



# **python-telegram-bot Documentation**

*Release 20.6*

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# python-telegram-bot

We have made you a wrapper you can't refuse

We have a vibrant community of developers helping each other in our [Telegram group](#). Join us!

*Stay tuned for library updates and new releases on our [Telegram Channel](#).*

This library provides a pure Python, asynchronous interface for the [Telegram Bot API](#). It's compatible with Python versions **3.8+**.

In addition to the pure API implementation, this library features a number of high-level classes to make the development of bots easy and straightforward. These classes are contained in the `telegram.ext` submodule.

A pure API implementation *without* `telegram.ext` is available as the standalone package `python-telegram-bot-raw`. [See here for details](#).





**NOTE**

Installing both `python-telegram-bot` and `python-telegram-bot-raw` in conjunction will result in undesired side-effects, so only install *one* of both.



## TELEGRAM API SUPPORT

All types and methods of the Telegram Bot API **6.9** are supported.



## INSTALLING

You can install or upgrade `python-telegram-bot` via

```
$ pip install python-telegram-bot --upgrade
```

To install a pre-release, use the `--pre` flag in addition.

You can also install `python-telegram-bot` from source, though this is usually not necessary.

```
$ git clone https://github.com/python-telegram-bot/python-telegram-bot
$ cd python-telegram-bot
$ python setup.py install
```

### 3.1 Verifying Releases

We sign all the releases with a GPG key. The signatures are uploaded to both the [GitHub releases page](#) and the [PyPI project](#) and end with a suffix `.asc`. Please find the public keys [here](#). The keys are named in the format `<first_version>-<last_version>.gpg` or `<first_version>-current.gpg` if the key is currently being used for new releases.

In addition, the GitHub release page also contains the sha1 hashes of the release files in the files with the suffix `.sha1`.

This allows you to verify that a release file that you downloaded was indeed provided by the `python-telegram-bot` team.

### 3.2 Dependencies & Their Versions

`python-telegram-bot` tries to use as few 3rd party dependencies as possible. However, for some features using a 3rd party library is more sane than implementing the functionality again. As these features are *optional*, the corresponding 3rd party dependencies are not installed by default. Instead, they are listed as optional dependencies. This allows to avoid unnecessary dependency conflicts for users who don't need the optional features.

The only required dependency is `httpx ~0.24.1` for `telegram.request.HTTPXRequest`, the default networking backend.

`python-telegram-bot` is most useful when used along with additional libraries. To minimize dependency conflicts, we try to be liberal in terms of version requirements on the (optional) dependencies. On the other hand, we have to ensure stability of `python-telegram-bot`, which is why we do apply version bounds. If you encounter dependency conflicts due to these bounds, feel free to reach out.

### 3.2.1 Optional Dependencies

PTB can be installed with optional dependencies:

- `pip install "python-telegram-bot[passport]"` installs the `cryptography>=39.0.1` library. Use this, if you want to use Telegram Passport related functionality.
- `pip install "python-telegram-bot[socks]"` installs `httpx[socks]`. Use this, if you want to work behind a Socks5 server.
- `pip install "python-telegram-bot[http2]"` installs `httpx[http2]`. Use this, if you want to use HTTP/2.
- `pip install "python-telegram-bot[rate-limiter]"` installs `aiolimiter~=1.1.0`. Use this, if you want to use `telegram.ext.AIORateLimiter`.
- `pip install "python-telegram-bot[webhooks]"` installs the `tornado~=6.3.3` library. Use this, if you want to use `telegram.ext.Updater.start_webhook/telegram.ext.Application.run_webhook`.
- `pip install "python-telegram-bot[callback-data]"` installs the `cachetools~=5.3.1` library. Use this, if you want to use `arbitrary callback_data`.
- `pip install "python-telegram-bot[job-queue]"` installs the `APScheduler~=3.10.4` library and enforces `pytz>=2018.6`, where `pytz` is a dependency of `APScheduler`. Use this, if you want to use the `telegram.ext.JobQueue`.

To install multiple optional dependencies, separate them by commas, e.g. `pip install "python-telegram-bot[socks,webhooks]"`.

Additionally, two shortcuts are provided:

- `pip install "python-telegram-bot[all]"` installs all optional dependencies.
- `pip install "python-telegram-bot[ext]"` installs all optional dependencies that are related to `telegram.ext`, i.e. `[rate-limiter, webhooks, callback-data, job-queue]`.

## **QUICK START**

Our Wiki contains an [Introduction to the API](#) explaining how the pure Bot API can be accessed via `python-telegram-bot`. Moreover, the [Tutorial: Your first Bot](#) gives an introduction on how chatbots can be easily programmed with the help of the `telegram.ext` module.





## RESOURCES

- The [package documentation](#) is the technical reference for `python-telegram-bot`. It contains descriptions of all available classes, modules, methods and arguments as well as the [changelog](#).
- The [wiki](#) is home to number of more elaborate introductions of the different features of `python-telegram-bot` and other useful resources that go beyond the technical documentation.
- Our [examples section](#) contains several examples that showcase the different features of both the Bot API and `python-telegram-bot`. Even if it is not your approach for learning, please take a look at `echobot.py`. It is the de facto base for most of the bots out there. The code for these examples is released to the public domain, so you can start by grabbing the code and building on top of it.
- The [official Telegram Bot API documentation](#) is of course always worth a read.



## GETTING HELP

If the resources mentioned above don't answer your questions or simply overwhelm you, there are several ways of getting help.

1. We have a vibrant community of developers helping each other in our [Telegram group](#). Join us! Asking a question here is often the quickest way to get a pointer in the right direction.
2. Ask questions by opening [a discussion](#).
3. You can even ask for help on Stack Overflow using the [python-telegram-bot tag](#).



## CONCURRENCY

Since v20.0, `python-telegram-bot` is built on top of Python's `asyncio` module. Because `asyncio` is in general single-threaded, `python-telegram-bot` does currently not aim to be thread-safe. Noteworthy parts of `python-telegram-bot`'s API that are likely to cause issues (e.g. race conditions) when used in a multi-threaded setting include:

- `telegram.ext.Application/Updater.update_queue`
- `telegram.ext.ConversationHandler.check/handle_update`
- `telegram.ext.CallbackDataCache`
- `telegram.ext.BasePersistence`
- all classes in the `telegram.ext.filters` module that allow to add/remove allowed users/chats at runtime



## CONTRIBUTING

Contributions of all sizes are welcome. Please review our [contribution guidelines](#) to get started. You can also help by [reporting bugs](#) or [feature requests](#).





## **DONATING**

Occasionally we are asked if we accept donations to support the development. While we appreciate the thought, maintaining PTB is our hobby, and we have almost no running costs for it. We therefore have nothing set up to accept donations. If you still want to donate, we kindly ask you to donate to another open source project/initiative of your choice instead.



## LICENSE

You may copy, distribute and modify the software provided that modifications are described and licensed for free under [LGPL-3](#). Derivatives works (including modifications or anything statically linked to the library) can only be redistributed under LGPL-3, but applications that use the library don't have to be.

## 10.1 telegram package

### 10.1.1 Version Constants

A library that provides a Python interface to the Telegram Bot API

```
telegram.__bot_api_version__ = '6.9'
```

Shortcut for `telegram.constants.BOT_API_VERSION`.

Changed in version 20.0: This constant was previously named `bot_api_version`.

**Type**

`str`

```
telegram.__bot_api_version_info__ = (6, 9)
```

Shortcut for `telegram.constants.BOT_API_VERSION_INFO`.

New in version 20.0.

**Type**

`typing.NamedTuple`

```
telegram.__version__ = '20.6'
```

The version of the *python-telegram-bot* library as string. To get detailed information about the version number, please use `__version_info__` instead.

**Type**

`str`

```
telegram.__version_info__ = (20, 6, 0, 'final', 0)
```

A tuple containing the five components of the version number: *major*, *minor*, *micro*, *releaselevel*, and *serial*. All values except *releaselevel* are integers. The release level is 'alpha', 'beta', 'candidate', or 'final'. The components can also be accessed by name, so `__version_info__[0]` is equivalent to `__version_info__.major` and so on.

New in version 20.0.

**Type**

`typing.NamedTuple`

## 10.1.2 Classes in this package

### Bot

```
class telegram.Bot(token, base_url='https://api.telegram.org/bot',
                   base_file_url='https://api.telegram.org/file/bot', request=None,
                   get_updates_request=None, private_key=None, private_key_password=None,
                   local_mode=False)
```

Bases: `telegram.TelegramObject`, `typing.AsyncContextManager`

This object represents a Telegram Bot.

Instances of this class can be used as asyncio context managers, where

```
async with bot:
    # code
```

is roughly equivalent to

```
try:
    await bot.initialize()
    # code
finally:
    await bot.shutdown()
```

---

#### Note:

- Most bot methods have the argument `api_kwargs` which allows passing arbitrary keywords to the Telegram API. This can be used to access new features of the API before they are incorporated into PTB. However, this is not guaranteed to work, i.e. it will fail for passing files.
  - Bots should not be serialized since if you for e.g. change the bots token, then your serialized instance will not reflect that change. Trying to pickle a bot instance will raise `pickle.PicklingError`. Trying to deepcopy a bot instance will raise `TypeError`.
- 

---

#### Use In

`telegram.ext.ApplicationBuilder.bot()`

---

---

#### Available In

- `telegram.ext.Application.bot`
  - `telegram.ext.BasePersistence.bot`
  - `telegram.ext.CallbackContext.bot`
  - `telegram.ext.Updater.bot`
- 

---

#### Examples

*Raw API Bot*

---

#### See also:

Your First Bot, Builder Pattern

New in version 13.2: Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `bot` is equal.

Changed in version 20.0:

- Removed the deprecated methods `kick_chat_member`, `kickChatMember`, `get_chat_members_count` and `getChatMembersCount`.
- Removed the deprecated property commands.
- Removed the deprecated `defaults` parameter. If you want to use `telegram.ext.Defaults`, please use the subclass `telegram.ext.ExtBot` instead.
- Attempting to pickle a bot instance will now raise `pickle.PicklingError`.
- Attempting to deepcopy a bot instance will now raise `TypeError`.
- The following are now keyword-only arguments in Bot methods: `location`, `filename`, `venue`, `contact`, `{read, write, connect, pool}_timeout`, `api_kwargs`. Use a named argument for those, and notice that some positional arguments changed position as a result.
- For uploading files, file paths are now always accepted. If `local_mode` is `False`, the file contents will be read in binary mode and uploaded. Otherwise, the file path will be passed in the file URI scheme.

Changed in version 20.5: Removed deprecated methods `set_sticker_set_thumb` and `setStickerSetThumb`. Use `set_sticker_set_thumbnail()` and `setStickerSetThumbnail()` instead.

#### Parameters

- **token** (`str`) – Bot’s unique authentication token.
- **base\_url** (`str`, optional) – Telegram Bot API service URL.
- **base\_file\_url** (`str`, optional) – Telegram Bot API file URL.
- **request** (`telegram.request.BaseRequest`, optional) – Pre initialized `telegram.request.BaseRequest` instances. Will be used for all bot methods *except* for `get_updates()`. If not passed, an instance of `telegram.request.HTTPXRequest` will be used.
- **get\_updates\_request** (`telegram.request.BaseRequest`, optional) – Pre initialized `telegram.request.BaseRequest` instances. Will be used exclusively for `get_updates()`. If not passed, an instance of `telegram.request.HTTPXRequest` will be used.
- **private\_key** (`bytes`, optional) – Private key for decryption of telegram passport data.
- **private\_key\_password** (`bytes`, optional) – Password for above private key.
- **local\_mode** (`bool`, optional) – Set to `True`, if the `base_url` is the URI of a [Local Bot API Server](#) that runs with the `--local` flag. Currently, the only effect of this is that files are uploaded using their local path in the file URI scheme. Defaults to `False`.

New in version 20.0..

<code>send_animation()</code>	Used for sending animations
<code>send_audio()</code>	Used for sending audio files
<code>send_chat_action()</code>	Used for sending chat actions
<code>send_contact()</code>	Used for sending contacts
<code>send_dice()</code>	Used for sending dice messages
<code>send_document()</code>	Used for sending documents
<code>send_game()</code>	Used for sending a game
<code>send_invoice()</code>	Used for sending an invoice
<code>send_location()</code>	Used for sending location
<code>send_media_group()</code>	Used for sending media grouped together
<code>send_message()</code>	Used for sending text messages
<code>send_photo()</code>	Used for sending photos
<code>send_poll()</code>	Used for sending polls
<code>send_sticker()</code>	Used for sending stickers
<code>send_venue()</code>	Used for sending venue locations.
<code>send_video()</code>	Used for sending videos
<code>send_video_note()</code>	Used for sending video notes
<code>send_voice()</code>	Used for sending voice messages
<code>copy_message()</code>	Used for copying the contents of an arbitrary message
<code>forward_message()</code>	Used for forwarding messages

<code>answer_callback_query()</code>	Used for answering the callback query
<code>answer_inline_query()</code>	Used for answering the inline query
<code>answer_pre_checkout_query()</code>	Used for answering a pre checkout query
<code>answer_shipping_query()</code>	Used for answering a shipping query
<code>answer_web_app_query()</code>	Used for answering a web app query
<code>edit_message_caption()</code>	Used for editing captions
<code>edit_message_media()</code>	Used for editing the media on messages
<code>edit_message_location()</code>	Used for editing the location in live location messages
<code>edit_message_reply_markup()</code>	Used for editing the reply markup on messages
<code>edit_message_text()</code>	Used for editing text messages
<code>stop_poll()</code>	Used for stopping the running poll
<code>delete_message()</code>	Used for deleting messages.

<code>ban_chat_member</code>	Used for banning a member from the chat
<code>unban_chat_memb</code>	Used for unbanning a member from the chat
<code>ban_chat_sender</code>	Used for banning a channel in a channel or supergroup
<code>unban_chat_send</code>	Used for unbanning a channel in a channel or supergroup
<code>restrict_chat_m</code>	Used for restricting a chat member
<code>promote_chat_me</code>	Used for promoting a chat member
<code>set_chat_admini</code>	Used for assigning a custom admin title to an admin
<code>set_chat_permiss</code>	Used for setting the permissions of a chat
<code>export_chat_inv</code>	Used for creating a new primary invite link for a chat
<code>create_chat_inv</code>	Used for creating an additional invite link for a chat
<code>edit_chat_invit</code>	Used for editing a non-primary invite link
<code>revoke_chat_inv</code>	Used for revoking an invite link created by the bot
<code>approve_chat_jo</code>	Used for approving a chat join request
<code>decline_chat_jo</code>	Used for declining a chat join request
<code>set_chat_photo(</code>	Used for setting a photo to a chat
<code>delete_chat_pho</code>	Used for deleting a chat photo
<code>set_chat_title(</code>	Used for setting a chat title
<code>set_chat_descri</code>	Used for setting the description of a chat
<code>pin_chat_messag</code>	Used for pinning a message
<code>unpin_chat_mess</code>	Used for unpinning a message
<code>unpin_all_chat_</code>	Used for unpinning all pinned chat messages
<code>get_user_profil</code>	Used for obtaining user's profile pictures
<code>get_chat()</code>	Used for getting information about a chat
<code>get_chat_admini</code>	Used for getting the list of admins in a chat
<code>get_chat_member</code>	Used for getting the number of members in a chat
<code>get_chat_member</code>	Used for getting a member of a chat
<code>leave_chat()</code>	Used for leaving a chat

<code>set_my_commands</code>	Used for setting the list of commands
<code>delete_my_comma</code>	Used for deleting the list of commands
<code>get_my_commands</code>	Used for obtaining the list of commands
<code>get_my_default_</code>	Used for obtaining the default administrator rights for the bot
<code>set_my_default_</code>	Used for setting the default administrator rights for the bot
<code>get_chat_menu_b</code>	Used for obtaining the menu button of a private chat or the default menu button
<code>set_chat_menu_b</code>	Used for setting the menu button of a private chat or the default menu button
<code>set_my_descript</code>	Used for setting the description of the bot
<code>get_my_descript</code>	Used for obtaining the description of the bot
<code>set_my_short_de</code>	Used for setting the short description of the bot
<code>get_my_short_de</code>	Used for obtaining the short description of the bot
<code>set_my_name()</code>	Used for setting the name of the bot
<code>get_my_name()</code>	Used for obtaining the name of the bot

<code>add_sticker_to_</code>	Used for adding a sticker to a set
<code>delete_sticker_</code>	Used for deleting a sticker from a set
<code>create_new_stic</code>	Used for creating a new sticker set
<code>delete_sticker_</code>	Used for deleting a sticker set made by a bot
<code>set_chat_sticke</code>	Used for setting a sticker set of a chat
<code>delete_chat_sti</code>	Used for deleting the set sticker set of a chat
<code>set_sticker_pos</code>	Used for moving a sticker's position in the set
<code>set_sticker_set</code>	Used for setting the title of a sticker set
<code>set_sticker_emo</code>	Used for setting the emoji list of a sticker
<code>set_sticker_key</code>	Used for setting the keywords of a sticker
<code>set_sticker_mas</code>	Used for setting the mask position of a mask sticker
<code>set_sticker_set</code>	Used for setting the thumbnail of a sticker set
<code>set_custom_emoj</code>	Used for setting the thumbnail of a custom emoji sticker set
<code>get_sticker_set</code>	Used for getting a sticker set
<code>upload_sticker_</code>	Used for uploading a sticker file
<code>get_custom_emoj</code>	Used for getting custom emoji files based on their IDs

<code>get_game_high_s</code>	Used for getting the game high scores
<code>set_game_score(</code>	Used for setting the game score

<code>get_updates()</code>	Used for getting updates using long polling
<code>get_webhook_inf</code>	Used for getting current webhook status
<code>set_webhook()</code>	Used for setting a webhook to receive updates
<code>delete_webhook(</code>	Used for removing webhook integration

<code>close_forum_top</code>	Used for closing a forum topic
<code>close_general_f</code>	Used for closing the general forum topic
<code>create_forum_to</code>	Used to create a topic
<code>delete_forum_to</code>	Used for deleting a forum topic
<code>edit_forum_topi</code>	Used to edit a topic
<code>edit_general_fo</code>	Used to edit the general topic
<code>get_forum_topic</code>	Used to get custom emojis to use as topic icons
<code>hide_general_fo</code>	Used to hide the general topic
<code>unhide_general_</code>	Used to unhide the general topic
<code>reopen_forum_to</code>	Used to reopen a topic
<code>reopen_general_</code>	Used to reopen the general topic
<code>unpin_all_forum</code>	Used to unpin all messages in a forum topic
<code>unpin_all_gener</code>	Used to unpin all messages in the general forum topic

<code>create_invoice_</code>	Used to generate an HTTP link for an invoice
<code>close()</code>	Used for closing server instance when switching to another local server
<code>log_out()</code>	Used for logging out from cloud Bot API server
<code>get_file()</code>	Used for getting basic info about a file
<code>get_me()</code>	Used for getting basic information about the bot



<code>base_file_url</code>	Telegram Bot API file URL
<code>base_url</code>	Telegram Bot API service URL
<code>bot</code>	The user instance of the bot as returned by <code>get_me()</code>
<code>can_join_groups</code>	Whether the bot can join groups
<code>can_read_all_gr</code>	Whether the bot can read all incoming group messages
<code>id</code>	The user id of the bot
<code>name</code>	The username of the bot, with leading @
<code>first_name</code>	The first name of the bot
<code>last_name</code>	The last name of the bot
<code>local_mode</code>	Whether the bot is running in local mode
<code>username</code>	The username of the bot, without leading @
<code>link</code>	The t.me link of the bot
<code>private_key</code>	Deserialized private key for decryption of telegram passport data
<code>supports_inline</code>	Whether the bot supports inline queries
<code>token</code>	Bot's unique authentication token

#### `__deepcopy__(memodict)`

Customizes how `copy.deepcopy()` processes objects of this type. Bots can not be deepcopied and this method will always raise an exception.

New in version 20.0.

##### Raises

`TypeError` –

#### `__reduce__()`

Customizes how `copy.deepcopy()` processes objects of this type. Bots can not be pickled and this method will always raise an exception.

New in version 20.0.

##### Raises

`pickle.PicklingError` –

#### `__repr__()`

Give a string representation of the bot in the form `Bot[token=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

##### Returns

`str`

**async** `addStickerToSet(user_id, name, sticker, *, read_timeout=None, write_timeout=20, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `add_sticker_to_set()`

**async** `add_sticker_to_set(user_id, name, sticker, *, read_timeout=None, write_timeout=20, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Use this method to add a new sticker to a set created by the bot. The format of the added sticker must match the format of the other stickers in the set. Emoji sticker sets can have up to **200** stickers. Animated and video sticker sets can have up to **50** stickers. Static sticker sets can have up to **120** stickers.

Changed in version 20.2: Since Bot API 6.6, the parameter `sticker` replace the parameters `png_sticker`, `tgs_sticker`, `webm_sticker`, `emojis`, and `mask_position`.

Changed in version 20.5: Removed deprecated parameters `png_sticker`, `tgs_sticker`, `webm_sticker`, `emojis`, and `mask_position`.

##### Parameters

- **user\_id** (`int`) – User identifier of created sticker set owner.
- **name** (`str`) – Sticker set name.
- **sticker** (`telegram.InputSticker`) – An object with information about the added sticker. If exactly the same sticker had already been added to the set, then the set isn't changed.

New in version 20.2.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

```
async answerCallbackQuery(callback_query_id, text=None, show_alert=None, url=None,
                           cache_time=None, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `answer_callback_query()`

```
async answerInlineQuery(inline_query_id, results, cache_time=None, is_personal=None,
                        next_offset=None, button=None, *, current_offset=None,
                        read_timeout=None, write_timeout=None, connect_timeout=None,
                        pool_timeout=None, api_kwargs=None)
```

Alias for `answer_inline_query()`

```
async answerPreCheckoutQuery(pre_checkout_query_id, ok, error_message=None, *,
                              read_timeout=None, write_timeout=None, connect_timeout=None,
                              pool_timeout=None, api_kwargs=None)
```

Alias for `answer_pre_checkout_query()`

```
async answerShippingQuery(shipping_query_id, ok, shipping_options=None, error_message=None,
                           *, read_timeout=None, write_timeout=None, connect_timeout=None,
                           pool_timeout=None, api_kwargs=None)
```

Alias for `answer_shipping_query()`

```
async answerWebAppQuery(web_app_query_id, result, *, read_timeout=None, write_timeout=None,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `answer_web_app_query()`

```
async answer_callback_query(callback_query_id, text=None, show_alert=None, url=None,
                             cache_time=None, *, read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to send answers to callback queries sent from inline keyboards. The answer will be displayed to the user as a notification at the top of the chat screen or as an alert. Alternatively, the user can be redirected to the specified Game URL. For this option to work, you must first create a game for your bot via [@BotFather](#) and accept the terms. Otherwise, you may use links like `t.me/your_bot?start=XXXX` that open your bot with a parameter.

---

## Shortcuts

`telegram.CallbackQuery.answer()`

---

### Parameters

- **callback\_query\_id** (`str`) – Unique identifier for the query to be answered.
- **text** (`str`, optional) – Text of the notification. If not specified, nothing will be shown to the user, 0-200 characters.
- **show\_alert** (`bool`, optional) – If `True`, an alert will be shown by the client instead of a notification at the top of the chat screen. Defaults to `False`.
- **url** (`str`, optional) – URL that will be opened by the user's client. If you have created a Game and accepted the conditions via [@BotFather](#), specify the URL that opens your game - note that this will only work if the query comes from a callback game button. Otherwise, you may use links like `t.me/your_bot?start=XXXX` that open your bot with a parameter.
- **cache\_time** (`int`, optional) – The maximum amount of time in seconds that the result of the callback query may be cached client-side. Defaults to 0.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

`bool` On success, `True` is returned.

### Raises

`telegram.error.TelegramError` –

```
async def answer_inline_query(inline_query_id, results, cache_time=None, is_personal=None,
                             next_offset=None, button=None, *, current_offset=None,
                             read_timeout=None, write_timeout=None, connect_timeout=None,
                             pool_timeout=None, api_kwargs=None)
```

Use this method to send answers to an inline query. No more than 50 results per query are allowed.

**Warning:** In most use cases `current_offset` should not be passed manually. Instead of calling this method directly, use the shortcut `telegram.InlineQuery.answer()` with `telegram.InlineQuery.answer.auto_pagination` set to `True`, which will take care of passing the correct value.

---

## Shortcuts

`telegram.InlineQuery.answer()`

---

## See also:

### Working with Files and Media

Changed in version 20.5: Removed deprecated arguments `switch_pm_text` and `switch_pm_parameter`.

## Parameters

- **inline\_query\_id** (`str`) – Unique identifier for the answered query.
- **results** (List[`telegram.InlineQueryResult`] | Callable) – A list of results for the inline query. In case `current_offset` is passed, `results` may also be a callable that accepts the current page index starting from 0. It must return either a list of `telegram.InlineQueryResult` instances or `None` if there are no more results.
- **cache\_time** (`int`, optional) – The maximum amount of time in seconds that the result of the inline query may be cached on the server. Defaults to 300.
- **is\_personal** (`bool`, optional) – Pass `True`, if results may be cached on the server side only for the user that sent the query. By default, results may be returned to any user who sends the same query.
- **next\_offset** (`str`, optional) – Pass the offset that a client should send in the next query with the same text to receive more results. Pass an empty string if there are no more results or if you don't support pagination. Offset length can't exceed 64 bytes.
- **button** (`telegram.InlineQueryResultsButton`, optional) – A button to be shown above the inline query results.

New in version 20.3.

## Keyword Arguments

- **current\_offset** (`str`, optional) – The `telegram.InlineQuery.offset` of the inline query to answer. If passed, PTB will automatically take care of the pagination for you, i.e. pass the correct `next_offset` and truncate the results list/get the results from the callable you passed.
- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

## Returns

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async def answer_pre_checkout_query(pre_checkout_query_id, ok, error_message=None, *,
                                   read_timeout=None, write_timeout=None,
                                   connect_timeout=None, pool_timeout=None,
                                   api_kwargs=None)
```

Once the user has confirmed their payment and shipping details, the Bot API sends the final confirmation in the form of an `telegram.Update` with the field `telegram.Update.pre_checkout_query`. Use this method to respond to such pre-checkout queries.

---

**Note:** The Bot API must receive an answer within 10 seconds after the pre-checkout query was sent.

---

---

**Shortcuts**`telegram.PreCheckoutQuery.answer()`

---

**Parameters**

- **pre\_checkout\_query\_id** (`str`) – Unique identifier for the query to be answered.
- **ok** (`bool`) – Specify `True` if everything is alright (goods are available, etc.) and the bot is ready to proceed with the order. Use `False` if there are any problems.
- **error\_message** (`str`, optional) – Required if `ok` is `False`. Error message in human readable form that explains the reason for failure to proceed with the checkout (e.g. “Sorry, somebody just bought the last of our amazing black T-shirts while you were busy filling out your payment details. Please choose a different color or garment!”). Telegram will display this message to the user.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async def answer_shipping_query(shipping_query_id, ok, shipping_options=None,
                                error_message=None, *, read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

If you sent an invoice requesting a shipping address and the parameter `send_invoice.is_flexible` was specified, the Bot API will send an `telegram.Update` with a `telegram.Update.shipping_query` field to the bot. Use this method to reply to shipping queries.

---

## Shortcuts

`telegram.ShippingQuery.answer()`

---

### Parameters

- **shipping\_query\_id** (`str`) – Unique identifier for the query to be answered.
- **ok** (`bool`) – Specify `True` if delivery to the specified address is possible and `False` if there are any problems (for example, if delivery to the specified address is not possible).
- **shipping\_options** (`Sequence[telegram.ShippingOption]`), optional) – Required if `ok` is `True`. A sequence of available shipping options.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **error\_message** (`str`, optional) – Required if `ok` is `False`. Error message in human readable form that explains why it is impossible to complete the order (e.g. “Sorry, delivery to your desired address is unavailable”). Telegram will display this message to the user.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, `True` is returned.

### Return type

`bool`

### Raises

`telegram.error.TelegramError` –

```
async def answer_web_app_query(web_app_query_id, result, *, read_timeout=None,
                               write_timeout=None, connect_timeout=None, pool_timeout=None,
                               api_kwargs=None)
```

Use this method to set the result of an interaction with a Web App and send a corresponding message on behalf of the user to the chat from which the query originated.

New in version 20.0.

### Parameters

- **web\_app\_query\_id** (`str`) – Unique identifier for the query to be answered.

- **result** (*telegram.InlineQueryResult*) – An object describing the message to be sent.

#### Keyword Arguments

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, a sent *telegram.SentWebAppMessage* is returned.

#### Return type

*telegram.SentWebAppMessage*

#### Raises

*telegram.error.TelegramError* –

**async approveChatJoinRequest**(*chat\_id*, *user\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for *approve\_chat\_join\_request()*

**async approve\_chat\_join\_request**(*chat\_id*, *user\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to approve a chat join request.

The bot must be an administrator in the chat for this to work and must have the *telegram.ChatPermissions.can\_invite\_users* administrator right.

---

#### Shortcuts

- *telegram.Chat.approve\_join\_request()*
  - *telegram.ChatJoinRequest.approve()*
  - *telegram.User.approve\_join\_request()*
- 

New in version 13.8.

#### Parameters

- **chat\_id** (*int* | *str*) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **user\_id** (*int*) – Unique identifier of the target user.

#### Keyword Arguments

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.



- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async banChatMember(chat_id, user_id, until_date=None, revoke_messages=None, *,
                    read_timeout=None, write_timeout=None, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Alias for `ban_chat_member()`

```
async banChatSenderChat(chat_id, sender_chat_id, *, read_timeout=None, write_timeout=None,
                      connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `ban_chat_sender_chat()`

```
async ban_chat_member(chat_id, user_id, until_date=None, revoke_messages=None, *,
                    read_timeout=None, write_timeout=None, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Use this method to ban a user from a group, supergroup or a channel. In the case of supergroups and channels, the user will not be able to return to the group on their own using invite links, etc., unless unbanned first. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

**Shortcuts**

`telegram.Chat.ban_member()`

---

New in version 13.7.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target group or username of the target supergroup or channel (in the format `@channelusername`).
- **user\_id** (`int`) – Unique identifier of the target user.
- **until\_date** (`int` | `datetime.datetime`, optional) – Date when the user will be unbanned, unix time. If user is banned for more than 366 days or less than 30 seconds from the current time they are considered to be banned forever. Applied for supergroups and channels only. For timezone naive `datetime.datetime` objects, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
- **revoke\_messages** (`bool`, optional) – Pass `True` to delete all messages from the chat for the user that is being removed. If `False`, the user will be able to see messages in the group that were sent before the user was removed. Always `True` for supergroups and channels.

New in version 13.4.

**Keyword Arguments**



- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

**async ban\_chat\_sender\_chat**(*chat\_id, sender\_chat\_id, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Use this method to ban a channel chat in a supergroup or a channel. Until the chat is unbanned, the owner of the banned chat won't be able to send messages on behalf of **any of their channels**. The bot must be an administrator in the supergroup or channel for this to work and must have the appropriate administrator rights.

---

**Shortcuts**

- `telegram.Chat.ban_chat()`
  - `telegram.Chat.ban_sender_chat()`
- 

New in version 13.9.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target group or username of the target supergroup or channel (in the format `@channelusername`).
- **sender\_chat\_id** (`int`) – Unique identifier of the target sender chat.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –**property base\_file\_url**

Telegram Bot API file URL, built from `Bot.base_file_url` and `Bot.token`.

New in version 20.0.

**Type**`str`**property base\_url**

Telegram Bot API service URL, built from `Bot.base_url` and `Bot.token`.

New in version 20.0.

**Type**`str`**property bot**

User instance for the bot as returned by `get_me()`.

**Warning:** This value is the cached return value of `get_me()`. If the bots profile is changed during runtime, this value won't reflect the changes until `get_me()` is called again.

**See also:**`initialize()`**Type**`telegram.User`**property can\_join\_groups**

Bot's `telegram.User.can_join_groups` attribute. Shortcut for the corresponding attribute of `bot`.

**Type**`bool`**property can\_read\_all\_group\_messages**

Bot's `telegram.User.can_read_all_group_messages` attribute. Shortcut for the corresponding attribute of `bot`.

**Type**`bool`

**async close**(`*`, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to close the bot instance before moving it from one local server to another. You need to delete the webhook before calling this method to ensure that the bot isn't launched again after server restart. The method will return error 429 in the first 10 minutes after the bot is launched.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success

**Return type**

`True`

**Raises**

`telegram.error.TelegramError` –

```
async closeForumTopic(chat_id, message_thread_id, *, read_timeout=None, write_timeout=None,
                      connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `close_forum_topic()`

```
async closeGeneralForumTopic(chat_id, *, read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `close_general_forum_topic()`

```
async close_forum_topic(chat_id, message_thread_id, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to close an open topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights, unless it is the creator of the topic.

---

**Shortcuts**

- `telegram.Chat.close_forum_topic()`
  - `telegram.Message.close_forum_topic()`
- 

New in version 20.0.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).
- **message\_thread\_id** (`int`) – Unique identifier for the target message thread of the forum topic.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async close_general_forum_topic(chat_id, *, read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None,
                                api_kwargs=None)
```

Use this method to close an open ‘General’ topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights.

---

**Shortcuts**`telegram.Chat.close_general_forum_topic()`

---

New in version 20.0.

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async copyMessage(chat_id, from_chat_id, message_id, caption=None, parse_mode=None,
                  caption_entities=None, disable_notification=None, reply_to_message_id=None,
                  allow_sending_without_reply=None, reply_markup=None, protect_content=None,
                  message_thread_id=None, *, read_timeout=None, write_timeout=None,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `copy_message()`

```
async copy_message(chat_id, from_chat_id, message_id, caption=None, parse_mode=None,
                   caption_entities=None, disable_notification=None, reply_to_message_id=None,
                   allow_sending_without_reply=None, reply_markup=None,
                   protect_content=None, message_thread_id=None, *, read_timeout=None,
                   write_timeout=None, connect_timeout=None, pool_timeout=None,
                   api_kwargs=None)
```

Use this method to copy messages of any kind. Service messages and invoice messages can’t be copied. The method is analogous to the method `forward_message()`, but the copied message doesn’t have a link to the original message.

---

### Shortcuts

- `telegram.Chat.copy_message()`
  - `telegram.Chat.send_copy()`
  - `telegram.Message.copy()`
  - `telegram.Message.reply_copy()`
  - `telegram.User.copy_message()`
  - `telegram.User.send_copy()`
- 

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **from\_chat\_id** (`int` | `str`) – Unique identifier for the chat where the original message was sent (or channel username in the format `@channelusername`).
- **message\_id** (`int`) – Message identifier in the chat specified in `from_chat_id`.
- **caption** (`str`, optional) – New caption for media, 0-1024 characters after entities parsing. If not specified, the original caption is kept.
- **parse\_mode** (`str`, optional) – Mode for parsing entities in the new caption. See the constants in `telegram.constants.ParseMode` for the available modes.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.

- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success

**Return type**

`telegram.MessageId`

**Raises**

`telegram.error.TelegramError` –

```
async createChatInviteLink(chat_id, expire_date=None, member_limit=None, name=None,
                           creates_join_request=None, *, read_timeout=None,
                           write_timeout=None, connect_timeout=None, pool_timeout=None,
                           api_kwargs=None)
```

Alias for `create_chat_invite_link()`

```
async createForumTopic(chat_id, name, icon_color=None, icon_custom_emoji_id=None, *,
                       read_timeout=None, write_timeout=None, connect_timeout=None,
                       pool_timeout=None, api_kwargs=None)
```

Alias for `create_forum_topic()`

```
async createInvoiceLink(title, description, payload, provider_token, currency, prices,
                        max_tip_amount=None, suggested_tip_amounts=None,
                        provider_data=None, photo_url=None, photo_size=None,
                        photo_width=None, photo_height=None, need_name=None,
                        need_phone_number=None, need_email=None,
                        need_shipping_address=None, send_phone_number_to_provider=None,
                        send_email_to_provider=None, is_flexible=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Alias for `create_invoice_link()`

```
async createNewStickerSet(user_id, name, title, stickers, sticker_format, sticker_type=None,
                          needs_repainting=None, *, read_timeout=None, write_timeout=20,
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `create_new_sticker_set()`

```
async create_chat_invite_link(chat_id, expire_date=None, member_limit=None, name=None,
                              creates_join_request=None, *, read_timeout=None,
                              write_timeout=None, connect_timeout=None, pool_timeout=None,
                              api_kwargs=None)
```

Use this method to create an additional invite link for a chat. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights. The link can be revoked using the method `revoke_chat_invite_link()`.

---

**Note:** When joining *public* groups via an invite link, Telegram clients may display the usual “Join” button, effectively ignoring the invite link. In particular, the parameter `creates_join_request` has no effect in this case. However, this behavior is undocumented and may be subject to change. See [this GitHub thread](#) for some discussion.

---

---

**Shortcuts**

`telegram.Chat.create_invite_link()`

---

New in version 13.4.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **expire\_date** (`int` | `datetime.datetime`, optional) – Date when the link will expire. Integer input will be interpreted as Unix timestamp. For timezone naive `datetime.datetime` objects, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
- **member\_limit** (`int`, optional) – Maximum number of users that can be members of the chat simultaneously after joining the chat via this invite link; `1- 99999`.
- **name** (`str`, optional) – Invite link name; `0-32` characters.

New in version 13.8.

- **creates\_join\_request** (`bool`, optional) – `True`, if users joining the chat via the link need to be approved by chat administrators. If `True`, `member_limit` can't be specified.

New in version 13.8.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

`telegram.ChatInviteLink`

#### Raises

`telegram.error.TelegramError` –

```
async create_forum_topic(chat_id, name, icon_color=None, icon_custom_emoji_id=None, *,
                          read_timeout=None, write_timeout=None, connect_timeout=None,
                          pool_timeout=None, api_kwargs=None)
```

Use this method to create a topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights.

---

#### Shortcuts

`telegram.Chat.create_forum_topic()`

---

New in version 20.0.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).



- **name** (`str`) – New topic name, 1- 128 characters.
- **icon\_color** (`int`, optional) – Color of the topic icon in RGB format. Currently, must be one of `telegram.constants.ForumIconColor.BLUE`, `telegram.constants.ForumIconColor.YELLOW`, `telegram.constants.ForumIconColor.PURPLE`, `telegram.constants.ForumIconColor.GREEN`, `telegram.constants.ForumIconColor.PINK`, or `telegram.constants.ForumIconColor.RED`.
- **icon\_custom\_emoji\_id** (`str`, optional) – New unique identifier of the custom emoji shown as the topic icon. Use `get_forum_topic_icon_stickers()` to get all allowed custom emoji identifiers.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

`telegram.ForumTopic`

#### Raises

`telegram.error.TelegramError` –

**async create\_invoice\_link**(*title, description, payload, provider\_token, currency, prices, max\_tip\_amount=None, suggested\_tip\_amounts=None, provider\_data=None, photo\_url=None, photo\_size=None, photo\_width=None, photo\_height=None, need\_name=None, need\_phone\_number=None, need\_email=None, need\_shipping\_address=None, send\_phone\_number\_to\_provider=None, send\_email\_to\_provider=None, is\_flexible=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Use this method to create a link for an invoice.

New in version 20.0.

#### Parameters

- **title** (`str`) – Product name. 1- 32 characters.
- **description** (`str`) – Product description. 1- 255 characters.
- **payload** (`str`) – Bot-defined invoice payload. 1- 128 bytes. This will not be displayed to the user, use for your internal processes.
- **provider\_token** (`str`) – Payments provider token, obtained via `@BotFather`.
- **currency** (`str`) – Three-letter ISO 4217 currency code, see [more on currencies](#).
- **prices** (Sequence[`telegram.LabeledPrice`]) – Price breakdown, a sequence of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.).

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.



- **max\_tip\_amount** (`int`, optional) – The maximum accepted amount for tips in the *smallest* units of the currency (integer, **not** float/double). For example, for a maximum tip of US\$ 1.45 pass `max_tip_amount = 145`. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies). Defaults to 0.
- **suggested\_tip\_amounts** (`Sequence[int]`, optional) – An array of suggested amounts of tips in the *smallest* units of the currency (integer, **not** float/double). At most 4 suggested tip amounts can be specified. The suggested tip amounts must be positive, passed in a strictly increased order and must not exceed `max_tip_amount`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **provider\_data** (`str` | `object`, optional) – Data about the invoice, which will be shared with the payment provider. A detailed description of required fields should be provided by the payment provider. When an object is passed, it will be encoded as JSON.
- **photo\_url** (`str`, optional) – URL of the product photo for the invoice. Can be a photo of the goods or a marketing image for a service.
- **photo\_size** (`int`, optional) – Photo size in bytes.
- **photo\_width** (`int`, optional) – Photo width.
- **photo\_height** (`int`, optional) – Photo height.
- **need\_name** (`bool`, optional) – Pass `True`, if you require the user's full name to complete the order.
- **need\_phone\_number** (`bool`, optional) – Pass `True`, if you require the user's phone number to complete the order.
- **need\_email** (`bool`, optional) – Pass `True`, if you require the user's email address to complete the order.
- **need\_shipping\_address** (`bool`, optional) – Pass `True`, if you require the user's shipping address to complete the order.
- **send\_phone\_number\_to\_provider** (`bool`, optional) – Pass `True`, if user's phone number should be sent to provider.
- **send\_email\_to\_provider** (`bool`, optional) – Pass `True`, if user's email address should be sent to provider.
- **is\_flexible** (`bool`, optional) – Pass `True`, if the final price depends on the shipping method.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the created invoice link is returned.

**Return type**`str`

```
async create_new_sticker_set(user_id, name, title, stickers, sticker_format, sticker_type=None,  
                             needs_repainting=None, *, read_timeout=None, write_timeout=20,  
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to create new sticker set owned by a user. The bot will be able to edit the created sticker set thus created.

Changed in version 20.0: The parameter `contains_masks` has been removed. Use `sticker_type` instead.

Changed in version 20.2: Since Bot API 6.6, the parameters `stickers` and `sticker_format` replace the parameters `png_sticker`, `tgs_sticker`, `webm_sticker`, `emojis`, and `mask_position`.

Changed in version 20.5: Removed the deprecated parameters mentioned above and adjusted the order of the parameters.

**Parameters**

- **user\_id** (`int`) – User identifier of created sticker set owner.
- **name** (`str`) – Short name of sticker set, to be used in `t.me/addstickers/` URLs (e.g., `animals`). Can contain only english letters, digits and underscores. Must begin with a letter, can't contain consecutive underscores and must end in `"_by_<bot username>"`. `<bot_username>` is case insensitive. 1- 64 characters.
- **title** (`str`) – Sticker set title, 1- 64 characters.
- **stickers** (`Sequence[telegram.InputSticker]`) – A sequence of 1- 50 initial stickers to be added to the sticker set.

New in version 20.2.

- **sticker\_format** (`str`) – Format of stickers in the set, must be one of `STATIC`, `ANIMATED` or `VIDEO`.

New in version 20.2.

- **sticker\_type** (`str`, optional) – Type of stickers in the set, pass `telegram.Sticker.REGULAR` or `telegram.Sticker.MASK`, or `telegram.Sticker.CUSTOM_EMOJI`. By default, a regular sticker set is created

New in version 20.0.

- **needs\_repainting** (`bool`, optional) – Pass `True` if stickers in the sticker set must be repainted to the color of text when used in messages, the accent color if used as emoji status, white on chat photos, or another appropriate color based on context; for custom emoji sticker sets only.

New in version 20.2.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to 20.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async def declineChatJoinRequest(chat_id, user_id, *, read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `decline_chat_join_request()`

```
async def decline_chat_join_request(chat_id, user_id, *, read_timeout=None, write_timeout=None,
                                   connect_timeout=None, pool_timeout=None,
                                   api_kwargs=None)
```

Use this method to decline a chat join request.

The bot must be an administrator in the chat for this to work and must have the `telegram.ChatPermissions.can_invite_users` administrator right.

---

**Shortcuts**

- `telegram.Chat.decline_join_request()`
  - `telegram.ChatJoinRequest.decline()`
  - `telegram.User.decline_join_request()`
- 

New in version 13.8.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **user\_id** (`int`) – Unique identifier of the target user.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async def deleteChatPhoto(chat_id, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `delete_chat_photo()`

```
async deleteChatStickerSet(chat_id, *, read_timeout=None, write_timeout=None,  
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `delete_chat_sticker_set()`

```
async deleteForumTopic(chat_id, message_thread_id, *, read_timeout=None, write_timeout=None,  
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `delete_forum_topic()`

```
async deleteMessage(chat_id, message_id, *, read_timeout=None, write_timeout=None,  
                     connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `delete_message()`

```
async deleteMyCommands(scope=None, language_code=None, *, read_timeout=None,  
                        write_timeout=None, connect_timeout=None, pool_timeout=None,  
                        api_kwargs=None)
```

Alias for `delete_my_commands()`

```
async deleteStickerFromSet(sticker, *, read_timeout=None, write_timeout=None,  
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `delete_sticker_from_set()`

```
async deleteStickerSet(name, *, read_timeout=None, write_timeout=None, connect_timeout=None,  
                        pool_timeout=None, api_kwargs=None)
```

Alias for `delete_sticker_set()`

```
async deleteWebhook(drop_pending_updates=None, *, read_timeout=None, write_timeout=None,  
                     connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `delete_webhook()`

```
async delete_chat_photo(chat_id, *, read_timeout=None, write_timeout=None,  
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to delete a chat photo. Photos can't be changed for private chats. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

## Shortcuts

`telegram.Chat.delete_photo()`

---

### Parameters

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async delete_chat_sticker_set(chat_id, *, read_timeout=None, write_timeout=None,
                              connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to delete a group sticker set from a supergroup. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights. Use the field `telegram.Chat.can_set_sticker_set` optionally returned in `get_chat()` requests to check if the bot can use this method.

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**`bool`

```
async delete_forum_topic(chat_id, message_thread_id, *, read_timeout=None,
                          write_timeout=None, connect_timeout=None, pool_timeout=None,
                          api_kwargs=None)
```

Use this method to delete a forum topic along with all its messages in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_delete_messages` administrator rights.

---

**Shortcuts**

- `telegram.Chat.delete_forum_topic()`
  - `telegram.Message.delete_forum_topic()`
- 

New in version 20.0.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).
- **message\_thread\_id** (`int`) – Unique identifier for the target message thread of the forum topic.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

**async delete\_message**(*chat\_id*, *message\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to delete a message, including service messages, with the following limitations:

- A message can only be deleted if it was sent less than 48 hours ago.
- Service messages about a supergroup, channel, or forum topic creation can't be deleted.
- A dice message in a private chat can only be deleted if it was sent more than 24 hours ago.
- Bots can delete outgoing messages in private chats, groups, and supergroups.
- Bots can delete incoming messages in private chats.
- Bots granted `can_post_messages` permissions can delete outgoing messages in channels.
- If the bot is an administrator of a group, it can delete any message there.
- If the bot has `can_delete_messages` permission in a supergroup or a channel, it can delete any message there.

---

**Shortcuts**

`telegram.Message.delete()`

---

**See also:**

`telegram.CallbackQuery.delete_message()` (calls `delete_message()` indirectly, via `telegram.Message.delete()`)

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`) – Identifier of the message to delete.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.

- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async delete_my_commands(scope=None, language_code=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Use this method to delete the list of the bot's commands for the given scope and user language. After deletion, `higher level commands` will be shown to affected users.

New in version 13.7.

**See also:**

`get_my_commands()`, `set_my_commands()`

**Parameters**

- **scope** (`telegram.BotCommandScope`, optional) – An object, describing scope of users for which the commands are relevant. Defaults to `telegram.BotCommandScopeDefault`.
- **language\_code** (`str`, optional) – A two-letter ISO 639-1 language code. If empty, commands will be applied to all users from the given scope, for whose language there are no dedicated commands.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –



```
async delete_sticker_from_set(sticker, *, read_timeout=None, write_timeout=None,  
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to delete a sticker from a set created by the bot.

**Parameters**

**sticker** (`str`) – File identifier of the sticker.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async delete_sticker_set(name, *, read_timeout=None, write_timeout=None,  
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to delete a sticker set that was created by the bot.

New in version 20.2.

**Parameters**

**name** (`str`) – Sticker set name.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –



**async delete\_webhook**(*drop\_pending\_updates=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to remove webhook integration if you decide to switch back to [get\\_updates\(\)](#).

#### Parameters

**drop\_pending\_updates** (*bool*, optional) – Pass `True` to drop all pending updates.

#### Keyword Arguments

- **read\_timeout** (*float* | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (*float* | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (*float* | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float* | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

**async editChatInviteLink**(*chat\_id*, *invite\_link*, *expire\_date=None*, *member\_limit=None*, *name=None*, *creates\_join\_request=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for [edit\\_chat\\_invite\\_link\(\)](#)

**async editForumTopic**(*chat\_id*, *message\_thread\_id*, *name=None*, *icon\_custom\_emoji\_id=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for [edit\\_forum\\_topic\(\)](#)

**async editGeneralForumTopic**(*chat\_id*, *name*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for [edit\\_general\\_forum\\_topic\(\)](#)

**async editMessageCaption**(*chat\_id=None*, *message\_id=None*, *inline\_message\_id=None*, *caption=None*, *reply\_markup=None*, *parse\_mode=None*, *caption\_entities=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for [edit\\_message\\_caption\(\)](#)

**async editMessageLiveLocation**(*chat\_id=None*, *message\_id=None*, *inline\_message\_id=None*, *latitude=None*, *longitude=None*, *reply\_markup=None*, *horizontal\_accuracy=None*, *heading=None*, *proximity\_alert\_radius=None*, \*, *location=None*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for [edit\\_message\\_live\\_location\(\)](#)

```
async editMessageMedia(media, chat_id=None, message_id=None, inline_message_id=None,
                        reply_markup=None, *, read_timeout=None, write_timeout=None,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `edit_message_media()`

```
async editMessageReplyMarkup(chat_id=None, message_id=None, inline_message_id=None,
                              reply_markup=None, *, read_timeout=None, write_timeout=None,
                              connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `edit_message_reply_markup()`

```
async editMessageText(text, chat_id=None, message_id=None, inline_message_id=None,
                       parse_mode=None, disable_web_page_preview=None, reply_markup=None,
                       entities=None, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `edit_message_text()`

```
async edit_chat_invite_link(chat_id, invite_link, expire_date=None, member_limit=None,
                             name=None, creates_join_request=None, *, read_timeout=None,
                             write_timeout=None, connect_timeout=None, pool_timeout=None,
                             api_kwargs=None)
```

Use this method to edit a non-primary invite link created by the bot. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

**Note:** Though not stated explicitly in the official docs, Telegram changes not only the optional parameters that are explicitly passed, but also replaces all other optional parameters to the default values. However, since not documented, this behaviour may change unbeknown to PTB.

---

---

## Shortcuts

`telegram.Chat.edit_invite_link()`

---

New in version 13.4.

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **invite\_link** (`str` | `telegram.ChatInviteLink`) – The invite link to edit.

Changed in version 20.0: Now also accepts `telegram.ChatInviteLink` instances.

- **expire\_date** (`int` | `datetime.datetime`, optional) – Date when the link will expire. For timezone naive `datetime.datetime` objects, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
- **member\_limit** (`int`, optional) – Maximum number of users that can be members of the chat simultaneously after joining the chat via this invite link; 1- 99999.
- **name** (`str`, optional) – Invite link name; 0-32 characters.

New in version 13.8.

- **creates\_join\_request** (`bool`, optional) – `True`, if users joining the chat via the link need to be approved by chat administrators. If `True`, `member_limit` can't be specified.

New in version 13.8.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

`telegram.ChatInviteLink`

**Raises**

`telegram.error.TelegramError` –

```
async edit_forum_topic(chat_id, message_thread_id, name=None, icon_custom_emoji_id=None, *,
                       read_timeout=None, write_timeout=None, connect_timeout=None,
                       pool_timeout=None, api_kwargs=None)
```

Use this method to edit name and icon of a topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights, unless it is the creator of the topic.

---

**Shortcuts**

- `telegram.Chat.edit_forum_topic()`
  - `telegram.Message.edit_forum_topic()`
- 

New in version 20.0.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).
- **message\_thread\_id** (`int`) – Unique identifier for the target message thread of the forum topic.
- **name** (`str`, optional) – New topic name, `1-128` characters. If not specified or empty, the current name of the topic will be kept.
- **icon\_custom\_emoji\_id** (`str`, optional) – New unique identifier of the custom emoji shown as the topic icon. Use `get_forum_topic_icon_stickers()` to get all allowed custom emoji identifiers. Pass an empty string to remove the icon. If not specified, the current icon will be kept.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async edit_general_forum_topic(chat_id, name, *, read_timeout=None, write_timeout=None,
                               connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to edit the name of the ‘General’ topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights.

---

**Shortcuts**

`telegram.Chat.edit_general_forum_topic()`

---

New in version 20.0.

**Parameters**

- **chat\_id** (*int* | *str*) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **name** (*str*) – New topic name, 1- 128 characters.

**Keyword Arguments**

- **read\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async edit_message_caption(chat_id=None, message_id=None, inline_message_id=None,
                           caption=None, reply_markup=None, parse_mode=None,
                           caption_entities=None, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to edit captions of messages.

---

**Note:** It is currently only possible to edit messages without `telegram.Message.reply_markup` or with inline keyboards.

---

---

### Shortcuts

- `telegram.CallbackQuery.edit_message_caption()`
  - `telegram.Message.edit_caption()`
- 

### Parameters

- **chat\_id** (`int` | `str`, optional) – Required if `inline_message_id` is not specified. Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Identifier of the message to edit.
- **inline\_message\_id** (`str`, optional) – Required if `chat_id` and `message_id` are not specified. Identifier of the inline message.
- **caption** (`str`, optional) – New caption of the message, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – An object for an inline keyboard.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.read\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.write\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.connect\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.pool\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, if edited message is not an inline message, the edited message is returned, otherwise `True` is returned.

### Return type

[telegram.Message](#)

### Raises

[telegram.error.TelegramError](#) –

```
async edit_message_live_location(chat_id=None, message_id=None, inline_message_id=None,
                                latitude=None, longitude=None, reply_markup=None,
                                horizontal_accuracy=None, heading=None,
                                proximity_alert_radius=None, *, location=None,
                                read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None,
                                api_kwargs=None)
```

Use this method to edit live location messages sent by the bot or via the bot (for inline bots). A location can be edited until its `telegram.Location.live_period` expires or editing is explicitly disabled by a call to `stop_message_live_location()`.

---

**Note:** You can either supply a `latitude` and `longitude` or a `location`.

---

---

### Shortcuts

- `telegram.CallbackQuery.edit_message_live_location()`
  - `telegram.Message.edit_live_location()`
- 

### Parameters

- **chat\_id** (`int` | `str`, optional) – Required if `inline_message_id` is not specified. Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Identifier of the message to edit.
- **inline\_message\_id** (`str`, optional) – Required if `chat_id` and `message_id` are not specified. Identifier of the inline message.
- **latitude** (`float`, optional) – Latitude of location.
- **longitude** (`float`, optional) – Longitude of location.
- **horizontal\_accuracy** (`float`, optional) – The radius of uncertainty for the location, measured in meters; 0-1500.
- **heading** (`int`, optional) – Direction in which the user is moving, in degrees. Must be between 1 and 360 if specified.
- **proximity\_alert\_radius** (`int`, optional) – Maximum distance for proximity alerts about approaching another chat member, in meters. Must be between 1 and 100000 if specified.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for a new inline keyboard.

### Keyword Arguments

- **location** (`telegram.Location`, optional) – The location to send.
- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, if edited message is not an inline message, the edited message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**async edit\_message\_media**(*media*, *chat\_id=None*, *message\_id=None*, *inline\_message\_id=None*, *reply\_markup=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to edit animation, audio, document, photo, or video messages. If a message is part of a message album, then it can be edited only to an audio for audio albums, only to a document for document albums and to a photo or a video otherwise. When an inline message is edited, a new file can't be uploaded; use a previously uploaded file via its *file\_id* or specify a URL.

---

**Note:** It is currently only possible to edit messages without `telegram.Message.reply_markup` or with inline keyboards.

---

---

**Shortcuts**

- `telegram.CallbackQuery.edit_message_media()`
  - `telegram.Message.edit_media()`
- 

**See also:**

[Working with Files and Media](#)

**Parameters**

- **media** (`telegram.InputMedia`) – An object for a new media content of the message.
- **chat\_id** (*int* | *str*, optional) – Required if *inline\_message\_id* is not specified. Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (*int*, optional) – Required if *inline\_message\_id* is not specified. Identifier of the message to edit.
- **inline\_message\_id** (*str*, optional) – Required if *chat\_id* and *message\_id* are not specified. Identifier of the inline message.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for an inline keyboard.

**Keyword Arguments**

- **read\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.



- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, if edited message is not an inline message, the edited `Message` is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

```
async edit_message_reply_markup(chat_id=None, message_id=None, inline_message_id=None,
                                reply_markup=None, *, read_timeout=None,
                                write_timeout=None, connect_timeout=None,
                                pool_timeout=None, api_kwargs=None)
```

Use this method to edit only the reply markup of messages sent by the bot or via the bot (for inline bots).

---

**Note:** It is currently only possible to edit messages without `telegram.Message.reply_markup` or with inline keyboards.

---

---

**Shortcuts**

- `telegram.CallbackQuery.edit_message_reply_markup()`
  - `telegram.Message.edit_reply_markup()`
- 

**Parameters**

- **chat\_id** (`int` | `str`, optional) – Required if `inline_message_id` is not specified. Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Identifier of the message to edit.
- **inline\_message\_id** (`str`, optional) – Required if `chat_id` and `message_id` are not specified. Identifier of the inline message.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for an inline keyboard.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.



**Returns**

On success, if edited message is not an inline message, the edited message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

```
async edit_message_text(text, chat_id=None, message_id=None, inline_message_id=None,
                        parse_mode=None, disable_web_page_preview=None,
                        reply_markup=None, entities=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Use this method to edit text and game messages.

---

**Note:** It is currently only possible to edit messages without `telegram.Message.reply_markup` or with inline keyboards..

---

---

**Shortcuts**

- `telegram.CallbackQuery.edit_message_text()`
  - `telegram.Message.edit_text()`
- 

**See also:**

`telegram.Game.text`

**Parameters**

- **chat\_id** (`int` | `str`, optional) – Required if `inline_message_id` is not specified. Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Identifier of the message to edit.
- **inline\_message\_id** (`str`, optional) – Required if `chat_id` and `message_id` are not specified. Identifier of the inline message.
- **text** (`str`) – New text of the message, 1- 4096 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and [formatting options](#) for more details.
- **entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in message text, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.
- **disable\_web\_page\_preview** (`bool`, optional) – Disables link previews for links in this message.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for an inline keyboard.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.

- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, if edited message is not an inline message, the edited message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

```
async exportChatInviteLink(chat_id, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `export_chat_invite_link()`

```
async export_chat_invite_link(chat_id, *, read_timeout=None, write_timeout=None,
                              connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to generate a new primary invite link for a chat; any previously generated link is revoked. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

**Note:** Each administrator in a chat generates their own invite links. Bots can't use invite links generated by other administrators. If you want your bot to work with invite links, it will need to generate its own link using `export_chat_invite_link()` or by calling the `get_chat()` method. If your bot needs to generate a new primary invite link replacing its previous one, use `export_chat_invite_link()` again.

---

---

**Shortcuts**

`telegram.Chat.export_invite_link()`

---

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

New invite link on success.

**Return type**

`str`

**Raises**

`telegram.error.TelegramError` –

**property first\_name**

Bot's first name. Shortcut for the corresponding attribute of `bot`.

**Type**

`str`

```
async forwardMessage(chat_id, from_chat_id, message_id, disable_notification=None,
                     protect_content=None, message_thread_id=None, *, read_timeout=None,
                     write_timeout=None, connect_timeout=None, pool_timeout=None,
                     api_kwargs=None)
```

Alias for `forward_message()`

```
async forward_message(chat_id, from_chat_id, message_id, disable_notification=None,
                     protect_content=None, message_thread_id=None, *, read_timeout=None,
                     write_timeout=None, connect_timeout=None, pool_timeout=None,
                     api_kwargs=None)
```

Use this method to forward messages of any kind. Service messages can't be forwarded.

---

**Note:** Since the release of Bot API 5.5 it can be impossible to forward messages from some chats. Use the attributes `telegram.Message.has_protected_content` and `telegram.Chat.has_protected_content` to check this.

As a workaround, it is still possible to use `copy_message()`. However, this behaviour is undocumented and might be changed by Telegram.

---

---

**Shortcuts**

- `telegram.Chat.forward_from()`
  - `telegram.Chat.forward_to()`
  - `telegram.Message.forward()`
- 

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **from\_chat\_id** (`int` | `str`) – Unique identifier for the chat where the original message was sent (or channel username in the format `@channelusername`).
- **message\_id** (`int`) – Message identifier in the chat specified in `from_chat_id`.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

**async** `getChat(chat_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_chat()`

**async** `getChatAdministrators(chat_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_chat_administrators()`

**async** `getChatMember(chat_id, user_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_chat_member()`

**async** `getChatMemberCount(chat_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_chat_member_count()`

**async** `getChatMenuButton(chat_id=None, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_chat_menu_button()`

**async** `getCustomEmojiStickers(custom_emoji_ids, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_custom_emoji_stickers()`

**async** `getFile(file_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_file()`

**async** `getForumTopicIconStickers(*, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `get_forum_topic_icon_stickers()`

```
async getGameHighScores(user_id, chat_id=None, message_id=None, inline_message_id=None, *,
                        read_timeout=None, write_timeout=None, connect_timeout=None,
                        pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_game\_high\_scores\(\)`](#)

```
async getMe(*, read_timeout=None, write_timeout=None, connect_timeout=None,
            pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_me\(\)`](#)

```
async getMyCommands(scope=None, language_code=None, *, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Alias for [`get\_my\_commands\(\)`](#)

```
async getMyDefaultAdministratorRights(for_channels=None, *, read_timeout=None,
                                       write_timeout=None, connect_timeout=None,
                                       pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_my\_default\_administrator\_rights\(\)`](#)

```
async getMyDescription(language_code=None, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_my\_description\(\)`](#)

```
async getMyName(language_code=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_my\_name\(\)`](#)

```
async getMyShortDescription(language_code=None, *, read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_my\_short\_description\(\)`](#)

```
async getStickerSet(name, *, read_timeout=None, write_timeout=None, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_sticker\_set\(\)`](#)

```
async getUpdates(offset=None, limit=None, timeout=None, allowed_updates=None, *,
                 read_timeout=2, write_timeout=None, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_updates\(\)`](#)

```
async getUserProfilePhotos(user_id, offset=None, limit=None, *, read_timeout=None,
                           write_timeout=None, connect_timeout=None, pool_timeout=None,
                           api_kwargs=None)
```

Alias for [`get\_user\_profile\_photos\(\)`](#)

```
async getWebhookInfo(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                     pool_timeout=None, api_kwargs=None)
```

Alias for [`get\_webhook\_info\(\)`](#)

```
async get_chat(chat_id, *, read_timeout=None, write_timeout=None, connect_timeout=None,
                pool_timeout=None, api_kwargs=None)
```

Use this method to get up to date information about the chat (current name of the user for one-on-one conversations, current username of a user, group or channel, etc.).

#### Parameters

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.

- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

`telegram.Chat`

**Raises**

`telegram.error.TelegramError` –

**async get\_chat\_administrators**(*chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to get a list of administrators in a chat.

---

**Shortcuts**

`telegram.Chat.get_administrators()`

---

Changed in version 20.0: Returns a tuple instead of a list.

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, returns a tuple of `ChatMember` objects that contains information about all chat administrators except other bots. If the chat is a group or a supergroup and no administrators were appointed, only the creator will be returned.

**Return type**

Tuple[`telegram.ChatMember`]

**Raises**

`telegram.error.TelegramError` –

**async get\_chat\_member**(*chat\_id*, *user\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to get information about a member of a chat. The method is only guaranteed to work for other users if the bot is an administrator in the chat.

---

### Shortcuts

`telegram.Chat.get_member()`

---

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **user\_id** (`int`) – Unique identifier of the target user.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

`telegram.ChatMember`

#### Raises

`telegram.error.TelegramError` –

```
async get_chat_member_count(chat_id, *, read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to get the number of members in a chat.

---

### Shortcuts

`telegram.Chat.get_member_count()`

---

New in version 13.7.

#### Parameters

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.



**Returns**

Number of members in the chat.

**Return type**

`int`

**Raises**

`telegram.error.TelegramError` –

```
async get_chat_menu_button(chat_id=None, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to get the current value of the bot's menu button in a private chat, or the default menu button.

---

**Shortcuts**

- `telegram.Chat.get_menu_button()`
  - `telegram.User.get_menu_button()`
- 

**See also:**

`set_chat_menu_button()`, `telegram.Chat.set_menu_button()`, `telegram.User.set_menu_button()`

New in version 20.0.

**Parameters**

**chat\_id** (`int`, optional) – Unique identifier for the target private chat. If not specified, default bot's menu button will be returned.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the current menu button is returned.

**Return type**

`telegram.MenuButton`

```
async get_custom_emoji_stickers(custom_emoji_ids, *, read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None,
                                api_kwargs=None)
```

Use this method to get information about emoji stickers by their identifiers.

Changed in version 20.0: Returns a tuple instead of a list.

**Parameters**

**custom\_emoji\_ids** (`Sequence[str]`) – Sequence of custom emoji identifiers. At most 200 custom emoji identifiers can be specified.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.



### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

Tuple[`telegram.Sticker`]

### Raises

`telegram.error.TelegramError` –

**async** `get_file(file_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Use this method to get basic info about a file and prepare it for downloading. For the moment, bots can download files of up to **20 MB** in size. The file can then be e.g. downloaded with `telegram.File.download_to_drive()`. It is guaranteed that the link will be valid for at least 1 hour. When the link expires, a new one can be requested by calling `get_file` again.

---

**Note:** This function may not preserve the original file name and MIME type. You should save the file's MIME type and name (if available) when the File object is received.

---

---

### Shortcuts

- `telegram.ChatPhoto.get_big_file()`
  - `telegram.ChatPhoto.get_small_file()`
- 

### See also:

Working with Files and Media

### Parameters

**file\_id** (`str` | `telegram.Animation` | `telegram.Audio` | `telegram.ChatPhoto` | `telegram.Document` | `telegram.PhotoSize` | `telegram.Sticker` | `telegram.Video` | `telegram.VideoNote` | `telegram.Voice`) – Either the file identifier or an object that has a `file_id` attribute to get file information about.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

*telegram.File*

**Raises**

*telegram.error.TelegramError* –

```
async get_forum_topic_icon_stickers(*, read_timeout=None, write_timeout=None,
                                     connect_timeout=None, pool_timeout=None,
                                     api_kwargs=None)
```

Use this method to get custom emoji stickers, which can be used as a forum topic icon by any user. Requires no parameters.

New in version 20.0.

**Keyword Arguments**

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

Tuple[*telegram.Sticker*]

**Raises**

*telegram.error.TelegramError* –

```
async get_game_high_scores(user_id, chat_id=None, message_id=None, inline_message_id=None,
                           *, read_timeout=None, write_timeout=None, connect_timeout=None,
                           pool_timeout=None, api_kwargs=None)
```

Use this method to get data for high score tables. Will return the score of the specified user and several of their neighbors in a game.

---

**Note:** This method will currently return scores for the target user, plus two of their closest neighbors on each side. Will also return the top three users if the user and his neighbors are not among them. Please note that this behavior is subject to change.

---

---

**Shortcuts**

- *telegram.CallbackQuery.get\_game\_high\_scores()*
  - *telegram.Message.get\_game\_high\_scores()*
- 

Changed in version 20.0: Returns a tuple instead of a list.

**Parameters**

- **user\_id** (*int*) – Target user id.

- **chat\_id** (`int`, optional) – Required if *inline\_message\_id* is not specified. Unique identifier for the target chat.
- **message\_id** (`int`, optional) – Required if *inline\_message\_id* is not specified. Identifier of the sent message.
- **inline\_message\_id** (`str`, optional) – Required if *chat\_id* and *message\_id* are not specified. Identifier of the inline message.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

Tuple[*telegram.GameHighScore*]

#### Raises

*telegram.error.TelegramError* –

```
async get_me(*, read_timeout=None, write_timeout=None, connect_timeout=None,
             pool_timeout=None, api_kwargs=None)
```

A simple method for testing your bot's auth token. Requires no parameters.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

A *telegram.User* instance representing that bot if the credentials are valid, `None` otherwise.

#### Return type

*telegram.User*

#### Raises

*telegram.error.TelegramError* –

```
async get_my_commands(scope=None, language_code=None, *, read_timeout=None,
                     write_timeout=None, connect_timeout=None, pool_timeout=None,
                     api_kwargs=None)
```

Use this method to get the current list of the bot's commands for the given scope and user language.

See also:

[`set\_my\_commands\(\)`](#), [`delete\_my\_commands\(\)`](#)

Changed in version 20.0: Returns a tuple instead of a list.

#### Parameters

- **scope** ([`telegram.BotCommandScope`](#), optional) – An object, describing scope of users. Defaults to [`telegram.BotCommandScopeDefault`](#).

New in version 13.7.

- **language\_code** ([`str`](#), optional) – A two-letter ISO 639-1 language code or an empty string.

New in version 13.7.

#### Keyword Arguments

- **read\_timeout** ([`float`](#) | [`None`](#), optional) – Value to pass to [`telegram.request.BaseRequest.post.read\_timeout`](#). Defaults to [`DEFAULT\_NONE`](#).
- **write\_timeout** ([`float`](#) | [`None`](#), optional) – Value to pass to [`telegram.request.BaseRequest.post.write\_timeout`](#). Defaults to [`DEFAULT\_NONE`](#).
- **connect\_timeout** ([`float`](#) | [`None`](#), optional) – Value to pass to [`telegram.request.BaseRequest.post.connect\_timeout`](#). Defaults to [`DEFAULT\_NONE`](#).
- **pool\_timeout** ([`float`](#) | [`None`](#), optional) – Value to pass to [`telegram.request.BaseRequest.post.pool\_timeout`](#). Defaults to [`DEFAULT\_NONE`](#).
- **api\_kwargs** ([`dict`](#), optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the commands set for the bot. An empty tuple is returned if commands are not set.

#### Return type

Tuple[[`telegram.BotCommand`](#)]

#### Raises

[`telegram.error.TelegramError`](#) –

```
async get_my_default_administrator_rights(for_channels=None, *, read_timeout=None,
                                         write_timeout=None, connect_timeout=None,
                                         pool_timeout=None, api_kwargs=None)
```

Use this method to get the current default administrator rights of the bot.

See also:

[`set\_my\_default\_administrator\_rights\(\)`](#)

New in version 20.0.

#### Parameters

**for\_channels** ([`bool`](#), optional) – Pass [`True`](#) to get default administrator rights of the bot in channels. Otherwise, default administrator rights of the bot for groups and supergroups will be returned.

#### Keyword Arguments

- **read\_timeout** ([`float`](#) | [`None`](#), optional) – Value to pass to [`telegram.request.BaseRequest.post.read\_timeout`](#). Defaults to [`DEFAULT\_NONE`](#).
- **write\_timeout** ([`float`](#) | [`None`](#), optional) – Value to pass to [`telegram.request.BaseRequest.post.write\_timeout`](#). Defaults to [`DEFAULT\_NONE`](#).

- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success.

**Return type**

`telegram.ChatAdministratorRights`

**Raises**

`telegram.error.TelegramError` –

**async get\_my\_description**(`language_code=None`, \*, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to get the current bot description for the given user language.

**Parameters**

**language\_code** (`str`, optional) – A two-letter ISO 639-1 language code or an empty string.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the bot description is returned.

**Return type**

`telegram.BotDescription`

**Raises**

`telegram.error.TelegramError` –

**async get\_my\_name**(`language_code=None`, \*, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to get the current bot name for the given user language.

**Parameters**

**language\_code** (`str`, optional) – A two-letter ISO 639-1 language code or an empty string.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.

- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the bot name is returned.

**Return type**

*telegram.BotName*

**Raises**

*telegram.error.TelegramError* –

```
async get_my_short_description(language_code=None, *, read_timeout=None,
                              write_timeout=None, connect_timeout=None,
                              pool_timeout=None, api_kwargs=None)
```

Use this method to get the current bot short description for the given user language.

**Parameters**

**language\_code** (*str*, optional) – A two-letter ISO 639-1 language code or an empty string.

**Keyword Arguments**

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the bot short description is returned.

**Return type**

*telegram.BotShortDescription*

**Raises**

*telegram.error.TelegramError* –

```
async get_sticker_set(name, *, read_timeout=None, write_timeout=None, connect_timeout=None,
                      pool_timeout=None, api_kwargs=None)
```

Use this method to get a sticker set.

**Parameters**

**name** (*str*) – Name of the sticker set.

**Keyword Arguments**

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.

- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

`telegram.StickerSet`

**Raises**

`telegram.error.TelegramError` –

**async get\_updates**(`offset=None`, `limit=None`, `timeout=None`, `allowed_updates=None`, \*, `read_timeout=2`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to receive incoming updates using long polling.

---

**Note:**

1. This method will not work if an outgoing webhook is set up.
  2. In order to avoid getting duplicate updates, recalculate offset after each server response.
  3. To take full advantage of this library take a look at `telegram.ext.Updater`
- 

**See also:**

`telegram.ext.Application.run_polling()`, `telegram.ext.Updater.start_polling()`

Changed in version 20.0: Returns a tuple instead of a list.

**Parameters**

- **offset** (`int`, optional) – Identifier of the first update to be returned. Must be greater by one than the highest among the identifiers of previously received updates. By default, updates starting with the earliest unconfirmed update are returned. An update is considered confirmed as soon as this method is called with an offset higher than its `telegram.Update.update_id`. The negative offset can be specified to retrieve updates starting from -offset update from the end of the updates queue. All previous updates will be forgotten.
- **limit** (`int`, optional) – Limits the number of updates to be retrieved. Values between 1- 100 are accepted. Defaults to 100.
- **timeout** (`int`, optional) – Timeout in seconds for long polling. Defaults to 0, i.e. usual short polling. Should be positive, short polling should be used for testing purposes only.
- **allowed\_updates** (`Sequence[str]`, optional) – A sequence the types of updates you want your bot to receive. For example, specify ["message", "edited\_channel\_post", "callback\_query"] to only receive updates of these types. See `telegram.Update` for a complete list of available update types. Specify an empty sequence to receive all updates except `telegram.Update.chat_member` (default). If not specified, the previous setting will be used. Please note that this parameter doesn't affect updates created before the call to the `get_updates`, so unwanted updates may be received for a short period of time.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.



**Keyword Arguments**

- **read\_timeout** (*float*, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to 2. *timeout* will be added to this value.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

Tuple[`telegram.Update`]

**Raises**

`telegram.error.TelegramError` –

```
async get_user_profile_photos(user_id, offset=None, limit=None, *, read_timeout=None,
                              write_timeout=None, connect_timeout=None, pool_timeout=None,
                              api_kwargs=None)
```

Use this method to get a list of profile pictures for a user.

---

**Shortcuts**

`telegram.User.get_profile_photos()`

---

**Parameters**

- **user\_id** (*int*) – Unique identifier of the target user.
- **offset** (*int*, optional) – Sequential number of the first photo to be returned. By default, all photos are returned.
- **limit** (*int*, optional) – Limits the number of photos to be retrieved. Values between 1- 100 are accepted. Defaults to 100.

**Keyword Arguments**

- **read\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

`telegram.UserProfilePhotos`

**Raises**

`telegram.error.TelegramError` –



```
async get_webhook_info(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                      pool_timeout=None, api_kwargs=None)
```

Use this method to get current webhook status. Requires no parameters.

If the bot is using `get_updates()`, will return an object with the `telegram.WebhookInfo.url` field empty.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

`telegram.WebhookInfo`

```
async hideGeneralForumTopic(chat_id, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `hide_general_forum_topic()`

```
async hide_general_forum_topic(chat_id, *, read_timeout=None, write_timeout=None,
                              connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to hide the ‘General’ topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights. The topic will be automatically closed if it was open.

---

#### Shortcuts

`telegram.Chat.hide_general_forum_topic()`

---

New in version 20.0.

#### Parameters

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –**property id**

Unique identifier for this bot. Shortcut for the corresponding attribute of `bot`.

**Type**`int`**async initialize()**

Initialize resources used by this class. Currently calls `get_me()` to cache `bot` and calls `telegram.request.BaseRequest.initialize()` for the request objects used by this bot.

**See also:**`shutdown()`

New in version 20.0.

**property last\_name**

Optional. Bot's last name. Shortcut for the corresponding attribute of `bot`.

**Type**`str`

**async leaveChat**(`chat_id`, \*, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Alias for `leave_chat()`

**async leave\_chat**(`chat_id`, \*, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method for your bot to leave a group, supergroup or channel.

---

**Shortcuts**`telegram.Chat.leave()`

---

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –**property link**

Convenience property. Returns the t.me link of the bot.

**Type**`str`**property local\_mode**

Whether this bot is running in local mode.

New in version 20.0.

**Type**`bool`

**async logOut**(\**, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Alias for `log_out()`

**async log\_out**(\**, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Use this method to log out from the cloud Bot API server before launching the bot locally. You *must* log out the bot before running it locally, otherwise there is no guarantee that the bot will receive updates. After a successful call, you can immediately log in on a local server, but will not be able to log in back to the cloud Bot API server for 10 minutes.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success

**Return type**`True`**Raises**`telegram.error.TelegramError` –**property name**

Bot's @username. Shortcut for the corresponding attribute of `bot`.

**Type**`str`

**async pinChatMessage**(*chat\_id, message\_id, disable\_notification=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Alias for `pin_chat_message()`

```
async pin_chat_message(chat_id, message_id, disable_notification=None, *, read_timeout=None,
                       write_timeout=None, connect_timeout=None, pool_timeout=None,
                       api_kwargs=None)
```

Use this method to add a message to the list of pinned messages in a chat. If the chat is not a private chat, the bot must be an administrator in the chat for this to work and must have the `can_pin_messages` admin right in a supergroup or `can_edit_messages` admin right in a channel.

---

### Shortcuts

- `telegram.Chat.pin_message()`
  - `telegram.Message.pin()`
  - `telegram.User.pin_message()`
- 

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **message\_id** (`int`) – Identifier of a message to pin.
- **disable\_notification** (`bool`, optional) – Pass `True`, if it is not necessary to send a notification to all chat members about the new pinned message. Notifications are always disabled in channels and private chats.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, `True` is returned.

### Return type

`bool`

### Raises

`telegram.error.TelegramError` –

### property private\_key

Deserialized private key for decryption of telegram passport data.

New in version 20.0.

```
async promoteChatMember(chat_id, user_id, can_change_info=None, can_post_messages=None,
                           can_edit_messages=None, can_delete_messages=None,
                           can_invite_users=None, can_restrict_members=None,
                           can_pin_messages=None, can_promote_members=None,
                           is_anonymous=None, can_manage_chat=None,
                           can_manage_video_chats=None, can_manage_topics=None,
                           can_post_stories=None, can_edit_stories=None,
                           can_delete_stories=None, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `promote_chat_member()`

```
async promote_chat_member(chat_id, user_id, can_change_info=None, can_post_messages=None,
                           can_edit_messages=None, can_delete_messages=None,
                           can_invite_users=None, can_restrict_members=None,
                           can_pin_messages=None, can_promote_members=None,
                           is_anonymous=None, can_manage_chat=None,
                           can_manage_video_chats=None, can_manage_topics=None,
                           can_post_stories=None, can_edit_stories=None,
                           can_delete_stories=None, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to promote or demote a user in a supergroup or a channel. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights. Pass `False` for all boolean parameters to demote a user.

---

### Shortcuts

`telegram.Chat.promote_member()`

---

Changed in version 20.0: The argument `can_manage_voice_chats` was renamed to `can_manage_video_chats` in accordance to Bot API 6.0.

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **user\_id** (`int`) – Unique identifier of the target user.
- **is\_anonymous** (`bool`, optional) – Pass `True`, if the administrator's presence in the chat is hidden.
- **can\_manage\_chat** (`bool`, optional) – Pass `True`, if the administrator can access the chat event log, chat statistics, boost list in channels, see channel members, report spam messages, see anonymous administrators in supergroups and ignore slow mode. Implied by any other administrator privilege.

New in version 13.4.

- **can\_manage\_video\_chats** (`bool`, optional) – Pass `True`, if the administrator can manage video chats.

New in version 20.0.

- **can\_change\_info** (`bool`, optional) – Pass `True`, if the administrator can change chat title, photo and other settings.
- **can\_post\_messages** (`bool`, optional) – Pass `True`, if the administrator can post messages in the channel, or access channel statistics; channels only.
- **can\_edit\_messages** (`bool`, optional) – Pass `True`, if the administrator can edit messages of other users and can pin messages, channels only.
- **can\_delete\_messages** (`bool`, optional) – Pass `True`, if the administrator can delete messages of other users.

- **can\_invite\_users** (*bool*, optional) – Pass *True*, if the administrator can invite new users to the chat.
- **can\_restrict\_members** (*bool*, optional) – Pass *True*, if the administrator can restrict, ban or unban chat members, or access supergroup statistics.
- **can\_pin\_messages** (*bool*, optional) – Pass *True*, if the administrator can pin messages, supergroups only.
- **can\_promote\_members** (*bool*, optional) – Pass *True*, if the administrator can add new administrators with a subset of their own privileges or demote administrators that they have promoted, directly or indirectly (promoted by administrators that were appointed by the user).
- **can\_manage\_topics** (*bool*, optional) – Pass *True*, if the user is allowed to create, rename, close, and reopen forum topics; supergroups only.

New in version 20.0.

- **can\_post\_stories** (*bool*, optional) – Pass *True*, if the administrator can post stories in the channel; channels only.

New in version 20.6.

- **can\_edit\_stories** (*bool*, optional) – Pass *True*, if the administrator can edit stories posted by other users; channels only.

New in version 20.6.

- **can\_delete\_stories** (*bool*, optional) – Pass *True*, if the administrator can delete stories posted by other users; channels only.

New in version 20.6.

#### Keyword Arguments

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, *True* is returned.

#### Return type

*bool*

#### Raises

*telegram.error.TelegramError* –

```
async reopenForumTopic(chat_id, message_thread_id, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for *reopen\_forum\_topic()*

```
async reopenGeneralForumTopic(chat_id, *, read_timeout=None, write_timeout=None,
                              connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for *reopen\_general\_forum\_topic()*

```
async reopen_forum_topic(chat_id, message_thread_id, *, read_timeout=None,
                          write_timeout=None, connect_timeout=None, pool_timeout=None,
                          api_kwargs=None)
```

Use this method to reopen a closed topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have [can\\_manage\\_topics](#) administrator rights, unless it is the creator of the topic.

---

#### Shortcuts

- [telegram.Chat.reopen\\_forum\\_topic\(\)](#)
  - [telegram.Message.reopen\\_forum\\_topic\(\)](#)
- 

New in version 20.0.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **message\_thread\_id** (`int`) – Unique identifier for the target message thread of the forum topic.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.read\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.write\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.connect\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to [telegram.request.BaseRequest.post.pool\\_timeout](#). Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

[telegram.error.TelegramError](#) –

```
async reopen_general_forum_topic(chat_id, *, read_timeout=None, write_timeout=None,
                                 connect_timeout=None, pool_timeout=None,
                                 api_kwargs=None)
```

Use this method to reopen a closed ‘General’ topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have [can\\_manage\\_topics](#) administrator rights. The topic will be automatically unhidden if it was hidden.

---

#### Shortcuts

[telegram.Chat.reopen\\_general\\_forum\\_topic\(\)](#)

---

New in version 20.0.

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

**property request**

The `BaseRequest` object used by this bot.

**Warning:** Requests to the Bot API are made by the various methods of this class. This attribute should *not* be used manually.

```
async restrictChatMember(chat_id, user_id, permissions, until_date=None,
                          use_independent_chat_permissions=None, *, read_timeout=None,
                          write_timeout=None, connect_timeout=None, pool_timeout=None,
                          api_kwargs=None)
```

Alias for `restrict_chat_member()`

```
async restrict_chat_member(chat_id, user_id, permissions, until_date=None,
                           use_independent_chat_permissions=None, *, read_timeout=None,
                           write_timeout=None, connect_timeout=None, pool_timeout=None,
                           api_kwargs=None)
```

Use this method to restrict a user in a supergroup. The bot must be an administrator in the supergroup for this to work and must have the appropriate admin rights. Pass `True` for all boolean parameters to lift restrictions from a user.

---

**Shortcuts**

`telegram.Chat.restrict_member()`

---

**See also:**

`telegram.ChatPermissions.all_permissions()`

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).



- **user\_id** (`int`) – Unique identifier of the target user.
- **until\_date** (`int` | `datetime.datetime`, optional) – Date when restrictions will be lifted for the user, unix time. If user is restricted for more than 366 days or less than 30 seconds from the current time, they are considered to be restricted forever. For timezone naive `datetime.datetime` objects, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
- **permissions** (`telegram.ChatPermissions`) – An object for new user permissions.
- **use\_independent\_chat\_permissions** (`bool`, optional) – Pass `True` if chat permissions are set independently. Otherwise, the `can_send_other_messages` and `can_add_web_page_previews` permissions will imply the `can_send_messages`, `can_send_audios`, `can_send_documents`, `can_send_photos`, `can_send_videos`, `can_send_video_notes`, and `can_send_voice_notes` permissions; the `can_send_polls` permission will imply the `can_send_messages` permission.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

**async revokeChatInviteLink**(*chat\_id*, *invite\_link*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `revoke_chat_invite_link()`

**async revoke\_chat\_invite\_link**(*chat\_id*, *invite\_link*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to revoke an invite link created by the bot. If the primary link is revoked, a new link is automatically generated. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

#### Shortcuts

`telegram.Chat.revoke_invite_link()`

---

New in version 13.4.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).

- **invite\_link** (`str` | `telegram.ChatInviteLink`) – The invite link to revoke.

Changed in version 20.0: Now also accepts `telegram.ChatInviteLink` instances.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

`telegram.ChatInviteLink`

#### Raises

`telegram.error.TelegramError` –

```
async sendAnimation(chat_id, animation, duration=None, width=None, height=None, caption=None,
                    parse_mode=None, disable_notification=None, reply_to_message_id=None,
                    reply_markup=None, allow_sending_without_reply=None,
                    caption_entities=None, protect_content=None, message_thread_id=None,
                    has_spoiler=None, thumbnail=None, *, filename=None, read_timeout=None,
                    write_timeout=20, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Alias for `send_animation()`

```
async sendAudio(chat_id, audio, duration=None, performer=None, title=None, caption=None,
                disable_notification=None, reply_to_message_id=None, reply_markup=None,
                parse_mode=None, allow_sending_without_reply=None, caption_entities=None,
                protect_content=None, message_thread_id=None, thumbnail=None, *,
                filename=None, read_timeout=None, write_timeout=20, connect_timeout=None,
                pool_timeout=None, api_kwargs=None)
```

Alias for `send_audio()`

```
async sendChatAction(chat_id, action, message_thread_id=None, *, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Alias for `send_chat_action()`

```
async sendContact(chat_id, phone_number=None, first_name=None, last_name=None,
                  disable_notification=None, reply_to_message_id=None, reply_markup=None,
                  vcard=None, allow_sending_without_reply=None, protect_content=None,
                  message_thread_id=None, *, contact=None, read_timeout=None,
                  write_timeout=None, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Alias for `send_contact()`

```
async sendDice(chat_id, disable_notification=None, reply_to_message_id=None, reply_markup=None,
               emoji=None, allow_sending_without_reply=None, protect_content=None,
               message_thread_id=None, *, read_timeout=None, write_timeout=None,
               connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `send_dice()`

```
async sendDocument(chat_id, document, caption=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, parse_mode=None,
                    disable_content_type_detection=None, allow_sending_without_reply=None,
                    caption_entities=None, protect_content=None, message_thread_id=None,
                    thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                    connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [send\\_document\(\)](#)

```
async sendGame(chat_id, game_short_name, disable_notification=None, reply_to_message_id=None,
                reply_markup=None, allow_sending_without_reply=None, protect_content=None,
                message_thread_id=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [send\\_game\(\)](#)

```
async sendInvoice(chat_id, title, description, payload, provider_token, currency, prices,
                  start_parameter=None, photo_url=None, photo_size=None, photo_width=None,
                  photo_height=None, need_name=None, need_phone_number=None,
                  need_email=None, need_shipping_address=None, is_flexible=None,
                  disable_notification=None, reply_to_message_id=None, reply_markup=None,
                  provider_data=None, send_phone_number_to_provider=None,
                  send_email_to_provider=None, allow_sending_without_reply=None,
                  max_tip_amount=None, suggested_tip_amounts=None, protect_content=None,
                  message_thread_id=None, *, read_timeout=None, write_timeout=None,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [send\\_invoice\(\)](#)

```
async sendLocation(chat_id, latitude=None, longitude=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, live_period=None,
                    horizontal_accuracy=None, heading=None, proximity_alert_radius=None,
                    allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, *, location=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Alias for [send\\_location\(\)](#)

```
async sendMediaGroup(chat_id, media, disable_notification=None, reply_to_message_id=None,
                      allow_sending_without_reply=None, protect_content=None,
                      message_thread_id=None, *, read_timeout=None, write_timeout=20,
                      connect_timeout=None, pool_timeout=None, api_kwargs=None,
                      caption=None, parse_mode=None, caption_entities=None)
```

Alias for [send\\_media\\_group\(\)](#)

```
async sendMessage(chat_id, text, parse_mode=None, entities=None,
                  disable_web_page_preview=None, disable_notification=None,
                  protect_content=None, reply_to_message_id=None,
                  allow_sending_without_reply=None, reply_markup=None,
                  message_thread_id=None, *, read_timeout=None, write_timeout=None,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for [send\\_message\(\)](#)

```
async sendPhoto(chat_id, photo, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, parse_mode=None,
                 allow_sending_without_reply=None, caption_entities=None, protect_content=None,
                 message_thread_id=None, has_spoiler=None, *, filename=None,
                 read_timeout=None, write_timeout=20, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Alias for [send\\_photo\(\)](#)

```
async sendPoll(chat_id, question, options, is_anonymous=None, type=None,
                allows_multiple_answers=None, correct_option_id=None, is_closed=None,
                disable_notification=None, reply_to_message_id=None, reply_markup=None,
                explanation=None, explanation_parse_mode=None, open_period=None,
                close_date=None, allow_sending_without_reply=None, explanation_entities=None,
                protect_content=None, message_thread_id=None, *, read_timeout=None,
                write_timeout=None, connect_timeout=None, pool_timeout=None,
                api_kwargs=None)
```

Alias for `send_poll()`

```
async sendSticker(chat_id, sticker, disable_notification=None, reply_to_message_id=None,
                  reply_markup=None, allow_sending_without_reply=None, protect_content=None,
                  message_thread_id=None, emoji=None, *, read_timeout=None,
                  write_timeout=20, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Alias for `send_sticker()`

```
async sendVenue(chat_id, latitude=None, longitude=None, title=None, address=None,
                 foursquare_id=None, disable_notification=None, reply_to_message_id=None,
                 reply_markup=None, foursquare_type=None, google_place_id=None,
                 google_place_type=None, allow_sending_without_reply=None,
                 protect_content=None, message_thread_id=None, *, venue=None,
                 read_timeout=None, write_timeout=None, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Alias for `send_venue()`

```
async sendVideo(chat_id, video, duration=None, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, width=None, height=None,
                 parse_mode=None, supports_streaming=None, allow_sending_without_reply=None,
                 caption_entities=None, protect_content=None, message_thread_id=None,
                 has_spoiler=None, thumbnail=None, *, filename=None, read_timeout=None,
                 write_timeout=20, connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `send_video()`

```
async sendVideoNote(chat_id, video_note, duration=None, length=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None,
                    allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, thumbnail=None, *, filename=None,
                    read_timeout=None, write_timeout=20, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Alias for `send_video_note()`

```
async sendVoice(chat_id, voice, duration=None, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, parse_mode=None,
                 allow_sending_without_reply=None, caption_entities=None, protect_content=None,
                 message_thread_id=None, *, filename=None, read_timeout=None,
                 write_timeout=20, connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `send_voice()`

```
async send_animation(chat_id, animation, duration=None, width=None, height=None,
                     caption=None, parse_mode=None, disable_notification=None,
                     reply_to_message_id=None, reply_markup=None,
                     allow_sending_without_reply=None, caption_entities=None,
                     protect_content=None, message_thread_id=None, has_spoiler=None,
                     thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                     connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to send animation files (GIF or H.264/MPEG-4 AVC video without sound). Bots can currently send animation files of up to **50 MB** in size, this limit may be changed in the future.

---

**Note:** `thumbnail` will be ignored for small files, for which Telegram can easily generate thumbnails. However, this behaviour is undocumented and might be changed by Telegram.

---

---

### Shortcuts

- `telegram.Chat.send_animation()`
  - `telegram.Message.reply_animation()`
  - `telegram.User.send_animation()`
- 

### See also:

#### Working with Files and Media

Changed in version 20.5: Removed deprecated argument `thumb`. Use `thumbnail` instead.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **animation** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.Animation`) – Animation to send. Pass a `file_id` as `String` to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a `String` for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as `bytes` or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as `bytes` or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.Animation` object to send.

Changed in version 13.2: Accept `bytes` as input.

- **duration** (`int`, optional) – Duration of sent animation in seconds.
- **width** (`int`, optional) – Animation width.
- **height** (`int`, optional) – Animation height.
- **caption** (`str`, optional) – Animation caption (may also be used when resending animations by `file_id`), 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **has\_spoiler** (`bool`, optional) – Pass `True` if the animation needs to be covered with a spoiler animation.

New in version 20.0.

- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting.

New in version 20.2.

#### Keyword Arguments

- **filename** (`str`, optional) – Custom file name for the animation, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

```
async send_audio(chat_id, audio, duration=None, performer=None, title=None, caption=None,
                 disable_notification=None, reply_to_message_id=None, reply_markup=None,
                 parse_mode=None, allow_sending_without_reply=None, caption_entities=None,
                 protect_content=None, message_thread_id=None, thumbnail=None, *,
                 filename=None, read_timeout=None, write_timeout=20, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```



Use this method to send audio files, if you want Telegram clients to display them in the music player. Your audio must be in the `.mp3` or `.m4a` format.

Bots can currently send audio files of up to **50 MB** in size, this limit may be changed in the future.

For sending voice messages, use the `send_voice()` method instead.

---

### Shortcuts

- `telegram.Chat.send_audio()`
  - `telegram.Message.reply_audio()`
  - `telegram.User.send_audio()`
- 

### See also:

[Working with Files and Media](#)

Changed in version 20.5: Removed deprecated argument `thumb`. Use `thumbnail` instead.

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **audio** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.Audio`) – Audio file to send. Pass a `file_id` as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.Audio` object to send.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **caption** (`str`, optional) – Audio caption, 0-**1024** characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and [formatting options](#) for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **duration** (`int`, optional) – Duration of sent audio in seconds.
- **performer** (`str`, optional) – Performer.
- **title** (`str`, optional) – Track name.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting.

New in version 20.2.

#### Keyword Arguments

- **filename** (`str`, optional) – Custom file name for the audio, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent `Message` is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

```
async send_chat_action(chat_id, action, message_thread_id=None, *, read_timeout=None,
                       write_timeout=None, connect_timeout=None, pool_timeout=None,
                       api_kwargs=None)
```

Use this method when you need to tell the user that something is happening on the bot's side. The status is set for 5 seconds or less (when a message arrives from your bot, Telegram clients clear its typing status). Telegram only recommends using this method when a response from the bot will take a noticeable amount of time to arrive.



---

### Shortcuts

- `telegram.Chat.send_action()`
  - `telegram.Chat.send_chat_action()`
  - `telegram.Message.reply_chat_action()`
  - `telegram.User.send_action()`
  - `telegram.User.send_chat_action()`
- 

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **action** (`str`) – Type of action to broadcast. Choose one, depending on what the user is about to receive. For convenience look at the constants in `telegram.constants.ChatAction`.
- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, `True` is returned.

### Return type

`bool`

### Raises

`telegram.error.TelegramError` –

```
async send_contact(chat_id, phone_number=None, first_name=None, last_name=None,
                  disable_notification=None, reply_to_message_id=None, reply_markup=None,
                  vcard=None, allow_sending_without_reply=None, protect_content=None,
                  message_thread_id=None, *, contact=None, read_timeout=None,
                  write_timeout=None, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Use this method to send phone contacts.

---

**Note:** You can either supply `contact` or `phone_number` and `first_name` with optionally `last_name` and optionally `vcard`.

---

---

### Shortcuts

- `telegram.Chat.send_contact()`
  - `telegram.Message.reply_contact()`
  - `telegram.User.send_contact()`
- 

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **phone\_number** (`str`, optional) – Contact’s phone number.
- **first\_name** (`str`, optional) – Contact’s first name.
- **last\_name** (`str`, optional) – Contact’s last name.
- **vcard** (`str`, optional) – Additional data about the contact in the form of a vCard, 0-2048 bytes.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

### Keyword Arguments

- **contact** (`telegram.Contact`, optional) – The contact to send.
- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, the sent Message is returned.

**Return type**`telegram.Message`**Raises**`telegram.error.TelegramError` –

```
async send_dice(chat_id, disable_notification=None, reply_to_message_id=None,
                reply_markup=None, emoji=None, allow_sending_without_reply=None,
                protect_content=None, message_thread_id=None, *, read_timeout=None,
                write_timeout=None, connect_timeout=None, pool_timeout=None,
                api_kwargs=None)
```

Use this method to send an animated emoji that will display a random value.

---

**Shortcuts**

- `telegram.Chat.send_dice()`
  - `telegram.Message.reply_dice()`
  - `telegram.User.send_dice()`
- 

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user
- **emoji** (`str`, optional) – Emoji on which the dice throw animation is based. Currently, must be one of `telegram.constants.DiceEmoji`. Dice can have values 1-6 for " and ", values 1-5 for " and ", and values 1- 64 for ". Defaults to ".

Changed in version 13.4: Added the " emoji.

- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.
- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 13.10.

New in version 20.0.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the sent Message is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

```
async send_document(chat_id, document, caption=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, parse_mode=None,
                    disable_content_type_detection=None, allow_sending_without_reply=None,
                    caption_entities=None, protect_content=None, message_thread_id=None,
                    thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                    connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to send general files.

Bots can currently send files of any type of up to **50 MB** in size, this limit may be changed in the future.

---

**Shortcuts**

- `telegram.Chat.send_document()`
  - `telegram.Message.reply_document()`
  - `telegram.User.send_document()`
- 

**See also:**

[Working with Files and Media](#)

Changed in version 20.5: Removed deprecated argument `thumb`. Use `thumbnail` instead.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **document** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.Document`) – File to send. Pass a `file_id` as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.Document` object to send.

---

**Note:** Sending by URL will currently only work GIF, PDF & ZIP files.

---

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **caption** (`str`, optional) – Document caption (may also be used when resending documents by `file_id`), 0-**1024** characters after entities parsing.

- **disable\_content\_type\_detection** (`bool`, optional) – Disables automatic server-side content type detection for files uploaded using multipart/form-data.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting.

New in version 20.2.

#### Keyword Arguments

- **filename** (`str`, optional) – Custom file name for the document, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.
- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to 20.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the sent Message is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

**async send\_game**(*chat\_id*, *game\_short\_name*, *disable\_notification=None*, *reply\_to\_message\_id=None*, *reply\_markup=None*, *allow\_sending\_without\_reply=None*, *protect\_content=None*, *message\_thread\_id=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to send a game.

---

**Shortcuts**

- `telegram.Chat.send_game()`
  - `telegram.Message.reply_game()`
  - `telegram.User.send_game()`
- 

**Parameters**

- **chat\_id** (`int`) – Unique identifier for the target chat.
- **game\_short\_name** (`str`) – Short name of the game, serves as the unique identifier for the game. Set up your games via [@BotFather](#).
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.  
New in version 13.10.
- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.  
New in version 20.0.
- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for a new inline keyboard. If empty, one “Play game\_title” button will be shown. If not empty, the first button must launch the game.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the sent Message is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

```
async send_invoice(chat_id, title, description, payload, provider_token, currency, prices,
                  start_parameter=None, photo_url=None, photo_size=None, photo_width=None,
                  photo_height=None, need_name=None, need_phone_number=None,
                  need_email=None, need_shipping_address=None, is_flexible=None,
                  disable_notification=None, reply_to_message_id=None, reply_markup=None,
                  provider_data=None, send_phone_number_to_provider=None,
                  send_email_to_provider=None, allow_sending_without_reply=None,
                  max_tip_amount=None, suggested_tip_amounts=None, protect_content=None,
                  message_thread_id=None, *, read_timeout=None, write_timeout=None,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to send invoices.

**Warning:** As of API 5.2 `start_parameter` is an optional argument and therefore the order of the arguments had to be changed. Use keyword arguments to make sure that the arguments are passed correctly.

---

**Shortcuts**

- `telegram.Chat.send_invoice()`
  - `telegram.Message.reply_invoice()`
  - `telegram.User.send_invoice()`
- 

Changed in version 13.5: As of Bot API 5.2, the parameter `start_parameter` is optional.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **title** (`str`) – Product name. 1- 32 characters.
- **description** (`str`) – Product description. 1- 255 characters.
- **payload** (`str`) – Bot-defined invoice payload. 1- 128 bytes. This will not be displayed to the user, use for your internal processes.
- **provider\_token** (`str`) – Payments provider token, obtained via `@BotFather`.
- **currency** (`str`) – Three-letter ISO 4217 currency code, see [more on currencies](#).
- **prices** (Sequence[`telegram.LabeledPrice`]) – Price breakdown, a sequence of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.).

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.



- **max\_tip\_amount** (`int`, optional) – The maximum accepted amount for tips in the *smallest* units of the currency (integer, **not** float/double). For example, for a maximum tip of US\$ 1.45 pass `max_tip_amount = 145`. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies). Defaults to 0.

New in version 13.5.

- **suggested\_tip\_amounts** (`Sequence[int]`, optional) – An array of suggested amounts of tips in the *smallest* units of the currency (integer, **not** float/double). At most 4 suggested tip amounts can be specified. The suggested tip amounts must be positive, passed in a strictly increased order and must not exceed `max_tip_amount`.

New in version 13.5.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **start\_parameter** (`str`, optional) – Unique deep-linking parameter. If left empty, *forwarded copies* of the sent message will have a *Pay* button, allowing multiple users to pay directly from the forwarded message, using the same invoice. If non-empty, forwarded copies of the sent message will have a *URL* button with a deep link to the bot (instead of a *Pay* button), with the value used as the start parameter.

Changed in version 13.5: As of Bot API 5.2, this parameter is optional.

- **provider\_data** (`str` | `object`, optional) – data about the invoice, which will be shared with the payment provider. A detailed description of required fields should be provided by the payment provider. When an object is passed, it will be encoded as JSON.
- **photo\_url** (`str`, optional) – URL of the product photo for the invoice. Can be a photo of the goods or a marketing image for a service. People like it better when they see what they are paying for.
- **photo\_size** (`str`, optional) – Photo size.
- **photo\_width** (`int`, optional) – Photo width.
- **photo\_height** (`int`, optional) – Photo height.
- **need\_name** (`bool`, optional) – Pass `True`, if you require the user's full name to complete the order.
- **need\_phone\_number** (`bool`, optional) – Pass `True`, if you require the user's phone number to complete the order.
- **need\_email** (`bool`, optional) – Pass `True`, if you require the user's email to complete the order.
- **need\_shipping\_address** (`bool`, optional) – Pass `True`, if you require the user's shipping address to complete the order.
- **send\_phone\_number\_to\_provider** (`bool`, optional) – Pass `True`, if user's phone number should be sent to provider.
- **send\_email\_to\_provider** (`bool`, optional) – Pass `True`, if user's email address should be sent to provider.
- **is\_flexible** (`bool`, optional) – Pass `True`, if the final price depends on the shipping method.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.



- **message\_thread\_id** (*int*, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (*int*, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (*bool*, optional) – Pass *True*, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (*telegram.InlineKeyboardMarkup*, optional) – An object for an inline keyboard. If empty, one ‘Pay total price’ button will be shown. If not empty, the first button must be a Pay button.

#### Keyword Arguments

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

*telegram.Message*

#### Raises

*telegram.error.TelegramError* –

```
async send_location(chat_id, latitude=None, longitude=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, live_period=None,
                    horizontal_accuracy=None, heading=None, proximity_alert_radius=None,
                    allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, *, location=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Use this method to send point on the map.

---

**Note:** You can either supply a *latitude* and *longitude* or a *location*.

---

---

#### Shortcuts

- *telegram.Chat.send\_location()*
  - *telegram.Message.reply\_location()*
  - *telegram.User.send\_location()*
- 

#### Parameters

- **chat\_id** (*int* | *str*) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).

- **latitude** (`float`, optional) – Latitude of location.
- **longitude** (`float`, optional) – Longitude of location.
- **horizontal\_accuracy** (`int`, optional) – The radius of uncertainty for the location, measured in meters; 0-1500.
- **live\_period** (`int`, optional) – Period in seconds for which the location will be updated, should be between 60 and 86400.
- **heading** (`int`, optional) – For live locations, a direction in which the user is moving, in degrees. Must be between 1 and 360 if specified.
- **proximity\_alert\_radius** (`int`, optional) – For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters. Must be between 1 and 100000 if specified.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.  
New in version 13.10.
- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.  
New in version 20.0.
- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

#### Keyword Arguments

- **location** (`telegram.Location`, optional) – The location to send.
- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

```
async send_media_group(chat_id, media, disable_notification=None, reply_to_message_id=None,
                       allow_sending_without_reply=None, protect_content=None,
                       message_thread_id=None, *, read_timeout=None, write_timeout=20,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None,
                       caption=None, parse_mode=None, caption_entities=None)
```

Use this method to send a group of photos, videos, documents or audios as an album. Documents and audio files can be only grouped in an album with messages of the same type.

---

**Note:** If you supply a `caption` (along with either `parse_mode` or `caption_entities`), then items in `media` must have no captions, and vice versa.

---

---

### Shortcuts

- `telegram.Chat.send_media_group()`
  - `telegram.Message.reply_media_group()`
  - `telegram.User.send_media_group()`
- 

### See also:

[Working with Files and Media](#)

Changed in version 20.0: Returns a tuple instead of a list.

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **media** (Sequence[`telegram.InputMediaAudio`, `telegram.InputMediaDocument`, `telegram.InputMediaPhoto`, `telegram.InputMediaVideo`]) – An array describing messages to be sent, must include 2- 10 items.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.

### Keyword Arguments

- **caption** (`str`, optional) – Caption that will be added to the first element of `media`, so that it will be used as caption for the whole media group. Defaults to `None`.

New in version 20.0.

- **parse\_mode** (`str` | `None`, optional) – Parse mode for `caption`. See the constants in `telegram.constants.ParseMode` for the available modes.

New in version 20.0.

- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – List of special entities for `caption`, which can be specified instead of `parse_mode`. Defaults to `None`.

New in version 20.0.

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

An array of the sent Messages.

#### Return type

`Tuple[telegram.Message]`

#### Raises

`telegram.error.TelegramError` –

```
async send_message(chat_id, text, parse_mode=None, entities=None,
                   disable_web_page_preview=None, disable_notification=None,
                   protect_content=None, reply_to_message_id=None,
                   allow_sending_without_reply=None, reply_markup=None,
                   message_thread_id=None, *, read_timeout=None, write_timeout=None,
                   connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to send text messages.

---

#### Shortcuts

- `telegram.Chat.send_message()`
  - `telegram.Message.reply_html()`
  - `telegram.Message.reply_markdown_v2()`
  - `telegram.Message.reply_markdown()`
  - `telegram.Message.reply_text()`
  - `telegram.User.send_message()`
- 

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **text** (`str`) – Text of the message to be sent. Max `4096` characters after entities parsing.
- **parse\_mode** (`str`) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.

- **entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in message text, which can be specified instead of [parse\\_mode](#).

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list.

- **disable\_web\_page\_preview** ([bool](#), optional) – Disables link previews for links in this message.
- **disable\_notification** ([bool](#), optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** ([bool](#), optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **reply\_to\_message\_id** ([int](#), optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** ([bool](#), optional) – Pass [True](#), if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** ([InlineKeyboardMarkup](#) | [ReplyKeyboardMarkup](#) | [ReplyKeyboardRemove](#) | [ForceReply](#), optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **message\_thread\_id** ([int](#), optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

#### Keyword Arguments

- **read\_timeout** ([float](#) | [None](#), optional) – Value to pass to [telegram.request.BaseRequest.post.read\\_timeout](#). Defaults to [DEFAULT\\_NONE](#).
- **write\_timeout** ([float](#) | [None](#), optional) – Value to pass to [telegram.request.BaseRequest.post.write\\_timeout](#). Defaults to [DEFAULT\\_NONE](#).
- **connect\_timeout** ([float](#) | [None](#), optional) – Value to pass to [telegram.request.BaseRequest.post.connect\\_timeout](#). Defaults to [DEFAULT\\_NONE](#).
- **pool\_timeout** ([float](#) | [None](#), optional) – Value to pass to [telegram.request.BaseRequest.post.pool\\_timeout](#). Defaults to [DEFAULT\\_NONE](#).
- **api\_kwargs** ([dict](#), optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent message is returned.

#### Return type

[telegram.Message](#)

#### Raises

[telegram.error.TelegramError](#) –

```
async send_photo(chat_id, photo, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, parse_mode=None,
                 allow_sending_without_reply=None, caption_entities=None,
                 protect_content=None, message_thread_id=None, has_spoiler=None, *,
                 filename=None, read_timeout=None, write_timeout=20, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Use this method to send photos.

---

### Shortcuts

- `telegram.Chat.send_photo()`
  - `telegram.Message.reply_photo()`
  - `telegram.User.send_photo()`
- 

### See also:

Working with Files and Media

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **photo** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.PhotoSize`) – Photo to send. Pass a `file_id` as `String` to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a `String` for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as `bytes` or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as `bytes` or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.PhotoSize` object to send.

**Caution:**

- The photo must be at most 10MB in size.
- The photo's width and height must not exceed 10000 in total.
- Width and height ratio must be at most 20.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **caption** (`str`, optional) – Photo caption (may also be used when resending photos by `file_id`), 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **has\_spoiler** (`bool`, optional) – Pass `True` if the photo needs to be covered with a spoiler animation.

New in version 20.0.

#### Keyword Arguments

- **filename** (`str`, optional) – Custom file name for the photo, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

```
async send_poll(chat_id, question, options, is_anonymous=None, type=None,
                allows_multiple_answers=None, correct_option_id=None, is_closed=None,
                disable_notification=None, reply_to_message_id=None, reply_markup=None,
                explanation=None, explanation_parse_mode=None, open_period=None,
                close_date=None, allow_sending_without_reply=None, explanation_entities=None,
                protect_content=None, message_thread_id=None, *, read_timeout=None,
                write_timeout=None, connect_timeout=None, pool_timeout=None,
                api_kwargs=None)
```

Use this method to send a native poll.

---

#### Shortcuts

- `telegram.Chat.send_poll()`
  - `telegram.Message.reply_poll()`
  - `telegram.User.send_poll()`
-



### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **question** (`str`) – Poll question, 1- 300 characters.
- **options** (`Sequence[str]`) – Sequence of answer options, 2- 10 strings 1- 100 characters each.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **is\_anonymous** (`bool`, optional) – `True`, if the poll needs to be anonymous, defaults to `True`.
- **type** (`str`, optional) – Poll type, 'quiz' or 'regular', defaults to 'regular'.
- **allows\_multiple\_answers** (`bool`, optional) – `True`, if the poll allows multiple answers, ignored for polls in quiz mode, defaults to `False`.
- **correct\_option\_id** (`int`, optional) – 0-based identifier of the correct answer option, required for polls in quiz mode.
- **explanation** (`str`, optional) – Text that is shown when a user chooses an incorrect answer or taps on the lamp icon in a quiz-style poll, 0-200 characters with at most 2 line feeds after entities parsing.
- **explanation\_parse\_mode** (`str`, optional) – Mode for parsing entities in the explanation. See the constants in `telegram.constants.ParseMode` for the available modes.
- **explanation\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in message text, which can be specified instead of `explanation_parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **open\_period** (`int`, optional) – Amount of time in seconds the poll will be active after creation, 5- 600. Can't be used together with `close_date`.
- **close\_date** (`int` | `datetime.datetime`, optional) – Point in time (Unix timestamp) when the poll will be automatically closed. Must be at least 5 and no more than 600 seconds in the future. Can't be used together with `open_period`. For timezone naive `datetime.datetime` objects, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
- **is\_closed** (`bool`, optional) – Pass `True`, if the poll needs to be immediately closed. This can be useful for poll preview.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.



- **reply\_markup** (*InlineKeyboardMarkup* | *ReplyKeyboardMarkup* | *ReplyKeyboardRemove* | *ForceReply*, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

#### Keyword Arguments

- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

*telegram.Message*

#### Raises

*telegram.error.TelegramError* –

```
async send_sticker(chat_id, sticker, disable_notification=None, reply_to_message_id=None,
                  reply_markup=None, allow_sending_without_reply=None,
                  protect_content=None, message_thread_id=None, emoji=None, *,
                  read_timeout=None, write_timeout=20, connect_timeout=None,
                  pool_timeout=None, api_kwargs=None)
```

Use this method to send static `.WEBP`, animated `.TGS`, or video `.WEBM` stickers.

---

#### Shortcuts

- *telegram.Chat.send\_sticker()*
  - *telegram.Message.reply\_sticker()*
  - *telegram.User.send\_sticker()*
- 

#### See also:

[Working with Files and Media](#)

#### Parameters

- **chat\_id** (*int* | *str*) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **sticker** (*str* | *file object* | *bytes* | *pathlib.Path* | *telegram.Sticker*) – Sticker to send. Pass a *file\_id* as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a *file object* (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or *pathlib.Path* object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the *local\_mode* setting. Video stickers can only be sent by a *file\_id*. Animated stickers can't be sent via an HTTP URL.

Lastly you can pass an existing `telegram.Sticker` object to send.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **emoji** (`str`, optional) – Emoji associated with the sticker; only for just uploaded stickers

New in version 20.2.

- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

```
async send_venue(chat_id, latitude=None, longitude=None, title=None, address=None,
                 foursquare_id=None, disable_notification=None, reply_to_message_id=None,
                 reply_markup=None, foursquare_type=None, google_place_id=None,
                 google_place_type=None, allow_sending_without_reply=None,
                 protect_content=None, message_thread_id=None, *, venue=None,
                 read_timeout=None, write_timeout=None, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Use this method to send information about a venue.

---

**Note:**

- You can either supply `venue`, or `latitude`, `longitude`, `title` and `address` and optionally `foursquare_id` and `foursquare_type` or optionally `google_place_id` and `google_place_type`.
  - Foursquare details and Google Place details are mutually exclusive. However, this behaviour is undocumented and might be changed by Telegram.
- 

---

**Shortcuts**

- `telegram.Chat.send_venue()`
  - `telegram.Message.reply_venue()`
  - `telegram.User.send_venue()`
- 

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **latitude** (`float`, optional) – Latitude of venue.
- **longitude** (`float`, optional) – Longitude of venue.
- **title** (`str`, optional) – Name of the venue.
- **address** (`str`, optional) – Address of the venue.
- **foursquare\_id** (`str`, optional) – Foursquare identifier of the venue.
- **foursquare\_type** (`str`, optional) – Foursquare type of the venue, if known. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”.)
- **google\_place\_id** (`str`, optional) – Google Places identifier of the venue.
- **google\_place\_type** (`str`, optional) – Google Places type of the venue. (See [supported types](#).)
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.  
New in version 13.10.
- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.  
New in version 20.0.
- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.

- **reply\_markup** (*InlineKeyboardMarkup* | *ReplyKeyboardMarkup* | *ReplyKeyboardRemove* | *ForceReply*, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

#### Keyword Arguments

- **venue** (*telegram.Venue*, optional) – The venue to send.
- **read\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.read\_timeout*. Defaults to *DEFAULT\_NONE*.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.write\_timeout*. Defaults to *DEFAULT\_NONE*.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.connect\_timeout*. Defaults to *DEFAULT\_NONE*.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to *telegram.request.BaseRequest.post.pool\_timeout*. Defaults to *DEFAULT\_NONE*.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

*telegram.Message*

#### Raises

*telegram.error.TelegramError* –

**async send\_video**(*chat\_id*, *video*, *duration=None*, *caption=None*, *disable\_notification=None*, *reply\_to\_message\_id=None*, *reply\_markup=None*, *width=None*, *height=None*, *parse\_mode=None*, *supports\_streaming=None*, *allow\_sending\_without\_reply=None*, *caption\_entities=None*, *protect\_content=None*, *message\_thread\_id=None*, *has\_spoiler=None*, *thumbnail=None*, *\*, filename=None*, *read\_timeout=None*, *write\_timeout=20*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to send video files, Telegram clients support mp4 videos (other formats may be sent as Document).

Bots can currently send video files of up to **50 MB** in size, this limit may be changed in the future.

---

**Note:** *thumbnail* will be ignored for small video files, for which Telegram can easily generate thumbnails. However, this behaviour is undocumented and might be changed by Telegram.

---

---

#### Shortcuts

- *telegram.Chat.send\_video()*
  - *telegram.Message.reply\_video()*
  - *telegram.User.send\_video()*
- 

#### See also:

Working with Files and Media

Changed in version 20.5: Removed deprecated argument *thumb*. Use *thumbnail* instead.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **video** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.Video`) – Video file to send. Pass a `file_id` as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.Video` object to send.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **duration** (`int`, optional) – Duration of sent video in seconds.
- **width** (`int`, optional) – Video width.
- **height** (`int`, optional) – Video height.
- **caption** (`str`, optional) – Video caption (may also be used when resending videos by `file_id`), 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **supports\_streaming** (`bool`, optional) – Pass `True`, if the uploaded video is suitable for streaming.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **has\_spoiler** (`bool`, optional) – Pass `True` if the video needs to be covered with a spoiler animation.

New in version 20.0.

- **thumbnail** (*file object* | *bytes* | `pathlib.Path` | *str*, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a *file object* (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the *local\_mode* setting.

New in version 20.2.

#### Keyword Arguments

- **filename** (*str*, optional) – Custom file name for the video, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **read\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to 20.
- **connect\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float* | *None*, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (*dict*, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

```
async def send_video_note(chat_id, video_note, duration=None, length=None,
                          disable_notification=None, reply_to_message_id=None,
                          reply_markup=None, allow_sending_without_reply=None,
                          protect_content=None, message_thread_id=None, thumbnail=None, *,
                          filename=None, read_timeout=None, write_timeout=20,
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

As of v.4.0, Telegram clients support rounded square mp4 videos of up to 1 minute long. Use this method to send video messages.

---

**Note:** *thumbnail* will be ignored for small video files, for which Telegram can easily generate thumbnails. However, this behaviour is undocumented and might be changed by Telegram.

---

---

#### Shortcuts

- `telegram.Chat.send_video_note()`
- `telegram.Message.reply_video_note()`
- `telegram.User.send_video_note()`

See also:

[Working with Files and Media](#)

Changed in version 20.5: Removed deprecated argument `thumb`. Use `thumbnail` instead.

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **video\_note** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.VideoNote`) – Video note to send. Pass a `file_id` as `String` to send a video note that exists on the Telegram servers (recommended) or upload a new video using multipart/form-data. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as `bytes` or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as `bytes` or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.VideoNote` object to send. Sending video notes by a URL is currently unsupported.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **duration** (`int`, optional) – Duration of sent video in seconds.
- **length** (`int`, optional) – Video width and height, i.e. diameter of the video message.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.
- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as `bytes` or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as `bytes` or the file path will be passed to Telegram, depending on the `local_mode` setting.

New in version 20.2.

#### Keyword Arguments



- **filename** (`str`, optional) – Custom file name for the video note, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `20`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the sent Message is returned.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` –

**async send\_voice**(`chat_id`, `voice`, `duration=None`, `caption=None`, `disable_notification=None`, `reply_to_message_id=None`, `reply_markup=None`, `parse_mode=None`, `allow_sending_without_reply=None`, `caption_entities=None`, `protect_content=None`, `message_thread_id=None`, `*`, `filename=None`, `read_timeout=None`, `write_timeout=20`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to send audio files, if you want Telegram clients to display the file as a playable voice message. For this to work, your audio must be in an `.ogg` file encoded with OPUS (other formats may be sent as Audio or Document). Bots can currently send voice messages of up to **50 MB** in size, this limit may be changed in the future.

---

**Note:** To use this method, the file must have the type `audio/ogg` and be no more than **1 MB** in size. **1 MB- 20 MB** voice notes will be sent as files.

---

---

#### Shortcuts

- `telegram.Chat.send_voice()`
  - `telegram.Message.reply_voice()`
  - `telegram.User.send_voice()`
- 

#### See also:

Working with Files and Media

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **voice** (`str` | file object | `bytes` | `pathlib.Path` | `telegram.Voice`) – Voice file to send. Pass a `file_id` as String to send a file that exists on the Telegram servers



(recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting. Lastly you can pass an existing `telegram.Voice` object to send.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

- **caption** (`str`, optional) – Voice message caption, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **duration** (`int`, optional) – Duration of the voice message in seconds.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 13.10.

- **message\_thread\_id** (`int`, optional) – Unique identifier for the target message thread (topic) of the forum; for forum supergroups only.

New in version 20.0.

- **reply\_to\_message\_id** (`int`, optional) – If the message is a reply, ID of the original message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **reply\_markup** (`InlineKeyboardMarkup` | `ReplyKeyboardMarkup` | `ReplyKeyboardRemove` | `ForceReply`, optional) – Additional interface options. An object for an inline keyboard, custom reply keyboard, instructions to remove reply keyboard or to force a reply from the user.

#### Keyword Arguments

- **filename** (`str`, optional) – Custom file name for the voice, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to 20.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the sent Message is returned.

**Return type**

`telegram.Message`

**Raises**

`telegram.error.TelegramError` –

```
async setChatAdministratorCustomTitle(chat_id, user_id, custom_title, *, read_timeout=None,
                                       write_timeout=None, connect_timeout=None,
                                       pool_timeout=None, api_kwargs=None)
```

Alias for `set_chat_administrator_custom_title()`

```
async setChatDescription(chat_id, description=None, *, read_timeout=None, write_timeout=None,
                         connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_chat_description()`

```
async setChatMenuButton(chat_id=None, menu_button=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Alias for `set_chat_menu_button()`

```
async setChatPermissions(chat_id, permissions, use_independent_chat_permissions=None, *,
                        read_timeout=None, write_timeout=None, connect_timeout=None,
                        pool_timeout=None, api_kwargs=None)
```

Alias for `set_chat_permissions()`

```
async setChatPhoto(chat_id, photo, *, read_timeout=None, write_timeout=20,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_chat_photo()`

```
async setChatStickerSet(chat_id, sticker_set_name, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_chat_sticker_set()`

```
async setChatTitle(chat_id, title, *, read_timeout=None, write_timeout=None,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_chat_title()`

```
async setCustomEmojiStickerSetThumbnail(name, custom_emoji_id=None, *,
                                       read_timeout=None, write_timeout=None,
                                       connect_timeout=None, pool_timeout=None,
                                       api_kwargs=None)
```

Alias for `set_custom_emoji_sticker_set_thumbnail()`

```
async setGameScore(user_id, score, chat_id=None, message_id=None, inline_message_id=None,
                  force=None, disable_edit_message=None, *, read_timeout=None,
                  write_timeout=None, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Alias for `set_game_score()`

```
async setMyCommands(commands, scope=None, language_code=None, *, read_timeout=None,
                   write_timeout=None, connect_timeout=None, pool_timeout=None,
                   api_kwargs=None)
```

Alias for `set_my_commands()`

```
async setMyDefaultAdministratorRights(rights=None, for_channels=None, *,
                                       read_timeout=None, write_timeout=None,
                                       connect_timeout=None, pool_timeout=None,
                                       api_kwargs=None)
```

Alias for `set_my_default_administrator_rights()`

```
async setMyDescription(description=None, language_code=None, *, read_timeout=None,
                       write_timeout=None, connect_timeout=None, pool_timeout=None,
                       api_kwargs=None)
```

Alias for `set_my_description()`

```
async setMyName(name=None, language_code=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_my_name()`

```
async setMyShortDescription(short_description=None, language_code=None, *,
                             read_timeout=None, write_timeout=None, connect_timeout=None,
                             pool_timeout=None, api_kwargs=None)
```

Alias for `set_my_short_description()`

```
async setPassportDataErrors(user_id, errors, *, read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_passport_data_errors()`

```
async setStickerEmojiList(sticker, emoji_list, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_sticker_emoji_list()`

```
async setStickerKeywords(sticker, keywords=None, *, read_timeout=None, write_timeout=None,
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_sticker_keywords()`

```
async setStickerMaskPosition(sticker, mask_position=None, *, read_timeout=None,
                              write_timeout=None, connect_timeout=None, pool_timeout=None,
                              api_kwargs=None)
```

Alias for `set_sticker_mask_position()`

```
async setStickerPositionInSet(sticker, position, *, read_timeout=None, write_timeout=None,
                               connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_sticker_position_in_set()`

```
async setStickerSetThumbnail(name, user_id, thumbnail=None, *, read_timeout=None,
                              write_timeout=None, connect_timeout=None, pool_timeout=None,
                              api_kwargs=None)
```

Alias for `set_sticker_set_thumbnail()`

```
async setStickerSetTitle(name, title, *, read_timeout=None, write_timeout=None,
                         connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `set_sticker_set_title()`

```
async setWebhook(url, certificate=None, max_connections=None, allowed_updates=None,
                 ip_address=None, drop_pending_updates=None, secret_token=None, *,
                 read_timeout=None, write_timeout=None, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Alias for `set_webhook()`

```
async set_chat_administrator_custom_title(chat_id, user_id, custom_title, *,
                                           read_timeout=None, write_timeout=None,
                                           connect_timeout=None, pool_timeout=None,
                                           api_kwargs=None)
```

Use this method to set a custom title for administrators promoted by the bot in a supergroup. The bot must be an administrator for this to work.

---

### Shortcuts

`telegram.Chat.set_administrator_custom_title()`

---

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **user\_id** (`int`) – Unique identifier of the target administrator.
- **custom\_title** (`str`) – New custom title for the administrator; 0-16 characters, emoji are not allowed.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

```
async set_chat_description(chat_id, description=None, *, read_timeout=None,
                           write_timeout=None, connect_timeout=None, pool_timeout=None,
                           api_kwargs=None)
```

Use this method to change the description of a group, a supergroup or a channel. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

### Shortcuts

`telegram.Chat.set_description()`

---

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **description** (`str`, optional) – New chat description, 0-255 characters.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async def set_chat_menu_button(chat_id=None, menu_button=None, *, read_timeout=None,
                               write_timeout=None, connect_timeout=None, pool_timeout=None,
                               api_kwargs=None)
```

Use this method to change the bot's menu button in a private chat, or the default menu button.

---

**Shortcuts**

- `telegram.Chat.set_menu_button()`
  - `telegram.User.set_menu_button()`
- 

**See also:**

`get_chat_menu_button()`, `telegram.Chat.get_menu_button()` `telegram.User.get_menu_button()`

New in version 20.0.

**Parameters**

- **chat\_id** (`int`, optional) – Unique identifier for the target private chat. If not specified, default bot's menu button will be changed
- **menu\_button** (`telegram.MenuButton`, optional) – An object for the new bot's menu button. Defaults to `telegram.MenuButtonDefault`.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async def set_chat_permissions(chat_id, permissions, use_independent_chat_permissions=None, *,
                              read_timeout=None, write_timeout=None, connect_timeout=None,
                              pool_timeout=None, api_kwargs=None)
```

Use this method to set default chat permissions for all members. The bot must be an administrator in the group or a supergroup for this to work and must have the `telegram.ChatMemberAdministrator.can_restrict_members` admin rights.

---

**Shortcuts**

`telegram.Chat.set_permissions()`

---

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **permissions** (`telegram.ChatPermissions`) – New default chat permissions.
- **use\_independent\_chat\_permissions** (`bool`, optional) – Pass `True` if chat permissions are set independently. Otherwise, the `can_send_other_messages` and `can_add_web_page_previews` permissions will imply the `can_send_messages`, `can_send_audios`, `can_send_documents`, `can_send_photos`, `can_send_videos`, `can_send_video_notes`, and `can_send_voice_notes` permissions; the `can_send_polls` permission will imply the `can_send_messages` permission.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async def set_chat_photo(chat_id, photo, *, read_timeout=None, write_timeout=20,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to set a new profile photo for the chat.

Photos can't be changed for private chats. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

## Shortcuts

`telegram.Chat.set_photo()`

---

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **photo** (`file object` | `bytes` | `pathlib.Path`) – New chat photo. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting.

Changed in version 13.2: Accept `bytes` as input.

Changed in version 20.0: File paths as input is also accepted for bots *not* running in `local_mode`.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to 20.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, `True` is returned.

### Return type

`bool`

### Raises

`telegram.error.TelegramError` –

```
async set_chat_sticker_set(chat_id, sticker_set_name, *, read_timeout=None,
                           write_timeout=None, connect_timeout=None, pool_timeout=None,
                           api_kwargs=None)
```

Use this method to set a new group sticker set for a supergroup. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights. Use the field `telegram.Chat.can_set_sticker_set` optionally returned in `get_chat()` requests to check if the bot can use this method.

### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **sticker\_set\_name** (`str`) – Name of the sticker set to be set as the group sticker set.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.



- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async set_chat_title(chat_id, title, *, read_timeout=None, write_timeout=None,
                    connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to change the title of a chat. Titles can't be changed for private chats. The bot must be an administrator in the chat for this to work and must have the appropriate admin rights.

---

**Shortcuts**

`telegram.Chat.set_title()`

---

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **title** (`str`) – New chat title, 1- 128 characters.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async set_custom_emoji_sticker_set_thumbnail(name, custom_emoji_id=None, *,
                                             read_timeout=None, write_timeout=None,
                                             connect_timeout=None, pool_timeout=None,
                                             api_kwargs=None)
```



Use this method to set the thumbnail of a custom emoji sticker set.

New in version 20.2.

#### Parameters

- **name** (`str`) – Sticker set name.
- **custom\_emoji\_id** (`str`, optional) – Custom emoji identifier of a sticker from the sticker set; pass an empty string to drop the thumbnail and use the first sticker as the thumbnail.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

```
async def set_game_score(user_id, score, chat_id=None, message_id=None, inline_message_id=None,
                        force=None, disable_edit_message=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Use this method to set the score of the specified user in a game message.

---

#### Shortcuts

- `telegram.CallbackQuery.set_game_score()`
  - `telegram.Message.set_game_score()`
- 

#### See also:

`telegram.Game.text`

#### Parameters

- **user\_id** (`int`) – User identifier.
- **score** (`int`) – New score, must be non-negative.
- **force** (`bool`, optional) – Pass `True`, if the high score is allowed to decrease. This can be useful when fixing mistakes or banning cheaters.
- **disable\_edit\_message** (`bool`, optional) – Pass `True`, if the game message should not be automatically edited to include the current scoreboard.

- **chat\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Unique identifier for the target chat.
- **message\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Identifier of the sent message.
- **inline\_message\_id** (`str`, optional) – Required if `chat_id` and `message_id` are not specified. Identifier of the inline message.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

The edited message. If the message is not an inline message , `True`.

#### Return type

`telegram.Message`

#### Raises

`telegram.error.TelegramError` – If the new score is not greater than the user's current score in the chat and `force` is `False`.

```
async def set_my_commands(commands, scope=None, language_code=None, *, read_timeout=None,
                          write_timeout=None, connect_timeout=None, pool_timeout=None,
                          api_kwargs=None)
```

Use this method to change the list of the bot's commands. See the [Telegram docs](#) for more details about bot commands.

#### See also:

`get_my_commands()`, `delete_my_commands()`

#### Parameters

- **commands** (Sequence[`BotCommand` | (`str`, `str`)]) – A sequence of bot commands to be set as the list of the bot's commands. At most **100** commands can be specified.

---

**Note:** If you pass in a sequence of `tuple`, the order of elements in each `tuple` must correspond to the order of positional arguments to create a `BotCommand` instance.

---

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **scope** (`telegram.BotCommandScope`, optional) – An object, describing scope of users for which the commands are relevant. Defaults to `telegram.BotCommandScopeDefault`.

New in version 13.7.

- **language\_code** (`str`, optional) – A two-letter ISO 639-1 language code. If empty, commands will be applied to all users from the given scope, for whose language there are no dedicated commands.

New in version 13.7.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

```
async set_my_default_administrator_rights(rights=None, for_channels=None, *,
                                         read_timeout=None, write_timeout=None,
                                         connect_timeout=None, pool_timeout=None,
                                         api_kwargs=None)
```

Use this method to change the default administrator rights requested by the bot when it's added as an administrator to groups or channels. These rights will be suggested to users, but they are free to modify the list before adding the bot.

#### See also:

`get_my_default_administrator_rights()`

New in version 20.0.

#### Parameters

- **rights** (`telegram.ChatAdministratorRights`, optional) – A `telegram.ChatAdministratorRights` object describing new default administrator rights. If not specified, the default administrator rights will be cleared.
- **for\_channels** (`bool`, optional) – Pass `True` to change the default administrator rights of the bot in channels. Otherwise, the default administrator rights of the bot for groups and supergroups will be changed.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

Returns `True` on success.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async set_my_description(description=None, language_code=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Use this method to change the bot's description, which is shown in the chat with the bot if the chat is empty.

New in version 20.2.

**Parameters**

- **description** (`str`, optional) – New bot description; 0-512 characters. Pass an empty string to remove the dedicated description for the given language.
- **language\_code** (`str`, optional) – A two-letter ISO 639-1 language code. If empty, the description will be applied to all users for whose language there is no dedicated description.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async set_my_name(name=None, language_code=None, *, read_timeout=None, write_timeout=None,
                 connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to change the bot's name.

New in version 20.3.

**Parameters**

- **name** (`str`, optional) – New bot name; 0-64 characters. Pass an empty string to remove the dedicated name for the given language.

**Caution:** If *language\_code* is not specified, a *name* must be specified.

- **language\_code** (`str`, optional) – A two-letter ISO 639-1 language code. If empty, the name will be applied to all users for whose language there is no dedicated name.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

```
async set_my_short_description(short_description=None, language_code=None, *,
                             read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to change the bot's short description, which is shown on the bot's profile page and is sent together with the link when users share the bot.

New in version 20.2.

#### Parameters

- **short\_description** (`str`, optional) – New short description for the bot; 0-120 characters. Pass an empty string to remove the dedicated description for the given language.
- **language\_code** (`str`, optional) – A two-letter ISO 639-1 language code. If empty, the description will be applied to all users for whose language there is no dedicated description.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async set_passport_data_errors(user_id, errors, *, read_timeout=None, write_timeout=None,
                               connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Informs a user that some of the Telegram Passport elements they provided contains errors. The user will not be able to re-submit their Passport to you until the errors are fixed (the contents of the field for which you returned the error must change).

Use this if the data submitted by the user doesn't satisfy the standards your service requires for any reason. For example, if a birthday date seems invalid, a submitted document is blurry, a scan shows evidence of tampering, etc. Supply some details in the error message to make sure the user knows how to correct the issues.

**Parameters**

- **user\_id** (`int`) – User identifier
- **errors** (`Sequence[PassportElementError]`) – A Sequence describing the errors.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

**Keyword Arguments**

- **read\_timeout** (`float | None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float | None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float | None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float | None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**`bool`**Raises**`telegram.error.TelegramError` –

```
async set_sticker_emoji_list(sticker, emoji_list, *, read_timeout=None, write_timeout=None,
                             connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to change the list of emoji assigned to a regular or custom emoji sticker. The sticker must belong to a sticker set created by the bot.

New in version 20.2.

**Parameters**

- **sticker** (`str`) – File identifier of the sticker.
- **emoji\_list** (`Sequence[str]`) – A sequence of 1- 20 emoji associated with the sticker.

**Keyword Arguments**

- **read\_timeout** (`float | None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.

- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

**async set\_sticker\_keywords**(*sticker*, *keywords=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to change search keywords assigned to a regular or custom emoji sticker. The sticker must belong to a sticker set created by the bot.

New in version 20.2.

**Parameters**

- **sticker** (`str`) – File identifier of the sticker.
- **keywords** (`Sequence[str]`) – A sequence of 0-20 search keywords for the sticker with total length up to 64 characters.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

**async set\_sticker\_mask\_position**(*sticker*, *mask\_position=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to change the mask position of a mask sticker. The sticker must belong to a sticker set that was created by the bot.

New in version 20.2.



**Parameters**

- **sticker** (`str`) – File identifier of the sticker.
- **mask\_position** (`telegram.MaskPosition`, optional) – A object with the position where the mask should be placed on faces. Omit the parameter to remove the mask position.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async set_sticker_position_in_set(sticker, position, *, read_timeout=None,
                                write_timeout=None, connect_timeout=None,
                                pool_timeout=None, api_kwargs=None)
```

Use this method to move a sticker in a set created by the bot to a specific position.

**Parameters**

- **sticker** (`str`) – File identifier of the sticker.
- **position** (`int`) – New sticker position in the set, zero-based.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –



```
async set_sticker_set_thumbnail(name, user_id, thumbnail=None, *, read_timeout=None,
                               write_timeout=None, connect_timeout=None,
                               pool_timeout=None, api_kwargs=None)
```

Use this method to set the thumbnail of a regular or mask sticker set. The format of the thumbnail file must match the format of the stickers in the set.

New in version 20.2.

#### Parameters

- **name** (`str`) – Sticker set name
- **user\_id** (`int`) – User identifier of created sticker set owner.
- **thumbnail** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – A **.WEBP** or **.PNG** image with the thumbnail, must be up to **128** kilobytes in size and have width and height of exactly **100** px, or a **.TGS** animation with the thumbnail up to **32** kilobytes in size; see [the docs](#) for animated sticker technical requirements, or a **.WEBM** video with the thumbnail up to **32** kilobytes in size; see [this](#) for video sticker technical requirements.

Pass a `file_id` as `String` to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a `String` for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting.

Animated and video sticker set thumbnails can't be uploaded via HTTP URL. If omitted, then the thumbnail is dropped and the first sticker is used as the thumbnail.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

```
async set_sticker_set_title(name, title, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to set the title of a created sticker set.

New in version 20.2.

#### Parameters

- **name** (`str`) – Sticker set name.
- **title** (`str`) – Sticker set title, **1-64** characters.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

### Returns

On success, `True` is returned.

### Return type

`bool`

### Raises

`telegram.error.TelegramError` –

**async set\_webhook**(`url`, `certificate=None`, `max_connections=None`, `allowed_updates=None`, `ip_address=None`, `drop_pending_updates=None`, `secret_token=None`, \*, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to specify a url and receive incoming updates via an outgoing webhook. Whenever there is an update for the bot, Telegram will send an HTTPS POST request to the specified url, containing An Update. In case of an unsuccessful request, Telegram will give up after a reasonable amount of attempts.

If you'd like to make sure that the Webhook was set by you, you can specify secret data in the parameter `secret_token`. If specified, the request will contain a header `X-Telegram-Bot-API-Secret-Token` with the secret token as content.

---

### Note:

1. You will not be able to receive updates using `get_updates()` for long as an outgoing webhook is set up.
2. To use a self-signed certificate, you need to upload your public key certificate using `certificate` parameter. Please upload as `InputFile`, sending a String will not work.
3. Ports currently supported for Webhooks: `telegram.constants.SUPPORTED_WEBHOOK_PORTS`.

If you're having any trouble setting up webhooks, please check out this [guide to Webhooks](#).

---

---

### Note:

1. You will not be able to receive updates using `get_updates()` for long as an outgoing webhook is set up.
2. To use a self-signed certificate, you need to upload your public key certificate using `certificate` parameter. Please upload as `InputFile`, sending a String will not work.
3. Ports currently supported for Webhooks: `telegram.constants.SUPPORTED_WEBHOOK_PORTS`.

If you're having any trouble setting up webhooks, please check out this [guide to Webhooks](#).

---

See also:

`telegram.ext.Application.run_webhook()`, `telegram.ext.Updater.start_webhook()`

---

## Examples

*Custom Webhook Bot*

---

### Parameters

- **url** (`str`) – HTTPS url to send updates to. Use an empty string to remove webhook integration.
- **certificate** (`file object` | `bytes` | `pathlib.Path` | `str`) – Upload your public key certificate so that the root certificate in use can be checked. See our [self-signed guide](#) for details. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in [local\\_mode](#), passing the path of the file (as string or `pathlib.Path` object) is supported as well.
- **ip\_address** (`str`, optional) – The fixed IP address which will be used to send webhook requests instead of the IP address resolved through DNS.
- **max\_connections** (`int`, optional) – Maximum allowed number of simultaneous HTTPS connections to the webhook for update delivery, *1- 100*. Defaults to *40*. Use lower values to limit the load on your bot's server, and higher values to increase your bot's throughput.
- **allowed\_updates** (`Sequence[str]`, optional) – A sequence of the types of updates you want your bot to receive. For example, specify `["message", "edited_channel_post", "callback_query"]` to only receive updates of these types. See [telegram.Update](#) for a complete list of available update types. Specify an empty sequence to receive all updates except [telegram.Update.chat\\_member](#) (default). If not specified, the previous setting will be used. Please note that this parameter doesn't affect updates created before the call to the `set_webhook`, so unwanted updates may be received for a short period of time.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **drop\_pending\_updates** (`bool`, optional) – Pass `True` to drop all pending updates.
- **secret\_token** (`str`, optional) – A secret token to be sent in a header `X-Telegram-Bot-API-Secret-Token` in every webhook request, *1- 256* characters. Only characters `A-Z`, `a-z`, `0-9`, `_` and `-` are allowed. The header is useful to ensure that the request comes from a webhook set by you.

New in version 20.0.

### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

`bool` On success, `True` is returned.

**Raises**

`telegram.error.TelegramError` –

**async shutdown()**

Stop & clear resources used by this class. Currently just calls `telegram.request.BaseRequest.shutdown()` for the request objects used by this bot.

**See also:**

`initialize()`

New in version 20.0.

**async stopMessageLiveLocation**(*chat\_id=None, message\_id=None, inline\_message\_id=None, reply\_markup=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Alias for `stop_message_live_location()`

**async stopPoll**(*chat\_id, message\_id, reply\_markup=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Alias for `stop_poll()`

**async stop\_message\_live\_location**(*chat\_id=None, message\_id=None, inline\_message\_id=None, reply\_markup=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Use this method to stop updating a live location message sent by the bot or via the bot (for inline bots) before `live_period` expires.

---

**Shortcuts**

- `telegram.CallbackQuery.stop_message_live_location()`
  - `telegram.Message.stop_live_location()`
- 

**Parameters**

- **chat\_id** (`int` | `str`, optional) – Required if `inline_message_id` is not specified. Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`, optional) – Required if `inline_message_id` is not specified. Identifier of the sent message with live location to stop.
- **inline\_message\_id** (`str`, optional) – Required if `chat_id` and `message_id` are not specified. Identifier of the inline message.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for a new inline keyboard.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, if edited message is not an inline message, the edited message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

```
async stop_poll(chat_id, message_id, reply_markup=None, *, read_timeout=None,
                write_timeout=None, connect_timeout=None, pool_timeout=None,
                api_kwargs=None)
```

Use this method to stop a poll which was sent by the bot.

---

**Shortcuts**

`telegram.Message.stop_poll()`

---

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **message\_id** (`int`) – Identifier of the original message with the poll.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – An object for a new message inline keyboard.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, the stopped Poll is returned.

**Return type**

`telegram.Poll`

**Raises**

`telegram.error.TelegramError` –

**property supports\_inline\_queries**

Bot's `telegram.User.supports_inline_queries` attribute. Shortcut for the corresponding attribute of `bot`.

**Type**

`bool`

**to\_dict**(*recursive=True*)

See `telegram.TelegramObject.to_dict()`.

#### property token

Bot's unique authentication token.

New in version 20.0.

#### Type

`str`

**async unbanChatMember**(*chat\_id*, *user\_id*, *only\_if\_banned=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `unban_chat_member()`

**async unbanChatSenderChat**(*chat\_id*, *sender\_chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `unban_chat_sender_chat()`

**async unban\_chat\_member**(*chat\_id*, *user\_id*, *only\_if\_banned=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to unban a previously kicked user in a supergroup or channel.

The user will *not* return to the group or channel automatically, but will be able to join via link, etc. The bot must be an administrator for this to work. By default, this method guarantees that after the call the user is not a member of the chat, but will be able to join it. So if the user is a member of the chat they will also be *removed* from the chat. If you don't want this, use the parameter `only_if_banned`.

---

#### Shortcuts

`telegram.Chat.unban_member()`

---

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format `@channelusername`).
- **user\_id** (`int`) – Unique identifier of the target user.
- **only\_if\_banned** (`bool`, optional) – Do nothing if the user is not banned.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async unban_chat_sender_chat(chat_id, sender_chat_id, *, read_timeout=None,
                             write_timeout=None, connect_timeout=None, pool_timeout=None,
                             api_kwargs=None)
```

Use this method to unban a previously banned channel in a supergroup or channel. The bot must be an administrator for this to work and must have the appropriate administrator rights.

---

**Shortcuts**

- `telegram.Chat.unban_chat()`
  - `telegram.Chat.unban_sender_chat()`
- 

New in version 13.9.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **sender\_chat\_id** (`int`) – Unique identifier of the target sender chat.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async unhideGeneralForumTopic(chat_id, *, read_timeout=None, write_timeout=None,
                              connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Alias for `unhide_general_forum_topic()`

```
async unhide_general_forum_topic(chat_id, *, read_timeout=None, write_timeout=None,
                                 connect_timeout=None, pool_timeout=None,
                                 api_kwargs=None)
```

Use this method to unhide the ‘General’ topic in a forum supergroup chat. The bot must be an administrator in the chat for this to work and must have `can_manage_topics` administrator rights.

---

**Shortcuts**

`telegram.Chat.unhide_general_forum_topic()`

---



New in version 20.0.

#### Parameters

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

**async unpinAllChatMessages**(*chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `unpin_all_chat_messages()`

**async unpinAllForumTopicMessages**(*chat\_id*, *message\_thread\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `unpin_all_forum_topic_messages()`

**async unpinAllGeneralForumTopicMessages**(*chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `unpin_all_general_forum_topic_messages()`

**async unpinChatMessage**(*chat\_id*, *message\_id=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `unpin_chat_message()`

**async unpin\_all\_chat\_messages**(*chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Use this method to clear the list of pinned messages in a chat. If the chat is not a private chat, the bot must be an administrator in the chat for this to work and must have the `can_pin_messages` admin right in a supergroup or `can_edit_messages` admin right in a channel.

---

#### Shortcuts

- `telegram.Chat.unpin_all_messages()`
  - `telegram.User.unpin_all_messages()`
-



**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async unpin_all_forum_topic_messages(chat_id, message_thread_id, *, read_timeout=None,
                                     write_timeout=None, connect_timeout=None,
                                     pool_timeout=None, api_kwargs=None)
```

Use this method to clear the list of pinned messages in a forum topic. The bot must be an administrator in the chat for this to work and must have `can_pin_messages` administrator rights in the supergroup.

---

**Shortcuts**

- `telegram.Chat.unpin_all_forum_topic_messages()`
  - `telegram.Message.unpin_all_forum_topic_messages()`
- 

New in version 20.0.

**Parameters**

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **message\_thread\_id** (`int`) – Unique identifier for the target message thread of the forum topic.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async unpin_all_general_forum_topic_messages(chat_id, *, read_timeout=None,
                                             write_timeout=None, connect_timeout=None,
                                             pool_timeout=None, api_kwargs=None)
```

Use this method to clear the list of pinned messages in a General forum topic. The bot must be an administrator in the chat for this to work and must have `can_pin_messages` administrator rights in the supergroup.

---

**Shortcuts**

`telegram.Chat.unpin_all_general_forum_topic_messages()`

---

New in version 20.5.

**Parameters**

**chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target supergroup (in the format `@supergroupusername`).

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**Raises**

`telegram.error.TelegramError` –

```
async unpin_chat_message(chat_id, message_id=None, *, read_timeout=None, write_timeout=None,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to remove a message from the list of pinned messages in a chat. If the chat is not a private chat, the bot must be an administrator in the chat for this to work and must have the `can_pin_messages` admin right in a supergroup or `can_edit_messages` admin right in a channel.

---

**Shortcuts**

- `telegram.Chat.unpin_message()`

- `telegram.Message.unpin()`
  - `telegram.User.unpin_message()`
- 

#### Parameters

- **chat\_id** (`int` | `str`) – Unique identifier for the target chat or username of the target channel (in the format @channelusername).
- **message\_id** (`int`, optional) – Identifier of a message to unpin. If not specified, the most recent pinned message (by sending date) will be unpinned.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

#### Raises

`telegram.error.TelegramError` –

**async uploadStickerFile**(`user_id`, `sticker`, `sticker_format`, \*, `read_timeout=None`, `write_timeout=20`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Alias for `upload_sticker_file()`

**async upload\_sticker\_file**(`user_id`, `sticker`, `sticker_format`, \*, `read_timeout=None`, `write_timeout=20`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Use this method to upload a file with a sticker for later use in the `create_new_sticker_set()` and `add_sticker_to_set()` methods (can be used multiple times).

Changed in version 20.5: Removed deprecated parameter `png_sticker`.

#### Parameters

- **user\_id** (`int`) – User identifier of sticker file owner.
- **sticker** (`str` | `file object` | `bytes` | `pathlib.Path`) – A file with the sticker in the ".WEBP", ".PNG", ".TGS" or ".WEBM" format. See [here](#) for technical requirements . To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`), the file contents as bytes or the path of the file (as string or `pathlib.Path` object). In the latter case, the file contents will either be read as bytes or the file path will be passed to Telegram, depending on the `local_mode` setting.  
  
New in version 20.2.
- **sticker\_format** (`str`) – Format of the sticker. Must be one of `telegram.constants.StickerFormat.STATIC`, `telegram.constants.StickerFormat.ANIMATED`, `telegram.constants.StickerFormat.VIDEO`.

New in version 20.2.

#### Keyword Arguments

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to 20.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **api\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to be passed to the Telegram API.

#### Returns

On success, the uploaded File is returned.

#### Return type

`telegram.File`

#### Raises

`telegram.error.TelegramError` –

#### property username

Bot's username. Shortcut for the corresponding attribute of `bot`.

#### Type

`str`

## Available Types

### Animation

```
class telegram.Animation(file_id, file_unique_id, width, height, duration, file_name=None,
                        mime_type=None, file_size=None, thumbnail=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents an animation file (GIF or H.264/MPEG-4 AVC video without sound).

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `file_unique_id` is equal.

---

#### Use In

- `telegram.Bot.get_file()`
  - `telegram.Bot.send_animation()`
- 

---

#### Available In

- `telegram.Game.animation`
  - `telegram.Message.animation`
- 

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

#### Parameters

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.

- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **width** (`int`) – Video width as defined by sender.
- **height** (`int`) – Video height as defined by sender.
- **duration** (`int`) – Duration of the video in seconds as defined by sender.
- **file\_name** (`str`, optional) – Original animation filename as defined by sender.
- **mime\_type** (`str`, optional) – MIME type of the file as defined by sender.
- **file\_size** (`int`, optional) – File size in bytes.
- **thumbnail** (`telegram.PhotoSize`, optional) – Animation thumbnail as defined by sender.

New in version 20.2.

#### **file\_id**

Identifier for this file, which can be used to download or reuse the file.

##### **Type**

`str`

#### **file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

##### **Type**

`str`

#### **width**

Video width as defined by sender.

##### **Type**

`int`

#### **height**

Video height as defined by sender.

##### **Type**

`int`

#### **duration**

Duration of the video in seconds as defined by sender.

##### **Type**

`int`

#### **file\_name**

Optional. Original animation filename as defined by sender.

##### **Type**

`str`

#### **mime\_type**

Optional. MIME type of the file as defined by sender.

##### **Type**

`str`

#### **file\_size**

Optional. File size in bytes.

##### **Type**

`int`

**thumbnail**

Optional. Animation thumbnail as defined by sender.

New in version 20.2.

**Type**

`telegram.PhotoSize`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

**async** `get_file(*, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

## Audio

**class** `telegram.Audio(file_id, file_unique_id, duration, performer=None, title=None, mime_type=None, file_size=None, file_name=None, thumbnail=None, *, api_kwargs=None)`

Bases: `telegram.TelegramObject`

This object represents an audio file to be treated as music by the Telegram clients.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `file_unique_id` is equal.

---

**Use In**

- `telegram.Bot.get_file()`
  - `telegram.Bot.send_audio()`
- 

---

**Available In**

`telegram.Message.audio`

---

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

**Parameters**

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **duration** (`int`) – Duration of the audio in seconds as defined by sender.
- **performer** (`str`, optional) – Performer of the audio as defined by sender or by audio tags.
- **title** (`str`, optional) – Title of the audio as defined by sender or by audio tags.
- **file\_name** (`str`, optional) – Original filename as defined by sender.
- **mime\_type** (`str`, optional) – MIME type of the file as defined by sender.

- **file\_size** (`int`, optional) – File size in bytes.
- **thumbnail** (`telegram.PhotoSize`, optional) – Thumbnail of the album cover to which the music file belongs.

New in version 20.2.

**file\_id**

Identifier for this file, which can be used to download or reuse the file.

**Type**

`str`

**file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**

`str`

**duration**

Duration of the audio in seconds as defined by sender.

**Type**

`int`

**performer**

Optional. Performer of the audio as defined by sender or by audio tags.

**Type**

`str`

**title**

Optional. Title of the audio as defined by sender or by audio tags.

**Type**

`str`

**file\_name**

Optional. Original filename as defined by sender.

**Type**

`str`

**mime\_type**

Optional. MIME type of the file as defined by sender.

**Type**

`str`

**file\_size**

Optional. File size in bytes.

**Type**

`int`

**thumbnail**

Optional. Thumbnail of the album cover to which the music file belongs.

New in version 20.2.

**Type**

`telegram.PhotoSize`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

```
async get_file(*, read_timeout=None, write_timeout=None, connect_timeout=None,
               pool_timeout=None, api_kwargs=None)
```

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

## BotCommand

```
class telegram.BotCommand(command, description, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a bot command.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `command` and `description` are equal.

---

**Use In**

`telegram.Bot.set_my_commands()`

---

**Parameters**

- **command** (`str`) – Text of the command; 1- 32 characters. Can contain only lowercase English letters, digits and underscores.
- **description** (`str`) – Description of the command; 1- 256 characters.

**command**

Text of the command; 1- 32 characters. Can contain only lowercase English letters, digits and underscores.

**Type**

`str`

**description**

Description of the command; 1- 256 characters.

**Type**

`str`

**MAX\_COMMAND = 32**

`telegram.constants.BotCommandLimit.MAX_COMMAND`

New in version 20.0.

**MAX\_DESCRIPTION = 256**

`telegram.constants.BotCommandLimit.MAX_DESCRIPTION`

New in version 20.0.

**MIN\_COMMAND = 1**

`telegram.constants.BotCommandLimit.MIN_COMMAND`

New in version 20.0.



**MIN\_DESCRIPTION = 1**

*telegram.constants.BotCommandLimit.MIN\_DESCRIPTION*

New in version 20.0.

## BotCommandScope

**class** telegram.**BotCommandScope**(*type*, \*, *api\_kwargs=None*)

Bases: *telegram.TelegramObject*

Base class for objects that represent the scope to which bot commands are applied. Currently, the following 7 scopes are supported:

- *telegram.BotCommandScopeDefault*
- *telegram.BotCommandScopeAllPrivateChats*
- *telegram.BotCommandScopeAllGroupChats*
- *telegram.BotCommandScopeAllChatAdministrators*
- *telegram.BotCommandScopeChat*
- *telegram.BotCommandScopeChatAdministrators*
- *telegram.BotCommandScopeChatMember*

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *type* is equal. For subclasses with additional attributes, the notion of equality is overridden.

---

**Note:** Please see the [official docs](#) on how Telegram determines which commands to display.

---

---

### Use In

- *telegram.Bot.delete\_my\_commands()*
  - *telegram.Bot.get\_my\_commands()*
  - *telegram.Bot.set\_my\_commands()*
- 

New in version 13.7.

#### Parameters

**type** (*str*) – Scope type.

#### type

Scope type.

#### Type

*str*

**ALL\_CHAT\_ADMINISTRATORS = 'all\_chat\_administrators'**

*telegram.constants.BotCommandScopeType.ALL\_CHAT\_ADMINISTRATORS*

**ALL\_GROUP\_CHATS = 'all\_group\_chats'**

*telegram.constants.BotCommandScopeType.ALL\_GROUP\_CHATS*

**ALL\_PRIVATE\_CHATS = 'all\_private\_chats'**

*telegram.constants.BotCommandScopeType.ALL\_PRIVATE\_CHATS*

**CHAT = 'chat'**

*telegram.constants.BotCommandScopeType.CHAT*

**CHAT\_ADMINISTRATORS** = 'chat\_administrators'

*telegram.constants.BotCommandScopeType.CHAT\_ADMINISTRATORS*

**CHAT\_MEMBER** = 'chat\_member'

*telegram.constants.BotCommandScopeType.CHAT\_MEMBER*

**DEFAULT** = 'default'

*telegram.constants.BotCommandScopeType.DEFAULT*

**classmethod de\_json**(data, bot)

Converts JSON data to the appropriate *BotCommandScope* object, i.e. takes care of selecting the correct subclass.

**Parameters**

- **data** (Dict[str, ...]) – The JSON data.
- **bot** (*telegram.Bot*) – The bot associated with this object.

**Returns**

The Telegram object.

### BotCommandScopeAllChatAdministrators

**class** telegram.**BotCommandScopeAllChatAdministrators**(\*, api\_kwargs=None)

Bases: *telegram.BotCommandScope*

Represents the scope of bot commands, covering all group and supergroup chat administrators.

---

**Use In**

- *telegram.Bot.delete\_my\_commands()*
  - *telegram.Bot.get\_my\_commands()*
  - *telegram.Bot.set\_my\_commands()*
- 

New in version 13.7.

**type**

Scope type 'all\_chat\_administrators'.

**Type**

str

### BotCommandScopeAllGroupChats

**class** telegram.**BotCommandScopeAllGroupChats**(\*, api\_kwargs=None)

Bases: *telegram.BotCommandScope*

Represents the scope of bot commands, covering all group and supergroup chats.

---

**Use In**

- *telegram.Bot.delete\_my\_commands()*
  - *telegram.Bot.get\_my\_commands()*
  - *telegram.Bot.set\_my\_commands()*
- 

New in version 13.7.

**type**

Scope type `'all_group_chats'`.

**Type**

`str`

### BotCommandScopeAllPrivateChats

**class** telegram.BotCommandScopeAllPrivateChats(\*, api\_kwargs=None)

Bases: [telegram.BotCommandScope](#)

Represents the scope of bot commands, covering all private chats.

---

#### Use In

- [telegram.Bot.delete\\_my\\_commands\(\)](#)
  - [telegram.Bot.get\\_my\\_commands\(\)](#)
  - [telegram.Bot.set\\_my\\_commands\(\)](#)
- 

New in version 13.7.

**type**

Scope type `'all_private_chats'`.

**Type**

`str`

### BotCommandScopeChat

**class** telegram.BotCommandScopeChat(chat\_id, \*, api\_kwargs=None)

Bases: [telegram.BotCommandScope](#)

Represents the scope of bot commands, covering a specific chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `type` and `chat_id` are equal.

---

#### Use In

- [telegram.Bot.delete\\_my\\_commands\(\)](#)
  - [telegram.Bot.get\\_my\\_commands\(\)](#)
  - [telegram.Bot.set\\_my\\_commands\(\)](#)
- 

New in version 13.7.

#### Parameters

**chat\_id** (`str` | `int`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

**type**

Scope type `'chat'`.

**Type**

`str`

**chat\_id**

Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

**Type**

`str | int`

**BotCommandScopeChatAdministrators**

**class** telegram.BotCommandScopeChatAdministrators(*chat\_id*, \*, *api\_kwargs=None*)

Bases: [telegram.BotCommandScope](#)

Represents the scope of bot commands, covering all administrators of a specific group or supergroup chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [type](#) and [chat\\_id](#) are equal.

---

**Use In**

- [telegram.Bot.delete\\_my\\_commands\(\)](#)
  - [telegram.Bot.get\\_my\\_commands\(\)](#)
  - [telegram.Bot.set\\_my\\_commands\(\)](#)
- 

New in version 13.7.

**Parameters**

**chat\_id** (`str | int`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

**type**

Scope type '[chat\\_administrators](#)'.

**Type**

`str`

**chat\_id**

Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

**Type**

`str | int`

**BotCommandScopeChatMember**

**class** telegram.BotCommandScopeChatMember(*chat\_id*, *user\_id*, \*, *api\_kwargs=None*)

Bases: [telegram.BotCommandScope](#)

Represents the scope of bot commands, covering a specific member of a group or supergroup chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [type](#), [chat\\_id](#) and [user\\_id](#) are equal.

---

**Use In**

- [telegram.Bot.delete\\_my\\_commands\(\)](#)
- [telegram.Bot.get\\_my\\_commands\(\)](#)
- [telegram.Bot.set\\_my\\_commands\(\)](#)

New in version 13.7.

#### Parameters

- **chat\_id** (`str` | `int`) – Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).
- **user\_id** (`int`) – Unique identifier of the target user.

#### type

Scope type '`chat_member`'.

#### Type

`str`

#### chat\_id

Unique identifier for the target chat or username of the target supergroup (in the format @supergroupusername).

#### Type

`str` | `int`

#### user\_id

Unique identifier of the target user.

#### Type

`int`

### BotCommandScopeDefault

**class** telegram.BotCommandScopeDefault(\*, api\_kwargs=None)

Bases: [telegram.BotCommandScope](#)

Represents the default scope of bot commands. Default commands are used if no commands with a [narrower scope](#) are specified for the user.

---

#### Use In

- [telegram.Bot.delete\\_my\\_commands\(\)](#)
  - [telegram.Bot.get\\_my\\_commands\(\)](#)
  - [telegram.Bot.set\\_my\\_commands\(\)](#)
- 

New in version 13.7.

#### type

Scope type '`default`'.

#### Type

`str`

## BotDescription

**class** telegram.**BotDescription**(*description*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents the bot's description.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *description* is equal.

---

### Returned In

[telegram.Bot.get\\_my\\_description\(\)](#)

---

New in version 20.2.

#### Parameters

**description** ([str](#)) – The bot's description.

#### description

The bot's description.

#### Type

[str](#)

## BotName

**class** telegram.**BotName**(*name*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents the bot's name.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *name* is equal.

---

### Returned In

[telegram.Bot.get\\_my\\_name\(\)](#)

---

New in version 20.3.

#### Parameters

**name** ([str](#)) – The bot's name.

#### name

The bot's name.

#### Type

[str](#)

**MAX\_LENGTH** = 64

[telegram.constants.BotNameLimit.MAX\\_NAME\\_LENGTH](#)

## BotShortDescription

**class** telegram.BotShortDescription(short\_description, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents the bot's short description.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [short\\_description](#) is equal.

---

### Returned In

[telegram.Bot.get\\_my\\_short\\_description\(\)](#)

---

New in version 20.2.

#### Parameters

**short\_description** ([str](#)) – The bot's short description.

#### short\_description

The bot's short description.

#### Type

[str](#)

## CallbackQuery

**class** telegram.CallbackQuery(id, from\_user, chat\_instance, message=None, data=None, inline\_message\_id=None, game\_short\_name=None, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents an incoming callback query from a callback button in an inline keyboard.

If the button that originated the query was attached to a message sent by the bot, the field [message](#) will be present. If the button was attached to a message sent via the bot (in inline mode), the field [inline\\_message\\_id](#) will be present.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [id](#) is equal.

---

### Note:

- In Python [from](#) is a reserved word. Use [from\\_user](#) instead.
- Exactly one of the fields [data](#) or [game\\_short\\_name](#) will be present.
- After the user presses an inline button, Telegram clients will display a progress bar until you call [answer](#). It is, therefore, necessary to react by calling [telegram.Bot.answer\\_callback\\_query](#) even if no notification to the user is needed (e.g., without specifying any of the optional parameters).
- If you're using [telegram.ext.ExtBot.callback\\_data\\_cache](#), [data](#) may be an instance of [telegram.ext.InvalidCallbackData](#). This will be the case, if the data associated with the button triggering the [telegram.CallbackQuery](#) was already deleted or if [data](#) was manipulated by a malicious client.

New in version 13.6.

---

### Available In

*telegram.Update.callback\_query*

---

**Parameters**

- **id** (*str*) – Unique identifier for this query.
- **from\_user** (*telegram.User*) – Sender.
- **chat\_instance** (*str*) – Global identifier, uniquely corresponding to the chat to which the message with the callback button was sent. Useful for high scores in games.
- **message** (*telegram.Message*, optional) – Message with the callback button that originated the query. Note that message content and message date will not be available if the message is too old.
- **data** (*str*, optional) – Data associated with the callback button. Be aware that the message, which originated the query, can contain no callback buttons with this data.
- **inline\_message\_id** (*str*, optional) – Identifier of the message sent via the bot in inline mode, that originated the query.
- **game\_short\_name** (*str*, optional) – Short name of a Game to be returned, serves as the unique identifier for the game.

**id**

Unique identifier for this query.

**Type***str***from\_user**

Sender.

**Type***telegram.User***chat\_instance**

Global identifier, uniquely corresponding to the chat to which the message with the callback button was sent. Useful for high scores in games.

**Type***str***message**

Optional. Message with the callback button that originated the query. Note that message content and message date will not be available if the message is too old.

**Type***telegram.Message***data**

Optional. Data associated with the callback button. Be aware that the message, which originated the query, can contain no callback buttons with this data.

---

**Tip:** The value here is the same as the value passed in *telegram.InlineKeyboardButton.callback\_data*.

---

**Type***str | object*



**inline\_message\_id**

Optional. Identifier of the message sent via the bot in inline mode, that originated the query.

**Type**

`str`

**game\_short\_name**

Optional. Short name of a Game to be returned, serves as the unique identifier for the game.

**Type**

`str`

**MAX\_ANSWER\_TEXT\_LENGTH = 200**

`telegram.constants.CallbackQueryLimit.ANSWER_CALLBACK_QUERY_TEXT_LENGTH`

New in version 13.2.

**async** `answer`(*text=None, show\_alert=None, url=None, cache\_time=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.answer_callback_query(update.callback_query.id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.answer_callback_query()`.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async** `copy_message`(*chat\_id, caption=None, parse\_mode=None, caption\_entities=None, disable\_notification=None, reply\_to\_message\_id=None, allow\_sending\_without\_reply=None, reply\_markup=None, protect\_content=None, message\_thread\_id=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await update.callback_query.message.copy(
    from_chat_id=update.message.chat_id,
    message_id=update.message.message_id,
    *args,
    **kwargs
)
```

For the documentation of the arguments, please see `telegram.Message.copy()`.

**Returns**

On success, returns the `MessageId` of the sent message.

**Return type**

`telegram.MessageId`

**classmethod** `de_json`(*data, bot*)

See `telegram.TelegramObject.de_json()`.

**async** `delete_message`(*\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await update.callback_query.message.delete(*args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Message.delete\(\)`](#).

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async edit_message_caption(caption=None, reply_markup=None, parse_mode=None,
                           caption_entities=None, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.edit_caption(*args, **kwargs)
```

or:

```
await bot.edit_message_caption(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs,
)
```

For the documentation of the arguments, please see [`telegram.Bot.edit\_message\_caption\(\)`](#) and [`telegram.Message.edit\_caption\(\)`](#).

**Returns**

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

**Return type**

[`telegram.Message`](#)

```
async edit_message_live_location(latitude=None, longitude=None, reply_markup=None,
                                 horizontal_accuracy=None, heading=None,
                                 proximity_alert_radius=None, *, location=None,
                                 read_timeout=None, write_timeout=None,
                                 connect_timeout=None, pool_timeout=None,
                                 api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.edit_live_location(*args, **kwargs)
```

or:

```
await bot.edit_message_live_location(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs
)
```

For the documentation of the arguments, please see [`telegram.Bot.edit\_message\_live\_location\(\)`](#) and [`telegram.Message.edit\_live\_location\(\)`](#).

**Returns**

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

**Return type**

[`telegram.Message`](#)

```
async edit_message_media(media, reply_markup=None, *, read_timeout=None,
                          write_timeout=None, connect_timeout=None, pool_timeout=None,
                          api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.edit_media(*args, **kwargs)
```

or:

```
await bot.edit_message_media(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_media\(\)](#) and [telegram.Message.edit\\_media\(\)](#).

#### Returns

On success, if edited message is not an inline message, the edited `Message` is returned, otherwise `True` is returned.

#### Return type

[telegram.Message](#)

```
async edit_message_reply_markup(reply_markup=None, *, read_timeout=None,
                                write_timeout=None, connect_timeout=None,
                                pool_timeout=None, api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.edit_reply_markup(*args, **kwargs)
```

or:

```
await bot.edit_message_reply_markup(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_reply\\_markup\(\)](#) and [telegram.Message.edit\\_reply\\_markup\(\)](#).

#### Returns

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

#### Return type

[telegram.Message](#)

```
async edit_message_text(text, parse_mode=None, disable_web_page_preview=None,
                        reply_markup=None, entities=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.edit_text(*args, **kwargs)
```

or:

```
await bot.edit_message_text(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs,
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_text\(\)](#) and [telegram.Message.edit\\_text\(\)](#).

**Returns**

On success, if edited message is sent by the bot, the edited Message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

```
async get_game_high_scores(user_id, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.get_game_high_score(*args, **kwargs)
```

or:

```
await bot.get_game_high_scores(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.get_game_high_scores()` and `telegram.Message.get_game_high_scores()`.

**Returns**

Tuple[`telegram.GameHighScore`]

```
async pin_message(disable_notification=None, *, read_timeout=None, write_timeout=None,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await update.callback_query.message.pin(*args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Message.pin()`.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async set_game_score(user_id, score, force=None, disable_edit_message=None, *,
                     read_timeout=None, write_timeout=None, connect_timeout=None,
                     pool_timeout=None, api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.set_game_score(*args, **kwargs)
```

or:

```
await bot.set_game_score(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.set_game_score()` and `telegram.Message.set_game_score()`.

**Returns**

On success, if edited message is sent by the bot, the edited Message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

```
async stop_message_live_location(reply_markup=None, *, read_timeout=None,
                                write_timeout=None, connect_timeout=None,
                                pool_timeout=None, api_kwargs=None)
```

Shortcut for either:

```
await update.callback_query.message.stop_live_location(*args, **kwargs)
```

or:

```
await bot.stop_message_live_location(
    inline_message_id=update.callback_query.inline_message_id, *args,
    ↪ **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.stop\\_message\\_live\\_location\(\)](#) and [telegram.Message.stop\\_live\\_location\(\)](#).

#### Returns

On success, if edited message is sent by the bot, the edited Message is returned, otherwise `True` is returned.

#### Return type

[telegram.Message](#)

```
async unpin_message(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await update.callback_query.message.unpin(*args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Message.unpin\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

## Chat

```
class telegram.Chat(id, type, title=None, username=None, first_name=None, last_name=None,
                    photo=None, description=None, invite_link=None, pinned_message=None,
                    permissions=None, sticker_set_name=None, can_set_sticker_set=None,
                    slow_mode_delay=None, bio=None, linked_chat_id=None, location=None,
                    message_auto_delete_time=None, has_private_forwards=None,
                    has_protected_content=None, join_to_send_messages=None, join_by_request=None,
                    has_restricted_voice_and_video_messages=None, is_forum=None,
                    active_usernames=None, emoji_status_custom_emoji_id=None,
                    emoji_status_expiration_date=None, has_aggressive_anti_spam_enabled=None,
                    has_hidden_members=None, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `id` is equal.

#### Available In

- [telegram.ChatJoinRequest.chat](#)

- `telegram.ChatMemberUpdated.chat`
  - `telegram.Message.chat`
  - `telegram.Message.forward_from_chat`
  - `telegram.Message.sender_chat`
  - `telegram.PollAnswer.voter_chat`
  - `telegram.Update.effective_chat`
- 

---

### Returned In

`telegram.Bot.get_chat()`

---

Changed in version 20.0:

- Removed the deprecated methods `kick_member` and `get_members_count`.
- The following are now keyword-only arguments in Bot methods: `location`, `filename`, `contact`, `{read, write, connect, pool}_timeout`, `api_kwargs`. Use a named argument for those, and notice that some positional arguments changed position as a result.

Changed in version 20.0: Removed the attribute `all_members_are_administrators`. As long as Telegram provides this field for backwards compatibility, it is available through `api_kwargs`.

### Parameters

- **id** (`int`) – Unique identifier for this chat. This number may be greater than 32 bits and some programming languages may have difficulty/silent defects in interpreting it. But it is smaller than 52 bits, so a signed 64-bit integer or double-precision float type are safe for storing this identifier.
- **type** (`str`) – Type of chat, can be either `PRIVATE`, `GROUP`, `SUPERGROUP` or `CHANNEL`.
- **title** (`str`, optional) – Title, for supergroups, channels and group chats.
- **username** (`str`, optional) – Username, for private chats, supergroups and channels if available.
- **first\_name** (`str`, optional) – First name of the other party in a private chat.
- **last\_name** (`str`, optional) – Last name of the other party in a private chat.
- **photo** (`telegram.ChatPhoto`, optional) – Chat photo. Returned only in `telegram.Bot.get_chat()`.
- **bio** (`str`, optional) – Bio of the other party in a private chat. Returned only in `telegram.Bot.get_chat()`.
- **has\_private\_forwards** (`bool`, optional) – `True`, if privacy settings of the other party in the private chat allows to use `tg://user?id=<user_id>` links only in chats with the user. Returned only in `telegram.Bot.get_chat()`.

New in version 13.9.

- **description** (`str`, optional) – Description, for groups, supergroups and channel chats. Returned only in `telegram.Bot.get_chat()`.
- **invite\_link** (`str`, optional) – Primary invite link, for groups, supergroups and channel. Returned only in `telegram.Bot.get_chat()`.
- **pinned\_message** (`telegram.Message`, optional) – The most recent pinned message (by sending date). Returned only in `telegram.Bot.get_chat()`.
- **permissions** (`telegram.ChatPermissions`) – Optional. Default chat member permissions, for groups and supergroups. Returned only in `telegram.Bot.get_chat()`.

- **slow\_mode\_delay** (`int`, optional) – For supergroups, the minimum allowed delay between consecutive messages sent by each unprivileged user. Returned only in `telegram.Bot.get_chat()`.

- **message\_auto\_delete\_time** (`int`, optional) – The time after which all messages sent to the chat will be automatically deleted; in seconds. Returned only in `telegram.Bot.get_chat()`.

New in version 13.4.

- **has\_protected\_content** (`bool`, optional) – `True`, if messages from the chat can't be forwarded to other chats. Returned only in `telegram.Bot.get_chat()`.

New in version 13.9.

- **sticker\_set\_name** (`str`, optional) – For supergroups, name of group sticker set. Returned only in `telegram.Bot.get_chat()`.

- **can\_set\_sticker\_set** (`bool`, optional) – `True`, if the bot can change group the sticker set. Returned only in `telegram.Bot.get_chat()`.

- **linked\_chat\_id** (`int`, optional) – Unique identifier for the linked chat, i.e. the discussion group identifier for a channel and vice versa; for supergroups and channel chats. Returned only in `telegram.Bot.get_chat()`.

- **location** (`telegram.ChatLocation`, optional) – For supergroups, the location to which the supergroup is connected. Returned only in `telegram.Bot.get_chat()`.

- **join\_to\_send\_messages** (`bool`, optional) – `True`, if users need to join the supergroup before they can send messages. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

- **join\_by\_request** (`bool`, optional) – `True`, if all users directly joining the supergroup need to be approved by supergroup administrators. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

- **has\_restricted\_voice\_and\_video\_messages** (`bool`, optional) – `True`, if the privacy settings of the other party restrict sending voice and video note messages in the private chat. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

- **is\_forum** (`bool`, optional) – `True`, if the supergroup chat is a forum (has `topics` enabled).

New in version 20.0.

- **active\_usernames** (`Sequence[str]`, optional) – If set, the list of all active chat usernames; for private chats, supergroups and channels. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

- **emoji\_status\_custom\_emoji\_id** (`str`, optional) – Custom emoji identifier of emoji status of the other party in a private chat. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

- **emoji\_status\_expiration\_date** (`datetime.datetime`, optional) – Expiration date of emoji status of the other party in a private chat, in seconds. Returned only in `telegram.Bot.get_chat()`. The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

New in version 20.5.

- **has\_aggressive\_anti\_spam\_enabled** (*bool*, optional) – *True*, if aggressive anti-spam checks are enabled in the supergroup. The field is only available to chat administrators. Returned only in *telegram.Bot.get\_chat()*.

New in version 20.0.

- **has\_hidden\_members** (*bool*, optional) – *True*, if non-administrators can only get the list of bots and administrators in the chat. Returned only in *telegram.Bot.get\_chat()*.

New in version 20.0.

#### **id**

Unique identifier for this chat. This number may be greater than 32 bits and some programming languages may have difficulty/silent defects in interpreting it. But it is smaller than 52 bits, so a signed 64-bit integer or double-precision float type are safe for storing this identifier.

##### **Type**

*int*

#### **type**

Type of chat, can be either *PRIVATE*, *GROUP*, *SUPERGROUP* or *CHANNEL*.

##### **Type**

*str*

#### **title**

Optional. Title, for supergroups, channels and group chats.

##### **Type**

*str*

#### **username**

Optional. Username, for private chats, supergroups and channels if available.

##### **Type**

*str*

#### **first\_name**

Optional. First name of the other party in a private chat.

##### **Type**

*str*

#### **last\_name**

Optional. Last name of the other party in a private chat.

##### **Type**

*str*

#### **photo**

Optional. Chat photo. Returned only in *telegram.Bot.get\_chat()*.

##### **Type**

*telegram.ChatPhoto*

#### **bio**

Optional. Bio of the other party in a private chat. Returned only in *telegram.Bot.get\_chat()*.

##### **Type**

*str*

#### **has\_private\_forwards**

Optional. *True*, if privacy settings of the other party in the private chat allows to use `tg://user?id=<user_id>` links only in chats with the user. Returned only in *telegram.Bot.get\_chat()*.

New in version 13.9.



**Type**`bool`**description**

Optional. Description, for groups, supergroups and channel chats. Returned only in `telegram.Bot.get_chat()`.

**Type**`str`**invite\_link**

Optional. Primary invite link, for groups, supergroups and channel. Returned only in `telegram.Bot.get_chat()`.

**Type**`str`**pinned\_message**

Optional. The most recent pinned message (by sending date). Returned only in `telegram.Bot.get_chat()`.

**Type**`telegram.Message`**permissions**

Optional. Default chat member permissions, for groups and supergroups. Returned only in `telegram.Bot.get_chat()`.

**Type**`telegram.ChatPermissions`**slow\_mode\_delay**

Optional. For supergroups, the minimum allowed delay between consecutive messages sent by each unprivileged user. Returned only in `telegram.Bot.get_chat()`.

**Type**`int`**message\_auto\_delete\_time**

Optional. The time after which all messages sent to the chat will be automatically deleted; in seconds. Returned only in `telegram.Bot.get_chat()`.

New in version 13.4.

**Type**`int`**has\_protected\_content**

Optional. `True`, if messages from the chat can't be forwarded to other chats. Returned only in `telegram.Bot.get_chat()`.

New in version 13.9.

**Type**`bool`**sticker\_set\_name**

Optional. For supergroups, name of Group sticker set. Returned only in `telegram.Bot.get_chat()`.

**Type**`str`**can\_set\_sticker\_set**

Optional. `True`, if the bot can change group the sticker set. Returned only in `telegram.Bot.get_chat()`.

**Type**`bool`**linked\_chat\_id**

Optional. Unique identifier for the linked chat, i.e. the discussion group identifier for a channel and vice versa; for supergroups and channel chats. Returned only in `telegram.Bot.get_chat()`.

**Type**`int`**location**

Optional. For supergroups, the location to which the supergroup is connected. Returned only in `telegram.Bot.get_chat()`.

**Type**`telegram.ChatLocation`**join\_to\_send\_messages**

Optional. `True`, if users need to join the supergroup before they can send messages. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

**Type**`bool`**join\_by\_request**

Optional. `True`, if all users directly joining the supergroup need to be approved by supergroup administrators. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

**Type**`bool`**has\_restricted\_voice\_and\_video\_messages**

Optional. `True`, if the privacy settings of the other party restrict sending voice and video note messages in the private chat. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

**Type**`bool`**is\_forum**

Optional. `True`, if the supergroup chat is a forum (has `topics` enabled).

New in version 20.0.

**Type**`bool`**active\_usernames**

Optional. If set, the list of all `active chat usernames`; for private chats, supergroups and channels. Returned only in `telegram.Bot.get_chat()`. This list is empty if the chat has no active usernames or this chat instance was not obtained via `get_chat()`.

New in version 20.0.

**Type**`Tuple[str]`**emoji\_status\_custom\_emoji\_id**

Optional. Custom emoji identifier of emoji status of the other party in a private chat. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

**Type**`str`**emoji\_status\_expiration\_date**

Expiration date of emoji status of the other party in a private chat, in seconds. Returned only in `telegram.Bot.get_chat()`. The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

New in version 20.5.

**Type**`datetime.datetime`, optional**has\_aggressive\_anti\_spam\_enabled**

Optional. `True`, if aggressive anti-spam checks are enabled in the supergroup. The field is only available to chat administrators. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

**Type**`bool`**has\_hidden\_members**

Optional. `True`, if non-administrators can only get the list of bots and administrators in the chat. Returned only in `telegram.Bot.get_chat()`.

New in version 20.0.

**Type**`bool`

**CHANNEL** = 'channel'

`telegram.constants.ChatType.CHANNEL`

**GROUP** = 'group'

`telegram.constants.ChatType.GROUP`

**PRIVATE** = 'private'

`telegram.constants.ChatType.PRIVATE`

**SENDER** = 'sender'

`telegram.constants.ChatType.SENDER`

New in version 13.5.

**SUPERGROUP** = 'supergroup'

`telegram.constants.ChatType.SUPERGROUP`

**async approve\_join\_request**(*user\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.approve_chat_join_request(chat_id=update.effective_chat.id, *args, kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.approve_chat_join_request()`.

New in version 13.8.

**Returns**

On success, `True` is returned.

**Return type**`bool`

```
async ban_chat(chat_id, *, read_timeout=None, write_timeout=None, connect_timeout=None,
               pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.ban_chat_sender_chat(
    sender_chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.ban\\_chat\\_sender\\_chat\(\)](#).

New in version 13.9.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async ban_member(user_id, revoke_messages=None, until_date=None, *, read_timeout=None,
                 write_timeout=None, connect_timeout=None, pool_timeout=None,
                 api_kwargs=None)
```

Shortcut for:

```
await bot.ban_chat_member(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.ban\\_chat\\_member\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async ban_sender_chat(sender_chat_id, *, read_timeout=None, write_timeout=None,
                      connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.ban_chat_sender_chat(chat_id=update.effective_chat.id, *args,
                                ↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.ban\\_chat\\_sender\\_chat\(\)](#).

New in version 13.9.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async close_forum_topic(message_thread_id, *, read_timeout=None, write_timeout=None,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.close_forum_topic(chat_id=update.effective_chat.id, *args,
                             ↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.close\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

**Return type**`bool`

```
async close_general_forum_topic(*, read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None,
                                api_kwargs=None)
```

Shortcut for:

```
await bot.close_general_forum_topic(chat_id=update.effective_chat.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.close\\_general\\_forum\\_topic\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**`bool`

```
async copy_message(chat_id, message_id, caption=None, parse_mode=None, caption_entities=None,
                   disable_notification=None, reply_to_message_id=None,
                   allow_sending_without_reply=None, reply_markup=None,
                   protect_content=None, message_thread_id=None, *, read_timeout=None,
                   write_timeout=None, connect_timeout=None, pool_timeout=None,
                   api_kwargs=None)
```

Shortcut for:

```
await bot.copy_message(from_chat_id=update.effective_chat.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.copy\\_message\(\)](#).

**Returns**

On success, instance representing the message posted.

**Return type**[telegram.Message](#)

```
async create_forum_topic(name, icon_color=None, icon_custom_emoji_id=None, *,
                          read_timeout=None, write_timeout=None, connect_timeout=None,
                          pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.create_forum_topic(chat_id=update.effective_chat.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.create\\_forum\\_topic\(\)](#).

New in version 20.0.

**Returns**[telegram.ForumTopic](#)

```
async create_invite_link(expire_date=None, member_limit=None, name=None,
                          creates_join_request=None, *, read_timeout=None, write_timeout=None,
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.create_chat_invite_link(chat_id=update.effective_chat.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.create\\_chat\\_invite\\_link\(\)](#).

New in version 13.4.

Changed in version 13.8: Edited signature according to the changes of [telegram.Bot.create\\_chat\\_invite\\_link\(\)](#).

**Returns**

[telegram.ChatInviteLink](#)

**classmethod** `de_json(data, bot)`

See [telegram.TelegramObject.de\\_json\(\)](#).

**async** `decline_join_request(user_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Shortcut for:

```
await bot.decline_chat_join_request(chat_id=update.effective_chat.id, *args,
↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.decline\\_chat\\_join\\_request\(\)](#).

New in version 13.8.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async** `delete_forum_topic(message_thread_id, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Shortcut for:

```
await bot.delete_forum_topic(chat_id=update.effective_chat.id, *args,
↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.delete\\_forum\\_topic\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async** `delete_photo(*, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Shortcut for:

```
await bot.delete_chat_photo(
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.delete\\_chat\\_photo\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async edit_forum_topic(message_thread_id, name=None, icon_custom_emoji_id=None, *,
                        read_timeout=None, write_timeout=None, connect_timeout=None,
                        pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.edit_forum_topic(chat_id=update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async edit_general_forum_topic(name, *, read_timeout=None, write_timeout=None,
                               connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.edit_general_forum_topic(
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_general\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async edit_invite_link(invite_link, expire_date=None, member_limit=None, name=None,
                       creates_join_request=None, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.edit_chat_invite_link(chat_id=update.effective_chat.id, *args,
                                ↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_chat\\_invite\\_link\(\)](#).

New in version 13.4.

Changed in version 13.8: Edited signature according to the changes of [telegram.Bot.edit\\_chat\\_invite\\_link\(\)](#).

#### Returns

[telegram.ChatInviteLink](#)

#### property effective\_name

Convenience property. Gives `title` if not `None`, else `full_name` if not `None`.

New in version 20.1.

#### Type

`str`

```
async export_invite_link(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                         pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.export_chat_invite_link(chat_id=update.effective_chat.id, *args,  
↪ **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.export\_chat\_invite\_link\(\)`](#).

New in version 13.4.

**Returns**

New invite link on success.

**Return type**

[`str`](#)

```
async forward_from(from_chat_id, message_id, disable_notification=None, protect_content=None,  
message_thread_id=None, *, read_timeout=None, write_timeout=None,  
connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.forward_message(chat_id=update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.forward\_message\(\)`](#).

**See also:**

[`forward\_to\(\)`](#)

New in version 20.0.

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async forward_to(chat_id, message_id, disable_notification=None, protect_content=None,  
message_thread_id=None, *, read_timeout=None, write_timeout=None,  
connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.forward_message(from_chat_id=update.effective_chat.id, *args,  
↪ **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.forward\_message\(\)`](#).

**See also:**

[`forward\_from\(\)`](#)

New in version 20.0.

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

**property full\_name**

Convenience property. If [`first\_name`](#) is not [`None`](#), gives [`first\_name`](#) followed by (if available) [`last\_name`](#).

---

**Note:** [`full\_name`](#) will always be [`None`](#), if the chat is a (super)group or channel.

---

New in version 13.2.



**Type**`str`

**async get\_administrators**(\**read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.get_chat_administrators(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.get\_chat\_administrators\(\)`](#).

**Returns**

A tuple of administrators in a chat. An Array of [`telegram.ChatMember`](#) objects that contains information about all chat administrators except other bots. If the chat is a group or a supergroup and no administrators were appointed, only the creator will be returned.

**Return type**

Tuple[[`telegram.ChatMember`](#)]

**async get\_member**(*user\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.get_chat_member(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.get\_chat\_member\(\)`](#).

**Returns**

[`telegram.ChatMember`](#)

**async get\_member\_count**(\**read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.get_chat_member_count(update.effective_chat.id, *args, **kwargs)
```


For the documentation of the arguments, please see [`telegram.Bot.get\_chat\_member\_count\(\)`](#).

**Returns**

`int`

**async get\_menu\_button**(\**read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.get_chat_menu_button(chat_id=update.effective_chat.id, *args,  **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.get\_chat\_menu\_button\(\)`](#).

**Caution:** Can only work, if the chat is a private chat.

**See also:**

[`set\_menu\_button\(\)`](#)

New in version 20.0.

**Returns**

On success, the current menu button is returned.

**Return type**`telegram.MenuButton`

**async** `hide_general_forum_topic`(\**read\_timeout=None*, *write\_timeout=None*,  
*connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.hide_general_forum_topic(chat_id=update.effective_chat.id, *args,  
    **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.hide_general_forum_topic()`.

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**`bool`

**async** `leave`(\**read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*,  
*pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.leave_chat(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.leave_chat()`.

**Returns**

On success, `True` is returned.

**Return type**`bool`**property link**

Convenience property. If the chat has a `username`, returns a t.me link of the chat.

**Type**`str`

**mention\_html**(*name=None*)

New in version 20.0.

**Parameters**

**name** (`str`) – The name used as a link for the chat. Defaults to `full_name`.

**Returns**

The inline mention for the chat as HTML.

**Return type**`str`**Raises**

**TypeError** – If the chat is a private chat and neither the `name` nor the `first_name` is set, then throw an `TypeError`. If the chat is a public chat and neither the `name` nor the `title` is set, then throw an `TypeError`. If chat is a private group chat, then throw an `TypeError`.

**mention\_markdown**(*name=None*)

---

**Note:** `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use `mention_markdown_v2()` instead.

---

New in version 20.0.

#### Parameters

**name** (`str`) – The name used as a link for the chat. Defaults to `full_name`.

#### Returns

The inline mention for the chat as markdown (version 1).

#### Return type

`str`

#### Raises

**TypeError** – If the chat is a private chat and neither the `name` nor the `first_name` is set, then throw an **TypeError**. If the chat is a public chat and neither the `name` nor the `title` is set, then throw an **TypeError**. If chat is a private group chat, then throw an **TypeError**.

**mention\_markdown\_v2**(*name=None*)

New in version 20.0.

#### Parameters

**name** (`str`) – The name used as a link for the chat. Defaults to `full_name`.

#### Returns

The inline mention for the chat as markdown (version 2).

#### Return type

`str`

#### Raises

**TypeError** – If the chat is a private chat and neither the `name` nor the `first_name` is set, then throw an **TypeError**. If the chat is a public chat and neither the `name` nor the `title` is set, then throw an **TypeError**. If chat is a private group chat, then throw an **TypeError**.

**async pin\_message**(*message\_id, disable\_notification=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.pin_chat_message(chat_id=update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.pin_chat_message()`.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async promote\_member**(*user\_id, can\_change\_info=None, can\_post\_messages=None, can\_edit\_messages=None, can\_delete\_messages=None, can\_invite\_users=None, can\_restrict\_members=None, can\_pin\_messages=None, can\_promote\_members=None, is\_anonymous=None, can\_manage\_chat=None, can\_manage\_video\_chats=None, can\_manage\_topics=None, can\_post\_stories=None, can\_edit\_stories=None, can\_delete\_stories=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.promote_chat_member(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.promote\\_chat\\_member\(\)](#).

New in version 13.2.

Changed in version 20.0: The argument `can_manage_voice_chats` was renamed to [can\\_manage\\_video\\_chats](#) in accordance to Bot API 6.0.

Changed in version 20.6: The arguments `can_post_stories`, `can_edit_stories` and `can_delete_stories` were added.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async reopen_forum_topic(message_thread_id, *, read_timeout=None, write_timeout=None,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.reopen_forum_topic(chat_id=update.effective_chat.id, *args,
                             **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.reopen\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async reopen_general_forum_topic(*, read_timeout=None, write_timeout=None,
                                connect_timeout=None, pool_timeout=None,
                                api_kwargs=None)
```

Shortcut for:

```
await bot.reopen_general_forum_topic(
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.reopen\\_general\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
async restrict_member(user_id, permissions, until_date=None,
                    use_independent_chat_permissions=None, *, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Shortcut for:

```
await bot.restrict_chat_member(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.restrict\\_chat\\_member\(\)](#).

New in version 13.2.

New in version 20.1: Added [use\\_independent\\_chat\\_permissions](#).

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async revoke\_invite\_link**(*invite\_link*, \*, *read\_timeout=None*, *write\_timeout=None*,  
*connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.revoke_chat_invite_link(chat_id=update.effective_chat.id, *args,
→ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.revoke\\_chat\\_invite\\_link\(\)](#).

New in version 13.4.

**Returns**

[telegram.ChatInviteLink](#)

**async send\_action**(*action*, *message\_thread\_id=None*, \*, *read\_timeout=None*, *write\_timeout=None*,  
*connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for [send\\_chat\\_action](#)

**async send\_animation**(*animation*, *duration=None*, *width=None*, *height=None*, *caption=None*,  
*parse\_mode=None*, *disable\_notification=None*, *reply\_to\_message\_id=None*,  
*reply\_markup=None*, *allow\_sending\_without\_reply=None*,  
*caption\_entities=None*, *protect\_content=None*, *message\_thread\_id=None*,  
*has\_spoiler=None*, *thumbnail=None*, \*, *filename=None*, *read\_timeout=None*,  
*write\_timeout=20*, *connect\_timeout=None*, *pool\_timeout=None*,  
*api\_kwargs=None*)

Shortcut for:

```
await bot.send_animation(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_animation\(\)](#).

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)

**async send\_audio**(*audio*, *duration=None*, *performer=None*, *title=None*, *caption=None*,  
*disable\_notification=None*, *reply\_to\_message\_id=None*, *reply\_markup=None*,  
*parse\_mode=None*, *allow\_sending\_without\_reply=None*, *caption\_entities=None*,  
*protect\_content=None*, *message\_thread\_id=None*, *thumbnail=None*, \*,  
*filename=None*, *read\_timeout=None*, *write\_timeout=20*, *connect\_timeout=None*,  
*pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.send_audio(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_audio\(\)](#).

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)

**async send\_chat\_action**(*action*, *message\_thread\_id=None*, \*, *read\_timeout=None*,  
*write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*,  
*api\_kwargs=None*)

Shortcut for:

```
await bot.send_chat_action(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_chat\\_action\(\)](#).

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async send_contact(phone_number=None, first_name=None, last_name=None,
                   disable_notification=None, reply_to_message_id=None, reply_markup=None,
                   vcard=None, allow_sending_without_reply=None, protect_content=None,
                   message_thread_id=None, *, contact=None, read_timeout=None,
                   write_timeout=None, connect_timeout=None, pool_timeout=None,
                   api_kwargs=None)
```

Shortcut for:

```
await bot.send_contact(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_contact\(\)](#).

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)

```
async send_copy(from_chat_id, message_id, caption=None, parse_mode=None,
                caption_entities=None, disable_notification=None, reply_to_message_id=None,
                allow_sending_without_reply=None, reply_markup=None, protect_content=None,
                message_thread_id=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.copy_message(chat_id=update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.copy\\_message\(\)](#).

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)

```
async send_dice(disable_notification=None, reply_to_message_id=None, reply_markup=None,
                emoji=None, allow_sending_without_reply=None, protect_content=None,
                message_thread_id=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_dice(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_dice\(\)](#).

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)

```
async send_document(document, caption=None, disable_notification=None,
                     reply_to_message_id=None, reply_markup=None, parse_mode=None,
                     disable_content_type_detection=None, allow_sending_without_reply=None,
                     caption_entities=None, protect_content=None, message_thread_id=None,
                     thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                     connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_document(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_document\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_game(game_short_name, disable_notification=None, reply_to_message_id=None,
                 reply_markup=None, allow_sending_without_reply=None, protect_content=None,
                 message_thread_id=None, *, read_timeout=None, write_timeout=None,
                 connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_game(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_game\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_invoice(title, description, payload, provider_token, currency, prices,
                   start_parameter=None, photo_url=None, photo_size=None, photo_width=None,
                   photo_height=None, need_name=None, need_phone_number=None,
                   need_email=None, need_shipping_address=None, is_flexible=None,
                   disable_notification=None, reply_to_message_id=None, reply_markup=None,
                   provider_data=None, send_phone_number_to_provider=None,
                   send_email_to_provider=None, allow_sending_without_reply=None,
                   max_tip_amount=None, suggested_tip_amounts=None, protect_content=None,
                   message_thread_id=None, *, read_timeout=None, write_timeout=None,
                   connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_invoice(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_invoice\(\)](#).

**Warning:** As of API 5.2 [start\\_parameter](#) is an optional argument and therefore the order of the arguments had to be changed. Use keyword arguments to make sure that the arguments are passed correctly.

Changed in version 13.5: As of Bot API 5.2, the parameter [start\\_parameter](#) is optional.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_location(latitude=None, longitude=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, live_period=None,
                    horizontal_accuracy=None, heading=None, proximity_alert_radius=None,
                    allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, *, location=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Shortcut for:

```
await bot.send_location(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_location\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_media_group(media, disable_notification=None, reply_to_message_id=None,
                       allow_sending_without_reply=None, protect_content=None,
                       message_thread_id=None, *, read_timeout=None, write_timeout=20,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None,
                       caption=None, parse_mode=None, caption_entities=None)
```

Shortcut for:

```
await bot.send_media_group(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_media\\_group\(\)](#).

#### Returns

On success, a tuple of [Message](#) instances that were sent is returned.

#### Return type

Tuple[[telegram.Message](#)]

```
async send_message(text, parse_mode=None, disable_web_page_preview=None,
                   disable_notification=None, reply_to_message_id=None, reply_markup=None,
                   allow_sending_without_reply=None, entities=None, protect_content=None,
                   message_thread_id=None, *, read_timeout=None, write_timeout=None,
                   connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_message(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_message\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_photo(photo, caption=None, disable_notification=None, reply_to_message_id=None,
                 reply_markup=None, parse_mode=None, allow_sending_without_reply=None,
                 caption_entities=None, protect_content=None, message_thread_id=None,
                 has_spoiler=None, *, filename=None, read_timeout=None, write_timeout=20,
                 connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_photo(update.effective_chat.id, *args, **kwargs)
```



For the documentation of the arguments, please see [telegram.Bot.send\\_photo\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_poll(question, options, is_anonymous=None, type=None, allows_multiple_answers=None,
               correct_option_id=None, is_closed=None, disable_notification=None,
               reply_to_message_id=None, reply_markup=None, explanation=None,
               explanation_parse_mode=None, open_period=None, close_date=None,
               allow_sending_without_reply=None, explanation_entities=None,
               protect_content=None, message_thread_id=None, *, read_timeout=None,
               write_timeout=None, connect_timeout=None, pool_timeout=None,
               api_kwargs=None)
```

Shortcut for:

```
await bot.send_poll(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_poll\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_sticker(sticker, disable_notification=None, reply_to_message_id=None,
                  reply_markup=None, allow_sending_without_reply=None,
                  protect_content=None, message_thread_id=None, emoji=None, *,
                  read_timeout=None, write_timeout=20, connect_timeout=None,
                  pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_sticker(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_sticker\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_venue(latitude=None, longitude=None, title=None, address=None, foursquare_id=None,
                disable_notification=None, reply_to_message_id=None, reply_markup=None,
                foursquare_type=None, google_place_id=None, google_place_type=None,
                allow_sending_without_reply=None, protect_content=None,
                message_thread_id=None, *, venue=None, read_timeout=None,
                write_timeout=None, connect_timeout=None, pool_timeout=None,
                api_kwargs=None)
```

Shortcut for:

```
await bot.send_venue(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_venue\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_video(video, duration=None, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, width=None, height=None,
                 parse_mode=None, supports_streaming=None,
                 allow_sending_without_reply=None, caption_entities=None,
                 protect_content=None, message_thread_id=None, has_spoiler=None,
                 thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                 connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_video(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_video\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_video_note(video_note, duration=None, length=None, disable_notification=None,
                     reply_to_message_id=None, reply_markup=None,
                     allow_sending_without_reply=None, protect_content=None,
                     message_thread_id=None, thumbnail=None, *, filename=None,
                     read_timeout=None, write_timeout=20, connect_timeout=None,
                     pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_video_note(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_video\\_note\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_voice(voice, duration=None, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, parse_mode=None,
                 allow_sending_without_reply=None, caption_entities=None,
                 protect_content=None, message_thread_id=None, *, filename=None,
                 read_timeout=None, write_timeout=20, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_voice(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_voice\(\)](#).

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async set_administrator_custom_title(user_id, custom_title, *, read_timeout=None,
                                     write_timeout=None, connect_timeout=None,
                                     pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.set_chat_administrator_custom_title(
    update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_administrator\\_custom\\_title\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async set\_description**(*description=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.set_chat_description(
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_description\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async set\_menu\_button**(*menu\_button=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.set_chat_menu_button(chat_id=update.effective_chat.id, *args, ↪
↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_menu\\_button\(\)](#).

**Caution:** Can only work, if the chat is a private chat.

#### See also:

[get\\_menu\\_button\(\)](#)

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async set\_permissions**(*permissions*, *use\_independent\_chat\_permissions=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.set_chat_permissions(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_permissions\(\)](#).

New in version 20.1: Added [use\\_independent\\_chat\\_permissions](#).

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async set\_photo**(*photo*, \*, *read\_timeout=None*, *write\_timeout=20*, *connect\_timeout=None*,  
*pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.set_chat_photo(
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_photo\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async set\_title**(*title*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*,  
*pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.set_chat_title(
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_title\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async unban\_chat**(*chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*,  
*pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.unban_chat_sender_chat(
    sender_chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.unban\\_chat\\_sender\\_chat\(\)](#).

New in version 13.9.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async unban\_member**(*user\_id*, *only\_if\_banned=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.unban_chat_member(update.effective_chat.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.unban\\_chat\\_member\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async unban\_sender\_chat**(*sender\_chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.unban_chat_sender_chat(chat_id=update.effective_chat.id, *args,
↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.unban\\_chat\\_sender\\_chat\(\)](#).

New in version 13.9.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async unhide\_general\_forum\_topic**(\*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.unhide_general_forum_topic (
    chat_id=update.effective_chat.id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.unhide\\_general\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

**async unpin\_all\_forum\_topic\_messages**(*message\_thread\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.unpin_all_forum_topic_messages(chat_id=update.effective_chat.id,
    *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.unpin\\_all\\_forum\\_topic\\_messages\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async unpin_all_general_forum_topic_messages(*, read_timeout=None, write_timeout=None,
                                              connect_timeout=None, pool_timeout=None,
                                              api_kwargs=None)
```

Shortcut for:

```
await bot.unpin_all_general_forum_topic_messages(chat_id=update.effective_
↳ chat.id,
        *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.unpin\\_all\\_general\\_forum\\_topic\\_messages\(\)](#).

New in version 20.5.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async unpin_all_messages(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                          pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.unpin_all_chat_messages(chat_id=update.effective_chat.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.unpin\\_all\\_chat\\_messages\(\)](#).

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async unpin_message(message_id=None, *, read_timeout=None, write_timeout=None,
                     connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.unpin_chat_message(chat_id=update.effective_chat.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.unpin\\_chat\\_message\(\)](#).

**Returns**

On success, `True` is returned.

**Return type**

`bool`

## ChatAdministratorRights

New in version 20.0.

```
class telegram.ChatAdministratorRights(is_anonymous, can_manage_chat, can_delete_messages,
                                       can_manage_video_chats, can_restrict_members,
                                       can_promote_members, can_change_info, can_invite_users,
                                       can_post_messages=None, can_edit_messages=None,
                                       can_pin_messages=None, can_manage_topics=None,
                                       can_post_stories=None, can_edit_stories=None,
                                       can_delete_stories=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

Represents the rights of an administrator in a chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `is_anonymous`, `can_manage_chat`, `can_delete_messages`, `can_manage_video_chats`, `can_restrict_members`, `can_promote_members`, `can_change_info`, `can_invite_users`, `can_post_messages`, `can_edit_messages`, `can_pin_messages`, `can_manage_topics`, `can_post_stories`, `can_delete_stories`, and `can_edit_stories` are equal.

---

### Use In

`telegram.Bot.set_my_default_administrator_rights()`

---

---

### Returned In

`telegram.Bot.get_my_default_administrator_rights()`

---

New in version 20.0.

Changed in version 20.0: `can_manage_topics` is considered as well when comparing objects of this type in terms of equality.

Changed in version 20.6: `can_post_stories`, `can_edit_stories`, and `can_delete_stories` are considered as well when comparing objects of this type in terms of equality.

### Parameters

- **`is_anonymous` (bool)** – `True`, if the user's presence in the chat is hidden.
- **`can_manage_chat` (bool)** – `True`, if the administrator can access the chat event log, chat statistics, boost list in channels, see channel members, report spam messages, see anonymous administrators in supergroups and ignore slow mode. Implied by any other administrator privilege.
- **`can_delete_messages` (bool)** – `True`, if the administrator can delete messages of other users.
- **`can_manage_video_chats` (bool)** – `True`, if the administrator can manage video chats.
- **`can_restrict_members` (bool)** – `True`, if the administrator can restrict, ban or unban chat members, or access supergroup statistics.
- **`can_promote_members` (bool)** – `True`, if the administrator can add new administrators with a subset of their own privileges or demote administrators that they have promoted, directly or indirectly (promoted by administrators that were appointed by the user).
- **`can_change_info` (bool)** – `True`, if the user is allowed to change the chat title, photo and other settings.
- **`can_invite_users` (bool)** – `True`, if the user is allowed to invite new users to the chat.

- **can\_post\_messages** (`bool`, optional) – `True`, if the administrator can post messages in the channel, or access channel statistics; channels only.
- **can\_edit\_messages** (`bool`, optional) – `True`, if the administrator can edit messages of other users.
- **can\_pin\_messages** (`bool`, optional) – `True`, if the user is allowed to pin messages; groups and supergroups only.
- **can\_post\_stories** (`bool`, optional) – `True`, if the administrator can post stories in the channel; channels only.  
New in version 20.6.
- **can\_edit\_stories** (`bool`, optional) – `True`, if the administrator can edit stories posted by other users; channels only.  
New in version 20.6.
- **can\_delete\_stories** (`bool`, optional) – `True`, if the administrator can delete stories posted by other users; channels only.  
New in version 20.6.
- **can\_manage\_topics** (`bool`, optional) – `True`, if the user is allowed to create, rename, close, and reopen forum topics; supergroups only.  
New in version 20.0.

**is\_anonymous**

`True`, if the user’s presence in the chat is hidden.

**Type**

`bool`

**can\_manage\_chat**

`True`, if the administrator can access the chat event log, chat statistics, boost list in channels, see channel members, report spam messages, see anonymous administrators in supergroups and ignore slow mode. Implied by any other administrator privilege.

**Type**

`bool`

**can\_delete\_messages**

`True`, if the administrator can delete messages of other users.

**Type**

`bool`

**can\_manage\_video\_chats**

`True`, if the administrator can manage video chats.

**Type**

`bool`

**can\_restrict\_members**

`True`, if the administrator can restrict, ban or unban chat members, or access supergroup statistics.

**Type**

`bool`

**can\_promote\_members**

`True`, if the administrator can add new administrators with a subset of their own privileges or demote administrators that he has promoted, directly or indirectly (promoted by administrators that were appointed by the user.)

**Type**

`bool`



**can\_change\_info**

`True`, if the user is allowed to change the chat title ,photo and other settings.

**Type**

`bool`

**can\_invite\_users**

`True`, if the user is allowed to invite new users to the chat.

**Type**

`bool`

**can\_post\_messages**

Optional. `True`, if the administrator can post messages in the channel, or access channel statistics; channels only.

**Type**

`bool`

**can\_edit\_messages**

Optional. `True`, if the administrator can edit messages of other users.

**Type**

`bool`

**can\_pin\_messages**

Optional. `True`, if the user is allowed to pin messages; groups and supergroups only.

**Type**

`bool`

**can\_post\_stories**

Optional. `True`, if the administrator can post stories in the channel; channels only.

New in version 20.6.

**Type**

`bool`

**can\_edit\_stories**

Optional. `True`, if the administrator can edit stories posted by other users; channels only.

New in version 20.6.

**Type**

`bool`

**can\_delete\_stories**

Optional. `True`, if the administrator can delete stories posted by other users; channels only.

New in version 20.6.

**Type**

`bool`

**can\_manage\_topics**

Optional. `True`, if the user is allowed to create, rename, close, and reopen forum topics; supergroups only.

New in version 20.0.

**Type**

`bool`

**classmethod** `all_rights()`

This method returns the `ChatAdministratorRights` object with all attributes set to `True`. This is e.g. useful when changing the bot's default administrator rights with `telegram.Bot.set_my_default_administrator_rights()`.

New in version 20.0.

**classmethod** `no_rights()`

This method returns the `ChatAdministratorRights` object with all attributes set to `False`.

New in version 20.0.

## ChatInviteLink

```
class telegram.ChatInviteLink(invite_link, creator, creates_join_request, is_primary, is_revoked,
                               expire_date=None, member_limit=None, name=None,
                               pending_join_request_count=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents an invite link for a chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `invite_link`, `creator`, `creates_join_request`, `is_primary` and `is_revoked` are equal.

---

**Use In**

- `telegram.Bot.edit_chat_invite_link()`
  - `telegram.Bot.revoke_chat_invite_link()`
- 

---

**Available In**

- `telegram.ChatJoinRequest.invite_link`
  - `telegram.ChatMemberUpdated.invite_link`
- 

---

**Returned In**

- `telegram.Bot.create_chat_invite_link()`
  - `telegram.Bot.edit_chat_invite_link()`
  - `telegram.Bot.revoke_chat_invite_link()`
- 

New in version 13.4.

Changed in version 20.0:

- The argument & attribute `creates_join_request` is now required to comply with the Bot API.
- Comparing objects of this class now also takes `creates_join_request` into account.

**Parameters**

- **invite\_link** (`str`) – The invite link.
- **creator** (`telegram.User`) – Creator of the link.
- **creates\_join\_request** (`bool`) – `True`, if users joining the chat via the link need to be approved by chat administrators.

New in version 13.8.

- **is\_primary** (`bool`) – `True`, if the link is primary.
- **is\_revoked** (`bool`) – `True`, if the link is revoked.
- **expire\_date** (`datetime.datetime`, optional) – Date when the link will expire or has been expired.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- **member\_limit** (`int`, optional) – Maximum number of users that can be members of the chat simultaneously after joining the chat via this invite link; `1-99999`.
- **name** (`str`, optional) – Invite link name. `0-32` characters.

New in version 13.8.

- **pending\_join\_request\_count** (`int`, optional) – Number of pending join requests created using this link.

New in version 13.8.

#### **invite\_link**

The invite link. If the link was created by another chat administrator, then the second part of the link will be replaced with '... '.

##### **Type**

`str`

#### **creator**

Creator of the link.

##### **Type**

`telegram.User`

#### **creates\_join\_request**

`True`, if users joining the chat via the link need to be approved by chat administrators.

New in version 13.8.

##### **Type**

`bool`

#### **is\_primary**

`True`, if the link is primary.

##### **Type**

`bool`

#### **is\_revoked**

`True`, if the link is revoked.

##### **Type**

`bool`

#### **expire\_date**

Optional. Date when the link will expire or has been expired.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

##### **Type**

`datetime.datetime`

#### **member\_limit**

Optional. Maximum number of users that can be members of the chat simultaneously after joining the chat via this invite link; `1-99999`.

Type

`int`

**name**

Optional. Invite link name. 0-32 characters.

New in version 13.8.

Type

`str`

**pending\_join\_request\_count**

Optional. Number of pending join requests created using this link.

New in version 13.8.

Type

`int`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

## ChatJoinRequest

**class** `telegram.ChatJoinRequest(chat, from_user, date, user_chat_id, bio=None, invite_link=None, *, api_kwargs=None)`

Bases: `telegram.TelegramObject`

This object represents a join request sent to a chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `chat`, `from_user` and `date` are equal.

---

### Note:

- Since Bot API 5.5, bots are allowed to contact users who sent a join request to a chat where the bot is an administrator with the `can_invite_users` administrator right - even if the user never interacted with the bot before.
  - Telegram does not guarantee that `from_user.id` coincides with the `chat_id` of the user. Please use `user_chat_id` to contact the user in response to their join request.
- 

---

### Available In

`telegram.Update.chat_join_request`

---

New in version 13.8.

Changed in version 20.1: In Bot API 6.5 the argument `user_chat_id` was added, which changes the position of the optional arguments `bio` and `invite_link`.

### Parameters

- **chat** (`telegram.Chat`) – Chat to which the request was sent.
- **from\_user** (`telegram.User`) – User that sent the join request.
- **date** (`datetime.datetime`) – Date the request was sent.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- **user\_chat\_id**(`int`) – Identifier of a private chat with the user who sent the join request. This number may have more than 32 significant bits and some programming languages may have difficulty/silent defects in interpreting it. But it has at most 52 significant bits, so a 64-bit integer or double-precision float type are safe for storing this identifier. The bot can use this identifier for 5 minutes to send messages until the join request is processed, assuming no other administrator contacted the user.

New in version 20.1.

- **bio**(`str`, optional) – Bio of the user.
- **invite\_link**(`telegram.ChatInviteLink`, optional) – Chat invite link that was used by the user to send the join request.

#### **chat**

Chat to which the request was sent.

##### **Type**

`telegram.Chat`

#### **from\_user**

User that sent the join request.

##### **Type**

`telegram.User`

#### **date**

Date the request was sent.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

##### **Type**

`datetime.datetime`

#### **user\_chat\_id**

Identifier of a private chat with the user who sent the join request. This number may have more than 32 significant bits and some programming languages may have difficulty/silent defects in interpreting it. But it has at most 52 significant bits, so a 64-bit integer or double-precision float type are safe for storing this identifier. The bot can use this identifier for 24 hours to send messages until the join request is processed, assuming no other administrator contacted the user.

New in version 20.1.

##### **Type**

`int`

#### **bio**

Optional. Bio of the user.

##### **Type**

`str`

#### **invite\_link**

Optional. Chat invite link that was used by the user to send the join request.

---

**Note:** When a user joins a *public* group via an invite link, this attribute may not be present. However, this behavior is undocumented and may be subject to change. See [this GitHub thread](#) for some discussion.

---

##### **Type**

`telegram.ChatInviteLink`

```
async approve(*, read_timeout=None, write_timeout=None, connect_timeout=None,
               pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.approve_chat_join_request(
    chat_id=update.effective_chat.id, user_id=update.effective_user.id,
    ↪ *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.approve\\_chat\\_join\\_request\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```
classmethod de_json(data, bot)
```

See [telegram.TelegramObject.de\\_json\(\)](#).

```
async decline(*, read_timeout=None, write_timeout=None, connect_timeout=None,
               pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.decline_chat_join_request(
    chat_id=update.effective_chat.id, user_id=update.effective_user.id,
    ↪ *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.decline\\_chat\\_join\\_request\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

## ChatLocation

```
class telegram.ChatLocation(location, address, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a location to which a chat is connected.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [location](#) is equal.

---

#### Available In

[telegram.Chat.location](#)

---

#### Parameters

- **location** ([telegram.Location](#)) – The location to which the supergroup is connected. Can't be a live location.
- **address** (`str`) – Location address; 1- 64 characters, as defined by the chat owner.

**location**

The location to which the supergroup is connected. Can't be a live location.

**Type**

`telegram.Location`

**address**

Location address; 1- 64 characters, as defined by the chat owner.

**Type**

`str`

**MAX\_ADDRESS = 64**

`telegram.constants.LocationLimit.MAX_CHAT_LOCATION_ADDRESS`

New in version 20.0.

**MIN\_ADDRESS = 1**

`telegram.constants.LocationLimit.MIN_CHAT_LOCATION_ADDRESS`

New in version 20.0.

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

## ChatMember

**class** telegram.**ChatMember**(user, status, \*, api\_kwargs=None)

Bases: `telegram.TelegramObject`

Base class for Telegram ChatMember Objects. Currently, the following 6 types of chat members are supported:

- `telegram.ChatMemberOwner`
- `telegram.ChatMemberAdministrator`
- `telegram.ChatMemberMember`
- `telegram.ChatMemberRestricted`
- `telegram.ChatMemberLeft`
- `telegram.ChatMemberBanned`

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `user` and `status` are equal.

---

**Available In**

- `telegram.ChatMemberUpdated.new_chat_member`
  - `telegram.ChatMemberUpdated.old_chat_member`
- 

---

**Returned In**

`telegram.Bot.get_chat_member()`

---

---

**Examples**

*Chat Member Bot*

---

Changed in version 20.0:

- As of Bot API 5.3, `ChatMember` is nothing but the base class for the subclasses listed above and is no longer returned directly by `get_chat()`. Therefore, most of the arguments and attributes were removed and you should no longer use `ChatMember` directly.
- The constant `ChatMember.CREATOR` was replaced by `OWNER`
- The constant `ChatMember.KICKED` was replaced by `BANNED`

#### Parameters

- **user** (`telegram.User`) – Information about the user.
- **status** (`str`) – The member's status in the chat. Can be `ADMINISTRATOR`, `OWNER`, `BANNED`, `LEFT`, `MEMBER` or `RESTRICTED`.

#### **user**

Information about the user.

##### Type

`telegram.User`

#### **status**

The member's status in the chat. Can be `ADMINISTRATOR`, `OWNER`, `BANNED`, `LEFT`, `MEMBER` or `RESTRICTED`.

##### Type

`str`

**ADMINISTRATOR** = 'administrator'

`telegram.constants.ChatMemberStatus.ADMINISTRATOR`

**BANNED** = 'kicked'

`telegram.constants.ChatMemberStatus.BANNED`

**LEFT** = 'left'

`telegram.constants.ChatMemberStatus.LEFT`

**MEMBER** = 'member'

`telegram.constants.ChatMemberStatus.MEMBER`

**OWNER** = 'creator'

`telegram.constants.ChatMemberStatus.OWNER`

**RESTRICTED** = 'restricted'

`telegram.constants.ChatMemberStatus.RESTRICTED`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

### **ChatMemberAdministrator**

```
class telegram.ChatMemberAdministrator(user, can_be_edited, is_anonymous, can_manage_chat,
                                         can_delete_messages, can_manage_video_chats,
                                         can_restrict_members, can_promote_members,
                                         can_change_info, can_invite_users,
                                         can_post_messages=None, can_edit_messages=None,
                                         can_pin_messages=None, can_manage_topics=None,
                                         custom_title=None, can_post_stories=None,
                                         can_edit_stories=None, can_delete_stories=None, *,
                                         api_kwargs=None)
```



Bases: *telegram.ChatMember*

Represents a chat member that has some additional privileges.

---

**Available In**

- *telegram.ChatMemberUpdated.new\_chat\_member*
  - *telegram.ChatMemberUpdated.old\_chat\_member*
- 

---

**Returned In**

*telegram.Bot.get\_chat\_member()*

---

New in version 13.7.

Changed in version 20.0:

- Argument and attribute `can_manage_voice_chats` were renamed to *can\_manage\_video\_chats* and *can\_manage\_video\_chats* in accordance to Bot API 6.0.
- The argument *can\_manage\_topics* was added, which changes the position of the optional argument *custom\_title*.

**Parameters**

- **user** (*telegram.User*) – Information about the user.
- **can\_be\_edited** (*bool*) – *True*, if the bot is allowed to edit administrator privileges of that user.
- **is\_anonymous** (*bool*) – *True*, if the user's presence in the chat is hidden.
- **can\_manage\_chat** (*bool*) – *True*, if the administrator can access the chat event log, chat statistics, message statistics in channels, see channel members, see anonymous administrators in supergroups and ignore slow mode. Implied by any other administrator privilege.
- **can\_delete\_messages** (*bool*) – *True*, if the administrator can delete messages of other users.
- **can\_manage\_video\_chats** (*bool*) – *True*, if the administrator can manage video chats.

New in version 20.0.

- **can\_restrict\_members** (*bool*) – *True*, if the administrator can restrict, ban or unban chat members.
- **can\_promote\_members** (*bool*) – *True*, if the administrator can add new administrators with a subset of his own privileges or demote administrators that he has promoted, directly or indirectly (promoted by administrators that were appointed by the user).
- **can\_change\_info** (*bool*) – *True*, if the user can change the chat title, photo and other settings.
- **can\_invite\_users** (*bool*) – *True*, if the user can invite new users to the chat.
- **can\_post\_messages** (*bool*, optional) – *True*, if the administrator can post messages in the channel, or access channel statistics; channels only.
- **can\_edit\_messages** (*bool*, optional) – *True*, if the administrator can edit messages of other users and can pin messages; channels only.

- **can\_pin\_messages** (*bool*, optional) – *True*, if the user is allowed to pin messages; groups and supergroups only.

- **can\_post\_stories** (*bool*, optional) – *True*, if the administrator can post stories in the channel; channels only.

New in version 20.6.

- **can\_edit\_stories** (*bool*, optional) – *True*, if the administrator can edit stories posted by other users; channels only.

New in version 20.6.

- **can\_delete\_stories** (*bool*, optional) – *True*, if the administrator can delete stories posted by other users; channels only.

New in version 20.6.

- **can\_manage\_topics** (*bool*, optional) – *True*, if the user is allowed to create, rename, close, and reopen forum topics; supergroups only.

New in version 20.0.

- **custom\_title** (*str*, optional) – Custom title for this user.

#### **status**

The member's status in the chat, always *'administrator'*.

##### **Type**

*str*

#### **user**

Information about the user.

##### **Type**

*telegram.User*

#### **can\_be\_edited**

*True*, if the bot is allowed to edit administrator privileges of that user.

##### **Type**

*bool*

#### **is\_anonymous**

*True*, if the user's presence in the chat is hidden.

##### **Type**

*bool*

#### **can\_manage\_chat**

*True*, if the administrator can access the chat event log, chat statistics, boost list in channels, see channel members, report spam messages, see anonymous administrators in supergroups and ignore slow mode. Implied by any other administrator privilege.

##### **Type**

*bool*

#### **can\_delete\_messages**

*True*, if the administrator can delete messages of other users.

##### **Type**

*bool*

#### **can\_manage\_video\_chats**

*True*, if the administrator can manage video chats.

New in version 20.0.

**Type**

`bool`

**can\_restrict\_members**

`True`, if the administrator can restrict, ban or unban chat members, or access supergroup statistics.

**Type**

`bool`

**can\_promote\_members**

`True`, if the administrator can add new administrators with a subset of their own privileges or demote administrators that they have promoted, directly or indirectly (promoted by administrators that were appointed by the user).

**Type**

`bool`

**can\_change\_info**

`True`, if the user can change the chat title, photo and other settings.

**Type**

`bool`

**can\_invite\_users**

`True`, if the user can invite new users to the chat.

**Type**

`bool`

**can\_post\_messages**

Optional. `True`, if the administrator can post messages in the channel or access channel statistics; channels only.

**Type**

`bool`

**can\_edit\_messages**

Optional. `True`, if the administrator can edit messages of other users and can pin messages; channels only.

**Type**

`bool`

**can\_pin\_messages**

Optional. `True`, if the user is allowed to pin messages; groups and supergroups only.

**Type**

`bool`

**can\_post\_stories**

Optional. `True`, if the administrator can post stories in the channel; channels only.

New in version 20.6.

**Type**

`bool`

**can\_edit\_stories**

Optional. `True`, if the administrator can edit stories posted by other users; channels only.

New in version 20.6.

**Type**

`bool`

**can\_delete\_stories**

Optional. `True`, if the administrator can delete stories posted by other users; channels only.

New in version 20.6.

**Type**

`bool`

**can\_manage\_topics**

Optional. `True`, if the user is allowed to create, rename, close, and reopen forum topics; supergroups only

New in version 20.0.

**Type**

`bool`

**custom\_title**

Optional. Custom title for this user.

**Type**

`str`

**ChatMemberBanned**

**class** telegram.**ChatMemberBanned**(*user*, *until\_date*, \*, *api\_kwargs=None*)

Bases: [telegram.ChatMember](#)

Represents a chat member that was banned in the chat and can't return to the chat or view chat messages.

---

**Available In**

- [telegram.ChatMemberUpdated.new\\_chat\\_member](#)
  - [telegram.ChatMemberUpdated.old\\_chat\\_member](#)
- 

---

**Returned In**

[telegram.Bot.get\\_chat\\_member\(\)](#)

---

New in version 13.7.

**Parameters**

- **user** ([telegram.User](#)) – Information about the user.
- **until\_date** (`datetime.datetime`) – Date when restrictions will be lifted for this user.  
Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless [telegram.ext.Defaults.tzinfo](#) is used.

**status**

The member's status in the chat, always `'kicked'`.

**Type**

`str`

**user**

Information about the user.

**Type**

[telegram.User](#)

**until\_date**

Date when restrictions will be lifted for this user.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**Type**

`datetime.datetime`

**ChatMemberLeft**

**class** telegram.ChatMemberLeft(*user*, \*, *api\_kwargs*=None)

Bases: `telegram.ChatMember`

Represents a chat member that isn't currently a member of the chat, but may join it themselves.

---

**Available In**

- `telegram.ChatMemberUpdated.new_chat_member`
  - `telegram.ChatMemberUpdated.old_chat_member`
- 

---

**Returned In**

`telegram.Bot.get_chat_member()`

---

New in version 13.7.

**Parameters**

**user** (`telegram.User`) – Information about the user.

**status**

The member's status in the chat, always `'left'`.

**Type**

`str`

**user**

Information about the user.

**Type**

`telegram.User`

**ChatMemberMember**

**class** telegram.ChatMemberMember(*user*, \*, *api\_kwargs*=None)

Bases: `telegram.ChatMember`

Represents a chat member that has no additional privileges or restrictions.

---

**Available In**

- `telegram.ChatMemberUpdated.new_chat_member`
- `telegram.ChatMemberUpdated.old_chat_member`

---

**Returned In**

`telegram.Bot.get_chat_member()`

---

New in version 13.7.

**Parameters**

**user** (`telegram.User`) – Information about the user.

**status**

The member's status in the chat, always `'member'`.

**Type**

`str`

**user**

Information about the user.

**Type**

`telegram.User`

## ChatMemberOwner

**class** telegram.ChatMemberOwner(*user, is\_anonymous, custom\_title=None, \*, api\_kwargs=None*)

Bases: `telegram.ChatMember`

Represents a chat member that owns the chat and has all administrator privileges.

---

**Available In**

- `telegram.ChatMemberUpdated.new_chat_member`
  - `telegram.ChatMemberUpdated.old_chat_member`
- 

---

**Returned In**

`telegram.Bot.get_chat_member()`

---

New in version 13.7.

**Parameters**

- **user** (`telegram.User`) – Information about the user.
- **is\_anonymous** (`bool`) – `True`, if the user's presence in the chat is hidden.
- **custom\_title** (`str`, optional) – Custom title for this user.

**status**

The member's status in the chat, always `'creator'`.

**Type**

`str`

**user**

Information about the user.

**Type**

`telegram.User`

**is\_anonymous**

`True`, if the user's presence in the chat is hidden.

**Type**

`bool`

**custom\_title**

Optional. Custom title for this user.

**Type**

`str`

## ChatMemberRestricted

```
class telegram.ChatMemberRestricted(user, is_member, can_change_info, can_invite_users,
                                     can_pin_messages, can_send_messages, can_send_polls,
                                     can_send_other_messages, can_add_web_page_previews,
                                     can_manage_topics, until_date, can_send_audios,
                                     can_send_documents, can_send_photos, can_send_videos,
                                     can_send_video_notes, can_send_voice_notes, *,
                                     api_kwargs=None)
```

Bases: `telegram.ChatMember`

Represents a chat member that is under certain restrictions in the chat. Supergroups only.

---

**Available In**

- `telegram.ChatMemberUpdated.new_chat_member`
  - `telegram.ChatMemberUpdated.old_chat_member`
- 

---

**Returned In**

`telegram.Bot.get_chat_member()`

---

New in version 13.7.

Changed in version 20.0: All arguments were made positional and their order was changed. The argument `can_manage_topics` was added.

Changed in version 20.5: Removed deprecated argument and attribute `can_send_media_messages`.

**Parameters**

- **user** (`telegram.User`) – Information about the user.
- **is\_member** (`bool`) – `True`, if the user is a member of the chat at the moment of the request.
- **can\_change\_info** (`bool`) – `True`, if the user can change the chat title, photo and other settings.
- **can\_invite\_users** (`bool`) – `True`, if the user can invite new users to the chat.
- **can\_pin\_messages** (`bool`) – `True`, if the user is allowed to pin messages; groups and supergroups only.
- **can\_send\_messages** (`bool`) – `True`, if the user is allowed to send text messages, contacts, invoices, locations and venues.
- **can\_send\_polls** (`bool`) – `True`, if the user is allowed to send polls.

- **can\_send\_other\_messages** (*bool*) – *True*, if the user is allowed to send animations, games, stickers and use inline bots.
- **can\_add\_web\_page\_previews** (*bool*) – *True*, if the user is allowed to add web page previews to their messages.
- **can\_manage\_topics** (*bool*) – *True*, if the user is allowed to create forum topics.  
New in version 20.0.
- **until\_date** (*datetime.datetime*) – Date when restrictions will be lifted for this user.  
Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless *telegram.ext.Defaults.tzinfo* is used.
- **can\_send\_audios** (*bool*) – *True*, if the user is allowed to send audios.  
New in version 20.1.
- **can\_send\_documents** (*bool*) – *True*, if the user is allowed to send documents.  
New in version 20.1.
- **can\_send\_photos** (*bool*) – *True*, if the user is allowed to send photos.  
New in version 20.1.
- **can\_send\_videos** (*bool*) – *True*, if the user is allowed to send videos.  
New in version 20.1.
- **can\_send\_video\_notes** (*bool*) – *True*, if the user is allowed to send video notes.  
New in version 20.1.
- **can\_send\_voice\_notes** (*bool*) – *True*, if the user is allowed to send voice notes.  
New in version 20.1.

**status**

The member's status in the chat, always *'restricted'*.

**Type**

*str*

**user**

Information about the user.

**Type**

*telegram.User*

**is\_member**

*True*, if the user is a member of the chat at the moment of the request.

**Type**

*bool*

**can\_change\_info**

*True*, if the user can change the chat title, photo and other settings.

**Type**

*bool*

**can\_invite\_users**

*True*, if the user can invite new users to the chat.

**Type**

*bool*



**can\_pin\_messages**

`True`, if the user is allowed to pin messages; groups and supergroups only.

**Type**

`bool`

**can\_send\_messages**

`True`, if the user is allowed to send text messages, contacts, locations and venues.

**Type**

`bool`

**can\_send\_polls**

`True`, if the user is allowed to send polls.

**Type**

`bool`

**can\_send\_other\_messages**

`True`, if the user is allowed to send animations, games, stickers and use inline bots.

**Type**

`bool`

**can\_add\_web\_page\_previews**

`True`, if the user is allowed to add web page previews to their messages.

**Type**

`bool`

**can\_manage\_topics**

`True`, if the user is allowed to create forum topics.

New in version 20.0.

**Type**

`bool`

**until\_date**

Date when restrictions will be lifted for this user.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**Type**

`datetime.datetime`

**can\_send\_audios**

`True`, if the user is allowed to send audios.

New in version 20.1.

**Type**

`bool`

**can\_send\_documents**

`True`, if the user is allowed to send documents.

New in version 20.1.

**Type**

`bool`

**can\_send\_photos**

`True`, if the user is allowed to send photos.

New in version 20.1.

**Type**

`bool`

**can\_send\_videos**

`True`, if the user is allowed to send videos.

New in version 20.1.

**Type**

`bool`

**can\_send\_video\_notes**

`True`, if the user is allowed to send video notes.

New in version 20.1.

**Type**

`bool`

**can\_send\_voice\_notes**

`True`, if the user is allowed to send voice notes.

New in version 20.1.

**Type**

`bool`

---

**ChatMemberUpdated**

```
class telegram.ChatMemberUpdated(chat, from_user, date, old_chat_member, new_chat_member,
                                  invite_link=None, via_chat_folder_invite_link=None, *,
                                  api_kwargs=None)
```

Bases: [`telegram.TelegramObject`](#)

This object represents changes in the status of a chat member.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `chat`, `from_user`, `date`, `old_chat_member` and `new_chat_member` are equal.

---

**Available In**

- [`telegram.Update.chat\_member`](#)
- [`telegram.Update.my\_chat\_member`](#)

---

New in version 13.4.

---

**Note:** In Python `from` is a reserved word. Use [`from\_user`](#) instead.

---

---

**Examples**

[\*Chat Member Bot\*](#)

---

**Parameters**

- **chat** (*telegram.Chat*) – Chat the user belongs to.
- **from\_user** (*telegram.User*) – Performer of the action, which resulted in the change.
- **date** (*datetime.datetime*) – Date the change was done in Unix time. Converted to *datetime.datetime*.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless *telegram.ext.Defaults.tzinfo* is used.

- **old\_chat\_member** (*telegram.ChatMember*) – Previous information about the chat member.
- **new\_chat\_member** (*telegram.ChatMember*) – New information about the chat member.
- **invite\_link** (*telegram.ChatInviteLink*, optional) – Chat invite link, which was used by the user to join the chat. For joining by invite link events only.
- **via\_chat\_folder\_invite\_link** (*bool*, optional) – *True*, if the user joined the chat via a chat folder invite link

New in version 20.3.

#### **chat**

Chat the user belongs to.

##### **Type**

*telegram.Chat*

#### **from\_user**

Performer of the action, which resulted in the change.

##### **Type**

*telegram.User*

#### **date**

Date the change was done in Unix time. Converted to *datetime.datetime*.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless *telegram.ext.Defaults.tzinfo* is used.

##### **Type**

*datetime.datetime*

#### **old\_chat\_member**

Previous information about the chat member.

##### **Type**

*telegram.ChatMember*

#### **new\_chat\_member**

New information about the chat member.

##### **Type**

*telegram.ChatMember*

#### **invite\_link**

Optional. Chat invite link, which was used by the user to join the chat. For joining by invite link events only.

##### **Type**

*telegram.ChatInviteLink*

**via\_chat\_folder\_invite\_link**

Optional. `True`, if the user joined the chat via a chat folder invite link

New in version 20.3.

**Type**

`bool`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**difference()**

Computes the difference between `old_chat_member` and `new_chat_member`.

---

**Example**

```
>>> chat_member_updated.difference()
{'custom_title': ('old title', 'new title')}
```

---

**Note:** To determine, if the `telegram.ChatMember.user` attribute has changed, *every* attribute of the user will be checked.

---

New in version 13.5.

**Returns**

A dictionary mapping attribute names to tuples of the form (`old_value`, `new_value`)

**Return type**

`Dict[str, Tuple[object, object]]`

## ChatPermissions

```
class telegram.ChatPermissions(can_send_messages=None, can_send_polls=None,
                               can_send_other_messages=None, can_add_web_page_previews=None,
                               can_change_info=None, can_invite_users=None,
                               can_pin_messages=None, can_manage_topics=None,
                               can_send_audios=None, can_send_documents=None,
                               can_send_photos=None, can_send_videos=None,
                               can_send_video_notes=None, can_send_voice_notes=None, *,
                               api_kwargs=None)
```

Bases: `telegram.TelegramObject`

Describes actions that a non-administrator user is allowed to take in a chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `can_send_messages`, `can_send_polls`, `can_send_other_messages`, `can_add_web_page_previews`, `can_change_info`, `can_invite_users`, `can_pin_messages`, `can_send_audios`, `can_send_documents`, `can_send_photos`, `can_send_videos`, `can_send_video_notes`, `can_send_voice_notes`, and `can_manage_topics` are equal.

---

**Use In**

- `telegram.Bot.restrict_chat_member()`
  - `telegram.Bot.set_chat_permissions()`
-

---

**Available In***telegram.Chat.permissions*

---

Changed in version 20.0: *can\_manage\_topics* is considered as well when comparing objects of this type in terms of equality.

Changed in version 20.5:

- *can\_send\_audios*, *can\_send\_documents*, *can\_send\_photos*, *can\_send\_videos*, *can\_send\_video\_notes* and *can\_send\_voice\_notes* are considered as well when comparing objects of this type in terms of equality.
- Removed deprecated argument and attribute *can\_send\_media\_messages*.

---

**Note:** Though not stated explicitly in the official docs, Telegram changes not only the permissions that are set, but also sets all the others to *False*. However, since not documented, this behavior may change unbeknown to PTB.

---

**Parameters**

- **can\_send\_messages** (*bool*, optional) – *True*, if the user is allowed to send text messages, contacts, locations and venues.
- **can\_send\_polls** (*bool*, optional) – *True*, if the user is allowed to send polls.
- **can\_send\_other\_messages** (*bool*, optional) – *True*, if the user is allowed to send animations, games, stickers and use inline bots.
- **can\_add\_web\_page\_previews** (*bool*, optional) – *True*, if the user is allowed to add web page previews to their messages.
- **can\_change\_info** (*bool*, optional) – *True*, if the user is allowed to change the chat title, photo and other settings. Ignored in public supergroups.
- **can\_invite\_users** (*bool*, optional) – *True*, if the user is allowed to invite new users to the chat.
- **can\_pin\_messages** (*bool*, optional) – *True*, if the user is allowed to pin messages. Ignored in public supergroups.
- **can\_manage\_topics** (*bool*, optional) – *True*, if the user is allowed to create forum topics. If omitted defaults to the value of *can\_pin\_messages*.

New in version 20.0.

- **can\_send\_audios** (*bool*) – *True*, if the user is allowed to send audios.

New in version 20.1.

- **can\_send\_documents** (*bool*) – *True*, if the user is allowed to send documents.

New in version 20.1.

- **can\_send\_photos** (*bool*) – *True*, if the user is allowed to send photos.

New in version 20.1.

- **can\_send\_videos** (*bool*) – *True*, if the user is allowed to send videos.

New in version 20.1.

- **can\_send\_video\_notes** (*bool*) – *True*, if the user is allowed to send video notes.

New in version 20.1.

- **can\_send\_voice\_notes** (`bool`) – `True`, if the user is allowed to send voice notes.

New in version 20.1.

**can\_send\_messages**

Optional. `True`, if the user is allowed to send text messages, contacts, locations and venues.

Type

`bool`

**can\_send\_polls**

Optional. `True`, if the user is allowed to send polls, implies `can_send_messages`.

Type

`bool`

**can\_send\_other\_messages**

Optional. `True`, if the user is allowed to send animations, games, stickers and use inline bots.

Type

`bool`

**can\_add\_web\_page\_previews**

Optional. `True`, if the user is allowed to add web page previews to their messages.

Type

`bool`

**can\_change\_info**

Optional. `True`, if the user is allowed to change the chat title, photo and other settings. Ignored in public supergroups.

Type

`bool`

**can\_invite\_users**

Optional. `True`, if the user is allowed to invite new users to the chat.

Type

`bool`

**can\_pin\_messages**

Optional. `True`, if the user is allowed to pin messages. Ignored in public supergroups.

Type

`bool`

**can\_manage\_topics**

Optional. `True`, if the user is allowed to create forum topics. If omitted defaults to the value of `can_pin_messages`.

New in version 20.0.

Type

`bool`

**can\_send\_audios**

`True`, if the user is allowed to send audios.

New in version 20.1.

Type

`bool`

**can\_send\_documents**

`True`, if the user is allowed to send documents.

New in version 20.1.

**Type**

`bool`

**can\_send\_photos**

`True`, if the user is allowed to send photos.

New in version 20.1.

**Type**

`bool`

**can\_send\_videos**

`True`, if the user is allowed to send videos.

New in version 20.1.

**Type**

`bool`

**can\_send\_video\_notes**

`True`, if the user is allowed to send video notes.

New in version 20.1.

**Type**

`bool`

**can\_send\_voice\_notes**

`True`, if the user is allowed to send voice notes.

New in version 20.1.

**Type**

`bool`

**classmethod all\_permissions()**

This method returns an `ChatPermissions` instance with all attributes set to `True`. This is e.g. useful when unrestricting a chat member with `telegram.Bot.restrict_chat_member()`.

New in version 20.0.

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**classmethod no\_permissions()**

This method returns an `ChatPermissions` instance with all attributes set to `False`.

New in version 20.0.

## ChatPhoto

**class** telegram.ChatPhoto(*small\_file\_id, small\_file\_unique\_id, big\_file\_id, big\_file\_unique\_id, \*, api\_kwargs=None*)

Bases: `telegram.TelegramObject`

This object represents a chat photo.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `small_file_unique_id` and `big_file_unique_id` are equal.

---

**Use In**

`telegram.Bot.get_file()`

---

---

**Available In**

`telegram.Chat.photo`

---

**Parameters**

- **small\_file\_id** (`str`) – File identifier of small (`160` x `160`) chat photo. This `file_id` can be used only for photo download and only for as long as the photo is not changed.
- **small\_file\_unique\_id** (`str`) – Unique file identifier of small (`160` x `160`) chat photo, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **big\_file\_id** (`str`) – File identifier of big (`640` x `640`) chat photo. This `file_id` can be used only for photo download and only for as long as the photo is not changed.
- **big\_file\_unique\_id** (`str`) – Unique file identifier of big (`640` x `640`) chat photo, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**small\_file\_id**

File identifier of small (`160` x `160`) chat photo. This `file_id` can be used only for photo download and only for as long as the photo is not changed.

**Type**

`str`

**small\_file\_unique\_id**

Unique file identifier of small (`160` x `160`) chat photo, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**

`str`

**big\_file\_id**

File identifier of big (`640` x `640`) chat photo. This `file_id` can be used only for photo download and only for as long as the photo is not changed.

**Type**

`str`

**big\_file\_unique\_id**

Unique file identifier of big (`640` x `640`) chat photo, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**

`str`

**SIZE\_BIG = 640**

`telegram.constants.ChatPhotoSize.BIG`

New in version 20.0.

**SIZE\_SMALL = 160**

`telegram.constants.ChatPhotoSize.SMALL`

New in version 20.0.



```
async get_big_file(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                  pool_timeout=None, api_kwargs=None)
```

Convenience wrapper over `telegram.Bot.get_file()` for getting the big (640 x 640) chat photo

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

```
async get_small_file(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Convenience wrapper over `telegram.Bot.get_file()` for getting the small (160 x 160) chat photo

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

## ChatShared

```
class telegram.ChatShared(request_id, chat_id, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object contains information about the chat whose identifier was shared with the bot using a `telegram.KeyboardButtonRequestChat` button.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `request_id` and `chat_id` are equal.

---

### Available In

`telegram.Message.chat_shared`

---

New in version 20.1.

### Parameters

- **request\_id** (`int`) – Identifier of the request.
- **chat\_id** (`int`) – Identifier of the shared user. This number may be greater than 32 bits and some programming languages may have difficulty/silent defects in interpreting it. But it is smaller than 52 bits, so a signed 64-bit integer or double-precision float type are safe for storing this identifier.

### request\_id

Identifier of the request.

**Type**

`int`

### chat\_id

Identifier of the shared user. This number may be greater than 32 bits and some programming languages may have difficulty/silent defects in interpreting it. But it is smaller than 52 bits, so a signed 64-bit integer or double-precision float type are safe for storing this identifier.

**Type**

`int`

## Contact

```
class telegram.Contact(phone_number, first_name, last_name=None, user_id=None, vcard=None, *,
                        api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a phone contact.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [phone\\_number](#) is equal.

---

### Use In

[telegram.Bot.send\\_contact\(\)](#)

---

---

### Available In

[telegram.Message.contact](#)

---

#### Parameters

- **phone\_number** ([str](#)) – Contact’s phone number.
- **first\_name** ([str](#)) – Contact’s first name.
- **last\_name** ([str](#), optional) – Contact’s last name.
- **user\_id** ([int](#), optional) – Contact’s user identifier in Telegram.
- **vcard** ([str](#), optional) – Additional data about the contact in the form of a vCard.

#### phone\_number

Contact’s phone number.

##### Type

[str](#)

#### first\_name

Contact’s first name.

##### Type

[str](#)

#### last\_name

Optional. Contact’s last name.

##### Type

[str](#)

#### user\_id

Optional. Contact’s user identifier in Telegram.

##### Type

[int](#)

#### vcard

Optional. Additional data about the contact in the form of a vCard.

##### Type

[str](#)

## Dice

**class** telegram.Dice(value, emoji, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents an animated emoji with a random value for currently supported base emoji. (The singular form of “dice” is “die”. However, PTB mimics the Telegram API, which uses the term “dice”.)

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *value* and *emoji* are equal.

---

**Note:** If *emoji* is `"`, a value of 6 currently represents a bullseye, while a value of 1 indicates that the dartboard was missed. However, this behaviour is undocumented and might be changed by Telegram.

If *emoji* is `"`, a value of 4 or 5 currently score a basket, while a value of 1 to 3 indicates that the basket was missed. However, this behaviour is undocumented and might be changed by Telegram.

If *emoji* is `"`, a value of 4 to 5 currently scores a goal, while a value of 1 to 3 indicates that the goal was missed. However, this behaviour is undocumented and might be changed by Telegram.

If *emoji* is `"`, a value of 6 knocks all the pins, while a value of 1 means all the pins were missed. However, this behaviour is undocumented and might be changed by Telegram.

If *emoji* is `"`, each value corresponds to a unique combination of symbols, which can be found in our [wiki](#). However, this behaviour is undocumented and might be changed by Telegram.

---

### Available In

[telegram.Message.dice](#)

---

### Parameters

- **value** (`int`) – Value of the dice. *1-6* for `"`, `"` and `"` base emoji, *1-5* for `"` and `"` base emoji, *1-64* for `"` base emoji.
- **emoji** (`str`) – Emoji on which the dice throw animation is based.

### value

Value of the dice. *1-6* for `"`, `"` and `"` base emoji, *1-5* for `"` and `"` base emoji, *1-64* for `"` base emoji.

#### Type

`int`

### emoji

Emoji on which the dice throw animation is based.

#### Type

`str`

`ALL_EMOJI = [DiceEmoji.DICE, DiceEmoji.DARTS, DiceEmoji.BASKETBALL, DiceEmoji.FOOTBALL, DiceEmoji.SLOT_MACHINE, DiceEmoji.BOWLING]`

A list of all available dice emoji.

#### Type

`List[str]`

`BASKETBALL = ''`

`telegram.constants.DiceEmoji.BASKETBALL`

```
BOWLING = ''
    telegram.constants.DiceEmoji.BOWLING
    New in version 13.4.

DARTS = ''
    telegram.constants.DiceEmoji.DARTS

DICE = ''
    telegram.constants.DiceEmoji.DICE

FOOTBALL = ''
    telegram.constants.DiceEmoji.FOOTBALL

MAX_VALUE_BASKETBALL = 5
    telegram.constants.DiceLimit.MAX_VALUE_BASKETBALL
    New in version 20.0.

MAX_VALUE_BOWLING = 6
    telegram.constants.DiceLimit.MAX_VALUE_BOWLING
    New in version 20.0.

MAX_VALUE_DARTS = 6
    telegram.constants.DiceLimit.MAX_VALUE_DARTS
    New in version 20.0.

MAX_VALUE_DICE = 6
    telegram.constants.DiceLimit.MAX_VALUE_DICE
    New in version 20.0.

MAX_VALUE_FOOTBALL = 5
    telegram.constants.DiceLimit.MAX_VALUE_FOOTBALL
    New in version 20.0.

MAX_VALUE_SLOT_MACHINE = 64
    telegram.constants.DiceLimit.MAX_VALUE_SLOT_MACHINE
    New in version 20.0.

MIN_VALUE = 1
    telegram.constants.DiceLimit.MIN_VALUE
    New in version 20.0.

SLOT_MACHINE = ''
    telegram.constants.DiceEmoji.SLOT_MACHINE
```

## Document

```
class telegram.Document(file_id, file_unique_id, file_name=None, mime_type=None, file_size=None,
                        thumbnail=None, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a general file (as opposed to photos, voice messages and audio files).

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [file\\_unique\\_id](#) is equal.

---

### Use In

- `telegram.Bot.get_file()`
  - `telegram.Bot.send_document()`
- 

---

#### Available In

`telegram.Message.document`

---

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

#### Parameters

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **file\_name** (`str`, optional) – Original filename as defined by sender.
- **mime\_type** (`str`, optional) – MIME type of the file as defined by sender.
- **file\_size** (`int`, optional) – File size in bytes.
- **thumbnail** (`telegram.PhotoSize`, optional) – Document thumbnail as defined by sender.

New in version 20.2.

#### **file\_id**

Identifier for this file, which can be used to download or reuse the file.

##### Type

`str`

#### **file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

##### Type

`str`

#### **file\_name**

Optional. Original filename as defined by sender.

##### Type

`str`

#### **mime\_type**

Optional. MIME type of the file as defined by sender.

##### Type

`str`

#### **file\_size**

Optional. File size in bytes.

##### Type

`int`

#### **thumbnail**

Optional. Document thumbnail as defined by sender.

New in version 20.2.

##### Type

`telegram.PhotoSize`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

**async** `get_file(*, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

## File

**class** `telegram.File(file_id, file_unique_id, file_size=None, file_path=None, *, api_kwargs=None)`

Bases: `telegram.TelegramObject`

This object represents a file ready to be downloaded. The file can be e.g. downloaded with `download_to_drive`. It is guaranteed that the link will be valid for at least 1 hour. When the link expires, a new one can be requested by calling `telegram.Bot.get_file()`.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `file_unique_id` is equal.

---

**Available In**

`telegram.Sticker.premium_animation`

---

---

**Returned In**

- `telegram.Bot.get_file()`
  - `telegram.Bot.upload_sticker_file()`
- 

Changed in version 20.0: download was split into `download_to_drive()` and `download_to_memory()`.

---

**Note:**

- Maximum file size to download is **20 MB**.
  - If you obtain an instance of this class from `telegram.PassportFile.get_file`, then it will automatically be decrypted as it downloads when you call e.g. `download_to_drive()`.
- 

**Parameters**

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **file\_size** (`int`, optional) – File size in bytes, if known.
- **file\_path** (`str`, optional) – File path. Use e.g. `download_to_drive()` to get the file.

**file\_id**

Identifier for this file, which can be used to download or reuse the file.

**Type**

`str`

**file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**

`str`

**file\_size**

Optional. File size in bytes, if known.

**Type**

`int`

**file\_path**

Optional. File path. Use e.g. `download_to_drive()` to get the file.

**Type**

`str`

**async download\_as\_bytearray**(*buf=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None*)

Download this file and return it as a bytearray.

**Parameters**

**buf** (`bytearray`, optional) – Extend the given bytearray with the downloaded data.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.

New in version 20.0.

- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.

New in version 20.0.

- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.

New in version 20.0.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

New in version 20.0.

**Returns**

The same object as `buf` if it was specified. Otherwise a newly allocated `bytearray`.

**Return type**

`bytearray`

**async download\_to\_drive**(*custom\_path=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None*)

Download this file. By default, the file is saved in the current working directory with `file_path` as file name. If the file has no filename, the file ID will be used as filename. If `custom_path` is supplied as a `str` or `pathlib.Path`, it will be saved to that path.

---

**Note:** If `custom_path` isn't provided and `file_path` is the path of a local file (which is the case when a Bot API Server is running in local mode), this method will just return the path.

The only exception to this are encrypted files (e.g. a passport file). For these, a file with the prefix `decrypted_` will be created in the same directory as the original file in order to decrypt the file without changing the existing one in-place.

---

**See also:**

[Working with Files and Media](#)

Changed in version 20.0:

- `custom_path` parameter now also accepts `pathlib.Path` as argument.
- Returns `pathlib.Path` object in cases where previously a `str` was returned.
- This method was previously called `download`. It was split into `download_to_drive()` and `download_to_memory()`.

**Parameters**

**custom\_path** (`pathlib.Path` | `str`, optional) – The path where the file will be saved to. If not specified, will be saved in the current working directory with `file_path` as file name or the `file_id` if `file_path` is not set.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

**Returns**

Returns the Path object the file was downloaded to.

**Return type**

`pathlib.Path`

**async download\_to\_memory**(*out*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*)

Download this file into memory. *out* needs to be supplied with a `io.BufferedIOBase`, the file contents will be saved to that object using the *out.write* method.

**See also:**

[Working with Files and Media](#)

New in version 20.0.

**Parameters**

**out** (`io.BufferedIOBase`) – A file-like object. Must be opened for writing in binary mode.

**Keyword Arguments**

- **read\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.read_timeout`. Defaults to `DEFAULT_NONE`.



- **write\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.request.BaseRequest.post.pool_timeout`. Defaults to `DEFAULT_NONE`.

**set\_credentials**(*credentials*)

Sets the passport credentials for the file.

**Parameters**

**credentials** (`telegram.FileCredentials`) – The credentials.

## ForceReply

**class** telegram.**ForceReply**(*selective=None, input\_field\_placeholder=None, \*, api\_kwargs=None*)

Bases: `telegram.TelegramObject`

Upon receiving a message with this object, Telegram clients will display a reply interface to the user (act as if the user has selected the bot's message and tapped 'Reply'). This can be extremely useful if you want to create user-friendly step-by-step interfaces without having to sacrifice privacy mode.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `selective` is equal.

---

### Use In

- `telegram.Bot.copy_message()`
- `telegram.Bot.send_animation()`
- `telegram.Bot.send_audio()`
- `telegram.Bot.send_contact()`
- `telegram.Bot.send_dice()`
- `telegram.Bot.send_document()`
- `telegram.Bot.send_location()`
- `telegram.Bot.send_message()`
- `telegram.Bot.send_photo()`
- `telegram.Bot.send_poll()`
- `telegram.Bot.send_sticker()`
- `telegram.Bot.send_venue()`
- `telegram.Bot.send_video_note()`
- `telegram.Bot.send_video()`
- `telegram.Bot.send_voice()`

---

Changed in version 20.0: The (undocumented) argument `force_reply` was removed and instead `force_reply` is now always set to `True` as expected by the Bot API.

**Parameters**

- **selective** (`bool`, optional) – Use this parameter if you want to force reply from specific users only. Targets:
  - 1) Users that are @mentioned in the `text` of the `telegram.Message` object.

2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

- **input\_field\_placeholder** (`str`, optional) – The placeholder to be shown in the input field when the reply is active; 1- 64 characters.

New in version 13.7.

#### **force\_reply**

Shows reply interface to the user, as if they manually selected the bots message and tapped 'Reply'.

##### **Type**

`True`

#### **selective**

Optional. Force reply from specific users only. Targets:

- 1) Users that are @mentioned in the `text` of the `telegram.Message` object.
- 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

##### **Type**

`bool`

#### **input\_field\_placeholder**

Optional. The placeholder to be shown in the input field when the reply is active; 1- 64 characters.

New in version 13.7.

##### **Type**

`str`

#### **MAX\_INPUT\_FIELD\_PLACEHOLDER = 64**

`telegram.constants.ReplyLimit.MAX_INPUT_FIELD_PLACEHOLDER`

New in version 20.0.

#### **MIN\_INPUT\_FIELD\_PLACEHOLDER = 1**

`telegram.constants.ReplyLimit.MIN_INPUT_FIELD_PLACEHOLDER`

New in version 20.0.

## **ForumTopic**

```
class telegram.ForumTopic(message_thread_id, name, icon_color, icon_custom_emoji_id=None, *,
                           api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a forum topic.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `message_thread_id`, `name` and `icon_color` are equal.

---

#### **Returned In**

`telegram.Bot.create_forum_topic()`

---

New in version 20.0.

#### **Parameters**

- **message\_thread\_id** (`int`) – Unique identifier of the forum topic
- **name** (`str`) – Name of the topic

- **icon\_color** ([int](#)) – Color of the topic icon in RGB format
- **icon\_custom\_emoji\_id** ([str](#), optional) – Unique identifier of the custom emoji shown as the topic icon.

**message\_thread\_id**

Unique identifier of the forum topic

**Type**

[int](#)

**name**

Name of the topic

**Type**

[str](#)

**icon\_color**

Color of the topic icon in RGB format

**Type**

[int](#)

**icon\_custom\_emoji\_id**

Optional. Unique identifier of the custom emoji shown as the topic icon.

**Type**

[str](#)

## ForumTopicClosed

```
class telegram.ForumTopicClosed(*, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a service message about a forum topic closed in the chat. Currently holds no information.

---

**Available In**

[telegram.Message.forum\\_topic\\_closed](#)

---

New in version 20.0.

## ForumTopicCreated

```
class telegram.ForumTopicCreated(name, icon_color, icon_custom_emoji_id=None, *,
                                  api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents the content of a service message about a new forum topic created in the chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [name](#) and [icon\\_color](#) are equal.

---

**Available In**

[telegram.Message.forum\\_topic\\_created](#)

---

New in version 20.0.

**Parameters**

- **name** (`str`) – Name of the topic
- **icon\_color** (`int`) – Color of the topic icon in RGB format
- **icon\_custom\_emoji\_id** (`str`, optional) – Unique identifier of the custom emoji shown as the topic icon.

**name**

Name of the topic

**Type**

`str`

**icon\_color**

Color of the topic icon in RGB format

**Type**

`int`

**icon\_custom\_emoji\_id**

Optional. Unique identifier of the custom emoji shown as the topic icon.

**Type**

`str`

**ForumTopicEdited**

```
class telegram.ForumTopicEdited(name=None, icon_custom_emoji_id=None, *, api_kwargs=None)
```

Bases: [`telegram.TelegramObject`](#)

This object represents a service message about an edited forum topic.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [`name`](#) and [`icon\_custom\_emoji\_id`](#) are equal.

---

**Available In**

[`telegram.Message.forum\_topic\_edited`](#)

---

New in version 20.0.

**Parameters**

- **name** (`str`, optional) – New name of the topic, if it was edited.
- **icon\_custom\_emoji\_id** (`str`, optional) – New identifier of the custom emoji shown as the topic icon, if it was edited; an empty string if the icon was removed.

**name**

Optional. New name of the topic, if it was edited.

**Type**

`str`

**icon\_custom\_emoji\_id**

Optional. New identifier of the custom emoji shown as the topic icon, if it was edited; an empty string if the icon was removed.

**Type**

`str`

## ForumTopicReopened

**class** telegram.**ForumTopicReopened**(\**api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a service message about a forum topic reopened in the chat. Currently holds no information.

---

### Available In

[telegram.Message.forum\\_topic\\_reopened](#)

---

New in version 20.0.

## GeneralForumTopicHidden

**class** telegram.**GeneralForumTopicHidden**(\**api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a service message about General forum topic hidden in the chat. Currently holds no information.

---

### Available In

[telegram.Message.general\\_forum\\_topic\\_hidden](#)

---

New in version 20.0.

## GeneralForumTopicUnhidden

**class** telegram.**GeneralForumTopicUnhidden**(\**api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a service message about General forum topic unhidden in the chat. Currently holds no information.

---

### Available In

[telegram.Message.general\\_forum\\_topic\\_unhidden](#)

---

New in version 20.0.

## InlineKeyboardButton

**class** telegram.**InlineKeyboardButton**(*text*, *url=None*, *callback\_data=None*, *switch\_inline\_query=None*, *switch\_inline\_query\_current\_chat=None*, *callback\_game=None*, *pay=None*, *login\_url=None*, *web\_app=None*, *switch\_inline\_query\_chosen\_chat=None*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents one button of an inline keyboard.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `text`, `url`, `login_url`, `callback_data`, `switch_inline_query`, `switch_inline_query_current_chat`, `callback_game`, `web_app` and `pay` are equal.

**Note:**

- You must use exactly one of the optional fields. Mind that `callback_game` is not working as expected. Putting a game short name in it might, but is not guaranteed to work.
- If your bot allows for arbitrary callback data, in keyboards returned in a response from telegram, `callback_data` maybe be an instance of `telegram.ext.InvalidCallbackData`. This will be the case, if the data associated with the button was already deleted.

New in version 13.6.

- Since Bot API 5.5, it's now allowed to mention users by their ID in inline keyboards. This will only work in Telegram versions released after December 7, 2021. Older clients will display *unsupported message*.
- 

**Warning:**

- If your bot allows your arbitrary callback data, buttons whose callback data is a non-hashable object will become unhashable. Trying to evaluate `hash(button)` will result in a `TypeError`.

Changed in version 13.6.

- After Bot API 6.1, only HTTPS links will be allowed in `login_url`.
- 

**Available In**

`telegram.InlineKeyboardMarkup.inline_keyboard`

---

**Examples**

- [Inline Keyboard 1](#)
  - [Inline Keyboard 2](#)
- 

**See also:**

`telegram.InlineKeyboardMarkup`

Changed in version 20.0: `web_app` is considered as well when comparing objects of this type in terms of equality.

**Parameters**

- **text** (`str`) – Label text on the button.
- **url** (`str`, optional) – HTTP or tg:// url to be opened when the button is pressed. Links `tg://user?id=<user_id>` can be used to mention a user by their ID without using a username, if this is allowed by their privacy settings.

Changed in version 13.9: You can now mention a user using `tg://user?id=<user_id>`.

- **login\_url** (`telegram.LoginUrl`, optional) – An HTTPS URL used to automatically authorize the user. Can be used as a replacement for the Telegram Login Widget.

**Caution:** Only HTTPS links are allowed after Bot API 6.1.

- **callback\_data** (`str` | `object`, optional) – Data to be sent in a callback query to the bot when button is pressed, UTF-8 1- 64 bytes. If the bot instance allows arbitrary callback data, anything can be passed.

---

**Tip:** The value entered here will be available in `telegram.CallbackQuery.data`.

---

**See also:**

[Arbitrary callback\\_data](#)

- **web\_app** (`telegram.WebAppInfo`, optional) – Description of the [Web App](#) that will be launched when the user presses the button. The Web App will be able to send an arbitrary message on behalf of the user using the method `answer_web_app_query()`. Available only in private chats between a user and the bot.

New in version 20.0.

- **switch\_inline\_query** (`str`, optional) – If set, pressing the button will prompt the user to select one of their chats, open that chat and insert the bot's username and the specified inline query in the input field. Can be empty, in which case just the bot's username will be inserted. This offers an easy way for users to start using your bot in inline mode when they are currently in a private chat with it. Especially useful when combined with `switch_pm*` actions - in this case the user will be automatically returned to the chat they switched from, skipping the chat selection screen.

---

**Tip:** This is similar to the new parameter `switch_inline_query_chosen_chat`, but gives no control over which chats can be selected.

---

- **switch\_inline\_query\_current\_chat** (`str`, optional) – If set, pressing the button will insert the bot's username and the specified inline query in the current chat's input field. Can be empty, in which case only the bot's username will be inserted. This offers a quick way for the user to open your bot in inline mode in the same chat - good for selecting something from multiple options.
- **callback\_game** (`telegram.CallbackGame`, optional) – Description of the game that will be launched when the user presses the button. This type of button **must** always be the **first** button in the first row.
- **pay** (`bool`, optional) – Specify `True`, to send a Pay button. This type of button **must** always be the **first** button in the first row and can only be used in invoice messages.
- **switch\_inline\_query\_chosen\_chat** (`telegram.SwitchInlineQueryChosenChat`, optional) – If set, pressing the button will prompt the user to select one of their chats of the specified type, open that chat and insert the bot's username and the specified inline query in the input field.

New in version 20.3.

---

**Tip:** This is similar to `switch_inline_query`, but gives more control on which chats can be selected.

---

**Caution:** The PTB team has discovered that this field works correctly only if your Telegram client is released after April 20th 2023.

**text**

Label text on the button.

**Type**`str`**url**

Optional. HTTP or tg:// url to be opened when the button is pressed. Links `tg://user?id=<user_id>` can be used to mention a user by their ID without using a username, if this is allowed by their privacy settings.

Changed in version 13.9: You can now mention a user using `tg://user?id=<user_id>`.

**Type**`str`**login\_url**

Optional. An HTTPS URL used to automatically authorize the user. Can be used as a replacement for the Telegram Login Widget.

**Caution:** Only HTTPS links are allowed after Bot API 6.1.

**Type**`telegram.LoginUrl`**callback\_data**

Optional. Data to be sent in a callback query to the bot when button is pressed, UTF-8 1- 64 bytes.

**Type**`str | object`**web\_app**

Optional. Description of the [Web App](#) that will be launched when the user presses the button. The Web App will be able to send an arbitrary message on behalf of the user using the method `answer_web_app_query()`. Available only in private chats between a user and the bot.

New in version 20.0.

**Type**`telegram.WebAppInfo`**switch\_inline\_query**

Optional. If set, pressing the button will prompt the user to select one of their chats, open that chat and insert the bot's username and the specified inline query in the input field. Can be empty, in which case just the bot's username will be inserted. This offers an easy way for users to start using your bot in inline mode when they are currently in a private chat with it. Especially useful when combined with `switch_pm*` actions - in this case the user will be automatically returned to the chat they switched from, skipping the chat selection screen.

---

**Tip:** This is similar to the new parameter `switch_inline_query_chosen_chat`, but gives no control over which chats can be selected.

---

**Type**`str`**switch\_inline\_query\_current\_chat**

Optional. If set, pressing the button will insert the bot's username and the specified inline query in the current chat's input field. Can be empty, in which case only the bot's username will be inserted. This offers a quick way for the user to open your bot in inline mode in the same chat - good for selecting something from multiple options.



**Type**`str`**callback\_game**

Optional. Description of the game that will be launched when the user presses the button. This type of button **must** always be the **first** button in the first row.

**Type**`telegram.CallbackGame`**pay**

Optional. Specify `True`, to send a Pay button. This type of button **must** always be the **first** button in the first row and can only be used in invoice messages.

**Type**`bool`**switch\_inline\_query\_chosen\_chat**

Optional. If set, pressing the button will prompt the user to select one of their chats of the specified type, open that chat and insert the bot's username and the specified inline query in the input field.

New in version 20.3.

---

**Tip:** This is similar to `switch_inline_query`, but gives more control on which chats can be selected.

---

**Caution:** The PTB team has discovered that this field works correctly only if your Telegram client is released after April 20th 2023.

**Type**`telegram.SwitchInlineQueryChosenChat`**MAX\_CALLBACK\_DATA = 64**`telegram.constants.InlineKeyboardButtonLimit.MAX_CALLBACK_DATA`

New in version 20.0.

**MIN\_CALLBACK\_DATA = 1**`telegram.constants.InlineKeyboardButtonLimit.MIN_CALLBACK_DATA`

New in version 20.0.

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**update\_callback\_data(callback\_data)**

Sets `callback_data` to the passed object. Intended to be used by `telegram.ext.CallbackDataCache`.

New in version 13.6.

**Parameters**

**callback\_data** (`object`) – The new callback data.

## InlineKeyboardMarkup

**class** telegram.**InlineKeyboardMarkup**(*inline\_keyboard*, \*, *api\_kwargs=None*)

Bases: `telegram.TelegramObject`

This object represents an inline keyboard that appears right next to the message it belongs to.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their size of `inline_keyboard` and all the buttons are equal.

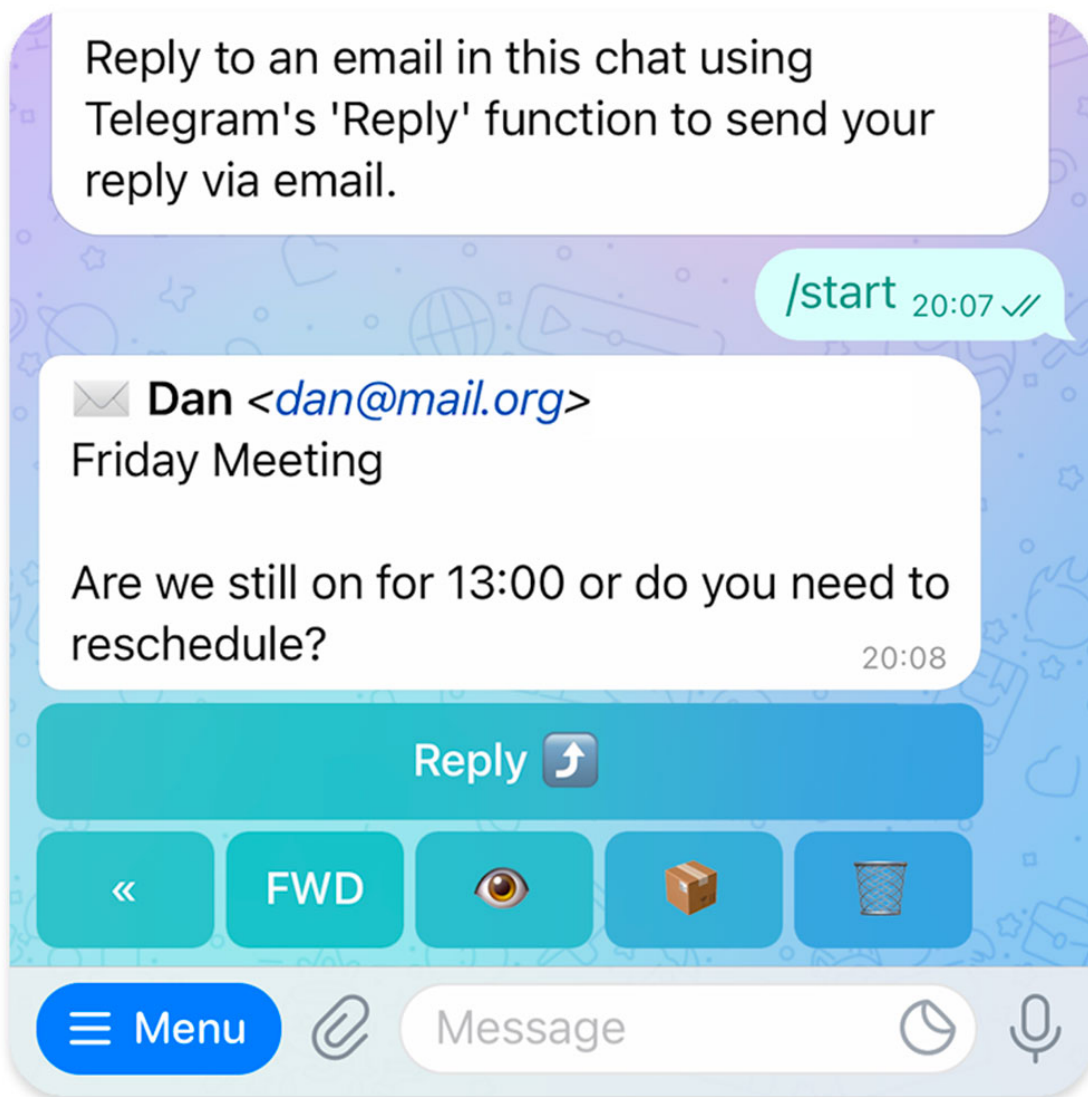


Fig. 1: An inline keyboard on a message

---

### Use In

- `telegram.Bot.copy_message()`
- `telegram.Bot.edit_message_caption()`
- `telegram.Bot.edit_message_live_location()`
- `telegram.Bot.edit_message_media()`

- `telegram.Bot.edit_message_reply_markup()`
  - `telegram.Bot.edit_message_text()`
  - `telegram.Bot.send_animation()`
  - `telegram.Bot.send_audio()`
  - `telegram.Bot.send_contact()`
  - `telegram.Bot.send_dice()`
  - `telegram.Bot.send_document()`
  - `telegram.Bot.send_game()`
  - `telegram.Bot.send_invoice()`
  - `telegram.Bot.send_location()`
  - `telegram.Bot.send_message()`
  - `telegram.Bot.send_photo()`
  - `telegram.Bot.send_poll()`
  - `telegram.Bot.send_sticker()`
  - `telegram.Bot.send_venue()`
  - `telegram.Bot.send_video_note()`
  - `telegram.Bot.send_video()`
  - `telegram.Bot.send_voice()`
  - `telegram.Bot.stop_message_live_location()`
  - `telegram.Bot.stop_poll()`
- 

---

#### Available In

- `telegram.InlineQueryResultArticle.reply_markup`
- `telegram.InlineQueryResultAudio.reply_markup`
- `telegram.InlineQueryResultCachedAudio.reply_markup`
- `telegram.InlineQueryResultCachedDocument.reply_markup`
- `telegram.InlineQueryResultCachedGif.reply_markup`
- `telegram.InlineQueryResultCachedMpeg4Gif.reply_markup`
- `telegram.InlineQueryResultCachedPhoto.reply_markup`
- `telegram.InlineQueryResultCachedSticker.reply_markup`
- `telegram.InlineQueryResultCachedVideo.reply_markup`
- `telegram.InlineQueryResultCachedVoice.reply_markup`
- `telegram.InlineQueryResultContact.reply_markup`
- `telegram.InlineQueryResultDocument.reply_markup`
- `telegram.InlineQueryResultGame.reply_markup`
- `telegram.InlineQueryResultGif.reply_markup`
- `telegram.InlineQueryResultLocation.reply_markup`
- `telegram.InlineQueryResultMpeg4Gif.reply_markup`
- `telegram.InlineQueryResultPhoto.reply_markup`

- `telegram.InlineQueryResultVenue.reply_markup`
  - `telegram.InlineQueryResultVideo.reply_markup`
  - `telegram.InlineQueryResultVoice.reply_markup`
  - `telegram.Message.reply_markup`
- 

**See also:**

An another kind of keyboard would be the `telegram.ReplyKeyboardMarkup`.

---

**Examples**

- *Inline Keyboard 1*
  - *Inline Keyboard 2*
- 

**Parameters**

**inline\_keyboard** (Sequence[Sequence[`telegram.InlineKeyboardButton`]]) – Sequence of button rows, each represented by a sequence of `InlineKeyboardButton` objects.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

**inline\_keyboard**

Tuple of button rows, each represented by a tuple of `InlineKeyboardButton` objects.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[Tuple[`telegram.InlineKeyboardButton`]]

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**classmethod from\_button(button, \*\*kwargs)**

Shortcut for:

```
InlineKeyboardMarkup([[button]], **kwargs)
```

Return an `InlineKeyboardMarkup` from a single `InlineKeyboardButton`

**Parameters**

**button** (`telegram.InlineKeyboardButton`) – The button to use in the markup

**classmethod from\_column(button\_column, \*\*kwargs)**

Shortcut for:

```
InlineKeyboardMarkup([[button] for button in button_column], **kwargs)
```

Return an `InlineKeyboardMarkup` from a single column of `InlineKeyboardButtons`

**Parameters**

**button\_column** (Sequence[`telegram.InlineKeyboardButton`]) – The button to use in the markup

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

**classmethod from\_row(button\_row, \*\*kwargs)**

Shortcut for:

`InlineKeyboardMarkup([button_row], **kwargs)`

Return an `InlineKeyboardMarkup` from a single row of `InlineKeyboardButtons`

#### Parameters

**button\_row** (Sequence[[`telegram.InlineKeyboardButton`](#)]) – The button to use in the markup

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

## InputFile

**class** `telegram.InputFile`(*obj*, *filename=None*, *attach=False*)

Bases: `object`

This object represents a Telegram InputFile.

---

#### Use In

- `telegram.Bot.send_animation()`
  - `telegram.Bot.send_audio()`
  - `telegram.Bot.send_document()`
  - `telegram.Bot.send_photo()`
  - `telegram.Bot.send_sticker()`
  - `telegram.Bot.send_video_note()`
  - `telegram.Bot.send_video()`
  - `telegram.Bot.send_voice()`
  - `telegram.Bot.set_chat_photo()`
  - `telegram.Bot.set_sticker_set_thumbnail()`
  - `telegram.Bot.set_webhook()`
  - `telegram.Bot.upload_sticker_file()`
- 

---

#### Available In

- `telegram.InputMedia.media`
- `telegram.InputMediaAnimation.media`
- `telegram.InputMediaAnimation.thumbnail`
- `telegram.InputMediaAudio.media`
- `telegram.InputMediaAudio.thumbnail`
- `telegram.InputMediaDocument.media`
- `telegram.InputMediaDocument.thumbnail`
- `telegram.InputMediaPhoto.media`
- `telegram.InputMediaVideo.media`
- `telegram.InputMediaVideo.thumbnail`
- `telegram.InputSticker.sticker`

Changed in version 20.0:

- The former attribute `attach` was renamed to `attach_name`.
- Method `is_image` was removed. If you pass `bytes` to `obj` and would like to have the mime type automatically guessed, please pass `filename` in addition.

#### Parameters

- **obj** (`file object` | `bytes` | `str`) – An open file descriptor or the files content as bytes or string.

---

**Note:** If `obj` is a string, it will be encoded as bytes via `obj.encode('utf-8')`.

---

Changed in version 20.0: Accept string input.

- **filename** (`str`, optional) – Filename for this InputFile.
- **attach** (`bool`, optional) – Pass `True` if the parameter this file belongs to in the request to Telegram should point to the multipart data via an `attach://` URI. Defaults to `False`.

#### **input\_file\_content**

The binary content of the file to send.

##### Type

`bytes`

#### **attach\_name**

Optional. If present, the parameter this file belongs to in the request to Telegram should point to the multipart data via a an URI of the form `attach://<attach_name> URI`.

##### Type

`str`

#### **filename**

Filename for the file to be sent.

##### Type

`str`

#### **mimetype**

The mimetype inferred from the file to be sent.

##### Type

`str`

#### **property attach\_uri**

URI to insert into the JSON data for uploading the file. Returns `None`, if `attach_name` is `None`.

#### **property field\_tuple**

Field tuple representing the contents of the file for upload to the Telegram servers.

##### Return type

Tuple[`str`, `bytes`, `str`]

## InputMedia

**class** telegram.**InputMedia**(*media\_type*, *media*, *caption*=None, *caption\_entities*=None, *parse\_mode*=None, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

Base class for Telegram InputMedia Objects.

---

### Use In

[telegram.Bot.edit\\_message\\_media\(\)](#)

---

Changed in version 20.0: Added arguments and attributes [type](#), [media](#), [caption](#), [caption\\_entities](#), [parse\\_mode](#).

### See also:

[Working with Files and Media](#)

### Parameters

- **media\_type** ([str](#)) – Type of media that the instance represents.
- **media** ([str](#) | [file object](#) | [bytes](#) | [pathlib.Path](#) | [telegram.Animation](#) | [telegram.Audio](#) | [telegram.Document](#) | [telegram.PhotoSize](#) | [telegram.Video](#)) – File to send. Pass a `file_id` as `String` to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a `String` for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as `bytes`. If the bot is running in [local\\_mode](#), passing the path of the file (as `string` or [pathlib.Path](#) object) is supported as well. Lastly you can pass an existing telegram media object of the corresponding type to send.
- **caption** ([str](#), optional) – Caption of the media to be sent, 0-1024 characters after entities parsing.
- **caption\_entities** ([Sequence](#)[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **parse\_mode** ([str](#), optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

### type

Type of the input media.

#### Type

[str](#)

### media

Media to send.

#### Type

[str](#) | [telegram.InputFile](#)

### caption

Optional. Caption of the media to be sent, 0-1024 characters after entities parsing.

#### Type

[str](#)

**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**

[str](#)

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.MessageEntity](#)]

## InputMediaAnimation

```
class telegram.InputMediaAnimation(media, caption=None, parse_mode=None, width=None,
                                   height=None, duration=None, caption_entities=None,
                                   filename=None, has_spoiler=None, thumbnail=None, *,
                                   api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents an animation file (GIF or H.264/MPEG-4 AVC video without sound) to be sent.

---

**Note:** When using a [telegram.Animation](#) for the `media` attribute, it will take the width, height and duration from that video, unless otherwise specified with the optional arguments.

---

---

**Use In**

[telegram.Bot.edit\\_message\\_media\(\)](#)

---

**See also:**

[Working with Files and Media](#)

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

**Parameters**

- **media** ([str](#) | [file object](#) | [bytes](#) | [pathlib.Path](#) | [telegram.Animation](#)) – File to send. Pass a `file_id` as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a [file object](#) (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in [local\\_mode](#), passing the path of the file (as string or [pathlib.Path](#) object) is supported as well. Lastly you can pass an existing [telegram.Animation](#) object to send.

Changed in version 13.2: Accept [bytes](#) as input.

- **filename** ([str](#), optional) – Custom file name for the animation, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the [tempfile](#) module.

New in version 13.1.



- **caption** (`str`, optional) – Caption of the animation to be sent, 0-**1024** characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.
- **width** (`int`, optional) – Animation width.
- **height** (`int`, optional) – Animation height.
- **duration** (`int`, optional) – Animation duration in seconds.
- **has\_spoiler** (`bool`, optional) – Pass `True`, if the animation needs to be covered with a spoiler animation.

New in version 20.0.

- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in `local_mode`, passing the path of the file (as string or `pathlib.Path` object) is supported as well.

New in version 20.2.

#### type

`'animation'`.

#### Type

`str`

#### media

Animation to send.

#### Type

`str` | `telegram.InputFile`

#### caption

Optional. Caption of the animation to be sent, 0-**1024** characters after entities parsing.

#### Type

`str`

#### parse\_mode

Optional. The parse mode to use for text formatting.

#### Type

`str`

#### caption\_entities

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**Tuple[[telegram.MessageEntity](#)]**width**

Optional. Animation width.

**Type**[int](#)**height**

Optional. Animation height.

**Type**[int](#)**duration**

Optional. Animation duration in seconds.

**Type**[int](#)**has\_spoiler**Optional. [True](#), if the animation is covered with a spoiler animation.

New in version 20.0.

**Type**[bool](#)**thumbnail**

Optional. Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file.

New in version 20.2.

**Type**[telegram.InputFile](#)

## InputMediaAudio

```
class telegram.InputMediaAudio(media, caption=None, parse_mode=None, duration=None,
                               performer=None, title=None, caption_entities=None, filename=None,
                               thumbnail=None, *, api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents an audio file to be treated as music to be sent.

---

**Use In**

- [telegram.Bot.edit\\_message\\_media\(\)](#)
  - [telegram.Bot.send\\_media\\_group\(\)](#)
- 

**See also:**[Working with Files and Media](#)

---

**Note:** When using a [telegram.Audio](#) for the *media* attribute, it will take the duration, performer and title from that video, unless otherwise specified with the optional arguments.

---

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

### Parameters

- **media** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.Audio`) – File to send. Pass a `file_id` as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in *local\_mode*, passing the path of the file (as string or `pathlib.Path` object) is supported as well. Lastly you can pass an existing `telegram.Audio` object to send.

Changed in version 13.2: Accept `bytes` as input.

- **filename** (`str`, optional) – Custom file name for the audio, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **caption** (`str`, optional) – Caption of the audio to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and *formatting options* for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **duration** (`int`, optional) – Duration of the audio in seconds as defined by sender.
- **performer** (`str`, optional) – Performer of the audio as defined by sender or by audio tags.
- **title** (`str`, optional) – Title of the audio as defined by sender or by audio tags.
- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in *local\_mode*, passing the path of the file (as string or `pathlib.Path` object) is supported as well.

New in version 20.2.

### type

`'audio'`.

### Type

`str`

### media

Audio file to send.

### Type

`str` | `telegram.InputFile`

### caption

Optional. Caption of the audio to be sent, 0-1024 characters after entities parsing.

### Type

`str`

**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**

[str](#)

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.MessageEntity](#)]

**duration**

Optional. Duration of the audio in seconds.

**Type**

[int](#)

**performer**

Optional. Performer of the audio as defined by sender or by audio tags.

**Type**

[str](#)

**title**

Optional. Title of the audio as defined by sender or by audio tags.

**Type**

[str](#)

**thumbnail**

Optional. Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file.

New in version 20.2.

**Type**

[telegram.InputFile](#)

---

**InputMediaDocument**

```
class telegram.InputMediaDocument(media, caption=None, parse_mode=None,
                                   disable_content_type_detection=None, caption_entities=None,
                                   filename=None, thumbnail=None, *, api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents a general file to be sent.

---

**Use In**

- [telegram.Bot.edit\\_message\\_media\(\)](#)
- [telegram.Bot.send\\_media\\_group\(\)](#)

**See also:**[Working with Files and Media](#)

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

**Parameters**

- **media** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.Document`) – File to send. Pass a `file_id` as `String` to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a `String` for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as `bytes`. If the bot is running in *local\_mode*, passing the path of the file (as string or `pathlib.Path` object) is supported as well. Lastly you can pass an existing `telegram.Document` object to send.

Changed in version 13.2: Accept `bytes` as input.

- **filename** (`str`, optional) – Custom file name for the document, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **caption** (`str`, optional) – Caption of the document to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and [formatting options](#) for more details.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **disable\_content\_type\_detection** (`bool`, optional) – Disables automatic server-side content type detection for files uploaded using multipart/form-data. Always `True`, if the document is sent as part of an album.
- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as `bytes`. If the bot is running in *local\_mode*, passing the path of the file (as string or `pathlib.Path` object) is supported as well.

New in version 20.2.

**type**

`'document'`.

**Type**

`str`

**media**

File to send.

**Type**

`str` | `telegram.InputFile`

**caption**

Optional. Caption of the document to be sent, 0-1024 characters after entities parsing.

**Type**`str`**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**`str`**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**Tuple[[telegram.MessageEntity](#)]**disable\_content\_type\_detection**

Optional. Disables automatic server-side content type detection for files uploaded using multipart/form-data. Always `True`, if the document is sent as part of an album.

**Type**`bool`**thumbnail**

Optional. Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file.

New in version 20.2.

**Type**[telegram.InputFile](#)

## InputMediaPhoto

```
class telegram.InputMediaPhoto(media, caption=None, parse_mode=None, caption_entities=None,
                               filename=None, has_spoiler=None, *, api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents a photo to be sent.

---

**Use In**

- [telegram.Bot.edit\\_message\\_media\(\)](#)
  - [telegram.Bot.send\\_media\\_group\(\)](#)
- 

**See also:**

[Working with Files and Media](#)

**Parameters**

- **media** (`str` | `file object` | `bytes` | `pathlib.Path` | `telegram.PhotoSize`) – File to send. Pass a `file_id` as `String` to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a `String` for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as `bytes`. If the bot is running in `local_mode`, passing the path of the file (as `string` or `pathlib.Path` object) is supported as well. Lastly you can pass an existing `telegram.PhotoSize` object to send.

Changed in version 13.2: Accept `bytes` as input.

- **filename** (`str`, optional) – Custom file name for the photo, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the `tempfile` module.

New in version 13.1.

- **caption** (`str`, optional) – Caption of the photo to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **has\_spoiler** (`bool`, optional) – Pass `True`, if the photo needs to be covered with a spoiler animation.

New in version 20.0.

#### type

`'photo'`.

#### Type

`str`

#### media

Photo to send.

#### Type

`str` | `telegram.InputFile`

#### caption

Optional. Caption of the photo to be sent, 0-1024 characters after entities parsing.

#### Type

`str`

#### parse\_mode

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.

#### Type

`str`

#### caption\_entities

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**Tuple[[telegram.MessageEntity](#)]**has\_spoiler**Optional. [True](#), if the photo is covered with a spoiler animation.

New in version 20.0.

**Type**[bool](#)**InputMediaVideo**

```
class telegram.InputMediaVideo(media, caption=None, width=None, height=None, duration=None,
                               supports_streaming=None, parse_mode=None, caption_entities=None,
                               filename=None, has_spoiler=None, thumbnail=None, *,
                               api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents a video to be sent.

---

**Use In**

- [telegram.Bot.edit\\_message\\_media\(\)](#)
  - [telegram.Bot.send\\_media\\_group\(\)](#)
- 

**See also:**[Working with Files and Media](#)

---

**Note:**

- When using a [telegram.Video](#) for the [media](#) attribute, it will take the width, height and duration from that video, unless otherwise specified with the optional arguments.
  - **[thumbnail](#) will be ignored for small video files, for which Telegram can** easily generate thumbnails. However, this behaviour is undocumented and might be changed by Telegram.
- 

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.**Parameters**

- **media** ([str](#) | [file object](#) | [bytes](#) | [pathlib.Path](#) | [telegram.Video](#)) – File to send. Pass a `file_id` as String to send a file that exists on the Telegram servers (recommended), pass an HTTP URL as a String for Telegram to get a file from the Internet, or upload a new one. To upload a file, you can either pass a [file object](#) (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in [local mode](#), passing the path of the file (as string or [pathlib.Path](#) object) is supported as well. Lastly you can pass an existing [telegram.Video](#) object to send.

Changed in version 13.2: Accept [bytes](#) as input.

- **filename** ([str](#), optional) – Custom file name for the video, when uploading a new file. Convenience parameter, useful e.g. when sending files generated by the [tempfile](#) module.

New in version 13.1.

- **caption** ([str](#), optional) – Caption of the video to be sent, 0-[1024](#) characters after entities parsing.



- **parse\_mode** (`str`, optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

- **width** (`int`, optional) – Video width.
- **height** (`int`, optional) – Video height.
- **duration** (`int`, optional) – Video duration in seconds.
- **supports\_streaming** (`bool`, optional) – Pass `True`, if the uploaded video is suitable for streaming.
- **has\_spoiler** (`bool`, optional) – Pass `True`, if the video needs to be covered with a spoiler animation.

New in version 20.0.

- **thumbnail** (`file object` | `bytes` | `pathlib.Path` | `str`, optional) – Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as bytes. If the bot is running in [local\\_mode](#), passing the path of the file (as string or `pathlib.Path` object) is supported as well.

New in version 20.2.

#### type

`'video'`.

#### Type

`str`

#### media

Video file to send.

#### Type

`str` | [telegram.InputFile](#)

#### caption

Optional. Caption of the video to be sent, 0-[1024](#) characters after entities parsing.

#### Type

`str`

#### parse\_mode

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

#### Type

`str`

#### caption\_entities

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**Tuple[*telegram.MessageEntity*]**width**

Optional. Video width.

**Type***int***height**

Optional. Video height.

**Type***int***duration**

Optional. Video duration in seconds.

**Type***int***supports\_streaming**Optional. *True*, if the uploaded video is suitable for streaming.**Type***bool***has\_spoiler**Optional. *True*, if the video is covered with a spoiler animation.

New in version 20.0.

**Type***bool***thumbnail**

Optional. Thumbnail of the file sent; can be ignored if thumbnail generation for the file is supported server-side. The thumbnail should be in JPEG format and less than 200 kB in size. A thumbnail's width and height should not exceed 320. Ignored if the file is not uploaded using multipart/form-data. Thumbnails can't be reused and can be only uploaded as a new file.

New in version 20.2.

**Type***telegram.InputFile*

## InputSticker

```
class telegram.InputSticker(sticker, emoji_list, mask_position=None, keywords=None, *,
                             api_kwargs=None)
```

Bases: *telegram.TelegramObject*

This object describes a sticker to be added to a sticker set.

---

**Use In**

- *telegram.Bot.add\_sticker\_to\_set()*
  - *telegram.Bot.create\_new\_sticker\_set()*
- 

New in version 20.2.

**Parameters**

- **sticker** (`str` | `file object` | `bytes` | `pathlib.Path`) – The added sticker. To upload a file, you can either pass a `file object` (e.g. `open("filename", "rb")`) or the file contents as `bytes`. If the bot is running in *local\_mode*, passing the path of the file (as string or `pathlib.Path` object) is supported as well. Animated and video stickers can't be uploaded via HTTP URL.
- **emoji\_list** (`Sequence[str]`) – Sequence of 1 - 20 emoji associated with the sticker.
- **mask\_position** (`telegram.MaskPosition`, optional) – Position where the mask should be placed on faces. For “*mask*” stickers only.
- **keywords** (`Sequence[str]`, optional) – Sequence of 0-20 search keywords for the sticker with the total length of up to 64 characters. For “*regular*” and “*custom\_emoji*” stickers only.

**sticker**

The added sticker.

**Type**

`str` | `telegram.InputFile`

**emoji\_list**

Tuple of 1 - 20 emoji associated with the sticker.

**Type**

`Tuple[str]`

**mask\_position**

Optional. Position where the mask should be placed on faces. For “*mask*” stickers only.

**Type**

`telegram.MaskPosition`

**keywords**

Optional. Tuple of 0-20 search keywords for the sticker with the total length of up to 64 characters. For “*regular*” and “*custom\_emoji*” stickers only.

**Type**

`Tuple[str]`

## KeyboardButton

```
class telegram.KeyboardButton(text, request_contact=None, request_location=None, request_poll=None,
                              web_app=None, request_user=None, request_chat=None, *,
                              api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents one button of the reply keyboard. For simple text buttons, `str` can be used instead of this object to specify text of the button.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `text`, `request_contact`, `request_location`, `request_poll`, `web_app`, `request_user` and `request_chat` are equal.

---

**Note:**

- Optional fields are mutually exclusive.
- `request_contact` and `request_location` options will only work in Telegram versions released after 9 April, 2016. Older clients will display unsupported message.
- `request_poll` option will only work in Telegram versions released after 23 January, 2020. Older clients will display unsupported message.

- `web_app` option will only work in Telegram versions released after 16 April, 2022. Older clients will display unsupported message.
  - `request_user` and `request_chat` options will only work in Telegram versions released after 3 February, 2023. Older clients will display unsupported message.
- 

---

#### Available In

`telegram.ReplyKeyboardMarkup.keyboard`

---

Changed in version 20.0: `web_app` is considered as well when comparing objects of this type in terms of equality.

Changed in version 20.5: `request_user` and `request_chat` are considered as well when comparing objects of this type in terms of equality.

#### Parameters

- **text** (`str`) – Text of the button. If none of the optional fields are used, it will be sent to the bot as a message when the button is pressed.
- **request\_contact** (`bool`, optional) – If `True`, the user’s phone number will be sent as a contact when the button is pressed. Available in private chats only.
- **request\_location** (`bool`, optional) – If `True`, the user’s current location will be sent when the button is pressed. Available in private chats only.
- **request\_poll** (`KeyboardButtonPollType`, optional) – If specified, the user will be asked to create a poll and send it to the bot when the button is pressed. Available in private chats only.
- **web\_app** (`WebAppInfo`, optional) – If specified, the described Web App will be launched when the button is pressed. The Web App will be able to send a `Message.web_app_data` service message. Available in private chats only.

New in version 20.0.

- **request\_user** (`KeyboardButtonRequestUser`, optional) – If specified, pressing the button will open a list of suitable users. Tapping on any user will send its identifier to the bot in a `telegram.Message.user_shared` service message. Available in private chats only.

New in version 20.1.

- **request\_chat** (`KeyboardButtonRequestChat`, optional) – If specified, pressing the button will open a list of suitable chats. Tapping on a chat will send its identifier to the bot in a `telegram.Message.chat_shared` service message. Available in private chats only.

New in version 20.1.

#### text

Text of the button. If none of the optional fields are used, it will be sent to the bot as a message when the button is pressed.

##### Type

`str`

#### request\_contact

Optional. If `True`, the user’s phone number will be sent as a contact when the button is pressed. Available in private chats only.

##### Type

`bool`

**request\_location**

Optional. If `True`, the user's current location will be sent when the button is pressed. Available in private chats only.

**Type**

`bool`

**request\_poll**

Optional. If specified, the user will be asked to create a poll and send it to the bot when the button is pressed. Available in private chats only.

**Type**

`KeyboardButtonPollType`

**web\_app**

Optional. If specified, the described [Web App](#) will be launched when the button is pressed. The Web App will be able to send a `Message.web_app_data` service message. Available in private chats only.

New in version 20.0.

**Type**

`WebAppInfo`

**request\_user**

Optional. If specified, pressing the button will open a list of suitable users. Tapping on any user will send its identifier to the bot in a `telegram.Message.user_shared` service message. Available in private chats only.

New in version 20.1.

**Type**

`KeyboardButtonRequestUser`

**request\_chat**

Optional. If specified, pressing the button will open a list of suitable chats. Tapping on a chat will send its identifier to the bot in a `telegram.Message.chat_shared` service message. Available in private chats only.

New in version 20.1.

**Type**

`KeyboardButtonRequestChat`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

---

**KeyboardButtonPollType**

**class** telegram.KeyboardButtonPollType(*type=None, \*, api\_kwargs=None*)

Bases: `telegram.TelegramObject`

This object represents type of a poll, which is allowed to be created and sent when the corresponding button is pressed.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `type` is equal.

---

**Available In**

`telegram.KeyboardButton.request_poll`

---

---

**Examples**

## Poll Bot

---

### Parameters

**type** (`str`, optional) – If `'quiz'` is passed, the user will be allowed to create only polls in the quiz mode. If `'regular'` is passed, only regular polls will be allowed. Otherwise, the user will be allowed to create a poll of any type.

### type

Optional. If equals `'quiz'`, the user will be allowed to create only polls in the quiz mode. If equals `'regular'`, only regular polls will be allowed. Otherwise, the user will be allowed to create a poll of any type.

### Type

`str`

## KeyboardButtonRequestChat

```
class telegram.KeyboardButtonRequestChat(request_id, chat_is_channel, chat_is_forum=None,
                                         chat_has_username=None, chat_is_created=None,
                                         user_administrator_rights=None,
                                         bot_administrator_rights=None, bot_is_member=None, *,
                                         api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object defines the criteria used to request a suitable chat. The identifier of the selected user will be shared with the bot when the corresponding button is pressed.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `request_id` is equal.

---

### Available In

`telegram.KeyboardButton.request_chat`

---

### See also:

[Telegram Docs on requesting chats](#)

New in version 20.1.

### Parameters

- **request\_id** (`int`) – Signed 32-bit identifier of the request, which will be received back in the `telegram.ChatShared` object. Must be unique within the message.
- **chat\_is\_channel** (`bool`) – Pass `True` to request a channel chat, pass `False` to request a group or a supergroup chat.
- **chat\_is\_forum** (`bool`, optional) – Pass `True` to request a forum supergroup, pass `False` to request a non-forum chat. If not specified, no additional restrictions are applied.
- **chat\_has\_username** (`bool`, optional) – Pass `True` to request a supergroup or a channel with a username, pass `False` to request a chat without a username. If not specified, no additional restrictions are applied.
- **chat\_is\_created** (`bool`, optional) – Pass `True` to request a chat owned by the user. Otherwise, no additional restrictions are applied.

- **user\_administrator\_rights** (*ChatAdministratorRights*, optional) – Specifies the required administrator rights of the user in the chat. If not specified, no additional restrictions are applied.
- **bot\_administrator\_rights** (*ChatAdministratorRights*, optional) – Specifies the required administrator rights of the bot in the chat. The rights must be a subset of *user\_administrator\_rights*. If not specified, no additional restrictions are applied.
- **bot\_is\_member** (*bool*, optional) – Pass *True* to request a chat with the bot as a member. Otherwise, no additional restrictions are applied.

**request\_id**

Identifier of the request.

**Type**

*int*

**chat\_is\_channel**

Pass *True* to request a channel chat, pass *False* to request a group or a supergroup chat.

**Type**

*bool*

**chat\_is\_forum**

Optional. Pass *True* to request a forum supergroup, pass *False* to request a non-forum chat. If not specified, no additional restrictions are applied.

**Type**

*bool*

**chat\_has\_username**

Pass *True* to request a supergroup or a channel with a username, pass *False* to request a chat without a username. If not specified, no additional restrictions are applied.

**Type**

*bool*, optional

**chat\_is\_created**

user. Otherwise, no additional restrictions are applied.

**Type**

*bool*

**user\_administrator\_rights**

required administrator rights of the user in the chat. If not specified, no additional restrictions are applied.

**Type**

*ChatAdministratorRights*

**bot\_administrator\_rights**

required administrator rights of the bot in the chat. The rights must be a subset of *user\_administrator\_rights*. If not specified, no additional restrictions are applied.

**Type**

*ChatAdministratorRights*

**bot\_is\_member**

as a member. Otherwise, no additional restrictions are applied.

**Type**

*bool*

**classmethod de\_json(data, bot)**

See *telegram.TelegramObject.de\_json()*.

## KeyboardButtonRequestUser

```
class telegram.KeyboardButtonRequestUser(request_id, user_is_bot=None, user_is_premium=None, *,
                                         api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object defines the criteria used to request a suitable user. The identifier of the selected user will be shared with the bot when the corresponding button is pressed.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [request\\_id](#) is equal.

---

### Available In

[telegram.KeyboardButton.request\\_user](#)

---

### See also:

[Telegram Docs on requesting users](#)

New in version 20.1.

### Parameters

- **request\_id** ([int](#)) – Signed 32-bit identifier of the request, which will be received back in the [telegram.UserShared](#) object. Must be unique within the message.
- **user\_is\_bot** ([bool](#), optional) – Pass [True](#) to request a bot, pass [False](#) to request a regular user. If not specified, no additional restrictions are applied.
- **user\_is\_premium** ([bool](#), optional) – Pass [True](#) to request a premium user, pass [False](#) to request a non-premium user. If not specified, no additional restrictions are applied.

### request\_id

Identifier of the request.

#### Type

[int](#)

### user\_is\_bot

Optional. Pass [True](#) to request a bot, pass [False](#) to request a regular user. If not specified, no additional restrictions are applied.

#### Type

[bool](#)

### user\_is\_premium

Optional. Pass [True](#) to request a premium user, pass [False](#) to request a non-premium user. If not specified, no additional restrictions are applied.

#### Type

[bool](#)



## Location

```
class telegram.Location(longitude, latitude, horizontal_accuracy=None, live_period=None,
                        heading=None, proximity_alert_radius=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a point on the map.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `longitude` and `latitude` are equal.

---

### Use In

- `telegram.Bot.edit_message_live_location()`
  - `telegram.Bot.send_location()`
- 

---

### Available In

- `telegram.ChatLocation.location`
  - `telegram.ChosenInlineResult.location`
  - `telegram.InlineQuery.location`
  - `telegram.Message.location`
  - `telegram.Venue.location`
- 

### Parameters

- **longitude** (`float`) – Longitude as defined by sender.
- **latitude** (`float`) – Latitude as defined by sender.
- **horizontal\_accuracy** (`float`, optional) – The radius of uncertainty for the location, measured in meters; 0-*1500*.
- **live\_period** (`int`, optional) – Time relative to the message sending date, during which the location can be updated, in seconds. For active live locations only.
- **heading** (`int`, optional) – The direction in which user is moving, in degrees; *1-360*. For active live locations only.
- **proximity\_alert\_radius** (`int`, optional) – Maximum distance for proximity alerts about approaching another chat member, in meters. For sent live locations only.

### longitude

Longitude as defined by sender.

#### Type

`float`

### latitude

Latitude as defined by sender.

#### Type

`float`

### horizontal\_accuracy

Optional. The radius of uncertainty for the location, measured in meters; 0-*1500*.

#### Type

`float`

**live\_period**

Optional. Time relative to the message sending date, during which the location can be updated, in seconds. For active live locations only.

**Type**

`int`

**heading**

Optional. The direction in which user is moving, in degrees; *1-360*. For active live locations only.

**Type**

`int`

**proximity\_alert\_radius**

Optional. Maximum distance for proximity alerts about approaching another chat member, in meters. For sent live locations only.

**Type**

`int`

**HORIZONTAL\_ACCURACY = 1500**

`telegram.constants.LocationLimit.HORIZONTAL_ACCURACY`

New in version 20.0.

**MAX\_HEADING = 360**

`telegram.constants.LocationLimit.MAX_HEADING`

New in version 20.0.

**MIN\_HEADING = 1**

`telegram.constants.LocationLimit.MIN_HEADING`

New in version 20.0.

## LoginUrl

```
class telegram.LoginUrl(url, forward_text=None, bot_username=None, request_write_access=None, *,
                        api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a parameter of the inline keyboard button used to automatically authorize a user. Serves as a great replacement for the Telegram Login Widget when the user is coming from Telegram. All the user needs to do is tap/click a button and confirm that they want to log in. Telegram apps support these buttons as of version 5.7.

Sample bot: [@discussbot](#)

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *url* is equal.

---

**Note:** You must always check the hash of the received data to verify the authentication and the integrity of the data as described in [Checking authorization](#)

---

---

### Available In

`telegram.InlineKeyboardButton.login_url`

---

### Parameters

- **url** (`str`) – An HTTPS URL to be opened with user authorization data added to the query string when the button is pressed. If the user refuses to provide authorization data, the original URL without information about the user will be opened. The data added is the same as described in [Receiving authorization data](#).
- **forward\_text** (`str`, optional) – New text of the button in forwarded messages.
- **bot\_username** (`str`, optional) – Username of a bot, which will be used for user authorization. See [Setting up a bot](#) for more details. If not specified, the current bot's username will be assumed. The url's domain must be the same as the domain linked with the bot. See [Linking your domain to the bot](#) for more details.
- **request\_write\_access** (`bool`, optional) – Pass `True` to request the permission for your bot to send messages to the user.

**url**

An HTTPS URL to be opened with user authorization data added to the query string when the button is pressed. If the user refuses to provide authorization data, the original URL without information about the user will be opened. The data added is the same as described in [Receiving authorization data](#).

**Type**`str`**forward\_text**

Optional. New text of the button in forwarded messages.

**Type**`str`**bot\_username**

Optional. Username of a bot, which will be used for user authorization. See [Setting up a bot](#) for more details. If not specified, the current bot's username will be assumed. The url's domain must be the same as the domain linked with the bot. See [Linking your domain to the bot](#) for more details.

**Type**`str`**request\_write\_access**

Optional. Pass `True` to request the permission for your bot to send messages to the user.

**Type**`bool`

## MenuButton

**class** telegram.MenuButton(*type*, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

This object describes the bot's menu button in a private chat. It should be one of

- [telegram.MenuButtonCommands](#)
- [telegram.MenuButtonWebApp](#)
- [telegram.MenuButtonDefault](#)

If a menu button other than [telegram.MenuButtonDefault](#) is set for a private chat, then it is applied in the chat. Otherwise the default menu button is applied. By default, the menu button opens the list of bot commands.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `type` is equal. For subclasses with additional attributes, the notion of equality is overridden.

---

**Use In**

*telegram.Bot.set\_chat\_menu\_button()*

---

#### Returned In

*telegram.Bot.get\_chat\_menu\_button()*

---

New in version 20.0.

#### Parameters

**type** (*str*) – Type of menu button that the instance represents.

#### type

Type of menu button that the instance represents.

#### Type

*str*

**COMMANDS** = 'commands'

*telegram.constants.MenuButtonType.COMMANDS*

**DEFAULT** = 'default'

*telegram.constants.MenuButtonType.DEFAULT*

**WEB\_APP** = 'web\_app'

*telegram.constants.MenuButtonType.WEB\_APP*

**classmethod de\_json**(*data, bot*)

Converts JSON data to the appropriate *MenuButton* object, i.e. takes care of selecting the correct subclass.

#### Parameters

- **data** (Dict[*str*, ...]) – The JSON data.
- **bot** (*telegram.Bot*) – The bot associated with this object.

#### Returns

The Telegram object.

## MenuButtonCommands

**class** telegram.**MenuButtonCommands**(\*, *api\_kwargs=None*)

Bases: *telegram.MenuButton*

Represents a menu button, which opens the bot's list of commands.

---

#### Use In

*telegram.Bot.set\_chat\_menu\_button()*

---

---

#### Returned In

*telegram.Bot.get\_chat\_menu\_button()*

---

New in version 20.0.

**type**  
*'commands'.*  
**Type**  
*str*

### MenuButtonDefault

**class** telegram.MenuButtonDefault(\*, api\_kwargs=None)

Bases: *telegram.MenuButton*

Describes that no specific value for the menu button was set.

---

#### Use In

*telegram.Bot.set\_chat\_menu\_button()*

---

---

#### Returned In

*telegram.Bot.get\_chat\_menu\_button()*

---

New in version 20.0.

**type**  
*'default'.*  
**Type**  
*str*

### MenuButtonWebApp

**class** telegram.MenuButtonWebApp(text, web\_app, \*, api\_kwargs=None)

Bases: *telegram.MenuButton*

Represents a menu button, which launches a [Web App](#).

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *type*, *text* and *web\_app* are equal.

---

#### Use In

*telegram.Bot.set\_chat\_menu\_button()*

---

---

#### Returned In

*telegram.Bot.get\_chat\_menu\_button()*

---

New in version 20.0.

#### Parameters

- **text** (*str*) – Text of the button.
- **web\_app** (*telegram.WebAppInfo*) – Description of the Web App that will be launched when the user presses the button. The Web App will be able to send an arbitrary message on behalf of the user using the method *answerWebAppQuery()* of *Bot*.

**type**

`'web_app'.`

**Type**

`str`

**text**

Text of the button.

**Type**

`str`

**web\_app**

Description of the Web App that will be launched when the user presses the button. The Web App will be able to send an arbitrary message on behalf of the user using the method `answerWebAppQuery()` of `Bot`.

**Type**

`telegram.WebAppInfo`

**classmethod `de_json(data, bot)`**

See `telegram.TelegramObject.de_json()`.

## Message

```
class telegram.Message(message_id, date, chat, from_user=None, forward_from=None,
                        forward_from_chat=None, forward_from_message_id=None,
                        forward_date=None, reply_to_message=None, edit_date=None, text=None,
                        entities=None, caption_entities=None, audio=None, document=None,
                        game=None, photo=None, sticker=None, video=None, voice=None,
                        video_note=None, new_chat_members=None, caption=None, contact=None,
                        location=None, venue=None, left_chat_member=None, new_chat_title=None,
                        new_chat_photo=None, delete_chat_photo=None, group_chat_created=None,
                        supergroup_chat_created=None, channel_chat_created=None,
                        migrate_to_chat_id=None, migrate_from_chat_id=None, pinned_message=None,
                        invoice=None, successful_payment=None, forward_signature=None,
                        author_signature=None, media_group_id=None, connected_website=None,
                        animation=None, passport_data=None, poll=None, forward_sender_name=None,
                        reply_markup=None, dice=None, via_bot=None,
                        proximity_alert_triggered=None, sender_chat=None, video_chat_started=None,
                        video_chat_ended=None, video_chat_participants_invited=None,
                        message_auto_delete_timer_changed=None, video_chat_scheduled=None,
                        is_automatic_forward=None, has_protected_content=None, web_app_data=None,
                        is_topic_message=None, message_thread_id=None, forum_topic_created=None,
                        forum_topic_closed=None, forum_topic_reopened=None,
                        forum_topic_edited=None, general_forum_topic_hidden=None,
                        general_forum_topic_unhidden=None, write_access_allowed=None,
                        has_media_spoiler=None, user_shared=None, chat_shared=None, story=None, *,
                        api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a message.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `message_id` and `chat` are equal.

---

**Note:** In Python `from` is a reserved word. Use `from_user` instead.

---

---

**Available In**

- `telegram.CallbackQuery.message`
  - `telegram.Chat.pinned_message`
  - `telegram.Message.pinned_message`
  - `telegram.Message.reply_to_message`
  - `telegram.Update.channel_post`
  - `telegram.Update.edited_channel_post`
  - `telegram.Update.edited_message`
  - `telegram.Update.effective_message`
  - `telegram.Update.message`
- 

---

**Returned In**

- `telegram.Bot.edit_message_caption()`
  - `telegram.Bot.edit_message_live_location()`
  - `telegram.Bot.edit_message_media()`
  - `telegram.Bot.edit_message_reply_markup()`
  - `telegram.Bot.edit_message_text()`
  - `telegram.Bot.forward_message()`
  - `telegram.Bot.send_animation()`
  - `telegram.Bot.send_audio()`
  - `telegram.Bot.send_contact()`
  - `telegram.Bot.send_dice()`
  - `telegram.Bot.send_document()`
  - `telegram.Bot.send_game()`
  - `telegram.Bot.send_invoice()`
  - `telegram.Bot.send_location()`
  - `telegram.Bot.send_message()`
  - `telegram.Bot.send_photo()`
  - `telegram.Bot.send_poll()`
  - `telegram.Bot.send_sticker()`
  - `telegram.Bot.send_venue()`
  - `telegram.Bot.send_video_note()`
  - `telegram.Bot.send_video()`
  - `telegram.Bot.send_voice()`
  - `telegram.Bot.set_game_score()`
  - `telegram.Bot.stop_message_live_location()`
- 

Changed in version 20.0:

- The arguments and attributes `voice_chat_scheduled`, `voice_chat_started` and `voice_chat_ended`, `voice_chat_participants_invited` were renamed to `video_chat_scheduled/video_chat_scheduled`, `video_chat_started/video_chat_started`, `video_chat_ended/video_chat_ended` and `video_chat_participants_invited/video_chat_participants_invited`, respectively, in accordance to Bot API 6.0.
- The following are now keyword-only arguments in Bot methods: `{read, write, connect, pool}_timeout`, `api_kwargs`, `contact`, `quote`, `filename`, `location`, `venue`. Use a named argument for those, and notice that some positional arguments changed position as a result.

### Parameters

- **message\_id** (`int`) – Unique message identifier inside this chat.
- **from\_user** (`telegram.User`, optional) – Sender of the message; empty for messages sent to channels. For backward compatibility, this will contain a fake sender user in non-channel chats, if the message was sent on behalf of a chat.
- **sender\_chat** (`telegram.Chat`, optional) – Sender of the message, sent on behalf of a chat. For example, the channel itself for channel posts, the supergroup itself for messages from anonymous group administrators, the linked channel for messages automatically forwarded to the discussion group. For backward compatibility, `from_user` contains a fake sender user in non-channel chats, if the message was sent on behalf of a chat.
- **date** (`datetime.datetime`) – Date the message was sent in Unix time. Converted to `datetime.datetime`.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- **chat** (`telegram.Chat`) – Conversation the message belongs to.
- **forward\_from** (`telegram.User`, optional) – For forwarded messages, sender of the original message.
- **forward\_from\_chat** (`telegram.Chat`, optional) – For messages forwarded from channels or from anonymous administrators, information about the original sender chat.
- **forward\_from\_message\_id** (`int`, optional) – For forwarded channel posts, identifier of the original message in the channel.
- **forward\_sender\_name** (`str`, optional) – Sender's name for messages forwarded from users who disallow adding a link to their account in forwarded messages.
- **forward\_date** (`datetime.datetime`, optional) – For forwarded messages, date the original message was sent in Unix time. Converted to `datetime.datetime`.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- **is\_automatic\_forward** (`bool`, optional) – `True`, if the message is a channel post that was automatically forwarded to the connected discussion group.

New in version 13.9.

- **reply\_to\_message** (`telegram.Message`, optional) – For replies, the original message. Note that the Message object in this field will not contain further `reply_to_message` fields even if it itself is a reply.
- **edit\_date** (`datetime.datetime`, optional) – Date the message was last edited in Unix time. Converted to `datetime.datetime`.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.



- **has\_protected\_content** (`bool`, optional) – `True`, if the message can't be forwarded.

New in version 13.9.

- **media\_group\_id** (`str`, optional) – The unique identifier of a media message group this message belongs to.
- **text** (`str`, optional) – For text messages, the actual UTF-8 text of the message, 0-4096 characters.
- **entities** (`Sequence[telegram.MessageEntity]`, optional) – For text messages, special entities like usernames, URLs, bot commands, etc. that appear in the text. See `parse_entity` and `parse_entities` methods for how to use properly. This list is empty if the message does not contain entities.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **caption\_entities** (`Sequence[telegram.MessageEntity]`, optional) – For messages with a Caption. Special entities like usernames, URLs, bot commands, etc. that appear in the caption. See `Message.parse_caption_entity` and `parse_caption_entities` methods for how to use properly. This list is empty if the message does not contain caption entities.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **audio** (`telegram.Audio`, optional) – Message is an audio file, information about the file.
- **document** (`telegram.Document`, optional) – Message is a general file, information about the file.
- **animation** (`telegram.Animation`, optional) – Message is an animation, information about the animation. For backward compatibility, when this field is set, the document field will also be set.
- **game** (`telegram.Game`, optional) – Message is a game, information about the game.
- **photo** (`Sequence[telegram.PhotoSize]`, optional) – Message is a photo, available sizes of the photo. This list is empty if the message does not contain a photo.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **sticker** (`telegram.Sticker`, optional) – Message is a sticker, information about the sticker.
- **story** (`telegram.Story`, optional) – Message is a forwarded story.

New in version 20.5.

- **video** (`telegram.Video`, optional) – Message is a video, information about the video.
- **voice** (`telegram.Voice`, optional) – Message is a voice message, information about the file.
- **video\_note** (`telegram.VideoNote`, optional) – Message is a video note, information about the video message.
- **new\_chat\_members** (`Sequence[telegram.User]`, optional) – New members that were added to the group or supergroup and information about them (the bot itself may be one of these members). This list is empty if the message does not contain new chat members.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **caption** (`str`, optional) – Caption for the animation, audio, document, photo, video or voice, 0-1024 characters.

- **contact** (*telegram.Contact*, optional) – Message is a shared contact, information about the contact.
- **location** (*telegram.Location*, optional) – Message is a shared location, information about the location.
- **venue** (*telegram.Venue*, optional) – Message is a venue, information about the venue. For backward compatibility, when this field is set, the location field will also be set.
- **left\_chat\_member** (*telegram.User*, optional) – A member was removed from the group, information about them (this member may be the bot itself).
- **new\_chat\_title** (*str*, optional) – A chat title was changed to this value.
- **new\_chat\_photo** (Sequence[*telegram.PhotoSize*], optional) – A chat photo was changed to this value. This list is empty if the message does not contain a new chat photo.

Changed in version 20.0: Accepts any *collections.abc.Sequence* as input instead of just a list. The input is converted to a tuple.

- **delete\_chat\_photo** (*bool*, optional) – Service message: The chat photo was deleted.
- **group\_chat\_created** (*bool*, optional) – Service message: The group has been created.
- **supergroup\_chat\_created** (*bool*, optional) – Service message: The supergroup has been created. This field can't be received in a message coming through updates, because bot can't be a member of a supergroup when it is created. It can only be found in *reply\_to\_message* if someone replies to a very first message in a directly created supergroup.
- **channel\_chat\_created** (*bool*, optional) – Service message: The channel has been created. This field can't be received in a message coming through updates, because bot can't be a member of a channel when it is created. It can only be found in *reply\_to\_message* if someone replies to a very first message in a channel.
- **message\_auto\_delete\_timer\_changed** (*telegram.MessageAutoDeleteTimerChanged*, optional) – Service message: auto-delete timer settings changed in the chat.

New in version 13.4.

- **migrate\_to\_chat\_id** (*int*, optional) – The group has been migrated to a supergroup with the specified identifier.
- **migrate\_from\_chat\_id** (*int*, optional) – The supergroup has been migrated from a group with the specified identifier.
- **pinned\_message** (*telegram.Message*, optional) – Specified message was pinned. Note that the Message object in this field will not contain further *reply\_to\_message* fields even if it is itself a reply.
- **invoice** (*telegram.Invoice*, optional) – Message is an invoice for a payment, information about the invoice.
- **successful\_payment** (*telegram.SuccessfulPayment*, optional) – Message is a service message about a successful payment, information about the payment.
- **connected\_website** (*str*, optional) – The domain name of the website on which the user has logged in.
- **forward\_signature** (*str*, optional) – For messages forwarded from channels, signature of the post author if present.
- **author\_signature** (*str*, optional) – Signature of the post author for messages in channels, or the custom title of an anonymous group administrator.
- **passport\_data** (*telegram.PassportData*, optional) – Telegram Passport data.

- **poll** (*telegram.Poll*, optional) – Message is a native poll, information about the poll.
- **dice** (*telegram.Dice*, optional) – Message is a dice with random value.
- **via\_bot** (*telegram.User*, optional) – Bot through which message was sent.
- **proximity\_alert\_triggered** (*telegram.ProximityAlertTriggered*, optional) – Service message. A user in the chat triggered another user's proximity alert while sharing Live Location.
- **video\_chat\_scheduled** (*telegram.VideoChatScheduled*, optional) – Service message: video chat scheduled.

New in version 20.0.

- **video\_chat\_started** (*telegram.VideoChatStarted*, optional) – Service message: video chat started.

New in version 20.0.

- **video\_chat\_ended** (*telegram.VideoChatEnded*, optional) – Service message: video chat ended.

New in version 20.0.

- **video\_chat\_participants\_invited** (*telegram.VideoChatParticipantsInvited*, optional) – Service message: new participants invited to a video chat.

New in version 20.0.

- **web\_app\_data** (*telegram.WebAppData*, optional) – Service message: data sent by a Web App.

New in version 20.0.

- **reply\_markup** (*telegram.InlineKeyboardMarkup*, optional) – Inline keyboard attached to the message. *login\_url* buttons are represented as ordinary url buttons.
- **is\_topic\_message** (*bool*, optional) – *True*, if the message is sent to a forum topic.

New in version 20.0.

- **message\_thread\_id** (*int*, optional) – Unique identifier of a message thread to which the message belongs; for supergroups only.

New in version 20.0.

- **forum\_topic\_created** (*telegram.ForumTopicCreated*, optional) – Service message: forum topic created.

New in version 20.0.

- **forum\_topic\_closed** (*telegram.ForumTopicClosed*, optional) – Service message: forum topic closed.

New in version 20.0.

- **forum\_topic\_reopened** (*telegram.ForumTopicReopened*, optional) – Service message: forum topic reopened.

New in version 20.0.

- **forum\_topic\_edited** (*telegram.ForumTopicEdited*, optional) – Service message: forum topic edited.

New in version 20.0.

- **general\_forum\_topic\_hidden** (*telegram.GeneralForumTopicHidden*, optional) – Service message: General forum topic hidden.

New in version 20.0.

- **general\_forum\_topic\_unhidden** (*telegram.GeneralForumTopicUnhidden*, optional) – Service message: General forum topic unhidden.

New in version 20.0.

- **write\_access\_allowed** (*telegram.WriteAccessAllowed*, optional) – Service message: the user allowed the bot to write messages after adding it to the attachment or side menu, launching a Web App from a link, or accepting an explicit request from a Web App sent by the method *requestWriteAccess*.

New in version 20.0.

- **has\_media\_spoiler** (*bool*, optional) – *True*, if the message media is covered by a spoiler animation.

New in version 20.0.

- **user\_shared** (*telegram.UserShared*, optional) – Service message: a user was shared with the bot.

New in version 20.1.

- **chat\_shared** (*telegram.ChatShared*, optional) – Service message: a chat was shared with the bot.

New in version 20.1.

#### **message\_id**

Unique message identifier inside this chat.

##### **Type**

*int*

#### **from\_user**

Optional. Sender of the message; empty for messages sent to channels. For backward compatibility, this will contain a fake sender user in non-channel chats, if the message was sent on behalf of a chat.

##### **Type**

*telegram.User*

#### **sender\_chat**

Optional. Sender of the message, sent on behalf of a chat. For example, the channel itself for channel posts, the supergroup itself for messages from anonymous group administrators, the linked channel for messages automatically forwarded to the discussion group. For backward compatibility, *from\_user* contains a fake sender user in non-channel chats, if the message was sent on behalf of a chat.

##### **Type**

*telegram.Chat*

#### **date**

Date the message was sent in Unix time. Converted to *datetime.datetime*.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless *telegram.ext.Defaults.tzinfo* is used.

##### **Type**

*datetime.datetime*

#### **chat**

Conversation the message belongs to.

##### **Type**

*telegram.Chat*

**forward\_from**

Optional. For forwarded messages, sender of the original message.

**Type**

`telegram.User`

**forward\_from\_chat**

Optional. For messages forwarded from channels or from anonymous administrators, information about the original sender chat.

**Type**

`telegram.Chat`

**forward\_from\_message\_id**

Optional. For forwarded channel posts, identifier of the original message in the channel.

**Type**

`int`

**forward\_date**

Optional. For forwarded messages, date the original message was sent in Unix time. Converted to `datetime.datetime`.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**Type**

`datetime.datetime`

**is\_automatic\_forward**

Optional. `True`, if the message is a channel post that was automatically forwarded to the connected discussion group.

New in version 13.9.

**Type**

`bool`

**reply\_to\_message**

Optional. For replies, the original message. Note that the Message object in this field will not contain further `reply_to_message` fields even if it itself is a reply.

**Type**

`telegram.Message`

**edit\_date**

Optional. Date the message was last edited in Unix time. Converted to `datetime.datetime`.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**Type**

`datetime.datetime`

**has\_protected\_content**

Optional. `True`, if the message can't be forwarded.

New in version 13.9.

**Type**

`bool`

**media\_group\_id**

Optional. The unique identifier of a media message group this message belongs to.

**Type**

`str`

**text**

Optional. For text messages, the actual UTF-8 text of the message, 0-4096 characters.

**Type**

`str`

**entities**

Optional. For text messages, special entities like usernames, URLs, bot commands, etc. that appear in the text. See `parse_entity` and `parse_entities` methods for how to use properly. This list is empty if the message does not contain entities.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[`telegram.MessageEntity`]

**caption\_entities**

Optional. For messages with a Caption. Special entities like usernames, URLs, bot commands, etc. that appear in the caption. See `Message.parse_caption_entity` and `parse_caption_entities` methods for how to use properly. This list is empty if the message does not contain caption entities.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[`telegram.MessageEntity`]

**audio**

Optional. Message is an audio file, information about the file.

**See also:**

[Working with Files and Media](#)

**Type**

`telegram.Audio`

**document**

Optional. Message is a general file, information about the file.

**See also:**

[Working with Files and Media](#)

**Type**

`telegram.Document`

**animation**

Optional. Message is an animation, information about the animation. For backward compatibility, when this field is set, the document field will also be set.

**See also:**

[Working with Files and Media](#)

**Type**

`telegram.Animation`

**game**

Optional. Message is a game, information about the game.

**Type**

`telegram.Game`

**photo**

Optional. Message is a photo, available sizes of the photo. This list is empty if the message does not contain a photo.

**See also:**

[Working with Files and Media](#)

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[*telegram.PhotoSize*]

**sticker**

Optional. Message is a sticker, information about the sticker.

**See also:**

[Working with Files and Media](#)

**Type**

*telegram.Sticker*

**story**

Optional. Message is a forwarded story.

New in version 20.5.

**Type**

*telegram.Story*

**video**

Optional. Message is a video, information about the video.

**See also:**

[Working with Files and Media](#)

**Type**

*telegram.Video*

**voice**

Optional. Message is a voice message, information about the file.

**See also:**

[Working with Files and Media](#)

**Type**

*telegram.Voice*

**video\_note**

Optional. Message is a video note, information about the video message.

**See also:**

[Working with Files and Media](#)

**Type**

*telegram.VideoNote*

**new\_chat\_members**

Optional. New members that were added to the group or supergroup and information about them (the bot itself may be one of these members). This list is empty if the message does not contain new chat members.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[*telegram.User*]

**caption**

Optional. Caption for the animation, audio, document, photo, video or voice, 0-1024 characters.

**Type**

str

**contact**

Optional. Message is a shared contact, information about the contact.

**Type**

*telegram.Contact*

**location**

Optional. Message is a shared location, information about the location.

**Type**

*telegram.Location*

**venue**

Optional. Message is a venue, information about the venue. For backward compatibility, when this field is set, the location field will also be set.

**Type**

*telegram.Venue*

**left\_chat\_member**

Optional. A member was removed from the group, information about them (this member may be the bot itself).

**Type**

*telegram.User*

**new\_chat\_title**

Optional. A chat title was changed to this value.

**Type**

str

**new\_chat\_photo**

A chat photo was changed to this value. This list is empty if the message does not contain a new chat photo.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[*telegram.PhotoSize*]

**delete\_chat\_photo**

Optional. Service message: The chat photo was deleted.

**Type**

bool

**group\_chat\_created**

Optional. Service message: The group has been created.



**Type**`bool`**supergroup\_chat\_created**

Optional. Service message: The supergroup has been created. This field can't be received in a message coming through updates, because bot can't be a member of a supergroup when it is created. It can only be found in *reply\_to\_message* if someone replies to a very first message in a directly created supergroup.

**Type**`bool`**channel\_chat\_created**

Optional. Service message: The channel has been created. This field can't be received in a message coming through updates, because bot can't be a member of a channel when it is created. It can only be found in *reply\_to\_message* if someone replies to a very first message in a channel.

**Type**`bool`**message\_auto\_delete\_timer\_changed**

Optional. Service message: auto-delete timer settings changed in the chat.

New in version 13.4.

**Type**`telegram.MessageAutoDeleteTimerChanged`**migrate\_to\_chat\_id**

Optional. The group has been migrated to a supergroup with the specified identifier.

**Type**`int`**migrate\_from\_chat\_id**

Optional. The supergroup has been migrated from a group with the specified identifier.

**Type**`int`**pinned\_message**

Optional. Specified message was pinned. Note that the Message object in this field will not contain further *reply\_to\_message* fields even if it is itself a reply.

**Type**`telegram.Message`**invoice**

Optional. Message is an invoice for a payment, information about the invoice.

**Type**`telegram.Invoice`**successful\_payment**

Optional. Message is a service message about a successful payment, information about the payment.

**Type**`telegram.SuccessfulPayment`**connected\_website**

Optional. The domain name of the website on which the user has logged in.

**Type**`str`

**forward\_signature**

Optional. For messages forwarded from channels, signature of the post author if present.

**Type**

`str`

**author\_signature**

Optional. Signature of the post author for messages in channels, or the custom title of an anonymous group administrator.

**Type**

`str`

**forward\_sender\_name**

Optional. Sender's name for messages forwarded from users who disallow adding a link to their account in forwarded messages.

**Type**

`str`

**passport\_data**

Optional. Telegram Passport data.

---

**Examples**

*Passport Bot*

---

**Type**

`telegram.PassportData`

**poll**

Optional. Message is a native poll, information about the poll.

**Type**

`telegram.Poll`

**dice**

Optional. Message is a dice with random value.

**Type**

`telegram.Dice`

**via\_bot**

Optional. Bot through which message was sent.

**Type**

`telegram.User`

**proximity\_alert\_triggered**

Optional. Service message. A user in the chat triggered another user's proximity alert while sharing Live Location.

**Type**

`telegram.ProximityAlertTriggered`

**video\_chat\_scheduled**

Optional. Service message: video chat scheduled.

New in version 20.0.

**Type**

`telegram.VideoChatScheduled`

**video\_chat\_started**

Optional. Service message: video chat started.

New in version 20.0.

**Type**

*telegram.VideoChatStarted*

**video\_chat\_ended**

Optional. Service message: video chat ended.

New in version 20.0.

**Type**

*telegram.VideoChatEnded*

**video\_chat\_participants\_invited**

Optional. Service message: new participants invited to a video chat.

New in version 20.0.

**Type**

*telegram.VideoChatParticipantsInvited*

**web\_app\_data**

Optional. Service message: data sent by a Web App.

New in version 20.0.

**Type**

*telegram.WebAppData*

**reply\_markup**

Optional. Inline keyboard attached to the message. *login\_url* buttons are represented as ordinary url buttons.

**Type**

*telegram.InlineKeyboardMarkup*

**is\_topic\_message**

Optional. `True`, if the message is sent to a forum topic.

New in version 20.0.

**Type**

`bool`

**message\_thread\_id**

Optional. Unique identifier of a message thread to which the message belongs; for supergroups only.

New in version 20.0.

**Type**

`int`

**forum\_topic\_created**

Optional. Service message: forum topic created.

New in version 20.0.

**Type**

*telegram.ForumTopicCreated*

**forum\_topic\_closed**

Optional. Service message: forum topic closed.

New in version 20.0.

**Type***telegram.ForumTopicClosed***forum\_topic\_reopened**

Optional. Service message: forum topic reopened.

New in version 20.0.

**Type***telegram.ForumTopicReopened***forum\_topic\_edited**

Optional. Service message: forum topic edited.

New in version 20.0.

**Type***telegram.ForumTopicEdited***general\_forum\_topic\_hidden**

Optional. Service message: General forum topic hidden.

New in version 20.0.

**Type***telegram.GeneralForumTopicHidden***general\_forum\_topic\_unhidden**

Optional. Service message: General forum topic unhidden.

New in version 20.0.

**Type***telegram.GeneralForumTopicUnhidden***write\_access\_allowed**

Optional. Service message: the user allowed the bot added to the attachment menu to write messages.

New in version 20.0.

**Type***telegram.WriteAccessAllowed***has\_media\_spoiler**

Optional. `True`, if the message media is covered by a spoiler animation.

New in version 20.0.

**Type***bool***user\_shared**

Optional. Service message: a user was shared with the bot.

New in version 20.1.

**Type***telegram.UserShared***chat\_shared**

Optional. Service message: a chat was shared with the bot.

New in version 20.1.

**Type***telegram.ChatShared*

**property caption\_html**

Creates an HTML-formatted string from the markup entities found in the message's caption.

Use this if you want to retrieve the message caption with the caption entities formatted as HTML in the same way the original message was formatted.

Changed in version 13.10: Spoiler entities are now formatted as HTML.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message caption with caption entities formatted as HTML.

**Return type**

`str`

**property caption\_html\_urled**

Creates an HTML-formatted string from the markup entities found in the message's caption.

Use this if you want to retrieve the message caption with the caption entities formatted as HTML. This also formats `telegram.MessageEntity.URL` as a hyperlink.

Changed in version 13.10: Spoiler entities are now formatted as HTML.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message caption with caption entities formatted as HTML.

**Return type**

`str`

**property caption\_markdown**

Creates an Markdown-formatted string from the markup entities found in the message's caption using `telegram.constants.ParseMode.MARKDOWN`.

Use this if you want to retrieve the message caption with the caption entities formatted as Markdown in the same way the original message was formatted.

---

**Note:**

- `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use `caption_markdown_v2()` instead.
  - Custom emoji entities will be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

Changed in version 20.5: Since custom emoji entities are not supported by `MARKDOWN`, this method now raises a `ValueError` when encountering a custom emoji.

**Returns**

Message caption with caption entities formatted as Markdown.

**Return type**

`str`

**Raises**

**ValueError** – If the message contains underline, strikethrough, spoiler or nested entities.

**property caption\_markdown\_urled**

Creates an Markdown-formatted string from the markup entities found in the message's caption using `telegram.constants.ParseMode.MARKDOWN`.

Use this if you want to retrieve the message caption with the caption entities formatted as Markdown. This also formats `telegram.MessageEntity.URL` as a hyperlink.

**Note:**

- `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use `caption_markdown_v2_urled()` instead.
  - Custom emoji entities will be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

Changed in version 20.5: Since custom emoji entities are not supported by `MARKDOWN`, this method now raises a `ValueError` when encountering a custom emoji.

**Returns**

Message caption with caption entities formatted as Markdown.

**Return type**

`str`

**Raises**

**`ValueError`** – If the message contains underline, strikethrough, spoiler or nested entities.

**property `caption_markdown_v2`**

Creates an Markdown-formatted string from the markup entities found in the message's caption using `telegram.constants.ParseMode.MARKDOWN_V2`.

Use this if you want to retrieve the message caption with the caption entities formatted as Markdown in the same way the original message was formatted.

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message caption with caption entities formatted as Markdown.

**Return type**

`str`

**property `caption_markdown_v2_urled`**

Creates an Markdown-formatted string from the markup entities found in the message's caption using `telegram.constants.ParseMode.MARKDOWN_V2`.

Use this if you want to retrieve the message caption with the caption entities formatted as Markdown. This also formats `telegram.MessageEntity.URL` as a hyperlink.

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message caption with caption entities formatted as Markdown.

**Return type**

`str`

**property `chat_id`**

Shortcut for `telegram.Chat.id` for `chat`.

**Type**

`int`

**`async close_forum_topic`**(`*`, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`, `api_kwargs=None`)

Shortcut for:

```

await bot.close_forum_topic(
    chat_id=message.chat_id, message_thread_id=message.message_thread_id,
    *args,
    **kwargs
)

```

For the documentation of the arguments, please see [telegram.Bot.close\\_forum\\_topic\(\)](#).

New in version 20.0.

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```

async copy(chat_id, caption=None, parse_mode=None, caption_entities=None,
            disable_notification=None, reply_to_message_id=None,
            allow_sending_without_reply=None, reply_markup=None, protect_content=None,
            message_thread_id=None, *, read_timeout=None, write_timeout=None,
            connect_timeout=None, pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```

await bot.copy_message(
    chat_id=chat_id,
    from_chat_id=update.effective_message.chat_id,
    message_id=update.effective_message.message_id,
    *args,
    **kwargs
)

```

For the documentation of the arguments, please see [telegram.Bot.copy\\_message\(\)](#).

#### Returns

On success, returns the `MessageId` of the sent message.

#### Return type

[telegram.MessageId](#)

```

classmethod de_json(data, bot)

```

See [telegram.TelegramObject.de\\_json\(\)](#).

```

async delete(*, read_timeout=None, write_timeout=None, connect_timeout=None,
              pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```

await bot.delete_message(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)

```

For the documentation of the arguments, please see [telegram.Bot.delete\\_message\(\)](#).

#### Returns

On success, `True` is returned.

#### Return type

`bool`

```

async delete_forum_topic(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                          pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```
await bot.delete_forum_topic(
    chat_id=message.chat_id, message_thread_id=message.message_thread_id,
    *args,
    **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.delete\\_forum\\_topic\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async edit_caption(caption=None, reply_markup=None, parse_mode=None, caption_entities=None,
    *, read_timeout=None, write_timeout=None, connect_timeout=None,
    pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.edit_message_caption(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_caption\(\)](#).

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

**Returns**

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

**Return type**

[telegram.Message](#)

```
async edit_forum_topic(name=None, icon_custom_emoji_id=None, *, read_timeout=None,
    write_timeout=None, connect_timeout=None, pool_timeout=None,
    api_kwargs=None)
```

Shortcut for:

```
await bot.edit_forum_topic(
    chat_id=message.chat_id, message_thread_id=message.message_thread_id,
    *args,
    **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_forum\\_topic\(\)](#).

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`



```
async edit_live_location(latitude=None, longitude=None, reply_markup=None,
                        horizontal_accuracy=None, heading=None,
                        proximity_alert_radius=None, *, location=None, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Shortcut for:

```
await bot.edit_message_live_location(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_live\\_location\(\)](#).

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

#### Returns

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

#### Return type

[telegram.Message](#)

```
async edit_media(media, reply_markup=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.edit_message_media(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_media\(\)](#).

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

#### Returns

On success, if edited message is not an inline message, the edited `Message` is returned, otherwise `True` is returned.

#### Return type

[telegram.Message](#)

```
async edit_reply_markup(reply_markup=None, *, read_timeout=None, write_timeout=None,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.edit_message_reply_markup(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see [telegram.Bot.edit\\_message\\_reply\\_markup\(\)](#).

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

**Returns**

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**async** `edit_text`(*text*, *parse\_mode=None*, *disable\_web\_page\_preview=None*, *reply\_markup=None*, *entities=None*, *\**, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.edit_message_text(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.edit_message_text()`.

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

**Returns**

On success, if edited message is sent by the bot, the edited `Message` is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**property effective\_attachment**

If this message is neither a plain text message nor a status update, this gives the attachment that this message was sent with. This may be one of

- `telegram.Audio`
- `telegram.Dice`
- `telegram.Contact`
- `telegram.Document`
- `telegram.Animation`
- `telegram.Game`
- `telegram.Invoice`
- `telegram.Location`
- `telegram.PassportData`
- `List[telegram.PhotoSize]`
- `telegram.Poll`
- `telegram.Sticker`
- `telegram.Story`

- `telegram.SuccessfulPayment`
- `telegram.Venue`
- `telegram.Video`
- `telegram.VideoNote`
- `telegram.Voice`

Otherwise `None` is returned.

**See also:**

[Working with Files and Media](#)

Changed in version 20.0: `dice`, `passport_data` and `poll` are now also considered to be an attachment.

```
async forward(chat_id, disable_notification=None, protect_content=None, message_thread_id=None,
               *, read_timeout=None, write_timeout=None, connect_timeout=None,
               pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.forward_message(
    from_chat_id=update.effective_message.chat_id,
    message_id=update.effective_message.message_id,
    *args,
    **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.forward_message()`.

---

**Note:** Since the release of Bot API 5.5 it can be impossible to forward messages from some chats. Use the attributes `telegram.Message.has_protected_content` and `telegram.Chat.has_protected_content` to check this.

As a workaround, it is still possible to use `copy()`. However, this behaviour is undocumented and might be changed by Telegram.

---

**Returns**

On success, instance representing the message forwarded.

**Return type**

`telegram.Message`

```
async get_game_high_scores(user_id, *, read_timeout=None, write_timeout=None,
                           connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.get_game_high_scores(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.get_game_high_scores()`.

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

**Returns**Tuple[[telegram.GameHighScore](#)]**property id**Shortcut for [message\\_id](#).

New in version 20.0.

**Type**[int](#)**property link**

Convenience property. If the chat of the message is not a private chat or normal group, returns a t.me link of the message.

Changed in version 20.3: For messages that are replies or part of a forum topic, the link now points to the corresponding thread view.

**Type**[str](#)**parse\_caption\_entities**(types=None)

Returns a [dict](#) that maps [telegram.MessageEntity](#) to [str](#). It contains entities from this message's caption filtered by their [telegram.MessageEntity.type](#) attribute as the key, and the text that each entity belongs to as the value of the [dict](#).

---

**Note:** This method should always be used instead of the [caption\\_entities](#) attribute, since it calculates the correct substring from the message text based on UTF-16 codepoints. See [parse\\_entity](#) for more info.

---

**Parameters**

**types** (List[[str](#)], optional) – List of [telegram.MessageEntity](#) types as strings. If the type attribute of an entity is contained in this list, it will be returned. Defaults to a list of all types. All types can be found as constants in [telegram.MessageEntity](#).

**Returns**

A dictionary of entities mapped to the text that belongs to them, calculated based on UTF-16 codepoints.

**Return type**Dict[[telegram.MessageEntity](#), [str](#)]**parse\_caption\_entity**(entity)

Returns the text from a given [telegram.MessageEntity](#).

---

**Note:** This method is present because Telegram calculates the offset and length in UTF-16 codepoint pairs, which some versions of Python don't handle automatically. (That is, you can't just slice `Message.caption` with the offset and length.)

---

**Parameters**

**entity** ([telegram.MessageEntity](#)) – The entity to extract the text from. It must be an entity that belongs to this message.

**Returns**

The text of the given entity.

**Return type**[str](#)

**Raises**

**RuntimeError** – If the message has no caption.

**parse\_entities**(*types=None*)

Returns a **dict** that maps `telegram.MessageEntity` to `str`. It contains entities from this message filtered by their `telegram.MessageEntity.type` attribute as the key, and the text that each entity belongs to as the value of the **dict**.

---

**Note:** This method should always be used instead of the `entities` attribute, since it calculates the correct substring from the message text based on UTF-16 codepoints. See `parse_entity` for more info.

---

**Parameters**

**types** (List[`str`], optional) – List of `telegram.MessageEntity` types as strings. If the `type` attribute of an entity is contained in this list, it will be returned. Defaults to a list of all types. All types can be found as constants in `telegram.MessageEntity`.

**Returns**

A dictionary of entities mapped to the text that belongs to them, calculated based on UTF-16 codepoints.

**Return type**

Dict[`telegram.MessageEntity`, `str`]

**parse\_entity**(*entity*)

Returns the text from a given `telegram.MessageEntity`.

---

**Note:** This method is present because Telegram calculates the offset and length in UTF-16 codepoint pairs, which some versions of Python don't handle automatically. (That is, you can't just slice `Message.text` with the offset and length.)

---

**Parameters**

**entity** (`telegram.MessageEntity`) – The entity to extract the text from. It must be an entity that belongs to this message.

**Returns**

The text of the given entity.

**Return type**

`str`

**Raises**

**RuntimeError** – If the message has no text.

**async pin**(*disable\_notification=None*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.pin_chat_message(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.pin_chat_message()`.

**Returns**

On success, `True` is returned.

**Return type**`bool`

```
async reopen_forum_topic(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                        pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.reopen_forum_topic(
    chat_id=message.chat_id, message_thread_id=message.message_thread_id,
    *args,
    **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.reopen_forum_topic()`.

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**`bool`

```
async reply_animation(animation, duration=None, width=None, height=None, caption=None,
                    parse_mode=None, disable_notification=None, reply_to_message_id=None,
                    reply_markup=None, allow_sending_without_reply=None,
                    caption_entities=None, protect_content=None, message_thread_id=None,
                    has_spoiler=None, thumbnail=None, *, filename=None, quote=None,
                    read_timeout=None, write_timeout=20, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_animation(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_animation()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the animation is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**`telegram.Message`

```
async reply_audio(audio, duration=None, performer=None, title=None, caption=None,
                disable_notification=None, reply_to_message_id=None, reply_markup=None,
                parse_mode=None, allow_sending_without_reply=None, caption_entities=None,
                protect_content=None, message_thread_id=None, thumbnail=None, *,
                filename=None, quote=None, read_timeout=None, write_timeout=20,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_audio(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_audio()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the audio is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

`telegram.Message`

```
async reply_chat_action(action, message_thread_id=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Shortcut for:

```
await bot.send_chat_action(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_chat_action()`.

New in version 13.2.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async reply_contact(phone_number=None, first_name=None, last_name=None,
                    disable_notification=None, reply_to_message_id=None, reply_markup=None,
                    vcard=None, allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, *, contact=None, quote=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Shortcut for:

```
await bot.send_contact(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_contact()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the contact is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

`telegram.Message`

```
async reply_copy(from_chat_id, message_id, caption=None, parse_mode=None,
                 caption_entities=None, disable_notification=None, reply_to_message_id=None,
                 allow_sending_without_reply=None, reply_markup=None, protect_content=None,
                 message_thread_id=None, *, quote=None, read_timeout=None,
                 write_timeout=None, connect_timeout=None, pool_timeout=None,
                 api_kwargs=None)
```

Shortcut for:

```
await bot.copy_message(
    chat_id=message.chat.id,
    message_id=message_id,
    *args,
    **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.copy_message()`.

**Keyword Arguments**

**quote** (*bool*, optional) – If set to `True`, the copy is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

New in version 13.1.

**Returns**

On success, returns the `MessageId` of the sent message.

**Return type**

`telegram.MessageId`

```
async def reply_dice(disable_notification=None, reply_to_message_id=None, reply_markup=None,
                    emoji=None, allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, *, quote=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Shortcut for:

```
await bot.send_dice(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_dice()`.

**Keyword Arguments**

**quote** (*bool*, optional) – If set to `True`, the dice is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

`telegram.Message`

```
async def reply_document(document, caption=None, disable_notification=None,
                        reply_to_message_id=None, reply_markup=None, parse_mode=None,
                        disable_content_type_detection=None, allow_sending_without_reply=None,
                        caption_entities=None, protect_content=None, message_thread_id=None,
                        thumbnail=None, *, filename=None, quote=None, read_timeout=None,
                        write_timeout=20, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Shortcut for:

```
await bot.send_document(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_document()`.

**Keyword Arguments**

**quote** (*bool*, optional) – If set to `True`, the document is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

`telegram.Message`

```
async def reply_game(game_short_name, disable_notification=None, reply_to_message_id=None,
                    reply_markup=None, allow_sending_without_reply=None, protect_content=None,
                    message_thread_id=None, *, quote=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```



Shortcut for:

```
await bot.send_game(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_game\(\)](#).

#### Keyword Arguments

**quote** (*bool*, optional) – If set to **True**, the game is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: **True** in group chats and **False** in private chats.

New in version 13.2.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async reply_html(text, disable_web_page_preview=None, disable_notification=None,
                  reply_to_message_id=None, reply_markup=None,
                  allow_sending_without_reply=None, entities=None, protect_content=None,
                  message_thread_id=None, *, quote=None, read_timeout=None,
                  write_timeout=None, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Shortcut for:

```
await bot.send_message(
    update.effective_message.chat_id,
    parse_mode=ParseMode.HTML,
    *args,
    **kwargs,
)
```

Sends a message with HTML formatting.

For the documentation of the arguments, please see [telegram.Bot.send\\_message\(\)](#).

#### Keyword Arguments

**quote** (*bool*, optional) – If set to **True**, the message is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: **True** in group chats and **False** in private chats.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async reply_invoice(title, description, payload, provider_token, currency, prices,
                    start_parameter=None, photo_url=None, photo_size=None, photo_width=None,
                    photo_height=None, need_name=None, need_phone_number=None,
                    need_email=None, need_shipping_address=None, is_flexible=None,
                    disable_notification=None, reply_to_message_id=None, reply_markup=None,
                    provider_data=None, send_phone_number_to_provider=None,
                    send_email_to_provider=None, allow_sending_without_reply=None,
                    max_tip_amount=None, suggested_tip_amounts=None, protect_content=None,
                    message_thread_id=None, *, quote=None, read_timeout=None,
                    write_timeout=None, connect_timeout=None, pool_timeout=None,
                    api_kwargs=None)
```

Shortcut for:

```
await bot.send_invoice(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_invoice\(\)](#).

**Warning:** As of API 5.2 [start\\_parameter](#) is an optional argument and therefore the order of the arguments had to be changed. Use keyword arguments to make sure that the arguments are passed correctly.

New in version 13.2.

Changed in version 13.5: As of Bot API 5.2, the parameter [start\\_parameter](#) is optional.

#### Keyword Arguments

**quote** ([bool](#), optional) – If set to [True](#), the invoice is sent as an actual reply to this message. If [reply\\_to\\_message\\_id](#) is passed, this parameter will be ignored. Default: [True](#) in group chats and [False](#) in private chats.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async reply_location(latitude=None, longitude=None, disable_notification=None,
                      reply_to_message_id=None, reply_markup=None, live_period=None,
                      horizontal_accuracy=None, heading=None, proximity_alert_radius=None,
                      allow_sending_without_reply=None, protect_content=None,
                      message_thread_id=None, *, location=None, quote=None,
                      read_timeout=None, write_timeout=None, connect_timeout=None,
                      pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_location(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_location\(\)](#).

#### Keyword Arguments

**quote** ([bool](#), optional) – If set to [True](#), the location is sent as an actual reply to this message. If [reply\\_to\\_message\\_id](#) is passed, this parameter will be ignored. Default: [True](#) in group chats and [False](#) in private chats.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async reply_markdown(text, disable_web_page_preview=None, disable_notification=None,
                     reply_to_message_id=None, reply_markup=None,
                     allow_sending_without_reply=None, entities=None, protect_content=None,
                     message_thread_id=None, *, quote=None, read_timeout=None,
                     write_timeout=None, connect_timeout=None, pool_timeout=None,
                     api_kwargs=None)
```

Shortcut for:

```
await bot.send_message(
    update.effective_message.chat_id,
    parse_mode=ParseMode.MARKDOWN,
    *args,
```

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```

    **kwargs,
)

```

Sends a message with Markdown version 1 formatting.

For the documentation of the arguments, please see [telegram.Bot.send\\_message\(\)](#).

---

**Note:** `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use [reply\\_markdown\\_v2\(\)](#) instead.

---

#### Keyword Arguments

**quote** (*bool*, optional) – If set to `True`, the message is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```

async reply_markdown_v2(text, disable_web_page_preview=None, disable_notification=None,
    reply_to_message_id=None, reply_markup=None,
    allow_sending_without_reply=None, entities=None,
    protect_content=None, message_thread_id=None, *, quote=None,
    read_timeout=None, write_timeout=None, connect_timeout=None,
    pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```

await bot.send_message(
    update.effective_message.chat_id,
    parse_mode=ParseMode.MARKDOWN_V2,
    *args,
    **kwargs,
)

```

Sends a message with markdown version 2 formatting.

For the documentation of the arguments, please see [telegram.Bot.send\\_message\(\)](#).

#### Keyword Arguments

**quote** (*bool*, optional) – If set to `True`, the message is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```

async reply_media_group(media, disable_notification=None, reply_to_message_id=None,
    allow_sending_without_reply=None, protect_content=None,
    message_thread_id=None, *, quote=None, read_timeout=None,
    write_timeout=20, connect_timeout=None, pool_timeout=None,
    api_kwargs=None, caption=None, parse_mode=None,
    caption_entities=None)

```

Shortcut for:

```
await bot.send_media_group(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_media_group()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the media group is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

An array of the sent Messages.

**Return type**

Tuple[`telegram.Message`]

**Raises**

`telegram.error.TelegramError` –

```
async reply_photo(photo, caption=None, disable_notification=None, reply_to_message_id=None,
                  reply_markup=None, parse_mode=None, allow_sending_without_reply=None,
                  caption_entities=None, protect_content=None, message_thread_id=None,
                  has_spoiler=None, *, filename=None, quote=None, read_timeout=None,
                  write_timeout=20, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Shortcut for:

```
await bot.send_photo(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_photo()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the photo is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

`telegram.Message`

```
async reply_poll(question, options, is_anonymous=None, type=None,
                 allows_multiple_answers=None, correct_option_id=None, is_closed=None,
                 disable_notification=None, reply_to_message_id=None, reply_markup=None,
                 explanation=None, explanation_parse_mode=None, open_period=None,
                 close_date=None, allow_sending_without_reply=None, explanation_entities=None,
                 protect_content=None, message_thread_id=None, *, quote=None,
                 read_timeout=None, write_timeout=None, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_poll(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_poll()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the poll is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**`telegram.Message`

```
async reply_sticker(sticker, disable_notification=None, reply_to_message_id=None,
                    reply_markup=None, allow_sending_without_reply=None,
                    protect_content=None, message_thread_id=None, emoji=None, *, quote=None,
                    read_timeout=None, write_timeout=20, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_sticker(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_sticker()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the sticker is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**`telegram.Message`

```
async reply_text(text, parse_mode=None, disable_web_page_preview=None,
                 disable_notification=None, reply_to_message_id=None, reply_markup=None,
                 allow_sending_without_reply=None, entities=None, protect_content=None,
                 message_thread_id=None, *, quote=None, read_timeout=None,
                 write_timeout=None, connect_timeout=None, pool_timeout=None,
                 api_kwargs=None)
```

Shortcut for:

```
await bot.send_message(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_message()`.

**Keyword Arguments**

**quote** (`bool`, optional) – If set to `True`, the message is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**`telegram.Message`

```
async reply_venue(latitude=None, longitude=None, title=None, address=None, foursquare_id=None,
                 disable_notification=None, reply_to_message_id=None, reply_markup=None,
                 foursquare_type=None, google_place_id=None, google_place_type=None,
                 allow_sending_without_reply=None, protect_content=None,
                 message_thread_id=None, *, venue=None, quote=None, read_timeout=None,
                 write_timeout=None, connect_timeout=None, pool_timeout=None,
                 api_kwargs=None)
```

Shortcut for:

```
await bot.send_venue(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.send_venue()`.

**Keyword Arguments**

**quote** (*bool*, optional) – If set to *True*, the venue is sent as an actual reply to this message. If *reply\_to\_message\_id* is passed, this parameter will be ignored. Default: *True* in group chats and *False* in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

*telegram.Message*

```
async reply_video(video, duration=None, caption=None, disable_notification=None,
    reply_to_message_id=None, reply_markup=None, width=None, height=None,
    parse_mode=None, supports_streaming=None,
    allow_sending_without_reply=None, caption_entities=None,
    protect_content=None, message_thread_id=None, has_spoiler=None,
    thumbnail=None, *, filename=None, quote=None, read_timeout=None,
    write_timeout=20, connect_timeout=None, pool_timeout=None,
    api_kwargs=None)
```

Shortcut for:

```
await bot.send_video(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see *telegram.Bot.send\_video()*.

**Keyword Arguments**

**quote** (*bool*, optional) – If set to *True*, the video is sent as an actual reply to this message. If *reply\_to\_message\_id* is passed, this parameter will be ignored. Default: *True* in group chats and *False* in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

*telegram.Message*

```
async reply_video_note(video_note, duration=None, length=None, disable_notification=None,
    reply_to_message_id=None, reply_markup=None,
    allow_sending_without_reply=None, protect_content=None,
    message_thread_id=None, thumbnail=None, *, filename=None,
    quote=None, read_timeout=None, write_timeout=20,
    connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_video_note(update.effective_message.chat_id, *args, **kwargs)
```

For the documentation of the arguments, please see *telegram.Bot.send\_video\_note()*.

**Keyword Arguments**

**quote** (*bool*, optional) – If set to *True*, the video note is sent as an actual reply to this message. If *reply\_to\_message\_id* is passed, this parameter will be ignored. Default: *True* in group chats and *False* in private chats.

**Returns**

On success, instance representing the message posted.

**Return type**

*telegram.Message*

```

async reply_voice(voice, duration=None, caption=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, parse_mode=None,
                    allow_sending_without_reply=None, caption_entities=None,
                    protect_content=None, message_thread_id=None, *, filename=None, quote=None,
                    read_timeout=None, write_timeout=20, connect_timeout=None,
                    pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```

await bot.send_voice(update.effective_message.chat_id, *args, **kwargs)

```

For the documentation of the arguments, please see [telegram.Bot.send\\_voice\(\)](#).

#### Keyword Arguments

**quote** (**bool**, optional) – If set to **True**, the voice note is sent as an actual reply to this message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: **True** in group chats and **False** in private chats.

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```

async set_game_score(user_id, score, force=None, disable_edit_message=None, *,
                      read_timeout=None, write_timeout=None, connect_timeout=None,
                      pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```

await bot.set_game_score(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)

```

For the documentation of the arguments, please see [telegram.Bot.set\\_game\\_score\(\)](#).

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and might be changed by Telegram.

---

#### Returns

On success, if edited message is sent by the bot, the edited [Message](#) is returned, otherwise **True** is returned.

#### Return type

[telegram.Message](#)

```

async stop_live_location(reply_markup=None, *, read_timeout=None, write_timeout=None,
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)

```

Shortcut for:

```

await bot.stop_message_live_location(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)

```

For the documentation of the arguments, please see [telegram.Bot.stop\\_message\\_live\\_location\(\)](#).

---

**Note:** You can only edit messages that the bot sent itself (i.e. of the `bot.send_*` family of methods) or channel posts, if the bot is an admin in that channel. However, this behaviour is undocumented and

might be changed by Telegram.

---

**Returns**

On success, if edited message is sent by the bot, the edited Message is returned, otherwise `True` is returned.

**Return type**

`telegram.Message`

**async stop\_poll**(*reply\_markup=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.stop_poll(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.stop_poll()`.

**Returns**

On success, the stopped Poll with the final results is returned.

**Return type**

`telegram.Poll`

**property text\_html**

Creates an HTML-formatted string from the markup entities found in the message.

Use this if you want to retrieve the message text with the entities formatted as HTML in the same way the original message was formatted.

Changed in version 13.10: Spoiler entities are now formatted as HTML.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message text with entities formatted as HTML.

**Return type**

`str`

**property text\_html\_urled**

Creates an HTML-formatted string from the markup entities found in the message.

Use this if you want to retrieve the message text with the entities formatted as HTML. This also formats `telegram.MessageEntity.URL` as a hyperlink.

Changed in version 13.10: Spoiler entities are now formatted as HTML.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message text with entities formatted as HTML.

**Return type**

`str`

**property text\_markdown**

Creates an Markdown-formatted string from the markup entities found in the message using `telegram.constants.ParseMode.MARKDOWN`.

Use this if you want to retrieve the message text with the entities formatted as Markdown in the same way the original message was formatted.

---

**Note:**



- `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use `text_markdown_v2()` instead.
  - Custom emoji entities will be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

Changed in version 20.5: Since custom emoji entities are not supported by `MARKDOWN`, this method now raises a `ValueError` when encountering a custom emoji.

**Returns**

Message text with entities formatted as Markdown.

**Return type**

`str`

**Raises**

**`ValueError`** – If the message contains underline, strikethrough, spoiler or nested entities.

**property `text_markdown_urled`**

Creates an Markdown-formatted string from the markup entities found in the message using `telegram.constants.ParseMode.MARKDOWN`.

Use this if you want to retrieve the message text with the entities formatted as Markdown. This also formats `telegram.MessageEntity.URL` as a hyperlink.

---

**Note:**

- `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use `text_markdown_v2_urled()` instead.
  - Custom emoji entities will be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

Changed in version 20.5: Since custom emoji entities are not supported by `MARKDOWN`, this method now raises a `ValueError` when encountering a custom emoji.

**Returns**

Message text with entities formatted as Markdown.

**Return type**

`str`

**Raises**

**`ValueError`** – If the message contains underline, strikethrough, spoiler or nested entities.

**property `text_markdown_v2`**

Creates an Markdown-formatted string from the markup entities found in the message using `telegram.constants.ParseMode.MARKDOWN_V2`.

Use this if you want to retrieve the message text with the entities formatted as Markdown in the same way the original message was formatted.

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message text with entities formatted as Markdown.

**Return type**

`str`

**property text\_markdown\_v2\_urled**

Creates an Markdown-formatted string from the markup entities found in the message using `telegram.constants.ParseMode.MARKDOWN_V2`.

Use this if you want to retrieve the message text with the entities formatted as Markdown. This also formats `telegram.MessageEntity.URL` as a hyperlink.

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

Changed in version 20.3: Custom emoji entities are now supported.

**Returns**

Message text with entities formatted as Markdown.

**Return type**

`str`

**async unpin**(*\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.unpin_chat_message(
    chat_id=message.chat_id, message_id=message.message_id, *args, **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.unpin_chat_message()`.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**async unpin\_all\_forum\_topic\_messages**(*\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.unpin_all_forum_topic_messages(
    chat_id=message.chat_id, message_thread_id=message.message_thread_id,
    ↪ *args,
    **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.unpin_all_forum_topic_messages()`.

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

## MessageAutoDeleteTimerChanged

**class** telegram.**MessageAutoDeleteTimerChanged**(*message\_auto\_delete\_time*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a service message about a change in auto-delete timer settings.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *message\_auto\_delete\_time* is equal.

---

### Available In

[telegram.Message.message\\_auto\\_delete\\_timer\\_changed](#)

---

New in version 13.4.

#### Parameters

**message\_auto\_delete\_time** ([int](#)) – New auto-delete time for messages in the chat.

**message\_auto\_delete\_time**

New auto-delete time for messages in the chat.

#### Type

[int](#)

## MessageEntity

**class** telegram.**MessageEntity**(*type*, *offset*, *length*, *url=None*, *user=None*, *language=None*, *custom\_emoji\_id=None*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents one special entity in a text message. For example, hashtags, usernames, URLs, etc.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *type*, *offset* and *length* are equal.

---

### Use In

- [telegram.Bot.copy\\_message\(\)](#)
  - [telegram.Bot.edit\\_message\\_caption\(\)](#)
  - [telegram.Bot.edit\\_message\\_text\(\)](#)
  - [telegram.Bot.send\\_animation\(\)](#)
  - [telegram.Bot.send\\_audio\(\)](#)
  - [telegram.Bot.send\\_document\(\)](#)
  - [telegram.Bot.send\\_media\\_group\(\)](#)
  - [telegram.Bot.send\\_message\(\)](#)
  - [telegram.Bot.send\\_photo\(\)](#)
  - [telegram.Bot.send\\_poll\(\)](#)
  - [telegram.Bot.send\\_video\(\)](#)
  - [telegram.Bot.send\\_voice\(\)](#)
- 

---

### Available In

- `telegram.Game.text_entities`
  - `telegram.InlineQueryResultAudio.caption_entities`
  - `telegram.InlineQueryResultCachedAudio.caption_entities`
  - `telegram.InlineQueryResultCachedDocument.caption_entities`
  - `telegram.InlineQueryResultCachedGif.caption_entities`
  - `telegram.InlineQueryResultCachedMpeg4Gif.caption_entities`
  - `telegram.InlineQueryResultCachedPhoto.caption_entities`
  - `telegram.InlineQueryResultCachedVideo.caption_entities`
  - `telegram.InlineQueryResultCachedVoice.caption_entities`
  - `telegram.InlineQueryResultDocument.caption_entities`
  - `telegram.InlineQueryResultGif.caption_entities`
  - `telegram.InlineQueryResultMpeg4Gif.caption_entities`
  - `telegram.InlineQueryResultPhoto.caption_entities`
  - `telegram.InlineQueryResultVideo.caption_entities`
  - `telegram.InlineQueryResultVoice.caption_entities`
  - `telegram.InputMedia.caption_entities`
  - `telegram.InputMediaAnimation.caption_entities`
  - `telegram.InputMediaAudio.caption_entities`
  - `telegram.InputMediaDocument.caption_entities`
  - `telegram.InputMediaPhoto.caption_entities`
  - `telegram.InputMediaVideo.caption_entities`
  - `telegram.InputTextMessageContent.entities`
  - `telegram.Message.caption_entities`
  - `telegram.Message.entities`
  - `telegram.Poll.explanation_entities`
- 

### Parameters

- **type** (`str`) – Type of the entity. Can be *MENTION* (@username), *HASHTAG* (#hash-tag), *CASHTAG* (\$USD), *BOT\_COMMAND* (/start@jobs\_bot), *URL* (<https://telegram.org>), *EMAIL* (do-not-reply@telegram.org), *PHONE\_NUMBER* (+1-212-555-0123), *BOLD* (**bold text**), *ITALIC* (*italic text*), *UNDERLINE* (underlined text), *STRIKETHROUGH*, *SPOILER* (spoiler message), *CODE* (monowidth string), *PRE* (monowidth block), *TEXT\_LINK* (for clickable text URLs), *TEXT\_MENTION* (for users without usernames), *CUSTOM\_EMOJI* (for inline custom emoji stickers).

New in version 20.0: Added inline custom emoji

- **offset** (`int`) – Offset in UTF-16 code units to the start of the entity.
- **length** (`int`) – Length of the entity in UTF-16 code units.
- **url** (`str`, optional) – For *TEXT\_LINK* only, url that will be opened after user taps on the text.
- **user** (`telegram.User`, optional) – For *TEXT\_MENTION* only, the mentioned user.
- **language** (`str`, optional) – For *PRE* only, the programming language of the entity text.

- **custom\_emoji\_id** (`str`, optional) – For *CUSTOM\_EMOJI* only, unique identifier of the custom emoji. Use `telegram.Bot.get_custom_emoji_stickers()` to get full information about the sticker.

New in version 20.0.

#### type

Type of the entity. Can be *MENTION* (@username), *HASHTAG* (#hashtag), *CASHTAG* (\$USD), *BOT\_COMMAND* (/start@jobs\_bot), *URL* (https://telegram.org), *EMAIL* (do-not-reply@telegram.org), *PHONE\_NUMBER* (+1-212-555-0123), *BOLD* (**bold text**), *ITALIC* (*italic text*), *UNDERLINE* (underlined text), *STRIKETHROUGH*, *SPOILER* (spoiler message), *CODE* (monowidth string), *PRE* (monowidth block), *TEXT\_LINK* (for clickable text URLs), *TEXT\_MENTION* (for users without usernames), *CUSTOM\_EMOJI* (for inline custom emoji stickers).

New in version 20.0: Added inline custom emoji

#### Type

`str`

#### offset

Offset in UTF-16 code units to the start of the entity.

#### Type

`int`

#### length

Length of the entity in UTF-16 code units.

#### Type

`int`

#### url

Optional. For *TEXT\_LINK* only, url that will be opened after user taps on the text.

#### Type

`str`

#### user

Optional. For *TEXT\_MENTION* only, the mentioned user.

#### Type

`telegram.User`

#### language

Optional. For *PRE* only, the programming language of the entity text.

#### Type

`str`

#### custom\_emoji\_id

Optional. For *CUSTOM\_EMOJI* only, unique identifier of the custom emoji. Use `telegram.Bot.get_custom_emoji_stickers()` to get full information about the sticker.

New in version 20.0.

#### Type

`str`

```
ALL_TYPES = [MessageEntityType.MENTION, MessageEntityType.HASHTAG,
MessageEntityType.CASHTAG, MessageEntityType.PHONE_NUMBER,
MessageEntityType.BOT_COMMAND, MessageEntityType.URL, MessageEntityType.EMAIL,
MessageEntityType.BOLD, MessageEntityType.ITALIC, MessageEntityType.CODE,
MessageEntityType.PRE, MessageEntityType.TEXT_LINK,
MessageEntityType.TEXT_MENTION, MessageEntityType.UNDERLINE,
MessageEntityType.STRIKETHROUGH, MessageEntityType.SPOILER,
MessageEntityType.CUSTOM_EMOJI]
```

A list of all available message entity types.

**Type**

List[str]

**BOLD** = 'bold'

*telegram.constants.MessageEntityType.BOLD*

**BOT\_COMMAND** = 'bot\_command'

*telegram.constants.MessageEntityType.BOT\_COMMAND*

**CASHTAG** = 'cashtag'

*telegram.constants.MessageEntityType.CASHTAG*

**CODE** = 'code'

*telegram.constants.MessageEntityType.CODE*

**CUSTOM\_EMOJI** = 'custom\_emoji'

*telegram.constants.MessageEntityType.CUSTOM\_EMOJI*

New in version 20.0.

**EMAIL** = 'email'

*telegram.constants.MessageEntityType.EMAIL*

**HASHTAG** = 'hashtag'

*telegram.constants.MessageEntityType.HASHTAG*

**ITALIC** = 'italic'

*telegram.constants.MessageEntityType.ITALIC*

**MENTION** = 'mention'

*telegram.constants.MessageEntityType.MENTION*

**PHONE\_NUMBER** = 'phone\_number'

*telegram.constants.MessageEntityType.PHONE\_NUMBER*

**PRE** = 'pre'

*telegram.constants.MessageEntityType.PRE*

**SPOILER** = 'spoiler'

*telegram.constants.MessageEntityType.SPOILER*

New in version 13.10.

**STRIKETHROUGH** = 'strikethrough'

*telegram.constants.MessageEntityType.STRIKETHROUGH*

**TEXT\_LINK** = 'text\_link'

*telegram.constants.MessageEntityType.TEXT\_LINK*

**TEXT\_MENTION** = 'text\_mention'

*telegram.constants.MessageEntityType.TEXT\_MENTION*

**UNDERLINE** = 'underline'

*telegram.constants.MessageEntityType.UNDERLINE*

**URL** = 'url'

*telegram.constants.MessageEntityType.URL*

**classmethod de\_json**(data, bot)

See *telegram.TelegramObject.de\_json()*.

## MessageId

**class** telegram.**MessageId**(*message\_id*, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

This object represents a unique message identifier.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *message\_id* is equal.

---

### Returned In

[telegram.Bot.copy\\_message\(\)](#)

---

### Parameters

**message\_id** (*int*) – Unique message identifier.

### message\_id

Unique message identifier.

### Type

*int*

## PhotoSize

**class** telegram.**PhotoSize**(*file\_id*, *file\_unique\_id*, *width*, *height*, *file\_size*=None, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

This object represents one size of a photo or a file/sticker thumbnail.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *file\_unique\_id* is equal.

---

### Use In

- [telegram.Bot.get\\_file\(\)](#)
  - [telegram.Bot.send\\_photo\(\)](#)
- 

---

### Available In

- [telegram.Animation.thumbnail](#)
- [telegram.Audio.thumbnail](#)
- [telegram.Document.thumbnail](#)
- [telegram.Game.photo](#)
- [telegram.Message.new\\_chat\\_photo](#)
- [telegram.Message.photo](#)
- [telegram.Sticker.thumbnail](#)
- [telegram.StickerSet.thumbnail](#)
- [telegram.UserProfilePhotos.photos](#)
- [telegram.Video.thumbnail](#)
- [telegram.VideoNote.thumbnail](#)

### Parameters

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **width** (`int`) – Photo width.
- **height** (`int`) – Photo height.
- **file\_size** (`int`, optional) – File size in bytes.

### **file\_id**

Identifier for this file, which can be used to download or reuse the file.

#### Type

`str`

### **file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

#### Type

`str`

### **width**

Photo width.

#### Type

`int`

### **height**

Photo height.

#### Type

`int`

### **file\_size**

Optional. File size in bytes.

#### Type

`int`

**async get\_file**(*\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

### Returns

`telegram.File`

### Raises

`telegram.error.TelegramError` –



## Poll

```
class telegram.Poll(id, question, options, total_voter_count, is_closed, is_anonymous, type,
                    allows_multiple_answers, correct_option_id=None, explanation=None,
                    explanation_entities=None, open_period=None, close_date=None, *,
                    api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object contains information about a poll.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *id* is equal.

---

### Available In

- [telegram.Message.poll](#)
- [telegram.Update.poll](#)

---

### Returned In

[telegram.Bot.stop\\_poll\(\)](#)

---

### Examples

[Poll Bot](#)

---

#### Parameters

- **id** ([str](#)) – Unique poll identifier.
- **question** ([str](#)) – Poll question, 1- 300 characters.
- **options** (Sequence[[PollOption](#)]) – List of poll options.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **is\_closed** ([bool](#)) – [True](#), if the poll is closed.
- **is\_anonymous** ([bool](#)) – [True](#), if the poll is anonymous.
- **type** ([str](#)) – Poll type, currently can be [REGULAR](#) or [QUIZ](#).
- **allows\_multiple\_answers** ([bool](#)) – [True](#), if the poll allows multiple answers.
- **correct\_option\_id** ([int](#), optional) – A zero based identifier of the correct answer option. Available only for closed polls in the quiz mode, which were sent (not forwarded), by the bot or to a private chat with the bot.
- **explanation** ([str](#), optional) – Text that is shown when a user chooses an incorrect answer or taps on the lamp icon in a quiz-style poll, 0-200 characters.
- **explanation\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Special entities like usernames, URLs, bot commands, etc. that appear in the [explanation](#). This list is empty if the message does not contain explanation entities.

Changed in version 20.0:

- This attribute is now always a (possibly empty) list and never [None](#).
- Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

- **open\_period** (`int`, optional) – Amount of time in seconds the poll will be active after creation.
- **close\_date** (`datetime.datetime`, optional) – Point in time (Unix timestamp) when the poll will be automatically closed. Converted to `datetime.datetime`.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**id**

Unique poll identifier.

**Type**

`str`

**question**

Poll question, 1- 300 characters.

**Type**

`str`

**options**

List of poll options.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[*PollOption*]

**total\_voter\_count**

Total number of users that voted in the poll.

**Type**

`int`

**is\_closed**

`True`, if the poll is closed.

**Type**

`bool`

**is\_anonymous**

`True`, if the poll is anonymous.

**Type**

`bool`

**type**

Poll type, currently can be *REGULAR* or *QUIZ*.

**Type**

`str`

**allows\_multiple\_answers**

`True`, if the poll allows multiple answers.

**Type**

`bool`

**correct\_option\_id**

Optional. A zero based identifier of the correct answer option. Available only for closed polls in the quiz mode, which were sent (not forwarded), by the bot or to a private chat with the bot.

**Type**

`int`

**explanation**

Optional. Text that is shown when a user chooses an incorrect answer or taps on the lamp icon in a quiz-style poll, 0-200 characters.

**Type**

`str`

**explanation\_entities**

Special entities like usernames, URLs, bot commands, etc. that appear in the *explanation*. This list is empty if the message does not contain explanation entities.

Changed in version 20.0: This attribute is now an immutable tuple.

Changed in version 20.0: This attribute is now always a (possibly empty) list and never `None`.

**Type**

Tuple[*telegram.MessageEntity*]

**open\_period**

Optional. Amount of time in seconds the poll will be active after creation.

**Type**

`int`

**close\_date**

Optional. Point in time when the poll will be automatically closed.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless *telegram.ext.Defaults.tzinfo* is used.

**Type**

`datetime.datetime`

**MAX\_EXPLANATION\_LENGTH = 200**

*telegram.constants.PollLimit.MAX\_EXPLANATION\_LENGTH*

New in version 20.0.

**MAX\_EXPLANATION\_LINE\_FEEDS = 2**

*telegram.constants.PollLimit.MAX\_EXPLANATION\_LINE\_FEEDS*

New in version 20.0.

**MAX\_OPEN\_PERIOD = 600**

*telegram.constants.PollLimit.MAX\_OPEN\_PERIOD*

New in version 20.0.

**MAX\_OPTION\_LENGTH = 100**

*telegram.constants.PollLimit.MAX\_OPTION\_LENGTH*

New in version 20.0.

**MAX\_OPTION\_NUMBER = 10**

*telegram.constants.PollLimit.MAX\_OPTION\_NUMBER*

New in version 20.0.

**MAX\_QUESTION\_LENGTH = 300**

*telegram.constants.PollLimit.MAX\_QUESTION\_LENGTH*

New in version 20.0.

**MIN\_OPEN\_PERIOD = 5**

*telegram.constants.PollLimit.MIN\_OPEN\_PERIOD*

New in version 20.0.

**MIN\_OPTION\_LENGTH = 1**

`telegram.constants.PollLimit.MIN_OPTION_LENGTH`

New in version 20.0.

**MIN\_OPTION\_NUMBER = 2**

`telegram.constants.PollLimit.MIN_OPTION_NUMBER`

New in version 20.0.

**MIN\_QUESTION\_LENGTH = 1**

`telegram.constants.PollLimit.MIN_QUESTION_LENGTH`

New in version 20.0.

**QUIZ = 'quiz'**

`telegram.constants.PollType.QUIZ`

**REGULAR = 'regular'**

`telegram.constants.PollType.REGULAR`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**parse\_explanation\_entities(types=None)**

Returns a `dict` that maps `telegram.MessageEntity` to `str`. It contains entities from this poll's explanation filtered by their `type` attribute as the key, and the text that each entity belongs to as the value of the `dict`.

---

**Note:** This method should always be used instead of the `explanation_entities` attribute, since it calculates the correct substring from the message text based on UTF-16 codepoints. See `parse_explanation_entity` for more info.

---

#### Parameters

**types** (List[`str`], optional) – List of `MessageEntity` types as strings. If the `type` attribute of an entity is contained in this list, it will be returned. Defaults to `telegram.MessageEntity.ALL_TYPES`.

#### Returns

A dictionary of entities mapped to the text that belongs to them, calculated based on UTF-16 codepoints.

#### Return type

Dict[`telegram.MessageEntity`, `str`]

**parse\_explanation\_entity(entity)**

Returns the text from a given `telegram.MessageEntity`.

---

**Note:** This method is present because Telegram calculates the offset and length in UTF-16 codepoint pairs, which some versions of Python don't handle automatically. (That is, you can't just slice `Message.text` with the offset and length.)

---

#### Parameters

**entity** (`telegram.MessageEntity`) – The entity to extract the text from. It must be an entity that belongs to this message.

#### Returns

The text of the given entity.

**Return type**`str`**Raises**`RuntimeError` – If the poll has no explanation.**PollAnswer****class** telegram.PollAnswer(*poll\_id, option\_ids, user=None, voter\_chat=None, \*, api\_kwargs=None*)Bases: `telegram.TelegramObject`

This object represents an answer of a user in a non-anonymous poll.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `poll_id`, `user` and `option_ids` are equal.

---

**Available In**`telegram.Update.poll_answer`

---

Changed in version 20.5: The order of `option_ids` and `user` is changed in 20.5 as the latter one became optional.Changed in version 20.6: Backward compatibility for changed order of `option_ids` and `user` was removed.**Parameters**

- **poll\_id** (`str`) – Unique poll identifier.
- **option\_ids** (`Sequence[int]`) – Identifiers of answer options, chosen by the user. May be empty if the user retracted their vote.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **user** (`telegram.User`, optional) – The user that changed the answer to the poll, if the voter isn't anonymous. If the voter is anonymous, this field will contain the user `136817688` for backwards compatibility.

Changed in version 20.5: `user` became optional.

- **voter\_chat** (`telegram.Chat`, optional) – The chat that changed the answer to the poll, if the voter is anonymous.

New in version 20.5.

**poll\_id**

Unique poll identifier.

**Type**`str`**option\_ids**

Identifiers of answer options, chosen by the user. May be empty if the user retracted their vote.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**`Tuple[int]`**user**Optional. The user, who changed the answer to the poll, if the voter isn't anonymous. If the voter is anonymous, this field will contain the user `136817688` for backwards compatibilityChanged in version 20.5: `user` became optional.

**Type***telegram.User***voter\_chat**

Optional. The chat that changed the answer to the poll, if the voter is anonymous.

New in version 20.5.

**Type***telegram.Chat***classmethod de\_json(data, bot)**

See *telegram.TelegramObject.de\_json()*.

## PollOption

**class telegram.PollOption**(text, voter\_count, \*, api\_kwargs=None)

Bases: *telegram.TelegramObject*

This object contains information about one answer option in a poll.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *text* and *voter\_count* are equal.

---

**Available In***telegram.Poll.options*

---

**Parameters**

- **text** (*str*) – Option text, *1-100* characters.
- **voter\_count** (*int*) – Number of users that voted for this option.

**text**

Option text, *1-100* characters.

**Type***str***voter\_count**

Number of users that voted for this option.

**Type***int***MAX\_LENGTH = 100***telegram.constants.PollLimit.MAX\_OPTION\_LENGTH*

New in version 20.0.

**MIN\_LENGTH = 1***telegram.constants.PollLimit.MIN\_OPTION\_LENGTH*

New in version 20.0.

## ProximityAlertTriggered

**class** telegram.ProximityAlertTriggered(*traveler, watcher, distance, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents the content of a service message, sent whenever a user in the chat triggers a proximity alert set by another user.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *traveler*, *watcher* and *distance* are equal.

---

### Available In

[telegram.Message.proximity\\_alert\\_triggered](#)

---

### Parameters

- **traveler** ([telegram.User](#)) – User that triggered the alert
- **watcher** ([telegram.User](#)) – User that set the alert
- **distance** ([int](#)) – The distance between the users

### traveler

User that triggered the alert

#### Type

[telegram.User](#)

### watcher

User that set the alert

#### Type

[telegram.User](#)

### distance

The distance between the users

#### Type

[int](#)

**classmethod** [de\\_json](#)(*data, bot*)

See [telegram.TelegramObject.de\\_json\(\)](#).

## ReplyKeyboardMarkup

**class** telegram.ReplyKeyboardMarkup(*keyboard, resize\_keyboard=None, one\_time\_keyboard=None, selective=None, input\_field\_placeholder=None, is\_persistent=None, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a custom keyboard with reply options.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their size of *keyboard* and all the buttons are equal.

---

### Use In

- [telegram.Bot.copy\\_message\(\)](#)
- [telegram.Bot.send\\_animation\(\)](#)

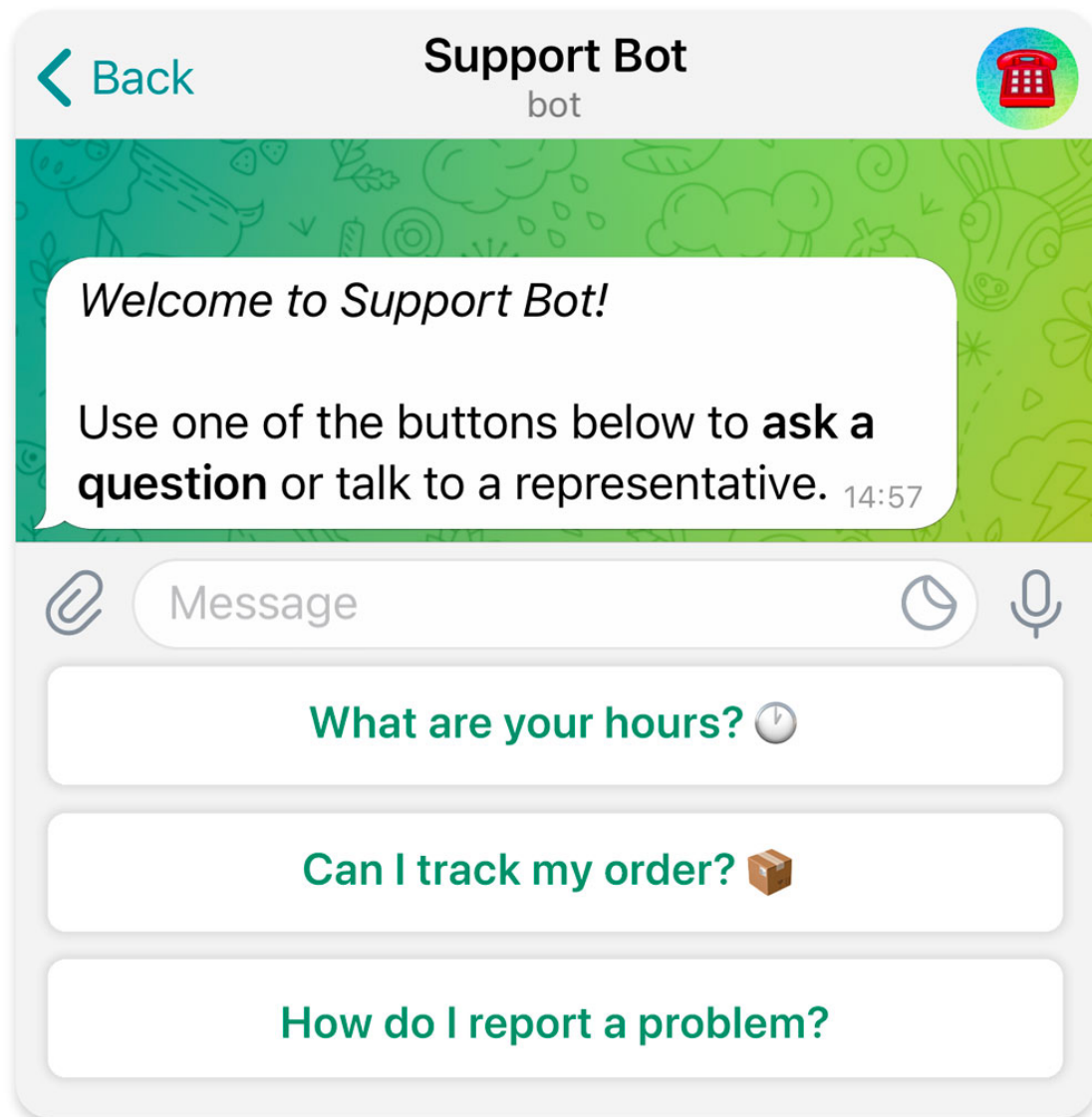


Fig. 2: A reply keyboard with reply options.



- `telegram.Bot.send_audio()`
  - `telegram.Bot.send_contact()`
  - `telegram.Bot.send_dice()`
  - `telegram.Bot.send_document()`
  - `telegram.Bot.send_location()`
  - `telegram.Bot.send_message()`
  - `telegram.Bot.send_photo()`
  - `telegram.Bot.send_poll()`
  - `telegram.Bot.send_sticker()`
  - `telegram.Bot.send_venue()`
  - `telegram.Bot.send_video_note()`
  - `telegram.Bot.send_video()`
  - `telegram.Bot.send_voice()`
- 

**See also:**

Another kind of keyboard would be the `telegram.InlineKeyboardMarkup`.

---

**Examples**

- Example usage: A user requests to change the bot's language, bot replies to the request with a keyboard to select the new language. Other users in the group don't see the keyboard.
  - *Conversation Bot*
  - *Conversation Bot 2*
- 

**Parameters**

- **keyboard** (Sequence[Sequence[str | `telegram.KeyboardButton`]]) – Array of button rows, each represented by an Array of `telegram.KeyboardButton` objects.
- **resize\_keyboard** (bool, optional) – Requests clients to resize the keyboard vertically for optimal fit (e.g., make the keyboard smaller if there are just two rows of buttons). Defaults to `False`, in which case the custom keyboard is always of the same height as the app's standard keyboard.
- **one\_time\_keyboard** (bool, optional) – Requests clients to hide the keyboard as soon as it's been used. The keyboard will still be available, but clients will automatically display the usual letter-keyboard in the chat - the user can press a special button in the input field to see the custom keyboard again. Defaults to `False`.
- **selective** (bool, optional) – Use this parameter if you want to show the keyboard to specific users only. Targets:
  - 1) Users that are @mentioned in the `text` of the `telegram.Message` object.
  - 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.Defaults to `False`.
- **input\_field\_placeholder** (str, optional) – The placeholder to be shown in the input field when the keyboard is active; 1- 64 characters.

New in version 13.7.

- **is\_persistent** (`bool`, optional) – Requests clients to always show the keyboard when the regular keyboard is hidden. Defaults to `False`, in which case the custom keyboard can be hidden and opened with a keyboard icon.

New in version 20.0.

### **keyboard**

Array of button rows, each represented by an Array of `telegram.KeyboardButton` objects.

#### **Type**

`Tuple[Tuple[telegram.KeyboardButton]]`

### **resize\_keyboard**

Optional. Requests clients to resize the keyboard vertically for optimal fit (e.g., make the keyboard smaller if there are just two rows of buttons). Defaults to `False`, in which case the custom keyboard is always of the same height as the app's standard keyboard.

#### **Type**

`bool`

### **one\_time\_keyboard**

Optional. Requests clients to hide the keyboard as soon as it's been used. The keyboard will still be available, but clients will automatically display the usual letter-keyboard in the chat - the user can press a special button in the input field to see the custom keyboard again. Defaults to `False`.

#### **Type**

`bool`

### **selective**

Optional. Show the keyboard to specific users only. Targets:

- 1) Users that are @mentioned in the `text` of the `telegram.Message` object.
- 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

Defaults to `False`.

#### **Type**

`bool`

### **input\_field\_placeholder**

Optional. The placeholder to be shown in the input field when the keyboard is active; 1- 64 characters.

New in version 13.7.

#### **Type**

`str`

### **is\_persistent**

Optional. Requests clients to always show the keyboard when the regular keyboard is hidden. If `False`, the custom keyboard can be hidden and opened with a keyboard icon.

New in version 20.0.

#### **Type**

`bool`

### **MAX\_INPUT\_FIELD\_PLACEHOLDER = 64**

`telegram.constants.ReplyLimit.MAX_INPUT_FIELD_PLACEHOLDER`

New in version 20.0.

### **MIN\_INPUT\_FIELD\_PLACEHOLDER = 1**

`telegram.constants.ReplyLimit.MIN_INPUT_FIELD_PLACEHOLDER`

New in version 20.0.

```
classmethod from_button(button, resize_keyboard=False, one_time_keyboard=False,
                        selective=False, input_field_placeholder=None, is_persistent=None,
                        **kwargs)
```

Shortcut for:

```
ReplyKeyboardMarkup([[button]], **kwargs)
```

Return a ReplyKeyboardMarkup from a single KeyboardButton.

#### Parameters

- **button** (*telegram.KeyboardButton* | *str*) – The button to use in the markup.
- **resize\_keyboard** (*bool*, optional) – Requests clients to resize the keyboard vertically for optimal fit (e.g., make the keyboard smaller if there are just two rows of buttons). Defaults to *False*, in which case the custom keyboard is always of the same height as the app's standard keyboard.
- **one\_time\_keyboard** (*bool*, optional) – Requests clients to hide the keyboard as soon as it's been used. The keyboard will still be available, but clients will automatically display the usual letter-keyboard in the chat - the user can press a special button in the input field to see the custom keyboard again. Defaults to *False*.
- **selective** (*bool*, optional) – Use this parameter if you want to show the keyboard to specific users only. Targets:
  - 1) Users that are @mentioned in the text of the Message object.
  - 2) If the bot's message is a reply (has *reply\_to\_message\_id*), sender of the original message.

Defaults to *False*.

- **input\_field\_placeholder** (*str*) – Optional. The placeholder shown in the input field when the reply is active.

New in version 13.7.

- **is\_persistent** (*bool*) – Optional. Requests clients to always show the keyboard when the regular keyboard is hidden. Defaults to *False*, in which case the custom keyboard can be hidden and opened with a keyboard icon.

New in version 20.0.

```
classmethod from_column(button_column, resize_keyboard=False, one_time_keyboard=False,
                        selective=False, input_field_placeholder=None, is_persistent=None,
                        **kwargs)
```

Shortcut for:

```
ReplyKeyboardMarkup([[button] for button in button_column], **kwargs)
```

Return a ReplyKeyboardMarkup from a single column of KeyboardButtons.

#### Parameters

- **button\_column** (Sequence[*telegram.KeyboardButton* | *str*]) – The button to use in the markup.  
 Changed in version 20.0: Accepts any *collections.abc.Sequence* as input instead of just a list.
- **resize\_keyboard** (*bool*, optional) – Requests clients to resize the keyboard vertically for optimal fit (e.g., make the keyboard smaller if there are just two rows of buttons). Defaults to *False*, in which case the custom keyboard is always of the same height as the app's standard keyboard.

- **one\_time\_keyboard** (`bool`, optional) – Requests clients to hide the keyboard as soon as it's been used. The keyboard will still be available, but clients will automatically display the usual letter-keyboard in the chat - the user can press a special button in the input field to see the custom keyboard again. Defaults to `False`.

- **selective** (`bool`, optional) – Use this parameter if you want to show the keyboard to specific users only. Targets:

- 1) Users that are @mentioned in the text of the Message object.
- 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

Defaults to `False`.

- **input\_field\_placeholder** (`str`) – Optional. The placeholder shown in the input field when the reply is active.

New in version 13.7.

- **is\_persistent** (`bool`) – Optional. Requests clients to always show the keyboard when the regular keyboard is hidden. Defaults to `False`, in which case the custom keyboard can be hidden and opened with a keyboard icon.

New in version 20.0.

```
classmethod from_row(button_row, resize_keyboard=False, one_time_keyboard=False,
                    selective=False, input_field_placeholder=None, is_persistent=None,
                    **kwargs)
```

Shortcut for:

```
ReplyKeyboardMarkup([button_row], **kwargs)
```

Return a `ReplyKeyboardMarkup` from a single row of `KeyboardButtons`.

#### Parameters

- **button\_row** (Sequence[`telegram.KeyboardButton` | `str`]) – The button to use in the markup.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list.

- **resize\_keyboard** (`bool`, optional) – Requests clients to resize the keyboard vertically for optimal fit (e.g., make the keyboard smaller if there are just two rows of buttons). Defaults to `False`, in which case the custom keyboard is always of the same height as the app's standard keyboard.

- **one\_time\_keyboard** (`bool`, optional) – Requests clients to hide the keyboard as soon as it's been used. The keyboard will still be available, but clients will automatically display the usual letter-keyboard in the chat - the user can press a special button in the input field to see the custom keyboard again. Defaults to `False`.

- **selective** (`bool`, optional) – Use this parameter if you want to show the keyboard to specific users only. Targets:

- 1) Users that are @mentioned in the text of the Message object.
- 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

Defaults to `False`.

- **input\_field\_placeholder** (`str`) – Optional. The placeholder shown in the input field when the reply is active.

New in version 13.7.

- **is\_persistent** (`bool`) – Optional. Requests clients to always show the keyboard when the regular keyboard is hidden. Defaults to `False`, in which case the custom keyboard can be hidden and opened with a keyboard icon.

New in version 20.0.

## ReplyKeyboardRemove

**class** telegram.**ReplyKeyboardRemove**(*selective=None, \*, api\_kwargs=None*)

Bases: `telegram.TelegramObject`

Upon receiving a message with this object, Telegram clients will remove the current custom keyboard and display the default letter-keyboard. By default, custom keyboards are displayed until a new keyboard is sent by a bot. An exception is made for one-time keyboards that are hidden immediately after the user presses a button (see `telegram.ReplyKeyboardMarkup`).

---

**Note:** User will not be able to summon this keyboard; if you want to hide the keyboard from sight but keep it accessible, use `telegram.ReplyKeyboardMarkup.one_time_keyboard`.

---

---

### Use In

- `telegram.Bot.copy_message()`
  - `telegram.Bot.send_animation()`
  - `telegram.Bot.send_audio()`
  - `telegram.Bot.send_contact()`
  - `telegram.Bot.send_dice()`
  - `telegram.Bot.send_document()`
  - `telegram.Bot.send_location()`
  - `telegram.Bot.send_message()`
  - `telegram.Bot.send_photo()`
  - `telegram.Bot.send_poll()`
  - `telegram.Bot.send_sticker()`
  - `telegram.Bot.send_venue()`
  - `telegram.Bot.send_video_note()`
  - `telegram.Bot.send_video()`
  - `telegram.Bot.send_voice()`
- 

---

### Examples

- Example usage: A user votes in a poll, bot returns confirmation message in reply to the vote and removes the keyboard for that user, while still showing the keyboard with poll options to users who haven't voted yet.
  - *Conversation Bot*
  - *Conversation Bot 2*
-

**Parameters**

**selective** (`bool`, optional) – Use this parameter if you want to remove the keyboard for specific users only. Targets:

- 1) Users that are @mentioned in the text of the `telegram.Message` object.
- 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

**remove\_keyboard**

Requests clients to remove the custom keyboard.

**Type**

`True`

**selective**

Optional. Remove the keyboard for specific users only. Targets:

- 1) Users that are @mentioned in the text of the `telegram.Message` object.
- 2) If the bot's message is a reply (has `reply_to_message_id`), sender of the original message.

**Type**

`bool`

**SentWebAppMessage**

**class** `telegram.SentWebAppMessage`(*inline\_message\_id=None*, \*, *api\_kwargs=None*)

Bases: `telegram.TelegramObject`

Contains information about an inline message sent by a Web App on behalf of a user.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `inline_message_id` are equal.

---

**Returned In**

`telegram.Bot.answer_web_app_query()`

---

New in version 20.0.

**Parameters**

**inline\_message\_id** (`str`, optional) – Identifier of the sent inline message. Available only if there is an `inline keyboard` attached to the message.

**inline\_message\_id**

Optional. Identifier of the sent inline message. Available only if there is an `inline keyboard` attached to the message.

**Type**

`str`

## Story

**class** telegram.Story(\*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents a message about a forwarded story in the chat. Currently holds no information.

---

### Available In

[telegram.Message.story](#)

---

New in version 20.5.

## SwitchInlineQueryChosenChat

**class** telegram.SwitchInlineQueryChosenChat(query=None, allow\_user\_chats=None, allow\_bot\_chats=None, allow\_group\_chats=None, allow\_channel\_chats=None, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents an inline button that switches the current user to inline mode in a chosen chat, with an optional default inline query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [query](#), [allow\\_user\\_chats](#), [allow\\_bot\\_chats](#), [allow\\_group\\_chats](#), and [allow\\_channel\\_chats](#) are equal.

New in version 20.3.

**Caution:** The PTB team has discovered that you must pass at least one of [allow\\_user\\_chats](#), [allow\\_bot\\_chats](#), [allow\\_group\\_chats](#), or [allow\\_channel\\_chats](#) to Telegram. Otherwise, an error will be raised.

### Parameters

- **query** ([str](#), optional) – The default inline query to be inserted in the input field. If left empty, only the bot’s username will be inserted.
- **allow\_user\_chats** ([bool](#), optional) – Pass [True](#), if private chats with users can be chosen.
- **allow\_bot\_chats** ([bool](#), optional) – Pass [True](#), if private chats with bots can be chosen.
- **allow\_group\_chats** ([bool](#), optional) – Pass [True](#), if group and supergroup chats can be chosen.
- **allow\_channel\_chats** ([bool](#), optional) – Pass [True](#), if channel chats can be chosen.

### query

Optional. The default inline query to be inserted in the input field. If left empty, only the bot’s username will be inserted.

### Type

[str](#)

### allow\_user\_chats

Optional. [True](#), if private chats with users can be chosen.

Type

bool

**allow\_bot\_chats**

Optional. `True`, if private chats with bots can be chosen.

Type

bool

**allow\_group\_chats**

Optional. `True`, if group and supergroup chats can be chosen.

Type

bool

**allow\_channel\_chats**

Optional. `True`, if channel chats can be chosen.

Type

bool

## TelegramObject

```
class telegram.TelegramObject(*, api_kwargs=None)
```

Bases: `object`

Base class for most Telegram objects.

Objects of this type are subscriptable with strings. See `__getitem__()` for more details. The `pickle` and `deepcopy()` behavior of objects of this type are defined by `__getstate__()`, `__setstate__()` and `__deepcopy__()`.

---

**Tip:** Objects of this type can be serialized via Python’s `pickle` module and pickled objects from one version of PTB are usually loadable in future versions. However, we can not guarantee that this compatibility will always be provided. At least a manual one-time conversion of the data may be needed on major updates of the library.

---

Changed in version 20.0:

- Removed argument and attribute `bot` for several subclasses. Use `set_bot()` and `get_bot()` instead.
- Removed the possibility to pass arbitrary keyword arguments for several subclasses.
- String representations objects of this type was overhauled. See `__repr__()` for details. As this class doesn’t implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.
- Objects of this class (or subclasses) are now immutable. This means that you can’t set or delete attributes anymore. Moreover, attributes that were formerly of type `list` are now of type `tuple`.

### Parameters

**api\_kwargs** (Dict[str, any], optional) – Arbitrary keyword arguments. Can be used to store data for which there are no dedicated attributes. These arguments are also considered by `to_dict()` and `to_json()`, i.e. when passing objects to Telegram. Passing them to Telegram is however not guaranteed to work for all kinds of objects, e.g. this will fail for objects that can not directly be JSON serialized.

New in version 20.0.



**api\_kwargs**

Optional. Arbitrary keyword arguments. Used to store data for which there are no dedicated attributes. These arguments are also considered by `to_dict()` and `to_json()`, i.e. when passing objects to Telegram. Passing them to Telegram is however not guaranteed to work for all kinds of objects, e.g. this will fail for objects that can not directly be JSON serialized.

New in version 20.0.

**Type**

`types.MappingProxyType [str, any]`

**\_\_deepcopy\_\_(memodict)**

Customizes how `copy.deepcopy()` processes objects of this type. The only difference to the default implementation is that the `telegram.Bot` instance set via `set_bot()` (if any) is not copied, but shared between the original and the copy, i.e.:

```
assert telegram_object.get_bot() is copy.deepcopy(telegram_object).get_bot()
```

**Parameters**

**memodict** (`dict`) – A dictionary that maps objects to their copies.

**Returns**

The copied object.

**Return type**

`telegram.TelegramObject`

**\_\_delattr\_\_(key)**

Overrides `object.__delattr__()` to prevent the deletion of attributes.

**Raises**

**AttributeError** –

**\_\_eq\_\_(other)**

Compares this object with `other` in terms of equality. If this object and `other` are *not* objects of the same class, this comparison will fall back to Python's default implementation of `object.__eq__()`. Otherwise, both objects may be compared in terms of equality, if the corresponding subclass of `TelegramObject` has defined a set of attributes to compare and the objects are considered to be equal, if all of these attributes are equal. If the subclass has not defined a set of attributes to compare, a warning will be issued.

---

**Tip:** If instances of a class in the `telegram` module are comparable in terms of equality, the documentation of the class will state the attributes that will be used for this comparison.

---

**Parameters**

**other** (`object`) – The object to compare with.

**Returns**

`bool`

**\_\_getitem\_\_(item)**

Objects of this type are subscriptable with strings, where `telegram_object["attribute_name"]` is equivalent to `telegram_object.attribute_name`.

---

**Tip:** This is useful for dynamic attribute lookup, i.e. `telegram_object[arg]` where the value of `arg` is determined at runtime. In all other cases, it's recommended to use the dot notation instead, i.e. `telegram_object.attribute_name`.

---

Changed in version 20.0: `telegram_object['from']` will look up the key `from_user`. This is to account for special cases like `Message.from_user` that deviate from the official Bot API.

**Parameters**

**item** (`str`) – The name of the attribute to look up.

**Returns**

`object`

**Raises**

**KeyError** – If the object does not have an attribute with the appropriate name.

**\_\_getstate\_\_()**

Overrides `object.__getstate__()` to customize the pickling process of objects of this type. The returned state does *not* contain the `telegram.Bot` instance set with `set_bot()` (if any), as it can't be pickled.

**Returns**

The state of the object.

**Return type**

state (`Dict[str, object]`)

**\_\_hash\_\_()**

Builds a hash value for this object such that the hash of two objects is equal if and only if the objects are equal in terms of `__eq__()`.

**Returns**

`int`

**\_\_repr\_\_()**

Gives a string representation of this object in the form `ClassName(attr_1=value_1, attr_2=value_2, ...)`, where attributes are omitted if they have the value `None` or are empty instances of `collections.abc.Sized` (e.g. `list`, `dict`, `set`, `str`, etc.).

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

**Returns**

`str`

**\_\_setattr\_\_(key, value)**

Overrides `object.__setattr__()` to prevent the overriding of attributes.

**Raises**

**AttributeError** –

**\_\_setstate\_\_(state)**

Overrides `object.__setstate__()` to customize the unpickling process of objects of this type. Modifies the object in-place.

If any data was stored in the `api_kwargs` of the pickled object, this method checks if the class now has dedicated attributes for those keys and moves the values from `api_kwargs` to the dedicated attributes. This can happen, if serialized data is loaded with a new version of this library, where the new version was updated to account for updates of the Telegram Bot API.

If on the contrary an attribute was removed from the class, the value is not discarded but made available via `api_kwargs`.

**Parameters**

**state** (`dict`) – The data to set as attributes of this object.

**classmethod de\_json(data, bot)**

Converts JSON data to a Telegram object.

**Parameters**

- **data** (Dict[str, ...]) – The JSON data.
- **bot** ([telegram.Bot](#)) – The bot associated with this object.

**Returns**

The Telegram object.

**classmethod** `de_list(data, bot)`

Converts a list of JSON objects to a tuple of Telegram objects.

Changed in version 20.0:

- Returns a tuple instead of a list.
- Filters out any `None` values.

**Parameters**

- **data** (List[Dict[str, ...]]) – The JSON data.
- **bot** ([telegram.Bot](#)) – The bot associated with these objects.

**Returns**

A tuple of Telegram objects.

`get_bot()`

Returns the [telegram.Bot](#) instance associated with this object.

**See also:**

[set\\_bot\(\)](#)

**Raises**

**RuntimeError** – If no [telegram.Bot](#) instance was set for this object.

`set_bot(bot)`

Sets the [telegram.Bot](#) instance associated with this object.

**See also:**

[get\\_bot\(\)](#)

**Parameters**

**bot** ([telegram.Bot](#) | `None`) – The bot instance.

`to_dict(recursive=True)`

Gives representation of object as `dict`.

Changed in version 20.0:

- Now includes all entries of [api\\_kwargs](#).
- Attributes whose values are empty sequences are no longer included.

**Parameters**

**recursive** (`bool`, optional) – If `True`, will convert any TelegramObjects (if found) in the attributes to a dictionary. Else, preserves it as an object itself. Defaults to `True`.

New in version 20.0.

**Returns**

`dict`

**to\_json()**

Gives a JSON representation of object.

Changed in version 20.0: Now includes all entries of *api\_kwargs*.

**Returns**

*str*

## Update

```
class telegram.Update(update_id, message=None, edited_message=None, channel_post=None,
                      edited_channel_post=None, inline_query=None, chosen_inline_result=None,
                      callback_query=None, shipping_query=None, pre_checkout_query=None,
                      poll=None, poll_answer=None, my_chat_member=None, chat_member=None,
                      chat_join_request=None, *, api_kwargs=None)
```

Bases: *telegram.TelegramObject*

This object represents an incoming update.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *update\_id* is equal.

---

**Note:** At most one of the optional parameters can be present in any given update.

---

**See also:**

[Your First Bot](#)

**Parameters**

- **update\_id** (*int*) – The update’s unique identifier. Update identifiers start from a certain positive number and increase sequentially. This ID becomes especially handy if you’re using Webhooks, since it allows you to ignore repeated updates or to restore the correct update sequence, should they get out of order. If there are no new updates for at least a week, then identifier of the next update will be chosen randomly instead of sequentially.
- **message** (*telegram.Message*, optional) – New incoming message of any kind - text, photo, sticker, etc.
- **edited\_message** (*telegram.Message*, optional) – New version of a message that is known to the bot and was edited.
- **channel\_post** (*telegram.Message*, optional) – New incoming channel post of any kind - text, photo, sticker, etc.
- **edited\_channel\_post** (*telegram.Message*, optional) – New version of a channel post that is known to the bot and was edited.
- **inline\_query** (*telegram.InlineQuery*, optional) – New incoming inline query.
- **chosen\_inline\_result** (*telegram.ChosenInlineResult*, optional) – The result of an inline query that was chosen by a user and sent to their chat partner.
- **callback\_query** (*telegram.CallbackQuery*, optional) – New incoming callback query.
- **shipping\_query** (*telegram.ShippingQuery*, optional) – New incoming shipping query. Only for invoices with flexible price.
- **pre\_checkout\_query** (*telegram.PreCheckoutQuery*, optional) – New incoming pre-checkout query. Contains full information about checkout.
- **poll** (*telegram.Poll*, optional) – New poll state. Bots receive only updates about stopped polls and polls, which are sent by the bot.

- **poll\_answer** (*telegram.PollAnswer*, optional) – A user changed their answer in a non-anonymous poll. Bots receive new votes only in polls that were sent by the bot itself.
- **my\_chat\_member** (*telegram.ChatMemberUpdated*, optional) – The bot's chat member status was updated in a chat. For private chats, this update is received only when the bot is blocked or unblocked by the user.

New in version 13.4.

- **chat\_member** (*telegram.ChatMemberUpdated*, optional) – A chat member's status was updated in a chat. The bot must be an administrator in the chat and must explicitly specify *CHAT\_MEMBER* in the list of *telegram.ext.Application.run\_polling.allowed\_updates* to receive these updates (see *telegram.Bot.get\_updates()*, *telegram.Bot.set\_webhook()*, *telegram.ext.Application.run\_polling()* and *telegram.ext.Application.run\_webhook()*).

New in version 13.4.

- **chat\_join\_request** (*telegram.ChatJoinRequest*, optional) – A request to join the chat has been sent. The bot must have the *telegram.ChatPermissions.can\_invite\_users* administrator right in the chat to receive these updates.

New in version 13.8.

#### **update\_id**

The update's unique identifier. Update identifiers start from a certain positive number and increase sequentially. This ID becomes especially handy if you're using Webhooks, since it allows you to ignore repeated updates or to restore the correct update sequence, should they get out of order. If there are no new updates for at least a week, then identifier of the next update will be chosen randomly instead of sequentially.

##### **Type**

*int*

#### **message**

Optional. New incoming message of any kind - text, photo, sticker, etc.

##### **Type**

*telegram.Message*

#### **edited\_message**

Optional. New version of a message that is known to the bot and was edited.

##### **Type**

*telegram.Message*

#### **channel\_post**

Optional. New incoming channel post of any kind - text, photo, sticker, etc.

##### **Type**

*telegram.Message*

#### **edited\_channel\_post**

Optional. New version of a channel post that is known to the bot and was edited.

##### **Type**

*telegram.Message*

#### **inline\_query**

Optional. New incoming inline query.

##### **Type**

*telegram.InlineQuery*

**chosen\_inline\_result**

Optional. The result of an inline query that was chosen by a user and sent to their chat partner.

**Type**

*telegram.ChosenInlineResult*

**callback\_query**

Optional. New incoming callback query.

---

**Examples**

*Arbitrary Callback Data Bot*

---

**Type**

*telegram.CallbackQuery*

**shipping\_query**

Optional. New incoming shipping query. Only for invoices with flexible price.

**Type**

*telegram.ShippingQuery*

**pre\_checkout\_query**

Optional. New incoming pre-checkout query. Contains full information about checkout.

**Type**

*telegram.PreCheckoutQuery*

**poll**

Optional. New poll state. Bots receive only updates about stopped polls and polls, which are sent by the bot.

**Type**

*telegram.Poll*

**poll\_answer**

Optional. A user changed their answer in a non-anonymous poll. Bots receive new votes only in polls that were sent by the bot itself.

**Type**

*telegram.PollAnswer*

**my\_chat\_member**

Optional. The bot's chat member status was updated in a chat. For private chats, this update is received only when the bot is blocked or unblocked by the user.

New in version 13.4.

**Type**

*telegram.ChatMemberUpdated*

**chat\_member**

Optional. A chat member's status was updated in a chat. The bot must be an administrator in the chat and must explicitly specify `CHAT_MEMBER` in the list of *telegram.ext.Application.run\_polling.allowed\_updates* to receive these updates (see *telegram.Bot.get\_updates()*, *telegram.Bot.set\_webhook()*, *telegram.ext.Application.run\_polling()* and *telegram.ext.Application.run\_webhook()*).

New in version 13.4.

**Type**

*telegram.ChatMemberUpdated*

**chat\_join\_request**

Optional. A request to join the chat has been sent. The bot must have the *telegram.ChatPermissions.can\_invite\_users* administrator right in the chat to receive these updates.

New in version 13.8.

**Type**

*telegram.ChatJoinRequest*

```
ALL_TYPES = [UpdateType.MESSAGE, UpdateType.EDITED_MESSAGE,
UpdateType.CHANNEL_POST, UpdateType.EDITED_CHANNEL_POST, UpdateType.INLINE_QUERY,
UpdateType.CHOSEN_INLINE_RESULT, UpdateType.CALLBACK_QUERY,
UpdateType.SHIPPING_QUERY, UpdateType.PRE_CHECKOUT_QUERY, UpdateType.POLL,
UpdateType.POLL_ANSWER, UpdateType.MY_CHAT_MEMBER, UpdateType.CHAT_MEMBER,
UpdateType.CHAT_JOIN_REQUEST]
```

A list of all available update types.

New in version 13.5.

**Type**

List[*str*]

```
CALLBACK_QUERY = 'callback_query'
```

*telegram.constants.UpdateType.CALLBACK\_QUERY*

New in version 13.5.

```
CHANNEL_POST = 'channel_post'
```

*telegram.constants.UpdateType.CHANNEL\_POST*

New in version 13.5.

```
CHAT_JOIN_REQUEST = 'chat_join_request'
```

*telegram.constants.UpdateType.CHAT\_JOIN\_REQUEST*

New in version 13.8.

```
CHAT_MEMBER = 'chat_member'
```

*telegram.constants.UpdateType.CHAT\_MEMBER*

New in version 13.5.

```
CHOSEN_INLINE_RESULT = 'chosen_inline_result'
```

*telegram.constants.UpdateType.CHOSEN\_INLINE\_RESULT*

New in version 13.5.

```
EDITED_CHANNEL_POST = 'edited_channel_post'
```

*telegram.constants.UpdateType.EDITED\_CHANNEL\_POST*

New in version 13.5.

```
EDITED_MESSAGE = 'edited_message'
```

*telegram.constants.UpdateType.EDITED\_MESSAGE*

New in version 13.5.

```
INLINE_QUERY = 'inline_query'
```

*telegram.constants.UpdateType.INLINE\_QUERY*

New in version 13.5.

```
MESSAGE = 'message'
```

*telegram.constants.UpdateType.MESSAGE*

New in version 13.5.

**MY\_CHAT\_MEMBER** = 'my\_chat\_member'

*telegram.constants.UpdateType.MY\_CHAT\_MEMBER*

New in version 13.5.

**POLL** = 'poll'

*telegram.constants.UpdateType.POLL*

New in version 13.5.

**POLL\_ANSWER** = 'poll\_answer'

*telegram.constants.UpdateType.POLL\_ANSWER*

New in version 13.5.

**PRE\_CHECKOUT\_QUERY** = 'pre\_checkout\_query'

*telegram.constants.UpdateType.PRE\_CHECKOUT\_QUERY*

New in version 13.5.

**SHIPPING\_QUERY** = 'shipping\_query'

*telegram.constants.UpdateType.SHIPPING\_QUERY*

New in version 13.5.

**classmethod de\_json**(data, bot)

See *telegram.TelegramObject.de\_json()*.

**property effective\_chat**

The chat that this update was sent in, no matter what kind of update this is. If no chat is associated with this update, this gives *None*. This is the case, if *inline\_query*, *chosen\_inline\_result*, *callback\_query* from inline messages, *shipping\_query*, *pre\_checkout\_query*, *poll* or *poll\_answer* is present.

---

#### Example

If *message* is present, this will give *telegram.Message.chat*.

---

**Type**

*telegram.Chat*

**property effective\_message**

The message included in this update, no matter what kind of update this is. More precisely, this will be the message contained in *message*, *edited\_message*, *channel\_post*, *edited\_channel\_post* or *callback\_query* (i.e. *telegram.CallbackQuery.message*) or *None*, if none of those are present.

**Type**

*telegram.Message*

**property effective\_user**

The user that sent this update, no matter what kind of update this is. If no user is associated with this update, this gives *None*. This is the case if *channel\_post*, *edited\_channel\_post* or *poll* is present.

---

#### Example

- If *message* is present, this will give *telegram.Message.from\_user*.
  - If *poll\_answer* is present, this will give *telegram.PollAnswer.user*.
- 

**Type**

*telegram.User*



## User

```
class telegram.User(id, first_name, is_bot, last_name=None, username=None, language_code=None,
                    can_join_groups=None, can_read_all_group_messages=None,
                    supports_inline_queries=None, is_premium=None,
                    added_to_attachment_menu=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a Telegram user or bot.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `id` is equal.

---

### Available In

- `telegram.Bot.bot`
- `telegram.CallbackQuery.from_user`
- `telegram.ChatInviteLink.creator`
- `telegram.ChatJoinRequest.from_user`
- `telegram.ChatMember.user`
- `telegram.ChatMemberAdministrator.user`
- `telegram.ChatMemberBanned.user`
- `telegram.ChatMemberLeft.user`
- `telegram.ChatMemberMember.user`
- `telegram.ChatMemberOwner.user`
- `telegram.ChatMemberRestricted.user`
- `telegram.ChatMemberUpdated.from_user`
- `telegram.ChosenInlineResult.from_user`
- `telegram.GameHighScore.user`
- `telegram.InlineQuery.from_user`
- `telegram.Message.forward_from`
- `telegram.Message.from_user`
- `telegram.Message.left_chat_member`
- `telegram.Message.new_chat_members`
- `telegram.Message.via_bot`
- `telegram.MessageEntity.user`
- `telegram.PollAnswer.user`
- `telegram.PreCheckoutQuery.from_user`
- `telegram.ProximityAlertTriggered.traveler`
- `telegram.ProximityAlertTriggered.watcher`
- `telegram.ShippingQuery.from_user`
- `telegram.Update.effective_user`
- `telegram.VideoChatParticipantsInvited.users`

---

## Returned In

`telegram.Bot.get_me()`

---

Changed in version 20.0: The following are now keyword-only arguments in Bot methods: `location`, `filename`, `venue`, `contact`, `{read, write, connect, pool}_timeout` `api_kwargs`. Use a named argument for those, and notice that some positional arguments changed position as a result.

### Parameters

- **id** (`int`) – Unique identifier for this user or bot.
- **is\_bot** (`bool`) – `True`, if this user is a bot.
- **first\_name** (`str`) – User’s or bot’s first name.
- **last\_name** (`str`, optional) – User’s or bot’s last name.
- **username** (`str`, optional) – User’s or bot’s username.
- **language\_code** (`str`, optional) – IETF language tag of the user’s language.
- **can\_join\_groups** (`str`, optional) – `True`, if the bot can be invited to groups. Returned only in `telegram.Bot.get_me` requests.
- **can\_read\_all\_group\_messages** (`str`, optional) – `True`, if privacy mode is disabled for the bot. Returned only in `telegram.Bot.get_me` requests.
- **supports\_inline\_queries** (`str`, optional) – `True`, if the bot supports inline queries. Returned only in `telegram.Bot.get_me` requests.
- **is\_premium** (`bool`, optional) – `True`, if this user is a Telegram Premium user.

New in version 20.0.

- **added\_to\_attachment\_menu** (`bool`, optional) – `True`, if this user added the bot to the attachment menu.

New in version 20.0.

### id

Unique identifier for this user or bot.

#### Type

`int`

### is\_bot

`True`, if this user is a bot.

#### Type

`bool`

### first\_name

User’s or bot’s first name.

#### Type

`str`

### last\_name

Optional. User’s or bot’s last name.

#### Type

`str`

**username**

Optional. User's or bot's username.

**Type**

`str`

**language\_code**

Optional. IETF language tag of the user's language.

**Type**

`str`

**can\_join\_groups**

Optional. `True`, if the bot can be invited to groups. Returned only in `telegram.Bot.get_me` requests.

**Type**

`str`

**can\_read\_all\_group\_messages**

Optional. `True`, if privacy mode is disabled for the bot. Returned only in `telegram.Bot.get_me` requests.

**Type**

`str`

**supports\_inline\_queries**

Optional. `True`, if the bot supports inline queries. Returned only in `telegram.Bot.get_me` requests.

**Type**

`str`

**is\_premium**

Optional. `True`, if this user is a Telegram Premium user.

New in version 20.0.

**Type**

`bool`

**added\_to\_attachment\_menu**

Optional. `True`, if this user added the bot to the attachment menu.

New in version 20.0.

**Type**

`bool`

**async approve\_join\_request**(*chat\_id*, \*, *read\_timeout=None*, *write\_timeout=None*,  
*connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.approve_chat_join_request(user_id=update.effective_user.id, *args, kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.approve_chat_join_request()`.

---

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

New in version 13.8.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async copy_message(chat_id, message_id, caption=None, parse_mode=None, caption_entities=None,
                  disable_notification=None, reply_to_message_id=None,
                  allow_sending_without_reply=None, reply_markup=None,
                  protect_content=None, message_thread_id=None, *, read_timeout=None,
                  write_timeout=None, connect_timeout=None, pool_timeout=None,
                  api_kwargs=None)
```

Shortcut for:

```
await bot.copy_message(from_chat_id=update.effective_user.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.copy_message()`.

---

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

`telegram.Message`

```
async decline_join_request(chat_id, *, read_timeout=None, write_timeout=None,
                          connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.decline_chat_join_request(user_id=update.effective_user.id, *args,
↳ **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.decline_chat_join_request()`.

---

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

New in version 13.8.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

**property full\_name**

Convenience property. The user's `first_name`, followed by (if available) `last_name`.

**Type**

`str`

**async get\_menu\_button**(\**, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.get_chat_menu_button(chat_id=update.effective_user.id, *args,
↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.get\\_chat\\_menu\\_button\(\)](#).

See also:

[set\\_menu\\_button\(\)](#)

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

New in version 20.0.

#### Returns

On success, the current menu button is returned.

#### Return type

[telegram.MenuButton](#)

**async get\_profile\_photos**(*offset=None, limit=None, \*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Shortcut for:

```
await bot.get_user_profile_photos(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.get\\_user\\_profile\\_photos\(\)](#).

#### property link

Convenience property. If [username](#) is available, returns a t.me link of the user.

#### Type

[str](#)

**mention\_button**(*name=None*)

Shortcut for:

```
InlineKeyboardButton(text=name, url=f"tg://user?id={update.effective_user.id}"
↪ ")
```

New in version 13.9.

#### Parameters

**name** ([str](#)) – The name used as a link for the user. Defaults to [full\\_name](#).

#### Returns

InlineButton with url set to the user mention

#### Return type

[telegram.InlineKeyboardButton](#)

**mention\_html**(*name=None*)

#### Parameters

**name** ([str](#)) – The name used as a link for the user. Defaults to [full\\_name](#).

#### Returns

The inline mention for the user as HTML.

**Return type**`str``mention_markdown(name=None)`

---

**Note:** `'Markdown'` is a legacy mode, retained by Telegram for backward compatibility. You should use `mention_markdown_v2()` instead.

---

**Parameters**

**name** (`str`) – The name used as a link for the user. Defaults to `full_name`.

**Returns**

The inline mention for the user as markdown (version 1).

**Return type**`str``mention_markdown_v2(name=None)`**Parameters**

**name** (`str`) – The name used as a link for the user. Defaults to `full_name`.

**Returns**

The inline mention for the user as markdown (version 2).

**Return type**`str`**property name**

Convenience property. If available, returns the user's `username` prefixed with "@". If `username` is not available, returns `full_name`.

**Type**`str`

`async pin_message(message_id, disable_notification=None, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Shortcut for:

`await bot.pin_chat_message(chat_id=update.effective_user.id, *args, **kwargs)`

For the documentation of the arguments, please see `telegram.Bot.pin_chat_message()`.

---

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, `True` is returned.

**Return type**`bool`

`async send_action(action, message_thread_id=None, *, read_timeout=None, write_timeout=None, connect_timeout=None, pool_timeout=None, api_kwargs=None)`

Alias for `send_chat_action`

```
async send_animation(animation, duration=None, width=None, height=None, caption=None,
                      parse_mode=None, disable_notification=None, reply_to_message_id=None,
                      reply_markup=None, allow_sending_without_reply=None,
                      caption_entities=None, protect_content=None, message_thread_id=None,
                      has_spoiler=None, thumbnail=None, *, filename=None, read_timeout=None,
                      write_timeout=20, connect_timeout=None, pool_timeout=None,
                      api_kwargs=None)
```

Shortcut for:

```
await bot.send_animation(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_animation\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_audio(audio, duration=None, performer=None, title=None, caption=None,
                  disable_notification=None, reply_to_message_id=None, reply_markup=None,
                  parse_mode=None, allow_sending_without_reply=None, caption_entities=None,
                  protect_content=None, message_thread_id=None, thumbnail=None, *,
                  filename=None, read_timeout=None, write_timeout=20, connect_timeout=None,
                  pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_audio(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_audio\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_chat_action(action, message_thread_id=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Shortcut for:

```
await bot.send_chat_action(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_chat\\_action\(\)](#).

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success.

**Return type**

`True`

```
async send_contact(phone_number=None, first_name=None, last_name=None,
                   disable_notification=None, reply_to_message_id=None, reply_markup=None,
                   vcard=None, allow_sending_without_reply=None, protect_content=None,
                   message_thread_id=None, *, contact=None, read_timeout=None,
                   write_timeout=None, connect_timeout=None, pool_timeout=None,
                   api_kwargs=None)
```

Shortcut for:

```
await bot.send_contact(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_contact\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)

```
async send_copy(from_chat_id, message_id, caption=None, parse_mode=None,
               caption_entities=None, disable_notification=None, reply_to_message_id=None,
               allow_sending_without_reply=None, reply_markup=None, protect_content=None,
               message_thread_id=None, *, read_timeout=None, write_timeout=None,
               connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.copy_message(chat_id=update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.copy\\_message\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[telegram.Message](#)



```
async send_dice(disable_notification=None, reply_to_message_id=None, reply_markup=None,
                emoji=None, allow_sending_without_reply=None, protect_content=None,
                message_thread_id=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_dice(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_dice\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_document(document, caption=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, parse_mode=None,
                    disable_content_type_detection=None, allow_sending_without_reply=None,
                    caption_entities=None, protect_content=None, message_thread_id=None,
                    thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                    connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_document(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_document\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_game(game_short_name, disable_notification=None, reply_to_message_id=None,
                reply_markup=None, allow_sending_without_reply=None, protect_content=None,
                message_thread_id=None, *, read_timeout=None, write_timeout=None,
                connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_game(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_game\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_invoice(title, description, payload, provider_token, currency, prices,
                   start_parameter=None, photo_url=None, photo_size=None, photo_width=None,
                   photo_height=None, need_name=None, need_phone_number=None,
                   need_email=None, need_shipping_address=None, is_flexible=None,
                   disable_notification=None, reply_to_message_id=None, reply_markup=None,
                   provider_data=None, send_phone_number_to_provider=None,
                   send_email_to_provider=None, allow_sending_without_reply=None,
                   max_tip_amount=None, suggested_tip_amounts=None, protect_content=None,
                   message_thread_id=None, *, read_timeout=None, write_timeout=None,
                   connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_invoice(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_invoice\(\)`](#).

**Warning:** As of API 5.2 [`start\_parameter`](#) is an optional argument and therefore the order of the arguments had to be changed. Use keyword arguments to make sure that the arguments are passed correctly.

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

Changed in version 13.5: As of Bot API 5.2, the parameter [`start\_parameter`](#) is optional.

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_location(latitude=None, longitude=None, disable_notification=None,
                   reply_to_message_id=None, reply_markup=None, live_period=None,
                   horizontal_accuracy=None, heading=None, proximity_alert_radius=None,
                   allow_sending_without_reply=None, protect_content=None,
                   message_thread_id=None, *, location=None, read_timeout=None,
                   write_timeout=None, connect_timeout=None, pool_timeout=None,
                   api_kwargs=None)
```

Shortcut for:

```
await bot.send_location(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_location\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_media_group(media, disable_notification=None, reply_to_message_id=None,
                       allow_sending_without_reply=None, protect_content=None,
                       message_thread_id=None, *, read_timeout=None, write_timeout=20,
                       connect_timeout=None, pool_timeout=None, api_kwargs=None,
                       caption=None, parse_mode=None, caption_entities=None)
```

Shortcut for:

```
await bot.send_media_group(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_media\_group\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

] On success, a tuple of [`Message`](#) instances that were sent is returned.

**Return type**

Tuple[[`telegram.Message`](#)]

```
async send_message(text, parse_mode=None, disable_web_page_preview=None,
                   disable_notification=None, reply_to_message_id=None, reply_markup=None,
                   allow_sending_without_reply=None, entities=None, protect_content=None,
                   message_thread_id=None, *, read_timeout=None, write_timeout=None,
                   connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_message(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_message\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_photo(photo, caption=None, disable_notification=None, reply_to_message_id=None,
                  reply_markup=None, parse_mode=None, allow_sending_without_reply=None,
                  caption_entities=None, protect_content=None, message_thread_id=None,
                  has_spoiler=None, *, filename=None, read_timeout=None, write_timeout=20,
                  connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_photo(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_photo\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[`telegram.Message`](#)

```
async send_poll(question, options, is_anonymous=None, type=None, allows_multiple_answers=None,
                correct_option_id=None, is_closed=None, disable_notification=None,
                reply_to_message_id=None, reply_markup=None, explanation=None,
                explanation_parse_mode=None, open_period=None, close_date=None,
                allow_sending_without_reply=None, explanation_entities=None,
                protect_content=None, message_thread_id=None, *, read_timeout=None,
                write_timeout=None, connect_timeout=None, pool_timeout=None,
                api_kwargs=None)
```

Shortcut for:

```
await bot.send_poll(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_poll\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[`telegram.Message`](#)

```
async send_sticker(sticker, disable_notification=None, reply_to_message_id=None,
                  reply_markup=None, allow_sending_without_reply=None,
                  protect_content=None, message_thread_id=None, emoji=None, *,
                  read_timeout=None, write_timeout=20, connect_timeout=None,
                  pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_sticker(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_sticker\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_venue(latitude=None, longitude=None, title=None, address=None, foursquare_id=None,
                 disable_notification=None, reply_to_message_id=None, reply_markup=None,
                 foursquare_type=None, google_place_id=None, google_place_type=None,
                 allow_sending_without_reply=None, protect_content=None,
                 message_thread_id=None, *, venue=None, read_timeout=None,
                 write_timeout=None, connect_timeout=None, pool_timeout=None,
                 api_kwargs=None)
```

Shortcut for:

```
await bot.send_venue(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_venue\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_video(video, duration=None, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, width=None, height=None,
                 parse_mode=None, supports_streaming=None,
                 allow_sending_without_reply=None, caption_entities=None,
                 protect_content=None, message_thread_id=None, has_spoiler=None,
                 thumbnail=None, *, filename=None, read_timeout=None, write_timeout=20,
                 connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_video(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.send\_video\(\)`](#).

---

**Note:** This shortcuts build on the assumption that [`User.id`](#) coincides with the [`Chat.id`](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, instance representing the message posted.

**Return type**

[`telegram.Message`](#)

```
async send_video_note(video_note, duration=None, length=None, disable_notification=None,
                      reply_to_message_id=None, reply_markup=None,
                      allow_sending_without_reply=None, protect_content=None,
                      message_thread_id=None, thumbnail=None, *, filename=None,
                      read_timeout=None, write_timeout=20, connect_timeout=None,
                      pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_video_note(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_video\\_note\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async send_voice(voice, duration=None, caption=None, disable_notification=None,
                 reply_to_message_id=None, reply_markup=None, parse_mode=None,
                 allow_sending_without_reply=None, caption_entities=None,
                 protect_content=None, message_thread_id=None, *, filename=None,
                 read_timeout=None, write_timeout=20, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.send_voice(update.effective_user.id, *args, **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.send\\_voice\(\)](#).

---

**Note:** This shortcuts build on the assumption that [User.id](#) coincides with the [Chat.id](#) of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

#### Returns

On success, instance representing the message posted.

#### Return type

[telegram.Message](#)

```
async set_menu_button(menu_button=None, *, read_timeout=None, write_timeout=None,
                     connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.set_chat_menu_button(chat_id=update.effective_chat.id, *args,
                               ↪ **kwargs)
```

For the documentation of the arguments, please see [telegram.Bot.set\\_chat\\_menu\\_button\(\)](#).

**See also:**

[get\\_menu\\_button\(\)](#)

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

New in version 20.0.

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async unpin_all_messages(*, read_timeout=None, write_timeout=None, connect_timeout=None,
                        pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.unpin_all_chat_messages(chat_id=update.effective_user.id, *args,
    ↪ **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.unpin_all_chat_messages()`.

---

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, `True` is returned.

**Return type**

`bool`

```
async unpin_message(message_id=None, *, read_timeout=None, write_timeout=None,
                    connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Shortcut for:

```
await bot.unpin_chat_message(chat_id=update.effective_user.id, *args,
    ↪ **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.unpin_chat_message()`.

---

**Note:** This shortcuts build on the assumption that `User.id` coincides with the `Chat.id` of the private chat with the user. This has been the case so far, but Telegram does not guarantee that this stays this way.

---

**Returns**

On success, `True` is returned.

**Return type**

`bool`

## UserProfilePhotos

**class** telegram.[UserProfilePhotos](#)(total\_count, photos, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents a user's profile pictures.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [total\\_count](#) and [photos](#) are equal.

---

### Returned In

[telegram.Bot.get\\_user\\_profile\\_photos\(\)](#)

---

### Parameters

- **total\_count** ([int](#)) – Total number of profile pictures the target user has.
- **photos** (Sequence[Sequence[[telegram.PhotoSize](#)]]) – Requested profile pictures (in up to 4 sizes each).

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

### total\_count

Total number of profile pictures.

#### Type

[int](#)

### photos

Requested profile pictures (in up to 4 sizes each).

Changed in version 20.0: This attribute is now an immutable tuple.

#### Type

Tuple[Tuple[[telegram.PhotoSize](#)]]

**classmethod** [de\\_json](#)(data, bot)

See [telegram.TelegramObject.de\\_json\(\)](#).

## UserShared

**class** telegram.[UserShared](#)(request\_id, user\_id, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object contains information about the user whose identifier was shared with the bot using a [telegram.KeyboardButtonRequestUser](#) button.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [request\\_id](#) and [user\\_id](#) are equal.

---

### Available In

[telegram.Message.user\\_shared](#)

---

New in version 20.1.

### Parameters

- **request\_id** ([int](#)) – Identifier of the request.



- **user\_id** ([int](#)) – Identifier of the shared user. This number may be greater than 32 bits and some programming languages may have difficulty/silent defects in interpreting it. But it is smaller than 52 bits, so a signed 64-bit integer or double-precision float type are safe for storing this identifier.

**request\_id**

Identifier of the request.

**Type**

[int](#)

**user\_id**

Identifier of the shared user. This number may be greater than 32 bits and some programming languages may have difficulty/silent defects in interpreting it. But it is smaller than 52 bits, so a signed 64-bit integer or double-precision float type are safe for storing this identifier.

**Type**

[int](#)

## Venue

```
class telegram.Venue(location, title, address, foursquare_id=None, foursquare_type=None,
                     google_place_id=None, google_place_type=None, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a venue.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [location](#) and [title](#) are equal.

---

**Note:** Foursquare details and Google Place details are mutually exclusive. However, this behaviour is undocumented and might be changed by Telegram.

---

---

**Use In**

[telegram.Bot.send\\_venue\(\)](#)

---

---

**Available In**

[telegram.Message.venue](#)

---

**Parameters**

- **location** ([telegram.Location](#)) – Venue location.
- **title** ([str](#)) – Name of the venue.
- **address** ([str](#)) – Address of the venue.
- **foursquare\_id** ([str](#), optional) – Foursquare identifier of the venue.
- **foursquare\_type** ([str](#), optional) – Foursquare type of the venue. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”.)
- **google\_place\_id** ([str](#), optional) – Google Places identifier of the venue.
- **google\_place\_type** ([str](#), optional) – Google Places type of the venue. (See [supported types](#).)

**location**

Venue location.

**Type**

`telegram.Location`

**title**

Name of the venue.

**Type**

`str`

**address**

Address of the venue.

**Type**

`str`

**foursquare\_id**

Optional. Foursquare identifier of the venue.

**Type**

`str`

**foursquare\_type**

Optional. Foursquare type of the venue. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”).

**Type**

`str`

**google\_place\_id**

Optional. Google Places identifier of the venue.

**Type**

`str`

**google\_place\_type**

Optional. Google Places type of the venue. (See [supported types](#).)

**Type**

`str`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

## Video

```
class telegram.Video(file_id, file_unique_id, width, height, duration, mime_type=None, file_size=None,
                    file_name=None, thumbnail=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a video file.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `file_unique_id` is equal.

---

**Use In**

- `telegram.Bot.get_file()`
- `telegram.Bot.send_video()`

---

**Available In***telegram.Message.video*

---

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

**Parameters**

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **width** (`int`) – Video width as defined by sender.
- **height** (`int`) – Video height as defined by sender.
- **duration** (`int`) – Duration of the video in seconds as defined by sender.
- **file\_name** (`str`, optional) – Original filename as defined by sender.
- **mime\_type** (`str`, optional) – MIME type of a file as defined by sender.
- **file\_size** (`int`, optional) – File size in bytes.
- **thumbnail** (*telegram.PhotoSize*, optional) – Video thumbnail.

New in version 20.2.

**file\_id**

Identifier for this file, which can be used to download or reuse the file.

**Type**`str`**file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**`str`**width**

Video width as defined by sender.

**Type**`int`**height**

Video height as defined by sender.

**Type**`int`**duration**

Duration of the video in seconds as defined by sender.

**Type**`int`**file\_name**

Optional. Original filename as defined by sender.

**Type**`str`

**mime\_type**

Optional. MIME type of a file as defined by sender.

**Type**

`str`

**file\_size**

Optional. File size in bytes.

**Type**

`int`

**thumbnail**

Optional. Video thumbnail.

New in version 20.2.

**Type**

`telegram.PhotoSize`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**async get\_file(\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None)**

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

## VideoChatEnded

**class telegram.VideoChatEnded(duration, \*, api\_kwargs=None)**

Bases: `telegram.TelegramObject`

This object represents a service message about a video chat ended in the chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `duration` are equal.

---

**Available In**

`telegram.Message.video_chat_ended`

---

New in version 13.4.

Changed in version 20.0: This class was renamed from `VoiceChatEnded` in accordance to Bot API 6.0.

**Parameters**

**duration** (`int`) – Voice chat duration in seconds.

**duration**

Voice chat duration in seconds.

**Type**

`int`

## VideoChatParticipantsInvited

**class** telegram.VideoChatParticipantsInvited(*users*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a service message about new members invited to a video chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [users](#) are equal.

---

### Available In

[telegram.Message.video\\_chat\\_participants\\_invited](#)

---

New in version 13.4.

Changed in version 20.0: This class was renamed from `VoiceChatParticipantsInvited` in accordance to Bot API 6.0.

### Parameters

**users** (Sequence[[telegram.User](#)]) – New members that were invited to the video chat.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

### users

New members that were invited to the video chat.

Changed in version 20.0: This attribute is now an immutable tuple.

### Type

Tuple[[telegram.User](#)]

**classmethod** `de_json`(*data*, *bot*)

See [telegram.TelegramObject.de\\_json\(\)](#).

## VideoChatScheduled

**class** telegram.VideoChatScheduled(*start\_date*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a service message about a video chat scheduled in the chat.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [start\\_date](#) are equal.

---

### Available In

[telegram.Message.video\\_chat\\_scheduled](#)

---

Changed in version 20.0: This class was renamed from `VoiceChatScheduled` in accordance to Bot API 6.0.

### Parameters

**start\_date** ([datetime.datetime](#)) – Point in time (Unix timestamp) when the video chat is supposed to be started by a chat administrator

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless [telegram.ext.Defaults.tzinfo](#) is used.

**start\_date**

Point in time (Unix timestamp) when the video chat is supposed to be started by a chat administrator

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**Type**

`datetime.datetime`

**classmethod `de_json(data, bot)`**

See `telegram.TelegramObject.de_json()`.

**VideoChatStarted**

**class** `telegram.VideoChatStarted(*, api_kwargs=None)`

Bases: `telegram.TelegramObject`

This object represents a service message about a video chat started in the chat. Currently holds no information.

---

**Available In**

`telegram.Message.video_chat_started`

---

New in version 13.4.

Changed in version 20.0: This class was renamed from `VoiceChatStarted` in accordance to Bot API 6.0.

**VideoNote**

**class** `telegram.VideoNote(file_id, file_unique_id, length, duration, file_size=None, thumbnail=None, *, api_kwargs=None)`

Bases: `telegram.TelegramObject`

This object represents a video message (available in Telegram apps as of v.4.0).

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `file_unique_id` is equal.

---

**Use In**

- `telegram.Bot.get_file()`
  - `telegram.Bot.send_video_note()`
- 

---

**Available In**

`telegram.Message.video_note`

---

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

**Parameters**

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

- **length** (`int`) – Video width and height (diameter of the video message) as defined by sender.
- **duration** (`int`) – Duration of the video in seconds as defined by sender.
- **file\_size** (`int`, optional) – File size in bytes.
- **thumbnail** (`telegram.PhotoSize`, optional) – Video thumbnail.

New in version 20.2.

**file\_id**

Identifier for this file, which can be used to download or reuse the file.

**Type**

`str`

**file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**

`str`

**length**

Video width and height (diameter of the video message) as defined by sender.

**Type**

`int`

**duration**

Duration of the video in seconds as defined by sender.

**Type**

`int`

**file\_size**

Optional. File size in bytes.

**Type**

`int`

**thumbnail**

Optional. Video thumbnail.

New in version 20.2.

**Type**

`telegram.PhotoSize`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**async get\_file(\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None)**

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

## Voice

**class** telegram.Voice(*file\_id*, *file\_unique\_id*, *duration*, *mime\_type*=None, *file\_size*=None, \*,  
                    *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

This object represents a voice note.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *file\_unique\_id* is equal.

---

### Use In

- [telegram.Bot.get\\_file\(\)](#)
- [telegram.Bot.send\\_voice\(\)](#)

---

### Available In

[telegram.Message.voice](#)

---

#### Parameters

- **file\_id** ([str](#)) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** ([str](#)) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **duration** ([int](#)) – Duration of the audio in seconds as defined by sender.
- **mime\_type** ([str](#), optional) – MIME type of the file as defined by sender.
- **file\_size** ([int](#), optional) – File size in bytes.

#### file\_id

Identifier for this file, which can be used to download or reuse the file.

##### Type

[str](#)

#### file\_unique\_id

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

##### Type

[str](#)

#### duration

Duration of the audio in seconds as defined by sender.

##### Type

[int](#)

#### mime\_type

Optional. MIME type of the file as defined by sender.

##### Type

[str](#)

#### file\_size

Optional. File size in bytes.



**Type**`int`

**async** `get_file`(\*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Convenience wrapper over `telegram.Bot.get_file()`

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**`telegram.File`**Raises**`telegram.error.TelegramError` –

## WebAppData

**class** `telegram.WebAppData`(*data*, *button\_text*, \*, *api\_kwargs=None*)

Bases: `telegram.TelegramObject`

Contains data sent from a [Web App](#) to the bot.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *data* and *button\_text* are equal.

---

**Available In**`telegram.Message.web_app_data`

---

---

**Examples**

*Webapp Bot*

---

New in version 20.0.

**Parameters**

- **data** (`str`) – The data. Be aware that a bad client can send arbitrary data in this field.
- **button\_text** (`str`) – Text of the [web\\_app](#) keyboard button, from which the Web App was opened.

**data**

The data. Be aware that a bad client can send arbitrary data in this field.

**Type**`str`**button\_text**

Text of the [web\\_app](#) keyboard button, from which the Web App was opened.

**Warning:** Be aware that a bad client can send arbitrary data in this field.

**Type**`str`

## WebAppInfo

**class** telegram.**WebAppInfo**(url, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object contains information about a [Web App](#).

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [url](#) are equal.

---

### Available In

- [telegram.InlineQueryResultsButton.web\\_app](#)
  - [telegram.KeyboardButton.web\\_app](#)
  - [telegram.MenuButtonWebApp.web\\_app](#)
- 

---

### Examples

*Webapp Bot*

---

New in version 20.0.

#### Parameters

**url** ([str](#)) – An HTTPS URL of a Web App to be opened with additional data as specified in [Initializing Web Apps](#).

#### url

An HTTPS URL of a Web App to be opened with additional data as specified in [Initializing Web Apps](#).

#### Type

[str](#)

## WebhookInfo

**class** telegram.**WebhookInfo**(url, has\_custom\_certificate, pending\_update\_count, last\_error\_date=None, last\_error\_message=None, max\_connections=None, allowed\_updates=None, ip\_address=None, last\_synchronization\_error\_date=None, \*, api\_kwargs=None)

Bases: [telegram.TelegramObject](#)

This object represents a Telegram WebhookInfo.

Contains information about the current status of a webhook.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [url](#), [has\\_custom\\_certificate](#), [pending\\_update\\_count](#), [ip\\_address](#), [last\\_error\\_date](#), [last\\_error\\_message](#), [max\\_connections](#), [allowed\\_updates](#) and [last\\_synchronization\\_error\\_date](#) are equal.

---

### Returned In

[telegram.Bot.get\\_webhook\\_info\(\)](#)

---

Changed in version 20.0: [last\\_synchronization\\_error\\_date](#) is considered as well when comparing objects of this type in terms of equality.

#### Parameters

- **url** (`str`) – Webhook URL, may be empty if webhook is not set up.
- **has\_custom\_certificate** (`bool`) – `True`, if a custom certificate was provided for webhook certificate checks.
- **pending\_update\_count** (`int`) – Number of updates awaiting delivery.
- **ip\_address** (`str`, optional) – Currently used webhook IP address.
- **last\_error\_date** (`datetime.datetime`) – Optional. Datetime for the most recent error that happened when trying to deliver an update via webhook.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- **last\_error\_message** (`str`, optional) – Error message in human-readable format for the most recent error that happened when trying to deliver an update via webhook.
- **max\_connections** (`int`, optional) – Maximum allowed number of simultaneous HTTPS connections to the webhook for update delivery.
- **allowed\_updates** (`Sequence[str]`, optional) – A list of update types the bot is subscribed to. Defaults to all update types, except `telegram.Update.chat_member`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **last\_synchronization\_error\_date** (`datetime.datetime`, optional) – Datetime of the most recent error that happened when trying to synchronize available updates with Telegram datacenters.

New in version 20.0.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

#### **url**

Webhook URL, may be empty if webhook is not set up.

##### **Type**

`str`

#### **has\_custom\_certificate**

`True`, if a custom certificate was provided for webhook certificate checks.

##### **Type**

`bool`

#### **pending\_update\_count**

Number of updates awaiting delivery.

##### **Type**

`int`

#### **ip\_address**

Optional. Currently used webhook IP address.

##### **Type**

`str`

#### **last\_error\_date**

Optional. Datetime for the most recent error that happened when trying to deliver an update via webhook.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

##### **Type**

`datetime.datetime`

**last\_error\_message**

Optional. Error message in human-readable format for the most recent error that happened when trying to deliver an update via webhook.

**Type**

`str`

**max\_connections**

Optional. Maximum allowed number of simultaneous HTTPS connections to the webhook for update delivery.

**Type**

`int`

**allowed\_updates**

Optional. A list of update types the bot is subscribed to. Defaults to all update types, except `telegram.Update.chat_member`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

`Tuple[str]`

**last\_synchronization\_error\_date**

Datetime of the most recent error that happened when trying to synchronize available updates with Telegram datacenters.

New in version 20.0.

Changed in version 20.3: The default timezone of the bot is used for localization, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**Type**

`datetime.datetime`, optional

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

## WriteAccessAllowed

```
class telegram.WriteAccessAllowed(web_app_name=None, from_request=None,
                                  from_attachment_menu=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a service message about a user allowing a bot to write messages after adding it to the attachment menu, launching a Web App from a link, or accepting an explicit request from a Web App sent by the method `requestWriteAccess`.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `web_app_name` is equal.

---

**Available In**

`telegram.Message.write_access_allowed`

---

New in version 20.0.

Changed in version 20.6: Added custom equality comparison for objects of this class.

### Parameters

- **web\_app\_name** (`str`, optional) – Name of the Web App, if the access was granted when the Web App was launched from a link.

New in version 20.3.

- **from\_request** (`bool`, optional) – `True`, if the access was granted after the user accepted an explicit request from a Web App sent by the method `requestWriteAccess`.

New in version 20.6.

- **from\_attachment\_menu** (`bool`, optional) – `True`, if the access was granted when the bot was added to the attachment or side menu.

New in version 20.6.

#### **web\_app\_name**

Optional. Name of the Web App, if the access was granted when the Web App was launched from a link.

New in version 20.3.

#### Type

`str`

#### **from\_request**

Optional. `True`, if the access was granted after the user accepted an explicit request from a Web App.

New in version 20.6.

#### Type

`bool`

#### **from\_attachment\_menu**

Optional. `True`, if the access was granted when the bot was added to the attachment or side menu.

New in version 20.6.

#### Type

`bool`

## Stickers

### MaskPosition

**class** telegram.MaskPosition(*point, x\_shift, y\_shift, scale, \*, api\_kwargs=None*)

Bases: `telegram.TelegramObject`

This object describes the position on faces where a mask should be placed by default.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *point*, *x\_shift*, *y\_shift* and, *scale* are equal.

---

#### Use In

`telegram.Bot.set_sticker_mask_position()`

---

---

#### Available In

`telegram.Sticker.mask_position`

---

### Parameters

- **point** (`str`) – The part of the face relative to which the mask should be placed. One of `FOREHEAD`, `EYES`, `MOUTH`, or `CHIN`.
- **x\_shift** (`float`) – Shift by X-axis measured in widths of the mask scaled to the face size, from left to right. For example, choosing `-1.0` will place mask just to the left of the default mask position.
- **y\_shift** (`float`) – Shift by Y-axis measured in heights of the mask scaled to the face size, from top to bottom. For example, `1.0` will place the mask just below the default mask position.
- **scale** (`float`) – Mask scaling coefficient. For example, `2.0` means double size.

**point**

The part of the face relative to which the mask should be placed. One of `FOREHEAD`, `EYES`, `MOUTH`, or `CHIN`.

**Type**

`str`

**x\_shift**

Shift by X-axis measured in widths of the mask scaled to the face size, from left to right. For example, choosing `-1.0` will place mask just to the left of the default mask position.

**Type**

`float`

**y\_shift**

Shift by Y-axis measured in heights of the mask scaled to the face size, from top to bottom. For example, `1.0` will place the mask just below the default mask position.

**Type**

`float`

**scale**

Mask scaling coefficient. For example, `2.0` means double size.

**Type**

`float`

`CHIN = 'chin'`

`telegram.constants.MaskPosition.CHIN`

`EYES = 'eyes'`

`telegram.constants.MaskPosition.EYES`

`FOREHEAD = 'forehead'`

`telegram.constants.MaskPosition.FOREHEAD`

`MOUTH = 'mouth'`

`telegram.constants.MaskPosition.MOUTH`

**Sticker**

```
class telegram.Sticker(file_id, file_unique_id, width, height, is_animated, is_video, type, emoji=None,
                        file_size=None, set_name=None, mask_position=None,
                        premium_animation=None, custom_emoji_id=None, thumbnail=None,
                        needs_repainting=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a sticker.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `file_unique_id` is equal.

---

**Note:** As of v13.11 `is_video` is a required argument and therefore the order of the arguments had to be changed. Use keyword arguments to make sure that the arguments are passed correctly.

---

---

#### Use In

- `telegram.Bot.get_file()`
  - `telegram.Bot.send_sticker()`
- 

---

#### Available In

- `telegram.Message.sticker`
  - `telegram.StickerSet.stickers`
- 

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

#### Parameters

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **width** (`int`) – Sticker width.
- **height** (`int`) – Sticker height.
- **is\_animated** (`bool`) – `True`, if the sticker is animated.
- **is\_video** (`bool`) – `True`, if the sticker is a video sticker.

New in version 13.11.

- **type** (`str`) – Type of the sticker. Currently one of `REGULAR`, `MASK`, `CUSTOM_EMOJI`. The type of the sticker is independent from its format, which is determined by the fields `is_animated` and `is_video`.

New in version 20.0.

- **emoji** (`str`, optional) – Emoji associated with the sticker
- **set\_name** (`str`, optional) – Name of the sticker set to which the sticker belongs.
- **mask\_position** (`telegram.MaskPosition`, optional) – For mask stickers, the position where the mask should be placed.
- **file\_size** (`int`, optional) – File size in bytes.
- **premium\_animation** (`telegram.File`, optional) – For premium regular stickers, premium animation for the sticker.

New in version 20.0.

- **custom\_emoji\_id** (`str`, optional) – For custom emoji stickers, unique identifier of the custom emoji.

New in version 20.0.

- **thumbnail** (`telegram.PhotoSize`, optional) – Sticker thumbnail in the `.WEBP` or `.JPG` format.

New in version 20.2.

- **needs\_repainting** (*bool*, optional) – *True*, if the sticker must be repainted to a text color in messages, the color of the Telegram Premium badge in emoji status, white color on chat photos, or another appropriate color in other places.

New in version 20.2.

**file\_id**

Identifier for this file, which can be used to download or reuse the file.

**Type**

*str*

**file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

**Type**

*str*

**width**

Sticker width.

**Type**

*int*

**height**

Sticker height.

**Type**

*int*

**is\_animated**

*True*, if the sticker is animated.

**Type**

*bool*

**is\_video**

*True*, if the sticker is a video sticker.

New in version 13.11.

**Type**

*bool*

**type**

Type of the sticker. Currently one of *REGULAR*, *MASK*, *CUSTOM\_EMOJI*. The type of the sticker is independent from its format, which is determined by the fields *is\_animated* and *is\_video*.

New in version 20.0.

**Type**

*str*

**emoji**

Optional. Emoji associated with the sticker.

**Type**

*str*

**set\_name**

Optional. Name of the sticker set to which the sticker belongs.

**Type**

*str*



**mask\_position**

Optional. For mask stickers, the position where the mask should be placed.

**Type**

*telegram.MaskPosition*

**file\_size**

Optional. File size in bytes.

**Type**

*int*

**premium\_animation**

Optional. For premium regular stickers, premium animation for the sticker.

New in version 20.0.

**Type**

*telegram.File*

**custom\_emoji\_id**

Optional. For custom emoji stickers, unique identifier of the custom emoji.

New in version 20.0.

**Type**

*str*

**thumbnail**

Optional. Sticker thumbnail in the .WEBP or .JPG format.

New in version 20.2.

**Type**

*telegram.PhotoSize*

**needs\_repainting**

Optional. *True*, if the sticker must be repainted to a text color in messages, the color of the Telegram Premium badge in emoji status, white color on chat photos, or another appropriate color in other places.

New in version 20.2.

**Type**

*bool*

**CUSTOM\_EMOJI** = 'custom\_emoji'

*telegram.constants.StickerType.CUSTOM\_EMOJI*

**MASK** = 'mask'

*telegram.constants.StickerType.MASK*

**REGULAR** = 'regular'

*telegram.constants.StickerType.REGULAR*

**classmethod de\_json**(data, bot)

See *telegram.TelegramObject.de\_json()*.

**async get\_file**(\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None)

Convenience wrapper over *telegram.Bot.get\_file()*

For the documentation of the arguments, please see *telegram.Bot.get\_file()*.

**Returns**

*telegram.File*

**Raises**

`telegram.error.TelegramError` –

**StickerSet**

```
class telegram.StickerSet(name, title, is_animated, stickers, is_video, sticker_type, thumbnail=None, *,
                           api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents a sticker set.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `name` is equal.

---

**Note:** As of v13.11 `is_video` is a required argument and therefore the order of the arguments had to be changed. Use keyword arguments to make sure that the arguments are passed correctly.

---

---

**Returned In**

`telegram.Bot.get_sticker_set()`

---

Changed in version 20.0: The parameter `contains_masks` has been removed. Use `sticker_type` instead.

Changed in version 20.5: Removed the deprecated argument and attribute `thumb`.

**Parameters**

- **name** (`str`) – Sticker set name.
- **title** (`str`) – Sticker set title.
- **is\_animated** (`bool`) – `True`, if the sticker set contains animated stickers.
- **is\_video** (`bool`) – `True`, if the sticker set contains video stickers.  
New in version 13.11.
- **stickers** (Sequence[`telegram.Sticker`]) – List of all set stickers.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.
- **sticker\_type** (`str`) – Type of stickers in the set, currently one of `telegram.Sticker.REGULAR`, `telegram.Sticker.MASK`, `telegram.Sticker.CUSTOM_EMOJI`.  
New in version 20.0.
- **thumbnail** (`telegram.PhotoSize`, optional) – Sticker set thumbnail in the `.WEBP`, `.TGS`, or `.WEBM` format.  
New in version 20.2.

**name**

Sticker set name.

**Type**

`str`

**title**

Sticker set title.

**Type**

`str`

**is\_animated**

`True`, if the sticker set contains animated stickers.

**Type**

`bool`

**is\_video**

`True`, if the sticker set contains video stickers.

New in version 13.11.

**Type**

`bool`

**stickers**

List of all set stickers.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[[`telegram.Sticker`](#)]

**sticker\_type**

Type of stickers in the set, currently one of [`telegram.Sticker.REGULAR`](#), [`telegram.Sticker.MASK`](#), [`telegram.Sticker.CUSTOM\_EMOJI`](#).

New in version 20.0.

**Type**

`str`

**thumbnail**

Optional. Sticker set thumbnail in the `.WEBP`, `.TGS`, or `.WEBM` format.

New in version 20.2.

**Type**

[`telegram.PhotoSize`](#)

**classmethod `de_json(data, bot)`**

See [`telegram.TelegramObject.de\_json\(\)`](#).

## Inline Mode

### ChosenInlineResult

```
class telegram.ChosenInlineResult(result_id, from_user, query, location=None,
                                   inline_message_id=None, *, api_kwargs=None)
```

Bases: [`telegram.TelegramObject`](#)

Represents a result of an inline query that was chosen by the user and sent to their chat partner.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `result_id` is equal.

---

**Note:**

- In Python `from` is a reserved word. Use `from_user` instead.
  - It is necessary to enable inline feedback via [`@Botfather`](#) in order to receive these objects in updates.
- 

---

**Available In**

*telegram.Update.chosen\_inline\_result*

---

#### Parameters

- **result\_id** (*str*) – The unique identifier for the result that was chosen.
- **from\_user** (*telegram.User*) – The user that chose the result.
- **location** (*telegram.Location*, optional) – Sender location, only for bots that require user location.
- **inline\_message\_id** (*str*, optional) – Identifier of the sent inline message. Available only if there is an inline keyboard attached to the message. Will be also received in callback queries and can be used to edit the message.
- **query** (*str*) – The query that was used to obtain the result.

#### **result\_id**

The unique identifier for the result that was chosen.

##### Type

*str*

#### **from\_user**

The user that chose the result.

##### Type

*telegram.User*

#### **location**

Optional. Sender location, only for bots that require user location.

##### Type

*telegram.Location*

#### **inline\_message\_id**

Optional. Identifier of the sent inline message. Available only if there is an inline keyboard attached to the message. Will be also received in callback queries and can be used to edit the message.

##### Type

*str*

#### **query**

The query that was used to obtain the result.

##### Type

*str*

#### **classmethod de\_json**(*data*, *bot*)

See *telegram.TelegramObject.de\_json()*.

## InlineQuery

```
class telegram.InlineQuery(id, from_user, query, offset, location=None, chat_type=None, *,  
                           api_kwargs=None)
```

Bases: *telegram.TelegramObject*

This object represents an incoming inline query. When the user sends an empty query, your bot could return some default or trending results.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *id* is equal.

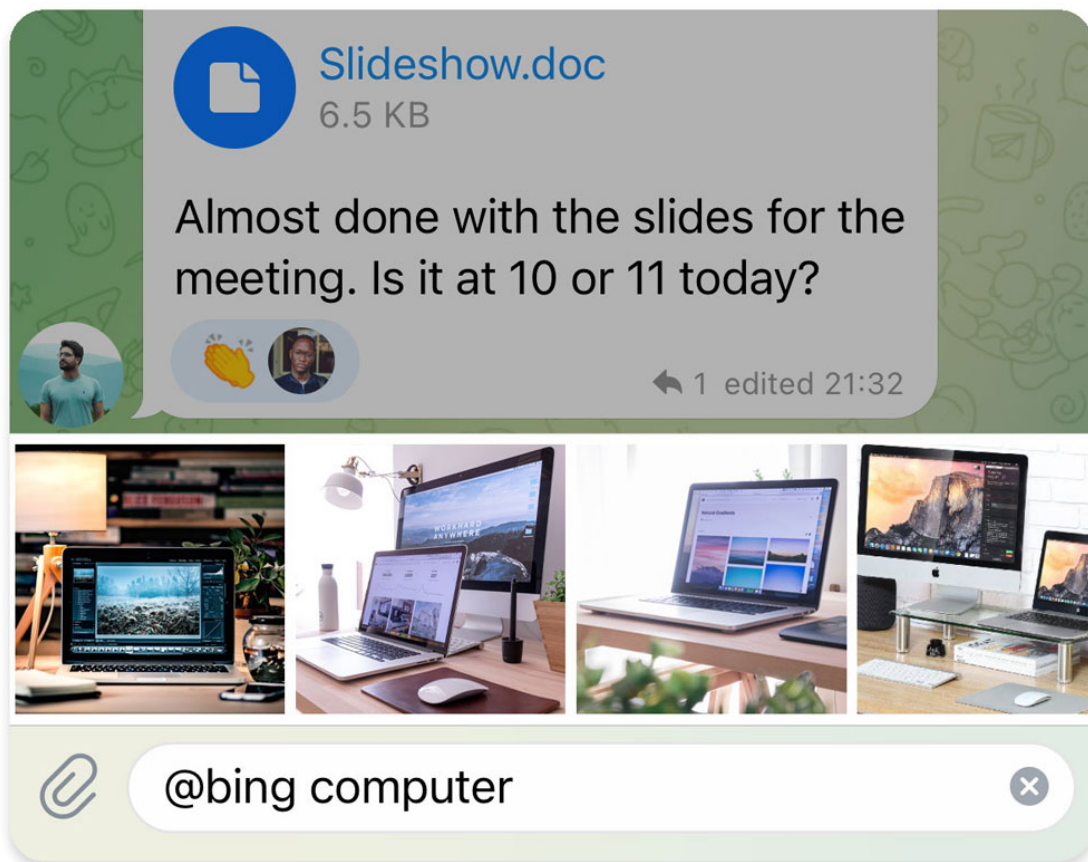


Fig. 3: Inline queries on Telegram

---

**Available In***telegram.Update.inline\_query*

---

**See also:**

The *telegram.InlineQueryResult* classes represent the media the user can choose from (see above figure).

---

**Note:** In Python `from` is a reserved word. Use *from\_user* instead.

---

Changed in version 20.0: The following are now keyword-only arguments in Bot methods: {`read`, `write`, `connect`, `pool_timeout`, `answer.api_kwargs`, `auto_pagination`}. Use a named argument for those, and notice that some positional arguments changed position as a result.

**Parameters**

- **id** (*str*) – Unique identifier for this query.
- **from\_user** (*telegram.User*) – Sender.
- **query** (*str*) – Text of the query (up to 256 characters).
- **offset** (*str*) – Offset of the results to be returned, can be controlled by the bot.
- **chat\_type** (*str*, optional) – Type of the chat, from which the inline query was sent. Can be either *'sender'* for a private chat with the inline query sender, *'private'*, *'group'*, *'supergroup'* or *'channel'*. The chat type should be always known for requests sent from official clients and most third-party clients, unless the request was sent from a secret chat.  
New in version 13.5.
- **location** (*telegram.Location*, optional) – Sender location, only for bots that request user location.

**id**

Unique identifier for this query.

**Type***str***from\_user**

Sender.

**Type***telegram.User***query**

Text of the query (up to 256 characters).

**Type***str***offset**

Offset of the results to be returned, can be controlled by the bot.

**Type***str***chat\_type**

Optional. Type of the chat, from which the inline query was sent. Can be either *'sender'* for a private chat with the inline query sender, *'private'*, *'group'*, *'supergroup'* or *'channel'*. The chat type

should be always known for requests sent from official clients and most third-party clients, unless the request was sent from a secret chat.

New in version 13.5.

#### Type

`str`

#### location

Optional. Sender location, only for bots that request user location.

#### Type

`telegram.Location`

#### MAX\_OFFSET\_LENGTH = 64

`telegram.constants.InlineQueryLimit.MAX_OFFSET_LENGTH`

New in version 20.0.

#### MAX\_QUERY\_LENGTH = 256

`telegram.constants.InlineQueryLimit.MAX_QUERY_LENGTH`

New in version 20.0.

#### MAX\_RESULTS = 50

`telegram.constants.InlineQueryLimit.RESULTS`

New in version 13.2.

#### MAX\_SWITCH\_PM\_TEXT\_LENGTH = 64

`telegram.constants.InlineQueryLimit.MAX_SWITCH_PM_TEXT_LENGTH`

New in version 20.0.

#### MIN\_SWITCH\_PM\_TEXT\_LENGTH = 1

`telegram.constants.InlineQueryLimit.MIN_SWITCH_PM_TEXT_LENGTH`

New in version 20.0.

**async answer**(*results*, *cache\_time=None*, *is\_personal=None*, *next\_offset=None*, *button=None*, \*, *current\_offset=None*, *auto\_pagination=False*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.answer_inline_query(
    update.inline_query.id,
    *args,
    current_offset=self.offset if auto_pagination else None,
    **kwargs
)
```

For the documentation of the arguments, please see `telegram.Bot.answer_inline_query()`.

Changed in version 20.0: Raises `ValueError` instead of `TypeError`.

#### Keyword Arguments

**auto\_pagination** (`bool`, optional) – If set to `True`, *offset* will be passed as *current\_offset* to `telegram.Bot.answer_inline_query()`. Defaults to `False`.

#### Raises

**ValueError** – If both *current\_offset* and *auto\_pagination* are supplied.

**classmethod de\_json**(*data*, *bot*)

See `telegram.TelegramObject.de_json()`.

## InlineQueryResult

**class** telegram.**InlineQueryResult**(*type*, *id*, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

Baseclass for the InlineQueryResult\* classes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *id* is equal.

---

**Note:** All URLs passed in inline query results will be available to end users and therefore must be assumed to be *public*.

---

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

---

### Examples

[Inline Bot](#)

---

#### Parameters

- **type** ([str](#)) – Type of the result.
- **id** ([str](#)) – Unique identifier for this result, 1- 64 Bytes.

#### **type**

Type of the result.

##### **Type**

[str](#)

#### **id**

Unique identifier for this result, 1- 64 Bytes.

##### **Type**

[str](#)

**MAX\_ID\_LENGTH = 64**

[telegram.constants.InlineQueryResultLimit.MAX\\_ID\\_LENGTH](#)

New in version 20.0.

**MIN\_ID\_LENGTH = 1**

[telegram.constants.InlineQueryResultLimit.MIN\\_ID\\_LENGTH](#)

New in version 20.0.



## InlineQueryResultArticle

```
class telegram.InlineQueryResultArticle(id, title, input_message_content, reply_markup=None,
                                         url=None, hide_url=None, description=None,
                                         thumbnail_url=None, thumbnail_width=None,
                                         thumbnail_height=None, *, api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

This object represents a Telegram `InlineQueryResultArticle`.

### Use In

- `telegram.Bot.answer_inline_query()`
- `telegram.Bot.answer_web_app_query()`

### Examples

*Inline Bot*

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

#### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **title** (`str`) – Title of the result.
- **input\_message\_content** (`telegram.InputMessageContent`) – Content of the message to be sent.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **url** (`str`, optional) – URL of the result.
- **hide\_url** (`bool`, optional) – Pass `True`, if you don't want the URL to be shown in the message.
- **description** (`str`, optional) – Short description of the result.
- **thumbnail\_url** (`str`, optional) – Url of the thumbnail for the result.  
New in version 20.2.
- **thumbnail\_width** (`int`, optional) – Thumbnail width.  
New in version 20.2.
- **thumbnail\_height** (`int`, optional) – Thumbnail height.  
New in version 20.2.

#### type

`'article'`.

#### Type

`str`

#### id

Unique identifier for this result, 1- 64 Bytes.

#### Type

`str`

**title**

Title of the result.

**Type**

`str`

**input\_message\_content**

Content of the message to be sent.

**Type**

`telegram.InputMessageContent`

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

`telegram.InlineKeyboardMarkup`

**url**

Optional. URL of the result.

**Type**

`str`

**hide\_url**

Optional. Pass `True`, if you don't want the URL to be shown in the message.

**Type**

`bool`

**description**

Optional. Short description of the result.

**Type**

`str`

**thumbnail\_url**

Optional. Url of the thumbnail for the result.

New in version 20.2.

**Type**

`str`

**thumbnail\_width**

Optional. Thumbnail width.

New in version 20.2.

**Type**

`int`

**thumbnail\_height**

Optional. Thumbnail height.

New in version 20.2.

**Type**

`int`

## InlineQueryResultAudio

```
class telegram.InlineQueryResultAudio(id, audio_url, title, performer=None, audio_duration=None,
                                       caption=None, reply_markup=None,
                                       input_message_content=None, parse_mode=None,
                                       caption_entities=None, *, api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to an mp3 audio file. By default, this audio file will be sent by the user. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the audio.

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

### See also:

[Working with Files and Media](#)

### Parameters

- **id** ([str](#)) – Unique identifier for this result, [1- 64](#) Bytes.
- **audio\_url** ([str](#)) – A valid URL for the audio file.
- **title** ([str](#)) – Title.
- **performer** ([str](#), optional) – Performer.
- **audio\_duration** ([str](#), optional) – Audio duration in seconds.
- **caption** ([str](#), optional) – Caption, 0-[1024](#) characters after entities parsing.
- **parse\_mode** ([str](#), optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the audio.

### type

['audio'](#).

### Type

[str](#)

### id

Unique identifier for this result, [1- 64](#) Bytes.

### Type

[str](#)

### audio\_url

A valid URL for the audio file.

**Type**  
`str`

**title**  
Title.

**Type**  
`str`

**performer**  
Optional. Performer.

**Type**  
`str`

**audio\_duration**  
Optional. Audio duration in seconds.

**Type**  
`str`

**caption**  
Optional. Caption, 0-*1024* characters after entities parsing.

**Type**  
`str`

**parse\_mode**  
Optional. Mode for parsing entities. See *telegram.constants.ParseMode* and formatting options for more details.

**Type**  
`str`

**caption\_entities**  
Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**  
Tuple[*telegram.MessageEntity*]

**reply\_markup**  
Optional. Inline keyboard attached to the message.

**Type**  
*telegram.InlineKeyboardMarkup*

**input\_message\_content**  
Optional. Content of the message to be sent instead of the audio.

**Type**  
*telegram.InputMessageContent*

## InlineQueryResultCachedAudio

```
class telegram.InlineQueryResultCachedAudio(id, audio_file_id, caption=None, reply_markup=None,
                                             input_message_content=None, parse_mode=None,
                                             caption_entities=None, *, api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to an mp3 audio file stored on the Telegram servers. By default, this audio file will be sent by the user. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the audio.

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

### See also:

[Working with Files and Media](#)

### Parameters

- **id** ([str](#)) – Unique identifier for this result, 1- 64 Bytes.
- **audio\_file\_id** ([str](#)) – A valid file identifier for the audio file.
- **caption** ([str](#), optional) – Caption, 0-1024 characters after entities parsing.
- **parse\_mode** ([str](#), optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the audio.

### type

['audio'](#).

#### Type

[str](#)

### id

Unique identifier for this result, 1- 64 Bytes.

#### Type

[str](#)

### audio\_file\_id

A valid file identifier for the audio file.

#### Type

[str](#)

**caption**

Optional. Caption, 0-**1024** characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and formatting options for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[`telegram.MessageEntity`]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

`telegram.InlineKeyboardMarkup`

**input\_message\_content**

Optional. Content of the message to be sent instead of the audio.

**Type**

`telegram.InputMessageContent`

---

**InlineQueryResultCachedDocument**

```
class telegram.InlineQueryResultCachedDocument(id, title, document_file_id, description=None,
                                                caption=None, reply_markup=None,
                                                input_message_content=None, parse_mode=None,
                                                caption_entities=None, *, api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a link to a file stored on the Telegram servers. By default, this file will be sent by the user with an optional caption. Alternatively, you can use `input_message_content` to send a message with the specified content instead of the file.

---

**Use In**

- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

**See also:**

[Working with Files and Media](#)

**Parameters**

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **title** (`str`) – Title for the result.
- **document\_file\_id** (`str`) – A valid file identifier for the file.
- **description** (`str`, optional) – Short description of the result.
- **caption** (`str`, optional) – Caption of the document to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the file.

**type**`'document'.`**Type**`str`**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**`str`**title**

Title for the result.

**Type**`str`**document\_file\_id**

A valid file identifier for the file.

**Type**`str`**description**

Optional. Short description of the result.

**Type**`str`**caption**

Optional. Caption of the document to be sent, 0-1024 characters after entities parsing.

**Type**`str`**parse\_mode**Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.**Type**`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[\*telegram.MessageEntity\*](#)]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

[\*telegram.InlineKeyboardMarkup\*](#)

**input\_message\_content**

Optional. Content of the message to be sent instead of the file.

**Type**

[\*telegram.InputMessageContent\*](#)

**InlineQueryResultCachedGif**

```
class telegram.InlineQueryResultCachedGif(id, gif_file_id, title=None, caption=None,
                                           reply_markup=None, input_message_content=None,
                                           parse_mode=None, caption_entities=None, *,
                                           api_kwargs=None)
```

Bases: [\*telegram.InlineQueryResult\*](#)

Represents a link to an animated GIF file stored on the Telegram servers. By default, this animated GIF file will be sent by the user with an optional caption. Alternatively, you can use [\*input\\_message\\_content\*](#) to send a message with specified content instead of the animation.

---

**Use In**

- [\*telegram.Bot.answer\\_inline\\_query\(\)\*](#)
  - [\*telegram.Bot.answer\\_web\\_app\\_query\(\)\*](#)
- 

**See also:**

[Working with Files and Media](#)

**Parameters**

- **id** ([\*str\*](#)) – Unique identifier for this result, 1- 64 Bytes.
- **gif\_file\_id** ([\*str\*](#)) – A valid file identifier for the GIF file.
- **title** ([\*str\*](#), optional) – Title for the result.
- **caption** ([\*str\*](#), optional) – Caption of the GIF file to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** ([\*str\*](#), optional) – Mode for parsing entities. See [\*telegram.constants.ParseMode\*](#) and [formatting options](#) for more details.



- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the gif.

**type**

`'gif'.`

**Type**

`str`

**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**

`str`

**gif\_file\_id**

A valid file identifier for the GIF file.

**Type**

`str`

**title**

Optional. Title for the result.

**Type**

`str`

**caption**

Optional. Caption of the GIF file to be sent, 0-1024 characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.MessageEntity](#)]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

*telegram.InlineKeyboardMarkup*

**input\_message\_content**

Optional. Content of the message to be sent instead of the gif.

**Type**

*telegram.InputMessageContent*

**InlineQueryResultCachedMpeg4Gif**

```
class telegram.InlineQueryResultCachedMpeg4Gif(id, mpeg4_file_id, title=None, caption=None,
                                                reply_markup=None,
                                                input_message_content=None, parse_mode=None,
                                                caption_entities=None, *, api_kwargs=None)
```

Bases: *telegram.InlineQueryResult*

Represents a link to a video animation (H.264/MPEG-4 AVC video without sound) stored on the Telegram servers. By default, this animated MPEG-4 file will be sent by the user with an optional caption. Alternatively, you can use *input\_message\_content* to send a message with the specified content instead of the animation.

---

**Use In**

- *telegram.Bot.answer\_inline\_query()*
  - *telegram.Bot.answer\_web\_app\_query()*
- 

**See also:**

[Working with Files and Media](#)

**Parameters**

- **id** (*str*) – Unique identifier for this result, 1- 64 Bytes.
- **mpeg4\_file\_id** (*str*) – A valid file identifier for the MP4 file.
- **title** (*str*, optional) – Title for the result.
- **caption** (*str*, optional) – Caption of the MPEG-4 file to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (*str*, optional) – Mode for parsing entities. See *telegram.constants.ParseMode* and [formatting options](#) for more details.
- **caption\_entities** (Sequence[*telegram.MessageEntity*], optional) – Sequence of special entities that appear in the caption, which can be specified instead of *parse\_mode*.  
Changed in version 20.0: Accepts any *collections.abc.Sequence* as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** (*telegram.InlineKeyboardMarkup*, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (*telegram.InputMessageContent*, optional) – Content of the message to be sent instead of the MPEG-4 file.

**type**`'mpeg4_gif'.`**Type**`str`**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**`str`**mpeg4\_file\_id**

A valid file identifier for the MP4 file.

**Type**`str`**title**

Optional. Title for the result.

**Type**`str`**caption**

Optional. Caption of the MPEG-4 file to be sent, 0-1024 characters after entities parsing.

**Type**`str`**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**`str`**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**`Tuple[telegram.MessageEntity]`**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**`telegram.InlineKeyboardMarkup`**input\_message\_content**

Optional. Content of the message to be sent instead of the MPEG-4 file.

**Type**`telegram.InputMessageContent`

## InlineQueryResultCachedPhoto

```
class telegram.InlineQueryResultCachedPhoto(id, photo_file_id, title=None, description=None,
                                             caption=None, reply_markup=None,
                                             input_message_content=None, parse_mode=None,
                                             caption_entities=None, *, api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to a photo stored on the Telegram servers. By default, this photo will be sent by the user with an optional caption. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the photo.

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

### See also:

[Working with Files and Media](#)

### Parameters

- **id** ([str](#)) – Unique identifier for this result, 1- 64 Bytes.
- **photo\_file\_id** ([str](#)) – A valid file identifier of the photo.
- **title** ([str](#), optional) – Title for the result.
- **description** ([str](#), optional) – Short description of the result.
- **caption** ([str](#), optional) – Caption of the photo to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** ([str](#), optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of **parse\_mode**.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the photo.

### type

['photo'](#).

### Type

[str](#)

### id

Unique identifier for this result, 1- 64 Bytes.

### Type

[str](#)

**photo\_file\_id**

A valid file identifier of the photo.

**Type**

`str`

**title**

Optional. Title for the result.

**Type**

`str`

**description**

Optional. Short description of the result.

**Type**

`str`

**caption**

Optional. Caption of the photo to be sent, 0-*1024* characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See *telegram.constants.ParseMode* and formatting options for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[*telegram.MessageEntity*]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

*telegram.InlineKeyboardMarkup*

**input\_message\_content**

Optional. Content of the message to be sent instead of the photo.

**Type**

*telegram.InputMessageContent*

## InlineQueryResultCachedSticker

```
class telegram.InlineQueryResultCachedSticker(id, sticker_file_id, reply_markup=None,
                                              input_message_content=None, *,
                                              api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to a sticker stored on the Telegram servers. By default, this sticker will be sent by the user. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the sticker.

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

### See also:

[Working with Files and Media](#)

#### Parameters

- **id** ([str](#)) – Unique identifier for this result, 1- 64 Bytes.
- **sticker\_file\_id** ([str](#)) – A valid file identifier of the sticker.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the sticker.

#### type

['sticker'](#).

##### Type

[str](#)

#### id

Unique identifier for this result, 1- 64 Bytes.

##### Type

[str](#)

#### sticker\_file\_id

A valid file identifier of the sticker.

##### Type

[str](#)

#### reply\_markup

Optional. Inline keyboard attached to the message.

##### Type

[telegram.InlineKeyboardMarkup](#)

#### input\_message\_content

Optional. Content of the message to be sent instead of the sticker.

##### Type

[telegram.InputMessageContent](#)

## InlineQueryResultCachedVideo

```
class telegram.InlineQueryResultCachedVideo(id, video_file_id, title, description=None,
                                             caption=None, reply_markup=None,
                                             input_message_content=None, parse_mode=None,
                                             caption_entities=None, *, api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to a video file stored on the Telegram servers. By default, this video file will be sent by the user with an optional caption. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the video.

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
- [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)

### See also:

[Working with Files and Media](#)

### Parameters

- **id** ([str](#)) – Unique identifier for this result, 1- 64 Bytes.
- **video\_file\_id** ([str](#)) – A valid file identifier for the video file.
- **title** ([str](#)) – Title for the result.
- **description** ([str](#), optional) – Short description of the result.
- **caption** ([str](#), optional) – Caption of the video to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** ([str](#), optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the video.

### type

`'video'.`

### Type

`str`

### id

Unique identifier for this result, 1- 64 Bytes.

### Type

`str`

### video\_file\_id

A valid file identifier for the video file.

### Type

`str`

**title**

Title for the result.

**Type**

`str`

**description**

Optional. Short description of the result.

**Type**

`str`

**caption**

Optional. Caption of the video to be sent, 0-[1024](#) characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.MessageEntity](#)]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

[telegram.InlineKeyboardMarkup](#)

**input\_message\_content**

Optional. Content of the message to be sent instead of the video.

**Type**

[telegram.InputMessageContent](#)

### **InlineQueryResultCachedVoice**

```
class telegram.InlineQueryResultCachedVoice(id, voice_file_id, title, caption=None,
                                             reply_markup=None, input_message_content=None,
                                             parse_mode=None, caption_entities=None, *,
                                             api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to a voice message stored on the Telegram servers. By default, this voice message will be sent by the user. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the voice message.

---

**Use In**



- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

See also:

Working with Files and Media

#### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **voice\_file\_id** (`str`) – A valid file identifier for the voice message.
- **title** (`str`) – Voice message title.
- **caption** (`str`, optional) – Caption, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (`telegram.InputMessageContent`, optional) – Content of the message to be sent instead of the voice message.

#### type

`'voice'`.

##### Type

`str`

#### id

Unique identifier for this result, 1- 64 Bytes.

##### Type

`str`

#### voice\_file\_id

A valid file identifier for the voice message.

##### Type

`str`

#### title

Voice message title.

##### Type

`str`

#### caption

Optional. Caption, 0-1024 characters after entities parsing.

##### Type

`str`

#### parse\_mode

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.

**Type**`str`**caption\_entities**

Optional. Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**`Tuple[telegram.MessageEntity]`**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**`telegram.InlineKeyboardMarkup`**input\_message\_content**

Optional. Content of the message to be sent instead of the voice message.

**Type**`telegram.InputMessageContent`**InlineQueryResultContact**

```
class telegram.InlineQueryResultContact(id, phone_number, first_name, last_name=None,
                                         reply_markup=None, input_message_content=None,
                                         vcard=None, thumbnail_url=None, thumbnail_width=None,
                                         thumbnail_height=None, *, api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a contact with a phone number. By default, this contact will be sent by the user. Alternatively, you can use `input\_message\_content` to send a message with the specified content instead of the contact.

---

**Use In**

- `telegram.Bot.answer\_inline\_query\(\)`
  - `telegram.Bot.answer\_web\_app\_query\(\)`
- 

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

**Parameters**

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **phone\_number** (`str`) – Contact’s phone number.
- **first\_name** (`str`) – Contact’s first name.
- **last\_name** (`str`, optional) – Contact’s last name.
- **vcard** (`str`, optional) – Additional data about the contact in the form of a vCard, 0-2048 bytes.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.

- **input\_message\_content** (*telegram.InputMessageContent*, optional) – Content of the message to be sent instead of the contact.
- **thumbnail\_url** (*str*, optional) – Url of the thumbnail for the result.  
New in version 20.2.
- **thumbnail\_width** (*int*, optional) – Thumbnail width.  
New in version 20.2.
- **thumbnail\_height** (*int*, optional) – Thumbnail height.  
New in version 20.2.

**type**

*'contact'*.

**Type**

*str*

**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**

*str*

**phone\_number**

Contact's phone number.

**Type**

*str*

**first\_name**

Contact's first name.

**Type**

*str*

**last\_name**

Optional. Contact's last name.

**Type**

*str*

**vcard**

Optional. Additional data about the contact in the form of a vCard, 0-2048 bytes.

**Type**

*str*

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

*telegram.InlineKeyboardMarkup*

**input\_message\_content**

Optional. Content of the message to be sent instead of the contact.

**Type**

*telegram.InputMessageContent*

**thumbnail\_url**

Optional. Url of the thumbnail for the result.

New in version 20.2.

Type

`str`

**thumbnail\_width**

Optional. Thumbnail width.

New in version 20.2.

Type

`int`

**thumbnail\_height**

Optional. Thumbnail height.

New in version 20.2.

Type

`int`

## InlineQueryResultDocument

```
class telegram.InlineQueryResultDocument(id, document_url, title, mime_type, caption=None,
                                          description=None, reply_markup=None,
                                          input_message_content=None, parse_mode=None,
                                          caption_entities=None, thumbnail_url=None,
                                          thumbnail_width=None, thumbnail_height=None, *,
                                          api_kwargs=None)
```

Bases: [`telegram.InlineQueryResult`](#)

Represents a link to a file. By default, this file will be sent by the user with an optional caption. Alternatively, you can use [`input\_message\_content`](#) to send a message with the specified content instead of the file. Currently, only .PDF and .ZIP files can be sent using this method.

---

### Use In

- [`telegram.Bot.answer\_inline\_query\(\)`](#)
  - [`telegram.Bot.answer\_web\_app\_query\(\)`](#)
- 

### See also:

[Working with Files and Media](#)

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **title** (`str`) – Title for the result.
- **caption** (`str`, optional) – Caption of the document to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See [`telegram.constants.ParseMode`](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[`telegram.MessageEntity`](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [`collections.abc.Sequence`](#) as input instead of just a list. The input is converted to a tuple.
- **document\_url** (`str`) – A valid URL for the file.

- **mime\_type** (`str`) – Mime type of the content of the file, either “application/pdf” or “application/zip”.
- **description** (`str`, optional) – Short description of the result.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (`telegram.InputMessageContent`, optional) – Content of the message to be sent instead of the file.
- **thumbnail\_url** (`str`, optional) – URL of the thumbnail (JPEG only) for the file.  
New in version 20.2.
- **thumbnail\_width** (`int`, optional) – Thumbnail width.  
New in version 20.2.
- **thumbnail\_height** (`int`, optional) – Thumbnail height.  
New in version 20.2.

**type**

`'document'`.

**Type**

`str`

**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**

`str`

**title**

Title for the result.

**Type**

`str`

**caption**

Optional. Caption of the document to be sent, 0-1024 characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and [formatting options](#) for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

`Tuple[telegram.MessageEntity]`

**document\_url**

A valid URL for the file.

**Type**

`str`

**mime\_type**

Mime type of the content of the file, either “application/pdf” or “application/zip”.

**Type**

`str`

**description**

Optional. Short description of the result.

**Type**

`str`

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

`telegram.InlineKeyboardMarkup`

**input\_message\_content**

Optional. Content of the message to be sent instead of the file.

**Type**

`telegram.InputMessageContent`

**thumbnail\_url**

Optional. URL of the thumbnail (JPEG only) for the file.

New in version 20.2.

**Type**

`str`

**thumbnail\_width**

Optional. Thumbnail width.

New in version 20.2.

**Type**

`int`

**thumbnail\_height**

Optional. Thumbnail height.

New in version 20.2.

**Type**

`int`

**InlineQueryResultGame**

```
class telegram.InlineQueryResultGame(id, game_short_name, reply_markup=None, *,
                                       api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a `telegram.Game`.

---

**Use In**

- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

#### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **game\_short\_name** (`str`) – Short name of the game.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.

#### type

`'game'.`

#### Type

`str`

#### id

Unique identifier for this result, 1- 64 Bytes.

#### Type

`str`

#### game\_short\_name

Short name of the game.

#### Type

`str`

#### reply\_markup

Optional. Inline keyboard attached to the message.

#### Type

`telegram.InlineKeyboardMarkup`

### InlineQueryResultGif

```
class telegram.InlineQueryResultGif(id, gif_url, thumbnail_url, gif_width=None, gif_height=None,
                                     title=None, caption=None, reply_markup=None,
                                     input_message_content=None, gif_duration=None,
                                     parse_mode=None, caption_entities=None,
                                     thumbnail_mime_type=None, *, api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a link to an animated GIF file. By default, this animated GIF file will be sent by the user with optional caption. Alternatively, you can use `input_message_content` to send a message with the specified content instead of the animation.

---

#### Use In

- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

#### See also:

[Working with Files and Media](#)

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **gif\_url** (`str`) – A valid URL for the GIF file. File size must not exceed 1MB.
- **gif\_width** (`int`, optional) – Width of the GIF.
- **gif\_height** (`int`, optional) – Height of the GIF.
- **gif\_duration** (`int`, optional) – Duration of the GIF in seconds.
- **thumbnail\_url** (`str`, optional) – URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.

**Warning:** The Bot API does **not** define this as an optional argument. It is formally optional for backwards compatibility with the deprecated `thumb_url`. If you pass neither `thumbnail_url` nor `thumb_url`, `ValueError` will be raised.

New in version 20.2.

- **thumbnail\_mime\_type** (`str`, optional) – MIME type of the thumbnail, must be one of 'image/jpeg', 'image/gif', or 'video/mp4'. Defaults to 'image/jpeg'.

New in version 20.2.

- **title** (`str`, optional) – Title for the result.
- **caption** (`str`, optional) – Caption of the GIF file to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (`telegram.InputMessageContent`, optional) – Content of the message to be sent instead of the GIF animation.

### Raises

**ValueError** – If neither `thumbnail_url` nor `thumb_url` is supplied or if both are supplied and are not equal.

### type

`'gif'`.

### Type

`str`

### id

Unique identifier for this result, 1- 64 Bytes.

### Type

`str`

### gif\_url

A valid URL for the GIF file. File size must not exceed 1MB.

### Type

`str`



**gif\_width**

Optional. Width of the GIF.

**Type**

`int`

**gif\_height**

Optional. Height of the GIF.

**Type**

`int`

**gif\_duration**

Optional. Duration of the GIF in seconds.

**Type**

`int`

**thumbnail\_url**

URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.

New in version 20.2.

**Type**

`str`

**thumbnail\_mime\_type**

Optional. MIME type of the thumbnail, must be one of 'image/jpeg', 'image/gif', or 'video/mp4'. Defaults to 'image/jpeg'.

New in version 20.2.

**Type**

`str`

**title**

Optional. Title for the result.

**Type**

`str`

**caption**

Optional. Caption of the GIF file to be sent, 0-**1024** characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.MessageEntity](#)]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

*telegram.InlineKeyboardMarkup*

**input\_message\_content**

Optional. Content of the message to be sent instead of the GIF animation.

**Type**

*telegram.InputMessageContent*

---

**InlineQueryResultLocation**

```
class telegram.InlineQueryResultLocation(id, latitude, longitude, title, live_period=None,
                                          reply_markup=None, input_message_content=None,
                                          horizontal_accuracy=None, heading=None,
                                          proximity_alert_radius=None, thumbnail_url=None,
                                          thumbnail_width=None, thumbnail_height=None, *,
                                          api_kwargs=None)
```

Bases: *telegram.InlineQueryResult*

Represents a location on a map. By default, the location will be sent by the user. Alternatively, you can use *input\_message\_content* to send a message with the specified content instead of the location.

---

**Use In**

- *telegram.Bot.answer\_inline\_query()*
  - *telegram.Bot.answer\_web\_app\_query()*
- 

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

**Parameters**

- **id** (*str*) – Unique identifier for this result, 1- 64 Bytes.
- **latitude** (*float*) – Location latitude in degrees.
- **longitude** (*float*) – Location longitude in degrees.
- **title** (*str*) – Location title.
- **horizontal\_accuracy** (*float*, optional) – The radius of uncertainty for the location, measured in meters; 0- 1500.
- **live\_period** (*int*, optional) – Period in seconds for which the location will be updated, should be between 60 and 86400.
- **heading** (*int*, optional) – For live locations, a direction in which the user is moving, in degrees. Must be between 1 and 360 if specified.
- **proximity\_alert\_radius** (*int*, optional) – For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters. Must be between 1 and 100000 if specified.
- **reply\_markup** (*telegram.InlineKeyboardMarkup*, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (*telegram.InputMessageContent*, optional) – Content of the message to be sent instead of the location.
- **thumbnail\_url** (*str*, optional) – Url of the thumbnail for the result.

New in version 20.2.

- **thumbnail\_width** (`int`, optional) – Thumbnail width.

New in version 20.2.

- **thumbnail\_height** (`int`, optional) – Thumbnail height.

New in version 20.2.

**type**

`'location'`.

**Type**

`str`

**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**

`str`

**latitude**

Location latitude in degrees.

**Type**

`float`

**longitude**

Location longitude in degrees.

**Type**

`float`

**title**

Location title.

**Type**

`str`

**horizontal\_accuracy**

Optional. The radius of uncertainty for the location, measured in meters; 0- 1500.

**Type**

`float`

**live\_period**

Optional. Period in seconds for which the location will be updated, should be between 60 and 86400.

**Type**

`int`

**heading**

Optional. For live locations, a direction in which the user is moving, in degrees. Must be between 1 and 360 if specified.

**Type**

`int`

**proximity\_alert\_radius**

Optional. For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters. Must be between 1 and 100000 if specified.

**Type**

`int`

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

*telegram.InlineKeyboardMarkup*

**input\_message\_content**

Optional. Content of the message to be sent instead of the location.

**Type**

*telegram.InputMessageContent*

**thumbnail\_url**

Optional. Url of the thumbnail for the result.

New in version 20.2.

**Type**

*str*

**thumbnail\_width**

Optional. Thumbnail width.

New in version 20.2.

**Type**

*int*

**thumbnail\_height**

Optional. Thumbnail height.

New in version 20.2.

**Type**

*int*

**HORIZONTAL\_ACCURACY = 1500**

*telegram.constants.LocationLimit.HORIZONTAL\_ACCURACY*

New in version 20.0.

**MAX\_HEADING = 360**

*telegram.constants.LocationLimit.MAX\_HEADING*

New in version 20.0.

**MAX\_LIVE\_PERIOD = 86400**

*telegram.constants.LocationLimit.MAX\_LIVE\_PERIOD*

New in version 20.0.

**MAX\_PROXIMITY\_ALERT\_RADIUS = 100000**

*telegram.constants.LocationLimit.MAX\_PROXIMITY\_ALERT\_RADIUS*

New in version 20.0.

**MIN\_HEADING = 1**

*telegram.constants.LocationLimit.MIN\_HEADING*

New in version 20.0.

**MIN\_LIVE\_PERIOD = 60**

*telegram.constants.LocationLimit.MIN\_LIVE\_PERIOD*

New in version 20.0.

`MIN_PROXIMITY_ALERT_RADIUS = 1`

`telegram.constants.LocationLimit.MIN_PROXIMITY_ALERT_RADIUS`

New in version 20.0.

## InlineQueryResultMpeg4Gif

```
class telegram.InlineQueryResultMpeg4Gif(id, mpeg4_url, thumbnail_url, mpeg4_width=None,
                                          mpeg4_height=None, title=None, caption=None,
                                          reply_markup=None, input_message_content=None,
                                          mpeg4_duration=None, parse_mode=None,
                                          caption_entities=None, thumbnail_mime_type=None, *,
                                          api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a link to a video animation (H.264/MPEG-4 AVC video without sound). By default, this animated MPEG-4 file will be sent by the user with optional caption. Alternatively, you can use `input_message_content` to send a message with the specified content instead of the animation.

---

### Use In

- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

### See also:

[Working with Files and Media](#)

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **mpeg4\_url** (`str`) – A valid URL for the MP4 file. File size must not exceed 1MB.
- **mpeg4\_width** (`int`, optional) – Video width.
- **mpeg4\_height** (`int`, optional) – Video height.
- **mpeg4\_duration** (`int`, optional) – Video duration in seconds.
- **thumbnail\_url** (`str`, optional) – URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.

**Warning:** The Bot API does **not** define this as an optional argument. It is formally optional for backwards compatibility with the deprecated `thumb_url`. If you pass neither `thumbnail_url` nor `thumb_url`, `ValueError` will be raised.

New in version 20.2.

- **thumbnail\_mime\_type** (`str`, optional) – MIME type of the thumbnail, must be one of 'image/jpeg', 'image/gif', or 'video/mp4'. Defaults to 'image/jpeg'.

New in version 20.2.

- **title** (`str`, optional) – Title for the result.
- **caption** (`str`, optional) – Caption of the MPEG-4 file to be sent, 0-1024 characters after entities parsing.

- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (`telegram.InputMessageContent`, optional) – Content of the message to be sent instead of the video animation.

**Raises**

**ValueError** – If neither `thumbnail_url` nor `thumb_url` is supplied or if both are supplied and are not equal.

**type**

`'mpeg4_gif'`.

**Type**

`str`

**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**

`str`

**mpeg4\_url**

A valid URL for the MP4 file. File size must not exceed 1MB.

**Type**

`str`

**mpeg4\_width**

Optional. Video width.

**Type**

`int`

**mpeg4\_height**

Optional. Video height.

**Type**

`int`

**mpeg4\_duration**

Optional. Video duration in seconds.

**Type**

`int`

**thumbnail\_url**

URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.

New in version 20.2.

**Type**

`str`

**thumbnail\_mime\_type**

Optional. MIME type of the thumbnail, must be one of `'image/jpeg'`, `'image/gif'`, or `'video/mp4'`. Defaults to `'image/jpeg'`.

New in version 20.2.

**Type**`str`**title**

Optional. Title for the result.

**Type**`str`**caption**

Optional. Caption of the MPEG-4 file to be sent, 0-**1024** characters after entities parsing.

**Type**`str`**parse\_mode**

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and formatting options for more details.

**Type**`str`**caption\_entities**

Optional. Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**`Tuple[telegram.MessageEntity]`**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**`telegram.InlineKeyboardMarkup`**input\_message\_content**

Optional. Content of the message to be sent instead of the video animation.

**Type**`telegram.InputMessageContent`

## **InlineQueryResultPhoto**

```
class telegram.InlineQueryResultPhoto(id, photo_url, thumbnail_url, photo_width=None,  
photo_height=None, title=None, description=None,  
caption=None, reply_markup=None,  
input_message_content=None, parse_mode=None,  
caption_entities=None, *, api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a link to a photo. By default, this photo will be sent by the user with optional caption. Alternatively, you can use `input\_message\_content` to send a message with the specified content instead of the photo.

---

**Use In**

- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

**See also:**

## Working with Files and Media

Changed in version 20.5: Removed the deprecated argument and attribute `thumb_url`.

**Parameters**

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **photo\_url** (`str`) – A valid URL of the photo. Photo must be in JPEG format. Photo size must not exceed 5MB.
- **thumbnail\_url** (`str`, optional) – URL of the thumbnail for the photo.

**Warning:** The Bot API does **not** define this as an optional argument. It is formally optional for backwards compatibility with the deprecated `thumb_url`. If you pass neither `thumbnail_url` nor `thumb_url`, `ValueError` will be raised.

New in version 20.2.

- **photo\_width** (`int`, optional) – Width of the photo.
- **photo\_height** (`int`, optional) – Height of the photo.
- **title** (`str`, optional) – Title for the result.
- **description** (`str`, optional) – Short description of the result.
- **caption** (`str`, optional) – Caption of the photo to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.

- **caption\_entities** (Sequence[`telegram.MessageEntity`], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (`telegram.InputMessageContent`, optional) – Content of the message to be sent instead of the photo.

**Raises**

**ValueError** – If neither `thumbnail_url` nor `thumb_url` is supplied or if both are supplied and are not equal.

**type**

`'photo'`.

**Type**

`str`

**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**

`str`



**photo\_url**

A valid URL of the photo. Photo must be in JPEG format. Photo size must not exceed 5MB.

**Type**

`str`

**thumbnail\_url**

URL of the thumbnail for the photo.

**Type**

`str`

**photo\_width**

Optional. Width of the photo.

**Type**

`int`

**photo\_height**

Optional. Height of the photo.

**Type**

`int`

**title**

Optional. Title for the result.

**Type**

`str`

**description**

Optional. Short description of the result.

**Type**

`str`

**caption**

Optional. Caption of the photo to be sent, 0-[1024](#) characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.MessageEntity](#)]

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

*telegram.InlineKeyboardMarkup*

**input\_message\_content**

Optional. Content of the message to be sent instead of the photo.

**Type**

*telegram.InputMessageContent*

---

**InlineQueryResultsButton**

```
class telegram.InlineQueryResultsButton(text, web_app=None, start_parameter=None, *,
                                         api_kwargs=None)
```

Bases: *telegram.TelegramObject*

This object represents a button to be shown above inline query results. You **must** use exactly one of the optional fields.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *text*, *web\_app* and *start\_parameter* are equal.

---

**Use In**

*telegram.Bot.answer\_inline\_query()*

---

**Parameters**

- **text** (*str*) – Label text on the button.
- **web\_app** (*telegram.WebAppInfo*, optional) – Description of the [Web App](#) that will be launched when the user presses the button. The Web App will be able to switch back to the inline mode using the method [switchInlineQuery](#) inside the Web App.
- **start\_parameter** (*str*, optional) – Deep-linking parameter for the `/start` message sent to the bot when user presses the switch button. [1- 64](#) characters, only A-Z, a-z, `0-9`, `_` and `-` are allowed.

---

**Example**

An inline bot that sends YouTube videos can ask the user to connect the bot to their YouTube account to adapt search results accordingly. To do this, it displays a ‘Connect your YouTube account’ button above the results, or even before showing any. The user presses the button, switches to a private chat with the bot and, in doing so, passes a start parameter that instructs the bot to return an OAuth link. Once done, the bot can offer a `switch_inline` button so that the user can easily return to the chat where they wanted to use the bot’s inline capabilities.

---

**text**

Label text on the button.

**Type**

*str*

**web\_app**

Optional. Description of the [Web App](#) that will be launched when the user presses the button. The Web App will be able to switch back to the inline mode using the method `web_app_switch_inline_query` inside the Web App.

**Type**

`telegram.WebAppInfo`

**start\_parameter**

Optional. Deep-linking parameter for the `/start` message sent to the bot when user presses the switch button. 1- 64 characters, only A-Z, a-z, 0-9, \_ and - are allowed.

**Type**

`str`

**MAX\_START\_PARAMETER\_LENGTH** = 64

`telegram.constants.InlineQueryResultsButtonLimit.MAX_START_PARAMETER_LENGTH`

**MIN\_START\_PARAMETER\_LENGTH** = 1

`telegram.constants.InlineQueryResultsButtonLimit.MIN_START_PARAMETER_LENGTH`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

**InlineQueryResultVenue**

```
class telegram.InlineQueryResultVenue(id, latitude, longitude, title, address, foursquare_id=None,
                                       foursquare_type=None, reply_markup=None,
                                       input_message_content=None, google_place_id=None,
                                       google_place_type=None, thumbnail_url=None,
                                       thumbnail_width=None, thumbnail_height=None, *,
                                       api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a venue. By default, the venue will be sent by the user. Alternatively, you can use `input_message_content` to send a message with the specified content instead of the venue.

---

**Note:** Foursquare details and Google Place details are mutually exclusive. However, this behaviour is undocumented and might be changed by Telegram.

---

**Use In**

- `telegram.Bot.answer_inline_query()`
  - `telegram.Bot.answer_web_app_query()`
- 

Changed in version 20.5: Removed the deprecated arguments and attributes `thumb_*`.

**Parameters**

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **latitude** (`float`) – Latitude of the venue location in degrees.
- **longitude** (`float`) – Longitude of the venue location in degrees.
- **title** (`str`) – Title of the venue.
- **address** (`str`) – Address of the venue.
- **foursquare\_id** (`str`, optional) – Foursquare identifier of the venue if known.

- **foursquare\_type** (`str`, optional) – Foursquare type of the venue, if known. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”).
- **google\_place\_id** (`str`, optional) – Google Places identifier of the venue.
- **google\_place\_type** (`str`, optional) – Google Places type of the venue. (See [supported types](#).)
- **reply\_markup** (`telegram.InlineKeyboardMarkup`, optional) – Inline keyboard attached to the message.
- **input\_message\_content** (`telegram.InputMessageContent`, optional) – Content of the message to be sent instead of the venue.
- **thumbnail\_url** (`str`, optional) – Url of the thumbnail for the result.  
New in version 20.2.
- **thumbnail\_width** (`int`, optional) – Thumbnail width.  
New in version 20.2.
- **thumbnail\_height** (`int`, optional) – Thumbnail height.  
New in version 20.2.

**type**`'venue'.`**Type**`str`**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**`str`**latitude**

Latitude of the venue location in degrees.

**Type**`float`**longitude**

Longitude of the venue location in degrees.

**Type**`float`**title**

Title of the venue.

**Type**`str`**address**

Address of the venue.

**Type**`str`**foursquare\_id**

Optional. Foursquare identifier of the venue if known.

**Type**`str`

**foursquare\_type**

Optional. Foursquare type of the venue, if known. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”).)

**Type**

`str`

**google\_place\_id**

Optional. Google Places identifier of the venue.

**Type**

`str`

**google\_place\_type**

Optional. Google Places type of the venue. (See [supported types](#).)

**Type**

`str`

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

`telegram.InlineKeyboardMarkup`

**input\_message\_content**

Optional. Content of the message to be sent instead of the venue.

**Type**

`telegram.InputMessageContent`

**thumbnail\_url**

Optional. Url of the thumbnail for the result.

New in version 20.2.

**Type**

`str`

**thumbnail\_width**

Optional. Thumbnail width.

New in version 20.2.

**Type**

`int`

**thumbnail\_height**

Optional. Thumbnail height.

New in version 20.2.

**Type**

`int`

## InlineQueryResultVideo

```
class telegram.InlineQueryResultVideo(id, video_url, mime_type, thumbnail_url, title, caption=None,
                                       video_width=None, video_height=None,
                                       video_duration=None, description=None,
                                       reply_markup=None, input_message_content=None,
                                       parse_mode=None, caption_entities=None, *,
                                       api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to a page containing an embedded video player or a video file. By default, this video file will be sent by the user with an optional caption. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the video.

---

**Note:** If an `InlineQueryResultVideo` message contains an embedded video (e.g., YouTube), you must replace its content using [input\\_message\\_content](#).

---

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

### See also:

[Working with Files and Media](#)

Changed in version 20.5: Removed the deprecated argument and attribute `thumb_url`.

### Parameters

- **id** (`str`) – Unique identifier for this result, 1- 64 Bytes.
- **video\_url** (`str`) – A valid URL for the embedded video player or video file.
- **mime\_type** (`str`) – Mime type of the content of video url, “text/html” or “video/mp4”.
- **thumbnail\_url** (`str`, optional) – URL of the thumbnail (JPEG only) for the video.

**Warning:** The Bot API does **not** define this as an optional argument. It is formally optional for backwards compatibility with the deprecated `thumb_url`. If you pass neither `thumbnail_url` nor `thumb_url`, `ValueError` will be raised.

New in version 20.2.

- **title** (`str`, optional) – Title for the result.

**Warning:** The Bot API does **not** define this as an optional argument. It is formally optional to ensure backwards compatibility of `thumbnail_url` with the deprecated `thumb_url`, which required that `thumbnail_url` become optional. `TypeError` will be raised if no `title` is passed.

- **caption** (`str`, optional) – Caption of the video to be sent, 0-1024 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **video\_width** ([int](#), optional) – Video width.
- **video\_height** ([int](#), optional) – Video height.
- **video\_duration** ([int](#), optional) – Video duration in seconds.
- **description** ([str](#), optional) – Short description of the result.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the video. This field is required if `InlineQueryResultVideo` is used to send an HTML-page as a result (e.g., a YouTube video).

**Raises**

- **ValueError** – If neither [thumbnail\\_url](#) nor [thumb\\_url](#) is supplied or if both are supplied and are not equal.
- **TypeError** – If no [title](#) is passed.

**type**['video'](#).**Type**[str](#)**id**

Unique identifier for this result, 1- 64 Bytes.

**Type**[str](#)**video\_url**

A valid URL for the embedded video player or video file.

**Type**[str](#)**mime\_type**

Mime type of the content of video url, “text/html” or “video/mp4”.

**Type**[str](#)**thumbnail\_url**

URL of the thumbnail (JPEG only) for the video.

New in version 20.2.

**Type**[str](#)**title**

Title for the result.

**Type**[str](#)

**caption**

Optional. Caption of the video to be sent, 0-**1024** characters after entities parsing.

**Type**

`str`

**parse\_mode**

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and formatting options for more details.

**Type**

`str`

**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[`telegram.MessageEntity`]

**video\_width**

Optional. Video width.

**Type**

`int`

**video\_height**

Optional. Video height.

**Type**

`int`

**video\_duration**

Optional. Video duration in seconds.

**Type**

`int`

**description**

Optional. Short description of the result.

**Type**

`str`

**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**

`telegram.InlineKeyboardMarkup`

**input\_message\_content**

Optional. Content of the message to be sent instead of the video. This field is required if `InlineQueryResultVideo` is used to send an HTML-page as a result (e.g., a YouTube video).

**Type**

`telegram.InputMessageContent`



## InlineQueryResultVoice

```
class telegram.InlineQueryResultVoice(id, voice_url, title, voice_duration=None, caption=None,
                                     reply_markup=None, input_message_content=None,
                                     parse_mode=None, caption_entities=None, *,
                                     api_kwargs=None)
```

Bases: [telegram.InlineQueryResult](#)

Represents a link to a voice recording in an .ogg container encoded with OPUS. By default, this voice recording will be sent by the user. Alternatively, you can use [input\\_message\\_content](#) to send a message with the specified content instead of the voice message.

---

### Use In

- [telegram.Bot.answer\\_inline\\_query\(\)](#)
  - [telegram.Bot.answer\\_web\\_app\\_query\(\)](#)
- 

### See also:

[Working with Files and Media](#)

### Parameters

- **id** ([str](#)) – Unique identifier for this result, 1- 64 Bytes.
- **voice\_url** ([str](#)) – A valid URL for the voice recording.
- **title** ([str](#)) – Recording title.
- **caption** ([str](#), optional) – Caption, 0-1024 characters after entities parsing.
- **parse\_mode** ([str](#), optional) – Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.
- **caption\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.
- **voice\_duration** ([int](#), optional) – Recording duration in seconds.
- **reply\_markup** ([telegram.InlineKeyboardMarkup](#), optional) – Inline keyboard attached to the message.
- **input\_message\_content** ([telegram.InputMessageContent](#), optional) – Content of the message to be sent instead of the voice recording.

### type

`'voice'.`

### Type

`str`

### id

Unique identifier for this result, 1- 64 Bytes.

### Type

`str`

### voice\_url

A valid URL for the voice recording.

**Type**`str`**title**

Recording title.

**Type**`str`**caption**

Optional. Caption, 0-**1024** characters after entities parsing.

**Type**`str`**parse\_mode**

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and formatting options for more details.

**Type**`str`**caption\_entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**`Tuple[telegram.MessageEntity]`**voice\_duration**

Optional. Recording duration in seconds.

**Type**`int`**reply\_markup**

Optional. Inline keyboard attached to the message.

**Type**`telegram.InlineKeyboardMarkup`**input\_message\_content**

Optional. Content of the message to be sent instead of the voice recording.

**Type**`telegram.InputMessageContent`

## InputMessageContent

**class** telegram.**InputMessageContent**(\**api\_kwargs=None*)

Bases: *telegram.TelegramObject*

Base class for Telegram InputMessageContent Objects.

See: *telegram.InputContactMessageContent*, *telegram.InputInvoiceMessageContent*, *telegram.InputLocationMessageContent*, *telegram.InputTextMessageContent* and *telegram.InputVenueMessageContent* for more details.

---

### Available In

- *telegram.InlineQueryResultArticle.input\_message\_content*
  - *telegram.InlineQueryResultAudio.input\_message\_content*
  - *telegram.InlineQueryResultCachedAudio.input\_message\_content*
  - *telegram.InlineQueryResultCachedDocument.input\_message\_content*
  - *telegram.InlineQueryResultCachedGif.input\_message\_content*
  - *telegram.InlineQueryResultCachedMpeg4Gif.input\_message\_content*
  - *telegram.InlineQueryResultCachedPhoto.input\_message\_content*
  - *telegram.InlineQueryResultCachedSticker.input\_message\_content*
  - *telegram.InlineQueryResultCachedVideo.input\_message\_content*
  - *telegram.InlineQueryResultCachedVoice.input\_message\_content*
  - *telegram.InlineQueryResultContact.input\_message\_content*
  - *telegram.InlineQueryResultDocument.input\_message\_content*
  - *telegram.InlineQueryResultGif.input\_message\_content*
  - *telegram.InlineQueryResultLocation.input\_message\_content*
  - *telegram.InlineQueryResultMpeg4Gif.input\_message\_content*
  - *telegram.InlineQueryResultPhoto.input\_message\_content*
  - *telegram.InlineQueryResultVenue.input\_message\_content*
  - *telegram.InlineQueryResultVideo.input\_message\_content*
  - *telegram.InlineQueryResultVoice.input\_message\_content*
- 

## InputTextMessageContent

**class** telegram.**InputTextMessageContent**(*message\_text*, *parse\_mode=None*,  
*disable\_web\_page\_preview=None*, *entities=None*, \*,  
*api\_kwargs=None*)

Bases: *telegram.InputMessageContent*

Represents the content of a text message to be sent as the result of an inline query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *message\_text* is equal.

---

### Available In

- *telegram.InlineQueryResultArticle.input\_message\_content*

- `telegram.InlineQueryResultAudio.input_message_content`
  - `telegram.InlineQueryResultCachedAudio.input_message_content`
  - `telegram.InlineQueryResultCachedDocument.input_message_content`
  - `telegram.InlineQueryResultCachedGif.input_message_content`
  - `telegram.InlineQueryResultCachedMpeg4Gif.input_message_content`
  - `telegram.InlineQueryResultCachedPhoto.input_message_content`
  - `telegram.InlineQueryResultCachedSticker.input_message_content`
  - `telegram.InlineQueryResultCachedVideo.input_message_content`
  - `telegram.InlineQueryResultCachedVoice.input_message_content`
  - `telegram.InlineQueryResultContact.input_message_content`
  - `telegram.InlineQueryResultDocument.input_message_content`
  - `telegram.InlineQueryResultGif.input_message_content`
  - `telegram.InlineQueryResultLocation.input_message_content`
  - `telegram.InlineQueryResultMpeg4Gif.input_message_content`
  - `telegram.InlineQueryResultPhoto.input_message_content`
  - `telegram.InlineQueryResultVenue.input_message_content`
  - `telegram.InlineQueryResultVideo.input_message_content`
  - `telegram.InlineQueryResultVoice.input_message_content`
- 

---

## Examples

### *Inline Bot*

---

#### Parameters

- **message\_text** (`str`) – Text of the message to be sent, 1- 4096 characters after entities parsing.
- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.
- **entities** (`Sequence[telegram.MessageEntity]`, optional) – Sequence of special entities that appear in the caption, which can be specified instead of `parse_mode`.  
Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.
- **disable\_web\_page\_preview** (`bool`, optional) – Disables link previews for links in the sent message.

#### **message\_text**

Text of the message to be sent, 1- 4096 characters after entities parsing.

#### **Type**

`str`

#### **parse\_mode**

Optional. Mode for parsing entities. See `telegram.constants.ParseMode` and `formatting options` for more details.

Type  
`str`

#### **entities**

Optional. Tuple of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

Type  
Tuple[`telegram.MessageEntity`]

#### **disable\_web\_page\_preview**

Optional. Disables link previews for links in the sent message.

Type  
`bool`

### **InputLocationMessageContent**

```
class telegram.InputLocationMessageContent(latitude, longitude, live_period=None,  
                                           horizontal_accuracy=None, heading=None,  
                                           proximity_alert_radius=None, *, api_kwargs=None)
```

Bases: `telegram.InputMessageContent`

Represents the content of a location message to be sent as the result of an inline query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `latitude` and `longitude` are equal.

---

#### **Available In**

- `telegram.InlineQueryResultArticle.input_message_content`
- `telegram.InlineQueryResultAudio.input_message_content`
- `telegram.InlineQueryResultCachedAudio.input_message_content`
- `telegram.InlineQueryResultCachedDocument.input_message_content`
- `telegram.InlineQueryResultCachedGif.input_message_content`
- `telegram.InlineQueryResultCachedMpeg4Gif.input_message_content`
- `telegram.InlineQueryResultCachedPhoto.input_message_content`
- `telegram.InlineQueryResultCachedSticker.input_message_content`
- `telegram.InlineQueryResultCachedVideo.input_message_content`
- `telegram.InlineQueryResultCachedVoice.input_message_content`
- `telegram.InlineQueryResultContact.input_message_content`
- `telegram.InlineQueryResultDocument.input_message_content`
- `telegram.InlineQueryResultGif.input_message_content`
- `telegram.InlineQueryResultLocation.input_message_content`
- `telegram.InlineQueryResultMpeg4Gif.input_message_content`
- `telegram.InlineQueryResultPhoto.input_message_content`

- `telegram.InlineQueryResultVenue.input_message_content`
  - `telegram.InlineQueryResultVideo.input_message_content`
  - `telegram.InlineQueryResultVoice.input_message_content`
- 

#### Parameters

- **latitude** (`float`) – Latitude of the location in degrees.
- **longitude** (`float`) – Longitude of the location in degrees.
- **horizontal\_accuracy** (`float`, optional) – The radius of uncertainty for the location, measured in meters; 0- `1500`.
- **live\_period** (`int`, optional) – Period in seconds for which the location will be updated, should be between `60` and `86400`.
- **heading** (`int`, optional) – For live locations, a direction in which the user is moving, in degrees. Must be between `1` and `360` if specified.
- **proximity\_alert\_radius** (`int`, optional) – For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters. Must be between `1` and `100000` if specified.

#### latitude

Latitude of the location in degrees.

##### Type

`float`

#### longitude

Longitude of the location in degrees.

##### Type

`float`

#### horizontal\_accuracy

Optional. The radius of uncertainty for the location, measured in meters; 0- `1500`.

##### Type

`float`

#### live\_period

Optional. Period in seconds for which the location can be updated, should be between `60` and `86400`.

##### Type

`int`

#### heading

Optional. For live locations, a direction in which the user is moving, in degrees. Must be between `1` and `360` if specified.

##### Type

`int`

#### proximity\_alert\_radius

Optional. For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters. Must be between `1` and `100000` if specified.

##### Type

`int`

**HORIZONTAL\_ACCURACY = 1500**

`telegram.constants.LocationLimit.HORIZONTAL_ACCURACY`

New in version 20.0.

**MAX\_HEADING = 360**

`telegram.constants.LocationLimit.MAX_HEADING`

New in version 20.0.

**MAX\_LIVE\_PERIOD = 86400**

`telegram.constants.LocationLimit.MAX_LIVE_PERIOD`

New in version 20.0.

**MAX\_PROXIMITY\_ALERT\_RADIUS = 100000**

`telegram.constants.LocationLimit.MAX_PROXIMITY_ALERT_RADIUS`

New in version 20.0.

**MIN\_HEADING = 1**

`telegram.constants.LocationLimit.MIN_HEADING`

New in version 20.0.

**MIN\_LIVE\_PERIOD = 60**

`telegram.constants.LocationLimit.MIN_LIVE_PERIOD`

New in version 20.0.

**MIN\_PROXIMITY\_ALERT\_RADIUS = 1**

`telegram.constants.LocationLimit.MIN_PROXIMITY_ALERT_RADIUS`

New in version 20.0.

## InputVenueMessageContent

```
class telegram.InputVenueMessageContent(latitude, longitude, title, address, foursquare_id=None,
                                         foursquare_type=None, google_place_id=None,
                                         google_place_type=None, *, api_kwargs=None)
```

Bases: `telegram.InputMessageContent`

Represents the content of a venue message to be sent as the result of an inline query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *latitude*, *longitude* and *title* are equal.

---

**Note:** Foursquare details and Google Place details are mutually exclusive. However, this behaviour is undocumented and might be changed by Telegram.

---

---

### Available In

- `telegram.InlineQueryResultArticle.input_message_content`
- `telegram.InlineQueryResultAudio.input_message_content`
- `telegram.InlineQueryResultCachedAudio.input_message_content`
- `telegram.InlineQueryResultCachedDocument.input_message_content`
- `telegram.InlineQueryResultCachedGif.input_message_content`
- `telegram.InlineQueryResultCachedMpeg4Gif.input_message_content`

- `telegram.InlineQueryResultCachedPhoto.input_message_content`
  - `telegram.InlineQueryResultCachedSticker.input_message_content`
  - `telegram.InlineQueryResultCachedVideo.input_message_content`
  - `telegram.InlineQueryResultCachedVoice.input_message_content`
  - `telegram.InlineQueryResultContact.input_message_content`
  - `telegram.InlineQueryResultDocument.input_message_content`
  - `telegram.InlineQueryResultGif.input_message_content`
  - `telegram.InlineQueryResultLocation.input_message_content`
  - `telegram.InlineQueryResultMpeg4Gif.input_message_content`
  - `telegram.InlineQueryResultPhoto.input_message_content`
  - `telegram.InlineQueryResultVenue.input_message_content`
  - `telegram.InlineQueryResultVideo.input_message_content`
  - `telegram.InlineQueryResultVoice.input_message_content`
- 

#### Parameters

- **latitude** (`float`) – Latitude of the location in degrees.
- **longitude** (`float`) – Longitude of the location in degrees.
- **title** (`str`) – Name of the venue.
- **address** (`str`) – Address of the venue.
- **foursquare\_id** (`str`, optional) – Foursquare identifier of the venue, if known.
- **foursquare\_type** (`str`, optional) – Foursquare type of the venue, if known. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”.)
- **google\_place\_id** (`str`, optional) – Google Places identifier of the venue.
- **google\_place\_type** (`str`, optional) – Google Places type of the venue. (See [supported types](#).)

#### latitude

Latitude of the location in degrees.

##### Type

`float`

#### longitude

Longitude of the location in degrees.

##### Type

`float`

#### title

Name of the venue.

##### Type

`str`

#### address

Address of the venue.

##### Type

`str`



**foursquare\_id**

Optional. Foursquare identifier of the venue, if known.

Type

`str`

**foursquare\_type**

Optional. Foursquare type of the venue, if known. (For example, “arts\_entertainment/default”, “arts\_entertainment/aquarium” or “food/icecream”.)

Type

`str`

**google\_place\_id**

Optional. Google Places identifier of the venue.

Type

`str`

**google\_place\_type**

Optional. Google Places type of the venue. (See [supported types](#).)

Type

`str`

---

**InputContactMessageContent**

```
class telegram.InputContactMessageContent(phone_number, first_name, last_name=None,
                                           vcard=None, *, api_kwargs=None)
```

Bases: [telegram.InputMessageContent](#)

Represents the content of a contact message to be sent as the result of an inline query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [phone\\_number](#) is equal.

---

**Available In**

- [telegram.InlineQueryResultArticle.input\\_message\\_content](#)
- [telegram.InlineQueryResultAudio.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedAudio.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedDocument.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedGif.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedMpeg4Gif.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedPhoto.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedSticker.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedVideo.input\\_message\\_content](#)
- [telegram.InlineQueryResultCachedVoice.input\\_message\\_content](#)
- [telegram.InlineQueryResultContact.input\\_message\\_content](#)
- [telegram.InlineQueryResultDocument.input\\_message\\_content](#)
- [telegram.InlineQueryResultGif.input\\_message\\_content](#)
- [telegram.InlineQueryResultLocation.input\\_message\\_content](#)
- [telegram.InlineQueryResultMpeg4Gif.input\\_message\\_content](#)

- `telegram.InlineQueryResultPhoto.input_message_content`
  - `telegram.InlineQueryResultVenue.input_message_content`
  - `telegram.InlineQueryResultVideo.input_message_content`
  - `telegram.InlineQueryResultVoice.input_message_content`
- 

#### Parameters

- **phone\_number** (`str`) – Contact’s phone number.
- **first\_name** (`str`) – Contact’s first name.
- **last\_name** (`str`, optional) – Contact’s last name.
- **vcard** (`str`, optional) – Additional data about the contact in the form of a vCard, 0-2048 bytes.

#### **phone\_number**

Contact’s phone number.

##### Type

`str`

#### **first\_name**

Contact’s first name.

##### Type

`str`

#### **last\_name**

Optional. Contact’s last name.

##### Type

`str`

#### **vcard**

Optional. Additional data about the contact in the form of a vCard, 0-2048 bytes.

##### Type

`str`

### **InputInvoiceMessageContent**

```
class telegram.InputInvoiceMessageContent(title, description, payload, provider_token, currency,
                                          prices, max_tip_amount=None,
                                          suggested_tip_amounts=None, provider_data=None,
                                          photo_url=None, photo_size=None, photo_width=None,
                                          photo_height=None, need_name=None,
                                          need_phone_number=None, need_email=None,
                                          need_shipping_address=None,
                                          send_phone_number_to_provider=None,
                                          send_email_to_provider=None, is_flexible=None, *,
                                          api_kwargs=None)
```

Bases: `telegram.InputMessageContent`

Represents the content of a invoice message to be sent as the result of an inline query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `title`, `description`, `payload`, `provider_token`, `currency` and `prices` are equal.

---

#### Available In

- `telegram.InlineQueryResultArticle.input_message_content`
  - `telegram.InlineQueryResultAudio.input_message_content`
  - `telegram.InlineQueryResultCachedAudio.input_message_content`
  - `telegram.InlineQueryResultCachedDocument.input_message_content`
  - `telegram.InlineQueryResultCachedGif.input_message_content`
  - `telegram.InlineQueryResultCachedMpeg4Gif.input_message_content`
  - `telegram.InlineQueryResultCachedPhoto.input_message_content`
  - `telegram.InlineQueryResultCachedSticker.input_message_content`
  - `telegram.InlineQueryResultCachedVideo.input_message_content`
  - `telegram.InlineQueryResultCachedVoice.input_message_content`
  - `telegram.InlineQueryResultContact.input_message_content`
  - `telegram.InlineQueryResultDocument.input_message_content`
  - `telegram.InlineQueryResultGif.input_message_content`
  - `telegram.InlineQueryResultLocation.input_message_content`
  - `telegram.InlineQueryResultMpeg4Gif.input_message_content`
  - `telegram.InlineQueryResultPhoto.input_message_content`
  - `telegram.InlineQueryResultVenue.input_message_content`
  - `telegram.InlineQueryResultVideo.input_message_content`
  - `telegram.InlineQueryResultVoice.input_message_content`
- 

New in version 13.5.

#### Parameters

- **title** (`str`) – Product name. 1- 32 characters.
- **description** (`str`) – Product description. 1- 255 characters.
- **payload** (`str`) – Bot-defined invoice payload. 1- 128 bytes. This will not be displayed to the user, use for your internal processes.
- **provider\_token** (`str`) – Payment provider token, obtained via @Botfather.
- **currency** (`str`) – Three-letter ISO 4217 currency code, see more on [currencies](#)
- **prices** (Sequence[`telegram.LabeledPrice`]) – Price breakdown, a list of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.)

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **max\_tip\_amount** (`int`, optional) – The maximum accepted amount for tips in the *smallest* units of the currency (integer, **not** float/double). For example, for a maximum tip of US\$ 1.45 pass `max_tip_amount = 145`. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies). Defaults to 0.
- **suggested\_tip\_amounts** (Sequence[`int`], optional) – An array of suggested amounts of tip in the *smallest* units of the currency (integer, **not** float/double). At most 4 suggested tip amounts can be specified. The suggested tip amounts must be positive, passed in a strictly increased order and must not exceed `max_tip_amount`.

Changed in version 20.0:

- This attribute is now an immutable tuple.

– This attribute is now always a tuple, that may be empty.

- **provider\_data** (`str`, optional) – An object for data about the invoice, which will be shared with the payment provider. A detailed description of the required fields should be provided by the payment provider.
- **photo\_url** (`str`, optional) – URL of the product photo for the invoice. Can be a photo of the goods or a marketing image for a service. People like it better when they see what they are paying for.
- **photo\_size** (`int`, optional) – Photo size.
- **photo\_width** (`int`, optional) – Photo width.
- **photo\_height** (`int`, optional) – Photo height.
- **need\_name** (`bool`, optional) – Pass `True`, if you require the user’s full name to complete the order.
- **need\_phone\_number** (`bool`, optional) – Pass `True`, if you require the user’s phone number to complete the order
- **need\_email** (`bool`, optional) – Pass `True`, if you require the user’s email address to complete the order.
- **need\_shipping\_address** (`bool`, optional) – Pass `True`, if you require the user’s shipping address to complete the order
- **send\_phone\_number\_to\_provider** (`bool`, optional) – Pass `True`, if user’s phone number should be sent to provider.
- **send\_email\_to\_provider** (`bool`, optional) – Pass `True`, if user’s email address should be sent to provider.
- **is\_flexible** (`bool`, optional) – Pass `True`, if the final price depends on the shipping method.

**title**

Product name. `1- 32` characters.

**Type**

`str`

**description**

Product description. `1- 255` characters.

**Type**

`str`

**payload**

Bot-defined invoice payload. `1- 128` bytes. This will not be displayed to the user, use for your internal processes.

**Type**

`str`

**provider\_token**

Payment provider token, obtained via `@Botfather`.

**Type**

`str`

**currency**

Three-letter ISO 4217 currency code, see more on [currencies](#)

**Type**

`str`

**prices**

Price breakdown, a list of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.)

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[[`telegram.LabeledPrice`](#)]

**max\_tip\_amount**

Optional. The maximum accepted amount for tips in the *smallest* units of the currency (integer, **not** float/double). For example, for a maximum tip of US\$ 1.45 `max_tip_amount` is 145. See the `exp` parameter in [`currencies.json`](#), it shows the number of digits past the decimal point for each currency (2 for the majority of currencies). Defaults to 0.

**Type**

[`int`](#)

**suggested\_tip\_amounts**

Optional. An array of suggested amounts of tip in the *smallest* units of the currency (integer, **not** float/double). At most 4 suggested tip amounts can be specified. The suggested tip amounts must be positive, passed in a strictly increased order and must not exceed [`max\_tip\_amount`](#).

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[[`int`](#)]

**provider\_data**

Optional. An object for data about the invoice, which will be shared with the payment provider. A detailed description of the required fields should be provided by the payment provider.

**Type**

[`str`](#)

**photo\_url**

Optional. URL of the product photo for the invoice. Can be a photo of the goods or a marketing image for a service. People like it better when they see what they are paying for.

**Type**

[`str`](#)

**photo\_size**

Optional. Photo size.

**Type**

[`int`](#)

**photo\_width**

Optional. Photo width.

**Type**

[`int`](#)

**photo\_height**

Optional. Photo height.

**Type**

[`int`](#)

**need\_name**

Optional. Pass [`True`](#), if you require the user's full name to complete the order.

**Type**

[`bool`](#)

**need\_phone\_number**

Optional. Pass `True`, if you require the user's phone number to complete the order

**Type**

`bool`

**need\_email**

Optional. Pass `True`, if you require the user's email address to complete the order.

**Type**

`bool`

**need\_shipping\_address**

Optional. Pass `True`, if you require the user's shipping address to complete the order

**Type**

`bool`

**send\_phone\_number\_to\_provider**

Optional. Pass `True`, if user's phone number should be sent to provider.

**Type**

`bool`

**send\_email\_to\_provider**

Optional. Pass `True`, if user's email address should be sent to provider.

**Type**

`bool`

**is\_flexible**

Optional. Pass `True`, if the final price depends on the shipping method.

**Type**

`bool`

**classmethod de\_json(data, bot)**

See [`telegram.TelegramObject.de\_json\(\)`](#).

## Payments

### Invoice

**class** `telegram.Invoice`(*title, description, start\_parameter, currency, total\_amount, \*, api\_kwargs=None*)

Bases: [`telegram.TelegramObject`](#)

This object contains basic information about an invoice.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *title*, *description*, *start\_parameter*, *currency* and *total\_amount* are equal.

---

**Available In**

[`telegram.Message.invoice`](#)

---

**Parameters**

- **title** (`str`) – Product name.
- **description** (`str`) – Product description.
- **start\_parameter** (`str`) – Unique bot deep-linking parameter that can be used to generate this invoice.

- **currency** (`str`) – Three-letter ISO 4217 currency code.
- **total\_amount** (`int`) – Total price in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 pass `amount = 145`. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).

**title**

Product name.

**Type**

`str`

**description**

Product description.

**Type**

`str`

**start\_parameter**

Unique bot deep-linking parameter that can be used to generate this invoice.

**Type**

`str`

**currency**

Three-letter ISO 4217 currency code.

**Type**

`str`

**total\_amount**

Total price in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 `amount` is 145. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).

**Type**

`int`

**MAX\_DESCRIPTION\_LENGTH = 255**

`telegram.constants.InvoiceLimit.MAX_DESCRIPTION_LENGTH`

New in version 20.0.

**MAX\_PAYLOAD\_LENGTH = 128**

`telegram.constants.InvoiceLimit.MAX_PAYLOAD_LENGTH`

New in version 20.0.

**MAX\_TIP\_AMOUNTS = 4**

`telegram.constants.InvoiceLimit.MAX_TIP_AMOUNTS`

New in version 20.0.

**MAX\_TITLE\_LENGTH = 32**

`telegram.constants.InvoiceLimit.MAX_TITLE_LENGTH`

New in version 20.0.

**MIN\_DESCRIPTION\_LENGTH = 1**

`telegram.constants.InvoiceLimit.MIN_DESCRIPTION_LENGTH`

New in version 20.0.

**MIN\_PAYLOAD\_LENGTH = 1**

`telegram.constants.InvoiceLimit.MIN_PAYLOAD_LENGTH`

New in version 20.0.

**MIN\_TITLE\_LENGTH = 1**

`telegram.constants.InvoiceLimit.MIN_TITLE_LENGTH`

New in version 20.0.

## LabeledPrice

**class** telegram.LabeledPrice(*label, amount, \*, api\_kwargs=None*)

Bases: `telegram.TelegramObject`

This object represents a portion of the price for goods or services.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *label* and *amount* are equal.

---

### Use In

- `telegram.Bot.create_invoice_link()`
- `telegram.Bot.send_invoice()`

---

### Available In

- `telegram.InputInvoiceMessageContent.prices`
- `telegram.ShippingOption.prices`

---

### Examples

*Payment Bot*

---

#### Parameters

- **label** (`str`) – Portion label.
- **amount** (`int`) – Price of the product in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 pass `amount = 145`. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).

#### label

Portion label.

##### Type

`str`

#### amount

Price of the product in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 `amount` is 145. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).

##### Type

`int`



## OrderInfo

**class** telegram.**OrderInfo**(*name=None, phone\_number=None, email=None, shipping\_address=None, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents information about an order.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *name*, *phone\_number*, *email* and *shipping\_address* are equal.

---

### Available In

- [telegram.PreCheckoutQuery.order\\_info](#)
  - [telegram.SuccessfulPayment.order\\_info](#)
- 

### Parameters

- **name** ([str](#), optional) – User name.
- **phone\_number** ([str](#), optional) – User’s phone number.
- **email** ([str](#), optional) – User email.
- **shipping\_address** ([telegram.ShippingAddress](#), optional) – User shipping address.

#### **name**

Optional. User name.

##### **Type**

[str](#)

#### **phone\_number**

Optional. User’s phone number.

##### **Type**

[str](#)

#### **email**

Optional. User email.

##### **Type**

[str](#)

#### **shipping\_address**

Optional. User shipping address.

##### **Type**

[telegram.ShippingAddress](#)

#### **classmethod de\_json**(*data, bot*)

See [telegram.TelegramObject.de\\_json\(\)](#).

## PreCheckoutQuery

```
class telegram.PreCheckoutQuery(id, from_user, currency, total_amount, invoice_payload,  
                                shipping_option_id=None, order_info=None, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object contains information about an incoming pre-checkout query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *id* is equal.

---

**Note:** In Python `from` is a reserved word. Use `from_user` instead.

---

---

### Available In

[telegram.Update.pre\\_checkout\\_query](#)

---

#### Parameters

- **id** ([str](#)) – Unique query identifier.
- **from\_user** ([telegram.User](#)) – User who sent the query.
- **currency** ([str](#)) – Three-letter ISO 4217 currency code.
- **total\_amount** ([int](#)) – Total price in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 pass `amount = 145`. See the `exp` parameter in [currencies.json](#), it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).
- **invoice\_payload** ([str](#)) – Bot specified invoice payload.
- **shipping\_option\_id** ([str](#), optional) – Identifier of the shipping option chosen by the user.
- **order\_info** ([telegram.OrderInfo](#), optional) – Order info provided by the user.

#### id

Unique query identifier.

##### Type

[str](#)

#### from\_user

User who sent the query.

##### Type

[telegram.User](#)

#### currency

Three-letter ISO 4217 currency code.

##### Type

[str](#)

#### total\_amount

Total price in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 `amount` is 145. See the `exp` parameter in [currencies.json](#), it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).

##### Type

[int](#)

**invoice\_payload**

Bot specified invoice payload.

**Type**

`str`

**shipping\_option\_id**

Optional. Identifier of the shipping option chosen by the user.

**Type**

`str`

**order\_info**

Optional. Order info provided by the user.

**Type**

`telegram.OrderInfo`

**async** **answer**(*ok*, *error\_message=None*, \*, *read\_timeout=None*, *write\_timeout=None*,  
*connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.answer_pre_checkout_query(update.pre_checkout_query.id, *args,  
    **kwargs)
```

For the documentation of the arguments, please see `telegram.Bot.answer_pre_checkout_query()`.

**classmethod de\_json**(*data*, *bot*)

See `telegram.TelegramObject.de_json()`.

## ShippingAddress

**class** `telegram.ShippingAddress`(*country\_code*, *state*, *city*, *street\_line1*, *street\_line2*, *post\_code*, \*,  
*api\_kwargs=None*)

Bases: `telegram.TelegramObject`

This object represents a Telegram ShippingAddress.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *country\_code*, *state*, *city*, *street\_line1*, *street\_line2* and *post\_code* are equal.

---

**Available In**

- `telegram.OrderInfo.shipping_address`
  - `telegram.ShippingQuery.shipping_address`
- 

**Parameters**

- **country\_code** (`str`) – ISO 3166-1 alpha-2 country code.
- **state** (`str`) – State, if applicable.
- **city** (`str`) – City.
- **street\_line1** (`str`) – First line for the address.
- **street\_line2** (`str`) – Second line for the address.
- **post\_code** (`str`) – Address post code.

**country\_code**

ISO 3166-1 alpha-2 country code.

**Type**

`str`

**state**

State, if applicable.

**Type**

`str`

**city**

City.

**Type**

`str`

**street\_line1**

First line for the address.

**Type**

`str`

**street\_line2**

Second line for the address.

**Type**

`str`

**post\_code**

Address post code.

**Type**

`str`

## ShippingOption

**class** telegram.**ShippingOption**(*id*, *title*, *prices*, \*, *api\_kwargs*=None)

Bases: [`telegram.TelegramObject`](#)

This object represents one shipping option.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *id* is equal.

---

**Use In**

[`telegram.Bot.answer\_shipping\_query\(\)`](#)

---

---

**Examples**

[\*Payment Bot\*](#)

---

**Parameters**

- **id** (`str`) – Shipping option identifier.
- **title** (`str`) – Option title.

- **prices** (Sequence[[telegram.LabeledPrice](#)]) – List of price portions.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

**id**

Shipping option identifier.

**Type**

[str](#)

**title**

Option title.

**Type**

[str](#)

**prices**

List of price portions.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[[telegram.LabeledPrice](#)]

## ShippingQuery

**class** telegram.**ShippingQuery**(*id, from\_user, invoice\_payload, shipping\_address, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object contains information about an incoming shipping query.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *id* is equal.

---

**Note:** In Python `from` is a reserved word. Use `from_user` instead.

---

---

### Available In

[telegram.Update.shipping\\_query](#)

---

### Parameters

- **id** ([str](#)) – Unique query identifier.
- **from\_user** ([telegram.User](#)) – User who sent the query.
- **invoice\_payload** ([str](#)) – Bot specified invoice payload.
- **shipping\_address** ([telegram.ShippingAddress](#)) – User specified shipping address.

**id**

Unique query identifier.

**Type**

[str](#)

**from\_user**

User who sent the query.

**Type**

[`telegram.User`](#)

**invoice\_payload**

Bot specified invoice payload.

**Type**

`str`

**shipping\_address**

User specified shipping address.

**Type**

[`telegram.ShippingAddress`](#)

**async answer**(*ok*, *shipping\_options=None*, *error\_message=None*, \*, *read\_timeout=None*,  
*write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Shortcut for:

```
await bot.answer_shipping_query(update.shipping_query.id, *args, **kwargs)
```

For the documentation of the arguments, please see [`telegram.Bot.answer\_shipping\_query\(\)`](#).

**classmethod de\_json**(*data*, *bot*)

See [`telegram.TelegramObject.de\_json\(\)`](#).

## SuccessfulPayment

**class telegram.SuccessfulPayment**(*currency*, *total\_amount*, *invoice\_payload*,  
*telegram\_payment\_charge\_id*, *provider\_payment\_charge\_id*,  
*shipping\_option\_id=None*, *order\_info=None*, \*, *api\_kwargs=None*)

Bases: [`telegram.TelegramObject`](#)

This object contains basic information about a successful payment.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [`telegram\_payment\_charge\_id`](#) and [`provider\_payment\_charge\_id`](#) are equal.

---

### Available In

[`telegram.Message.successful\_payment`](#)

---

### Parameters

- **currency** (`str`) – Three-letter ISO 4217 currency code.
- **total\_amount** (`int`) – Total price in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 pass `amount = 145`. See the `exp` parameter in [currencies.json](#), it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).
- **invoice\_payload** (`str`) – Bot specified invoice payload.
- **shipping\_option\_id** (`str`, optional) – Identifier of the shipping option chosen by the user.
- **order\_info** ([`telegram.OrderInfo`](#), optional) – Order info provided by the user.
- **telegram\_payment\_charge\_id** (`str`) – Telegram payment identifier.

- **provider\_payment\_charge\_id** (`str`) – Provider payment identifier.

**currency**

Three-letter ISO 4217 currency code.

**Type**

`str`

**total\_amount**

Total price in the smallest units of the currency (integer, not float/double). For example, for a price of US\$ 1.45 `amount` is 145. See the `exp` parameter in `currencies.json`, it shows the number of digits past the decimal point for each currency (2 for the majority of currencies).

**Type**

`int`

**invoice\_payload**

Bot specified invoice payload.

**Type**

`str`

**shipping\_option\_id**

Optional. Identifier of the shipping option chosen by the user.

**Type**

`str`

**order\_info**

Optional. Order info provided by the user.

**Type**

`telegram.OrderInfo`

**telegram\_payment\_charge\_id**

Telegram payment identifier.

**Type**

`str`

**provider\_payment\_charge\_id**

Provider payment identifier.

**Type**

`str`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

## Games

### Callbackgame

**class** telegram.CallbackGame(\*, *api\_kwargs=None*)

Bases: `telegram.TelegramObject`

A placeholder, currently holds no information. Use BotFather to set up your game.

---

**Available In**

`telegram.InlineKeyboardButton.callback_game`

---

## Game

```
class telegram.Game(title, description, photo, text=None, text_entities=None, animation=None, *,
                    api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a game. Use [BotFather](#) to create and edit games, their short names will act as unique identifiers.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [title](#), [description](#) and [photo](#) are equal.

---

### Available In

[telegram.Message.game](#)

---

### Parameters

- **title** ([str](#)) – Title of the game.
- **description** ([str](#)) – Description of the game.
- **photo** (Sequence[[telegram.PhotoSize](#)]) – Photo that will be displayed in the game message in chats.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

- **text** ([str](#), optional) – Brief description of the game or high scores included in the game message. Can be automatically edited to include current high scores for the game when the bot calls [telegram.Bot.set\\_game\\_score\(\)](#), or manually edited using [telegram.Bot.edit\\_message\\_text\(\)](#). 0-4096 characters.
- **text\_entities** (Sequence[[telegram.MessageEntity](#)], optional) – Special entities that appear in text, such as usernames, URLs, bot commands, etc.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

- **animation** ([telegram.Animation](#), optional) – Animation that will be displayed in the game message in chats. Upload via [BotFather](#).

### title

Title of the game.

#### Type

[str](#)

### description

Description of the game.

#### Type

[str](#)

### photo

Photo that will be displayed in the game message in chats.

Changed in version 20.0: This attribute is now an immutable tuple.

#### Type

Tuple[[telegram.PhotoSize](#)]



**text**

Optional. Brief description of the game or high scores included in the game message. Can be automatically edited to include current high scores for the game when the bot calls `telegram.Bot.set_game_score()`, or manually edited using `telegram.Bot.edit_message_text()`. 0-4096 characters.

**Type**

`str`

**text\_entities**

Optional. Special entities that appear in text, such as usernames, URLs, bot commands, etc. This tuple is empty if the message does not contain text entities.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[`telegram.MessageEntity`]

**animation**

Optional. Animation that will be displayed in the game message in chats. Upload via `BotFather`.

**Type**

`telegram.Animation`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**parse\_text\_entities(types=None)**

Returns a `dict` that maps `telegram.MessageEntity` to `str`. It contains entities from this message filtered by their `type` attribute as the key, and the text that each entity belongs to as the value of the `dict`.

---

**Note:** This method should always be used instead of the `text_entities` attribute, since it calculates the correct substring from the message text based on UTF-16 codepoints. See `parse_text_entity` for more info.

---

**Parameters**

**types** (List[`str`], optional) – List of `telegram.MessageEntity` types as strings. If the `type` attribute of an entity is contained in this list, it will be returned. Defaults to `telegram.MessageEntity.ALL_TYPES`.

**Returns**

A dictionary of entities mapped to the text that belongs to them, calculated based on UTF-16 codepoints.

**Return type**

Dict[`telegram.MessageEntity`, `str`]

**parse\_text\_entity(entity)**

Returns the text from a given `telegram.MessageEntity`.

---

**Note:** This method is present because Telegram calculates the offset and length in UTF-16 codepoint pairs, which some versions of Python don't handle automatically. (That is, you can't just slice `Message.text` with the offset and length.)

---

**Parameters**

**entity** (`telegram.MessageEntity`) – The entity to extract the text from. It must be an entity that belongs to this message.

**Returns**

The text of the given entity.

**Return type**

`str`

**Raises**

**RuntimeError** – If this game has no text.

## GameHighScore

**class** telegram.**GameHighScore**(*position, user, score, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents one row of the high scores table for a game.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *position*, *user* and *score* are equal.

**Parameters**

- **position** (`int`) – Position in high score table for the game.
- **user** ([telegram.User](#)) – User.
- **score** (`int`) – Score.

**position**

Position in high score table for the game.

**Type**

`int`

**user**

User.

**Type**

[telegram.User](#)

**score**

Score.

**Type**

`int`

**classmethod** **de\_json**(*data, bot*)

See [telegram.TelegramObject.de\\_json\(\)](#).

## Passport

### Credentials

**class** telegram.**Credentials**(*secure\_data, nonce, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

---

**Available In**

- [telegram.EncryptedCredentials.data](#)
  - [telegram.EncryptedCredentials.decrypted\\_data](#)
  - [telegram.PassportData.decrypted\\_credentials](#)
-

**secure\_data**

Credentials for encrypted data

**Type**

`telegram.SecureData`

**nonce**

Bot-specified nonce

**Type**

`str`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

## DataCredentials

**class** `telegram.DataCredentials(data_hash, secret, *, api_kwargs=None)`

Bases: `telegram.TelegramObject`

These credentials can be used to decrypt encrypted data from the data field in `EncryptedPassportData`.

---

**Available In**

`telegram.SecureValue.data`

---

**Parameters**

- **data\_hash** (`str`) – Checksum of encrypted data
- **secret** (`str`) – Secret of encrypted data

**hash**

Checksum of encrypted data

**Type**

`str`

**secret**

Secret of encrypted data

**Type**

`str`

## EncryptedCredentials

**class** `telegram.EncryptedCredentials(data, hash, secret, *, api_kwargs=None)`

Bases: `telegram.TelegramObject`

Contains data required for decrypting and authenticating `EncryptedPassportElement`. See the Telegram Passport Documentation for a complete description of the data decryption and authentication processes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `data`, `hash` and `secret` are equal.

---

**Note:** This object is decrypted only when originating from `telegram.PassportData.decrypted_credentials`.

---

---

**Available In***telegram.PassportData.credentials*

---

**Parameters**

- **data** (*telegram.Credentials* | *str*) – Decrypted data with unique user’s nonce, data hashes and secrets used for EncryptedPassportElement decryption and authentication or base64 encrypted data.
- **hash** (*str*) – Base64-encoded data hash for data authentication.
- **secret** (*str*) – Decrypted or encrypted secret used for decryption.

**data**

Decrypted data with unique user’s nonce, data hashes and secrets used for EncryptedPassportElement decryption and authentication or base64 encrypted data.

**Type***telegram.Credentials* | *str***hash**

Base64-encoded data hash for data authentication.

**Type***str***secret**

Decrypted or encrypted secret used for decryption.

**Type***str***property decrypted\_data**

**Lazily decrypt and return credentials data. This object**  
also contains the user specified nonce as *decrypted\_data.nonce*.

**Raises**

*telegram.error.PassportDecryptionError* – Decryption failed. Usually due to bad private/public key but can also suggest malformed/tampered data.

**Type***telegram.Credentials***property decrypted\_secret**

Lazily decrypt and return secret.

**Raises**

*telegram.error.PassportDecryptionError* – Decryption failed. Usually due to bad private/public key but can also suggest malformed/tampered data.

**Type***str*

## EncryptedPassportElement

```
class telegram.EncryptedPassportElement(type, hash, data=None, phone_number=None, email=None,
                                         files=None, front_side=None, reverse_side=None,
                                         selfie=None, translation=None, credentials=None, *,
                                         api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

Contains information about documents or other Telegram Passport elements shared with the bot by the user. The data has been automatically decrypted by python-telegram-bot.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [type](#), [data](#), [phone\\_number](#), [email](#), [files](#), [front\\_side](#), [reverse\\_side](#) and [selfie](#) are equal.

---

**Note:** This object is decrypted only when originating from [telegram.PassportData.decrypted\\_data](#).

---

### Available In

[telegram.PassportData.data](#)

---

### Parameters

- **type** ([str](#)) – Element type. One of “personal\_details”, “passport”, “driver\_license”, “identity\_card”, “internal\_passport”, “address”, “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration”, “temporary\_registration”, “phone\_number”, “email”.
- **hash** ([str](#)) – Base64-encoded element hash for using in [telegram.PassportElementErrorUnspecified](#).
- **data** ([telegram.PersonalDetails](#) | [telegram.IdDocumentData](#) | [telegram.ResidentialAddress](#) | [str](#), optional) – Decrypted or encrypted data, available for “personal\_details”, “passport”, “driver\_license”, “identity\_card”, “internal\_passport” and “address” types.
- **phone\_number** ([str](#), optional) – User’s verified phone number, available only for “phone\_number” type.
- **email** ([str](#), optional) – User’s verified email address, available only for “email” type.
- **files** (Sequence[[telegram.PassportFile](#)], optional) – Array of encrypted/decrypted files with documents provided by the user, available for “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration” types.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

- **front\_side** ([telegram.PassportFile](#), optional) – Encrypted/decrypted file with the front side of the document, provided by the user. Available for “passport”, “driver\_license”, “identity\_card” and “internal\_passport”.
- **reverse\_side** ([telegram.PassportFile](#), optional) – Encrypted/decrypted file with the reverse side of the document, provided by the user. Available for “driver\_license” and “identity\_card”.
- **selfie** ([telegram.PassportFile](#), optional) – Encrypted/decrypted file with the selfie of the user holding a document, provided by the user; available for “passport”, “driver\_license”, “identity\_card” and “internal\_passport”.

- **translation** (Sequence[[telegram.PassportFile](#)], optional) – Array of encrypted/decrypted files with translated versions of documents provided by the user. Available if requested for “passport”, “driver\_license”, “identity\_card”, “internal\_passport”, “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration” types.

Changed in version 20.0: Accepts any [collections.abc.Sequence](#) as input instead of just a list. The input is converted to a tuple.

**type**

Element type. One of “personal\_details”, “passport”, “driver\_license”, “identity\_card”, “internal\_passport”, “address”, “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration”, “temporary\_registration”, “phone\_number”, “email”.

**Type**

[str](#)

**hash**

Base64-encoded element hash for using in [telegram.PassportElementErrorUnspecified](#).

**Type**

[str](#)

**data**

Optional. Decrypted or encrypted data, available for “personal\_details”, “passport”, “driver\_license”, “identity\_card”, “internal\_passport” and “address” types.

**Type**

[telegram.PersonalDetails](#) | [telegram.IdDocumentData](#) | [telegram.ResidentialAddress](#) | [str](#)

**phone\_number**

Optional. User’s verified phone number, available only for “phone\_number” type.

**Type**

[str](#)

**email**

Optional. User’s verified email address, available only for “email” type.

**Type**

[str](#)

**files**

Optional. Array of encrypted/decrypted files with documents provided by the user, available for “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration” types.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[[telegram.PassportFile](#)]

**front\_side**

Optional. Encrypted/decrypted file with the front side of the document, provided by the user. Available for “passport”, “driver\_license”, “identity\_card” and “internal\_passport”.

**Type**

[telegram.PassportFile](#)

**reverse\_side**

Optional. Encrypted/decrypted file with the reverse side of the document, provided by the user. Available for “driver\_license” and “identity\_card”.

**Type**

*telegram.PassportFile*

**selfie**

Optional. Encrypted/decrypted file with the selfie of the user holding a document, provided by the user; available for “passport”, “driver\_license”, “identity\_card” and “internal\_passport”.

**Type**

*telegram.PassportFile*

**translation**

Optional. Array of encrypted/decrypted files with translated versions of documents provided by the user. Available if requested for “passport”, “driver\_license”, “identity\_card”, “internal\_passport”, “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration” types.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[*telegram.PassportFile*]

**classmethod de\_json(data, bot)**

See *telegram.TelegramObject.de\_json()*.

**classmethod de\_json\_decrypted(data, bot, credentials)**

Variant of *telegram.TelegramObject.de\_json()* that also takes into account passport credentials.

**Parameters**

- **data** (Dict[str, ...]) – The JSON data.
- **bot** (*telegram.Bot*) – The bot associated with this object.
- **credentials** (*telegram.FileCredentials*) – The credentials

**Return type**

*telegram.EncryptedPassportElement*

## FileCredentials

**class telegram.FileCredentials(file\_hash, secret, \*, api\_kwargs=None)**

Bases: *telegram.TelegramObject*

These credentials can be used to decrypt encrypted files from the front\_side, reverse\_side, selfie and files fields in EncryptedPassportData.

---

**Available In**

- *telegram.SecureValue.files*
- *telegram.SecureValue.front\_side*
- *telegram.SecureValue.reverse\_side*
- *telegram.SecureValue.selfie*
- *telegram.SecureValue.translation*

**Parameters**

- **file\_hash** (`str`) – Checksum of encrypted file
- **secret** (`str`) – Secret of encrypted file

**hash**

Checksum of encrypted file

**Type**

`str`

**secret**

Secret of encrypted file

**Type**

`str`

**IdDocumentData**

**class** telegram.IdDocumentData(*document\_no*, *expiry\_date*, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

This object represents the data of an identity document.

---

**Available In**

[telegram.EncryptedPassportElement.data](#)

---

**Parameters**

- **document\_no** (`str`) – Document number.
- **expiry\_date** (`str`) – Optional. Date of expiry, in DD.MM.YYYY format.

**document\_no**

Document number.

**Type**

`str`

**expiry\_date**

Optional. Date of expiry, in DD.MM.YYYY format.

**Type**

`str`

**PassportData**

**class** telegram.PassportData(*data*, *credentials*, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

Contains information about Telegram Passport data shared with the bot by the user.

---

**Note:** To be able to decrypt this object, you must pass your `private_key` to either [telegram.ext.Updater](#) or [telegram.Bot](#). Decrypted data is then found in `decrypted_data` and the payload can be found in `decrypted_credentials`'s attribute [telegram.Credentials.nonce](#).

---



---

**Available In***telegram.Message.passport\_data*

---

**Parameters**

- **data** (Sequence[*telegram.EncryptedPassportElement*]) – Array with encrypted information about documents and other Telegram Passport elements that was shared with the bot.

Changed in version 20.0: Accepts any `collections.abc.Sequence` as input instead of just a list. The input is converted to a tuple.

- **credentials** (*telegram.EncryptedCredentials*) – Encrypted credentials.

**data**

Array with encrypted information about documents and other Telegram Passport elements that was shared with the bot.

Changed in version 20.0: This attribute is now an immutable tuple.

**Type***Tuple[telegram.EncryptedPassportElement]***credentials**

Encrypted credentials.

**Type***telegram.EncryptedCredentials***classmethod de\_json(data, bot)**

See *telegram.TelegramObject.de\_json()*.

**property decrypted\_credentials****Lazily decrypt and return credentials that were used**

to decrypt the data. This object also contains the user specified payload as *decrypted\_data.payload*.

**Raises**

*telegram.error.PassportDecryptionError* – Decryption failed. Usually due to bad private/public key but can also suggest malformed/tampered data.

**Type***telegram.Credentials***property decrypted\_data****Lazily decrypt and return information**

about documents and other Telegram Passport elements which were shared with the bot.

Changed in version 20.0: Returns a tuple instead of a list.

**Raises**

*telegram.error.PassportDecryptionError* – Decryption failed. Usually due to bad private/public key but can also suggest malformed/tampered data.

**Type***Tuple[telegram.EncryptedPassportElement]*

## PassportElementError

**class** telegram.PassportElementError(*source, type, message, \*, api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

Baseclass for the PassportElementError\* classes.

This object represents an error in the Telegram Passport element which was submitted that should be resolved by the user.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [source](#) and [type](#) are equal.

---

### Use In

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

#### Parameters

- **source** ([str](#)) – Error source.
- **type** ([str](#)) – The section of the user’s Telegram Passport which has the error.
- **message** ([str](#)) – Error message.

#### source

Error source.

#### Type

[str](#)

#### type

The section of the user’s Telegram Passport which has the error.

#### Type

[str](#)

#### message

Error message.

#### Type

[str](#)

## PassportElementErrorDataField

**class** telegram.PassportElementErrorDataField(*type, field\_name, data\_hash, message, \*, api\_kwargs=None*)

Bases: [telegram.PassportElementError](#)

Represents an issue in one of the data fields that was provided by the user. The error is considered resolved when the field’s value changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [source](#), [type](#), [field\\_name](#), [data\\_hash](#) and [message](#) are equal.

---

### Use In

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

#### Parameters

- **type** (`str`) – The section of the user’s Telegram Passport which has the error, one of "personal\_details", "passport", "driver\_license", "identity\_card", "internal\_passport", "address".
- **field\_name** (`str`) – Name of the data field which has the error.
- **data\_hash** (`str`) – Base64-encoded data hash.
- **message** (`str`) – Error message.

**type**

The section of the user’s Telegram Passport which has the error, one of "personal\_details", "passport", "driver\_license", "identity\_card", "internal\_passport", "address".

**Type**

`str`

**field\_name**

Name of the data field which has the error.

**Type**

`str`

**data\_hash**

Base64-encoded data hash.

**Type**

`str`

**message**

Error message.

**Type**

`str`

---

**PassportElementErrorFile**

**class** telegram.PassportElementErrorFile(*type, file\_hash, message, \*, api\_kwargs=None*)

Bases: [telegram.PassportElementError](#)

Represents an issue with a document scan. The error is considered resolved when the file with the document scan changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [source](#), [type](#), [file\\_hash](#), and [message](#) are equal.

---

**Use In**

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

**Parameters**

- **type** (`str`) – The section of the user’s Telegram Passport which has the issue, one of "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".
- **file\_hash** (`str`) – Base64-encoded file hash.
- **message** (`str`) – Error message.

**type**

The section of the user's Telegram Passport which has the issue, one of "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".

**Type**

`str`

**file\_hash**

Base64-encoded file hash.

**Type**

`str`

**message**

Error message.

**Type**

`str`

## PassportElementErrorFiles

**class** telegram.PassportElementErrorFiles(*type*, *file\_hashes*, *message*, \*, *api\_kwargs*=None)

Bases: [`telegram.PassportElementError`](#)

Represents an issue with a list of scans. The error is considered resolved when the list of files with the document scans changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [`source`](#), [`type`](#), [`file\_hashes`](#), and [`message`](#) are equal.

---

**Use In**

[`telegram.Bot.set\_passport\_data\_errors\(\)`](#)

---

**Parameters**

- **type** (`str`) – The section of the user's Telegram Passport which has the issue, one of "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".
- **file\_hashes** (`List[str]`) – List of base64-encoded file hashes.
- **message** (`str`) – Error message.

**type**

The section of the user's Telegram Passport which has the issue, one of "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".

**Type**

`str`

**message**

Error message.

**Type**

`str`

**property file\_hashes**

List of base64-encoded file hashes.

Deprecated since version 20.6: This attribute will return a tuple instead of a list in future major versions.

**to\_dict**(*recursive=True*)

See `telegram.TelegramObject.to_dict()` for details.

---

**PassportElementErrorFrontSide**

**class** telegram.PassportElementErrorFrontSide(*type, file\_hash, message, \*, api\_kwargs=None*)

Bases: `telegram.PassportElementError`

Represents an issue with the front side of a document. The error is considered resolved when the file with the front side of the document changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *source*, *type*, *file\_hash*, and *message* are equal.

---

**Use In**

`telegram.Bot.set_passport_data_errors()`

---

**Parameters**

- **type** (*str*) – The section of the user’s Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport".
- **file\_hash** (*str*) – Base64-encoded hash of the file with the front side of the document.
- **message** (*str*) – Error message.

**type**

The section of the user’s Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport".

**Type**

*str*

**file\_hash**

Base64-encoded hash of the file with the front side of the document.

**Type**

*str*

**message**

Error message.

**Type**

*str*

## PassportElementErrorReverseSide

**class** telegram.PassportElementErrorReverseSide(*type*, *file\_hash*, *message*, \*, *api\_kwargs*=None)

Bases: [telegram.PassportElementError](#)

Represents an issue with the reverse side of a document. The error is considered resolved when the file with the reverse side of the document changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *source*, *type*, *file\_hash*, and *message* are equal.

---

### Use In

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

### Parameters

- **type** ([str](#)) – The section of the user’s Telegram Passport which has the issue, one of "driver\_license", "identity\_card".
- **file\_hash** ([str](#)) – Base64-encoded hash of the file with the reverse side of the document.
- **message** ([str](#)) – Error message.

### type

The section of the user’s Telegram Passport which has the issue, one of "driver\_license", "identity\_card".

#### Type

[str](#)

### file\_hash

Base64-encoded hash of the file with the reverse side of the document.

#### Type

[str](#)

### message

Error message.

#### Type

[str](#)

## PassportElementErrorSelfie

**class** telegram.PassportElementErrorSelfie(*type*, *file\_hash*, *message*, \*, *api\_kwargs*=None)

Bases: [telegram.PassportElementError](#)

Represents an issue with the selfie with a document. The error is considered resolved when the file with the selfie changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *source*, *type*, *file\_hash*, and *message* are equal.

---

### Use In

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

### Parameters

- **type** (`str`) – The section of the user's Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport".
- **file\_hash** (`str`) – Base64-encoded hash of the file with the selfie.
- **message** (`str`) – Error message.

**type**

The section of the user's Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport".

**Type**

`str`

**file\_hash**

Base64-encoded hash of the file with the selfie.

**Type**

`str`

**message**

Error message.

**Type**

`str`

## PassportElementErrorTranslationFile

```
class telegram.PassportElementErrorTranslationFile(type, file_hash, message, *,
                                                    api_kwargs=None)
```

Bases: [telegram.PassportElementError](#)

Represents an issue with one of the files that constitute the translation of a document. The error is considered resolved when the file changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [source](#), [type](#), [file\\_hash](#), and [message](#) are equal.

---

**Use In**

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

**Parameters**

- **type** (`str`) – Type of element of the user's Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport", "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".
- **file\_hash** (`str`) – Base64-encoded hash of the file.
- **message** (`str`) – Error message.

**type**

Type of element of the user's Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport", "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".

**Type**

`str`

**file\_hash**

Base64-encoded hash of the file.

**Type**

`str`

**message**

Error message.

**Type**

`str`

---

**PassportElementErrorTranslationFiles**

```
class telegram.PassportElementErrorTranslationFiles(type, file_hashes, message, *,
                                                    api_kwargs=None)
```

Bases: [`telegram.PassportElementError`](#)

Represents an issue with the translated version of a document. The error is considered resolved when a file with the document translation changes.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their [`source`](#), [`type`](#), [`file\_hashes`](#), and [`message`](#) are equal.

---

**Use In**

[`telegram.Bot.set\_passport\_data\_errors\(\)`](#)

---

**Parameters**

- **type** (`str`) – Type of element of the user's Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport", "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".
- **file\_hashes** (`List[str]`) – List of base64-encoded file hashes.
- **message** (`str`) – Error message.

**type**

Type of element of the user's Telegram Passport which has the issue, one of "passport", "driver\_license", "identity\_card", "internal\_passport", "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration", "temporary\_registration".

**Type**

`str`

**message**

Error message.

**Type**

`str`

**property file\_hashes**

List of base64-encoded file hashes.

Deprecated since version 20.6: This attribute will return a tuple instead of a list in future major versions.

**to\_dict**(*recursive=True*)

See [`telegram.TelegramObject.to\_dict\(\)`](#) for details.



## PassportElementErrorUnspecified

```
class telegram.PassportElementErrorUnspecified(type, element_hash, message, *,
                                              api_kwargs=None)
```

Bases: [telegram.PassportElementError](#)

Represents an issue in an unspecified place. The error is considered resolved when new data is added.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *source*, *type*, *element\_hash*, and *message* are equal.

---

### Use In

[telegram.Bot.set\\_passport\\_data\\_errors\(\)](#)

---

### Parameters

- **type** (*str*) – Type of element of the user’s Telegram Passport which has the issue.
- **element\_hash** (*str*) – Base64-encoded element hash.
- **message** (*str*) – Error message.

### type

Type of element of the user’s Telegram Passport which has the issue.

#### Type

*str*

### element\_hash

Base64-encoded element hash.

#### Type

*str*

### message

Error message.

#### Type

*str*

## PassportFile

```
class telegram.PassportFile(file_id, file_unique_id, file_date, file_size, credentials=None, *,
                           api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents a file uploaded to Telegram Passport. Currently all Telegram Passport files are in JPEG format when decrypted and don’t exceed 10MB.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their *file\_unique\_id* is equal.

---

### Available In

- [telegram.EncryptedPassportElement.files](#)
- [telegram.EncryptedPassportElement.front\\_side](#)
- [telegram.EncryptedPassportElement.reverse\\_side](#)
- [telegram.EncryptedPassportElement.selfie](#)

- `telegram.EncryptedPassportElement.translation`
- 

#### Parameters

- **file\_id** (`str`) – Identifier for this file, which can be used to download or reuse the file.
- **file\_unique\_id** (`str`) – Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.
- **file\_size** (`int`) – File size in bytes.
- **file\_date** (`int`) – Unix time when the file was uploaded.

Deprecated since version 20.6: This argument will only accept a datetime instead of an integer in future major versions.

#### **file\_id**

Identifier for this file, which can be used to download or reuse the file.

##### Type

`str`

#### **file\_unique\_id**

Unique identifier for this file, which is supposed to be the same over time and for different bots. Can't be used to download or reuse the file.

##### Type

`str`

#### **file\_size**

File size in bytes.

##### Type

`int`

#### **classmethod de\_json\_decrypted**(*data, bot, credentials*)

Variant of `telegram.TelegramObject.de_json()` that also takes into account passport credentials.

#### Parameters

- **data** (`Dict[str, ...]`) – The JSON data.
- **bot** (`telegram.Bot`) – The bot associated with this object.
- **credentials** (`telegram.FileCredentials`) – The credentials

#### Return type

`telegram.PassportFile`

#### **classmethod de\_list\_decrypted**(*data, bot, credentials*)

Variant of `telegram.TelegramObject.de_list()` that also takes into account passport credentials.

Changed in version 20.0:

- Returns a tuple instead of a list.
- Filters out any `None` values

#### Parameters

- **data** (`List[Dict[str, ...]]`) – The JSON data.
- **bot** (`telegram.Bot`) – The bot associated with these objects.
- **credentials** (`telegram.FileCredentials`) – The credentials

#### Return type

`Tuple[telegram.PassportFile]`

**property file\_date**

Unix time when the file was uploaded.

Deprecated since version 20.6: This attribute will return a datetime instead of a integer in future major versions.

**Type**

`int`

**async get\_file**(*\*, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, api\_kwargs=None*)

Wrapper over `telegram.Bot.get_file()`. Will automatically assign the correct credentials to the returned `telegram.File` if originating from `telegram.PassportData.decrypted_data`.

For the documentation of the arguments, please see `telegram.Bot.get_file()`.

**Returns**

`telegram.File`

**Raises**

`telegram.error.TelegramError` –

**to\_dict**(*recursive=True*)

See `telegram.TelegramObject.to_dict()` for details.

## PersonalDetails

```
class telegram.PersonalDetails(first_name, last_name, birth_date, gender, country_code,
                                residence_country_code, first_name_native=None,
                                last_name_native=None, middle_name=None,
                                middle_name_native=None, *, api_kwargs=None)
```

Bases: `telegram.TelegramObject`

This object represents personal details.

---

**Available In**

`telegram.EncryptedPassportElement.data`

---

**Parameters**

- **first\_name** (`str`) – First Name.
- **middle\_name** (`str`) – Optional. First Name.
- **last\_name** (`str`) – Last Name.
- **birth\_date** (`str`) – Date of birth in DD.MM.YYYY format.
- **gender** (`str`) – Gender, male or female.
- **country\_code** (`str`) – Citizenship (ISO 3166-1 alpha-2 country code).
- **residence\_country\_code** (`str`) – Country of residence (ISO 3166-1 alpha-2 country code).
- **first\_name\_native** (`str`) – First Name in the language of the user's country of residence.
- **middle\_name\_native** (`str`) – Optional. Middle Name in the language of the user's country of residence.
- **last\_name\_native** (`str`) – Last Name in the language of the user's country of residence.

**first\_name**

First Name.

**Type**

`str`

**middle\_name**

Optional. First Name.

**Type**

`str`

**last\_name**

Last Name.

**Type**

`str`

**birth\_date**

Date of birth in DD.MM.YYYY format.

**Type**

`str`

**gender**

Gender, male or female.

**Type**

`str`

**country\_code**

Citizenship (ISO 3166-1 alpha-2 country code).

**Type**

`str`

**residence\_country\_code**

Country of residence (ISO 3166-1 alpha-2 country code).

**Type**

`str`

**first\_name\_native**

First Name in the language of the user's country of residence.

**Type**

`str`

**middle\_name\_native**

Optional. Middle Name in the language of the user's country of residence.

**Type**

`str`

**last\_name\_native**

Last Name in the language of the user's country of residence.

**Type**

`str`

## ResidentialAddress

**class** telegram.**ResidentialAddress**(*street\_line1*, *street\_line2*, *city*, *state*, *country\_code*, *post\_code*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents a residential address.

---

### Available In

[telegram.EncryptedPassportElement.data](#)

---

### Parameters

- **street\_line1** ([str](#)) – First line for the address.
- **street\_line2** ([str](#)) – Optional. Second line for the address.
- **city** ([str](#)) – City.
- **state** ([str](#)) – Optional. State.
- **country\_code** ([str](#)) – ISO 3166-1 alpha-2 country code.
- **post\_code** ([str](#)) – Address post code.

### street\_line1

First line for the address.

#### Type

[str](#)

### street\_line2

Optional. Second line for the address.

#### Type

[str](#)

### city

City.

#### Type

[str](#)

### state

Optional. State.

#### Type

[str](#)

### country\_code

ISO 3166-1 alpha-2 country code.

#### Type

[str](#)

### post\_code

Address post code.

#### Type

[str](#)

## SecureData

```
class telegram.SecureData(personal_details=None, passport=None, internal_passport=None,
                           driver_license=None, identity_card=None, address=None, utility_bill=None,
                           bank_statement=None, rental_agreement=None, passport_registration=None,
                           temporary_registration=None, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents the credentials that were used to decrypt the encrypted data. All fields are optional and depend on fields that were requested.

---

### Available In

[telegram.Credentials.secure\\_data](#)

---

### Parameters

- **personal\_details** ([telegram.SecureValue](#), optional) – Credentials for encrypted personal details.
- **passport** ([telegram.SecureValue](#), optional) – Credentials for encrypted passport.
- **internal\_passport** ([telegram.SecureValue](#), optional) – Credentials for encrypted internal passport.
- **driver\_license** ([telegram.SecureValue](#), optional) – Credentials for encrypted driver license.
- **identity\_card** ([telegram.SecureValue](#), optional) – Credentials for encrypted ID card
- **address** ([telegram.SecureValue](#), optional) – Credentials for encrypted residential address.
- **utility\_bill** ([telegram.SecureValue](#), optional) – Credentials for encrypted utility bill.
- **bank\_statement** ([telegram.SecureValue](#), optional) – Credentials for encrypted bank statement.
- **rental\_agreement** ([telegram.SecureValue](#), optional) – Credentials for encrypted rental agreement.
- **passport\_registration** ([telegram.SecureValue](#), optional) – Credentials for encrypted registration from internal passport.
- **temporary\_registration** ([telegram.SecureValue](#), optional) – Credentials for encrypted temporary registration.

### personal\_details

Optional. Credentials for encrypted personal details.

#### Type

[telegram.SecureValue](#)

### passport

Optional. Credentials for encrypted passport.

#### Type

[telegram.SecureValue](#)

**internal\_passport**

Optional. Credentials for encrypted internal passport.

**Type**

*telegram.SecureValue*

**driver\_license**

Optional. Credentials for encrypted driver license.

**Type**

*telegram.SecureValue*

**identity\_card**

Optional. Credentials for encrypted ID card

**Type**

*telegram.SecureValue*

**address**

Optional. Credentials for encrypted residential address.

**Type**

*telegram.SecureValue*

**utility\_bill**

Optional. Credentials for encrypted utility bill.

**Type**

*telegram.SecureValue*

**bank\_statement**

Optional. Credentials for encrypted bank statement.

**Type**

*telegram.SecureValue*

**rental\_agreement**

Optional. Credentials for encrypted rental agreement.

**Type**

*telegram.SecureValue*

**passport\_registration**

Optional. Credentials for encrypted registration from internal passport.

**Type**

*telegram.SecureValue*

**temporary\_registration**

Optional. Credentials for encrypted temporary registration.

**Type**

*telegram.SecureValue*

**classmethod `de_json(data, bot)`**

See *telegram.TelegramObject.de\_json()*.

## SecureValue

```
class telegram.SecureValue(data=None, front_side=None, reverse_side=None, selfie=None, files=None,
                           translation=None, *, api_kwargs=None)
```

Bases: [`telegram.TelegramObject`](#)

This object represents the credentials that were used to decrypt the encrypted value. All fields are optional and depend on the type of field.

---

### Available In

- [`telegram.SecureData.address`](#)
  - [`telegram.SecureData.bank\_statement`](#)
  - [`telegram.SecureData.driver\_license`](#)
  - [`telegram.SecureData.identity\_card`](#)
  - [`telegram.SecureData.internal\_passport`](#)
  - [`telegram.SecureData.passport\_registration`](#)
  - [`telegram.SecureData.passport`](#)
  - [`telegram.SecureData.personal\_details`](#)
  - [`telegram.SecureData.rental\_agreement`](#)
  - [`telegram.SecureData.temporary\_registration`](#)
  - [`telegram.SecureData.utility\_bill`](#)
- 

### Parameters

- **data** ([`telegram.DataCredentials`](#), optional) – Credentials for encrypted Telegram Passport data. Available for “personal\_details”, “passport”, “driver\_license”, “identity\_card”, “identity\_passport” and “address” types.
- **front\_side** ([`telegram.FileCredentials`](#), optional) – Credentials for encrypted document’s front side. Available for “passport”, “driver\_license”, “identity\_card” and “internal\_passport”.
- **reverse\_side** ([`telegram.FileCredentials`](#), optional) – Credentials for encrypted document’s reverse side. Available for “driver\_license” and “identity\_card”.
- **selfie** ([`telegram.FileCredentials`](#), optional) – Credentials for encrypted selfie of the user with a document. Can be available for “passport”, “driver\_license”, “identity\_card” and “internal\_passport”.
- **translation** (List[[`telegram.FileCredentials`](#)], optional) – Credentials for an encrypted translation of the document. Available for “passport”, “driver\_license”, “identity\_card”, “internal\_passport”, “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration”.
- **files** (List[[`telegram.FileCredentials`](#)], optional) – Credentials for encrypted files. Available for “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration” types.

### data

Optional. Credentials for encrypted Telegram Passport data. Available for “personal\_details”, “passport”, “driver\_license”, “identity\_card”, “identity\_passport” and “address” types.

### Type

[`telegram.DataCredentials`](#)



**front\_side**

Optional. Credentials for encrypted document's front side. Available for "passport", "driver\_license", "identity\_card" and "internal\_passport".

**Type**

*telegram.FileCredentials*

**reverse\_side**

Optional. Credentials for encrypted document's reverse side. Available for "driver\_license" and "identity\_card".

**Type**

*telegram.FileCredentials*

**selfie**

Optional. Credentials for encrypted selfie of the user with a document. Can be available for "passport", "driver\_license", "identity\_card" and "internal\_passport".

**Type**

*telegram.FileCredentials*

**translation**

Optional. Credentials for an encrypted translation of the document. Available for "passport", "driver\_license", "identity\_card", "internal\_passport", "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration" and "temporary\_registration".

Changed in version 20.0: This attribute is now an immutable tuple.

**Type**

Tuple[*telegram.FileCredentials*]

**files**

Optional. Credentials for encrypted files. Available for "utility\_bill", "bank\_statement", "rental\_agreement", "passport\_registration" and "temporary\_registration" types.

Changed in version 20.0:

- This attribute is now an immutable tuple.
- This attribute is now always a tuple, that may be empty.

**Type**

Tuple[*telegram.FileCredentials*]

**classmethod `de_json(data, bot)`**

See *telegram.TelegramObject.de\_json()*.

## 10.2 telegram.ext package

Extensions over the Telegram Bot API to facilitate bot making

## 10.2.1 Application

```
class telegram.ext.Application(*, bot, update_queue, updater, job_queue, update_processor,
                               persistence, context_types, post_init, post_shutdown, post_stop)
```

Bases: `typing.Generic`, `typing.AsyncContextManager`

This class dispatches all kinds of updates to its registered handlers, and is the entry point to a PTB application.

---

**Tip:** This class may not be initialized directly. Use `telegram.ext.ApplicationBuilder` or `builder()` (for convenience).

---

Instances of this class can be used as asyncio context managers, where

```
async with application:
    # code
```

is roughly equivalent to

```
try:
    await application.initialize()
    # code
finally:
    await application.shutdown()
```

---

### Available In

`telegram.ext.CallbackContext.application`

---

---

### Returned In

`telegram.ext.ApplicationBuilder.build()`

---

---

### Examples

*Echo Bot*

---

### See also:

[Your First Bot](#), [Architecture Overview](#)

Changed in version 20.0:

- Initialization is now done through the `telegram.ext.ApplicationBuilder`.
- Removed the attribute groups.

### bot

The bot object that should be passed to the handlers.

#### Type

`telegram.Bot`

### update\_queue

The synchronized queue that will contain the updates.

#### Type

`asyncio.Queue`

**updater**

Optional. The updater used by this application.

**Type**

`telegram.ext.Updater`

**chat\_data**

A dictionary handlers can use to store data for the chat. For each integer chat id, the corresponding value of this mapping is available as `telegram.ext.CallbackContext.chat_data` in handler callbacks for updates from that chat.

Changed in version 20.0: `chat_data` is now read-only. Note that the values of the mapping are still mutable, i.e. editing `context.chat_data` within a handler callback is possible (and encouraged), but editing the mapping `application.chat_data` itself is not.

---

**Tip:**

- Manually modifying `chat_data` is almost never needed and inadvisable.
  - Entries are never deleted automatically from this mapping. If you want to delete the data associated with a specific chat, e.g. if the bot got removed from that chat, please use `drop_chat_data()`.
- 

**Type**

`types.MappingProxyType`

**user\_data**

A dictionary handlers can use to store data for the user. For each integer user id, the corresponding value of this mapping is available as `telegram.ext.CallbackContext.user_data` in handler callbacks for updates from that user.

Changed in version 20.0: `user_data` is now read-only. Note that the values of the mapping are still mutable, i.e. editing `context.user_data` within a handler callback is possible (and encouraged), but editing the mapping `application.user_data` itself is not.

---

**Tip:**

- Manually modifying `user_data` is almost never needed and inadvisable.
  - Entries are never deleted automatically from this mapping. If you want to delete the data associated with a specific user, e.g. if that user blocked the bot, please use `drop_user_data()`.
- 

**Type**

`types.MappingProxyType`

**bot\_data**

A dictionary handlers can use to store data for the bot.

**Type**

`dict`

**persistence**

The persistence class to store data that should be persistent over restarts.

**Type**

`telegram.ext.BasePersistence`

**handlers**

A dictionary mapping each handler group to the list of handlers registered to that group.

**See also:**

[`add\_handler\(\)`](#), [`add\_handlers\(\)`](#).

**Type**

Dict[int, List[[`telegram.ext.BaseHandler`](#)]]

**error\_handlers**

A dictionary where the keys are error handlers and the values indicate whether they are to be run blocking.

**See also:**

[`add\_error\_handler\(\)`](#)

**Type**

Dict[coroutine function, bool]

**context\_types**

Specifies the types used by this dispatcher for the context argument of handler and job callbacks.

**Type**

[`telegram.ext.ContextTypes`](#)

**post\_init**

Optional. A callback that will be executed by [`Application.run\_polling\(\)`](#) and [`Application.run\_webhook\(\)`](#) after initializing the application via [`initialize\(\)`](#).

**Type**

coroutine function

**post\_shutdown**

Optional. A callback that will be executed by [`Application.run\_polling\(\)`](#) and [`Application.run\_webhook\(\)`](#) after shutting down the application via [`shutdown\(\)`](#).

**Type**

coroutine function

**post\_stop**

Optional. A callback that will be executed by [`Application.run\_polling\(\)`](#) and [`Application.run\_webhook\(\)`](#) after stopping the application via [`stop\(\)`](#).

New in version 20.1.

**Type**

coroutine function

**\_\_repr\_\_()**

Give a string representation of the application in the form `Application[bot=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

**Returns**

str

**add\_error\_handler(callback, block=True)**

Registers an error handler in the Application. This handler will receive every error which happens in your bot. See the docs of [`process\_error\(\)`](#) for more details on how errors are handled.

---

**Note:** Attempts to add the same callback multiple times will be ignored.

---

## Examples

*Errorhandler Bot*

---

## See also:

Exceptions, Warnings and Logging

## Parameters

- **callback** ([coroutine function](#)) – The callback function for this error handler. Will be called when an error is raised. Callback signature:

```
async def callback(update: Optional[object], context:
    ↳ CallbackContext)
```

The error that happened will be present in `telegram.ext.CallbackContext.error`.

- **block** ([bool](#), optional) – Determines whether the return value of the callback should be awaited before processing the next error handler in `process_error()`. Defaults to `True`.

**add\_handler**(*handler*, *group=0*)

Register a handler.

TL;DR: Order and priority counts. 0 or 1 handlers per group will be used. End handling of update with `telegram.ext.ApplicationHandlerStop`.

A handler must be an instance of a subclass of `telegram.ext.BaseHandler`. All handlers are organized in groups with a numeric value. The default group is 0. All groups will be evaluated for handling an update, but only 0 or 1 handler per group will be used. If `telegram.ext.ApplicationHandlerStop` is raised from one of the handlers, no further handlers (regardless of the group) will be called.

The priority/order of handlers is determined as follows:

- Priority of the group (lower group number == higher priority)
- The first handler in a group which can handle an update (see `telegram.ext.BaseHandler.check_update`) will be used. Other handlers from the group will not be used. The order in which handlers were added to the group defines the priority.

**Warning:** Adding persistent `telegram.ext.ConversationHandler` after the application has been initialized is discouraged. This is because the persisted conversation states need to be loaded into memory while the application is already processing updates, which might lead to race conditions and undesired behavior. In particular, current conversation states may be overridden by the loaded data.

## Parameters

- **handler** (`telegram.ext.BaseHandler`) – A BaseHandler instance.
- **group** ([int](#), optional) – The group identifier. Default is 0.

**add\_handlers**(*handlers*, *group*=0)

Registers multiple handlers at once. The order of the handlers in the passed sequence(s) matters. See [add\\_handler\(\)](#) for details.

New in version 20.0.

**Parameters**

- **handlers** (List[[telegram.ext.BaseHandler](#)] | Dict[int, List[[telegram.ext.BaseHandler](#)]]) – Specify a sequence of handlers *or* a dictionary where the keys are groups and values are handlers.
- **group** ([int](#), optional) – Specify which group the sequence of [handlers](#) should be added to. Defaults to 0.

Example:

```
app.add_handlers(handlers={
    -1: [MessageHandler(...)],
    1: [CallbackQueryHandler(...), CommandHandler(...)]
})
```

**static builder()**

Convenience method. Returns a new [telegram.ext.ApplicationBuilder](#).

New in version 20.0.

**property concurrent\_updates**

The number of concurrent updates that will be processed in parallel. A value of 0 indicates updates are *not* being processed concurrently.

Changed in version 20.4: This is now just a shortcut to [update\\_processor.max\\_concurrent\\_updates](#).

**See also:**

[Concurrency](#)

**Type**

[int](#)

**create\_task**(*coroutine*, *update*=None, \*, *name*=None)

Thin wrapper around [asyncio.create\\_task\(\)](#) that handles exceptions raised by the [coroutine](#) with [process\\_error\(\)](#).

---

**Note:**

- If [coroutine](#) raises an exception, it will be set on the task created by this method even though it's handled by [process\\_error\(\)](#).
  - If the application is currently running, tasks created by this method will be awaited with [stop\(\)](#).
- 

**See also:**

[Concurrency](#)

**Parameters**

- **coroutine** ([awaitable](#)) – The awaitable to run as task.

Changed in version 20.2: Accepts [asyncio.Future](#) and generator-based coroutine functions.

Deprecated since version 20.4: Since Python 3.12, generator-based coroutine functions are no longer accepted.

- **update** (*object*, optional) – If set, will be passed to `process_error()` as additional information for the error handlers. Moreover, the corresponding `chat_data` and `user_data` entries will be updated in the next run of `update_persistence()` after the `coroutine` is finished.

**Keyword Arguments**

**name** (*str*, optional) – The name of the task.

New in version 20.4.

**Returns**

The created task.

**Return type**

`asyncio.Task`

**drop\_chat\_data(chat\_id)**

Drops the corresponding entry from the `chat_data`. Will also be deleted from the persistence on the next run of `update_persistence()`, if applicable.

**Warning:** When using `concurrent_updates` or the `job_queue`, `process_update()` or `telegram.ext.Job.run()` may re-create this entry due to the asynchronous nature of these features. Please make sure that your program can avoid or handle such situations.

New in version 20.0.

**Parameters**

**chat\_id** (*int*) – The chat id to delete. The entry will be deleted even if it is not empty.

**drop\_user\_data(user\_id)**

Drops the corresponding entry from the `user_data`. Will also be deleted from the persistence on the next run of `update_persistence()`, if applicable.

**Warning:** When using `concurrent_updates` or the `job_queue`, `process_update()` or `telegram.ext.Job.run()` may re-create this entry due to the asynchronous nature of these features. Please make sure that your program can avoid or handle such situations.

New in version 20.0.

**Parameters**

**user\_id** (*int*) – The user id to delete. The entry will be deleted even if it is not empty.

**async initialize()**

Initializes the Application by initializing:

- The `bot`, by calling `telegram.Bot.initialize()`.
- The `updater`, by calling `telegram.ext.Updater.initialize()`.
- The `persistence`, by loading persistent conversations and data.
- The `update_processor` by calling `telegram.ext.BaseUpdateProcessor.initialize()`.

Does *not* call `post_init` - that is only done by `run_polling()` and `run_webhook()`.

See also:

`shutdown()`

**property job\_queue**

The `JobQueue` used by the `telegram.ext.Application`.

See also:

[Job Queue](#)

Type

`telegram.ext.JobQueue`

**mark\_data\_for\_update\_persistence**(*chat\_ids=None, user\_ids=None*)

Mark entries of `chat_data` and `user_data` to be updated on the next run of `update_persistence()`.

---

**Tip:** Use this method sparingly. If you have to use this method, it likely means that you access and modify `context.application.chat/user_data[some_id]` within a callback. Note that for data which should be available globally in all handler callbacks independent of the chat/user, it is recommended to use `bot_data` instead.

---

New in version 20.3.

Parameters

- **chat\_ids** (`int` | `Collection[int]`, optional) – Chat IDs to mark.
- **user\_ids** (`int` | `Collection[int]`, optional) – User IDs to mark.

**migrate\_chat\_data**(*message=None, old\_chat\_id=None, new\_chat\_id=None*)

Moves the contents of `chat_data` at key `old_chat_id` to the key `new_chat_id`. Also marks the entries to be updated accordingly in the next run of `update_persistence()`.

**Warning:**

- Any data stored in `chat_data` at key `new_chat_id` will be overridden
- The key `old_chat_id` of `chat_data` will be deleted
- This does not update the `chat_id` attribute of any scheduled `telegram.ext.Job`.

When using `concurrent_updates` or the `job_queue`, `process_update()` or `telegram.ext.Job.run()` may re-create the old entry due to the asynchronous nature of these features. Please make sure that your program can avoid or handle such situations.

See also:

[Storing Bot, User and Chat Related Data](#)

Parameters

- **message** (`telegram.Message`, optional) – A message with either `migrate_from_chat_id` or `migrate_to_chat_id`. Mutually exclusive with passing `old_chat_id` and `new_chat_id`.

See also:

`telegram.ext.filters.StatusUpdate.MIGRATE`

- **old\_chat\_id** (`int`, optional) – The old chat ID. Mutually exclusive with passing `message`
- **new\_chat\_id** (`int`, optional) – The new chat ID. Mutually exclusive with passing `message`

Raises

**ValueError** – Raised if the input is invalid.



**async process\_error**(*update, error, job=None, coroutine=None*)

Processes an error by passing it to all error handlers registered with `add_error_handler()`. If one of the error handlers raises `telegram.ext.ApplicationHandlerStop`, the error will not be handled by other error handlers. Raising `telegram.ext.ApplicationHandlerStop` also stops processing of the update when this method is called by `process_update()`, i.e. no further handlers (even in other groups) will handle the update. All other exceptions raised by an error handler will just be logged.

Changed in version 20.0:

- `dispatch_error` was renamed to `process_error()`.
- Exceptions raised by error handlers are now properly logged.
- `telegram.ext.ApplicationHandlerStop` is no longer reraised but converted into the return value.

#### Parameters

- **update** (*object* | `telegram.Update`) – The update that caused the error.
- **error** (*Exception*) – The error that was raised.
- **job** (`telegram.ext.Job`, optional) – The job that caused the error.  
New in version 20.0.
- **coroutine** (*coroutine function*, optional) – The coroutine that caused the error.

#### Returns

`True`, if one of the error handlers raised `telegram.ext.ApplicationHandlerStop`.  
`False`, otherwise.

#### Return type

`bool`

**async process\_update**(*update*)

Processes a single update and marks the update to be updated by the persistence later. Exceptions raised by handler callbacks will be processed by `process_error()`.

**See also:**

[Concurrency](#)

Changed in version 20.0: Persistence is now updated in an interval set by `telegram.ext.BasePersistence.update_interval`.

#### Parameters

**update** (`telegram.Update` | *object* | `telegram.error.TelegramError`) – The update to process.

#### Raises

`RuntimeError` – If the application was not initialized.

**remove\_error\_handler**(*callback*)

Removes an error handler.

#### Parameters

**callback** (*coroutine function*) – The error handler to remove.

**remove\_handler**(*handler, group=0*)

Remove a handler from the specified group.

#### Parameters

- **handler** (`telegram.ext.BaseHandler`) – A `telegram.ext.BaseHandler` instance.
- **group** (*object*, optional) – The group identifier. Default is `0`.

```
run_polling(poll_interval=0.0, timeout=10, bootstrap_retries=-1, read_timeout=2,
             write_timeout=None, connect_timeout=None, pool_timeout=None,
             allowed_updates=None, drop_pending_updates=None, close_loop=True,
             stop_signals=None)
```

Convenience method that takes care of initializing and starting the app, polling updates from Telegram using `telegram.ext.Updater.start_polling()` and a graceful shutdown of the app on exit.

The app will shut down when `KeyboardInterrupt` or `SystemExit` is raised. On unix, the app will also shut down on receiving the signals specified by `stop_signals`.

The order of execution by `run_polling()` is roughly as follows:

- `initialize()`
- `post_init()`
- `telegram.ext.Updater.start_polling()`
- `start()`
- Run the application until the users stops it
- `telegram.ext.Updater.stop()`
- `stop()`
- `post_stop()`
- `shutdown()`
- `post_shutdown()`

---

**Tip:**

- When combining python-telegram-bot with other `asyncio` based frameworks, using this method is likely not the best choice, as it blocks the event loop until it receives a stop signal as described above. Instead, you can manually call the methods listed below to start and shut down the application and the `updater`. Keeping the event loop running and listening for a stop signal is then up to you.
  - To gracefully stop the execution of this method from within a handler, job or error callback, use `stop_running()`.
- 

**Parameters**

- **poll\_interval** (`float`, optional) – Time to wait between polling updates from Telegram in seconds. Default is `0.0`.
- **timeout** (`int`, optional) – Passed to `telegram.Bot.get_updates.timeout`. Default is `10` seconds.
- **bootstrap\_retries** (`int`, optional) – Whether the bootstrapping phase of the `telegram.ext.Updater` will retry on failures on the Telegram server.
  - `< 0` - retry indefinitely (default)
  - `0` - no retries
  - `> 0` - retry up to X times
- **read\_timeout** (`float`, optional) – Value to pass to `telegram.Bot.get_updates.read_timeout`. Defaults to `2`.
- **write\_timeout** (`float | None`, optional) – Value to pass to `telegram.Bot.get_updates.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float | None`, optional) – Value to pass to `telegram.Bot.get_updates.connect_timeout`. Defaults to `DEFAULT_NONE`.

- **pool\_timeout** (`float` | `None`, optional) – Value to pass to `telegram.Bot.get_updates.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **drop\_pending\_updates** (`bool`, optional) – Whether to clean any pending updates on Telegram servers before actually starting to poll. Default is `False`.
- **allowed\_updates** (`List[str]`, optional) – Passed to `telegram.Bot.get_updates()`.
- **close\_loop** (`bool`, optional) – If `True`, the current event loop will be closed upon shutdown. Defaults to `True`.

See also:

`asyncio.loop.close()`

- **stop\_signals** (`Sequence[int]` | `None`, optional) – Signals that will shut down the app. Pass `None` to not use stop signals. Defaults to `signal.SIGINT`, `signal.SIGTERM` and `signal.SIGABRT` on non Windows platforms.

**Caution:** Not every `asyncio.AbstractEventLoop` implements `asyncio.loop.add_signal_handler()`. Most notably, the standard event loop on Windows, `asyncio.ProactorEventLoop`, does not implement this method. If this method is not available, stop signals can not be set.

#### Raises

**RuntimeError** – If the Application does not have an `telegram.ext.Updater`.

**run\_webhook**(`listen='127.0.0.1'`, `port=80`, `url_path=""`, `cert=None`, `key=None`, `bootstrap_retries=0`, `webhook_url=None`, `allowed_updates=None`, `drop_pending_updates=None`, `ip_address=None`, `max_connections=40`, `close_loop=True`, `stop_signals=None`, `secret_token=None`)

Convenience method that takes care of initializing and starting the app, listening for updates from Telegram using `telegram.ext.Updater.start_webhook()` and a graceful shutdown of the app on exit.

The app will shut down when `KeyboardInterrupt` or `SystemExit` is raised. On unix, the app will also shut down on receiving the signals specified by `stop_signals`.

If `cert` and `key` are not provided, the webhook will be started directly on `http://listen:port/url_path`, so SSL can be handled by another application. Else, the webhook will be started on `https://listen:port/url_path`. Also calls `telegram.Bot.set_webhook()` as required.

The order of execution by `run_webhook()` is roughly as follows:

- `initialize()`
- `post_init()`
- `telegram.ext.Updater.start_webhook()`
- `start()`
- Run the application until the users stops it
- `telegram.ext.Updater.stop()`
- `stop()`
- `post_stop()`
- `shutdown()`
- `post_shutdown()`

**Important:** If you want to use this method, you must install PTB with the optional requirement webhooks, i.e.

```
pip install "python-telegram-bot[webhooks]"
```

---

**Tip:**

- When combining python-telegram-bot with other `asyncio` based frameworks, using this method is likely not the best choice, as it blocks the event loop until it receives a stop signal as described above. Instead, you can manually call the methods listed below to start and shut down the application and the `updater`. Keeping the event loop running and listening for a stop signal is then up to you.
  - To gracefully stop the execution of this method from within a handler, job or error callback, use `stop_running()`.
- 

**See also:**

Webhooks

**Parameters**

- **listen** (`str`, optional) – IP-Address to listen on. Defaults to `127.0.0.1`.
- **port** (`int`, optional) – Port the bot should be listening on. Must be one of `telegram.constants.SUPPORTED_WEBHOOK_PORTS` unless the bot is running behind a proxy. Defaults to `80`.
- **url\_path** (`str`, optional) – Path inside url. Defaults to `''`.
- **cert** (`pathlib.Path` | `str`, optional) – Path to the SSL certificate file.
- **key** (`pathlib.Path` | `str`, optional) – Path to the SSL key file.
- **bootstrap\_retries** (`int`, optional) – Whether the bootstrapping phase of the `telegram.ext.Updater` will retry on failures on the Telegram server.
  - `< 0` - retry indefinitely
  - `0` - no retries (default)
  - `> 0` - retry up to X times
- **webhook\_url** (`str`, optional) – Explicitly specify the webhook url. Useful behind NAT, reverse proxy, etc. Default is derived from `listen`, `port`, `url_path`, `cert`, and `key`.
- **allowed\_updates** (`List[str]`, optional) – Passed to `telegram.Bot.set_webhook()`.
- **drop\_pending\_updates** (`bool`, optional) – Whether to clean any pending updates on Telegram servers before actually starting to poll. Default is `False`.
- **ip\_address** (`str`, optional) – Passed to `telegram.Bot.set_webhook()`.
- **max\_connections** (`int`, optional) – Passed to `telegram.Bot.set_webhook()`. Defaults to `40`.
- **close\_loop** (`bool`, optional) – If `True`, the current event loop will be closed upon shutdown. Defaults to `True`.

**See also:**

`asyncio.loop.close()`

- **stop\_signals** (Sequence[int] | None, optional) – Signals that will shut down the app. Pass None to not use stop signals. Defaults to `signal.SIGINT`, `signal.SIGTERM` and `signal.SIGABRT`.

**Caution:** Not every `asyncio.AbstractEventLoop` implements `asyncio.loop.add_signal_handler()`. Most notably, the standard event loop on Windows, `asyncio.ProactorEventLoop`, does not implement this method. If this method is not available, stop signals can not be set.

- **secret\_token** (str, optional) – Secret token to ensure webhook requests originate from Telegram. See `telegram.Bot.set_webhook.secret_token` for more details.

When added, the web server started by this call will expect the token to be set in the X-Telegram-Bot-API-Secret-Token header of an incoming request and will raise a `http.HTTPStatus.FORBIDDEN` error if either the header isn't set or it is set to a wrong token.

New in version 20.0.

### property running

Indicates if this application is running.

See also:

`start()`, `stop()`

Type

bool

### async shutdown()

Shuts down the Application by shutting down:

- *bot* by calling `telegram.Bot.shutdown()`
- *updater* by calling `telegram.ext.Updater.shutdown()`
- *persistence* by calling `update_persistence()` and `BasePersistence.flush()`
- *update\_processor* by calling `telegram.ext.BaseUpdateProcessor.shutdown()`

Does *not* call `post_shutdown` - that is only done by `run_polling()` and `run_webhook()`.

See also:

`initialize()`

Raises

**RuntimeError** – If the application is still *running*.

### async start()

Starts

- a background task that fetches updates from `update_queue` and processes them via `process_update()`.
- `job_queue`, if set.
- a background task that calls `update_persistence()` in regular intervals, if `persistence` is set.

---

**Note:** This does *not* start fetching updates from Telegram. To fetch updates, you need to either start `updater` manually or use one of `run_polling()` or `run_webhook()`.

---

**Tip:** When using a custom logic for startup and shutdown of the application, eventual cancellation of pending tasks should happen only *after* `stop()` has been called in order to ensure that the tasks mentioned above are not cancelled prematurely.

---

**See also:**

`stop()`

**Raises**

**RuntimeError** – If the application is already running or was not initialized.

**async stop()**

Stops the process after processing any pending updates or tasks created by `create_task()`. Also stops `job_queue`, if set. Finally, calls `update_persistence()` and `BasePersistence.flush()` on `persistence`, if set.

**Warning:** Once this method is called, no more updates will be fetched from `update_queue`, even if it's not empty.

**See also:**

`start()`

---

**Note:**

- This does *not* stop `updater`. You need to either manually call `telegram.ext.Updater.stop()` or use one of `run_polling()` or `run_webhook()`.
  - Does *not* call `post_stop` - that is only done by `run_polling()` and `run_webhook()`.
- 

**Raises**

**RuntimeError** – If the application is not running.

**stop\_running()**

This method can be used to stop the execution of `run_polling()` or `run_webhook()` from within a handler, job or error callback. This allows a graceful shutdown of the application, i.e. the methods listed in `run_polling` and `run_webhook` will still be executed.

---

**Note:** If the application is not running, this method does nothing.

---

New in version 20.5.

**async update\_persistence()**

Updates `user_data`, `chat_data`, `bot_data` in `persistence` along with `callback_data_cache` and the conversation states of any persistent `ConversationHandler` registered for this application.

For `user_data` and `chat_data`, only those entries are updated which either were used or have been manually marked via `mark_data_for_update_persistence()` since the last run of this method.

---

**Tip:** This method will be called in regular intervals by the application. There is usually no need to call it manually.

---

---

**Note:** Any data is deep copied with `copy.deepcopy()` before handing it over to the persistence in order to avoid race conditions, so all persisted data must be copyable.

---

See also:

`telegram.ext.BasePersistence.update_interval`, `mark_data_for_update_persistence()`

#### property `update_processor`

The update processor used by this application.

See also:

[Concurrency](#)

New in version 20.4.

Type

`telegram.ext.BaseUpdateProcessor`

## 10.2.2 ApplicationBuilder

### class `telegram.ext.ApplicationBuilder`

This class serves as initializer for `telegram.ext.Application` via the so called [builder pattern](#). To build a `telegram.ext.Application`, one first initializes an instance of this class. Arguments for the `telegram.ext.Application` to build are then added by subsequently calling the methods of the builder. Finally, the `telegram.ext.Application` is built by calling `build()`. In the simplest case this can look like the following example.

---

#### Example

```
application = ApplicationBuilder().token("TOKEN").build()
```

---

Please see the description of the individual methods for information on which arguments can be set and what the defaults are when not called. When no default is mentioned, the argument will not be used by default.

---

#### Note:

- Some arguments are mutually exclusive. E.g. after calling `token()`, you can't set a custom bot with `bot()` and vice versa.
  - Unless a custom `telegram.Bot` instance is set via `bot()`, `build()` will use `telegram.ext.ExtBot` for the bot.
- 

See also:

[Your First Bot](#), [Builder Pattern](#)

#### `application_class(application_class, kwargs=None)`

Sets a custom subclass instead of `telegram.ext.Application`. The subclass's `__init__` should look like this

```
def __init__(self, custom_arg_1, custom_arg_2, ..., **kwargs):
    super().__init__(**kwargs)
    self.custom_arg_1 = custom_arg_1
    self.custom_arg_2 = custom_arg_2
```

#### Parameters

- **application\_class** (*type*) – A subclass of `telegram.ext.Application`
- **kwargs** (`Dict[str, object]`, optional) – Keyword arguments for the initialization. Defaults to an empty dict.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**arbitrary\_callback\_data**(*arbitrary\_callback\_data*)

Specifies whether `telegram.ext.Application.bot` should allow arbitrary objects as callback data for `telegram.InlineKeyboardButton` and how many keyboards should be cached in memory. If not called, only strings can be used as callback data and no data will be stored in memory.

---

**Important:** If you want to use this feature, you must install PTB with the optional requirement `callback-data`, i.e.

```
pip install "python-telegram-bot[callback-data]"
```

---

---

**Examples**

*Arbitrary callback\_data Bot*

---

**See also:**

`Arbitrary callback_data`

**Parameters**

**arbitrary\_callback\_data** (`bool` | `int`) – If `True` is passed, the default cache size of 1024 will be used. Pass an integer to specify a different cache size.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**base\_file\_url**(*base\_file\_url*)

Sets the base file URL for `telegram.ext.Application.bot`. If not called, will default to `'https://api.telegram.org/file/bot'`.

**See also:**

`telegram.Bot.base_file_url`, `Local Bot API Server`, `base_url()`

**Parameters**

**base\_file\_url** (`str`) – The URL.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**base\_url**(*base\_url*)

Sets the base URL for `telegram.ext.Application.bot`. If not called, will default to `'https://api.telegram.org/bot'`.



See also:

`telegram.Bot.base_url`, Local Bot API Server, `base_file_url()`

**Parameters**

**base\_url** (`str`) – The URL.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**bot(*bot*)**

Sets a `telegram.Bot` instance for `telegram.ext.Application.bot`. Instances of subclasses like `telegram.ext.ExtBot` are also valid.

**Parameters**

**bot** (`telegram.Bot`) – The bot.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**build()**

Builds a `telegram.ext.Application` with the provided arguments.

Calls `telegram.ext.JobQueue.set_application()` and `telegram.ext.BasePersistence.set_bot()` if appropriate.

**Returns**

`telegram.ext.Application`

**concurrent\_updates(*concurrent\_updates*)**

Specifies if and how many updates may be processed concurrently instead of one by one. If not called, updates will be processed one by one.

**Warning:** Processing updates concurrently is not recommended when stateful handlers like `telegram.ext.ConversationHandler` are used. Only use this if you are sure that your bot does not (explicitly or implicitly) rely on updates being processed sequentially.

---

**Tip:** When making requests to the Bot API in an asynchronous fashion (e.g. via `block=False`, `Application.create_task`, `concurrent_updates()` or the `JobQueue`), it can happen that more requests are being made in parallel than there are connections in the pool. If the number of requests is much higher than the number of connections, even setting `pool_timeout()` to a larger value may not always be enough to prevent pool timeouts. You should therefore set `concurrent_updates()`, `connection_pool_size()` and `pool_timeout()` to values that make sense for your setup.

---

See also:

`telegram.ext.Application.concurrent_updates`

**Parameters**

**concurrent\_updates** (`bool` | `int` | `BaseUpdateProcessor`) – Passing `True` will allow for 256 updates to be processed concurrently using `telegram.ext.SimpleUpdateProcessor`. Pass an integer to specify a different number of updates that may be processed concurrently. Pass an instance of `telegram.ext.BaseUpdateProcessor` to use that instance for handling updates concurrently.

Changed in version 20.4: Now accepts *BaseUpdateProcessor* instances.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**connect\_timeout(connect\_timeout)**

Sets the connection attempt timeout for the *connect\_timeout* parameter of *telegram.Bot.request*. Defaults to 5.0.

**See also:**

*get\_updates\_connect\_timeout()*

**Parameters**

**connect\_timeout** (float) – See *telegram.request.HTTPXRequest.connect\_timeout* for more information.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**connection\_pool\_size(connection\_pool\_size)**

Sets the size of the connection pool for the *connection\_pool\_size* parameter of *telegram.Bot.request*. Defaults to 256.

---

**Tip:** When making requests to the Bot API in an asynchronous fashion (e.g. via *block=False*, *Application.create\_task*, *concurrent\_updates()* or the *JobQueue*), it can happen that more requests are being made in parallel than there are connections in the pool. If the number of requests is much higher than the number of connections, even setting *pool\_timeout()* to a larger value may not always be enough to prevent pool timeouts. You should therefore set *concurrent\_updates()*, *connection\_pool\_size()* and *pool\_timeout()* to values that make sense for your setup.

---

**See also:**

*get\_updates\_connection\_pool\_size()*

**Parameters**

**connection\_pool\_size** (int) – The size of the connection pool.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**context\_types(context\_types)**

Sets a *telegram.ext.ContextTypes* instance for *telegram.ext.Application.context\_types*.

---

**Examples**

*Context Types Bot*

---

**Parameters**

**context\_types** (*telegram.ext.ContextTypes*) – The context types.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**defaults**(*defaults*)

Sets the *telegram.ext.Defaults* instance for *telegram.ext.Application.bot*.

**See also:**

[Adding Defaults to Your Bot](#)

**Parameters**

**defaults** (*telegram.ext.Defaults*) – The defaults instance.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**get\_updates\_connect\_timeout**(*get\_updates\_connect\_timeout*)

Sets the connection attempt timeout for the *telegram.request.HTTPXRequest.connect\_timeout* parameter which is used for the *telegram.Bot.get\_updates()* request. Defaults to 5.0.

**See also:**

*connect\_timeout()*

**Parameters**

**get\_updates\_connect\_timeout** (float) – See *telegram.request.HTTPXRequest.connect\_timeout* for more information.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**get\_updates\_connection\_pool\_size**(*get\_updates\_connection\_pool\_size*)

Sets the size of the connection pool for the *telegram.request.HTTPXRequest.connection\_pool\_size* parameter which is used for the *telegram.Bot.get\_updates()* request. Defaults to 1.

**See also:**

*connection\_pool\_size()*

**Parameters**

**get\_updates\_connection\_pool\_size** (int) – The size of the connection pool.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**get\_updates\_http\_version**(*get\_updates\_http\_version*)

Sets the HTTP protocol version which is used for the *http\_version* parameter which is used in the *telegram.Bot.get\_updates()* request. By default, HTTP/1.1 is used.

**See also:**

*http\_version()*

**Note:** Users have observed stability issues with HTTP/2, which happen due to how the [h2 library](#) handles cancellations of keepalive connections. See [#3556](#) for a discussion.

You will also need to install the http2 dependency. Keep in mind that the HTTP/1.1 implementation may be considered the “[more robust option at this time](#)”.

```
pip install httpx[http2]
```

---

New in version 20.1.

Changed in version 20.2: Reset the default version to 1.1.

**Parameters**

**get\_updates\_http\_version** (*str*) – Pass "2" or "2.0" if you'd like to use HTTP/2 for making requests to Telegram. Defaults to "1.1", in which case HTTP/1.1 is used.

Changed in version 20.5: Accept "2" as a valid value.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**get\_updates\_pool\_timeout**(*get\_updates\_pool\_timeout*)

Sets the connection pool's connection freeing timeout for the *pool\_timeout* parameter which is used for the *telegram.Bot.get\_updates()* request. Defaults to 1.0.

**See also:**

*pool\_timeout()*

**Parameters**

**get\_updates\_pool\_timeout** (*float*) – See *telegram.request.HTTPXRequest.pool\_timeout* for more information.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**get\_updates\_proxy\_url**(*get\_updates\_proxy\_url*)

Sets the proxy for the *telegram.request.HTTPXRequest.proxy\_url* parameter which is used for *telegram.Bot.get\_updates()*. Defaults to None.

**See also:**

*proxy\_url()*

**Parameters**

**get\_updates\_proxy\_url** (*str*) – The URL to the proxy server. See *telegram.request.HTTPXRequest.proxy\_url* for more information.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**get\_updates\_read\_timeout**(*get\_updates\_read\_timeout*)

Sets the waiting timeout for the `telegram.request.HTTPXRequest.read_timeout` parameter which is used for the `telegram.Bot.get_updates()` request. Defaults to 5.0.

See also:

`read_timeout()`

**Parameters**

**get\_updates\_read\_timeout** (float) – See `telegram.request.HTTPXRequest.read_timeout` for more information.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**get\_updates\_request**(*get\_updates\_request*)

Sets a `telegram.request.BaseRequest` instance for the `get_updates_request` parameter of `telegram.ext.Application.bot`.

See also:

`request()`

**Parameters**

**get\_updates\_request** (`telegram.request.BaseRequest`) – The request instance.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**get\_updates\_write\_timeout**(*get\_updates\_write\_timeout*)

Sets the write operation timeout for the `telegram.request.HTTPXRequest.write_timeout` parameter which is used for the `telegram.Bot.get_updates()` request. Defaults to 5.0.

See also:

`write_timeout()`

**Parameters**

**get\_updates\_write\_timeout** (float) – See `telegram.request.HTTPXRequest.write_timeout` for more information.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**http\_version**(*http\_version*)

Sets the HTTP protocol version which is used for the `http_version` parameter of `telegram.Bot.request`. By default, HTTP/1.1 is used.

See also:

`get_updates_http_version()`

---

**Note:** Users have observed stability issues with HTTP/2, which happen due to how the `h2` library handles cancellations of keepalive connections. See [#3556](#) for a discussion.

If you want to use HTTP/2, you must install PTB with the optional requirement `http2`, i.e.

```
pip install "python-telegram-bot[http2]"
```

Keep in mind that the HTTP/1.1 implementation may be considered the “[more robust option at this time](#)”.

---

New in version 20.1.

Changed in version 20.2: Reset the default version to 1.1.

#### Parameters

**http\_version** (`str`) – Pass `"2"` or `"2.0"` if you'd like to use HTTP/2 for making requests to Telegram. Defaults to `"1.1"`, in which case HTTP/1.1 is used.

Changed in version 20.5: Accept `"2"` as a valid value.

#### Returns

The same builder with the updated argument.

#### Return type

`ApplicationBuilder`

#### `job_queue(job_queue)`

Sets a `telegram.ext.JobQueue` instance for `telegram.ext.Application.job_queue`. If not called, a job queue will be instantiated if the requirements of `telegram.ext.JobQueue` are installed.

---

#### Examples

*Timer Bot*

---

#### See also:

[Job Queue](#)

---

#### Note:

- `telegram.ext.JobQueue.set_application()` will be called automatically by `build()`.
  - The job queue will be automatically started and stopped by `telegram.ext.Application.start()` and `telegram.ext.Application.stop()`, respectively.
  - When passing `None` or when the requirements of `telegram.ext.JobQueue` are not installed, `telegram.ext.ConversationHandler.conversation_timeout` can not be used, as this uses `telegram.ext.Application.job_queue` internally.
- 

#### Parameters

**job\_queue** (`telegram.ext.JobQueue`) – The job queue. Pass `None` if you don't want to use a job queue.

#### Returns

The same builder with the updated argument.

#### Return type

`ApplicationBuilder`

#### `local_mode(local_mode)`

Specifies the value for `local_mode` for the `telegram.ext.Application.bot`. If not called, will default to `False`.

**See also:**

[Local Bot API Server](#)

**Parameters**

**local\_mode** (*bool*) – Whether the bot should run in local mode.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**persistence**(*persistence*)

Sets a *telegram.ext.BasePersistence* instance for *telegram.ext.Application.persistence*.

---

**Note:** When using a persistence, note that all data stored in *context.user\_data*, *context.chat\_data*, *context.bot\_data* and in *telegram.ext.ExtBot.callback\_data\_cache* must be copyable with *copy.deepcopy()*. This is due to the data being deep copied before handing it over to the persistence in order to avoid race conditions.

---

**Examples**

*Persistent Conversation Bot*

---

**See also:**

[Making Your Bot Persistent](#)

**Warning:** If a *telegram.ext.ContextTypes* instance is set via *context\_types()*, the persistence instance must use the same types!

**Parameters**

**persistence** (*telegram.ext.BasePersistence*) – The persistence instance.

**Returns**

The same builder with the updated argument.

**Return type**

*ApplicationBuilder*

**pool\_timeout**(*pool\_timeout*)

Sets the connection pool's connection freeing timeout for the *pool\_timeout* parameter of *telegram.Bot.request*. Defaults to 1.0.

---

**Tip:** When making requests to the Bot API in an asynchronous fashion (e.g. via *block=False*, *Application.create\_task*, *concurrent\_updates()* or the *JobQueue*), it can happen that more requests are being made in parallel than there are connections in the pool. If the number of requests is much higher than the number of connections, even setting *pool\_timeout()* to a larger value may not always be enough to prevent pool timeouts. You should therefore set *concurrent\_updates()*, *connection\_pool\_size()* and *pool\_timeout()* to values that make sense for your setup.

---

**See also:**

*get\_updates\_pool\_timeout()*

**Parameters**

**pool\_timeout** (*float*) – See `telegram.request.HTTPXRequest.pool_timeout` for more information.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**post\_init**(*post\_init*)

Sets a callback to be executed by `Application.run_polling()` and `Application.run_webhook()` after executing `Application.initialize()` but before executing `Updater.start_polling()` or `Updater.start_webhook()`, respectively.

---

**Tip:** This can be used for custom startup logic that requires to await coroutines, e.g. setting up the bots commands via `set_my_commands()`.

---

**Example**

```
async def post_init(application: Application) -> None:
    await application.bot.set_my_commands(['start', 'Starts the bot'])

application = Application.builder().token("TOKEN").post_init(post_init).
    ↪build()
```

---

**Note:** If you implement custom logic that implies that you will **not** be using `Application`'s methods `run_polling()` or `run_webhook()` to run your application (like it's done in [Custom Webhook Bot Example](#)), the callback you set in this method **will not be called automatically**. So instead of setting a callback with this method, you have to explicitly await the function that you want to run at this stage of your application's life (in the [example mentioned above](#), that would be in `async` with `application` context manager).

---

**See also:**

`post_stop()`, `post_shutdown()`

**Parameters**

**post\_init** (*coroutine function*) – The custom callback. Must be a `coroutine function` and must accept exactly one positional argument, which is the `Application`:

```
async def post_init(application: Application) -> None:
```

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**post\_shutdown**(*post\_shutdown*)

Sets a callback to be executed by `Application.run_polling()` and `Application.run_webhook()` after executing `Updater.shutdown()` and `Application.shutdown()`.



**Tip:** This can be used for custom shutdown logic that requires to await coroutines, e.g. closing a database connection

---

#### Example

```
async def post_shutdown(application: Application) -> None:
    await application.bot_data['database'].close()

application = Application.builder()
    .token("TOKEN")
    .post_shutdown(post_shutdown)
    .build()
```

---

**Note:** If you implement custom logic that implies that you will **not** be using *Application*'s methods *run\_polling()* or *run\_webhook()* to run your application (like it's done in [Custom Webhook Bot Example](#)), the callback you set in this method **will not be called automatically**. So instead of setting a callback with this method, you have to explicitly `await` the function that you want to run at this stage of your application's life (in the [example mentioned above](#), that would be in `async` with `application` context manager).

---

#### See also:

*post\_init()*, *post\_stop()*

#### Parameters

**post\_shutdown** (coroutine function) – The custom callback. Must be a coroutine function and must accept exactly one positional argument, which is the *Application*:

```
async def post_shutdown(application: Application) -> None:
```

#### Returns

The same builder with the updated argument.

#### Return type

*ApplicationBuilder*

#### *post\_stop*(*post\_stop*)

Sets a callback to be executed by *Application.run\_polling()* and *Application.run\_webhook()* after executing *Updater.stop()* and *Application.stop()*.

New in version 20.1.

**Tip:** This can be used for custom stop logic that requires to await coroutines, e.g. sending message to a chat before shutting down the bot

---

#### Example

```
async def post_stop(application: Application) -> None:
    await application.bot.send_message(123456, "Shutting down...")

application = Application.builder()
    .token("TOKEN")
```

(continues on next page)

(continued from previous page)

```
.post_stop(post_stop)
.build()
```

---

**Note:** If you implement custom logic that implies that you will **not** be using *Application*'s methods *run\_polling()* or *run\_webhook()* to run your application (like it's done in *Custom Webhook Bot Example*), the callback you set in this method **will not be called automatically**. So instead of setting a callback with this method, you have to explicitly `await` the function that you want to run at this stage of your application's life (in the *example mentioned above*, that would be in `async` with `application` context manager).

---

**See also:**

*post\_init()*, *post\_shutdown()*

#### Parameters

**post\_stop** (coroutine function) – The custom callback. Must be a *coroutine function* and must accept exactly one positional argument, which is the *Application*:

```
async def post_stop(application: Application) -> None:
```

#### Returns

The same builder with the updated argument.

#### Return type

*ApplicationBuilder*

**private\_key**(*private\_key*, *password=None*)

Sets the private key and corresponding password for decryption of telegram passport data for *telegram.ext.Application.bot*.

---

#### Examples

*Passport Bot*

---

**See also:**

*Telegram Passports*

#### Parameters

- **private\_key** (*bytes* | *str* | *pathlib.Path*) – The private key or the file path of a file that contains the key. In the latter case, the file's content will be read automatically.
- **password** (*bytes* | *str* | *pathlib.Path*, optional) – The corresponding password or the file path of a file that contains the password. In the latter case, the file's content will be read automatically.

#### Returns

The same builder with the updated argument.

#### Return type

*ApplicationBuilder*

**proxy\_url**(*proxy\_url*)

Sets the proxy for the *proxy\_url* parameter of *telegram.Bot.request*. Defaults to *None*.

See also:

`get_updates_proxy_url()`

**Parameters**

**proxy\_url** (`str`) – The URL to the proxy server. See `telegram.request.HTTPXRequest.proxy_url` for more information.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**rate\_limiter**(`rate_limiter`)

Sets a `telegram.ext.BaseRateLimiter` instance for the `telegram.ext.ExtBot.rate_limiter` parameter of `telegram.ext.Application.bot`.

**Parameters**

**rate\_limiter** (`telegram.ext.BaseRateLimiter`) – The rate limiter.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**read\_timeout**(`read_timeout`)

Sets the waiting timeout for the `read_timeout` parameter of `telegram.Bot.request`. Defaults to `5.0`.

See also:

`get_updates_read_timeout()`

**Parameters**

**read\_timeout** (`float`) – See `telegram.request.HTTPXRequest.read_timeout` for more information.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**request**(`request`)

Sets a `telegram.request.BaseRequest` instance for the `telegram.Bot.request` parameter of `telegram.ext.Application.bot`.

See also:

`get_updates_request()`

**Parameters**

**request** (`telegram.request.BaseRequest`) – The request instance.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**token**(*token*)

Sets the token for `telegram.ext.Application.bot`.

**Parameters**

**token** (`str`) – The token.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**update\_queue**(*update\_queue*)

Sets a `asyncio.Queue` instance for `telegram.ext.Application.update_queue`, i.e. the queue that the application will fetch updates from. Will also be used for the `telegram.ext.Application.updater`. If not called, a queue will be instantiated.

**See also:**

`telegram.ext.Updater.update_queue`

**Parameters**

**update\_queue** (`asyncio.Queue`) – The queue.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**updater**(*updater*)

Sets a `telegram.ext.Updater` instance for `telegram.ext.Application.updater`. The `telegram.ext.Updater.bot` and `telegram.ext.Updater.update_queue` will be used for `telegram.ext.Application.bot` and `telegram.ext.Application.update_queue`, respectively.

**Parameters**

**updater** (`telegram.ext.Updater` | `None`) – The updater instance or `None` if no updater should be used.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

**write\_timeout**(*write\_timeout*)

Sets the write operation timeout for the `write_timeout` parameter of `telegram.Bot.request`. Defaults to 5.0.

**See also:**

`get_updates_write_timeout()`

**Parameters**

**write\_timeout** (`float`) – See `telegram.request.HTTPXRequest.write_timeout` for more information.

**Returns**

The same builder with the updated argument.

**Return type**

`ApplicationBuilder`

### 10.2.3 ApplicationHandlerStop

**class** telegram.ext.**ApplicationHandlerStop**(state=None)

Bases: [Exception](#)

Raise this in a handler or an error handler to prevent execution of any other handler (even in different groups).

In order to use this exception in a [telegram.ext.ConversationHandler](#), pass the optional `state` parameter instead of returning the next state:

```
async def conversation_callback(update, context):
    ...
    raise ApplicationHandlerStop(next_state)
```

---

**Note:** Has no effect, if the handler or error handler is run in a non-blocking way.

---

#### Parameters

**state** ([object](#), optional) – The next state of the conversation.

#### state

Optional. The next state of the conversation.

#### Type

[object](#)

### 10.2.4 BaseUpdateProcessor

**class** telegram.ext.**BaseUpdateProcessor**(max\_concurrent\_updates)

Bases: [ABC](#)

An abstract base class for update processors. You can use this class to implement your own update processor.

---

#### Use In

[telegram.ext.ApplicationBuilder.concurrent\\_updates\(\)](#)

---

---

#### Available In

[telegram.ext.Application.update\\_processor](#)

---

#### See also:

[Concurrency](#)

New in version 20.4.

#### Parameters

**max\_concurrent\_updates** ([int](#)) – The maximum number of updates to be processed concurrently. If this number is exceeded, new updates will be queued until the number of currently processed updates decreases.

#### Raises

[ValueError](#) – If `max_concurrent_updates` is a non-positive integer.

**abstract async do\_process\_update**(*update*, *coroutine*)

Custom implementation of how to process an update. Must be implemented by a subclass.

**Warning:** This method will be called by `process_update()`. It should *not* be called manually.

**Parameters**

- **update** (*object*) – The update to be processed.
- **coroutine** (*Awaitable*) – The coroutine that will be awaited to process the update.

**abstract async initialize**()

Initializes the processor so resources can be allocated. Must be implemented by a subclass.

**See also:**

`shutdown()`

**property max\_concurrent\_updates**

The maximum number of updates that can be processed concurrently.

**Type**

`int`

**final async process\_update**(*update*, *coroutine*)

Calls `do_process_update()` with a semaphore to limit the number of concurrent updates.

**Parameters**

- **update** (*object*) – The update to be processed.
- **coroutine** (*Awaitable*) – The coroutine that will be awaited to process the update.

**abstract async shutdown**()

Shutdown the processor so resources can be freed. Must be implemented by a subclass.

**See also:**

`initialize()`

## 10.2.5 CallbackContext

**class** telegram.ext.CallbackContext(*application*, *chat\_id=None*, *user\_id=None*)

This is a context object passed to the callback called by `telegram.ext.BaseHandler` or by the `telegram.ext.Application` in an error handler added by `telegram.ext.Application.add_error_handler` or to the callback of a `telegram.ext.Job`.

---

**Note:** `telegram.ext.Application` will create a single context for an entire update. This means that if you got 2 handlers in different groups and they both get called, they will receive the same `CallbackContext` object (of course with proper attributes like `matches` differing). This allows you to add custom attributes in a lower handler group callback, and then subsequently access those attributes in a higher handler group callback. Note that the attributes on `CallbackContext` might change in the future, so make sure to use a fairly unique name for the attributes.

---

**Warning:** Do not combine custom attributes with `telegram.ext.BaseHandler.block` set to `False` or `telegram.ext.Application.concurrent_updates` set to `True`. Due to how those work, it will almost certainly execute the callbacks for an update out of order, and the attributes that you think you added will not be present.

This class is a [Generic](#) class and accepts four type variables:

1. The type of *bot*. Must be [telegram.Bot](#) or a subclass of that class.
2. The type of *user\_data* (if *user\_data* is not `None`).
3. The type of *chat\_data* (if *chat\_data* is not `None`).
4. The type of *bot\_data* (if *bot\_data* is not `None`).

---

### Examples

- [Context Types Bot](#)
  - [Custom Webhook Bot](#)
- 

### See also:

[telegram.ext.ContextTypes.DEFAULT\\_TYPE](#), [Job Queue](#)

### Parameters

- **application** ([telegram.ext.Application](#)) – The application associated with this context.
- **chat\_id** ([int](#), optional) – The ID of the chat associated with this object. Used to provide [chat\\_data](#).  
New in version 20.0.
- **user\_id** ([int](#), optional) – The ID of the user associated with this object. Used to provide [user\\_data](#).  
New in version 20.0.

### coroutine

Optional. Only present in error handlers if the error was caused by an awaitable run with [Application.create\\_task\(\)](#) or a handler callback with *block=False*.

### Type

[awaitable](#)

### matches

Optional. If the associated update originated from a [filters.Regex](#), this will contain a list of match objects for every pattern where `re.search(pattern, string)` returned a match. Note that filters short circuit, so combined regex filters will not always be evaluated.

### Type

List[[re.Match](#)]

### args

Optional. Arguments passed to a command if the associated update is handled by [telegram.ext.CommandHandler](#), [telegram.ext.PrefixHandler](#) or [telegram.ext.StringCommandHandler](#). It contains a list of the words in the text after the command, using any whitespace string as a delimiter.

### Type

List[[str](#)]

### error

Optional. The error that was raised. Only present when passed to an error handler registered with [telegram.ext.Application.add\\_error\\_handler](#).

### Type

[Exception](#)

**job**

Optional. The job which originated this callback. Only present when passed to the callback of `telegram.ext.Job` or in error handlers if the error is caused by a job.

Changed in version 20.0: `job` is now also present in error handlers if the error is caused by a job.

**Type**

`telegram.ext.Job`

**property application**

The application associated with this context.

**Type**

`telegram.ext.Application`

**property bot**

The bot associated with this context.

**Type**

`telegram.Bot`

**property bot\_data**

Optional. An object that can be used to keep any data in. For each update it will be the same `ContextTypes.bot_data`. Defaults to `dict`.

**See also:**

[Storing Bot, User and Chat Related Data](#)

**Type**

`ContextTypes.bot_data`

**property chat\_data**

Optional. An object that can be used to keep any data in. For each update from the same chat id it will be the same `ContextTypes.chat_data`. Defaults to `dict`.

**Warning:** When a group chat migrates to a supergroup, its chat id will change and the `chat_data` needs to be transferred. For details see our [wiki page](#).

**See also:**

[Storing Bot, User and Chat Related Data](#)

Changed in version 20.0: The chat data is now also present in error handlers if the error is caused by a job.

**Type**

`ContextTypes.chat_data`

**drop\_callback\_data(callback\_query)**

Deletes the cached data for the specified callback query.

New in version 13.6.

---

**Note:** Will *not* raise exceptions in case the data is not found in the cache. Will raise `KeyError` in case the callback query can not be found in the cache.

---

**See also:**

[Arbitrary callback\\_data](#)



**Parameters**

**callback\_query** (*telegram.CallbackQuery*) – The callback query.

**Raises**

**KeyError** | **RuntimeError** – **KeyError**, if the callback query can not be found in the cache and **RuntimeError**, if the bot doesn't allow for arbitrary callback data.

**classmethod** **from\_error**(*update, error, application, job=None, coroutine=None*)

Constructs an instance of *telegram.ext.CallbackContext* to be passed to the error handlers.

**See also:**

*telegram.ext.Application.add\_error\_handler()*

Changed in version 20.0: Removed arguments *async\_args* and *async\_kwargs*.

**Parameters**

- **update** (*object* | *telegram.Update*) – The update associated with the error. May be *None*, e.g. for errors in job callbacks.
- **error** (*Exception*) – The error.
- **application** (*telegram.ext.Application*) – The application associated with this context.
- **job** (*telegram.ext.Job*, optional) – The job associated with the error.  
New in version 20.0.
- **coroutine** (*awaitable*, optional) – The awaitable associated with this error if the error was caused by a coroutine run with *Application.create\_task()* or a handler callback with *block=False*.  
New in version 20.0.

Changed in version 20.2: Accepts *asyncio.Future* and generator-based coroutine functions.

**Returns**

*telegram.ext.CallbackContext*

**classmethod** **from\_job**(*job, application*)

Constructs an instance of *telegram.ext.CallbackContext* to be passed to a job callback.

**See also:**

*telegram.ext.JobQueue()*

**Parameters**

- **job** (*telegram.ext.Job*) – The job.
- **application** (*telegram.ext.Application*) – The application associated with this context.

**Returns**

*telegram.ext.CallbackContext*

**classmethod** **from\_update**(*update, application*)

Constructs an instance of *telegram.ext.CallbackContext* to be passed to the handlers.

**See also:**

*telegram.ext.Application.add\_handler()*

**Parameters**

- **update** (*object* | *telegram.Update*) – The update.

- **application** (*telegram.ext.Application*) – The application associated with this context.

**Returns**

*telegram.ext.CallbackContext*

**property job\_queue**

The *JobQueue* used by the *telegram.ext.Application*.

**See also:**

[Job Queue](#)

**Type**

*telegram.ext.JobQueue*

**property match**

The first match from *matches*. Useful if you are only filtering using a single regex filter. Returns *None* if *matches* is empty.

**Type**

*re.Match*

**async refresh\_data()**

If *application* uses persistence, calls *telegram.ext.BasePersistence.refresh\_bot\_data()* on *bot\_data*, *telegram.ext.BasePersistence.refresh\_chat\_data()* on *chat\_data* and *telegram.ext.BasePersistence.refresh\_user\_data()* on *user\_data*, if appropriate.

Will be called by *telegram.ext.Application.process\_update()* and *telegram.ext.Job.run()*.

New in version 13.6.

**update(data)**

Updates *self.\_\_slots\_\_* with the passed data.

**Parameters**

**data** (Dict[*str*, *object*]) – The data.

**property update\_queue**

The *asyncio.Queue* instance used by the *telegram.ext.Application* and (usually) the *telegram.ext.Updater* associated with this context.

**Type**

*asyncio.Queue*

**property user\_data**

Optional. An object that can be used to keep any data in. For each update from the same user it will be the same *ContextTypes.user\_data*. Defaults to *dict*.

**See also:**

[Storing Bot, User and Chat Related Data](#)

Changed in version 20.0: The user data is now also present in error handlers if the error is caused by a job.

**Type**

*ContextTypes.user\_data*

## 10.2.6 ContextTypes

```
class telegram.ext.ContextTypes(context=<class 'telegram.ext.callbackcontext.CallbackContext'>,
                                bot_data=<class 'dict'>, chat_data=<class 'dict'>, user_data=<class
                                'dict'>)
```

Bases: `typing.Generic`

Convenience class to gather customizable types of the `telegram.ext.CallbackContext` interface.

---

### Use In

`telegram.ext.ApplicationBuilder.context_types()`

---

### Available In

- `telegram.ext.Application.context_types`
  - `telegram.ext.PicklePersistence.context_types`
- 

### Examples

*ContextTypes Bot*

---

### See also:

[Architecture Overview](#), [Storing Bot, User and Chat Related Data](#)

New in version 13.6.

### Parameters

- **context** (`type`, optional) – Determines the type of the `context` argument of all (error-)handler callbacks and job callbacks. Must be a subclass of `telegram.ext.CallbackContext`. Defaults to `telegram.ext.CallbackContext`.
- **bot\_data** (`type`, optional) – Determines the type of `context.bot_data` of all (error-)handler callbacks and job callbacks. Defaults to `dict`. Must support instantiating without arguments.
- **chat\_data** (`type`, optional) – Determines the type of `context.chat_data` of all (error-)handler callbacks and job callbacks. Defaults to `dict`. Must support instantiating without arguments.
- **user\_data** (`type`, optional) – Determines the type of `context.user_data` of all (error-)handler callbacks and job callbacks. Defaults to `dict`. Must support instantiating without arguments.

### DEFAULT\_TYPE

Shortcut for the type annotation for the `context` argument that's correct for the default settings, i.e. if `telegram.ext.ContextTypes` is not used.

---

### Example

```
async def callback(update: Update, context: ContextTypes.DEFAULT_TYPE):
    ...
```

---

alias of `CallbackContext[ExtBot[None], Dict[Any, Any], Dict[Any, Any], Dict[Any, Any]]`

**property bot\_data**

The type of `context.bot_data` of all (error-)handler callbacks and job callbacks.

**property chat\_data**

The type of `context.chat_data` of all (error-)handler callbacks and job callbacks.

**property context**

The type of the context argument of all (error-)handler callbacks and job callbacks.

**property user\_data**

The type of `context.user_data` of all (error-)handler callbacks and job callbacks.

## 10.2.7 Defaults

```
final class telegram.ext.Defaults(parse_mode=None, disable_notification=None,
                                  disable_web_page_preview=None, quote=None,
                                  tzinfo=datetime.timezone.utc, block=True,
                                  allow_sending_without_reply=None, protect_content=None)
```

Bases: `object`

Convenience Class to gather all parameters with a (user defined) default value

---

**Use In**

`telegram.ext.ApplicationBuilder.defaults()`

---

**See also:**

[Architecture Overview](#), [Adding Defaults to Your Bot](#)

Changed in version 20.0: Removed the argument and attribute `timeout`. Specify default timeout behavior for the networking backend directly via `telegram.ext.ApplicationBuilder` instead.

**Parameters**

- **parse\_mode** (`str`, optional) – Mode for parsing entities. See `telegram.constants.ParseMode` and [formatting options](#) for more details.
- **disable\_notification** (`bool`, optional) – Sends the message silently. Users will receive a notification with no sound.
- **disable\_web\_page\_preview** (`bool`, optional) – Disables link previews for links in this message.
- **allow\_sending\_without\_reply** (`bool`, optional) – Pass `True`, if the message should be sent even if the specified replied-to message is not found.
- **quote** (`bool`, optional) – If set to `True`, the reply is sent as an actual reply to the message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.
- **tzinfo** (`datetime.tzinfo`, optional) – A timezone to be used for all date(time) inputs appearing throughout PTB, i.e. if a timezone naive date(time) object is passed somewhere, it will be assumed to be in `tzinfo`. If the `telegram.ext.JobQueue` is used, this must be a timezone provided by the `pytz` module. Defaults to `pytz.utc`, if available, and `datetime.timezone.utc` otherwise.
- **block** (`bool`, optional) – Default setting for the `BaseHandler.block` parameter of handlers and error handlers registered through `Application.add_handler()` and `Application.add_error_handler()`. Defaults to `True`.

- **protect\_content** (`bool`, optional) – Protects the contents of the sent message from forwarding and saving.

New in version 20.0.

**property allow\_sending\_without\_reply**

Optional. Pass `True`, if the message should be sent even if the specified replied-to message is not found.

Type

`bool`

**property block**

Optional. Default setting for the `BaseHandler.block` parameter of handlers and error handlers registered through `Application.add_handler()` and `Application.add_error_handler()`.

Type

`bool`

**property disable\_notification**

Optional. Sends the message silently. Users will receive a notification with no sound.

Type

`bool`

**property disable\_web\_page\_preview**

Optional. Disables link previews for links in this message.

Type

`bool`

**property explanation\_parse\_mode**

Optional. Alias for `parse_mode`, used for the corresponding parameter of `telegram.Bot.send_poll()`.

Type

`str`

**property parse\_mode**

Optional. Send Markdown or HTML, if you want Telegram apps to show bold, italic, fixed-width text or URLs in your bot's message.

Type

`str`

**property protect\_content**

Optional. Protects the contents of the sent message from forwarding and saving.

New in version 20.0.

Type

`bool`

**property quote**

Optional. If set to `True`, the reply is sent as an actual reply to the message. If `reply_to_message_id` is passed, this parameter will be ignored. Default: `True` in group chats and `False` in private chats.

Type

`bool`

**property tzinfo**

A timezone to be used for all date(time) objects appearing throughout PTB.

Type

`tzinfo`

## 10.2.8 ExtBot

```
class telegram.ext.ExtBot(token, base_url='https://api.telegram.org/bot',
                           base_file_url='https://api.telegram.org/file/bot', request=None,
                           get_updates_request=None, private_key=None, private_key_password=None,
                           defaults=None, arbitrary_callback_data=False, local_mode=False,
                           rate_limiter=None)
```

Bases: [telegram.Bot](#), [typing.Generic](#)

This object represents a Telegram Bot with convenience extensions.

**Warning:** Not to be confused with [telegram.Bot](#).

For the documentation of the arguments, methods and attributes, please see [telegram.Bot](#).

All API methods of this class have an additional keyword argument `rate_limit_args`. This can be used to pass additional information to the rate limiter, specifically to [telegram.ext.BaseRateLimiter.process\\_request.rate\\_limit\\_args](#).

**Warning:**

- The keyword argument `rate_limit_args` can *not* be used, if `rate_limiter` is `None`.
- The method [get\\_updates\(\)](#) is the only method that does not have the additional argument, as this method will never be rate limited.

---

### Use In

[telegram.ext.ApplicationBuilder.bot\(\)](#)

---

---

### Available In

- [telegram.ext.Application.bot](#)
  - [telegram.ext.BasePersistence.bot](#)
  - [telegram.ext.CallbackContext.bot](#)
  - [telegram.ext.CallbackDataCache.bot](#)
  - [telegram.ext.Updater.bot](#)
- 

---

### Examples

*Arbitrary Callback Data Bot*

---

### See also:

[Arbitrary callback\\_data](#)

New in version 13.6.

Changed in version 20.0: Removed the attribute `arbitrary_callback_data`. You can instead use [bot.callback\\_data\\_cache.maxsize](#) to access the size of the cache.

Changed in version 20.5: Removed deprecated methods `set_sticker_set_thumb` and `setStickerSetThumb`.

### Parameters

- **defaults** (*telegram.ext.Defaults*, optional) – An object containing default values to be used if not set explicitly in the bot methods.
- **arbitrary\_callback\_data** (*bool* | *int*, optional) – Whether to allow arbitrary objects as callback data for *telegram.InlineKeyboardButton*. Pass an integer to specify the maximum number of objects cached in memory. Defaults to *False*.

See also:

*Arbitrary callback\_data*

- **rate\_limiter** (*telegram.ext.BaseRateLimiter*, optional) – A rate limiter to use for limiting the number of requests made by the bot per time interval.

New in version 20.0.

#### `__repr__()`

Give a string representation of the bot in the form `ExtBot[token=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

#### Returns

*str*

#### property `callback_data_cache`

Optional. The cache for objects passed as callback data for *telegram.InlineKeyboardButton*.

---

#### Examples

*Arbitrary Callback Data Bot*

---

Changed in version 20.0: \* This property is now read-only. \* This property is now optional and can be *None* if *arbitrary\_callback\_data* is set to *False*.

#### Type

*telegram.ext.CallbackDataCache*

#### property defaults

The *telegram.ext.Defaults* used by this bot, if any.

#### async `initialize()`

See *telegram.Bot.initialize()*. Also initializes the *ExtBot.rate\_limiter* (if set) by calling *telegram.ext.BaseRateLimiter.initialize()*.

#### `insert_callback_data(update)`

If this bot allows for arbitrary callback data, this inserts the cached data into all corresponding buttons within this update.

---

**Note:** Checks *telegram.Message.via\_bot* and *telegram.Message.from\_user* to figure out if a) a reply markup exists and b) it was actually sent by this bot. If not, the message will be returned unchanged.

Note that this will fail for channel posts, as *telegram.Message.from\_user* is *None* for those! In the corresponding reply markups, the callback data will be replaced by *telegram.ext.InvalidCallbackData*.

---

**Warning:** *In place*, i.e. the passed *telegram.Message* will be changed!

#### Parameters

**update** (*telegram.Update*) – The update.

**property** `rate_limiter`

The `telegram.ext.BaseRateLimiter` used by this bot, if any.

New in version 20.0.

**async** `shutdown()`

See `telegram.Bot.shutdown()`. Also shuts down the `ExtBot.rate_limiter` (if set) by calling `telegram.ext.BaseRateLimiter.shutdown()`.

## 10.2.9 Job

**class** `telegram.ext.Job`(*callback*, *data=None*, *name=None*, *chat\_id=None*, *user\_id=None*)

Bases: `typing.Generic`

This class is a convenience wrapper for the jobs held in a `telegram.ext.JobQueue`. With the current backend APScheduler, `job` holds a `apscheduler.job.Job` instance.

Objects of this class are comparable in terms of equality. Two objects of this class are considered equal, if their `id` is equal.

This class is a `Generic` class and accepts one type variable that specifies the type of the argument context of `callback`.

---

**Important:** If you want to use this class, you must install PTB with the optional requirement `job-queue`, i.e.

```
pip install "python-telegram-bot[job-queue]"
```

---

---

**Note:** All attributes and instance methods of `job` are also directly available as attributes/methods of the corresponding `telegram.ext.Job` object.

---

**Warning:** This class should not be instantiated manually. Use the methods of `telegram.ext.JobQueue` to schedule jobs.

---

**Available In**

`telegram.ext.CallbackContext.job`

---

**See also:**

`Job Queue`

Changed in version 20.0:

- Removed argument and attribute `job_queue`.
- Renamed `Job.context` to `Job.data`.
- Removed argument `job`
- To use this class, PTB must be installed via `pip install "python-telegram-bot[job-queue]"`.

**Parameters**

- **callback** (`coroutine function`) – The callback function that should be executed by the new job. Callback signature:



```
async def callback(context: CallbackContext)
```

- **data** (`object`, optional) – Additional data needed for the `callback` function. Can be accessed through `Job.data` in the callback. Defaults to `None`.
- **name** (`str`, optional) – The name of the new job. Defaults to `callback.__name__`.
- **chat\_id** (`int`, optional) – Chat id of the chat that this job is associated with.  
New in version 20.0.
- **user\_id** (`int`, optional) – User id of the user that this job is associated with.  
New in version 20.0.

**callback**

The callback function that should be executed by the new job.

**Type**

`coroutine function`

**data**

Optional. Additional data needed for the `callback` function.

**Type**

`object`

**name**

Optional. The name of the new job.

**Type**

`str`

**chat\_id**

Optional. Chat id of the chat that this job is associated with.

New in version 20.0.

**Type**

`int`

**user\_id**

Optional. User id of the user that this job is associated with.

New in version 20.0.

**Type**

`int`

**\_\_repr\_\_()**

Give a string representation of the job in the form `Job[id=..., name=..., callback=..., trigger=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

**Returns**

`str`

**property enabled**

Whether this job is enabled.

**Type**

`bool`

**classmethod** `from_aps_job(aps_job)`

Provides the `telegram.ext.Job` that is associated with the given APScheduler job.

---

**Tip:** This method can be useful when using advanced APScheduler features along with `telegram.ext.JobQueue`.

---

New in version 20.4.

**Parameters**

**aps\_job** (`apscheduler.job.Job`) – The APScheduler job

**Returns**

`telegram.ext.Job`

**property** `job`

The APS Job this job is a wrapper for.

Changed in version 20.0: This property is now read-only.

**Type**

`apscheduler.job.Job`

**property** `next_t`

Datetime for the next job execution. Datetime is localized according to `datetime.datetime.tzinfo`. If job is removed or already ran it equals to `None`.

**Warning:** This attribute is only available, if the `telegram.ext.JobQueue` this job belongs to is already started. Otherwise APScheduler raises an `AttributeError`.

**Type**

`datetime.datetime`

**property** `removed`

Whether this job is due to be removed.

**Type**

`bool`

**async** `run(application)`

Executes the callback function independently of the jobs schedule. Also calls `telegram.ext.Application.update_persistence()`.

Changed in version 20.0: Calls `telegram.ext.Application.update_persistence()`.

**Parameters**

**application** (`telegram.ext.Application`) – The application this job is associated with.

**schedule\_removal()**

Schedules this job for removal from the `JobQueue`. It will be removed without executing its callback function again.

### 10.2.10 JobQueue

**class** telegram.ext.JobQueue

Bases: `typing.Generic`

This class allows you to periodically perform tasks with the bot. It is a convenience wrapper for the APScheduler library.

This class is a `Generic` class and accepts one type variable that specifies the type of the argument context of the job callbacks (`callback`) of `run_once()` and the other scheduling methods.

---

**Important:** If you want to use this class, you must install PTB with the optional requirement `job-queue`, i.e.

```
pip install "python-telegram-bot[job-queue]"
```

---

---

#### Use In

`telegram.ext.ApplicationBuilder.job_queue()`

---

---

#### Available In

- `telegram.ext.Application.job_queue`
  - `telegram.ext.CallbackContext.job_queue`
- 

---

#### Examples

*Timer Bot*

---

#### See also:

[Architecture Overview](#), [Job Queue](#)

Changed in version 20.0: To use this class, PTB must be installed via `pip install "python-telegram-bot[job-queue]"`.

#### scheduler

The scheduler.

Changed in version 20.0: Uses `AsyncIOScheduler` instead of `BackgroundScheduler`

#### Type

`apscheduler.schedulers.asyncio.AsyncIOScheduler`

#### `__repr__()`

Give a string representation of the JobQueue in the form `JobQueue[application=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

#### Returns

`str`

#### property application

The application this JobQueue is associated with.

**get\_jobs\_by\_name**(*name*)

Returns a tuple of all *pending/scheduled* jobs with the given name that are currently in the *JobQueue*.

**Returns**

Tuple of all *pending* or *scheduled* jobs matching the name.

**Return type**

Tuple[*Job*]

**async static job\_callback**(*job\_queue*, *job*)

This method is used as a callback for the APScheduler jobs.

More precisely, the `func` argument of `apscheduler.job.Job` is set to this method and the `arg` argument (representing positional arguments to `func`) is set to a tuple containing the *JobQueue* itself and the *Job* instance.

---

**Tip:** This method is a static method rather than a bound method. This makes the arguments more transparent and allows for easier handling of PTBs integration of APScheduler when utilizing advanced features of APScheduler.

---

---

**Hint:** This method is effectively a wrapper for `telegram.ext.Job.run()`.

---

New in version 20.4.

**Parameters**

- **job\_queue** (*JobQueue*) – The job queue that created the job.
- **job** (*Job*) – The job to run.

**jobs**()

Returns a tuple of all *scheduled* jobs that are currently in the *JobQueue*.

**Returns**

Tuple of all *scheduled* jobs.

**Return type**

Tuple[*Job*]

**run\_custom**(*callback*, *job\_kwargs*, *data=None*, *name=None*, *chat\_id=None*, *user\_id=None*)

Creates a new custom defined *Job*.

**Parameters**

- **callback** (*coroutine function*) – The callback function that should be executed by the new job. Callback signature:

```
async def callback(context: CallbackContext)
```

- **job\_kwargs** (*dict*) – Arbitrary keyword arguments. Used as arguments for `apscheduler.schedulers.base.BaseScheduler.add_job()`.
- **data** (*object*, optional) – Additional data needed for the callback function. Can be accessed through `Job.data` in the callback. Defaults to `None`.

Changed in version 20.0: Renamed the parameter `context` to `data`.

- **name** (*str*, optional) – The name of the new job. Defaults to `callback.__name__`.
- **chat\_id** (*int*, optional) – Chat id of the chat associated with this job. If passed, the corresponding `chat_data` will be available in the callback.

New in version 20.0.

- **user\_id** (`int`, optional) – User id of the user associated with this job. If passed, the corresponding `user_data` will be available in the callback.

New in version 20.0.

#### Returns

The new `Job` instance that has been added to the job queue.

#### Return type

`telegram.ext.Job`

**run\_daily**(*callback*, *time*, *days*=(0, 1, 2, 3, 4, 5, 6), *data*=None, *name*=None, *chat\_id*=None, *user\_id*=None, *job\_kwargs*=None)

Creates a new `Job` that runs on a daily basis and adds it to the queue.

---

**Note:** For a note about DST, please see the documentation of `APScheduler`.

---

#### Parameters

- **callback** (`coroutine function`) – The callback function that should be executed by the new job. Callback signature:

```
async def callback(context: CallbackContext)
```

- **time** (`datetime.time`) – Time of day at which the job should run. If the time-zone (`datetime.time.tzinfo`) is `None`, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- **days** (`Tuple[int]`, optional) – Defines on which days of the week the job should run (where 0–6 correspond to sunday - saturday). By default, the job will run every day.

Changed in version 20.0: Changed day of the week mapping of 0-6 from monday-sunday to sunday-saturday.

- **data** (`object`, optional) – Additional data needed for the callback function. Can be accessed through `Job.data` in the callback. Defaults to `None`.

Changed in version 20.0: Renamed the parameter `context` to `data`.

- **name** (`str`, optional) – The name of the new job. Defaults to `callback.__name__`.
- **chat\_id** (`int`, optional) – Chat id of the chat associated with this job. If passed, the corresponding `chat_data` will be available in the callback.

New in version 20.0.

- **user\_id** (`int`, optional) – User id of the user associated with this job. If passed, the corresponding `user_data` will be available in the callback.

New in version 20.0.

- **job\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to pass to the `apscheduler.schedulers.base.BaseScheduler.add_job()`.

#### Returns

The new `Job` instance that has been added to the job queue.

#### Return type

`telegram.ext.Job`

**run\_monthly**(*callback*, *when*, *day*, *data*=None, *name*=None, *chat\_id*=None, *user\_id*=None, *job\_kwargs*=None)

Creates a new `Job` that runs on a monthly basis and adds it to the queue.

Changed in version 20.0: The `day_is_strict` argument was removed. Instead one can now pass `-1` to the `day` parameter to have the job run on the last day of the month.

#### Parameters

- **callback** (coroutine function) – The callback function that should be executed by the new job. Callback signature:

```
async def callback(context: CallbackContext)
```

- **when** (`datetime.time`) – Time of day at which the job should run. If the timezone (`when.tzinfo`) is `None`, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
- **day** (`int`) – Defines the day of the month whereby the job would run. It should be within the range of 1 and 31, inclusive. If a month has fewer days than this number, the job will not run in this month. Passing `-1` leads to the job running on the last day of the month.
- **data** (`object`, optional) – Additional data needed for the callback function. Can be accessed through `Job.data` in the callback. Defaults to `None`.

Changed in version 20.0: Renamed the parameter `context` to `data`.

- **name** (`str`, optional) – The name of the new job. Defaults to `callback.__name__`.
- **chat\_id** (`int`, optional) – Chat id of the chat associated with this job. If passed, the corresponding `chat_data` will be available in the callback.

New in version 20.0.

- **user\_id** (`int`, optional) – User id of the user associated with this job. If passed, the corresponding `user_data` will be available in the callback.

New in version 20.0.

- **job\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to pass to the `apscheduler.schedulers.base.BaseScheduler.add_job()`.

#### Returns

The new `Job` instance that has been added to the job queue.

#### Return type

`telegram.ext.Job`

**run\_once**(*callback*, *when*, *data=None*, *name=None*, *chat\_id=None*, *user\_id=None*, *job\_kwargs=None*)

Creates a new `Job` instance that runs once and adds it to the queue.

#### Parameters

- **callback** (coroutine function) – The callback function that should be executed by the new job. Callback signature:

```
async def callback(context: CallbackContext)
```

- **when** (`int` | `float` | `datetime.timedelta` | `datetime.datetime` | `datetime.time`) – Time in or at which the job should run. This parameter will be interpreted depending on its type.
  - `int` or `float` will be interpreted as “seconds from now” in which the job should run.
  - `datetime.timedelta` will be interpreted as “time from now” in which the job should run.
  - `datetime.datetime` will be interpreted as a specific date and time at which the job should run. If the timezone (`datetime.datetime.tzinfo`) is `None`, the default

timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

- `datetime.time` will be interpreted as a specific time of day at which the job should run. This could be either today or, if the time has already passed, tomorrow. If the timezone (`datetime.time.tzinfo`) is `None`, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.
  - **chat\_id** (`int`, optional) – Chat id of the chat associated with this job. If passed, the corresponding `chat_data` will be available in the callback.
- New in version 20.0.
- **user\_id** (`int`, optional) – User id of the user associated with this job. If passed, the corresponding `user_data` will be available in the callback.
- New in version 20.0.
- **data** (`object`, optional) – Additional data needed for the callback function. Can be accessed through `Job.data` in the callback. Defaults to `None`.
- Changed in version 20.0: Renamed the parameter `context` to `data`.
- **name** (`str`, optional) – The name of the new job. Defaults to `callback.__name__`.
  - **job\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to pass to the `apscheduler.schedulers.base.BaseScheduler.add_job()`.

#### Returns

The new `Job` instance that has been added to the job queue.

#### Return type

`telegram.ext.Job`

**run\_repeating**(*callback*, *interval*, *first=None*, *last=None*, *data=None*, *name=None*, *chat\_id=None*, *user\_id=None*, *job\_kwargs=None*)

Creates a new `Job` instance that runs at specified intervals and adds it to the queue.

---

**Note:** For a note about DST, please see the documentation of `APScheduler`.

---

#### Parameters

- **callback** (`coroutine function`) – The callback function that should be executed by the new job. Callback signature:

```
async def callback(context: CallbackContext)
```

- **interval** (`int` | `float` | `datetime.timedelta`) – The interval in which the job will run. If it is an `int` or a `float`, it will be interpreted as seconds.
- **first** (`int` | `float` | `datetime.timedelta` | `datetime.datetime` | `datetime.time`, optional) – Time in or at which the job should run. This parameter will be interpreted depending on its type.
  - `int` or `float` will be interpreted as “seconds from now” in which the job should run.
  - `datetime.timedelta` will be interpreted as “time from now” in which the job should run.
  - `datetime.datetime` will be interpreted as a specific date and time at which the job should run. If the timezone (`datetime.datetime.tzinfo`) is `None`, the default timezone of the bot will be used.

- `datetime.time` will be interpreted as a specific time of day at which the job should run. This could be either today or, if the time has already passed, tomorrow. If the timezone (`datetime.time.tzinfo`) is `None`, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

Defaults to `interval`

---

**Note:** Setting `first` to `0`, `datetime.datetime.now()` or another value that indicates that the job should run immediately will not work due to how the APScheduler library works. If you want to run a job immediately, we recommend to use an approach along the lines of:

```
job = context.job_queue.run_repeating(callback, interval=5)
await job.run(context.application)
```

See also:

`telegram.ext.Job.run()`

---

- **last** (`int` | `float` | `datetime.timedelta` | `datetime.datetime` | `datetime.time`, optional) – Latest possible time for the job to run. This parameter will be interpreted depending on its type. See `first` for details.

If `last` is `datetime.datetime` or `datetime.time` type and `last.tzinfo` is `None`, the default timezone of the bot will be assumed, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

Defaults to `None`.

- **data** (`object`, optional) – Additional data needed for the callback function. Can be accessed through `Job.data` in the callback. Defaults to `None`.

Changed in version 20.0: Renamed the parameter `context` to `data`.

- **name** (`str`, optional) – The name of the new job. Defaults to `callback.__name__`.
- **chat\_id** (`int`, optional) – Chat id of the chat associated with this job. If passed, the corresponding `chat_data` will be available in the callback.

New in version 20.0.

- **user\_id** (`int`, optional) – User id of the user associated with this job. If passed, the corresponding `user_data` will be available in the callback.

New in version 20.0.

- **job\_kwargs** (`dict`, optional) – Arbitrary keyword arguments to pass to the `apscheduler.schedulers.base.BaseScheduler.add_job()`.

### Returns

The new `Job` instance that has been added to the job queue.

### Return type

`telegram.ext.Job`

### `set_application(application)`

Set the application to be used by this `JobQueue`.

### Parameters

**application** (`telegram.ext.Application`) – The application.

### `async start()`

Starts the `JobQueue`.



**async stop**(*wait=True*)

Shuts down the *JobQueue*.

**Parameters**

**wait** (*bool*, optional) – Whether to wait until all currently running jobs have finished.  
Defaults to *True*.

## 10.2.11 SimpleUpdateProcessor

**class** telegram.ext.**SimpleUpdateProcessor**(*max\_concurrent\_updates*)

Bases: *telegram.ext.BaseUpdateProcessor*

Instance of *telegram.ext.BaseUpdateProcessor* that immediately awaits the coroutine, i.e. does not apply any additional processing. This is used by default when *telegram.ext.ApplicationBuilder.concurrent\_updates* is *int*.

---

**Use In**

*telegram.ext.ApplicationBuilder.concurrent\_updates()*

---



---

**Available In**

*telegram.ext.Application.update\_processor*

---

New in version 20.4.

**async do\_process\_update**(*update, coroutine*)

Immediately awaits the coroutine, i.e. does not apply any additional processing.

**Parameters**

- **update** (*object*) – The update to be processed.
- **coroutine** (*Awaitable*) – The coroutine that will be awaited to process the update.

**async initialize**()

Does nothing.

**async shutdown**()

Does nothing.

## 10.2.12 Updater

**class** telegram.ext.**Updater**(*bot, update\_queue*)

Bases: *typing.AsyncContextManager*

This class fetches updates for the bot either via long polling or by starting a webhook server. Received updates are enqueued into the *update\_queue* and may be fetched from there to handle them appropriately.

Instances of this class can be used as asyncio context managers, where

```
async with updater:
    # code
```

is roughly equivalent to

```
try:
    await updater.initialize()
    # code
finally:
    await updater.shutdown()
```

---

**Use In**

`telegram.ext.ApplicationBuilder.updater()`

---

---

**Available In**

`telegram.ext.Application.updater`

---

**See also:**

[Architecture Overview](#), [Builder Pattern](#)

Changed in version 20.0:

- Removed argument and attribute `user_sig_handler`
- The only arguments and attributes are now `bot` and `update_queue` as now the sole purpose of this class is to fetch updates. The entry point to a PTB application is now `telegram.ext.Application`.

**Parameters**

- **bot** (`telegram.Bot`) – The bot used with this Updater.
- **update\_queue** (`asyncio.Queue`) – Queue for the updates.

**bot**

The bot used with this Updater.

**Type**

`telegram.Bot`

**update\_queue**

Queue for the updates.

**Type**

`asyncio.Queue`

**\_\_repr\_\_()**

Give a string representation of the updater in the form `Updater[bot=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

**Returns**

`str`

**async initialize()**

Initializes the Updater & the associated `bot` by calling `telegram.Bot.initialize()`.

**See also:**

`shutdown()`

**async shutdown()**

Shutdown the Updater & the associated *bot* by calling `telegram.Bot.shutdown()`.

See also:

`initialize()`

**Raises**

**RuntimeError** – If the updater is still running.

**async start\_polling**(*poll\_interval=0.0, timeout=10, bootstrap\_retries=-1, read\_timeout=2, write\_timeout=None, connect\_timeout=None, pool\_timeout=None, allowed\_updates=None, drop\_pending\_updates=None, error\_callback=None*)

Starts polling updates from Telegram.

Changed in version 20.0: Removed the `clean` argument in favor of `drop_pending_updates`.

**Parameters**

- **poll\_interval** (*float*, optional) – Time to wait between polling updates from Telegram in seconds. Default is `0.0`.
- **timeout** (*int*, optional) – Passed to `telegram.Bot.get_updates.timeout`. Defaults to `10` seconds.
- **bootstrap\_retries** (*int*, optional) – Whether the bootstrapping phase of the `telegram.ext.Updater` will retry on failures on the Telegram server.
  - `< 0` - retry indefinitely (default)
  - `0` - no retries
  - `> 0` - retry up to X times
- **read\_timeout** (*float*, optional) – Value to pass to `telegram.Bot.get_updates.read_timeout`. Defaults to `2`.
- **write\_timeout** (*float | None*, optional) – Value to pass to `telegram.Bot.get_updates.write_timeout`. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (*float | None*, optional) – Value to pass to `telegram.Bot.get_updates.connect_timeout`. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (*float | None*, optional) – Value to pass to `telegram.Bot.get_updates.pool_timeout`. Defaults to `DEFAULT_NONE`.
- **allowed\_updates** (*List[str]*, optional) – Passed to `telegram.Bot.get_updates()`.
- **drop\_pending\_updates** (*bool*, optional) – Whether to clean any pending updates on Telegram servers before actually starting to poll. Default is `False`.

New in version 13.4.

- **error\_callback** (*Callable[[`telegram.error.TelegramError`], None]*, optional) – Callback to handle `telegram.error.TelegramError`s that occur while calling `telegram.Bot.get_updates()` during polling. Defaults to `None`, in which case errors will be logged. Callback signature:

```
def callback(error: telegram.error.TelegramError)
```

**Note:** The `error_callback` must *not* be a *coroutine function*! If asynchronous behavior of the callback is wanted, please schedule a task from within the callback.

**Returns**

The update queue that can be filled from the main thread.

**Return type**

`asyncio.Queue`

**Raises**

**RuntimeError** – If the updater is already running or was not initialized.

```
async start_webhook(listen='127.0.0.1', port=80, url_path='', cert=None, key=None,
                    bootstrap_retries=0, webhook_url=None, allowed_updates=None,
                    drop_pending_updates=None, ip_address=None, max_connections=40,
                    secret_token=None)
```

Starts a small http server to listen for updates via webhook. If `cert` and `key` are not provided, the webhook will be started directly on `http://listen:port/url_path`, so SSL can be handled by another application. Else, the webhook will be started on `https://listen:port/url_path`. Also calls `telegram.Bot.set_webhook()` as required.

---

**Important:** If you want to use this method, you must install PTB with the optional requirement webhooks, i.e.

```
pip install "python-telegram-bot[webhooks]"
```

---

**See also:****Webhooks**

Changed in version 13.4: `start_webhook()` now *always* calls `telegram.Bot.set_webhook()`, so pass `webhook_url` instead of calling `updater.bot.set_webhook(webhook_url)` manually.

Changed in version 20.0:

- Removed the `clean` argument in favor of `drop_pending_updates` and removed the deprecated argument `force_event_loop`.

**Parameters**

- **listen** (`str`, optional) – IP-Address to listen on. Defaults to `127.0.0.1`.
- **port** (`int`, optional) – Port the bot should be listening on. Must be one of `telegram.constants.SUPPORTED_WEBHOOK_PORTS` unless the bot is running behind a proxy. Defaults to `80`.
- **url\_path** (`str`, optional) – Path inside url (`http(s)://listen:port/<url_path>`). Defaults to `''`.
- **cert** (`pathlib.Path` | `str`, optional) – Path to the SSL certificate file.
- **key** (`pathlib.Path` | `str`, optional) – Path to the SSL key file.
- **drop\_pending\_updates** (`bool`, optional) – Whether to clean any pending updates on Telegram servers before actually starting to poll. Default is `False`.

New in version 13.4.

- **bootstrap\_retries** (`int`, optional) – Whether the bootstrapping phase of the `telegram.ext.Updater` will retry on failures on the Telegram server.
  - `< 0` - retry indefinitely
  - `0` - no retries (default)
  - `> 0` - retry up to X times

- **webhook\_url** (`str`, optional) – Explicitly specify the webhook url. Useful behind NAT, reverse proxy, etc. Default is derived from `listen`, `port`, `url_path`, `cert`, and `key`.
- **ip\_address** (`str`, optional) – Passed to `telegram.Bot.set_webhook()`. Defaults to `None`.

New in version 13.4.

- **allowed\_updates** (`List[str]`, optional) – Passed to `telegram.Bot.set_webhook()`. Defaults to `None`.
- **max\_connections** (`int`, optional) – Passed to `telegram.Bot.set_webhook()`. Defaults to 40.

New in version 13.6.

- **secret\_token** (`str`, optional) – Passed to `telegram.Bot.set_webhook()`. Defaults to `None`.

When added, the web server started by this call will expect the token to be set in the `X-Telegram-Bot-API-Secret-Token` header of an incoming request and will raise a `http.HTTPStatus.FORBIDDEN` error if either the header isn't set or it is set to a wrong token.

New in version 20.0.

#### Returns

The update queue that can be filled from the main thread.

#### Return type

`queue.Queue`

#### Raises

**RuntimeError** – If the updater is already running or was not initialized.

#### `async stop()`

Stops the polling/webhook.

#### See also:

`start_polling()`, `start_webhook()`

#### Raises

**RuntimeError** – If the updater is not running.

## 10.2.13 Handlers

### BaseHandler

**class** `telegram.ext.BaseHandler`(*callback*, *block=True*)

Bases: `typing.Generic`, `ABC`

The base class for all update handlers. Create custom handlers by inheriting from it.

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

This class is a `Generic` class and accepts two type variables:

1. The type of the updates that this handler will handle. Must coincide with the type of the first argument of `callback`. `check_update()` must only accept updates of this type.

2. The type of the second argument of `callback`. Must coincide with the type of the parameters `handle_update.context` and `collect_additional_context.context` as well as the second argument of `callback`. Must be either `CallbackContext` or a subclass of that class.

---

**Tip:** For this type variable, one should usually provide a `TypeVar` that is also used for the mentioned method arguments. That way, a type checker can check whether this handler fits the definition of the `Application`.

---

---

#### Available In

`telegram.ext.Application.handlers`

---

#### See also:

Types of Handlers

Changed in version 20.0:

- The attribute `run_async` is now `block`.
- This class was previously named `Handler`.

#### Parameters

- **callback** (`coroutine function`) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **block** (`bool`, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

#### See also:

Concurrency

#### callback

The callback function for this handler.

##### Type

`coroutine function`

#### block

Determines whether the callback will run in a blocking way.

##### Type

`bool`

#### \_\_repr\_\_()

Give a string representation of the handler in the form `ClassName[callback=...]`.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

#### Returns

`str`

**abstract check\_update(update)**

This method is called to determine if an update should be handled by this handler instance. It should always be overridden.

---

**Note:** Custom updates types can be handled by the application. Therefore, an implementation of this method should always check the type of `update`.

---

**Parameters**

**update** (`object` | `telegram.Update`) – The update to be tested.

**Returns**

Either `None` or `False` if the update should not be handled. Otherwise an object that will be passed to `handle_update()` and `collect_additional_context()` when the update gets handled.

**collect\_additional\_context(context, update, application, check\_result)**

Prepares additional arguments for the context. Override if needed.

**Parameters**

- **context** (`telegram.ext.CallbackContext`) – The context object.
- **update** (`telegram.Update`) – The update to gather chat/user id from.
- **application** (`telegram.ext.Application`) – The calling application.
- **check\_result** – The result (return value) from `check_update()`.

**async handle\_update(update, application, check\_result, context)**

This method is called if it was determined that an update should indeed be handled by this instance. Calls `callback` along with its respectful arguments. To work with the `telegram.ext.ConversationHandler`, this method returns the value returned from `callback`. Note that it can be overridden if needed by the subclassing handler.

**Parameters**

- **update** (`str` | `telegram.Update`) – The update to be handled.
- **application** (`telegram.ext.Application`) – The calling application.
- **check\_result** (`object`) – The result from `check_update()`.
- **context** (`telegram.ext.CallbackContext`) – The context as provided by the application.

## CallbackQueryHandler

**class telegram.ext.CallbackQueryHandler(callback, pattern=None, block=True)**

Bases: `telegram.ext.BaseHandler`

Handler class to handle Telegram `callback queries`. Optionally based on a regex.

Read the documentation of the `re` module for more information.

---

**Note:**

- If your bot allows arbitrary objects as `callback_data`, it may happen that the original `callback_data` for the incoming `telegram.CallbackQuery` can not be found. This is the case when either a malicious client tempered with the `telegram.CallbackQuery.data` or the data was simply dropped from cache or not persisted. In these cases, an instance of `telegram.ext.InvalidCallbackData` will be set as `telegram.CallbackQuery.data`.

New in version 13.6.

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

---

**Available In**`telegram.ext.Application.handlers`

---

**Parameters**

- **callback** (coroutine function) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **pattern** (str | re.Pattern | callable | type, optional) – Pattern to test `telegram.CallbackQuery.data` against. If a string or a regex pattern is passed, `re.match()` is used on `telegram.CallbackQuery.data` to determine if an update should be handled by this handler. If your bot allows arbitrary objects as `callback_data`, non-strings will be accepted. To filter arbitrary objects you may pass:
  - a callable, accepting exactly one argument, namely the `telegram.CallbackQuery.data`. It must return `True` or `False/None` to indicate, whether the update should be handled.
  - a `type`. If `telegram.CallbackQuery.data` is an instance of that type (or a subclass), the update will be handled.

If `telegram.CallbackQuery.data` is `None`, the `telegram.CallbackQuery` update will not be handled.

**See also:**

Arbitrary `callback_data`

Changed in version 13.6: Added support for arbitrary callback data.

- **block** (bool, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

**See also:**

Concurrency

**callback**

The callback function for this handler.

**Type**

coroutine function

**pattern**

Optional. Regex pattern, callback or type to test `telegram.CallbackQuery.data` against.

Changed in version 13.6: Added support for arbitrary callback data.

**Type**

re.Pattern | callable | type



**block**

Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`.

**Type**

`bool`

**check\_update(update)**

Determines whether an update should be passed to this handler's `callback`.

**Parameters**

**update** (`telegram.Update` | `object`) – Incoming update.

**Returns**

`bool`

**collect\_additional\_context(context, update, application, check\_result)**

Add the result of `re.match(pattern, update.callback_query.data)` to `CallbackContext.matches` as list with one element.

## ChatJoinRequestHandler

**class** `telegram.ext.ChatJoinRequestHandler(callback, chat_id=None, username=None, block=True)`

Bases: `telegram.ext.BaseHandler`

Handler class to handle Telegram updates that contain `telegram.Update.chat_join_request`.

---

**Note:** If neither of `username` and the `chat_id` are passed, this handler accepts *any* join request. Otherwise, this handler accepts all requests to join chats for which the chat ID is listed in `chat_id` or the username is listed in `username`, or both.

New in version 20.0.

---

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

---

**Available In**

`telegram.ext.Application.handlers`

---

New in version 13.8.

**Parameters**

- **callback** (`coroutine function`) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **chat\_id** (`int` | `Collection[int]`, optional) – Filters requests to allow only those which are asking to join the specified chat ID(s).

New in version 20.0.

- **username** (`str` | `Collection[str]`, optional) – Filters requests to allow only those which are asking to join the specified username(s).

New in version 20.0.

- **block** (`bool`, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

**See also:**

[Concurrency](#)

#### **callback**

The callback function for this handler.

##### **Type**

`coroutine function`

#### **block**

Determines whether the callback will run in a blocking way..

##### **Type**

`bool`

#### **check\_update(update)**

Determines whether an update should be passed to this handler's `callback`.

##### **Parameters**

**update** (`telegram.Update` | `object`) – Incoming update.

##### **Returns**

`bool`

### **ChatMemberHandler**

**class** `telegram.ext.ChatMemberHandler(callback, chat_member_types=-1, block=True)`

Bases: `telegram.ext.BaseHandler`

Handler class to handle Telegram updates that contain a chat member update.

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

---

#### **Available In**

`telegram.ext.Application.handlers`

---

---

#### **Examples**

*Chat Member Bot*

---

New in version 13.4.

##### **Parameters**

- **callback** (`coroutine function`) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of *telegram.ext.ConversationHandler*.

- **chat\_member\_types** (*int*, optional) – Pass one of *MY\_CHAT\_MEMBER*, *CHAT\_MEMBER* or *ANY\_CHAT\_MEMBER* to specify if this handler should handle only updates with *telegram.Update.my\_chat\_member*, *telegram.Update.chat\_member* or both. Defaults to *MY\_CHAT\_MEMBER*.
- **block** (*bool*, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in *telegram.ext.Application.process\_update()*. Defaults to *True*.

See also:

Concurrency

### callback

The callback function for this handler.

Type

coroutine function

### chat\_member\_types

Optional. Specifies if this handler should handle only updates with *telegram.Update.my\_chat\_member*, *telegram.Update.chat\_member* or both.

Type

*int*

### block

Determines whether the return value of the callback should be awaited before processing the next handler in *telegram.ext.Application.process\_update()*.

Type

*bool*

### ANY\_CHAT\_MEMBER = 1

Used as a constant to handle both *telegram.Update.my\_chat\_member* and *telegram.Update.chat\_member*.

Type

*int*

### CHAT\_MEMBER = 0

Used as a constant to handle only *telegram.Update.chat\_member*.

Type

*int*

### MY\_CHAT\_MEMBER = -1

Used as a constant to handle only *telegram.Update.my\_chat\_member*.

Type

*int*

### check\_update(update)

Determines whether an update should be passed to this handler's *callback*.

Parameters

**update** (*telegram.Update* | *object*) – Incoming update.

Returns

*bool*

## ChosenInlineResultHandler

**class** telegram.ext.ChosenInlineResultHandler(*callback*, *block=True*, *pattern=None*)

Bases: [telegram.ext.BaseHandler](#)

Handler class to handle Telegram updates that contain [telegram.Update.chosen\\_inline\\_result](#).

**Warning:** When setting *block* to `False`, you cannot rely on adding custom attributes to [telegram.ext.CallbackContext](#). See its docs for more info.

---

### Available In

[telegram.ext.Application.handlers](#)

---

### Parameters

- **callback** (coroutine function) – The callback function for this handler. Will be called when [check\\_update\(\)](#) has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of [telegram.ext.ConversationHandler](#).

- **block** (bool, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#). Defaults to `True`.

**See also:**

[Concurrency](#)

- **pattern** (str | [re.Pattern](#), optional) – Regex pattern. If not `None`, [re.match\(\)](#) is used on [telegram.ChosenInlineResult.result\\_id](#) to determine if an update should be handled by this handler. This is accessible in the callback as [telegram.ext.CallbackContext.matches](#).

New in version 13.6.

### callback

The callback function for this handler.

#### Type

[coroutine function](#)

### block

Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#).

#### Type

[bool](#)

### pattern

Optional. Regex pattern to test [telegram.ChosenInlineResult.result\\_id](#) against.

New in version 13.6.

#### Type

[Pattern](#)

**check\_update**(*update*)

Determines whether an update should be passed to this handler's *callback*.

**Parameters**

**update** (*telegram.Update* | *object*) – Incoming update.

**Returns**

*bool* | *re.match*

**collect\_additional\_context**(*context*, *update*, *application*, *check\_result*)

This function adds the matched regex pattern result to *telegram.ext.CallbackContext.matches*.

## CommandHandler

**class** telegram.ext.**CommandHandler**(*command*, *callback*, *filters=None*, *block=True*, *has\_args=None*)

Bases: *telegram.ext.BaseHandler*

Handler class to handle Telegram commands.

Commands are Telegram messages that start with /, optionally followed by an @ and the bot's name and/or some additional text. The handler will add a *list* to the *CallbackContext* named *CallbackContext.args*. It will contain a list of strings, which is the text following the command split on single or consecutive whitespace characters.

By default, the handler listens to messages as well as edited messages. To change this behavior use *~filters.UpdateType.EDITED\_MESSAGE* in the filter argument.

---

**Note:** *CommandHandler* does *not* handle (edited) channel posts and does *not* handle commands that are part of a caption. Please use *MessageHandler* with a suitable combination of filters (e.g. *telegram.ext.filters.UpdateType.CHANNEL\_POSTS*, *telegram.ext.filters.CAPTION* and *telegram.ext.filters.Regex*) to handle those messages.

---

**Warning:** When setting *block* to *False*, you cannot rely on adding custom attributes to *telegram.ext.CallbackContext*. See its docs for more info.

---

**Available In**

*telegram.ext.Application.handlers*

---

---

**Examples**

- *Timer Bot*
  - *Error Handler Bot*
- 

Changed in version 20.0:

- Renamed the attribute *command* to *commands*, which now is always a *frozenset*
- Updating the commands this handler listens to is no longer possible.

**Parameters**

- **command** (*str* | *Collection[str]*) – The command or list of commands this handler should listen for. Case-insensitive. Limitations are the same as for *telegram.BotCommand.command*.

- **callback** (coroutine function) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **filters** (`telegram.ext.filters.BaseFilter`, optional) – A filter inheriting from `telegram.ext.filters.BaseFilter`. Standard filters can be found in `telegram.ext.filters`. Filters can be combined using bitwise operators (& for `and`, | for `or`, ~ for `not`)
- **block** (bool, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

See also:

Concurrency

- **has\_args** (bool | int, optional) – Determines whether the command handler should process the update or not. If `True`, the handler will process any non-zero number of args. If `False`, the handler will only process if there are no args. if `int`, the handler will only process if there are exactly that many args. Defaults to `None`, which means the handler will process any or no args.

New in version 20.5.

#### Raises

**ValueError** – When the command is too long or has illegal chars.

#### commands

The set of commands this handler should listen for.

##### Type

FrozenSet[str]

#### callback

The callback function for this handler.

##### Type

coroutine function

#### filters

Optional. Only allow updates with these filters.

##### Type

`telegram.ext.filters.BaseFilter`

#### block

Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`.

##### Type

bool

#### has\_args

Optional argument, otherwise all implementations of `CommandHandler` will break. Defaults to `None`, which means the handler will process any args or no args.

New in version 20.5.

##### Type

bool | int | None

**check\_update**(*update*)

Determines whether an update should be passed to this handler's *callback*.

**Parameters**

**update** (*telegram.Update* | object) – Incoming update.

**Returns**

The list of args for the handler.

**Return type**

list

**collect\_additional\_context**(*context, update, application, check\_result*)

Add text after the command to *CallbackContext.args* as list, split on single whitespaces and add output of data filters to *CallbackContext* as well.

**ConversationHandler**

```
class telegram.ext.ConversationHandler(entry_points, states, fallbacks, allow_reentry=False,
                                     per_chat=True, per_user=True, per_message=False,
                                     conversation_timeout=None, name=None, persistent=False,
                                     map_to_parent=None, block=True)
```

Bases: *telegram.ext.BaseHandler*

A handler to hold a conversation with a single or multiple users through Telegram updates by managing three collections of other handlers.

**Warning:** *ConversationHandler* heavily relies on incoming updates being processed one by one. When using this handler, *telegram.ext.ApplicationBuilder.concurrent\_updates* should be set to *False*.

**Note:** *ConversationHandler* will only accept updates that are (subclass-)instances of *telegram.Update*. This is, because depending on the *per\_user* and *per\_chat*, *ConversationHandler* relies on *telegram.Update.effective\_user* and/or *telegram.Update.effective\_chat* in order to determine which conversation an update should belong to. For *per\_message=True*, *ConversationHandler* uses *update.callback\_query.message.message\_id* when *per\_chat=True* and *update.callback\_query.inline\_message\_id* when *per\_chat=False*. For a more detailed explanation, please see our [FAQ](#).

Finally, *ConversationHandler*, does *not* handle (edited) channel posts.

The first collection, a list named *entry\_points*, is used to initiate the conversation, for example with a *telegram.ext.CommandHandler* or *telegram.ext.MessageHandler*.

The second collection, a dict named *states*, contains the different conversation steps and one or more associated handlers that should be used if the user sends a message when the conversation with them is currently in that state. Here you can also define a state for *TIMEOUT* to define the behavior when *conversation\_timeout* is exceeded, and a state for *WAITING* to define behavior when a new update is received while the previous *block=False* handler is not finished.

The third collection, a list named *fallbacks*, is used if the user is currently in a conversation but the state has either no associated handler or the handler that is associated to the state is inappropriate for the update, for example if the update contains a command, but a regular text message is expected. You could use this for a */cancel* command or to let the user know their message was not recognized.

To change the state of conversation, the callback function of a handler must return the new state after responding to the user. If it does not return anything (returning *None* by default), the state will not change. If an entry point callback function returns *None*, the conversation ends immediately after the execution of

this callback function. To end the conversation, the callback function must return `END` or `-1`. To handle the conversation timeout, use handler `TIMEOUT` or `-2`. Finally, `telegram.ext.ApplicationHandlerStop` can be used in conversations as described in its documentation.

---

**Note:** In each of the described collections of handlers, a handler may in turn be a `ConversationHandler`. In that case, the child `ConversationHandler` should have the attribute `map_to_parent` which allows returning to the parent conversation at specified states within the child conversation.

Note that the keys in `map_to_parent` must not appear as keys in `states` attribute or else the latter will be ignored. You may map `END` to one of the parents states to continue the parent conversation after the child conversation has ended or even map a state to `END` to end the *parent* conversation from within the child conversation. For an example on nested `ConversationHandler` s, see `nestedconversationbot.py`.

---

---

#### Available In

`telegram.ext.Application.handlers`

---

---

#### Examples

- *Conversation Bot*
  - *Conversation Bot 2*
  - *Nested Conversation Bot*
  - *Persistent Conversation Bot*
- 

#### Parameters

- **entry\_points** (List[`telegram.ext.BaseHandler`]) – A list of `BaseHandler` objects that can trigger the start of the conversation. The first handler whose `check_update()` method returns `True` will be used. If all return `False`, the update is not handled.
- **states** (Dict[object, List[`telegram.ext.BaseHandler`]]) – A `dict` that defines the different states of conversation a user can be in and one or more associated `BaseHandler` objects that should be used in that state. The first handler whose `check_update()` method returns `True` will be used.
- **fallbacks** (List[`telegram.ext.BaseHandler`]) – A list of handlers that might be used if the user is in a conversation, but every handler for their current state returned `False` on `check_update()`. The first handler which `check_update()` method returns `True` will be used. If all return `False`, the update is not handled.
- **allow\_reentry** (bool, optional) – If set to `True`, a user that is currently in a conversation can restart the conversation by triggering one of the entry points. Default is `False`.
- **per\_chat** (bool, optional) – If the conversation key should contain the Chat's ID. Default is `True`.
- **per\_user** (bool, optional) – If the conversation key should contain the User's ID. Default is `True`.
- **per\_message** (bool, optional) – If the conversation key should contain the Message's ID. Default is `False`.
- **conversation\_timeout** (float | `datetime.timedelta`, optional) – When this handler is inactive more than this timeout (in seconds), it will be automatically ended. If this value is `0` or `None` (default), there will be no timeout. The last received update and the corresponding `context` will be handled by *ALL* the handler's whose `check_update()` method returns `True` that are in the state `ConversationHandler.TIMEOUT`.



**Caution:**

- This feature relies on the `telegram.ext.Application.job_queue` being set and hence requires that the dependencies that `telegram.ext.JobQueue` relies on are installed.
- Using `conversation_timeout` with nested conversations is currently not supported. You can still try to use it, but it will likely behave differently from what you expect.

- **name** (`str`, optional) – The name for this conversation handler. Required for persistence.
- **persistent** (`bool`, optional) – If the conversation's dict for this handler should be saved. `name` is required and persistence has to be set in `Application`.

Changed in version 20.0: Was previously named as `persistence`.

- **map\_to\_parent** (`Dict[object, object]`, optional) – A `dict` that can be used to instruct a child conversation handler to transition into a mapped state on its parent conversation handler in place of a specified nested state.
- **block** (`bool`, optional) – Pass `False` or `True` to set a default value for the `BaseHandler.block` setting of all handlers (in `entry_points`, `states` and `fallbacks`). The resolution order for checking if a handler should be run non-blocking is:

1. `telegram.ext.BaseHandler.block` (if set)
2. the value passed to this parameter (if any)
3. `telegram.ext.Defaults.block` (if defaults are used)

**See also:**

[Concurrency](#)

Changed in version 20.0: No longer overrides the handlers settings. Resolution order was changed.

**Raises**

**ValueError** – If `persistent` is used but `name` was not set, or when `per_message`, `per_chat`, `per_user` are all `False`.

**block**

Determines whether the callback will run in a blocking way. Always `True` since conversation handlers handle any non-blocking callbacks internally.

**Type**

`bool`

**END = -1**

Used as a constant to return when a conversation is ended.

**Type**

`int`

**TIMEOUT = -2**

Used as a constant to handle state when a conversation is timed out (exceeded `conversation_timeout`).

**Type**

`int`

**WAITING = -3**

Used as a constant to handle state when a conversation is still waiting on the previous `block=False` handler to finish.

**Type**

`int`

**\_\_repr\_\_()**

Give a string representation of the ConversationHandler in the form `ConversationHandler[name=..., states={...}]`.

If there are more than 3 states, only the first 3 states are listed.

As this class doesn't implement `object.__str__()`, the default implementation will be used, which is equivalent to `__repr__()`.

**Returns**

`str`

**property allow\_reentry**

Determines if a user can restart a conversation with an entry point.

**Type**

`bool`

**check\_update(update)**

Determines whether an update should be handled by this conversation handler, and if so in which state the conversation currently is.

**Parameters**

**update** (`telegram.Update` | `object`) – Incoming update.

**Returns**

`bool`

**property conversation\_timeout**

Optional. When this handler is inactive more than this timeout (in seconds), it will be automatically ended.

**Type**

`float` | `datetime.timedelta`

**property entry\_points**

A list of `BaseHandler` objects that can trigger the start of the conversation.

**Type**

`List[telegram.ext.BaseHandler]`

**property fallbacks**

A list of handlers that might be used if the user is in a conversation, but every handler for their current state returned `False` on `check_update()`.

**Type**

`List[telegram.ext.BaseHandler]`

**async handle\_update(update, application, check\_result, context)**

Send the update to the callback for the current state and BaseHandler

**Parameters**

- **check\_result** – The result from `check_update()`. For this handler it's a tuple of the conversation state, key, handler, and the handler's check result.
- **update** (`telegram.Update`) – Incoming telegram update.
- **application** (`telegram.ext.Application`) – Application that originated the update.

- **context** (*telegram.ext.CallbackContext*) – The context as provided by the application.

**property map\_to\_parent**

Optional. A *dict* that can be used to instruct a nested *ConversationHandler* to transition into a mapped state on its parent *ConversationHandler* in place of a specified nested state.

**Type**

*Dict*[*object*, *object*]

**property name**

Optional. The name for this *ConversationHandler*.

**Type**

*str*

**property per\_chat**

If the conversation key should contain the Chat's ID.

**Type**

*bool*

**property per\_message**

If the conversation key should contain the message's ID.

**Type**

*bool*

**property per\_user**

If the conversation key should contain the User's ID.

**Type**

*bool*

**property persistent**

Optional. If the conversations dict for this handler should be saved. *name* is required and persistence has to be set in *Application*.

**Type**

*bool*

**property states**

A *dict* that defines the different states of conversation a user can be in and one or more associated *BaseHandler* objects that should be used in that state.

**Type**

*Dict*[*object*, *List*[*telegram.ext.BaseHandler*]]

## filters Module

This module contains filters for use with *telegram.ext.MessageHandler*, *telegram.ext.CommandHandler*, or *telegram.ext.PrefixHandler*.

Changed in version 20.0:

1. Filters are no longer callable, if you're using a custom filter and are calling an existing filter, then switch to the new syntax: *filters.{filter}.check\_update(update)*.
2. Removed the *Filters* class. The filters are now directly attributes/classes of the *filters* module.
3. The names of all filters has been updated:
  - Filter classes which are ready for use, e.g *Filters.all* are now capitalized, e.g *filters.ALL*.
  - Filters which need to be initialized are now in CamelCase. E.g. *filters.User(...)*.

- Filters which do both (like `Filters.text`) are now split as ready-to-use version `filters.TEXT` and class version `filters.Text(...)`.

`telegram.ext.filters.ALL = filters.ALL`

All Messages.

`telegram.ext.filters.ANIMATION = filters.ANIMATION`

Messages that contain `telegram.Message.animation`.

`telegram.ext.filters.ATTACHMENT = filters.ATTACHMENT`

Messages that contain `telegram.Message.effective_attachment()`.

New in version 13.6.

`telegram.ext.filters.AUDIO = filters.AUDIO`

Messages that contain `telegram.Message.audio`.

**class** `telegram.ext.filters.BaseFilter`(*name=None, data\_filter=False*)

Bases: `object`

Base class for all Filters.

Filters subclassing from this class can combined using bitwise operators:

And:

```
filters.TEXT & filters.Entity(MENTION)
```

Or:

```
filters.AUDIO | filters.VIDEO
```

Exclusive Or:

```
filters.Regex('To Be') ^ filters.Regex('Not 2B')
```

Not:

```
~ filters.COMMAND
```

Also works with more than two filters:

```
filters.TEXT & (filters.Entity("url") | filters.Entity("text_link"))  
filters.TEXT & (~ filters.FORWARDED)
```

---

**Note:** Filters use the same short circuiting logic as python's `and`, `or` and `not`. This means that for example:

```
filters.Regex(r'(a?x)') | filters.Regex(r'(b?x)')
```

With `message.text == 'x'`, will only ever return the matches for the first filter, since the second one is never evaluated.

---

If you want to create your own filters create a class inheriting from either `MessageFilter` or `UpdateFilter` and implement a `filter()` method that returns a boolean: `True` if the message should be handled, `False` otherwise. Note that the filters work only as class instances, not actual class objects (so remember to initialize your filter classes).

By default, the filters name (what will get printed when converted to a string for display) will be the class name. If you want to overwrite this assign a better name to the `name` class variable.

---

**Available In**

- `telegram.ext.CommandHandler.filters`
  - `telegram.ext.MessageHandler.filters`
  - `telegram.ext.PrefixHandler.filters`
- 

New in version 20.0: Added the arguments `name` and `data_filter`.

#### Parameters

- **name** (`str`) – Name for this filter. Defaults to the type of filter.
- **data\_filter** (`bool`) – Whether this filter is a data filter. A data filter should return a dict with lists. The dict will be merged with `telegram.ext.CallbackContext`'s internal dict in most cases (depends on the handler).

#### property data\_filter

Whether this filter is a data filter.

##### Type

`bool`

#### property name

Name for this filter.

##### Type

`str`

#### check\_update(update)

Checks if the specified update should be handled by this filter.

#### Parameters

**update** (`telegram.Update`) – The update to check.

#### Returns

`True` if the update contains one of `channel_post`, `message`, `edited_channel_post` or `edited_message`, `False` otherwise.

#### Return type

`bool`

`telegram.ext.filters.CAPTION = filters.CAPTION`

Shortcut for `telegram.ext.filters.Caption()`.

---

#### Examples

To allow any caption, simply use `MessageHandler(filters.CAPTION, callback_method)`.

---

`telegram.ext.filters.CHAT = filters.CHAT`

This filter filters *any* message that has a `telegram.Message.chat`.

`telegram.ext.filters.COMMAND = filters.COMMAND`

Shortcut for `telegram.ext.filters.Command()`.

---

#### Examples

To allow messages starting with a command use `MessageHandler(filters.COMMAND, command_at_start_callback)`.

---

`telegram.ext.filters.CONTACT = filters.CONTACT`

Messages that contain `telegram.Message.contact`.

**class** telegram.ext.filters.**Caption**(strings=None)

Bases: [telegram.ext.filters.MessageFilter](#)

Messages with a caption. If a list of strings is passed, it filters messages to only allow those whose caption is appearing in the given list.

---

#### Examples

```
MessageHandler(filters.Caption(['PTB rocks!', 'PTB']), callback_method_2)
```

---

#### See also:

[telegram.ext.filters.CAPTION](#)

#### Parameters

**strings** (List[str] | Tuple[str], optional) – Which captions to allow. Only exact matches are allowed. If not specified, will allow any message with a caption.

**class** telegram.ext.filters.**CaptionEntity**(entity\_type)

Bases: [telegram.ext.filters.MessageFilter](#)

Filters media messages to only allow those which have a [telegram.MessageEntity](#) where their *type* matches *entity\_type*.

---

#### Examples

```
MessageHandler(filters.CaptionEntity("hashtag"), callback_method)
```

---

#### Parameters

**entity\_type** (str) – Caption Entity type to check for. All types can be found as constants in [telegram.MessageEntity](#).

**class** telegram.ext.filters.**CaptionRegex**(pattern)

Bases: [telegram.ext.filters.MessageFilter](#)

Filters updates by searching for an occurrence of *pattern* in the message caption.

This filter works similarly to [Regex](#), with the only exception being that it applies to the message caption instead of the text.

---

#### Examples

Use `MessageHandler(filters.PHOTO & filters.CaptionRegex(r'help'), callback)` to capture all photos with caption containing the word 'help'.

---

---

**Note:** This filter will not work on simple text messages, but only on media with caption.

---

#### Parameters

**pattern** (str | re.Pattern) – The regex pattern.

**class** telegram.ext.filters.**Chat**(chat\_id=None, username=None, allow\_empty=False)

Bases: [telegram.ext.filters.MessageFilter](#)

Filters messages to allow only those which are from a specified chat ID or username.

---

#### Examples

---

```
MessageHandler(filters.Chat(-1234), callback_method)
```

---

**Warning:** `chat_ids` will give a *copy* of the saved chat ids as `frozenset`. This is to ensure thread safety. To add/remove a chat, you should use `add_chat_ids()`, and `remove_chat_ids()`. Only update the entire set by `filter.chat_ids = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed chats.

#### Parameters

- **chat\_id** (`int` | `Collection[int]`, optional) – Which chat ID(s) to allow through.
- **username** (`str` | `Collection[str]`, optional) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.
- **allow\_empty** (`bool`, optional) – Whether updates should be processed, if no chat is specified in `chat_ids` and `usernames`. Defaults to `False`.

#### `chat_ids`

Which chat ID(s) to allow through.

##### Type

`set(int)`

#### `allow_empty`

Whether updates should be processed, if no chat is specified in `chat_ids` and `usernames`.

##### Type

`bool`

#### Raises

**RuntimeError** – If `chat_id` and `username` are both present.

#### `add_chat_ids(chat_id)`

Add one or more chats to the allowed chat ids.

##### Parameters

**chat\_id** (`int` | `Collection[int]`) – Which chat ID(s) to allow through.

#### `remove_chat_ids(chat_id)`

Remove one or more chats from allowed chat ids.

##### Parameters

**chat\_id** (`int` | `Collection[int]`) – Which chat ID(s) to disallow through.

#### `add_usernames(username)`

Add one or more chats to the allowed usernames.

##### Parameters

**username** (`str` | `Collection[str]`) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.

#### property name

Name for this filter.

##### Type

`str`

#### `remove_usernames(username)`

Remove one or more chats from allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to disallow through. Leading '@' s in usernames will be discarded.

**property usernames**

Which username(s) to allow through.

**Warning:** `usernames` will give a *copy* of the saved usernames as `frozenset`. This is to ensure thread safety. To add/remove a user, you should use `add_usernames()`, and `remove_usernames()`. Only update the entire set by `filter.usernames = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed users.

**Returns**

`frozenset(str)`

**class telegram.ext.filters.ChatType**

Bases: `object`

Subset for filtering the type of chat.

---

**Examples**

Use these filters like: `filters.ChatType.CHANNEL` or `filters.ChatType.SUPERGROUP` etc.

---

**Caution:** `filters.ChatType` itself is *not* a filter, but just a convenience namespace.

**CHANNEL = filters.ChatType.CHANNEL**

Updates from channel.

**GROUP = filters.ChatType.GROUP**

Updates from group.

**GROUPS = filters.ChatType.GROUPS**

Update from group *or* supergroup.

**PRIVATE = filters.ChatType.PRIVATE**

Update from private chats.

**SUPERGROUP = filters.ChatType.SUPERGROUP**

Updates from supergroup.

**class telegram.ext.filters.Command(only\_start=True)**

Bases: `telegram.ext.filters.MessageFilter`

Messages with a `telegram.MessageEntity.BOT_COMMAND`. By default, only allows messages *starting* with a bot command. Pass `False` to also allow messages that contain a bot command *anywhere* in the text.

---

**Examples**

`MessageHandler(filters.Command(False), command_anywhere_callback)`

---

**See also:**

`telegram.ext.filters.COMMAND`.



---

**Note:** `telegram.ext.filters.TEXT` also accepts messages containing a command.

---

#### Parameters

**only\_start** (`bool`, optional) – Whether to only allow messages that *start* with a bot command. Defaults to `True`.

**class** `telegram.ext.filters.Dice(values=None, emoji=None)`

Bases: `telegram.ext.filters.MessageFilter`

Dice Messages. If an integer or a list of integers is passed, it filters messages to only allow those whose dice value is appearing in the given list.

New in version 13.4.

---

#### Examples

To allow any dice message, simply use `MessageHandler(filters.Dice.ALL, callback_method)`.

To allow any dice message, but with value 3 or 4, use `MessageHandler(filters.Dice([3, 4]), callback_method)`

To allow only dice messages with the emoji , but any value, use `MessageHandler(filters.Dice.DICE, callback_method)`.

To allow only dice messages with the emoji and with value 6, use `MessageHandler(filters.Dice.Darts(6), callback_method)`.

To allow only dice messages with the emoji and with value 5 or 6, use `MessageHandler(filters.Dice.Football([5, 6]), callback_method)`.

---

**Note:** Dice messages don't have text. If you want to filter either text or dice messages, use `filters.TEXT` | `filters.Dice.ALL`.

---

#### Parameters

**values** (`int` | `Collection[int]`, optional) – Which values to allow. If not specified, will allow the specified dice message.

**ALL = filters.Dice.ALL**

Dice messages with any value and any emoji.

**class** `Basketball(values)`

Bases: `telegram.ext.filters.MessageFilter`

Dice messages with the emoji . Supports passing a list of integers.

#### Parameters

**values** (`int` | `Collection[int]`) – Which values to allow.

**BASKETBALL = filters.Dice.BASKETBALL**

Dice messages with the emoji . Matches any dice value.

**class** `Bowling(values)`

Bases: `telegram.ext.filters.MessageFilter`

Dice messages with the emoji . Supports passing a list of integers.

#### Parameters

**values** (`int` | `Collection[int]`) – Which values to allow.

**BOWLING = filters.Dice.BOWLING**

Dice messages with the emoji 🎳. Matches any dice value.

**class Darts(values)**

Bases: *telegram.ext.filters.MessageFilter*

Dice messages with the emoji 🎳. Supports passing a list of integers.

**Parameters**

**values** (*int* | Collection[*int*]) – Which values to allow.

**DARTS = filters.Dice.DARTS**

Dice messages with the emoji 🎯. Matches any dice value.

**class Dice(values)**

Bases: *telegram.ext.filters.MessageFilter*

Dice messages with the emoji 🎲. Supports passing a list of integers.

**Parameters**

**values** (*int* | Collection[*int*]) – Which values to allow.

**DICE = filters.Dice.DICE**

Dice messages with the emoji 🎲. Matches any dice value.

**class Football(values)**

Bases: *telegram.ext.filters.MessageFilter*

Dice messages with the emoji 🎳. Supports passing a list of integers.

**Parameters**

**values** (*int* | Collection[*int*]) – Which values to allow.

**FOOTBALL = filters.Dice.FOOTBALL**

Dice messages with the emoji 🎳. Matches any dice value.

**class SlotMachine(values)**

Bases: *telegram.ext.filters.MessageFilter*

Dice messages with the emoji 🎰. Supports passing a list of integers.

**Parameters**

**values** (*int* | Collection[*int*]) – Which values to allow.

**SLOT\_MACHINE = filters.Dice.SLOT\_MACHINE**

Dice messages with the emoji 🎰. Matches any dice value.

**class telegram.ext.filters.Document**

Bases: *object*

Subset for messages containing a document/file.

---

### Examples

Use these filters like: `filters.Document.MP3`, `filters.Document.MimeType("text/plain")` etc. Or just use `filters.Document.ALL` for all document messages.

---

**Caution:** `filters.Document` itself is *not* a filter, but just a convenience namespace.

**ALL = filters.Document.ALL**

Messages that contain a *telegram.Message.document*.

```
class Category(category)
```

Bases: `telegram.ext.filters.MessageFilter`

Filters documents by their category in the mime-type attribute.

#### Parameters

**category** (`str`) – Category of the media you want to filter.

---

#### Example

`filters.Document.Category('audio/')` returns `True` for all types of audio sent as a file, for example 'audio/mpeg' or 'audio/x-wav'.

---

**Note:** This Filter only filters by the mime\_type of the document, it doesn't check the validity of the document. The user can manipulate the mime-type of a message and send media with wrong types that don't fit to this handler.

---

```
APPLICATION = filters.Document.Category('application/')
```

Use as `filters.Document.APPLICATION`.

```
AUDIO = filters.Document.Category('audio/')
```

Use as `filters.Document.AUDIO`.

```
IMAGE = filters.Document.Category('image/')
```

Use as `filters.Document.IMAGE`.

```
VIDEO = filters.Document.Category('video/')
```

Use as `filters.Document.VIDEO`.

```
TEXT = filters.Document.Category('text/')
```

Use as `filters.Document.TEXT`.

```
class FileExtension(file_extension, case_sensitive=False)
```

Bases: `telegram.ext.filters.MessageFilter`

This filter filters documents by their file ending/extension.

#### Parameters

- **file\_extension** (`str` | `None`) – Media file extension you want to filter.
  - **case\_sensitive** (`bool`, optional) – Pass `True` to make the filter case sensitive. Default: `False`.
- 

#### Example

- `filters.Document.FileExtension("jpg")` filters files with extension ".jpg".
  - `filters.Document.FileExtension(".jpg")` filters files with extension "..jpg".
  - `filters.Document.FileExtension("Dockerfile", case_sensitive=True)` filters files with extension ".Dockerfile" minding the case.
  - `filters.Document.FileExtension(None)` filters files without a dot in the filename.
- 

#### Note:

- This Filter only filters by the file ending/extension of the document, it doesn't check the validity of document.

- The user can manipulate the file extension of a document and send media with wrong types that don't fit to this handler.
  - Case insensitive by default, you may change this with the flag `case_sensitive=True`.
  - Extension should be passed without leading dot unless it's a part of the extension.
  - Pass `None` to filter files with no extension, i.e. without a dot in the filename.
- 

**class** `MimeType(mimetype)`

Bases: `telegram.ext.filters.MessageFilter`

This Filter filters documents by their mime-type attribute.

**Parameters**

**mimetype** (`str`) – The mimetype to filter.

---

**Example**

`filters.Document.MimeType('audio/mpeg')` filters all audio in `.mp3` format.

---

---

**Note:** This Filter only filters by the `mime_type` of the document, it doesn't check the validity of document. The user can manipulate the mime-type of a message and send media with wrong types that don't fit to this handler.

---

**APK** = `filters.Document.MimeType('application/vnd.android.package-archive')`

Use as `filters.Document.APK`.

**DOC** = `filters.Document.MimeType('application/msword')`

Use as `filters.Document.DOC`.

**DOCX** = `filters.Document.MimeType('application/vnd.openxmlformats-officedocument.wordprocessingml.document')`

Use as `filters.Document.DOCX`.

**EXE** = `filters.Document.MimeType('application/octet-stream')`

Use as `filters.Document.EXE`.

**MP4** = `filters.Document.MimeType('video/mp4')`

Use as `filters.Document.MP4`.

**GIF** = `filters.Document.MimeType('image/gif')`

Use as `filters.Document.GIF`.

**JPG** = `filters.Document.MimeType('image/jpeg')`

Use as `filters.Document.JPG`.

**MP3** = `filters.Document.MimeType('audio/mpeg')`

Use as `filters.Document.MP3`.

**PDF** = `filters.Document.MimeType('application/pdf')`

Use as `filters.Document.PDF`.

**PY** = `filters.Document.MimeType('text/x-python')`

Use as `filters.Document.PY`.

**SVG** = `filters.Document.MimeType('image/svg+xml')`

Use as `filters.Document.SVG`.

```
TXT = filters.Document.MimeType('text/plain')
```

Use as `filters.Document.TXT`.

```
TARGZ = filters.Document.MimeType('application/x-compressed-tar')
```

Use as `filters.Document.TARGZ`.

```
WAV = filters.Document.MimeType('audio/x-wav')
```

Use as `filters.Document.WAV`.

```
XML = filters.Document.MimeType('text/xml')
```

Use as `filters.Document.XML`.

```
ZIP = filters.Document.MimeType('application/zip')
```

Use as `filters.Document.ZIP`.

```
class telegram.ext.filters.Entity(entity_type)
```

Bases: `telegram.ext.filters.MessageFilter`

Filters messages to only allow those which have a `telegram.MessageEntity` where their `type` matches `entity_type`.

---

### Examples

```
MessageHandler(filters.Entity("hashtag"), callback_method)
```

---

### Parameters

**entity\_type** (`str`) – Entity type to check for. All types can be found as constants in `telegram.MessageEntity`.

```
telegram.ext.filters.FORWARDED = filters.FORWARDED
```

Messages that contain `telegram.Message.forward_date`.

```
class telegram.ext.filters.ForwardedFrom(chat_id=None, username=None, allow_empty=False)
```

Bases: `telegram.ext.filters.MessageFilter`

Filters messages to allow only those which are forwarded from the specified chat ID(s) or username(s) based on `telegram.Message.forward_from` and `telegram.Message.forward_from_chat`.

New in version 13.5.

---

### Examples

```
MessageHandler(filters.ForwardedFrom(chat_id=1234), callback_method)
```

---



---

**Note:** When a user has disallowed adding a link to their account while forwarding their messages, this filter will *not* work since both `telegram.Message.forward_from` and `telegram.Message.forward_from_chat` are `None`. However, this behaviour is undocumented and might be changed by Telegram.

---

**Warning:** `chat_ids` will give a *copy* of the saved chat ids as `frozenset`. This is to ensure thread safety. To add/remove a chat, you should use `add_chat_ids()`, and `remove_chat_ids()`. Only update the entire set by `filter.chat_ids = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed chats.

### Parameters

- **chat\_id** (`int` | `Collection[int]`, optional) – Which chat/user ID(s) to allow through.
- **username** (`str` | `Collection[str]`, optional) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.
- **allow\_empty** (`bool`, optional) – Whether updates should be processed, if no chat is specified in `chat_ids` and `usernames`. Defaults to `False`.

**chat\_ids**

Which chat/user ID(s) to allow through.

**Type**

`set(int)`

**allow\_empty**

Whether updates should be processed, if no chat is specified in `chat_ids` and `usernames`.

**Type**

`bool`

**Raises**

**RuntimeError** – If both `chat_id` and `username` are present.

**add\_chat\_ids(chat\_id)**

Add one or more chats to the allowed chat ids.

**Parameters**

**chat\_id** (`int` | `Collection[int]`) – Which chat/user ID(s) to allow through.

**remove\_chat\_ids(chat\_id)**

Remove one or more chats from allowed chat ids.

**Parameters**

**chat\_id** (`int` | `Collection[int]`) – Which chat/user ID(s) to disallow through.

**add\_usernames(username)**

Add one or more chats to the allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.

**property name**

Name for this filter.

**Type**

`str`

**remove\_usernames(username)**

Remove one or more chats from allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to disallow through. Leading '@' s in usernames will be discarded.

**property usernames**

Which username(s) to allow through.

**Warning:** `usernames` will give a *copy* of the saved usernames as `frozenset`. This is to ensure thread safety. To add/remove a user, you should use `add_usernames()`, and `remove_usernames()`. Only update the entire set by `filter.usernames = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed users.

**Returns**

frozenset(str)

`telegram.ext.filters.GAME = filters.GAME`Messages that contain `telegram.Message.game`.`telegram.ext.filters.HAS_MEDIA_SPOILER = filters.HAS_MEDIA_SPOILER`Messages that contain `telegram.Message.has_media_spoiler`.

New in version 20.0.

`telegram.ext.filters.HAS_PROTECTED_CONTENT = filters.HAS_PROTECTED_CONTENT`Messages that contain `telegram.Message.has_protected_content`.

New in version 13.9.

`telegram.ext.filters.INVOICE = filters.INVOICE`Messages that contain `telegram.Message.invoice`.`telegram.ext.filters.IS_AUTOMATIC_FORWARD = filters.IS_AUTOMATIC_FORWARD`Messages that contain `telegram.Message.is_automatic_forward`.

New in version 13.9.

`telegram.ext.filters.IS_TOPIC_MESSAGE = filters.IS_TOPIC_MESSAGE`Messages that contain `telegram.Message.is_topic_message`.

New in version 20.0.

`telegram.ext.filters.LOCATION = filters.LOCATION`Messages that contain `telegram.Message.location`.**class** `telegram.ext.filters.Language(lang)`Bases: `telegram.ext.filters.MessageFilter`

Filters messages to only allow those which are from users with a certain language code.

---

**Note:** According to official Telegram Bot API documentation, not every single user has the `language_code` attribute. Do not count on this filter working on all users.

---

---

**Examples**`MessageHandler(filters.Language("en"), callback_method)`

---

**Parameters****lang** (str | Collection[str]) – Which language code(s) to allow through. This will be matched using `str.startswith` meaning that ‘en’ will match both ‘en\_US’ and ‘en\_GB’.**class** `telegram.ext.filters.MessageFilter(name=None, data_filter=False)`Bases: `telegram.ext.filters.BaseFilter`Base class for all Message Filters. In contrast to `UpdateFilter`, the object passed to `filter()` is `telegram.Update.effective_message`.Please see `BaseFilter` for details on how to create custom filters.

---

**Available In**

- `telegram.ext.CommandHandler.filters`
- `telegram.ext.MessageHandler.filters`

- [telegram.ext.PrefixHandler.filters](#)
- 

See also:

[Advanced Filters](#)

**check\_update**(*update*)

Checks if the specified update should be handled by this filter by passing [effective\\_message](#) to [filter\(\)](#).

**Parameters**

**update** ([telegram.Update](#)) – The update to check.

**Returns**

If the update should be handled by this filter, returns `True` or a dict with lists, in case the filter is a data filter. If the update should not be handled by this filter, `False` or `None`.

**Return type**

`bool` | `Dict[str, list]` | `None`

**abstract filter**(*message*)

This method must be overwritten.

**Parameters**

**message** ([telegram.Message](#)) – The message that is tested.

**Returns**

`dict` or `bool`

`telegram.ext.filters.PASSPORT_DATA = filters.PASSPORT_DATA`

Messages that contain [telegram.Message.passport\\_data](#).

`telegram.ext.filters.PHOTO = filters.PHOTO`

Messages that contain [telegram.Message.photo](#).

`telegram.ext.filters.POLL = filters.POLL`

Messages that contain [telegram.Message.poll](#).

`telegram.ext.filters.REPLY = filters.REPLY`

Messages that contain [telegram.Message.reply\\_to\\_message](#).

**class** `telegram.ext.filters.Regex`(*pattern*)

Bases: [telegram.ext.filters.MessageFilter](#)

Filters updates by searching for an occurrence of *pattern* in the message text. The `re.search()` function is used to determine whether an update should be filtered.

Refer to the documentation of the `re` module for more information.

To get the groups and groupdict matched, see [telegram.ext.CallbackContext.matches](#).

---

### Examples

Use `MessageHandler(filters.Regex(r'help'), callback)` to capture all messages that contain the word 'help'. You can also use `MessageHandler(filters.Regex(re.compile(r'help', re.IGNORECASE)), callback)` if you want your pattern to be case insensitive. This approach is recommended if you need to specify flags on your pattern.

---

---

**Note:** Filters use the same short circuiting logic as python's `and`, `or` and `not`. This means that for example:

```
>>> filters.Regex(r'(a?x)') | filters.Regex(r'(b?x)')
```



With a `telegram.Message.text` of `x`, will only ever return the matches for the first filter, since the second one is never evaluated.

---

**See also:**

[Types of Handlers](#)

**Parameters**

**pattern** (`str` | `re.Pattern`) – The regex pattern.

**class** telegram.ext.filters.Sticker

Bases: `object`

Filters messages which contain a sticker.

---

**Examples**

Use this filter like: `filters.Sticker.VIDEO`. Or, just use `filters.Sticker.ALL` for any type of sticker.

---

**Caution:** `filters.Sticker` itself is *not* a filter, but just a convenience namespace.

**ALL = filters.Sticker.ALL**

Messages that contain `telegram.Message.sticker`.

**ANIMATED = filters.Sticker.ANIMATED**

Messages that contain `telegram.Message.sticker` and *is animated*.

New in version 20.0.

**STATIC = filters.Sticker.STATIC**

Messages that contain `telegram.Message.sticker` and is a static sticker, i.e. does not contain `telegram.Sticker.is_animated` or `telegram.Sticker.is_video`.

New in version 20.0.

**VIDEO = filters.Sticker.VIDEO**

Messages that contain `telegram.Message.sticker` and is a *video sticker*.

New in version 20.0.

**PREMIUM = filters.Sticker.PREMIUM**

Messages that contain `telegram.Message.sticker` and have a *premium animation*.

New in version 20.0.

`telegram.ext.filters.STORY = filters.STORY`

Messages that contain `telegram.Message.story`.

New in version 20.5.

`telegram.ext.filters.SUCCESSFUL_PAYMENT = filters.SUCCESSFUL_PAYMENT`

Messages that contain `telegram.Message.successful_payment`.

**class** telegram.ext.filters.SenderChat(*chat\_id=None, username=None, allow\_empty=False*)

Bases: `telegram.ext.filters.MessageFilter`

Filters messages to allow only those which are from a specified sender chat's chat ID or username.

---

**Examples**

- To filter for messages sent to a group by a channel with ID -1234, use `MessageHandler(filters.SenderChat(-1234), callback_method)`.
  - To filter for messages of anonymous admins in a super group with username @anonymous, use `MessageHandler(filters.SenderChat(username='anonymous'), callback_method)`.
  - To filter for messages sent to a group by *any* channel, use `MessageHandler(filters.SenderChat.CHANNEL, callback_method)`.
  - To filter for messages of anonymous admins in *any* super group, use `MessageHandler(filters.SenderChat.SUPERGROUP, callback_method)`.
  - To filter for messages forwarded to a discussion group from *any* channel or of anonymous admins in *any* super group, use `MessageHandler(filters.SenderChat.ALL, callback)`
- 

**Note:** Remember, `sender_chat` is also set for messages in a channel as the channel itself, so when your bot is an admin in a channel and the linked discussion group, you would receive the message twice (once from inside the channel, once inside the discussion group). Since v13.9, the field `telegram.Message.is_automatic_forward` will be `True` for the discussion group message.

---

See also:

`telegram.ext.filters.IS_AUTOMATIC_FORWARD`

**Warning:** `chat_ids` will return a *copy* of the saved chat ids as `frozenset`. This is to ensure thread safety. To add/remove a chat, you should use `add_chat_ids()`, and `remove_chat_ids()`. Only update the entire set by `filter.chat_ids = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed chats.

### Parameters

- **chat\_id** (`int` | `Collection[int]`, optional) – Which sender chat ID(s) to allow through.
- **username** (`str` | `Collection[str]`, optional) – Which sender chat username(s) to allow through. Leading '@' s in usernames will be discarded.
- **allow\_empty** (`bool`, optional) – Whether updates should be processed, if no sender chat is specified in `chat_ids` and `usernames`. Defaults to `False`.

### chat\_ids

Which sender chat ID(s) to allow through.

#### Type

`set(int)`

### allow\_empty

Whether updates should be processed, if no sender chat is specified in `chat_ids` and `usernames`.

#### Type

`bool`

### Raises

`RuntimeError` – If both `chat_id` and `username` are present.

**ALL = filters.SenderChat.ALL**

All messages with a `telegram.Message.sender_chat`.

**SUPER\_GROUP** = `filters.SenderChat.SUPER_GROUP`

Messages whose sender chat is a super group.

**CHANNEL** = `filters.SenderChat.CHANNEL`

Messages whose sender chat is a channel.

**add\_chat\_ids**(*chat\_id*)

Add one or more sender chats to the allowed chat ids.

**Parameters**

**chat\_id** (`int` | `Collection[int]`) – Which sender chat ID(s) to allow through.

**remove\_chat\_ids**(*chat\_id*)

Remove one or more sender chats from allowed chat ids.

**Parameters**

**chat\_id** (`int` | `Collection[int]`) – Which sender chat ID(s) to disallow through.

**add\_usernames**(*username*)

Add one or more chats to the allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.

**property name**

Name for this filter.

**Type**

`str`

**remove\_usernames**(*username*)

Remove one or more chats from allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to disallow through. Leading '@' s in usernames will be discarded.

**property usernames**

Which username(s) to allow through.

**Warning:** `usernames` will give a *copy* of the saved usernames as `frozenset`. This is to ensure thread safety. To add/remove a user, you should use `add_usernames()`, and `remove_usernames()`. Only update the entire set by `filter.usernames = new_set`, if you are entirely sure that it is not causing race conditions, as this will complete replace the current set of allowed users.

**Returns**

`frozenset(str)`

**class** `telegram.ext.filters.StatusUpdate`

Bases: `object`

Subset for messages containing a status update.

---

**Examples**

Use these filters like: `filters.StatusUpdate.NEW_CHAT_MEMBERS` etc. Or use just `filters.StatusUpdate.ALL` for all status update messages.

---

**Caution:** `filters.StatusUpdate` itself is *not* a filter, but just a convenience namespace.

**ALL = filters.StatusUpdate.ALL**

Messages that contain any of the below.

**CHAT\_CREATED = filters.StatusUpdate.CHAT\_CREATED**

Messages that contain `telegram.Message.group_chat_created`, `telegram.Message.supergroup_chat_created` or `telegram.Message.channel_chat_created`.

**CHAT\_SHARED = filters.StatusUpdate.CHAT\_SHARED**

Messages that contain `telegram.Message.chat_shared`.

New in version 20.1.

**CONNECTED\_WEBSITE = filters.StatusUpdate.CONNECTED\_WEBSITE**

Messages that contain `telegram.Message.connected_website`.

**DELETE\_CHAT\_PHOTO = filters.StatusUpdate.DELETE\_CHAT\_PHOTO**

Messages that contain `telegram.Message.delete_chat_photo`.

**FORUM\_TOPIC\_CLOSED = filters.StatusUpdate.FORUM\_TOPIC\_CLOSED**

Messages that contain `telegram.Message.forum_topic_closed`.

New in version 20.0.

**FORUM\_TOPIC\_CREATED = filters.StatusUpdate.FORUM\_TOPIC\_CREATED**

Messages that contain `telegram.Message.forum_topic_created`.

New in version 20.0.

**FORUM\_TOPIC\_EDITED = filters.StatusUpdate.FORUM\_TOPIC\_EDITED**

Messages that contain `telegram.Message.forum_topic_edited`.

New in version 20.0.

**FORUM\_TOPIC\_REOPENED = filters.StatusUpdate.FORUM\_TOPIC\_REOPENED**

Messages that contain `telegram.Message.forum_topic_reopened`.

New in version 20.0.

**GENERAL\_FORUM\_TOPIC\_HIDDEN = filters.StatusUpdate.GENERAL\_FORUM\_TOPIC\_HIDDEN**

Messages that contain `telegram.Message.general_forum_topic_hidden`.

New in version 20.0.

**GENERAL\_FORUM\_TOPIC\_UNHIDDEN = filters.StatusUpdate.GENERAL\_FORUM\_TOPIC\_UNHIDDEN**

Messages that contain `telegram.Message.general_forum_topic_unhidden`.

New in version 20.0.

**LEFT\_CHAT\_MEMBER = filters.StatusUpdate.LEFT\_CHAT\_MEMBER**

Messages that contain `telegram.Message.left_chat_member`.

**MESSAGE\_AUTO\_DELETE\_TIMER\_CHANGED = filters.StatusUpdate.MESSAGE\_AUTO\_DELETE\_TIMER\_CHANGED**

Messages that contain `telegram.Message.message_auto_delete_timer_changed`

New in version 13.4.

**MIGRATE = filters.StatusUpdate.MIGRATE**

Messages that contain `telegram.Message.migrate_from_chat_id` or `telegram.Message.migrate_to_chat_id`.

**NEW\_CHAT\_MEMBERS = filters.StatusUpdate.NEW\_CHAT\_MEMBERS**

Messages that contain *telegram.Message.new\_chat\_members*.

**NEW\_CHAT\_PHOTO = filters.StatusUpdate.NEW\_CHAT\_PHOTO**

Messages that contain *telegram.Message.new\_chat\_photo*.

**NEW\_CHAT\_TITLE = filters.StatusUpdate.NEW\_CHAT\_TITLE**

Messages that contain *telegram.Message.new\_chat\_title*.

**PINNED\_MESSAGE = filters.StatusUpdate.PINNED\_MESSAGE**

Messages that contain *telegram.Message.pinned\_message*.

**PROXIMITY\_ALERT\_TRIGGERED = filters.StatusUpdate.PROXIMITY\_ALERT\_TRIGGERED**

Messages that contain *telegram.Message.proximity\_alert\_triggered*.

**USER\_SHARED = filters.StatusUpdate.USER\_SHARED**

Messages that contain *telegram.Message.user\_shared*.

New in version 20.1.

**VIDEO\_CHAT\_ENDED = filters.StatusUpdate.VIDEO\_CHAT\_ENDED**

Messages that contain *telegram.Message.video\_chat\_ended*.

New in version 13.4.

Changed in version 20.0: This filter was formerly named VOICE\_CHAT\_ENDED

**VIDEO\_CHAT\_SCHEDULED = filters.StatusUpdate.VIDEO\_CHAT\_SCHEDULED**

Messages that contain *telegram.Message.video\_chat\_scheduled*.

New in version 13.5.

Changed in version 20.0: This filter was formerly named VOICE\_CHAT\_SCHEDULED

**VIDEO\_CHAT\_STARTED = filters.StatusUpdate.VIDEO\_CHAT\_STARTED**

Messages that contain *telegram.Message.video\_chat\_started*.

New in version 13.4.

Changed in version 20.0: This filter was formerly named VOICE\_CHAT\_STARTED

**VIDEO\_CHAT\_PARTICIPANTS\_INVITED = filters.StatusUpdate.VIDEO\_CHAT\_PARTICIPANTS\_INVITED**

Messages that contain *telegram.Message.video\_chat\_participants\_invited*.

New in version 13.4.

Changed in version 20.0: This filter was formerly named VOICE\_CHAT\_PARTICIPANTS\_INVITED

**WEB\_APP\_DATA = filters.StatusUpdate.WEB\_APP\_DATA**

Messages that contain *telegram.Message.web\_app\_data*.

New in version 20.0.

**WRITE\_ACCESS\_ALLOWED = filters.StatusUpdate.WRITE\_ACCESS\_ALLOWED**

Messages that contain *telegram.Message.write\_access\_allowed*.

New in version 20.0.

`telegram.ext.filters.TEXT = filters.TEXT`

Shortcut for *telegram.ext.filters.Text()*.

---

### Examples

To allow any text message, simply use `MessageHandler(filters.TEXT, callback_method)`.

---

**class** telegram.ext.filters.**Text**(strings=None)

Bases: [telegram.ext.filters.MessageFilter](#)

Text Messages. If a list of strings is passed, it filters messages to only allow those whose text is appearing in the given list.

---

#### Examples

A simple use case for passing a list is to allow only messages that were sent by a custom [telegram.ReplyKeyboardMarkup](#):

```
buttons = ['Start', 'Settings', 'Back']
markup = ReplyKeyboardMarkup.from_column(buttons)
...
MessageHandler(filters.Text(buttons), callback_method)
```

---

#### See also:

[telegram.ext.filters.TEXT](#)

---

#### Note:

- Dice messages don't have text. If you want to filter either text or dice messages, use `filters.TEXT | filters.Dice.ALL`.
- Messages containing a command are accepted by this filter. Use `filters.TEXT & (~filters.COMMAND)`, if you want to filter only text messages without commands.

---

#### Parameters

**strings** (List[str] | Tuple[str], optional) – Which messages to allow. Only exact matches are allowed. If not specified, will allow any text message.

`telegram.ext.filters.USER = filters.USER`

This filter filters *any* message that has a [telegram.Message.from\\_user](#).

`telegram.ext.filters.USER_ATTACHMENT = filters.USER_ATTACHMENT`

This filter filters *any* message that have a user who added the bot to their *attachment menu* as [telegram.Update.effective\\_user](#).

New in version 20.0.

`telegram.ext.filters.PREMIUM_USER = filters.PREMIUM_USER`

This filter filters *any* message from a *Telegram Premium user* as [telegram.Update.effective\\_user](#).

New in version 20.0.

**class** telegram.ext.filters.**UpdateFilter**(name=None, data\_filter=False)

Bases: [telegram.ext.filters.BaseFilter](#)

Base class for all Update Filters. In contrast to [MessageFilter](#), the object passed to `filter()` is an instance of [telegram.Update](#), which allows to create filters like [telegram.ext.filters.UpdateType.EDITED\\_MESSAGE](#).

Please see [telegram.ext.filters.BaseFilter](#) for details on how to create custom filters.

---

#### Available In

- [telegram.ext.CommandHandler.filters](#)
- [telegram.ext.MessageHandler.filters](#)

- `telegram.ext.PrefixHandler.filters`
- 

**check\_update(update)**

Checks if the specified update should be handled by this filter.

**Parameters**

**update** (`telegram.Update`) – The update to check.

**Returns**

If the update should be handled by this filter, returns `True` or a dict with lists, in case the filter is a data filter. If the update should not be handled by this filter, `False` or `None`.

**Return type**

`bool` | `Dict[str, list]` | `None`

**abstract filter(update)**

This method must be overwritten.

**Parameters**

**update** (`telegram.Update`) – The update that is tested.

**Returns**

`dict` or `bool`.

**class telegram.ext.filters.UpdateType**

Bases: `object`

Subset for filtering the type of update.

---

**Examples**

Use these filters like: `filters.UpdateType.MESSAGE` or `filters.UpdateType.CHANNEL_POSTS` etc.

---

**Caution:** `filters.UpdateType` itself is *not* a filter, but just a convenience namespace.

**CHANNEL\_POST = filters.UpdateType.CHANNEL\_POST**

Updates with `telegram.Update.channel_post`.

**CHANNEL\_POSTS = filters.UpdateType.CHANNEL\_POSTS**

Updates with either `telegram.Update.channel_post` or `telegram.Update.edited_channel_post`.

**EDITED = filters.UpdateType.EDITED**

Updates with either `telegram.Update.edited_message` or `telegram.Update.edited_channel_post`.

New in version 20.0.

**EDITED\_CHANNEL\_POST = filters.UpdateType.EDITED\_CHANNEL\_POST**

Updates with `telegram.Update.edited_channel_post`.

**EDITED\_MESSAGE = filters.UpdateType.EDITED\_MESSAGE**

Updates with `telegram.Update.edited_message`.

**MESSAGE = filters.UpdateType.MESSAGE**

Updates with `telegram.Update.message`.

**MESSAGES = filters.UpdateType.MESSAGES**

Updates with either `telegram.Update.message` or `telegram.Update.edited_message`.

**class** telegram.ext.filters.**User**(*user\_id=None, username=None, allow\_empty=False*)

Bases: [telegram.ext.filters.MessageFilter](#)

Filters messages to allow only those which are from specified user ID(s) or username(s).

---

### Examples

MessageHandler(filters.User(1234), callback\_method)

---

#### Parameters

- **user\_id** ([int](#) | Collection[[int](#)], optional) – Which user ID(s) to allow through.
- **username** ([str](#) | Collection[[str](#)], optional) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.
- **allow\_empty** ([bool](#), optional) – Whether updates should be processed, if no user is specified in [user\\_ids](#) and [usernames](#). Defaults to [False](#).

#### Raises

[RuntimeError](#) – If [user\\_id](#) and [username](#) are both present.

#### **allow\_empty**

Whether updates should be processed, if no user is specified in [user\\_ids](#) and [usernames](#).

#### Type

[bool](#)

#### **add\_usernames**(*username*)

Add one or more chats to the allowed usernames.

#### Parameters

**username** ([str](#) | Collection[[str](#)]) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.

#### **property name**

Name for this filter.

#### Type

[str](#)

#### **remove\_usernames**(*username*)

Remove one or more chats from allowed usernames.

#### Parameters

**username** ([str](#) | Collection[[str](#)]) – Which username(s) to disallow through. Leading '@' s in usernames will be discarded.

#### **property usernames**

Which username(s) to allow through.

**Warning:** [usernames](#) will give a *copy* of the saved usernames as [frozenset](#). This is to ensure thread safety. To add/remove a user, you should use [add\\_usernames\(\)](#), and [remove\\_usernames\(\)](#). Only update the entire set by `filter.usernames = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed users.

#### Returns

[frozenset](#)([str](#))



**property user\_ids**

Which user ID(s) to allow through.

**Warning:** `user_ids` will give a *copy* of the saved user ids as `frozenset`. This is to ensure thread safety. To add/remove a user, you should use `add_user_ids()`, and `remove_user_ids()`. Only update the entire set by `filter.user_ids = new_set`, if you are entirely sure that it is not causing race conditions, as this will complete replace the current set of allowed users.

**Returns**

`frozenset(int)`

**add\_user\_ids(user\_id)**

Add one or more users to the allowed user ids.

**Parameters**

**user\_id** (`int` | `Collection[int]`) – Which user ID(s) to allow through.

**remove\_user\_ids(user\_id)**

Remove one or more users from allowed user ids.

**Parameters**

**user\_id** (`int` | `Collection[int]`) – Which user ID(s) to disallow through.

`telegram.ext.filters.VENUE = filters.VENUE`

Messages that contain `telegram.Message.venue`.

`telegram.ext.filters.VIA_BOT = filters.VIA_BOT`

This filter filters for message that were sent via *any* bot.

`telegram.ext.filters.VIDEO = filters.VIDEO`

Messages that contain `telegram.Message.video`.

`telegram.ext.filters.VIDEO_NOTE = filters.VIDEO_NOTE`

Messages that contain `telegram.Message.video_note`.

`telegram.ext.filters.VOICE = filters.VOICE`

Messages that contain `telegram.Message.voice`.

**class** `telegram.ext.filters.ViaBot(bot_id=None, username=None, allow_empty=False)`

Bases: `telegram.ext.filters.MessageFilter`

Filters messages to allow only those which are from specified via\_bot ID(s) or username(s).

**Examples**

```
MessageHandler(filters.ViaBot(1234), callback_method)
```

**Parameters**

- **bot\_id** (`int` | `Collection[int]`, optional) – Which bot ID(s) to allow through.
- **username** (`str` | `Collection[str]`, optional) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.
- **allow\_empty** (`bool`, optional) – Whether updates should be processed, if no user is specified in `bot_ids` and `usernames`. Defaults to `False`.

**Raises**

**RuntimeError** – If `bot_id` and `username` are both present.

**allow\_empty**

Whether updates should be processed, if no bot is specified in *bot\_ids* and *usernames*.

**Type**

`bool`

**add\_usernames(*username*)**

Add one or more chats to the allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to allow through. Leading '@' s in usernames will be discarded.

**property name**

Name for this filter.

**Type**

`str`

**remove\_usernames(*username*)**

Remove one or more chats from allowed usernames.

**Parameters**

**username** (`str` | `Collection[str]`) – Which username(s) to disallow through. Leading '@' s in usernames will be discarded.

**property usernames**

Which username(s) to allow through.

**Warning:** *usernames* will give a *copy* of the saved usernames as `frozenset`. This is to ensure thread safety. To add/remove a user, you should use `add_usernames()`, and `remove_usernames()`. Only update the entire set by `filter.usernames = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed users.

**Returns**

`frozenset(str)`

**property bot\_ids**

Which bot ID(s) to allow through.

**Warning:** *bot\_ids* will give a *copy* of the saved bot ids as `frozenset`. This is to ensure thread safety. To add/remove a bot, you should use `add_bot_ids()`, and `remove_bot_ids()`. Only update the entire set by `filter.bot_ids = new_set`, if you are entirely sure that it is not causing race conditions, as this will completely replace the current set of allowed bots.

**Returns**

`frozenset(int)`

**add\_bot\_ids(*bot\_id*)**

Add one or more bots to the allowed bot ids.

**Parameters**

**bot\_id** (`int` | `Collection[int]`) – Which bot ID(s) to allow through.

**remove\_bot\_ids(*bot\_id*)**

Remove one or more bots from allowed bot ids.

**Parameters**

**bot\_id** (`int` | `Collection[int]`, optional) – Which bot ID(s) to disallow through.

**InlineQueryHandler**

**class** telegram.ext.**InlineQueryHandler**(*callback*, *pattern=None*, *block=True*, *chat\_types=None*)

Bases: `telegram.ext.BaseHandler`

BaseHandler class to handle Telegram updates that contain a `telegram.Update.inline_query`. Optionally based on a regex. Read the documentation of the `re` module for more information.

**Warning:**

- When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.
- `telegram.InlineQuery.chat_type` will not be set for inline queries from secret chats and may not be set for inline queries coming from third-party clients. These updates won't be handled, if `chat_types` is passed.

---

**Available In**

`telegram.ext.Application.handlers`

---

---

**Examples**

*Inline Bot*

---

**Parameters**

- **callback** (`coroutine function`) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **pattern** (`str` | `re.Pattern`, optional) – Regex pattern. If not `None`, `re.match()` is used on `telegram.InlineQuery.query` to determine if an update should be handled by this handler.
- **block** (`bool`, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

**See also:**

[Concurrency](#)

- **chat\_types** (`List[str]`, optional) – List of allowed chat types. If passed, will only handle inline queries with the appropriate `telegram.InlineQuery.chat_type`.

New in version 13.5.

**callback**

The callback function for this handler.

**Type**

`coroutine function`

**pattern**

Optional. Regex pattern to test `telegram.InlineQuery.query` against.

**Type**

`str` | `re.Pattern`

**chat\_types**

Optional. List of allowed chat types.

New in version 13.5.

**Type**

`List[str]`

**block**

Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`.

**Type**

`bool`

**check\_update(update)**

Determines whether an update should be passed to this handler's `callback`.

**Parameters**

**update** (`telegram.Update` | object) – Incoming update.

**Returns**

`bool` | `re.match`

**collect\_additional\_context(context, update, application, check\_result)**

Add the result of `re.match(pattern, update.inline_query.query)` to `CallbackContext.matches` as list with one element.

## MessageHandler

**class** `telegram.ext.MessageHandler(filters, callback, block=True)`

Bases: `telegram.ext.BaseHandler`

Handler class to handle Telegram messages. They might contain text, media or status updates.

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

---

**Available In**

`telegram.ext.Application.handlers`

---

**Parameters**

- **filters** (`telegram.ext.filters.BaseFilter`) – A filter inheriting from `telegram.ext.filters.BaseFilter`. Standard filters can be found in `telegram.ext.filters`. Filters can be combined using bitwise operators (& for and, | for or, ~ for not). Passing `None` is a shortcut for passing `telegram.ext.filters.ALL`.

**See also:**[Advanced Filters](#)

- **callback** ([coroutine function](#)) – The callback function for this handler. Will be called when [check\\_update\(\)](#) has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of [telegram.ext.ConversationHandler](#).

- **block** ([bool](#), optional) – Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#). Defaults to `True`.

**See also:**[Concurrency](#)**filters**

Only allow updates with these Filters. See [telegram.ext.filters](#) for a full list of all available filters.

**Type**[telegram.ext.filters.BaseFilter](#)**callback**

The callback function for this handler.

**Type**[coroutine function](#)**block**

Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#).

**Type**[bool](#)**check\_update(update)**

Determines whether an update should be passed to this handler's [callback](#).

**Parameters**

**update** ([telegram.Update](#) | [object](#)) – Incoming update.

**Returns**[bool](#)**collect\_additional\_context(context, update, application, check\_result)**

Adds possible output of data filters to the [CallbackContext](#).

**PollAnswerHandler**

```
class telegram.ext.PollAnswerHandler(callback, block=True)
```

Bases: [telegram.ext.BaseHandler](#)

Handler class to handle Telegram updates that contain a [poll answer](#).

**Warning:** When setting [block](#) to `False`, you cannot rely on adding custom attributes to [telegram.ext.CallbackContext](#). See its docs for more info.

---

**Available In**

`telegram.ext.Application.handlers`

---

---

**Examples**

*Poll Bot*

---

**Parameters**

- **callback** (coroutine function) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **block** (bool, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

**See also:**

Concurrency

**callback**

The callback function for this handler.

**Type**

coroutine function

**block**

Determines whether the callback will run in a blocking way..

**Type**

bool

**check\_update(update)**

Determines whether an update should be passed to this handler's `callback`.

**Parameters**

**update** (`telegram.Update` | object) – Incoming update.

**Returns**

bool

**PollHandler**

**class** telegram.ext.PollHandler(callback, block=True)

Bases: `telegram.ext.BaseHandler`

Handler class to handle Telegram updates that contain a *poll*.

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

---

**Available In***telegram.ext.Application.handlers*

---

---

**Examples***Poll Bot*

---

**Parameters**

- **callback** (coroutine function) – The callback function for this handler. Will be called when *check\_update()* has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of *telegram.ext.ConversationHandler*.

- **block** (bool, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in *telegram.ext.Application.process\_update()*. Defaults to *True*.

**See also:***Concurrency***callback**

The callback function for this handler.

**Type***coroutine function***block**

Determines whether the callback will run in a blocking way..

**Type***bool***check\_update(update)**

Determines whether an update should be passed to this handler's *callback*.

**Parameters**

**update** (*telegram.Update* | object) – Incoming update.

**Returns***bool***PreCheckoutQueryHandler**

**class** telegram.ext.PreCheckoutQueryHandler(*callback*, *block=True*)

Bases: *telegram.ext.BaseHandler*

Handler class to handle Telegram *telegram.Update.pre\_checkout\_query*.

**Warning:** When setting *block* to *False*, you cannot rely on adding custom attributes to *telegram.ext.CallbackContext*. See its docs for more info.

---

**Available In**

`telegram.ext.Application.handlers`

---

---

**Examples**

*Payment Bot*

---

**Parameters**

- **callback** (*coroutine function*) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **block** (*bool*, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

**See also:**

*Concurrency*

**callback**

The callback function for this handler.

**Type**

*coroutine function*

**block**

Determines whether the callback will run in a blocking way..

**Type**

*bool*

**check\_update(update)**

Determines whether an update should be passed to this handler's *callback*.

**Parameters**

**update** (*telegram.Update* | *object*) – Incoming update.

**Returns**

*bool*

**PrefixHandler**

**class** `telegram.ext.PrefixHandler(prefix, command, callback, filters=None, block=True)`

Bases: `telegram.ext.BaseHandler`

Handler class to handle custom prefix commands.

This is an intermediate handler between *MessageHandler* and *CommandHandler*. It supports configurable commands with the same options as *CommandHandler*. It will respond to every combination of *prefix* and *command*. It will add a *list* to the *CallbackContext* named *CallbackContext.args*, containing a list of strings, which is the text following the command split on single or consecutive whitespace characters.



---

**Available In**`telegram.ext.Application.handlers`

---

---

**Examples**

Single prefix and command:

```
PrefixHandler("!", "test", callback) # will respond to '!test'.
```

Multiple prefixes, single command:

```
PrefixHandler(["!", "#"], "test", callback) # will respond to '!test' and '#test'.
```

Multiple prefixes and commands:

```
PrefixHandler(
    ["!", "#"], ["test", "help"], callback
) # will respond to '!test', '#test', '!help' and '#help'.
```

---

By default, the handler listens to messages as well as edited messages. To change this behavior use `~filters.UpdateType.EDITED_MESSAGE`

---

**Note:**

- `PrefixHandler` does *not* handle (edited) channel posts.
- 

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

Changed in version 20.0:

- `PrefixHandler` is no longer a subclass of `CommandHandler`.
- Removed the attributes `command` and `prefix`. Instead, the new `commands` contains all commands that this handler listens to as a `frozenset`, which includes the prefixes.
- Updating the prefixes and commands this handler listens to is no longer possible.

**Parameters**

- **prefix** (`str` | `Collection[str]`) – The prefix(es) that will precede `command`.
- **command** (`str` | `Collection[str]`) – The command or list of commands this handler should listen for. Case-insensitive.
- **callback** (`coroutine function`) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **filters** (*telegram.ext.filters.BaseFilter*, optional) – A filter inheriting from *telegram.ext.filters.BaseFilter*. Standard filters can be found in *telegram.ext.filters*. Filters can be combined using bitwise operators (& for **and**, | for **or**, ~ for **not**)
- **block** (*bool*, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in *telegram.ext.Application.process\_update()*. Defaults to **True**.

**See also:**

[Concurrency](#)

#### **commands**

The commands that this handler will listen for, i.e. the combinations of *prefix* and *command*.

##### **Type**

FrozenSet[*str*]

#### **callback**

The callback function for this handler.

##### **Type**

*coroutine function*

#### **filters**

Optional. Only allow updates with these Filters.

##### **Type**

*telegram.ext.filters.BaseFilter*

#### **block**

Determines whether the return value of the callback should be awaited before processing the next handler in *telegram.ext.Application.process\_update()*.

##### **Type**

*bool*

#### **check\_update(update)**

Determines whether an update should be passed to this handler's *callback*.

##### **Parameters**

**update** (*telegram.Update* | *object*) – Incoming update.

##### **Returns**

The list of args for the handler.

##### **Return type**

*list*

#### **collect\_additional\_context(context, update, application, check\_result)**

Add text after the command to *CallbackContext.args* as list, split on single whitespaces and add output of data filters to *CallbackContext* as well.

## ShippingQueryHandler

**class** telegram.ext.ShippingQueryHandler(*callback*, *block=True*)

Bases: [telegram.ext.BaseHandler](#)

Handler class to handle Telegram [telegram.Update.shipping\\_query](#).

**Warning:** When setting *block* to `False`, you cannot rely on adding custom attributes to [telegram.ext.CallbackContext](#). See its docs for more info.

---

### Available In

[telegram.ext.Application.handlers](#)

---

### Examples

[Payment Bot](#)

---

### Parameters

- **callback** ([coroutine function](#)) – The callback function for this handler. Will be called when [check\\_update\(\)](#) has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of [telegram.ext.ConversationHandler](#).

- **block** ([bool](#), optional) – Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#). Defaults to `True`.

**See also:**

[Concurrency](#)

### callback

The callback function for this handler.

#### Type

[coroutine function](#)

### block

Determines whether the callback will run in a blocking way..

#### Type

[bool](#)

### check\_update(*update*)

Determines whether an update should be passed to this handler's *callback*.

#### Parameters

**update** ([telegram.Update](#) | [object](#)) – Incoming update.

#### Returns

[bool](#)

## StringCommandHandler

**class** telegram.ext.StringCommandHandler(command, callback, block=True)

Bases: [telegram.ext.BaseHandler](#)

Handler class to handle string commands. Commands are string updates that start with /. The handler will add a [list](#) to the [CallbackContext](#) named [CallbackContext.args](#). It will contain a list of strings, which is the text following the command split on single whitespace characters.

---

**Note:** This handler is not used to handle Telegram [telegram.Update](#), but strings manually put in the queue. For example to send messages with the bot using command line or API.

---

**Warning:** When setting [block](#) to [False](#), you cannot rely on adding custom attributes to [telegram.ext.CallbackContext](#). See its docs for more info.

---

### Available In

[telegram.ext.Application.handlers](#)

---

### Parameters

- **command** ([str](#)) – The command this handler should listen for.
- **callback** ([coroutine function](#)) – The callback function for this handler. Will be called when [check\\_update\(\)](#) has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of [telegram.ext.ConversationHandler](#).

- **block** ([bool](#), optional) – Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#). Defaults to [True](#).

**See also:**

[Concurrency](#)

### command

The command this handler should listen for.

#### Type

[str](#)

### callback

The callback function for this handler.

#### Type

[coroutine function](#)

### block

Determines whether the return value of the callback should be awaited before processing the next handler in [telegram.ext.Application.process\\_update\(\)](#).

#### Type

[bool](#)

**check\_update**(*update*)

Determines whether an update should be passed to this handler's *callback*.

**Parameters**

**update** (*object*) – The incoming update.

**Returns**

List containing the text command split on whitespace.

**Return type**

List[*str*]

**collect\_additional\_context**(*context, update, application, check\_result*)

Add text after the command to *CallbackContext.args* as list, split on single whitespaces.

## StringRegexHandler

**class** telegram.ext.StringRegexHandler(*pattern, callback, block=True*)

Bases: *telegram.ext.BaseHandler*

Handler class to handle string updates based on a regex which checks the update content.

Read the documentation of the *re* module for more information. The *re.match()* function is used to determine if an update should be handled by this handler.

---

**Note:** This handler is not used to handle Telegram *telegram.Update*, but strings manually put in the queue. For example to send messages with the bot using command line or API.

---

**Warning:** When setting *block* to *False*, you cannot rely on adding custom attributes to *telegram.ext.CallbackContext*. See its docs for more info.

---

### Available In

*telegram.ext.Application.handlers*

---

### Parameters

- **pattern** (*str* | *re.Pattern*) – The regex pattern.
- **callback** (*coroutine function*) – The callback function for this handler. Will be called when *check\_update()* has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of *telegram.ext.ConversationHandler*.

- **block** (*bool*, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in *telegram.ext.Application.process\_update()*. Defaults to *True*.

**See also:**

Concurrency

**pattern**

The regex pattern.

**Type**

`str` | `re.Pattern`

**callback**

The callback function for this handler.

**Type**

`coroutine function`

**block**

Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`.

**Type**

`bool`

**check\_update(update)**

Determines whether an update should be passed to this handler's `callback`.

**Parameters**

**update** (`object`) – The incoming update.

**Returns**

`None` | `re.Match`

**collect\_additional\_context(context, update, application, check\_result)**

Add the result of `re.match(pattern, update)` to `CallbackContext.matches` as list with one element.

## TypeHandler

**class** `telegram.ext.TypeHandler`(*type, callback, strict=False, block=True*)

Bases: `telegram.ext.BaseHandler`

Handler class to handle updates of custom types.

**Warning:** When setting `block` to `False`, you cannot rely on adding custom attributes to `telegram.ext.CallbackContext`. See its docs for more info.

---

**Available In**

`telegram.ext.Application.handlers`

---

**Parameters**

- **type** (`type`) – The `type` of updates this handler should process, as determined by `isinstance`
- **callback** (`coroutine function`) – The callback function for this handler. Will be called when `check_update()` has determined that an update should be processed by this handler. Callback signature:

```
async def callback(update: Update, context: CallbackContext)
```

The return value of the callback is usually ignored except for the special case of `telegram.ext.ConversationHandler`.

- **strict** (`bool`, optional) – Use `type` instead of `isinstance`. Default is `False`.
- **block** (`bool`, optional) – Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`. Defaults to `True`.

**See also:**

[Concurrency](#)

#### **type**

The `type` of updates this handler should process.

**Type**

`type`

#### **callback**

The callback function for this handler.

**Type**

`coroutine function`

#### **strict**

Use `type` instead of `isinstance`. Default is `False`.

**Type**

`bool`

#### **block**

Determines whether the return value of the callback should be awaited before processing the next handler in `telegram.ext.Application.process_update()`.

**Type**

`bool`

#### **check\_update(update)**

Determines whether an update should be passed to this handler's `callback`.

**Parameters**

**update** (`object`) – Incoming update.

**Returns**

`bool`

## 10.2.14 Persistence

### **BasePersistence**

**class** `telegram.ext.BasePersistence(store_data=None, update_interval=60)`

Bases: `typing.Generic`, `ABC`

Interface class for adding persistence to your bot. Subclass this object for different implementations of a persistent bot.

**Attention:** The interface provided by this class is intended to be accessed exclusively by `Application`. Calling any of the methods below manually might interfere with the integration of persistence into `Application`.

All relevant methods must be overwritten. This includes:

- `get_bot_data()`

- `update_bot_data()`
- `refresh_bot_data()`
- `get_chat_data()`
- `update_chat_data()`
- `refresh_chat_data()`
- `drop_chat_data()`
- `get_user_data()`
- `update_user_data()`
- `refresh_user_data()`
- `drop_user_data()`
- `get_callback_data()`
- `update_callback_data()`
- `get_conversations()`
- `update_conversation()`
- `flush()`

If you don't actually need one of those methods, a simple `pass` is enough. For example, if you don't store `bot_data`, you don't need `get_bot_data()`, `update_bot_data()` or `refresh_bot_data()`.

---

**Note:** You should avoid saving `telegram.Bot` instances. This is because if you change e.g. the bots token, this won't propagate to the serialized instances and may lead to exceptions.

To prevent this, the implementation may use `bot` to replace bot instances with a placeholder before serialization and insert `bot` back when loading the data. Since `bot` will be set when the process starts, this will be the up-to-date bot instance.

If the persistence implementation does not take care of this, you should make sure not to store any bot instances in the data that will be persisted. E.g. in case of `telegram.TelegramObject`, one may call `set_bot()` to ensure that shortcuts like `telegram.Message.reply_text()` are available.

---

This class is a `Generic` class and accepts three type variables:

1. The type of the second argument of `update_user_data()`, which must coincide with the type of the second argument of `refresh_user_data()` and the values in the dictionary returned by `get_user_data()`.
2. The type of the second argument of `update_chat_data()`, which must coincide with the type of the second argument of `refresh_chat_data()` and the values in the dictionary returned by `get_chat_data()`.
3. The type of the argument of `update_bot_data()`, which must coincide with the type of the argument of `refresh_bot_data()` and the return value of `get_bot_data()`.

---

#### Use In

`telegram.ext.ApplicationBuilder.persistence()`

---

---

#### Available In

`telegram.ext.Application.persistence`

---



**See also:**

[Architecture Overview](#), [Making Your Bot Persistent](#)

Changed in version 20.0:

- The parameters and attributes `store_*_data` were replaced by `store_data`.
- `insert/replace_bot` was dropped. Serialization of bot instances now needs to be handled by the specific implementation - see above note.

**Parameters**

- **store\_data** ([PersistenceInput](#), optional) – Specifies which kinds of data will be saved by this persistence instance. By default, all available kinds of data will be saved.
- **update\_interval** (`int` | `float`, optional) – The [Application](#) will update the persistence in regular intervals. This parameter specifies the time (in seconds) to wait between two consecutive runs of updating the persistence. Defaults to 60 seconds.

New in version 20.0.

**store\_data**

Specifies which kinds of data will be saved by this persistence instance.

**Type**

[PersistenceInput](#)

**bot**

The bot associated with the persistence.

**Type**

[telegram.Bot](#)

**abstract async drop\_chat\_data(chat\_id)**

Will be called by the [telegram.ext.Application](#), when using [drop\\_chat\\_data\(\)](#).

New in version 20.0.

**Parameters**

**chat\_id** (`int`) – The chat id to delete from the persistence.

**abstract async drop\_user\_data(user\_id)**

Will be called by the [telegram.ext.Application](#), when using [drop\\_user\\_data\(\)](#).

New in version 20.0.

**Parameters**

**user\_id** (`int`) – The user id to delete from the persistence.

**abstract async flush()**

Will be called by [telegram.ext.Application.stop\(\)](#). Gives the persistence a chance to finish up saving or close a database connection gracefully.

Changed in version 20.0: Changed this method into an [abstractmethod\(\)](#).

**abstract async get\_bot\_data()**

Will be called by [telegram.ext.Application](#) upon creation with a persistence object. It should return the `bot_data` if stored, or an empty `dict`. In the latter case, the `dict` should produce values corresponding to one of the following:

- `dict`
- The type from [telegram.ext.ContextTypes.bot\\_data](#) if [telegram.ext.ContextTypes](#) are used.

**Returns**

The restored bot data.

**Return type**

Dict[int, dict | *telegram.ext.ContextTypes.bot\_data*]

**abstract async get\_callback\_data()**

Will be called by *telegram.ext.Application* upon creation with a persistence object. If callback data was stored, it should be returned.

New in version 13.6.

Changed in version 20.0: Changed this method into an *abstractmethod()*.

**Returns**

Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]] | None: The restored metadata or None, if no data was stored.

**abstract async get\_chat\_data()**

Will be called by *telegram.ext.Application* upon creation with a persistence object. It should return the *chat\_data* if stored, or an empty dict. In the latter case, the dictionary should produce values corresponding to one of the following:

- dict
- The type from *telegram.ext.ContextTypes.chat\_data* if *telegram.ext.ContextTypes* is used.

Changed in version 20.0: This method may now return a dict instead of a *collections.defaultdict*

**Returns**

The restored chat data.

**Return type**

Dict[int, dict | *telegram.ext.ContextTypes.chat\_data*]

**abstract async get\_conversations(name)**

Will be called by *telegram.ext.Application* when a *telegram.ext.ConversationHandler* is added if *telegram.ext.ConversationHandler.persistent* is True. It should return the conversations for the handler with *name* or an empty dict.

**Parameters**

**name** (str) – The handlers name.

**Returns**

The restored conversations for the handler.

**Return type**

dict

**abstract async get\_user\_data()**

Will be called by *telegram.ext.Application* upon creation with a persistence object. It should return the *user\_data* if stored, or an empty dict. In the latter case, the dictionary should produce values corresponding to one of the following:

- dict
- The type from *telegram.ext.ContextTypes.user\_data* if *telegram.ext.ContextTypes* is used.

Changed in version 20.0: This method may now return a dict instead of a *collections.defaultdict*

**Returns**

The restored user data.

**Return type**`Dict[int, dict | telegram.ext.ContextTypes.user\_data]`**abstract async refresh\_bot\_data(*bot\_data*)**

Will be called by the [telegram.ext.Application](#) before passing the *bot\_data* to a callback. Can be used to update data stored in *bot\_data* from an external source.

**Warning:** When using [concurrent\\_updates\(\)](#), this method may be called while a handler callback is still running. This might lead to race conditions.

New in version 13.6.

Changed in version 20.0: Changed this method into an [abstractmethod\(\)](#).

**Parameters**

**bot\_data** (`dict | telegram.ext.ContextTypes.bot\_data`) – The bot\_data.

**abstract async refresh\_chat\_data(*chat\_id*, *chat\_data*)**

Will be called by the [telegram.ext.Application](#) before passing the *chat\_data* to a callback. Can be used to update data stored in *chat\_data* from an external source.

**Warning:** When using [concurrent\\_updates\(\)](#), this method may be called while a handler callback is still running. This might lead to race conditions.

New in version 13.6.

Changed in version 20.0: Changed this method into an [abstractmethod\(\)](#).

**Parameters**

- **chat\_id** (`int`) – The chat ID this *chat\_data* is associated with.
- **chat\_data** (`dict | telegram.ext.ContextTypes.chat\_data`) – The chat\_data of a single chat.

**abstract async refresh\_user\_data(*user\_id*, *user\_data*)**

Will be called by the [telegram.ext.Application](#) before passing the *user\_data* to a callback. Can be used to update data stored in *user\_data* from an external source.

**Warning:** When using [concurrent\\_updates\(\)](#), this method may be called while a handler callback is still running. This might lead to race conditions.

New in version 13.6.

Changed in version 20.0: Changed this method into an [abstractmethod\(\)](#).

**Parameters**

- **user\_id** (`int`) – The user ID this *user\_data* is associated with.
- **user\_data** (`dict | telegram.ext.ContextTypes.user\_data`) – The user\_data of a single user.

**set\_bot(*bot*)**

Set the Bot to be used by this persistence instance.

**Parameters**

**bot** ([telegram.Bot](#)) – The bot.

**Raises**

**TypeError** – If `PersistenceInput.callback_data` is `True` and the `bot` is not an instance of `telegram.ext.ExtBot`.

**abstract async update\_bot\_data**(*data*)

Will be called by the `telegram.ext.Application` after a handler has handled an update.

**Parameters**

**data** (`dict` | `telegram.ext.ContextTypes.bot_data`) – The `telegram.ext.Application.bot_data`.

**abstract async update\_callback\_data**(*data*)

Will be called by the `telegram.ext.Application` after a handler has handled an update.

New in version 13.6.

Changed in version 20.0: Changed this method into an `abstractmethod()`.

**Parameters**

**data** (`Tuple`[`List`[`Tuple`[`str`, `float`, `Dict`[`str`, `Any`]]], `Dict`[`str`, `str`] | `None`) – The relevant data to restore `telegram.ext.CallbackDataCache`.

**abstract async update\_chat\_data**(*chat\_id*, *data*)

Will be called by the `telegram.ext.Application` after a handler has handled an update.

**Parameters**

- **chat\_id** (`int`) – The chat the data might have been changed for.
- **data** (`dict` | `telegram.ext.ContextTypes.chat_data`) – The `telegram.ext.Application.chat_data` [`chat_id`].

**abstract async update\_conversation**(*name*, *key*, *new\_state*)

Will be called when a `telegram.ext.ConversationHandler` changes states. This allows the storage of the new state in the persistence.

**Parameters**

- **name** (`str`) – The handler's name.
- **key** (`tuple`) – The key the state is changed for.
- **new\_state** (`object`) – The new state for the given key.

**property update\_interval**

Time (in seconds) that the `Application` will wait between two consecutive runs of updating the persistence.

New in version 20.0.

**Type**

`float`

**abstract async update\_user\_data**(*user\_id*, *data*)

Will be called by the `telegram.ext.Application` after a handler has handled an update.

**Parameters**

- **user\_id** (`int`) – The user the data might have been changed for.
- **data** (`dict` | `telegram.ext.ContextTypes.user_data`) – The `telegram.ext.Application.user_data` [`user_id`].

## DictPersistence

```
class telegram.ext.DictPersistence(store_data=None, user_data_json="", chat_data_json="",
                                   bot_data_json="", conversations_json="", callback_data_json="",
                                   update_interval=60)
```

Bases: [telegram.ext.BasePersistence](#)

Using Python's `dict` and `json` for making your bot persistent.

**Attention:** The interface provided by this class is intended to be accessed exclusively by [Application](#). Calling any of the methods below manually might interfere with the integration of persistence into [Application](#).

---

### Note:

- Data managed by [DictPersistence](#) is in-memory only and will be lost when the bot shuts down. This is, because [DictPersistence](#) is mainly intended as starting point for custom persistence classes that need to JSON-serialize the stored data before writing them to file/database.
  - This implementation of [BasePersistence](#) does not handle data that cannot be serialized by `json.dumps()`.
- 

---

### Use In

[telegram.ext.ApplicationBuilder.persistence\(\)](#)

---

---

### Available In

[telegram.ext.Application.persistence](#)

---

### See also:

[Making Your Bot Persistent](#)

Changed in version 20.0: The parameters and attributes `store_*_data` were replaced by [store\\_data](#).

#### Parameters

- **store\_data** ([PersistenceInput](#), optional) – Specifies which kinds of data will be saved by this persistence instance. By default, all available kinds of data will be saved.
- **user\_data\_json** (`str`, optional) – JSON string that will be used to reconstruct `user_data` on creating this persistence. Default is `""`.
- **chat\_data\_json** (`str`, optional) – JSON string that will be used to reconstruct `chat_data` on creating this persistence. Default is `""`.
- **bot\_data\_json** (`str`, optional) – JSON string that will be used to reconstruct `bot_data` on creating this persistence. Default is `""`.
- **conversations\_json** (`str`, optional) – JSON string that will be used to reconstruct conversation on creating this persistence. Default is `""`.
- **callback\_data\_json** (`str`, optional) – JSON string that will be used to reconstruct `callback_data` on creating this persistence. Default is `""`.

New in version 13.6.

- **update\_interval** (`int` | `float`, optional) – The *Application* will update the persistence in regular intervals. This parameter specifies the time (in seconds) to wait between two consecutive runs of updating the persistence. Defaults to 60 seconds.

New in version 20.0.

**store\_data**

Specifies which kinds of data will be saved by this persistence instance.

**Type**

*PersistenceInput*

**property bot\_data**

The bot\_data as a dict.

**Type**

`dict`

**property bot\_data\_json**

The bot\_data serialized as a JSON-string.

**Type**

`str`

**property callback\_data**

The metadata on the stored callback data.

New in version 13.6.

**Type**

`Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]]`

**property callback\_data\_json**

The metadata on the stored callback data as a JSON-string.

New in version 13.6.

**Type**

`str`

**property chat\_data**

The chat\_data as a dict.

**Type**

`dict`

**property chat\_data\_json**

The chat\_data serialized as a JSON-string.

**Type**

`str`

**property conversations**

The conversations as a dict.

**Type**

`dict`

**property conversations\_json**

The conversations serialized as a JSON-string.

**Type**

`str`

**async drop\_chat\_data**(*chat\_id*)

Will delete the specified key from the *chat\_data*.

New in version 20.0.

**Parameters**

**chat\_id** (*int*) – The chat id to delete from the persistence.

**async drop\_user\_data**(*user\_id*)

Will delete the specified key from the *user\_data*.

New in version 20.0.

**Parameters**

**user\_id** (*int*) – The user id to delete from the persistence.

**async flush**()

Does nothing.

New in version 20.0.

**See also:**

*telegram.ext.BasePersistence.flush()*

**async get\_bot\_data**()

Returns the bot\_data created from the bot\_data\_json or an empty *dict*.

**Returns**

The restored bot data.

**Return type**

*dict*

**async get\_callback\_data**()

Returns the callback\_data created from the callback\_data\_json or *None*.

New in version 13.6.

**Returns**

The restored metadata or *None*, if no data was stored.

**Return type**

*Tuple*[*List*[*Tuple*[*str*, *float*, *Dict*[*str*, *object*]]], *Dict*[*str*, *str*]]

**async get\_chat\_data**()

Returns the chat\_data created from the chat\_data\_json or an empty *dict*.

**Returns**

The restored chat data.

**Return type**

*dict*

**async get\_conversations**(*name*)

Returns the conversations created from the conversations\_json or an empty *dict*.

**Returns**

The restored conversations data.

**Return type**

*dict*

**async get\_user\_data**()

Returns the user\_data created from the user\_data\_json or an empty *dict*.

**Returns**

The restored user data.

**Return type**`dict`**async refresh\_bot\_data**(*bot\_data*)

Does nothing.

New in version 13.6.

**See also:**`telegram.ext.BasePersistence.refresh_bot_data()`**async refresh\_chat\_data**(*chat\_id*, *chat\_data*)

Does nothing.

New in version 13.6.

**See also:**`telegram.ext.BasePersistence.refresh_chat_data()`**async refresh\_user\_data**(*user\_id*, *user\_data*)

Does nothing.

New in version 13.6.

**See also:**`telegram.ext.BasePersistence.refresh_user_data()`**async update\_bot\_data**(*data*)Will update the `bot_data` (if changed).**Parameters****data** (`dict`) – The `telegram.ext.Application.bot_data`.**async update\_callback\_data**(*data*)Will update the `callback_data` (if changed).

New in version 13.6.

**Parameters****data** (`Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]]`) – The relevant data to restore `telegram.ext.CallbackDataCache`.**async update\_chat\_data**(*chat\_id*, *data*)Will update the `chat_data` (if changed).**Parameters**

- **chat\_id** (`int`) – The chat the data might have been changed for.
- **data** (`dict`) – The `telegram.ext.Application.chat_data` [`chat_id`].

**async update\_conversation**(*name*, *key*, *new\_state*)

Will update the conversations for the given handler.

**Parameters**

- **name** (`str`) – The handler's name.
- **key** (`tuple`) – The key the state is changed for.
- **new\_state** (`tuple` | `object`) – The new state for the given key.

**async update\_user\_data**(*user\_id*, *data*)Will update the `user_data` (if changed).**Parameters**

- **user\_id** (`int`) – The user the data might have been changed for.



- **data** (`dict`) – The `telegram.ext.Application.user_data` [`user_id`].

**property user\_data**

The user\_data as a dict.

**Type**

`dict`

**property user\_data\_json**

The user\_data serialized as a JSON-string.

**Type**

`str`

## PersistenceInput

```
class telegram.ext.PersistenceInput(bot_data=True, chat_data=True, user_data=True,
                                   callback_data=True)
```

Bases: `NamedTuple`

Convenience wrapper to group boolean input for the `store_data` parameter for `BasePersistence`.

---

**Available In**

- `telegram.ext.BasePersistence.store_data`
  - `telegram.ext.DictPersistence.store_data`
  - `telegram.ext.PicklePersistence.store_data`
- 

**Parameters**

- **bot\_data** (`bool`, optional) – Whether the setting should be applied for bot\_data. Defaults to `True`.
- **chat\_data** (`bool`, optional) – Whether the setting should be applied for chat\_data. Defaults to `True`.
- **user\_data** (`bool`, optional) – Whether the setting should be applied for user\_data. Defaults to `True`.
- **callback\_data** (`bool`, optional) – Whether the setting should be applied for callback\_data. Defaults to `True`.

**bot\_data**

Whether the setting should be applied for bot\_data.

**Type**

`bool`

**chat\_data**

Whether the setting should be applied for chat\_data.

**Type**

`bool`

**user\_data**

Whether the setting should be applied for user\_data.

**Type**

`bool`

**callback\_data**

Whether the setting should be applied for `callback_data`.

**Type**

`bool`

**PicklePersistence**

```
class telegram.ext.PicklePersistence(filepath, store_data=None, single_file=True, on_flush=False,
                                     update_interval=60, context_types=None)
```

Bases: `telegram.ext.BasePersistence`

Using python's builtin `pickle` for making your bot persistent.

**Attention:** The interface provided by this class is intended to be accessed exclusively by `Application`. Calling any of the methods below manually might interfere with the integration of persistence into `Application`.

---

**Note:** This implementation of `BasePersistence` uses the functionality of the pickle module to support serialization of bot instances. Specifically any reference to `bot` will be replaced by a placeholder before pickling and `bot` will be inserted back when loading the data.

---

---

**Use In**

`telegram.ext.ApplicationBuilder.persistence()`

---

---

**Available In**

`telegram.ext.Application.persistence`

---

---

**Examples**

*Persistent Conversation Bot*

---

**See also:**

[Making Your Bot Persistent](#)

Changed in version 20.0:

- The parameters and attributes `store_*_data` were replaced by `store_data`.
- The parameter and attribute `filename` were replaced by `filepath`.
- `filepath` now also accepts `pathlib.Path` as argument.

**Parameters**

- **filepath** (`str` | `pathlib.Path`) – The filepath for storing the pickle files. When `single_file` is `False` this will be used as a prefix.
- **store\_data** (`PersistenceInput`, optional) – Specifies which kinds of data will be saved by this persistence instance. By default, all available kinds of data will be saved.

- **single\_file** (*bool*, optional) – When *False* will store 5 separate files of *filename\_user\_data*, *filename\_bot\_data*, *filename\_chat\_data*, *filename\_callback\_data* and *filename\_conversations*. Default is *True*.
- **on\_flush** (*bool*, optional) – When *True* will only save to file when *flush()* is called and keep data in memory until that happens. When *False* will store data on any transaction *and* on call to *flush()*. Default is *False*.
- **context\_types** (*telegram.ext.ContextTypes*, optional) – Pass an instance of *telegram.ext.ContextTypes* to customize the types used in the *context* interface. If not passed, the defaults documented in *telegram.ext.ContextTypes* will be used.

New in version 13.6.

- **update\_interval** (*int* | *float*, optional) – The *Application* will update the persistence in regular intervals. This parameter specifies the time (in seconds) to wait between two consecutive runs of updating the persistence. Defaults to 60 seconds.

New in version 20.0.

### filepath

The filepath for storing the pickle files. When *single\_file* is *False* this will be used as a prefix.

#### Type

*str* | *pathlib.Path*

### store\_data

Specifies which kinds of data will be saved by this persistence instance.

#### Type

*PersistenceInput*

### single\_file

Optional. When *False* will store 5 separate files of *filename\_user\_data*, *filename\_bot\_data*, *filename\_chat\_data*, *filename\_callback\_data* and *filename\_conversations*. Default is *True*.

#### Type

*bool*

### on\_flush

Optional. When *True* will only save to file when *flush()* is called and keep data in memory until that happens. When *False* will store data on any transaction *and* on call to *flush()*. Default is *False*.

#### Type

*bool*

### context\_types

Container for the types used in the *context* interface.

New in version 13.6.

#### Type

*telegram.ext.ContextTypes*

### async drop\_chat\_data(chat\_id)

Will delete the specified key from the *chat\_data* and depending on *on\_flush* save the pickle file.

New in version 20.0.

#### Parameters

**chat\_id** (*int*) – The chat id to delete from the persistence.

### async drop\_user\_data(user\_id)

Will delete the specified key from the *user\_data* and depending on *on\_flush* save the pickle file.

New in version 20.0.

**Parameters**

**user\_id** (`int`) – The user id to delete from the persistence.

**async flush()**

Will save all data in memory to pickle file(s).

**async get\_bot\_data()**

Returns the bot\_data from the pickle file if it exists or an empty object of type `dict` | `telegram.ext.ContextTypes.bot_data`.

**Returns**

The restored bot data.

**Return type**

`dict` | `telegram.ext.ContextTypes.bot_data`

**async get\_callback\_data()**

Returns the callback data from the pickle file if it exists or `None`.

New in version 13.6.

**Returns**

`Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]]` | `None`: The restored metadata or `None`, if no data was stored.

**async get\_chat\_data()**

Returns the chat\_data from the pickle file if it exists or an empty `dict`.

**Returns**

The restored chat data.

**Return type**

`Dict[int, dict]`

**async get\_conversations(name)**

Returns the conversations from the pickle file if it exists or an empty dict.

**Parameters**

**name** (`str`) – The handlers name.

**Returns**

The restored conversations for the handler.

**Return type**

`dict`

**async get\_user\_data()**

Returns the user\_data from the pickle file if it exists or an empty `dict`.

**Returns**

The restored user data.

**Return type**

`Dict[int, dict]`

**async refresh\_bot\_data(bot\_data)**

Does nothing.

New in version 13.6.

**See also:**

`telegram.ext.BasePersistence.refresh_bot_data()`

**async refresh\_chat\_data**(*chat\_id*, *chat\_data*)

Does nothing.

New in version 13.6.

**See also:**

`telegram.ext.BasePersistence.refresh_chat_data()`

**async refresh\_user\_data**(*user\_id*, *user\_data*)

Does nothing.

New in version 13.6.

**See also:**

`telegram.ext.BasePersistence.refresh_user_data()`

**async update\_bot\_data**(*data*)

Will update the bot\_data and depending on *on\_flush* save the pickle file.

**Parameters**

**data** (`dict` | `telegram.ext.ContextTypes.bot_data`) – The `telegram.ext.Application.bot_data`.

**async update\_callback\_data**(*data*)

Will update the callback\_data (if changed) and depending on *on\_flush* save the pickle file.

New in version 13.6.

**Parameters**

**data** (`Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]]`) – The relevant data to restore `telegram.ext.CallbackDataCache`.

**async update\_chat\_data**(*chat\_id*, *data*)

Will update the chat\_data and depending on *on\_flush* save the pickle file.

**Parameters**

- **chat\_id** (`int`) – The chat the data might have been changed for.
- **data** (`dict`) – The `telegram.ext.Application.chat_data` [chat\_id].

**async update\_conversation**(*name*, *key*, *new\_state*)

Will update the conversations for the given handler and depending on *on\_flush* save the pickle file.

**Parameters**

- **name** (`str`) – The handler's name.
- **key** (`tuple`) – The key the state is changed for.
- **new\_state** (`object`) – The new state for the given key.

**async update\_user\_data**(*user\_id*, *data*)

Will update the user\_data and depending on *on\_flush* save the pickle file.

**Parameters**

- **user\_id** (`int`) – The user the data might have been changed for.
- **data** (`dict`) – The `telegram.ext.Application.user_data` [user\_id].

## 10.2.15 Arbitrary Callback Data

### CallbackDataCache

**class** telegram.ext.CallbackDataCache(*bot*, *maxsize=1024*, *persistent\_data=None*)

Bases: [object](#)

A custom cache for storing the callback data of a [telegram.ext.ExtBot](#). Internally, it keeps two mappings with fixed maximum size:

- One for mapping the data received in callback queries to the cached objects
- One for mapping the IDs of received callback queries to the cached objects

The second mapping allows to manually drop data that has been cached for keyboards of messages sent via inline mode. If necessary, will drop the least recently used items.

---

**Important:** If you want to use this class, you must install PTB with the optional requirement `callback-data`, i.e.

```
pip install "python-telegram-bot[callback-data]"
```

---

---

#### Available In

[telegram.ext.ExtBot.callback\\_data\\_cache](#)

---

---

#### Examples

*Arbitrary Callback Data Bot*

---

#### See also:

[Architecture Overview](#), [Arbitrary callback\\_data](#)

New in version 13.6.

Changed in version 20.0: To use this class, PTB must be installed via `pip install "python-telegram-bot[callback-data]"`.

#### Parameters

- **bot** ([telegram.ext.ExtBot](#)) – The bot this cache is for.
- **maxsize** ([int](#), optional) – Maximum number of items in each of the internal mappings. Defaults to 1024.
- **persistent\_data** (Tuple[List[Tuple[[str](#), [float](#), Dict[[str](#), [object](#)]]], Dict[[str](#), [str](#)]], optional) – Data to initialize the cache with, as returned by [telegram.ext.BasePersistence.get\\_callback\\_data\(\)](#).

#### bot

The bot this cache is for.

#### Type

[telegram.ext.ExtBot](#)

**clear\_callback\_data**(*time\_cutoff=None*)

Clears the stored callback data.

**Parameters**

**time\_cutoff** (`float` | `datetime.datetime`, optional) – Pass a UNIX timestamp or a `datetime.datetime` to clear only entries which are older. For timezone naive `datetime.datetime` objects, the default timezone of the bot will be used, which is UTC unless `telegram.ext.Defaults.tzinfo` is used.

**clear\_callback\_queries()**

Clears the stored callback query IDs.

**drop\_data(callback\_query)**

Deletes the data for the specified callback query.

---

**Note:** Will *not* raise exceptions in case the callback data is not found in the cache. Will raise `KeyError` in case the callback query can not be found in the cache.

---

**Parameters**

**callback\_query** (`telegram.CallbackQuery`) – The callback query.

**Raises**

`KeyError` – If the callback query can not be found in the cache

**static extract\_uuids(callback\_data)**

Extracts the keyboard uuid and the button uuid from the given `callback_data`.

**Parameters**

**callback\_data** (`str`) – The `callback_data` as present in the button.

**Returns**

Tuple of keyboard and button uuid

**Return type**

(`str`, `str`)

**load\_persistence\_data(persistent\_data)**

Loads data into the cache.

**Warning:** This method is not intended to be called by users directly.

New in version 20.0.

**Parameters**

**persistent\_data** (`Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]]`, optional) – Data to load, as returned by `telegram.ext.BasePersistence.get_callback_data()`.

**property maxsize**

The maximum size of the cache.

Changed in version 20.0: This property is now read-only.

**Type**

`int`

**property persistence\_data**

`Tuple[List[Tuple[str, float, Dict[str, object]]], Dict[str, str]]`: The data that needs to be persisted to allow caching callback data across bot reboots.

**process\_callback\_query**(*callback\_query*)

Replaces the data in the callback query and the attached messages keyboard with the cached objects, if necessary. If the data could not be found, `telegram.ext.InvalidCallbackData` will be inserted. If `telegram.CallbackQuery.data` or `telegram.CallbackQuery.message` is present, this also saves the callback queries ID in order to be able to resolve it to the stored data.

---

**Note:** Also considers inserts data into the buttons of `telegram.Message.reply_to_message` and `telegram.Message.pinned_message` if necessary.

---

**Warning:** *In place*, i.e. the passed `telegram.CallbackQuery` will be changed!

**Parameters**

**callback\_query** (`telegram.CallbackQuery`) – The callback query.

**process\_keyboard**(*reply\_markup*)

Registers the reply markup to the cache. If any of the buttons have `callback_data`, stores that data and builds a new keyboard with the correspondingly replaced buttons. Otherwise, does nothing and returns the original reply markup.

**Parameters**

**reply\_markup** (`telegram.InlineKeyboardMarkup`) – The keyboard.

**Returns**

The keyboard to be passed to Telegram.

**Return type**

`telegram.InlineKeyboardMarkup`

**process\_message**(*message*)

Replaces the data in the inline keyboard attached to the message with the cached objects, if necessary. If the data could not be found, `telegram.ext.InvalidCallbackData` will be inserted.

---

**Note:** Checks `telegram.Message.via_bot` and `telegram.Message.from_user` to check if the reply markup (if any) was actually sent by this cache's bot. If it was not, the message will be returned unchanged.

Note that this will fail for channel posts, as `telegram.Message.from_user` is `None` for those! In the corresponding reply markups the callback data will be replaced by `telegram.ext.InvalidCallbackData`.

---

**Warning:**

- Does *not* consider `telegram.Message.reply_to_message` and `telegram.Message.pinned_message`. Pass them to this method separately.
  - *In place*, i.e. the passed `telegram.Message` will be changed!

**Parameters**

**message** (`telegram.Message`) – The message.



## InvalidCallbackData

**class** telegram.ext.InvalidCallbackData(*callback\_data=None*)

Bases: [telegram.error.TelegramError](#)

Raised when the received callback data has been tampered with or deleted from cache.

---

### Examples

[Arbitrary Callback Data Bot](#)

---

### See also:

[Arbitrary callback\\_data](#)

New in version 13.6.

### Parameters

**callback\_data** ([int](#), optional) – The button data of which the callback data could not be found.

### callback\_data

Optional. The button data of which the callback data could not be found.

### Type

[int](#)

## 10.2.16 Rate Limiting

### BaseRateLimiter

**class** telegram.ext.BaseRateLimiter

Bases: [ABC](#), [typing.Generic](#)

Abstract interface class that allows to rate limit the requests that python-telegram-bot sends to the Telegram Bot API. An implementation of this class must implement all abstract methods and properties.

This class is a [Generic](#) class and accepts one type variable that specifies the type of the argument *rate\_limit\_args* of *process\_request()* and the methods of [ExtBot](#).

---

**Hint:** Requests to *get\_updates()* are never rate limited.

---

---

### Use In

[telegram.ext.ApplicationBuilder.rate\\_limiter\(\)](#)

---

### See also:

[Architecture Overview](#), [Avoiding Flood Limits](#)

New in version 20.0.

### abstract async initialize()

Initialize resources used by this class. Must be implemented by a subclass.

### abstract async process\_request(callback, args, kwargs, endpoint, data, rate\_limit\_args)

Process a request. Must be implemented by a subclass.

This method must call *callback* and return the result of the call. *When* the callback is called is up to the implementation.

---

**Important:** This method must only return once the result of `callback` is known!

---

If a `RetryAfter` error is raised, this method may try to make a new request by calling the callback again.

**Warning:** This method *should not* handle any other exception raised by `callback`!

There are basically two different approaches how a rate limiter can be implemented:

1. React only if necessary. In this case, the `callback` is called without any precautions. If a `RetryAfter` error is raised, processing requests is halted for the `retry_after` and finally the `callback` is called again. This approach is often amendable for bots that don't have a large user base and/or don't send more messages than they get updates.
2. Throttle all outgoing requests. In this case the implementation makes sure that the requests are spread out over a longer time interval in order to stay below the rate limits. This approach is often amendable for bots that have a large user base and/or send more messages than they get updates.

An implementation can use the information provided by `data`, `endpoint` and `rate_limit_args` to handle each request differently.

---

### Examples

- It is usually desirable to call `telegram.Bot.answer_inline_query()` as quickly as possible, while delaying `telegram.Bot.send_message()` is acceptable.
  - There are `different` rate limits for group chats and private chats.
  - When sending broadcast messages to a large number of users, these requests can typically be delayed for a longer time than messages that are direct replies to a user input.
- 

### Parameters

- **callback** (Callable[`...`, `coroutine`]) – The coroutine function that must be called to make the request.
- **args** (Tuple[`object`]) – The positional arguments for the `callback` function.
- **kwargs** (Dict[`str`, `object`]) – The keyword arguments for the `callback` function.
- **endpoint** (`str`) – The endpoint that the request is made for, e.g. "sendMessage".
- **data** (Dict[`str`, `object`]) – The parameters that were passed to the method of `ExtBot`. Any `api_kwargs` are included in this and any `defaults` are already applied.

---

### Example

When calling:

```
await ext_bot.send_message(  
    chat_id=1,  
    text="Hello world!",  
    api_kwargs={"custom": "arg"}  
)
```

then `data` will be:

```
{"chat_id": 1, "text": "Hello world!", "custom": "arg"}
```

---

- **rate\_limit\_args** (`None` | `object`) – Custom arguments passed to the methods of `ExtBot`. Can e.g. be used to specify the priority of the request.

**Returns**

The result of the callback function.

**Return type**

`bool` | `Dict[str, object]` | `None`

**abstract async shutdown()**

Stop & clear resources used by this class. Must be implemented by a subclass.

## AIORateLimiter

```
class telegram.ext.AIORateLimiter(overall_max_rate=30, overall_time_period=1,  
                                  group_max_rate=20, group_time_period=60, max_retries=0)
```

Bases: `telegram.ext.BaseRateLimiter`

Implementation of `BaseRateLimiter` using the library `aiolimiter`.

---

**Important:** If you want to use this class, you must install PTB with the optional requirement `rate-limiter`, i.e.

```
pip install "python-telegram-bot[rate-limiter]"
```

---

The rate limiting is applied by combining two levels of throttling and `process_request()` roughly boils down to:

```
async with group_limiter(group_id):  
    async with overall_limiter:  
        await callback(*args, **kwargs)
```

Here, `group_id` is determined by checking if there is a `chat_id` parameter in the `data`. The `overall_limiter` is applied only if a `chat_id` argument is present at all.

**Attention:**

- Some bot methods accept a `chat_id` parameter in form of a `@username` for supergroups and channels. As we can't know which `@username` corresponds to which integer `chat_id`, these will be treated as different groups, which may lead to exceeding the rate limit.
- As channels can't be differentiated from supergroups by the `@username` or integer `chat_id`, this also applies the group related rate limits to channels.
- A `RetryAfter` exception will halt *all* requests for `retry_after` + 0.1 seconds. This may be stricter than necessary in some cases, e.g. the bot may hit a rate limit in one group but might still be allowed to send messages in another group.

---

**Note:** This class is to be understood as minimal effort reference implementation. If you would like to handle rate limiting in a more sophisticated, fine-tuned way, we welcome you to implement your own subclass of `BaseRateLimiter`. Feel free to check out the source code of this class for inspiration.

---

**Use In**

`telegram.ext.ApplicationBuilder.rate_limiter()`

---

See also:

[Avoiding Flood Limits](#)

New in version 20.0.

#### Parameters

- **overall\_max\_rate** (*float*) – The maximum number of requests allowed for the entire bot per *overall\_time\_period*. When set to 0, no rate limiting will be applied. Defaults to 30.
- **overall\_time\_period** (*float*) – The time period (in seconds) during which the *overall\_max\_rate* is enforced. When set to 0, no rate limiting will be applied. Defaults to 1.
- **group\_max\_rate** (*float*) – The maximum number of requests allowed for requests related to groups and channels per *group\_time\_period*. When set to 0, no rate limiting will be applied. Defaults to 20.
- **group\_time\_period** (*float*) – The time period (in seconds) during which the *group\_max\_rate* is enforced. When set to 0, no rate limiting will be applied. Defaults to 60.
- **max\_retries** (*int*) – The maximum number of retries to be made in case of a *RetryAfter* exception. If set to 0, no retries will be made. Defaults to 0.

**async initialize()**

Does nothing.

**async process\_request**(*callback, args, kwargs, endpoint, data, rate\_limit\_args*)

Processes a request by applying rate limiting.

See *telegram.ext.BaseRateLimiter.process\_request()* for detailed information on the arguments.

#### Parameters

**rate\_limit\_args** (*None* | *int*) – If set, specifies the maximum number of retries to be made in case of a *RetryAfter* exception. Defaults to *AIORateLimiter.max\_retries*.

**async shutdown()**

Does nothing.

## 10.3 Auxiliary modules

### 10.3.1 telegram.constants Module

This module contains several constants that are relevant for working with the Bot API.

Unless noted otherwise, all constants in this module were extracted from the [Telegram Bots FAQ](#) and [Telegram Bots API](#).

Most of the following constants are related to specific classes or topics and are grouped into enums. If they are related to a specific class, then they are also available as attributes of those classes.

Changed in version 20.0:

- Most of the constants in this module are grouped into enums.

`telegram.constants.BOT_API_VERSION = '6.9'`

Telegram Bot API version supported by this version of *python-telegram-bot*. Also available as *telegram.\_\_bot\_api\_version\_\_*.

New in version 13.4.

**Type**`str``telegram.constants.BOT_API_VERSION_INFO = (6, 9)`

The components can also be accessed by name, so `BOT_API_VERSION_INFO[0]` is equivalent to `BOT_API_VERSION_INFO.major` and so on. Also available as `telegram.__bot_api_version_info__`.

New in version 20.0.

```
class telegram.constants.BotCommandLimit(value, names=None, *, module=None, qualname=None,
                                         type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.BotCommand` and `telegram.Bot.set_my_commands()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

`MAX_COMMAND = 32`

Maximum value allowed for `command` parameter of `telegram.BotCommand`.

**Type**`int``MAX_COMMAND_NUMBER = 100`

Maximum number of bot commands passed in a `list` to the `commands` parameter of `telegram.Bot.set_my_commands()`.

**Type**`int``MAX_DESCRIPTION = 256`

Maximum value allowed for `description` parameter of `telegram.BotCommand`.

**Type**`int``MIN_COMMAND = 1`

Minimum value allowed for `command` parameter of `telegram.BotCommand`.

**Type**`int``MIN_DESCRIPTION = 1`

Minimum value allowed for `description` parameter of `telegram.BotCommand`.

**Type**`int`

```
class telegram.constants.BotCommandScopeType(value, names=None, *, module=None,
                                             qualname=None, type=None, start=1,
                                             boundary=None)
```

Bases: `str, enum.Enum`

This enum contains the available types of `telegram.BotCommandScope`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

`ALL_CHAT_ADMINISTRATORS = 'all_chat_administrators'`

The type of `telegram.BotCommandScopeAllChatAdministrators`.

**Type**`str`

**ALL\_GROUP\_CHATS** = 'all\_group\_chats'

The type of `telegram.BotCommandScopeAllGroupChats`.

Type

`str`

**ALL\_PRIVATE\_CHATS** = 'all\_private\_chats'

The type of `telegram.BotCommandScopeAllPrivateChats`.

Type

`str`

**CHAT** = 'chat'

The type of `telegram.BotCommandScopeChat`.

Type

`str`

**CHAT\_ADMINISTRATORS** = 'chat\_administrators'

The type of `telegram.BotCommandScopeChatAdministrators`.

Type

`str`

**CHAT\_MEMBER** = 'chat\_member'

The type of `telegram.BotCommandScopeChatMember`.

Type

`str`

**DEFAULT** = 'default'

The type of `telegram.BotCommandScopeDefault`.

Type

`str`

```
class telegram.constants.BotDescriptionLimit(value, names=None, *, module=None,
                                             qualname=None, type=None, start=1,
                                             boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for the methods `telegram.Bot.set_my_description()` and `telegram.Bot.set_my_short_description()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.2.

**MAX\_DESCRIPTION\_LENGTH** = 512

Maximum length for the parameter `description` of `telegram.Bot.set_my_description()`

Type

`int`

**MAX\_SHORT\_DESCRIPTION\_LENGTH** = 120

Maximum length for the parameter `short_description` of `telegram.Bot.set_my_short_description()`

Type

`int`

```
class telegram.constants.BotNameLimit(value, names=None, *, module=None, qualname=None,
                                       type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for the methods `telegram.Bot.set_my_name()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.3.

**MAX\_NAME\_LENGTH = 64**

Maximum length for the parameter *name* of `telegram.Bot.set_my_name()`

Type  
`int`

```
class telegram.constants.CallbackQueryLimit(value, names=None, *, module=None,
                                             qualname=None, type=None, start=1,
                                             boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.CallbackQuery/telegram.Bot.answer_callback_query()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**ANSWER\_CALLBACK\_QUERY\_TEXT\_LENGTH = 200**

Maximum number of characters in a `str` passed as the *text* parameter of `telegram.Bot.answer_callback_query()`.

Type  
`int`

```
class telegram.constants.ChatAction(value, names=None, *, module=None, qualname=None,
                                     type=None, start=1, boundary=None)
```

Bases: `str, enum.Enum`

This enum contains the available chat actions for `telegram.Bot.send_chat_action()`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**CHOOSE\_STICKER = 'choose\_sticker'**

Chat action indicating that the bot is selecting a sticker.

Type  
`str`

**FIND\_LOCATION = 'find\_location'**

Chat action indicating that the bot is selecting a location.

Type  
`str`

**RECORD\_VIDEO = 'record\_video'**

Chat action indicating that the bot is recording a video.

Type  
`str`

**RECORD\_VIDEO\_NOTE = 'record\_video\_note'**

Chat action indicating that the bot is recording a video note.

Type  
`str`

**RECORD\_VOICE = 'record\_voice'**

Chat action indicating that the bot is recording a voice message.

Type  
`str`

**TYPING** = 'typing'

A chat indicating the bot is typing.

Type

`str`

**UPLOAD\_DOCUMENT** = 'upload\_document'

Chat action indicating that the bot is uploading a document.

Type

`str`

**UPLOAD\_PHOTO** = 'upload\_photo'

Chat action indicating that the bot is uploading a photo.

Type

`str`

**UPLOAD\_VIDEO** = 'upload\_video'

Chat action indicating that the bot is uploading a video.

Type

`str`

**UPLOAD\_VIDEO\_NOTE** = 'upload\_video\_note'

Chat action indicating that the bot is uploading a video note.

Type

`str`

**UPLOAD\_VOICE** = 'upload\_voice'

Chat action indicating that the bot is uploading a voice message.

Type

`str`

**class** telegram.constants.**ChatID**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: `enum.IntEnum`

This enum contains some special chat IDs. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**ANONYMOUS\_ADMIN** = 1087968824

User ID in groups for messages sent by anonymous admins. Telegram chat: [@GroupAnonymousBot](#).

---

**Note:** `telegram.Message.from_user` will contain this ID for backwards compatibility only. It's recommended to use `telegram.Message.sender_chat` instead.

---

Type

`int`

**FAKE\_CHANNEL** = 136817688

User ID in groups when message is sent on behalf of a channel, or when a channel votes on a poll. Telegram chat: [@Channel\\_Bot](#).

---

**Note:**

- `telegram.Message.from_user` will contain this ID for backwards compatibility only. It's recommended to use `telegram.Message.sender_chat` instead.



- `telegram.PollAnswer.user` will contain this ID for backwards compatibility only. It's recommended to use `telegram.PollAnswer.voter_chat` instead.
- 

Type  
`int`

**SERVICE\_CHAT = 777000**

Telegram service chat, that also acts as sender of channel posts forwarded to discussion groups. Telegram chat: [Telegram](#).

---

**Note:** `telegram.Message.from_user` will contain this ID for backwards compatibility only. It's recommended to use `telegram.Message.sender_chat` instead.

---

Type  
`int`

```
class telegram.constants.ChatInviteLinkLimit(value, names=None, *, module=None,
                                             qualname=None, type=None, start=1,
                                             boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.ChatInviteLink/create_chat_invite_link()`/`telegram.Bot.create_chat_invite_link()`/`telegram.Bot.edit_chat_invite_link()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_MEMBER\_LIMIT = 99999**

Maximum value allowed for the `member_limit` parameter of `telegram.Bot.create_chat_invite_link()` and `member_limit` of `telegram.Bot.edit_chat_invite_link()`.

Type  
`int`

**MIN\_MEMBER\_LIMIT = 1**

Minimum value allowed for the `member_limit` parameter of `telegram.Bot.create_chat_invite_link()` and `member_limit` of `telegram.Bot.edit_chat_invite_link()`.

Type  
`int`

**NAME\_LENGTH = 32**

Maximum number of characters in a `str` passed as the `name` parameter of `telegram.Bot.create_chat_invite_link()` and `name` of `telegram.Bot.edit_chat_invite_link()`.

Type  
`int`

```
class telegram.constants.ChatLimit(value, names=None, *, module=None, qualname=None,
                                   type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Bot.set_chat_administrator_custom_title()`, `telegram.Bot.set_chat_description()`, and `telegram.Bot.set_chat_title()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**CHAT\_ADMINISTRATOR\_CUSTOM\_TITLE\_LENGTH = 16**

Maximum length of a `str` passed as the `custom_title` parameter of `telegram.Bot.set_chat_administrator_custom_title()`.

Type

`int`

**CHAT\_DESCRIPTION\_LENGTH = 255**

Maximum number of characters in a `str` passed as the `description` parameter of `telegram.Bot.set_chat_description()`.

Type

`int`

**MAX\_CHAT\_TITLE\_LENGTH = 128**

Maximum length of a `str` passed as the `title` parameter of `telegram.Bot.set_chat_title()`.

Type

`int`

**MIN\_CHAT\_TITLE\_LENGTH = 1**

Minimum length of a `str` passed as the `title` parameter of `telegram.Bot.set_chat_title()`.

Type

`int`

**class telegram.constants.ChatMemberStatus**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `str`, `enum.Enum`

This enum contains the available states for `telegram.ChatMember`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**ADMINISTRATOR = 'administrator'**

A `telegram.ChatMember` who is administrator of the chat.

Type

`str`

**BANNED = 'kicked'**

A `telegram.ChatMember` who was banned in the chat.

Type

`str`

**LEFT = 'left'**

A `telegram.ChatMember` who has left the chat.

Type

`str`

**MEMBER = 'member'**

A `telegram.ChatMember` who is a member of the chat.

Type

`str`

**OWNER = 'creator'**

A `telegram.ChatMember` who is the owner of the chat.

Type

`str`

**RESTRICTED = 'restricted'**

A [\*telegram.ChatMember\*](#) who was restricted in this chat.

Type  
[\*str\*](#)

**class telegram.constants.ChatPhotoSize**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: [\*enum.IntEnum\*](#)

This enum contains limitations for [\*telegram.ChatPhoto\*](#). The enum members of this enumeration are instances of [\*int\*](#) and can be treated as such.

New in version 20.0.

**BIG = 640**

Width and height of a big chat photo, ID of which is passed in [\*big\\_file\\_id\*](#) and [\*big\\_file\\_unique\\_id\*](#) parameters of [\*telegram.ChatPhoto\*](#).

Type  
[\*int\*](#)

**SMALL = 160**

Width and height of a small chat photo, ID of which is passed in [\*small\\_file\\_id\*](#) and [\*small\\_file\\_unique\\_id\*](#) parameters of [\*telegram.ChatPhoto\*](#).

Type  
[\*int\*](#)

**class telegram.constants.ChatType**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: [\*str\*](#), [\*enum.Enum\*](#)

This enum contains the available types of [\*telegram.Chat\*](#). The enum members of this enumeration are instances of [\*str\*](#) and can be treated as such.

New in version 20.0.

**CHANNEL = 'channel'**

A [\*telegram.Chat\*](#) that is a channel.

Type  
[\*str\*](#)

**GROUP = 'group'**

A [\*telegram.Chat\*](#) that is a group.

Type  
[\*str\*](#)

**PRIVATE = 'private'**

A [\*telegram.Chat\*](#) that is private.

Type  
[\*str\*](#)

**SENDER = 'sender'**

A [\*telegram.Chat\*](#) that represents the chat of a [\*telegram.User\*](#) sending an [\*telegram.InlineQuery\*](#).

Type  
[\*str\*](#)

**SUPERGROUP = 'supergroup'**

A *telegram.Chat* that is a supergroup.

Type

*str*

**class telegram.constants.ContactLimit**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.InlineQueryResultContact*, *telegram.InputContactMessageContent*, and *telegram.Bot.send\_contact()*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**VCARD = 2048**

Maximum value allowed for:

- *vcard* parameter of *send\_contact()*
- *vcard* parameter of *InlineQueryResultContact*
- *vcard* parameter of *InputContactMessageContent*

Type

*int*

**class telegram.constants.CustomEmojiStickerLimit**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.Bot.get\_custom\_emoji\_stickers()*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**CUSTOM\_EMOJI\_IDENTIFIER\_LIMIT = 200**

Maximum amount of custom emoji identifiers which can be specified for the *custom\_emoji\_ids* parameter of *telegram.Bot.get\_custom\_emoji\_stickers()*.

Type

*int*

**class telegram.constants.DiceEmoji**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: *str, enum.Enum*

This enum contains the available emoji for *telegram.Dice*/ *telegram.Bot.send\_dice()*. The enum members of this enumeration are instances of *str* and can be treated as such.

New in version 20.0.

**BASKETBALL = ''**

A *telegram.Dice* with the emoji .

Type

*str*

**BOWLING = ''**

A *telegram.Dice* with the emoji .

Type

*str*

**DARTS** = ''

A *telegram.Dice* with the emoji .

Type  
str

**DICE** = ''

A *telegram.Dice* with the emoji .

Type  
str

**FOOTBALL** = ''

A *telegram.Dice* with the emoji .

Type  
str

**SLOT\_MACHINE** = ''

A *telegram.Dice* with the emoji .

Type  
str

```
class telegram.constants.DiceLimit(value, names=None, *, module=None, qualname=None,
                                   type=None, start=1, boundary=None)
```

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.Dice*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**MAX\_VALUE\_BASKETBALL** = 5

Maximum value allowed for *value* parameter of *telegram.Dice* if *emoji* is " .

Type  
int

**MAX\_VALUE\_BOWLING** = 6

Maximum value allowed for *value* parameter of *telegram.Dice* if *emoji* is " .

Type  
int

**MAX\_VALUE\_DARTS** = 6

Maximum value allowed for *value* parameter of *telegram.Dice* if *emoji* is " .

Type  
int

**MAX\_VALUE\_DICE** = 6

Maximum value allowed for *value* parameter of *telegram.Dice* if *emoji* is " .

Type  
int

**MAX\_VALUE\_FOOTBALL** = 5

Maximum value allowed for *value* parameter of *telegram.Dice* if *emoji* is " .

Type  
int

**MAX\_VALUE\_SLOT\_MACHINE = 64**

Maximum value allowed for *value* parameter of *telegram.Dice* if *emoji* is "".

Type  
*int*

**MIN\_VALUE = 1**

Minimum value allowed for *value* parameter of *telegram.Dice* (any emoji).

Type  
*int*

**class telegram.constants.FileSizeLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: *enum.IntEnum*

This enum contains limitations regarding the upload and download of files. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**FILESIZE\_DOWNLOAD = 200000000**

Bots can download files of up to 20MB in size.

Type  
*int*

**FILESIZE\_DOWNLOAD\_LOCAL\_MODE = 9223372036854775807**

Bots can download files without a size limit when using a local bot API server.

Type  
*int*

**FILESIZE\_UPLOAD = 500000000**

Bots can upload non-photo files of up to 50MB in size.

Type  
*int*

**FILESIZE\_UPLOAD\_LOCAL\_MODE = 20000000000**

Bots can upload non-photo files of up to 2000MB in size when using a local bot API server.

Type  
*int*

**PHOTOSIZE\_UPLOAD = 100000000**

Bots can upload photo files of up to 10MB in size.

Type  
*int*

**VOICE\_NOTE\_FILE\_SIZE = 10000000**

File size limit for the *send\_voice()* method of *telegram.Bot*. Bots can send *audio/ogg* files of up to 1MB in size as a voice note. Larger voice notes (up to 20MB) will be sent as files.

Type  
*int*

**class telegram.constants.FloodLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: *enum.IntEnum*

This enum contains limitations regarding flood limits. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**MESSAGES\_PER\_MINUTE\_PER\_GROUP = 20**

The number of messages that can roughly be sent to a particular group within one minute.

Type

`int`

**MESSAGES\_PER\_SECOND = 30**

The number of messages that can roughly be sent in an interval of 30 seconds across all chats.

Type

`int`

**MESSAGES\_PER\_SECOND\_PER\_CHAT = 1**

The number of messages that can be sent per second in a particular chat. Telegram may allow short bursts that go over this limit, but eventually you'll begin receiving 429 errors.

Type

`int`

**class** telegram.constants.**ForumIconColor**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `enum.IntEnum`

This enum contains the available colors for use in `telegram.Bot.create_forum_topic.icon_color`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**BLUE = 7322096**

An icon with a color which corresponds to blue (`0x6FB9F0`).

Type

`int`

**GREEN = 9367192**

An icon with a color which corresponds to green (`0x8EEE98`).

Type

`int`

**PINK = 16749490**

An icon with a color which corresponds to pink (`0xFF93B2`).

Type

`int`

**PURPLE = 13338331**

An icon with a color which corresponds to purple (`0xCB86DB`).

Type

`int`

**RED = 16478047**

An icon with a color which corresponds to red (`0xFB6F5F`).

Type

`int`

**YELLOW = 16766590**

An icon with a color which corresponds to yellow (0xFFD67E).

Type  
`int`

**class** telegram.constants.**ForumTopicLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Bot.create_forum_topic.name` and `telegram.Bot.edit_forum_topic.name`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_NAME\_LENGTH = 128**

Maximum length of a `str` passed as:

- `name` parameter of `telegram.Bot.create_forum_topic()`
- `name` parameter of `telegram.Bot.edit_forum_topic()`
- `name` parameter of `telegram.Bot.edit_general_forum_topic()`

Type  
`int`

**MIN\_NAME\_LENGTH = 1**

Minimum length of a `str` passed as:

- `name` parameter of `telegram.Bot.create_forum_topic()`
- `name` parameter of `telegram.Bot.edit_forum_topic()`
- `name` parameter of `telegram.Bot.edit_general_forum_topic()`

Type  
`int`

**class** telegram.constants.**InlineKeyboardButtonLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.InlineKeyboardButton`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_CALLBACK\_DATA = 64**

Maximum value allowed for `callback_data` parameter of `telegram.InlineKeyboardButton`

Type  
`int`

**MIN\_CALLBACK\_DATA = 1**

Minimum value allowed for `callback_data` parameter of `telegram.InlineKeyboardButton`

Type  
`int`



```
class telegram.constants.InlineKeyboardMarkupLimit(value, names=None, *, module=None,
                                                    qualname=None, type=None, start=1,
                                                    boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.InlineKeyboardMarkup/ telegram.Bot.send_message()` & friends. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**BUTTONS\_PER\_ROW = 8**

Maximum number of buttons that can be attached to a message per row.

---

**Note:** This value is undocumented and might be changed by Telegram.

---

Type  
`int`

**TOTAL\_BUTTON\_NUMBER = 100**

Maximum number of buttons that can be attached to a message.

---

**Note:** This value is undocumented and might be changed by Telegram.

---

Type  
`int`

```
class telegram.constants.InlineQueryLimit(value, names=None, *, module=None, qualname=None,
                                           type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.InlineQuery/ telegram.Bot.answer_inline_query()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_OFFSET\_LENGTH = 64**

Maximum number of bytes in a `str` passed as the `next_offset` parameter of `telegram.Bot.answer_inline_query()`.

Type  
`int`

**MAX\_QUERY\_LENGTH = 256**

Maximum number of characters in a `str` passed as the `query` parameter of `telegram.InlineQuery`.

Type  
`int`

**MAX\_SWITCH\_PM\_TEXT\_LENGTH = 64**

Maximum number of characters in a `str` passed as the `switch_pm_parameter` parameter of `telegram.Bot.answer_inline_query()`.

Deprecated since version 20.3: Deprecated in favor of `InlineQueryResultsButtonLimit.MAX_START_PARAMETER_LENGTH`.

Type  
`int`

**MIN\_SWITCH\_PM\_TEXT\_LENGTH = 1**

Minimum number of characters in a `str` passed as the `switch_pm_parameter` parameter of `telegram.Bot.answer_inline_query()`.

Deprecated since version 20.3: Deprecated in favor of `InlineQueryResultsButtonLimit.MIN_START_PARAMETER_LENGTH`.

Type  
`int`

**RESULTS = 50**

Maximum number of results that can be passed to `telegram.Bot.answer_inline_query()`.

Type  
`int`

```
class telegram.constants.InlineQueryResultLimit(value, names=None, *, module=None,
qualname=None, type=None, start=1,
boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.InlineQueryResult` and its subclasses. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_ID\_LENGTH = 64**

Maximum number of bytes in a `str` passed as the `id` parameter of `telegram.InlineQueryResult` and its subclasses

Type  
`int`

**MIN\_ID\_LENGTH = 1**

Minimum number of bytes in a `str` passed as the `id` parameter of `telegram.InlineQueryResult` and its subclasses

Type  
`int`

```
class telegram.constants.InlineQueryResultType(value, names=None, *, module=None,
qualname=None, type=None, start=1,
boundary=None)
```

Bases: `str, enum.Enum`

This enum contains the available types of `telegram.InlineQueryResult`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**ARTICLE = 'article'**

Type of `telegram.InlineQueryResultArticle`.

Type  
`str`

**AUDIO = 'audio'**

Type of `telegram.InlineQueryResultAudio` and `telegram.InlineQueryResultCachedAudio`.

Type  
`str`

**CONTACT = 'contact'**

Type of *telegram.InlineQueryResultContact*.

Type  
*str*

**DOCUMENT = 'document'**

Type of *telegram.InlineQueryResultDocument* and *telegram.InlineQueryResultCachedDocument*.

Type  
*str*

**GAME = 'game'**

Type of *telegram.InlineQueryResultGame*.

Type  
*str*

**GIF = 'gif'**

Type of *telegram.InlineQueryResultGif* and *telegram.InlineQueryResultCachedGif*.

Type  
*str*

**LOCATION = 'location'**

Type of *telegram.InlineQueryResultLocation*.

Type  
*str*

**MPEG4GIF = 'mpeg4\_gif'**

Type of *telegram.InlineQueryResultMpeg4Gif* and *telegram.InlineQueryResultCachedMpeg4Gif*.

Type  
*str*

**PHOTO = 'photo'**

Type of *telegram.InlineQueryResultPhoto* and *telegram.InlineQueryResultCachedPhoto*.

Type  
*str*

**STICKER = 'sticker'**

Type of and *telegram.InlineQueryResultCachedSticker*.

Type  
*str*

**VENUE = 'venue'**

Type of *telegram.InlineQueryResultVenue*.

Type  
*str*

**VIDEO = 'video'**

Type of *telegram.InlineQueryResultVideo* and *telegram.InlineQueryResultCachedVideo*.

Type  
*str*

**VOICE = 'voice'**

Type of `telegram.InlineQueryResultVoice` and `telegram.InlineQueryResultCachedVoice`.

Type  
`str`

**class** telegram.constants.**InlineQueryResultsButtonLimit**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.InlineQueryResultsButton`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.3.

**MAX\_START\_PARAMETER\_LENGTH = 64**

Maximum number of characters in a `str` passed as the `start_parameter` parameter of `telegram.InlineQueryResultsButton()`.

Type  
`int`

**MIN\_START\_PARAMETER\_LENGTH = 1**

Minimum number of characters in a `str` passed as the `start_parameter` parameter of `telegram.InlineQueryResultsButton()`.

Type  
`int`

**class** telegram.constants.**InputMediaType**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: `str, enum.Enum`

This enum contains the available types of `telegram.InputMedia`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**ANIMATION = 'animation'**

Type of `telegram.InputMediaAnimation`.

Type  
`str`

**AUDIO = 'audio'**

Type of `telegram.InputMediaAudio`.

Type  
`str`

**DOCUMENT = 'document'**

Type of `telegram.InputMediaDocument`.

Type  
`str`

**PHOTO = 'photo'**

Type of `telegram.InputMediaPhoto`.

Type  
`str`

**VIDEO** = 'video'

Type of *telegram.InputMediaVideo*.

Type  
*str*

**class** telegram.constants.**InvoiceLimit**(value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None)

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.InputInvoiceMessageContent*, *telegram.Bot.send\_invoice()*, and *telegram.Bot.create\_invoice\_link()*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**MAX\_DESCRIPTION\_LENGTH** = 255

Maximum number of characters in a *str* passed as:

- *description* parameter of *telegram.InputInvoiceMessageContent*
- *description* parameter of *telegram.Bot.send\_invoice()*.
- *description* parameter of *telegram.Bot.create\_invoice\_link()*.

Type  
*int*

**MAX\_PAYLOAD\_LENGTH** = 128

Maximum amount of bytes in a *str* passed as:

- *payload* parameter of *telegram.InputInvoiceMessageContent*
- *payload* parameter of *telegram.Bot.send\_invoice()*.
- *payload* parameter of *telegram.Bot.create\_invoice\_link()*.

Type  
*int*

**MAX\_TIP\_AMOUNTS** = 4

Maximum length of a Sequence passed as:

- *suggested\_tip\_amounts* parameter of *telegram.Bot.send\_invoice()*.
- *suggested\_tip\_amounts* parameter of *telegram.Bot.create\_invoice\_link()*.

Type  
*int*

**MAX\_TITLE\_LENGTH** = 32

Maximum number of characters in a *str* passed as:

- *title* parameter of *telegram.InputInvoiceMessageContent*
- *title* parameter of *telegram.Bot.send\_invoice()*.
- *title* parameter of *telegram.Bot.create\_invoice\_link()*.

Type  
*int*

**MIN\_DESCRIPTION\_LENGTH = 1**

Minimum number of characters in a `str` passed as:

- `description` parameter of `telegram.InputInvoiceMessageContent`
- `description` parameter of `telegram.Bot.send_invoice()`.
- `description` parameter of `telegram.Bot.create_invoice_link()`.

Type

`int`

**MIN\_PAYLOAD\_LENGTH = 1**

Minimum amount of bytes in a `str` passed as:

- `payload` parameter of `telegram.InputInvoiceMessageContent`
- `payload` parameter of `telegram.Bot.send_invoice()`.
- `payload` parameter of `telegram.Bot.create_invoice_link()`.

Type

`int`

**MIN\_TITLE\_LENGTH = 1**

Minimum number of characters in a `str` passed as:

- `title` parameter of `telegram.InputInvoiceMessageContent`
- `title` parameter of `telegram.Bot.send_invoice()`.
- `title` parameter of `telegram.Bot.create_invoice_link()`.

Type

`int`

**class** `telegram.constants.LocationLimit`(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Location/telegram.ChatLocation/ telegram.Bot.edit_message_live_location()/telegram.Bot.send_location()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**HORIZONTAL\_ACCURACY = 1500**

Maximum value allowed for:

- `horizontal_accuracy` parameter of `telegram.Location`
- `horizontal_accuracy` parameter of `telegram.InlineQueryResultLocation`
- `horizontal_accuracy` parameter of `telegram.InputLocationMessageContent`
- `horizontal_accuracy` parameter of `telegram.Bot.edit_message_live_location()`
- `horizontal_accuracy` parameter of `telegram.Bot.send_location()`

Type

`int`

**MAX\_CHAT\_LOCATION\_ADDRESS = 64**

Minimum value allowed for *address* parameter of *telegram.ChatLocation*

Type

*int*

**MAX\_HEADING = 360**

Maximum value allowed for:

- *heading* parameter of *telegram.Location*
- *heading* parameter of *telegram.InlineQueryResultLocation*
- *heading* parameter of *telegram.InputLocationMessageContent*
- *heading* parameter of *telegram.Bot.edit\_message\_live\_location()*
- *heading* parameter of *telegram.Bot.send\_location()*

Type

*int*

**MAX\_LIVE\_PERIOD = 86400**

Maximum value allowed for:

- *live\_period* parameter of *telegram.InlineQueryResultLocation*
- *live\_period* parameter of *telegram.InputLocationMessageContent*
- *live\_period* parameter of *telegram.Bot.edit\_message\_live\_location()*
- *live\_period* parameter of *telegram.Bot.send\_location()*

Type

*int*

**MAX\_PROXIMITY\_ALERT\_RADIUS = 100000**

Maximum value allowed for:

- *proximity\_alert\_radius* parameter of *telegram.InlineQueryResultLocation*
- *proximity\_alert\_radius* parameter of *telegram.InputLocationMessageContent*
- *proximity\_alert\_radius* parameter of *telegram.Bot.edit\_message\_live\_location()*
- *proximity\_alert\_radius* parameter of *telegram.Bot.send\_location()*

Type

*int*

**MIN\_CHAT\_LOCATION\_ADDRESS = 1**

Minimum value allowed for *address* parameter of *telegram.ChatLocation*

Type

*int*

**MIN\_HEADING = 1**

Minimum value allowed for:

- *heading* parameter of *telegram.Location*
- *heading* parameter of *telegram.InlineQueryResultLocation*
- *heading* parameter of *telegram.InputLocationMessageContent*
- *heading* parameter of *telegram.Bot.edit\_message\_live\_location()*
- *heading* parameter of *telegram.Bot.send\_location()*

Type  
`int`

**MIN\_LIVE\_PERIOD = 60**

Minimum value allowed for:

- `live_period` parameter of `telegram.InlineQueryResultLocation`
- `live_period` parameter of `telegram.InputLocationMessageContent`
- `live_period` parameter of `telegram.Bot.edit_message_live_location()`
- `live_period` parameter of `telegram.Bot.send_location()`

Type  
`int`

**MIN\_PROXIMITY\_ALERT\_RADIUS = 1**

Minimum value allowed for:

- `proximity_alert_radius` parameter of `telegram.InlineQueryResultLocation`
- `proximity_alert_radius` parameter of `telegram.InputLocationMessageContent`
- `proximity_alert_radius` parameter of `telegram.Bot.edit_message_live_location()`
- `proximity_alert_radius` parameter of `telegram.Bot.send_location()`

Type  
`int`

**class** telegram.constants.**MaskPosition**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `str`, `enum.Enum`

This enum contains the available positions for `telegram.MaskPosition`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**CHIN = 'chin'**

Mask position for a sticker on the chin.

Type  
`str`

**EYES = 'eyes'**

Mask position for a sticker on the eyes.

Type  
`str`

**FOREHEAD = 'forehead'**

Mask position for a sticker on the forehead.

Type  
`str`

**MOUTH = 'mouth'**

Mask position for a sticker on the mouth.

Type  
`str`



```
class telegram.constants.MediaGroupLimit(value, names=None, *, module=None, qualname=None,
                                         type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Bot.send_media_group()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_MEDIA\_LENGTH = 10**

Maximum length of a `list` passed as the `media` parameter of `telegram.Bot.send_media_group()`.

Type  
`int`

**MIN\_MEDIA\_LENGTH = 2**

Minimum length of a `list` passed as the `media` parameter of `telegram.Bot.send_media_group()`.

Type  
`int`

```
class telegram.constants.MenuButtonType(value, names=None, *, module=None, qualname=None,
                                         type=None, start=1, boundary=None)
```

Bases: `str, enum.Enum`

This enum contains the available types of `telegram.MenuButton`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**COMMANDS = 'commands'**

The type of `telegram.MenuButtonCommands`.

Type  
`str`

**DEFAULT = 'default'**

The type of `telegram.MenuButtonDefault`.

Type  
`str`

**WEB\_APP = 'web\_app'**

The type of `telegram.MenuButtonWebApp`.

Type  
`str`

```
class telegram.constants.MessageAttachmentType(value, names=None, *, module=None,
                                                qualname=None, type=None, start=1,
                                                boundary=None)
```

Bases: `str, enum.Enum`

This enum contains the available types of `telegram.Message` that can be seen as attachment. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**ANIMATION = 'animation'**

Messages with `telegram.Message.animation`.

Type  
`str`

**AUDIO = 'audio'**

Messages with *telegram.Message.audio*.

**Type**

*str*

**CONTACT = 'contact'**

Messages with *telegram.Message.contact*.

**Type**

*str*

**DICE = 'dice'**

Messages with *telegram.Message.dice*.

**Type**

*str*

**DOCUMENT = 'document'**

Messages with *telegram.Message.document*.

**Type**

*str*

**GAME = 'game'**

Messages with *telegram.Message.game*.

**Type**

*str*

**INVOICE = 'invoice'**

Messages with *telegram.Message.invoice*.

**Type**

*str*

**LOCATION = 'location'**

Messages with *telegram.Message.location*.

**Type**

*str*

**PASSPORT\_DATA = 'passport\_data'**

Messages with *telegram.Message.passport\_data*.

**Type**

*str*

**PHOTO = 'photo'**

Messages with *telegram.Message.photo*.

**Type**

*str*

**POLL = 'poll'**

Messages with *telegram.Message.poll*.

**Type**

*str*

**STICKER = 'sticker'**

Messages with *telegram.Message.sticker*.

**Type**

*str*

**STORY = 'story'**

Messages with `telegram.Message.story`.

Type

`str`

**SUCCESSFUL\_PAYMENT = 'successful\_payment'**

Messages with `telegram.Message.successful_payment`.

Type

`str`

**VENUE = 'venue'**

Messages with `telegram.Message.venue`.

Type

`str`

**VIDEO = 'video'**

Messages with `telegram.Message.video`.

Type

`str`

**VIDEO\_NOTE = 'video\_note'**

Messages with `telegram.Message.video_note`.

Type

`str`

**VOICE = 'voice'**

Messages with `telegram.Message.voice`.

Type

`str`

**class** telegram.constants.**MessageEntityType**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `str`, `enum.Enum`

This enum contains the available types of `telegram.MessageEntity`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**BOLD = 'bold'**

Message entities representing bold text.

Type

`str`

**BOT\_COMMAND = 'bot\_command'**

Message entities representing a bot command.

Type

`str`

**CASHTAG = 'cashtag'**

Message entities representing a cashtag.

Type

`str`

**CODE = 'code'**

Message entities representing monowidth string.

**Type**

`str`

**CUSTOM\_EMOJI = 'custom\_emoji'**

Message entities representing inline custom emoji stickers.

New in version 20.0.

**Type**

`str`

**EMAIL = 'email'**

Message entities representing a email.

**Type**

`str`

**HASHTAG = 'hashtag'**

Message entities representing a hashtag.

**Type**

`str`

**ITALIC = 'italic'**

Message entities representing italic text.

**Type**

`str`

**MENTION = 'mention'**

Message entities representing a mention.

**Type**

`str`

**PHONE\_NUMBER = 'phone\_number'**

Message entities representing a phone number.

**Type**

`str`

**PRE = 'pre'**

Message entities representing monowidth block.

**Type**

`str`

**SPOILER = 'spoiler'**

Message entities representing spoiler text.

**Type**

`str`

**STRIKETHROUGH = 'strikethrough'**

Message entities representing strikethrough text.

**Type**

`str`

**TEXT\_LINK = 'text\_link'**

Message entities representing clickable text URLs.

**Type**

`str`

**TEXT\_MENTION = 'text\_mention'**

Message entities representing text mention for users without usernames.

Type  
`str`

**UNDERLINE = 'underline'**

Message entities representing underline text.

Type  
`str`

**URL = 'url'**

Message entities representing a url.

Type  
`str`

**class telegram.constants.MessageLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Message`/ `telegram.InputTextMessageContent`/ `telegram.Bot.send_message()` & friends. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**CAPTION\_LENGTH = 1024**

Maximum number of characters in a `str` passed as:

- `caption` parameter of `telegram.Message`
- `caption` parameter of `telegram.InputMedia` and its subclasses
- `caption` parameter of subclasses of `telegram.InlineQueryResult`
- `caption` parameter of `telegram.Bot.send_photo()`, `telegram.Bot.send_audio()`, `telegram.Bot.send_document()`, `telegram.Bot.send_video()`, `telegram.Bot.send_animation()`, `telegram.Bot.send_voice()`, `telegram.Bot.edit_message_caption()`, `telegram.Bot.copy_message()`

Type  
`int`

**DEEP\_LINK\_LENGTH = 64**

Maximum number of characters for a deep link.

Type  
`int`

**MAX\_TEXT\_LENGTH = 4096**

Maximum number of characters in a `str` passed as:

- `text` parameter of `telegram.Game`
- `text` parameter of `telegram.Message`
- `message_text` parameter of `telegram.InputTextMessageContent`
- `text` parameter of `telegram.Bot.send_message()`
- `text` parameter of `telegram.Bot.edit_message_text()`

Type  
`int`

**MESSAGE\_ENTITIES = 100**

Maximum number of entities that can be displayed in a message. Further entities will simply be ignored by Telegram.

---

**Note:** This value is undocumented and might be changed by Telegram.

---

Type

`int`

**MIN\_TEXT\_LENGTH = 1**

Minimum number of characters in a `str` passed as the `message_text` parameter of `telegram.InputTextMessageContent` and the `text` parameter of `telegram.Bot.edit_message_text()`.

Type

`int`

**class** telegram.constants.**MessageType**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `str`, `enum.Enum`

This enum contains the available types of `telegram.Message` that can be seen as attachment. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**ANIMATION = 'animation'**

Messages with `telegram.Message.animation`.

Type

`str`

**AUDIO = 'audio'**

Messages with `telegram.Message.audio`.

Type

`str`

**CHANNEL\_CHAT\_CREATED = 'channel\_chat\_created'**

Messages with `telegram.Message.channel_chat_created`.

Type

`str`

**CONTACT = 'contact'**

Messages with `telegram.Message.contact`.

Type

`str`

**DELETE\_CHAT\_PHOTO = 'delete\_chat\_photo'**

Messages with `telegram.Message.delete_chat_photo`.

Type

`str`

**DICE = 'dice'**

Messages with `telegram.Message.dice`.

Type

`str`

**DOCUMENT = 'document'**

Messages with *telegram.Message.document*.

Type

*str*

**GAME = 'game'**

Messages with *telegram.Message.game*.

Type

*str*

**GROUP\_CHAT\_CREATED = 'group\_chat\_created'**

Messages with *telegram.Message.group\_chat\_created*.

Type

*str*

**INVOICE = 'invoice'**

Messages with *telegram.Message.invoice*.

Type

*str*

**LEFT\_CHAT\_MEMBER = 'left\_chat\_member'**

Messages with *telegram.Message.left\_chat\_member*.

Type

*str*

**LOCATION = 'location'**

Messages with *telegram.Message.location*.

Type

*str*

**MESSAGE\_AUTO\_DELETE\_TIMER\_CHANGED = 'message\_auto\_delete\_timer\_changed'**

Messages with *telegram.Message.message\_auto\_delete\_timer\_changed*.

Type

*str*

**MIGRATE\_FROM\_CHAT\_ID = 'migrate\_from\_chat\_id'**

Messages with *telegram.Message.migrate\_from\_chat\_id*.

Type

*str*

**MIGRATE\_TO\_CHAT\_ID = 'migrate\_to\_chat\_id'**

Messages with *telegram.Message.migrate\_to\_chat\_id*.

Type

*str*

**NEW\_CHAT\_MEMBERS = 'new\_chat\_members'**

Messages with *telegram.Message.new\_chat\_members*.

Type

*str*

**NEW\_CHAT\_PHOTO = 'new\_chat\_photo'**

Messages with *telegram.Message.new\_chat\_photo*.

Type

*str*

**NEW\_CHAT\_TITLE = 'new\_chat\_title'**

Messages with *telegram.Message.new\_chat\_title*.

Type

*str*

**PASSPORT\_DATA = 'passport\_data'**

Messages with *telegram.Message.passport\_data*.

Type

*str*

**PHOTO = 'photo'**

Messages with *telegram.Message.photo*.

Type

*str*

**PINNED\_MESSAGE = 'pinned\_message'**

Messages with *telegram.Message.pinned\_message*.

Type

*str*

**POLL = 'poll'**

Messages with *telegram.Message.poll*.

Type

*str*

**PROXIMITY\_ALERT\_TRIGGERED = 'proximity\_alert\_triggered'**

Messages with *telegram.Message.proximity\_alert\_triggered*.

Type

*str*

**STICKER = 'sticker'**

Messages with *telegram.Message.sticker*.

Type

*str*

**STORY = 'story'**

Messages with *telegram.Message.story*.

Type

*str*

**SUCCESSFUL\_PAYMENT = 'successful\_payment'**

Messages with *telegram.Message.successful\_payment*.

Type

*str*

**SUPERGROUP\_CHAT\_CREATED = 'supergroup\_chat\_created'**

Messages with *telegram.Message.supergroup\_chat\_created*.

Type

*str*

**TEXT = 'text'**

Messages with *telegram.Message.text*.

Type

*str*



**VENUE = 'venue'**

Messages with `telegram.Message.venue`.

**Type**

`str`

**VIDEO = 'video'**

Messages with `telegram.Message.video`.

**Type**

`str`

**VIDEO\_CHAT\_ENDED = 'video\_chat\_ended'**

Messages with `telegram.Message.video_chat_ended`.

**Type**

`str`

**VIDEO\_CHAT\_PARTICIPANTS\_INVITED = 'video\_chat\_participants\_invited'**

Messages with `telegram.Message.video_chat_participants_invited`.

**Type**

`str`

**VIDEO\_CHAT\_SCHEDULED = 'video\_chat\_scheduled'**

Messages with `telegram.Message.video_chat_scheduled`.

**Type**

`str`

**VIDEO\_CHAT\_STARTED = 'video\_chat\_started'**

Messages with `telegram.Message.video_chat_started`.

**Type**

`str`

**VIDEO\_NOTE = 'video\_note'**

Messages with `telegram.Message.video_note`.

**Type**

`str`

**VOICE = 'voice'**

Messages with `telegram.Message.voice`.

**Type**

`str`

**class** telegram.constants.ParseMode(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `str`, `enum.Enum`

This enum contains the available parse modes. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

**HTML = 'HTML'**

HTML parse mode.

**Type**

`str`

**MARKDOWN = 'Markdown'**

Markdown parse mode.

---

**Note:** `MARKDOWN` is a legacy mode, retained by Telegram for backward compatibility. You should use `MARKDOWN_V2` instead.

---

**Type**

`str`

**MARKDOWN\_V2 = 'MarkdownV2'**

Markdown parse mode version 2.

**Type**

`str`

**class** telegram.constants.PollLimit(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Poll/telegram.PollOption/ telegram.Bot.send_poll()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_EXPLANATION\_LENGTH = 200**

Maximum number of characters in a `str` passed as the `explanation` parameter of `telegram.Poll` and the `explanation` parameter of `telegram.Bot.send_poll()`.

**Type**

`int`

**MAX\_EXPLANATION\_LINE\_FEEDS = 2**

Maximum number of line feeds in a `str` passed as the `explanation` parameter of `telegram.Bot.send_poll()` after entities parsing.

**Type**

`int`

**MAX\_OPEN\_PERIOD = 600**

Maximum value allowed for the `open_period` parameter of `telegram.Bot.send_poll()`. Also used in the `close_date` parameter of `telegram.Bot.send_poll()`.

**Type**

`int`

**MAX\_OPTION\_LENGTH = 100**

Maximum length of each `str` passed in a `list` to the `options` parameter of `telegram.Bot.send_poll()`.

**Type**

`int`

**MAX\_OPTION\_NUMBER = 10**

Maximum number of strings passed in a `list` to the `options` parameter of `telegram.Bot.send_poll()`.

**Type**

`int`

**MAX\_QUESTION\_LENGTH = 300**

Maximum value allowed for the *question* parameter of *telegram.Poll* and the *question* parameter of *telegram.Bot.send\_poll()*.

Type  
*int*

**MIN\_OPEN\_PERIOD = 5**

Minimum value allowed for the *open\_period* parameter of *telegram.Bot.send\_poll()*. Also used in the *close\_date* parameter of *telegram.Bot.send\_poll()*.

Type  
*int*

**MIN\_OPTION\_LENGTH = 1**

Minimum length of each *str* passed in a *list* to the *options* parameter of *telegram.Bot.send\_poll()*.

Type  
*int*

**MIN\_OPTION\_NUMBER = 2**

Minimum number of strings passed in a *list* to the *options* parameter of *telegram.Bot.send\_poll()*.

Type  
*int*

**MIN\_QUESTION\_LENGTH = 1**

Minimum value allowed for the *question* parameter of *telegram.Poll* and the *question* parameter of *telegram.Bot.send\_poll()*.

Type  
*int*

**class telegram.constants.PollType**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: *str, enum.Enum*

This enum contains the available types for *telegram.Poll/ telegram.Bot.send\_poll()*. The enum members of this enumeration are instances of *str* and can be treated as such.

New in version 20.0.

**QUIZ = 'quiz'**

quiz polls.

Type  
*str*

**REGULAR = 'regular'**

regular polls.

Type  
*str*

**class telegram.constants.PollingLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.Bot.get\_updates.limit*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**MAX\_LIMIT = 100**

Maximum value allowed for the *limit* parameter of *telegram.Bot.get\_updates()*.

**Type***int***MIN\_LIMIT = 1**

Minimum value allowed for the *limit* parameter of *telegram.Bot.get\_updates()*.

**Type***int*

```
class telegram.constants.ReplyLimit(value, names=None, *, module=None, qualname=None,
                                   type=None, start=1, boundary=None)
```

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.ForceReply* and *telegram.ReplyKeyboardMarkup*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**MAX\_INPUT\_FIELD\_PLACEHOLDER = 64**

Maximum value allowed for *input\_field\_placeholder* parameter of *telegram.ForceReply* and *input\_field\_placeholder* parameter of *telegram.ReplyKeyboardMarkup*

**Type***int***MIN\_INPUT\_FIELD\_PLACEHOLDER = 1**

Minimum value allowed for *input\_field\_placeholder* parameter of *telegram.ForceReply* and *input\_field\_placeholder* parameter of *telegram.ReplyKeyboardMarkup*

**Type***int***telegram.constants.SUPPORTED\_WEBHOOK\_PORTS = [443, 80, 88, 8443]**

Ports supported by *telegram.Bot.set\_webhook.url*.

**Type***List[int]*

```
class telegram.constants.StickerFormat(value, names=None, *, module=None, qualname=None,
                                       type=None, start=1, boundary=None)
```

Bases: *str, enum.Enum*

This enum contains the available formats of *telegram.Sticker* in the set. The enum members of this enumeration are instances of *str* and can be treated as such.

New in version 20.2.

**ANIMATED = 'animated'**

Animated sticker.

**Type***str***STATIC = 'static'**

Static sticker.

**Type***str***VIDEO = 'video'**

Video sticker.

Type

`str`

```
class telegram.constants.StickerLimit(value, names=None, *, module=None, qualname=None,
                                     type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for various sticker methods, such as `telegram.Bot.create_new_sticker_set()`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.

**MAX\_KEYWORD\_LENGTH = 64**

Maximum number of characters in a search keyword for a sticker, for each item in `keywords` sequence of `telegram.Bot.set_sticker_keywords()`.

New in version 20.2.

Type

`int`

**MAX\_NAME\_AND\_TITLE = 64**

Maximum number of characters in a `str` passed as the `name` parameter or the `title` parameter of `telegram.Bot.create_new_sticker_set()`.

Type

`int`

**MAX\_SEARCH\_KEYWORDS = 20**

Maximum number of search keywords for a sticker, passed as the `keywords` parameter of `telegram.Bot.set_sticker_keywords()`.

New in version 20.2.

Type

`int`

**MAX\_STICKER\_EMOJI = 20**

Maximum number of emojis associated with a sticker, passed as the `emoji_list` parameter of `telegram.Bot.set_sticker_emoji_list()`.

New in version 20.2.

Type

`int`

**MIN\_NAME\_AND\_TITLE = 1**

Minimum number of characters in a `str` passed as the `name` parameter or the `title` parameter of `telegram.Bot.create_new_sticker_set()`.

Type

`int`

**MIN\_STICKER\_EMOJI = 1**

Minimum number of emojis associated with a sticker, passed as the `emoji_list` parameter of `telegram.Bot.set_sticker_emoji_list()`.

New in version 20.2.

Type

`int`

```
class telegram.constants.StickerSetLimit(value, names=None, *, module=None, qualname=None,
                                         type=None, start=1, boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for various sticker set methods, such as `telegram.Bot.create_new_sticker_set()` and `telegram.Bot.add_sticker_to_set()`.

The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.2.

**MAX\_ANIMATED\_STICKERS = 50**

Maximum number of stickers allowed in an animated or video sticker set, as given in `telegram.Bot.add_sticker_to_set()`.

Type

`int`

**MAX\_ANIMATED\_THUMBNAIL\_SIZE = 32**

Maximum size of the thumbnail if it is a `.TGS` or `.WEBM` in kilobytes, as given in `telegram.Bot.set_sticker_set_thumbnail()`.

Type

`int`

**MAX\_EMOJI\_STICKERS = 200**

Maximum number of stickers allowed in an emoji sticker set, as given in `telegram.Bot.add_sticker_to_set()`.

Type

`int`

**MAX\_INITIAL\_STICKERS = 50**

Maximum number of stickers allowed while creating a sticker set, passed as the `stickers` parameter of `telegram.Bot.create_new_sticker_set()`.

Type

`int`

**MAX\_STATIC\_STICKERS = 120**

Maximum number of stickers allowed in a static sticker set, as given in `telegram.Bot.add_sticker_to_set()`.

Type

`int`

**MAX\_STATIC\_THUMBNAIL\_SIZE = 128**

Maximum size of the thumbnail if it is a `.WEBP` or `.PNG` in kilobytes, as given in `telegram.Bot.set_sticker_set_thumbnail()`.

Type

`int`

**MIN\_INITIAL\_STICKERS = 1**

Minimum number of stickers needed to create a sticker set, passed as the `stickers` parameter of `telegram.Bot.create_new_sticker_set()`.

Type

`int`

**STATIC\_THUMB\_DIMENSIONS = 100**

Exact height and width of the thumbnail if it is a `.WEBP` or `.PNG` in pixels, as given in `telegram.Bot.set_sticker_set_thumbnail()`.

Type

`int`

```
class telegram.constants.StickerType(value, names=None, *, module=None, qualname=None,
                                     type=None, start=1, boundary=None)
```

Bases: `str`, `enum.Enum`

This enum contains the available types of `telegram.Sticker`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

```
CUSTOM_EMOJI = 'custom_emoji'
```

Custom emoji sticker.

Type  
`str`

```
MASK = 'mask'
```

Mask sticker.

Type  
`str`

```
REGULAR = 'regular'
```

Regular sticker.

Type  
`str`

```
class telegram.constants.UpdateType(value, names=None, *, module=None, qualname=None,
                                     type=None, start=1, boundary=None)
```

Bases: `str`, `enum.Enum`

This enum contains the available types of `telegram.Update`. The enum members of this enumeration are instances of `str` and can be treated as such.

New in version 20.0.

```
CALLBACK_QUERY = 'callback_query'
```

Updates with `telegram.Update.callback_query`.

Type  
`str`

```
CHANNEL_POST = 'channel_post'
```

Updates with `telegram.Update.channel_post`.

Type  
`str`

```
CHAT_JOIN_REQUEST = 'chat_join_request'
```

Updates with `telegram.Update.chat_join_request`.

Type  
`str`

```
CHAT_MEMBER = 'chat_member'
```

Updates with `telegram.Update.chat_member`.

Type  
`str`

```
CHOSEN_INLINE_RESULT = 'chosen_inline_result'
```

Updates with `telegram.Update.chosen_inline_result`.

Type  
`str`

**EDITED\_CHANNEL\_POST** = 'edited\_channel\_post'

Updates with `telegram.Update.edited_channel_post`.

Type

`str`

**EDITED\_MESSAGE** = 'edited\_message'

Updates with `telegram.Update.edited_message`.

Type

`str`

**INLINE\_QUERY** = 'inline\_query'

Updates with `telegram.Update.inline_query`.

Type

`str`

**MESSAGE** = 'message'

Updates with `telegram.Update.message`.

Type

`str`

**MY\_CHAT\_MEMBER** = 'my\_chat\_member'

Updates with `telegram.Update.my_chat_member`.

Type

`str`

**POLL** = 'poll'

Updates with `telegram.Update.poll`.

Type

`str`

**POLL\_ANSWER** = 'poll\_answer'

Updates with `telegram.Update.poll_answer`.

Type

`str`

**PRE\_CHECKOUT\_QUERY** = 'pre\_checkout\_query'

Updates with `telegram.Update.pre_checkout_query`.

Type

`str`

**SHIPPING\_QUERY** = 'shipping\_query'

Updates with `telegram.Update.shipping_query`.

Type

`str`

```
class telegram.constants.UserProfilePhotosLimit(value, names=None, *, module=None,
                                             qualname=None, type=None, start=1,
                                             boundary=None)
```

Bases: `enum.IntEnum`

This enum contains limitations for `telegram.Bot.get_user_profile_photos.limit`. The enum members of this enumeration are instances of `int` and can be treated as such.

New in version 20.0.



**MAX\_LIMIT = 100**

Maximum value allowed for *limit* parameter of *telegram.Bot.get\_user\_profile\_photos()*.

Type  
*int*

**MIN\_LIMIT = 1**

Minimum value allowed for *limit* parameter of *telegram.Bot.get\_user\_profile\_photos()*.

Type  
*int*

**class telegram.constants.WebhookLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: *enum.IntEnum*

This enum contains limitations for *telegram.Bot.set\_webhook.max\_connections* and *telegram.Bot.set\_webhook.secret\_token*. The enum members of this enumeration are instances of *int* and can be treated as such.

New in version 20.0.

**MAX\_CONNECTIONS\_LIMIT = 100**

Maximum value allowed for the *max\_connections* parameter of *telegram.Bot.set\_webhook()*.

Type  
*int*

**MAX\_SECRET\_TOKEN\_LENGTH = 256**

Maximum length of the secret token for the *secret\_token* parameter of *telegram.Bot.set\_webhook()*.

Type  
*int*

**MIN\_CONNECTIONS\_LIMIT = 1**

Minimum value allowed for the *max\_connections* parameter of *telegram.Bot.set\_webhook()*.

Type  
*int*

**MIN\_SECRET\_TOKEN\_LENGTH = 1**

Minimum length of the secret token for the *secret\_token* parameter of *telegram.Bot.set\_webhook()*.

Type  
*int*

### 10.3.2 telegram.error Module

This module contains classes that represent Telegram errors.

Changed in version 20.0: Replaced *Unauthorized* by *Forbidden*.

**exception telegram.error.BadRequest**(*message*)

Bases: *telegram.error.NetworkError*

Raised when Telegram could not process the request correctly.

**exception telegram.error.ChatMigrated**(*new\_chat\_id*)

Bases: *telegram.error.TelegramError*

Raised when the requested group chat migrated to supergroup and has a new chat id.

See also:

[Storing Bot, User and Chat Related Data](#)

#### Parameters

**new\_chat\_id** ([int](#)) – The new chat id of the group.

**new\_chat\_id**

The new chat id of the group.

#### Type

[int](#)

**exception** `telegram.error.Conflict(message)`

Bases: [telegram.error.TelegramError](#)

Raised when a long poll or webhook conflicts with another one.

**exception** `telegram.error.Forbidden(message)`

Bases: [telegram.error.TelegramError](#)

Raised when the bot has not enough rights to perform the requested action.

---

#### Examples

[Raw API Bot](#)

---

Changed in version 20.0: This class was previously named `Unauthorized`.

**exception** `telegram.error.InvalidToken(message=None)`

Bases: [telegram.error.TelegramError](#)

Raised when the token is invalid.

#### Parameters

**message** ([str](#), optional) – Any additional information about the exception.

New in version 20.0.

**exception** `telegram.error.NetworkError(message)`

Bases: [telegram.error.TelegramError](#)

Base class for exceptions due to networking errors.

---

**Tip:** This exception (and its subclasses) usually originates from the networking backend used by [HTTPXRequest](#), or a custom implementation of [BaseRequest](#). In this case, the original exception can be accessed via the `__cause__` attribute.

---

---

#### Examples

[Raw API Bot](#)

---

See also:

[Handling network errors](#)

**exception** `telegram.error.PassportDecryptionError(message)`

Bases: [telegram.error.TelegramError](#)

Something went wrong with decryption.

Changed in version 20.0: This class was previously named `TelegramDecryptionError` and was available via `telegram.TelegramDecryptionError`.

**exception** `telegram.error.RetryAfter`(*retry\_after*)

Bases: `telegram.error.TelegramError`

Raised when flood limits were exceeded.

Changed in version 20.0: *retry\_after* is now an integer to comply with the Bot API.

**Parameters**

**retry\_after** (`int`) – Time in seconds, after which the bot can retry the request.

**retry\_after**

Time in seconds, after which the bot can retry the request.

**Type**

`int`

**exception** `telegram.error.TelegramError`(*message*)

Bases: `Exception`

Base class for Telegram errors.

---

**Tip:** Objects of this type can be serialized via Python's `pickle` module and pickled objects from one version of PTB are usually loadable in future versions. However, we can not guarantee that this compatibility will always be provided. At least a manual one-time conversion of the data may be needed on major updates of the library.

---

**See also:**

[Exceptions, Warnings and Logging](#)

**exception** `telegram.error.Timeout`(*message=None*)

Bases: `telegram.error.NetworkError`

Raised when a request took too long to finish.

**See also:**

[Handling network errors](#)

**Parameters**

**message** (`str`, optional) – Any additional information about the exception.

New in version 20.0.

### 10.3.3 telegram.helpers Module

This module contains convenience helper functions.

Changed in version 20.0: Previously, the contents of this module were available through the (no longer existing) module `telegram.utils.helpers`.

`telegram.helpers.create_deep_linked_url`(*bot\_username*, *payload=None*, *group=False*)

Creates a deep-linked URL for this *bot\_username* with the specified *payload*. See <https://core.telegram.org/bots/features#deep-linking> to learn more.

The *payload* may consist of the following characters: A-Z, a-z, 0-9, \_, -

---

**Note:** Works well in conjunction with `CommandHandler("start", callback, filters=filters.Regex('payload'))`

---

---

### Examples

- `create_deep_linked_url(bot.get_me().username, "some-params")`
  - *Deep Linking*
- 

### Parameters

- **bot\_username** (`str`) – The username to link to.
- **payload** (`str`, optional) – Parameters to encode in the created URL.
- **group** (`bool`, optional) – If `True` the user is prompted to select a group to add the bot to. If `False`, opens a one-on-one conversation with the bot. Defaults to `False`.

### Returns

An URL to start the bot with specific parameters.

### Return type

`str`

### Raises

**ValueError** – If the length of the `payload` exceeds 64 characters, contains invalid characters, or if the `bot_username` is less than 4 characters.

`telegram.helpers.effective_message_type(entity)`

Extracts the type of message as a string identifier from a `telegram.Message` or a `telegram.Update`.

### Parameters

**entity** (`telegram.Update` | `telegram.Message`) – The update or message to extract from.

### Returns

One of `telegram.constants.MessageType` if the entity contains a message that matches one of those types. `None` otherwise.

### Return type

`str` | `None`

`telegram.helpers.escape_markdown(text, version=1, entity_type=None)`

Helper function to escape telegram markup symbols.

Changed in version 20.3: Custom emoji entity escaping is now supported.

### Parameters

- **text** (`str`) – The text.
- **version** (`int` | `str`) – Use to specify the version of telegrams Markdown. Either 1 or 2. Defaults to 1.
- **entity\_type** (`str`, optional) – For the entity types `'pre'`, `'code'` and the link part of `'text_link'` and `'custom_emoji'`, only certain characters need to be escaped in `'MarkdownV2'`. See the [official API documentation](#) for details. Only valid in combination with `version=2`, will be ignored else.

`telegram.helpers.mention_html(user_id, name)`

Helper function to create a user mention as HTML tag.

### Parameters

- **user\_id** (`int`) – The user's id which you want to mention.
- **name** (`str`) – The name the mention is showing.

**Returns**

The inline mention for the user as HTML.

**Return type**

`str`

`telegram.helpers.mention_markdown(user_id, name, version=1)`

Helper function to create a user mention in Markdown syntax.

**Parameters**

- **user\_id** (`int`) – The user’s id which you want to mention.
- **name** (`str`) – The name the mention is showing.
- **version** (`int` | `str`) – Use to specify the version of Telegram’s Markdown. Either 1 or 2. Defaults to 1.

**Returns**

The inline mention for the user as Markdown.

**Return type**

`str`

### 10.3.4 telegram.request Module

New in version 20.0.

#### BaseRequest

**class** `telegram.request.BaseRequest`

Bases: `typing.AsyncContextManager`, `ABC`

Abstract interface class that allows python-telegram-bot to make requests to the Bot API. Can be implemented via different asyncio HTTP libraries. An implementation of this class must implement all abstract methods and properties.

Instances of this class can be used as asyncio context managers, where

```
async with request_object:
    # code
```

is roughly equivalent to

```
try:
    await request_object.initialize()
    # code
finally:
    await request_object.shutdown()
```

---

**Tip:** JSON encoding and decoding is done with the standard library’s `json` by default. To use a custom library for this, you can override `parse_json_payload()` and implement custom logic to encode the keys of `telegram.request.RequestData.parameters`.

---

**Use In**

- `telegram.ext.ApplicationBuilder.get_updates_request()`
- `telegram.ext.ApplicationBuilder.request()`

**See also:**[Architecture Overview](#), [Builder Pattern](#)

New in version 20.0.

**DEFAULT\_NONE = None**

A special object that indicates that an argument of a function was not explicitly passed. Used for the timeout parameters of [post\(\)](#) and [do\\_request\(\)](#).

---

**Example**

When calling `request.post(url)`, `request` should use the default timeouts set on initialization. When calling `request.post(url, connect_timeout=5, read_timeout=None)`, `request` should use 5 for the connect timeout and `None` for the read timeout.

Use `if parameter is (not) BaseRequest.DEFAULT_NONE:` to check if the parameter was set.

---

**Type**`object`**USER\_AGENT = 'python-telegram-bot v20.6 (https://python-telegram-bot.org)'**

A description that can be used as user agent for requests made to the Bot API.

**Type**`str`**abstract async do\_request**(*url, method, request\_data=None, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None*)

Makes a request to the Bot API. Must be implemented by a subclass.

**Warning:** This method will be called by [post\(\)](#) and [retrieve\(\)](#). It should *not* be called manually.

**Parameters**

- **url** (`str`) – The URL to request.
- **method** (`str`) – HTTP method (i.e. 'POST', 'GET', etc.).
- **request\_data** ([telegram.request.RequestData](#), optional) – An object containing information about parameters and files to upload for the request.
- **read\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a response from Telegram's server instead of the time specified during creating of this object. Defaults to [DEFAULT\\_NONE](#).
- **write\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a write operation to complete (in terms of a network socket; i.e. POSTing a request or uploading a file) instead of the time specified during creating of this object. Defaults to [DEFAULT\\_NONE](#).
- **connect\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection attempt to a server to succeed instead of the time specified during creating of this object. Defaults to [DEFAULT\\_NONE](#).
- **pool\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection to become available instead of the time specified during creating of this object. Defaults to [DEFAULT\\_NONE](#).

**Returns**

The HTTP return code & the payload part of the server response.

**Return type**

Tuple[int, bytes]

**abstract async initialize()**

Initialize resources used by this class. Must be implemented by a subclass.

**static parse\_json\_payload(payload)**

Parse the JSON returned from Telegram.

---

**Tip:** By default, this method uses the standard library's `json.loads()` and `errors="replace"` in `bytes.decode()`. You can override it to customize either of these behaviors.

---

**Parameters**

**payload** (bytes) – The UTF-8 encoded JSON payload as returned by Telegram.

**Returns**

A JSON parsed as Python dict with results.

**Return type**

dict

**Raises**

**TelegramError** – If loading the JSON data failed

**final async post(url, request\_data=None, read\_timeout=None, write\_timeout=None, connect\_timeout=None, pool\_timeout=None)**

Makes a request to the Bot API handles the return code and parses the answer.

**Warning:** This method will be called by the methods of `telegram.Bot` and should *not* be called manually.

**Parameters**

- **url** (str) – The URL to request.
- **request\_data** (`telegram.request.RequestData`, optional) – An object containing information about parameters and files to upload for the request.
- **read\_timeout** (float | None, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a response from Telegram's server instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (float | None, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a write operation to complete (in terms of a network socket; i.e. POSTing a request or uploading a file) instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (float | None, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection attempt to a server to succeed instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (float | None, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection to become available instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.

**Returns**

The JSON response of the Bot API.

```
final async retrieve(url, read_timeout=None, write_timeout=None, connect_timeout=None,
                    pool_timeout=None)
```

Retrieve the contents of a file by its URL.

**Warning:** This method will be called by the methods of `telegram.Bot` and should *not* be called manually.

#### Parameters

- **url** (`str`) – The web location we want to retrieve.
- **read\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a response from Telegram’s server instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.
- **write\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a write operation to complete (in terms of a network socket; i.e. POSTing a request or uploading a file) instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.
- **connect\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection attempt to a server to succeed instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.
- **pool\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection to become available instead of the time specified during creating of this object. Defaults to `DEFAULT_NONE`.

#### Returns

The files contents.

#### Return type

`bytes`

#### abstract async shutdown()

Stop & clear resources used by this class. Must be implemented by a subclass.

## RequestData

```
final class telegram.request.RequestData(parameters=None)
```

Bases: `object`

Instances of this class collect the data needed for one request to the Bot API, including all parameters and files to be sent along with the request.

New in version 20.0.

**Warning:** How exactly instances of this are created should be considered an implementation detail and not part of PTBs public API. Users should exclusively rely on the documented attributes, properties and methods.

#### contains\_files

Whether this object contains files to be uploaded via multipart/form-data.

#### Type

`bool`



**property json\_parameters**

Gives the parameters as mapping of parameter name to the respective JSON encoded value.

---

**Tip:** By default, this property uses the standard library's `json.dumps()`. To use a custom library for JSON encoding, you can directly encode the keys of `parameters` - note that string valued keys should not be JSON encoded.

---

**property json\_payload**

The `parameters` as UTF-8 encoded JSON payload.

---

**Tip:** By default, this property uses the standard library's `json.dumps()`. To use a custom library for JSON encoding, you can directly encode the keys of `parameters` - note that string valued keys should not be JSON encoded.

---

**property multipart\_data**

Gives the files contained in this object as mapping of part name to encoded content.

**property parameters**

Gives the parameters as mapping of parameter name to the parameter value, which can be a single object of type `int`, `float`, `str` or `bool` or any (possibly nested) composition of lists, tuples and dictionaries, where each entry, key and value is of one of the mentioned types.

**parametrized\_url**(*url*, *encode\_kwargs*=None)

Shortcut for attaching the return value of `url_encoded_parameters()` to the *url*.

**Parameters**

- **url** (`str`) – The URL the parameters will be attached to.
- **encode\_kwargs** (`Dict[str, any]`, optional) – Additional keyword arguments to pass along to `urllib.parse.urlencode()`.

**url\_encoded\_parameters**(*encode\_kwargs*=None)

Encodes the parameters with `urllib.parse.urlencode()`.

**Parameters**

- **encode\_kwargs** (`Dict[str, any]`, optional) – Additional keyword arguments to pass along to `urllib.parse.urlencode()`.

**HTTPXRequest**

```
class telegram.request.HTTPXRequest(connection_pool_size=1, proxy_url=None, read_timeout=5.0,
                                     write_timeout=5.0, connect_timeout=5.0, pool_timeout=1.0,
                                     http_version='1.1')
```

Bases: `telegram.request.BaseRequest`

Implementation of `BaseRequest` using the library `httpx`.

---

**Use In**

- `telegram.ext.ApplicationBuilder.get_updates_request()`
  - `telegram.ext.ApplicationBuilder.request()`
- 

New in version 20.0.

**Parameters**

- **connection\_pool\_size** (`int`, optional) – Number of connections to keep in the connection pool. Defaults to 1.

---

**Note:** Independent of the value, one additional connection will be reserved for `telegram.Bot.get_updates()`.

---

- **proxy\_url** (`str`, optional) – The URL to the proxy server. For example 'http://127.0.0.1:3128' or 'socks5://127.0.0.1:3128'. Defaults to `None`.

---

**Note:**

- The proxy URL can also be set via the environment variables `HTTPS_PROXY` or `ALL_PROXY`. See [the docs of httpx](#) for more info.
  - For Socks5 support, additional dependencies are required. Make sure to install PTB via `pip install "python-telegram-bot[socks]"` in this case.
  - Socks5 proxies can not be set via environment variables.
- 

- **read\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a response from Telegram's server. This value is used unless a different value is passed to `do_request()`. Defaults to 5.
- **write\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a write operation to complete (in terms of a network socket; i.e. POSTing a request or uploading a file). This value is used unless a different value is passed to `do_request()`. Defaults to 5.
- **connect\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection attempt to a server to succeed. This value is used unless a different value is passed to `do_request()`. Defaults to 5.
- **pool\_timeout** (`float` | `None`, optional) – If passed, specifies the maximum amount of time (in seconds) to wait for a connection to become available. This value is used unless a different value is passed to `do_request()`. Defaults to 1.

**Warning:** With a finite pool timeout, you must expect `telegram.error.TimedOut` exceptions to be thrown when more requests are made simultaneously than there are connections in the connection pool!

- **http\_version** (`str`, optional) – If "2" or "2.0", HTTP/2 will be used instead of HTTP/1.1. Defaults to "1.1".

New in version 20.1.

Changed in version 20.2: Reset the default version to 1.1.

Changed in version 20.5: Accept "2" as a valid value.

**async do\_request**(`url`, `method`, `request_data=None`, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`)

See `BaseRequest.do_request()`.

**property http\_version**

Used HTTP version, see `http_version`.

New in version 20.2.

**Type**

`str`

**async initialize()**

See *BaseRequest.initialize()*.

**async shutdown()**

See *BaseRequest.shutdown()*.

### 10.3.5 telegram.warnings Module

This module contains classes used for warnings issued by this library.

New in version 20.0.

**exception telegram.warnings.PTBDeprecationWarning**

Bases: *telegram.warnings.PTBUserWarning*, *DeprecationWarning*

Custom warning class for deprecations in this library.

Changed in version 20.0: Renamed TelegramDeprecationWarning to PTBDeprecationWarning.

**exception telegram.warnings.PTBRuntimeWarning**

Bases: *telegram.warnings.PTBUserWarning*, *RuntimeWarning*

Custom runtime warning class used for warnings in this library.

New in version 20.0.

**exception telegram.warnings.PTBUserWarning**

Bases: *UserWarning*

Custom user warning class used for warnings in this library.

**See also:**

*Exceptions, Warnings and Logging*

New in version 20.0.

## 10.4 Examples

In this section we display small examples to show what a bot written with `python-telegram-bot` looks like. Some bots focus on one specific aspect of the Telegram Bot API while others focus on one of the mechanics of this library. Except for the *rawapibot.py* example, they all use the high-level framework this library provides with the *telegram.ext* submodule.

All examples are licensed under the [CC0 License](#) and are therefore fully dedicated to the public domain. You can use them as the base for your own bots without worrying about copyrights.

Do note that we ignore one pythonic convention. Best practice would dictate, in many handler callbacks function signatures, to replace the argument `context` with an underscore, since `context` is an unused local variable in those callbacks. However, since these are examples and not having a name for that argument confuses beginners, we decided to have it present.

### 10.4.1 echobot.py

This is probably the base for most of the bots made with `python-telegram-bot`. It simply replies to each text message with a message that contains the same text.

### 10.4.2 timerbot.py

This bot uses the `telegram.ext.JobQueue` class to send timed messages. The user sets a timer by using `/set` command with a specific time, for example `/set 30`. The bot then sets up a job to send a message to that user after 30 seconds. The user can also cancel the timer by sending `/unset`. To learn more about the `JobQueue`, read [this wiki article](#). Note: To use `JobQueue`, you must install PTB via `pip install "python-telegram-bot[job-queue]"`

### 10.4.3 conversationbot.py

A common task for a bot is to ask information from the user. In v5.0 of this library, we introduced the `telegram.ext.ConversationHandler` for that exact purpose. This example uses it to retrieve user-information in a conversation-like style. To get a better understanding, take a look at the [state diagram](#).

### 10.4.4 conversationbot2.py

A more complex example of a bot that uses the `ConversationHandler`. It is also more confusing. Good thing there is a [fancy state diagram](#) for this one, too!

### 10.4.5 nestedconversationbot.py

A even more complex example of a bot that uses the nested `ConversationHandlers`. While it's certainly not that complex that you couldn't built it without nested `ConversationHanldlers`, it gives a good impression on how to work with them. Of course, there is a [fancy state diagram](#) for this example, too!

### 10.4.6 persistentconversationbot.py

A basic example of a bot store conversation state and `user_data` over multiple restarts.

### 10.4.7 inlinekeyboard.py

This example sheds some light on inline keyboards, callback queries and message editing. A wiki site explaining this examples lives [here](#).

### 10.4.8 inlinekeyboard2.py

A more complex example about inline keyboards, callback queries and message editing. This example showcases how an interactive menu could be build using inline keyboards.

### 10.4.9 deeplinking.py

A basic example on how to use deeplinking with inline keyboards.

### 10.4.10 inlinebot.py

A basic example of an [inline bot](#). Don't forget to enable inline mode with [@BotFather](#).

### 10.4.11 pollbot.py

This example sheds some light on polls, poll answers and the corresponding handlers.

### 10.4.12 passportbot.py

A basic example of a bot that can accept passports. Use in combination with the [HTML page](#). Don't forget to enable and configure payments with [@BotFather](#). Check out this [guide](#) on Telegram passports in PTB. Note: To use Telegram Passport, you must install PTB via `pip install "python-telegram-bot[passport]"`

### 10.4.13 paymentbot.py

A basic example of a bot that can accept payments. Don't forget to enable and configure payments with [@BotFather](#).

### 10.4.14 errorhandlerbot.py

A basic example on how to set up a custom error handler.

### 10.4.15 chatmemberbot.py

A basic example on how `(my_)chat_member` updates can be used.

### 10.4.16 webappbot.py

A basic example of how [Telegram WebApps](#) can be used. Use in combination with the [HTML page](#). For your convenience, this file is hosted by the PTB team such that you don't need to host it yourself. Uses the [iro.js](#) JavaScript library to showcase a user interface that is hard to achieve with native Telegram functionality.

### 10.4.17 contexttypesbot.py

This example showcases how `telegram.ext.ContextTypes` can be used to customize the `context` argument of handler and job callbacks.

### 10.4.18 customwebhookbot.py

This example showcases how a custom webhook setup can be used in combination with `telegram.ext.Application`.

### 10.4.19 arbitrarycallbackdatabot.py

This example showcases how PTBs “arbitrary callback data” feature can be used. Note: To use arbitrary callback data, you must install PTB via `pip install "python-telegram-bot[callback-data]"`

### 10.4.20 Pure API

The `rawapibot.py` example uses only the pure, “bare-metal” API wrapper.

#### `arbitrarycallbackdatabot.py`

```
1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """This example showcases how PTBs "arbitrary callback data" feature can be used.
6
7  For detailed info on arbitrary callback data, see the wiki page at
8  https://github.com/python-telegram-bot/python-telegram-bot/wiki/Arbitrary-callback\_
9  ↪ data
10
11  Note:
12  To use arbitrary callback data, you must install PTB via
13  `pip install "python-telegram-bot[callback-data]"`
14  """
15  import logging
16  from typing import List, Tuple, cast
17
18  from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
19  from telegram.ext import (
20      Application,
21      CallbackQueryHandler,
22      CommandHandler,
23      ContextTypes,
24      InvalidCallbackData,
25      PicklePersistence,
26  )
27
28  # Enable logging
29  logging.basicConfig(
30      format="%%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
31  )
32  # set higher logging level for httpx to avoid all GET and POST requests being logged
33  logging.getLogger("httpx").setLevel(logging.WARNING)
34
35  logger = logging.getLogger(__name__)
36
37  async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
38      """Sends a message with 5 inline buttons attached."""
```

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```

39     number_list: List[int] = []
40     await update.message.reply_text("Please choose:", reply_markup=build_
↳ keyboard(number_list))
41
42
43 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
44     """Displays info on how to use the bot."""
45     await update.message.reply_text(
46         "Use /start to test this bot. Use /clear to clear the stored data so that you_
↳ can see "
47         "what happens, if the button data is not available. "
48     )
49
50
51 async def clear(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
52     """Clears the callback data cache"""
53     context.bot.callback_data_cache.clear_callback_data()
54     context.bot.callback_data_cache.clear_callback_queries()
55     await update.effective_message.reply_text("All clear!")
56
57
58 def build_keyboard(current_list: List[int]) -> InlineKeyboardMarkup:
59     """Helper function to build the next inline keyboard."""
60     return InlineKeyboardMarkup.from_column(
61         [InlineKeyboardButton(str(i), callback_data=(i, current_list)) for i in_
↳ range(1, 6)]
62     )
63
64
65 async def list_button(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
66     """Parses the CallbackQuery and updates the message text."""
67     query = update.callback_query
68     await query.answer()
69     # Get the data from the callback_data.
70     # If you're using a type checker like MyPy, you'll have to use typing.cast
71     # to make the checker get the expected type of the callback_data
72     number, number_list = cast(Tuple[int, List[int]], query.data)
73     # append the number to the list
74     number_list.append(number)
75
76     await query.edit_message_text(
77         text=f"So far you've selected {number_list}. Choose the next item:",
78         reply_markup=build_keyboard(number_list),
79     )
80
81     # we can delete the data stored for the query, because we've replaced the buttons
82     context.drop_callback_data(query)
83
84
85 async def handle_invalid_button(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
86     """Informs the user that the button is no longer available."""
87     await update.callback_query.answer()
88     await update.effective_message.edit_text(
89         "Sorry, I could not process this button click Please send /start to get a_
↳ new keyboard."

```

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```

90     )
91
92
93 def main() -> None:
94     """Run the bot."""
95     # We use persistence to demonstrate how buttons can still work after the bot was
↪ restarted
96     persistence = PicklePersistence(filepath="arbitrarycallbackdatabot")
97     # Create the Application and pass it your bot's token.
98     application = (
99         Application.builder()
100         .token("TOKEN")
101         .persistence(persistence)
102         .arbitrary_callback_data(True)
103         .build()
104     )
105
106     application.add_handler(CommandHandler("start", start))
107     application.add_handler(CommandHandler("help", help_command))
108     application.add_handler(CommandHandler("clear", clear))
109     application.add_handler(
110         CallbackQueryHandler(handle_invalid_button, pattern=InvalidCallbackData)
111     )
112     application.add_handler(CallbackQueryHandler(list_button))
113
114     # Run the bot until the user presses Ctrl-C
115     application.run_polling(allowed_updates=Update.ALL_TYPES)
116
117
118 if __name__ == "__main__":
119     main()

```

### chatmemberbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Simple Bot to handle '(my_)chat_member' updates.
7  Greet new users & keeps track of which chats the bot is in.
8
9  Usage:
10 Press Ctrl-C on the command line or send a signal to the process to stop the
11 bot.
12 """
13
14 import logging
15 from typing import Optional, Tuple
16
17 from telegram import Chat, ChatMember, ChatMemberUpdated, Update
18 from telegram.constants import ParseMode
19 from telegram.ext import (
20     Application,
21     ChatMemberHandler,

```

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```

22     CommandHandler,
23     ContextTypes,
24     MessageHandler,
25     filters,
26 )
27
28 # Enable logging
29
30 logging.basicConfig(
31     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
32 )
33
34 # set higher logging level for httpx to avoid all GET and POST requests being logged
35 logging.getLogger("httpx").setLevel(logging.WARNING)
36
37 logger = logging.getLogger(__name__)
38
39
40 def extract_status_change(chat_member_update: ChatMemberUpdated) -> Optional[Tuple[bool, bool]]:
41     """Takes a ChatMemberUpdated instance and extracts whether the 'old_chat_member'
42     was a member
43     of the chat and whether the 'new_chat_member' is a member of the chat. Returns
44     None, if
45     the status didn't change.
46     """
47     status_change = chat_member_update.difference().get("status")
48     old_is_member, new_is_member = chat_member_update.difference().get("is_member",
49     (None, None))
50
51     if status_change is None:
52         return None
53
54     old_status, new_status = status_change
55     was_member = old_status in [
56         ChatMember.MEMBER,
57         ChatMember.OWNER,
58         ChatMember.ADMINISTRATOR,
59     ] or (old_status == ChatMember.RESTRICTED and old_is_member is True)
60     is_member = new_status in [
61         ChatMember.MEMBER,
62         ChatMember.OWNER,
63         ChatMember.ADMINISTRATOR,
64     ] or (new_status == ChatMember.RESTRICTED and new_is_member is True)
65
66     return was_member, is_member
67
68
69 async def track_chats(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
70     """Tracks the chats the bot is in."""
71     result = extract_status_change(update.my_chat_member)
72     if result is None:
73         return
74     was_member, is_member = result
75
76     # Let's check who is responsible for the change

```

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```

74     cause_name = update.effective_user.full_name
75
76     # Handle chat types differently:
77     chat = update.effective_chat
78     if chat.type == Chat.PRIVATE:
79         if not was_member and is_member:
80             # This may not be really needed in practice because most clients will
↳ automatically
81             # send a /start command after the user unblocks the bot, and start
↳ private_chat()
82             # will add the user to "user_ids".
83             # We're including this here for the sake of the example.
84             logger.info("%s unblocked the bot", cause_name)
85             context.bot_data.setdefault("user_ids", set()).add(chat.id)
86         elif was_member and not is_member:
87             logger.info("%s blocked the bot", cause_name)
88             context.bot_data.setdefault("user_ids", set()).discard(chat.id)
89         elif chat.type in [Chat.GROUP, Chat.SUPERGROUP]:
90             if not was_member and is_member:
91                 logger.info("%s added the bot to the group %s", cause_name, chat.title)
92                 context.bot_data.setdefault("group_ids", set()).add(chat.id)
93             elif was_member and not is_member:
94                 logger.info("%s removed the bot from the group %s", cause_name, chat.
↳ title)
95                 context.bot_data.setdefault("group_ids", set()).discard(chat.id)
96             elif not was_member and is_member:
97                 logger.info("%s added the bot to the channel %s", cause_name, chat.title)
98                 context.bot_data.setdefault("channel_ids", set()).add(chat.id)
99             elif was_member and not is_member:
100                 logger.info("%s removed the bot from the channel %s", cause_name, chat.title)
101                 context.bot_data.setdefault("channel_ids", set()).discard(chat.id)
102
103
104 async def show_chats(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
105     """Shows which chats the bot is in"""
106     user_ids = ", ".join(str(uid) for uid in context.bot_data.setdefault("user_ids",
↳ set()))
107     group_ids = ", ".join(str(gid) for gid in context.bot_data.setdefault("group_ids",
↳ set()))
108     channel_ids = ", ".join(str(cid) for cid in context.bot_data.setdefault("channel_
↳ ids", set()))
109     text = (
110         f"@{context.bot.username} is currently in a conversation with the user IDs
↳ {user_ids}."
111         f" Moreover it is a member of the groups with IDs {group_ids} "
112         f"and administrator in the channels with IDs {channel_ids}."
113     )
114     await update.effective_message.reply_text(text)
115
116
117 async def greet_chat_members(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
118     """Greets new users in chats and announces when someone leaves"""
119     result = extract_status_change(update.chat_member)
120     if result is None:
121         return

```

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```

122 was_member, is_member = result
123 cause_name = update.chat_member.from_user.mention_html()
124 member_name = update.chat_member.new_chat_member.user.mention_html()
125
126
127 if not was_member and is_member:
128     await update.effective_chat.send_message(
129         f"{member_name} was added by {cause_name}. Welcome!",
130         parse_mode=ParseMode.HTML,
131     )
132 elif was_member and not is_member:
133     await update.effective_chat.send_message(
134         f"{member_name} is no longer with us. Thanks a lot, {cause_name} ...",
135         parse_mode=ParseMode.HTML,
136     )
137
138
139 async def start_private_chat(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
140     None:
141         """Greets the user and records that they started a chat with the bot if it's a
142         private chat.
143         Since no `my_chat_member` update is issued when a user starts a private chat with
144         the bot
145         for the first time, we have to track it explicitly here.
146         """
147         user_name = update.effective_user.full_name
148         chat = update.effective_chat
149         if chat.type != Chat.PRIVATE or chat.id in context.bot_data.get("user_ids",
150             set()):
151             return
152
153         logger.info("%s started a private chat with the bot", user_name)
154         context.bot_data.setdefault("user_ids", set()).add(chat.id)
155
156         await update.effective_message.reply_text(
157             f"Welcome {user_name}. Use /show_chats to see what chats I'm in."
158         )
159
160
161 def main() -> None:
162     """Start the bot."""
163     # Create the Application and pass it your bot's token.
164     application = Application.builder().token("TOKEN").build()
165
166     # Keep track of which chats the bot is in
167     application.add_handler(ChatMemberHandler(track_chats, ChatMemberHandler.MY_CHAT_
168         MEMBER))
169     application.add_handler(CommandHandler("show_chats", show_chats))
170
171     # Handle members joining/leaving chats.
172     application.add_handler(ChatMemberHandler(greet_chat_members, ChatMemberHandler.
173         CHAT_MEMBER))
174
175     # Interpret any other command or text message as a start of a private chat.
176     # This will record the user as being in a private chat with bot.
177     application.add_handler(MessageHandler(filters.ALL, start_private_chat))

```

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```

172
173     # Run the bot until the user presses Ctrl-C
174     # We pass 'allowed_updates' handle *all* updates including `chat_member` updates
175     # To reset this, simply pass `allowed_updates=[]`
176     application.run_polling(allowed_updates=Update.ALL_TYPES)
177
178
179 if __name__ == "__main__":
180     main()

```

### contexttypesbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Simple Bot to showcase `telegram.ext.ContextTypes`.
7
8  Usage:
9  Press Ctrl-C on the command line or send a signal to the process to stop the
10 bot.
11 """
12
13 import logging
14 from collections import defaultdict
15 from typing import DefaultDict, Optional, Set
16
17 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
18 from telegram.constants import ParseMode
19 from telegram.ext import (
20     Application,
21     CallbackContext,
22     CallbackQueryHandler,
23     CommandHandler,
24     ContextTypes,
25     ExtBot,
26     TypeHandler,
27 )
28
29 # Enable logging
30 logging.basicConfig(
31     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
32 )
33 # set higher logging level for httpx to avoid all GET and POST requests being logged
34 logging.getLogger("httpx").setLevel(logging.WARNING)
35
36 logger = logging.getLogger(__name__)
37
38
39 class ChatData:
40     """Custom class for chat_data. Here we store data per message."""
41
42     def __init__(self) -> None:
43         self.clicks_per_message: DefaultDict[int, int] = defaultdict(int)

```

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```

44
45
46 # The [ExtBot, dict, ChatData, dict] is for type checkers like mypy
47 class CustomContext(CallbackContext[ExtBot, dict, ChatData, dict]):
48     """Custom class for context."""
49
50     def __init__(
51         self,
52         application: Application,
53         chat_id: Optional[int] = None,
54         user_id: Optional[int] = None,
55     ):
56         super().__init__(application=application, chat_id=chat_id, user_id=user_id)
57         self._message_id: Optional[int] = None
58
59     @property
60     def bot_user_ids(self) -> Set[int]:
61         """Custom shortcut to access a value stored in the bot_data dict"""
62         return self.bot_data.setdefault("user_ids", set())
63
64     @property
65     def message_clicks(self) -> Optional[int]:
66         """Access the number of clicks for the message this context object was built
67         ↪ for."""
68         if self._message_id:
69             return self.chat_data.clicks_per_message[self._message_id]
70         return None
71
72     @message_clicks.setter
73     def message_clicks(self, value: int) -> None:
74         """Allow to change the count"""
75         if not self._message_id:
76             ↪ raise RuntimeError("There is no message associated with this context
77             ↪ object.")
78         self.chat_data.clicks_per_message[self._message_id] = value
79
80     @classmethod
81     def from_update(cls, update: object, application: "Application") -> "CustomContext
82     ↪ ":
83         """Override from_update to set _message_id."""
84         # Make sure to call super()
85         context = super().from_update(update, application)
86
87         if context.chat_data and isinstance(update, Update) and update.effective_
88         ↪ message:
89             # pylint: disable=protected-access
90             context._message_id = update.effective_message.message_id
91
92             # Remember to return the object
93             return context
94
95     async def start(update: Update, context: CustomContext) -> None:
96         """Display a message with a button."""
97         await update.message.reply_html(
98             "This button was clicked <i>0</i> times.",

```

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```

96         reply_markup=InlineKeyboardMarkup.from_button(
97             InlineKeyboardButton(text="Click me!", callback_data="button")
98         ),
99     )
100
101
102 async def count_click(update: Update, context: CustomContext) -> None:
103     """Update the click count for the message."""
104     context.message_clicks += 1
105     await update.callback_query.answer()
106     await update.effective_message.edit_text(
107         f"This button was clicked <i>{context.message_clicks}</i> times.",
108         reply_markup=InlineKeyboardMarkup.from_button(
109             InlineKeyboardButton(text="Click me!", callback_data="button")
110         ),
111         parse_mode=ParseMode.HTML,
112     )
113
114
115 async def print_users(update: Update, context: CustomContext) -> None:
116     """Show which users have been using this bot."""
117     await update.message.reply_text(
118         f"The following user IDs have used this bot: {' '.join(map(str, context.bot_
119 ↪ user_ids))}"
120     )
121
122
123 async def track_users(update: Update, context: CustomContext) -> None:
124     """Store the user id of the incoming update, if any."""
125     if update.effective_user:
126         context.bot_user_ids.add(update.effective_user.id)
127
128
129 def main() -> None:
130     """Run the bot."""
131     context_types = ContextTypes(context=CustomContext, chat_data=ChatData)
132     application = Application.builder().token("TOKEN").context_types(context_types).
133 ↪ build()
134
135     # run track_users in its own group to not interfere with the user handlers
136     application.add_handler(TypeHandler(Update, track_users), group=-1)
137     application.add_handler(CommandHandler("start", start))
138     application.add_handler(CallbackQueryHandler(count_click))
139     application.add_handler(CommandHandler("print_users", print_users))
140
141     application.run_polling(allowed_updates=Update.ALL_TYPES)
142
143
144 if __name__ == "__main__":
145     main()

```

## conversationbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  First, a few callback functions are defined. Then, those functions are passed to
7  the Application and registered at their respective places.
8  Then, the bot is started and runs until we press Ctrl-C on the command line.
9
10 Usage:
11 Example of a bot-user conversation using ConversationHandler.
12 Send /start to initiate the conversation.
13 Press Ctrl-C on the command line or send a signal to the process to stop the
14 bot.
15 """
16
17 import logging
18
19 from telegram import ReplyKeyboardMarkup, ReplyKeyboardRemove, Update
20 from telegram.ext import (
21     Application,
22     CommandHandler,
23     ContextTypes,
24     ConversationHandler,
25     MessageHandler,
26     filters,
27 )
28
29 # Enable logging
30 logging.basicConfig(
31     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
32 )
33 # set higher logging level for httpx to avoid all GET and POST requests being logged
34 logging.getLogger("httpx").setLevel(logging.WARNING)
35
36 logger = logging.getLogger(__name__)
37
38 GENDER, PHOTO, LOCATION, BIO = range(4)
39
40
41 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
42     """Starts the conversation and asks the user about their gender."""
43     reply_keyboard = [["Boy", "Girl", "Other"]]
44
45     await update.message.reply_text(
46         "Hi! My name is Professor Bot. I will hold a conversation with you. "
47         "Send /cancel to stop talking to me.\n\n"
48         "Are you a boy or a girl?",
49         reply_markup=ReplyKeyboardMarkup(
50             reply_keyboard, one_time_keyboard=True, input_field_placeholder="Boy or
51 ↪ Girl?"
52         ),
53     )
54
55     return GENDER

```

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```

55
56
57 async def gender(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
58     """Stores the selected gender and asks for a photo."""
59     user = update.message.from_user
60     logger.info("Gender of %s: %s", user.first_name, update.message.text)
61     await update.message.reply_text(
62         "I see! Please send me a photo of yourself, "
63         "so I know what you look like, or send /skip if you don't want to.",
64         reply_markup=ReplyKeyboardRemove(),
65     )
66
67     return PHOTO
68
69
70 async def photo(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
71     """Stores the photo and asks for a location."""
72     user = update.message.from_user
73     photo_file = await update.message.photo[-1].get_file()
74     await photo_file.download_to_drive("user_photo.jpg")
75     logger.info("Photo of %s: %s", user.first_name, "user_photo.jpg")
76     await update.message.reply_text(
77         "Gorgeous! Now, send me your location please, or send /skip if you don't want_
↪to."
78     )
79
80     return LOCATION
81
82
83 async def skip_photo(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
84     """Skips the photo and asks for a location."""
85     user = update.message.from_user
86     logger.info("User %s did not send a photo.", user.first_name)
87     await update.message.reply_text(
88         "I bet you look great! Now, send me your location please, or send /skip."
89     )
90
91     return LOCATION
92
93
94 async def location(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
95     """Stores the location and asks for some info about the user."""
96     user = update.message.from_user
97     user_location = update.message.location
98     logger.info(
99         "Location of %s: %f / %f", user.first_name, user_location.latitude, user_
↪location.longitude
100     )
101     await update.message.reply_text(
102         "Maybe I can visit you sometime! At last, tell me something about yourself."
103     )
104
105     return BIO
106
107
108 async def skip_location(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:

```

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```

109     """Skips the location and asks for info about the user."""
110     user = update.message.from_user
111     logger.info("User %s did not send a location.", user.first_name)
112     await update.message.reply_text(
113         "You seem a bit paranoid! At last, tell me something about yourself."
114     )
115
116     return BIO
117
118
119 async def bio(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
120     """Stores the info about the user and ends the conversation."""
121     user = update.message.from_user
122     logger.info("Bio of %s: %s", user.first_name, update.message.text)
123     await update.message.reply_text("Thank you! I hope we can talk again some day.")
124
125     return ConversationHandler.END
126
127
128 async def cancel(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
129     """Cancels and ends the conversation."""
130     user = update.message.from_user
131     logger.info("User %s canceled the conversation.", user.first_name)
132     await update.message.reply_text(
133         "Bye! I hope we can talk again some day.", reply_markup=ReplyKeyboardRemove()
134     )
135
136     return ConversationHandler.END
137
138
139 def main() -> None:
140     """Run the bot."""
141     # Create the Application and pass it your bot's token.
142     application = Application.builder().token("TOKEN").build()
143
144     # Add conversation handler with the states GENDER, PHOTO, LOCATION and BIO
145     conv_handler = ConversationHandler(
146         entry_points=[CommandHandler("start", start)],
147         states={
148             GENDER: [MessageHandler(filters.Regex("^Boy|Girl|Other$"), gender)],
149             PHOTO: [MessageHandler(filters.PHOTO, photo), CommandHandler("skip", skip_
150 ↪photo)],
151             LOCATION: [
152                 MessageHandler(filters.LOCATION, location),
153                 CommandHandler("skip", skip_location),
154             ],
155             BIO: [MessageHandler(filters.TEXT & ~filters.COMMAND, bio)],
156         },
157         fallbacks=[CommandHandler("cancel", cancel)],
158     )
159
160     application.add_handler(conv_handler)
161
162     # Run the bot until the user presses Ctrl-C
163     application.run_polling(allowed_updates=Update.ALL_TYPES)

```

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```

164
165 if __name__ == "__main__":
166     main()

```

## State Diagram

### conversationbot2.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  First, a few callback functions are defined. Then, those functions are passed to
7  the Application and registered at their respective places.
8  Then, the bot is started and runs until we press Ctrl-C on the command line.
9
10 Usage:
11 Example of a bot-user conversation using ConversationHandler.
12 Send /start to initiate the conversation.
13 Press Ctrl-C on the command line or send a signal to the process to stop the
14 bot.
15 """
16
17 import logging
18 from typing import Dict
19
20 from telegram import ReplyKeyboardMarkup, ReplyKeyboardRemove, Update
21 from telegram.ext import (
22     Application,
23     CommandHandler,
24     ContextTypes,
25     ConversationHandler,
26     MessageHandler,
27     filters,
28 )
29
30 # Enable logging
31 logging.basicConfig(
32     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
33 )
34 # set higher logging level for httpx to avoid all GET and POST requests being logged
35 logging.getLogger("httpx").setLevel(logging.WARNING)
36
37 logger = logging.getLogger(__name__)
38
39 CHOOSING, TYPING_REPLY, TYPING_CHOICE = range(3)
40
41 reply_keyboard = [
42     ["Age", "Favourite colour"],
43     ["Number of siblings", "Something else..."],
44     ["Done"],
45 ]
46 markup = ReplyKeyboardMarkup(reply_keyboard, one_time_keyboard=True)

```

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```

47
48
49 def facts_to_str(user_data: Dict[str, str]) -> str:
50     """Helper function for formatting the gathered user info."""
51     facts = [f"{key} - {value}" for key, value in user_data.items()]
52     return "\n".join(facts).join(["\n", "\n"])
53
54
55 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
56     """Start the conversation and ask user for input."""
57     await update.message.reply_text(
58         "Hi! My name is Doctor Botter. I will hold a more complex conversation with
↪you. "
59         "Why don't you tell me something about yourself?",
60         reply_markup=markup,
61     )
62
63     return CHOOSING
64
65
66 async def regular_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
67     """Ask the user for info about the selected predefined choice."""
68     text = update.message.text
69     context.user_data["choice"] = text
70     await update.message.reply_text(f"Your {text.lower()}? Yes, I would love to hear
↪about that!")
71
72     return TYPING_REPLY
73
74
75 async def custom_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
76     """Ask the user for a description of a custom category."""
77     await update.message.reply_text(
78         'Alright, please send me the category first, for example "Most impressive
↪skill"'
79     )
80
81     return TYPING_CHOICE
82
83
84 async def received_information(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↪int:
85     """Store info provided by user and ask for the next category."""
86     user_data = context.user_data
87     text = update.message.text
88     category = user_data["choice"]
89     user_data[category] = text
90     del user_data["choice"]
91
92     await update.message.reply_text(
93         "Neat! Just so you know, this is what you already told me:"
94         f"{facts_to_str(user_data)}You can tell me more, or change your opinion"
95         " on something.",
96         reply_markup=markup,
97     )
98

```

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```

99     return CHOOSING
100
101
102 async def done(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
103     """Display the gathered info and end the conversation."""
104     user_data = context.user_data
105     if "choice" in user_data:
106         del user_data["choice"]
107
108     await update.message.reply_text(
109         f"I learned these facts about you: {facts_to_str(user_data)}Until next time!",
110         reply_markup=ReplyKeyboardRemove(),
111     )
112
113     user_data.clear()
114     return ConversationHandler.END
115
116
117 def main() -> None:
118     """Run the bot."""
119     # Create the Application and pass it your bot's token.
120     application = Application.builder().token("TOKEN").build()
121
122     # Add conversation handler with the states CHOOSING, TYPING_CHOICE and TYPING_
123     ↪REPLY
124     conv_handler = ConversationHandler(
125         entry_points=[CommandHandler("start", start)],
126         states={
127             CHOOSING: [
128                 MessageHandler(
129                     filters.Regex("^Age|Favourite colour|Number of siblings)$"), ↪
130                 ↪regular_choice
131             ),
132             MessageHandler(filters.Regex("^Something else...$"), custom_choice),
133             ],
134             TYPING_CHOICE: [
135                 MessageHandler(
136                     filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")), ↪
137                 ↪regular_choice
138             ),
139             ],
140             TYPING_REPLY: [
141                 MessageHandler(
142                     filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")),
143                     received_information,
144                 )
145             ],
146             },
147             fallbacks=[MessageHandler(filters.Regex("^Done$"), done)],
148         )
149
150     application.add_handler(conv_handler)
151
152     # Run the bot until the user presses Ctrl-C
153     application.run_polling(allowed_updates=Update.ALL_TYPES)

```

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```

152
153 if __name__ == "__main__":
154     main()

```

## State Diagram

### customwebhookbot.py

This example is available for different web frameworks. You can select your preferred framework by opening one of the tabs above the code example.

**Hint:** The following examples show how different Python web frameworks can be used alongside PTB. This can be useful for two use cases:

1. For extending the functionality of your existing bot to handling updates of external services
2. For extending the functionality of your existing web application to also include chat bot functionality

How the PTB and web framework components of the examples below are viewed surely depends on which use case one has in mind. We are fully aware that a combination of PTB with web frameworks will always mean finding a tradeoff between usability and best practices for both PTB and the web framework and these examples are certainly far from optimal solutions. Please understand them as starting points and use your expertise of the web framework of your choosing to build up on them. You are of course also very welcome to help improve these examples!

```

1  #!/usr/bin/env python
2  # This program is dedicated to the public domain under the CC0 license.
3  # pylint: disable=import-error,unused-argument
4  """
5  Simple example of a bot that uses a custom webhook setup and handles custom updates.
6  For the custom webhook setup, the libraries `starlette` and `uvicorn` are used. Please
7  ↪install
8  them as `pip install starlette~=0.20.0 uvicorn~=0.23.2`.
9  Note that any other `asyncio` based web server framework can be used for a custom
10 ↪webhook setup
11 just as well.
12
13 Usage:
14 Set bot Token, URL, admin CHAT_ID and PORT after the imports.
15 You may also need to change the `listen` value in the uvicorn configuration to match
16 ↪your setup.
17 Press Ctrl-C on the command line or send a signal to the process to stop the bot.
18 """
19
20 import asyncio
21 import html
22 import logging
23 from dataclasses import dataclass
24 from http import HTTPStatus
25
26 import uvicorn
27 from starlette.applications import Starlette
28 from starlette.requests import Request
29 from starlette.responses import PlainTextResponse, Response
30 from starlette.routing import Route
31
32 from telegram import Update

```

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```

29 from telegram.constants import ParseMode
30 from telegram.ext import (
31     Application,
32     CallbackContext,
33     CommandHandler,
34     ContextTypes,
35     ExtBot,
36     TypeHandler,
37 )
38
39 # Enable logging
40 logging.basicConfig(
41     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
42 )
43 # set higher logging level for httpx to avoid all GET and POST requests being logged
44 logging.getLogger("httpx").setLevel(logging.WARNING)
45
46 logger = logging.getLogger(__name__)
47
48 # Define configuration constants
49 URL = "https://domain.tld"
50 ADMIN_CHAT_ID = 123456
51 PORT = 8000
52 TOKEN = "123:ABC" # nsec B105
53
54
55 @dataclass
56 class WebhookUpdate:
57     """Simple dataclass to wrap a custom update type"""
58
59     user_id: int
60     payload: str
61
62
63 class CustomContext(CallbackContext[ExtBot, dict, dict, dict]):
64     """
65     Custom CallbackContext class that makes `user_data` available for updates of type
66     `WebhookUpdate`.
67     """
68
69     @classmethod
70     def from_update(
71         cls,
72         update: object,
73         application: "Application",
74     ) -> "CustomContext":
75         if isinstance(update, WebhookUpdate):
76             return cls(application=application, user_id=update.user_id)
77         return super().from_update(update, application)
78
79
80 async def start(update: Update, context: CustomContext) -> None:
81     """Display a message with instructions on how to use this bot."""
82     payload_url = html.escape(f"{URL}/submitpayload?user_id=<your user id>&payload=
83     ↪<payload>")
84     text = (

```

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```

84         f"To check if the bot is still running, call <code>{URL}/healthcheck</code>.\n\n"
85         f"To post a custom update, call <code>{payload_url}</code>."
86     )
87     await update.message.reply_html(text=text)
88
89
90 async def webhook_update(update: WebhookUpdate, context: CustomContext) -> None:
91     """Handle custom updates."""
92     chat_member = await context.bot.get_chat_member(chat_id=update.user_id, user_
93     id=update.user_id)
94     payloads = context.user_data.setdefault("payloads", [])
95     payloads.append(update.payload)
96     combined_payloads = "<code>\n• <code>".join(payloads)
97     text = (
98         f"The user {chat_member.user.mention_html()} has sent a new payload. "
99         f"So far they have sent the following payloads: \n\n• <code>{combined_
100     payloads}</code>"
101     )
102     await context.bot.send_message(chat_id=ADMIN_CHAT_ID, text=text, parse_
103     mode=ParseMode.HTML)
104
105
106 async def main() -> None:
107     """Set up PTB application and a web application for handling the incoming
108     requests."""
109     context_types = ContextTypes(context=CustomContext)
110     # Here we set updater to None because we want our custom webhook server to handle
111     # the updates
112     # and hence we don't need an Updater instance
113     application = (
114         Application.builder().token(TOKEN).updater(None).context_types(context_types).
115         build()
116     )
117
118     # register handlers
119     application.add_handler(CommandHandler("start", start))
120     application.add_handler(TypeHandler(type=WebhookUpdate, callback=webhook_update))
121
122     # Pass webhook settings to telegram
123     await application.bot.set_webhook(url=f"{URL}/telegram", allowed_updates=Update.
124     ALL_TYPES)
125
126     # Set up webserver
127     async def telegram(request: Request) -> Response:
128         """Handle incoming Telegram updates by putting them into the `update_queue`"""
129         await application.update_queue.put(
130             Update.de_json(data=await request.json(), bot=application.bot)
131         )
132         return Response()
133
134     async def custom_updates(request: Request) -> PlainTextResponse:
135         """
136         Handle incoming webhook updates by also putting them into the `update_queue`
137         if
138         the required parameters were passed correctly.

```

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```

131     """
132     try:
133         user_id = int(request.query_params["user_id"])
134         payload = request.query_params["payload"]
135     except KeyError:
136         return PlainTextResponse(
137             status_code=HTTPStatus.BAD_REQUEST,
138             content="Please pass both `user_id` and `payload` as query parameters.
139         ↪ ",
140         )
141     except ValueError:
142         return PlainTextResponse(
143             status_code=HTTPStatus.BAD_REQUEST,
144             content="The `user_id` must be a string!",
145         )
146
147     await application.update_queue.put(WebhookUpdate(user_id=user_id, ↪
148     ↪ payload=payload))
149     return PlainTextResponse("Thank you for the submission! It's being forwarded.
150     ↪ ")
151
152     async def health(_: Request) -> PlainTextResponse:
153         """For the health endpoint, reply with a simple plain text message."""
154         return PlainTextResponse(content="The bot is still running fine :)")
155
156     starlette_app = Starlette(
157         routes=[
158             Route("/telegram", telegram, methods=["POST"]),
159             Route("/healthcheck", health, methods=["GET"]),
160             Route("/submitpayload", custom_updates, methods=["POST", "GET"]),
161         ]
162     )
163
164     webserver = uvicorn.Server(
165         config=uvicorn.Config(
166             app=starlette_app,
167             port=PORT,
168             use_colors=False,
169             host="127.0.0.1",
170         )
171     )
172
173     # Run application and webserver together
174     async with application:
175         await application.start()
176         await webserver.serve()
177         await application.stop()
178
179 if __name__ == "__main__":
180     asyncio.run(main())

```

```

1  #!/usr/bin/env python
2  # This program is dedicated to the public domain under the CC0 license.
3  # pylint: disable=import-error,unused-argument
4  """
5  Simple example of a bot that uses a custom webhook setup and handles custom updates.

```

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For the custom webhook setup, the libraries `flask`, `asgiref` and `uvicorn` are used. ↵  
 ↵ Please  
 install them as `pip install flask[async]~=2.3.2 uvicorn~=0.23.2 asgiref~=3.7.2`.  
 Note that any other `asyncio` based web server framework can be used for a custom ↵  
 ↵ webhook setup  
 just as well.

**Usage:**

Set bot Token, URL, admin CHAT\_ID and PORT after the imports.  
 You may also need to change the `listen` value in the uvicorn configuration to match ↵  
 ↵ your setup.

Press Ctrl-C on the command line or send a signal to the process to stop the bot.  
 """

```
import asyncio
import html
import logging
from dataclasses import dataclass
from http import HTTPStatus

import uvicorn
from asgiref.wsgi import WsgiToAsgi
from flask import Flask, Response, abort, make_response, request

from telegram import Update
from telegram.constants import ParseMode
from telegram.ext import (
    Application,
    CallbackContext,
    CommandHandler,
    ContextTypes,
    ExtBot,
    TypeHandler,
)

# Enable logging
logging.basicConfig(
    format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
)

# set higher logging level for httpx to avoid all GET and POST requests being logged
logging.getLogger("httpx").setLevel(logging.WARNING)

logger = logging.getLogger(__name__)

# Define configuration constants
URL = "https://domain.tld"
ADMIN_CHAT_ID = 123456
PORT = 8000
TOKEN = "123:ABC" # nsec B105

@dataclass
class WebhookUpdate:
    """Simple dataclass to wrap a custom update type"""

    user_id: int
    payload: str
```

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```

59
60
61 class CustomContext(CallbackContext[ExtBot, dict, dict]):
62     """
63     Custom CallbackContext class that makes `user_data` available for updates of type
64     `WebhookUpdate`.
65     """
66
67     @classmethod
68     def from_update(
69         cls,
70         update: object,
71         application: "Application",
72     ) -> "CustomContext":
73         if isinstance(update, WebhookUpdate):
74             return cls(application=application, user_id=update.user_id)
75         return super().from_update(update, application)
76
77
78 async def start(update: Update, context: CustomContext) -> None:
79     """Display a message with instructions on how to use this bot."""
80     payload_url = html.escape(f"{URL}/submitpayload?user_id=<your user id>&payload=
81     <payload>")
82     text = (
83         f"To check if the bot is still running, call <code>{URL}/healthcheck</code>.\n
84         <n\n"
85         f"To post a custom update, call <code>{payload_url}</code>."
86     )
87     await update.message.reply_html(text=text)
88
89
90 async def webhook_update(update: WebhookUpdate, context: CustomContext) -> None:
91     """Handle custom updates."""
92     chat_member = await context.bot.get_chat_member(chat_id=update.user_id, user_
93     id=update.user_id)
94     payloads = context.user_data.setdefault("payloads", [])
95     payloads.append(update.payload)
96     combined_payloads = "</code>\n• <code>".join(payloads)
97     text = (
98         f"The user {chat_member.user.mention_html()} has sent a new payload. "
99         f"So far they have sent the following payloads: \n\n• <code>{combined_
100     payloads}</code>"
101     )
102     await context.bot.send_message(chat_id=ADMIN_CHAT_ID, text=text, parse_
103     mode=ParseMode.HTML)
104
105
106 async def main() -> None:
107     """Set up PTB application and a web application for handling the incoming_
108     requests."""
109     context_types = ContextTypes(context=CustomContext)
110     # Here we set updater to None because we want our custom webhook server to handle_
111     the updates
112     # and hence we don't need an Updater instance
113     application = (
114         Application.builder().token(TOKEN).updater(None).context_types(context_types).

```

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```

108     ↪ build()
109     )
110
111     # register handlers
112     application.add_handler(CommandHandler("start", start))
113     application.add_handler(TypeHandler(type=WebhookUpdate, callback=webhook_update))
114
115     # Pass webhook settings to telegram
116     ↪ await application.bot.set_webhook(url=f"{URL}/telegram", allowed_updates=Update.
117     ↪ ALL_TYPES)
118
119     # Set up webserver
120     flask_app = Flask(__name__)
121
122     @flask_app.post("/telegram") # type: ignore[misc]
123     ↪ async def telegram() -> Response:
124         """Handle incoming Telegram updates by putting them into the `update_queue`"""
125         ↪ await application.update_queue.put(Update.de_json(data=request.json, ↪
126         ↪ bot=application.bot))
127         ↪ return Response(status=HTTPStatus.OK)
128
129     @flask_app.route("/submitpayload", methods=["GET", "POST"]) # type: ignore[misc]
130     ↪ async def custom_updates() -> Response:
131         """
132         ↪ Handle incoming webhook updates by also putting them into the `update_queue` ↪
133         ↪ the required parameters were passed correctly.
134         ↪ """
135         ↪ try:
136             ↪ user_id = int(request.args["user_id"])
137             ↪ payload = request.args["payload"]
138             ↪ except KeyError:
139                 ↪ abort(
140                     ↪ HTTPStatus.BAD_REQUEST,
141                     ↪ "Please pass both `user_id` and `payload` as query parameters.",
142                 )
143             ↪ except ValueError:
144                 ↪ abort(HTTPStatus.BAD_REQUEST, "The `user_id` must be a string!")
145
146             ↪ await application.update_queue.put(WebhookUpdate(user_id=user_id, ↪
147             ↪ payload=payload))
148             ↪ return Response(status=HTTPStatus.OK)
149
150     @flask_app.get("/healthcheck") # type: ignore[misc]
151     ↪ async def health() -> Response:
152         """For the health endpoint, reply with a simple plain text message."""
153         ↪ response = make_response("The bot is still running fine :)", HTTPStatus.OK)
154         ↪ response.mimetype = "text/plain"
155         ↪ return response
156
157     webserver = uvicorn.Server(
158         ↪ config=uvicorn.Config(
159             ↪ app=WsgiToAsgi(flask_app),
160             ↪ port=PORT,
161             ↪ use_colors=False,
162             ↪ host="127.0.0.1",

```

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```

159         )
160     )
161
162     # Run application and webserver together
163     async with application:
164         await application.start()
165         await webserver.serve()
166         await application.stop()
167
168
169 if __name__ == "__main__":
170     asyncio.run(main())

```

```

1  #!/usr/bin/env python
2  # This program is dedicated to the public domain under the CC0 license.
3  # pylint: disable=import-error,unused-argument
4  """
5
6  Simple example of a bot that uses a custom webhook setup and handles custom updates.
7  For the custom webhook setup, the libraries `quart` and `uvicorn` are used. Please
8  install them as `pip install quart~=0.18.4 uvicorn~=0.23.2`.
9  Note that any other `asyncio` based web server framework can be used for a custom
10 ↪webhook setup
11 just as well.
12
13 Usage:
14 Set bot Token, URL, admin CHAT_ID and PORT after the imports.
15 You may also need to change the `listen` value in the uvicorn configuration to match
16 ↪your setup.
17 Press Ctrl-C on the command line or send a signal to the process to stop the bot.
18 """
19
20 import asyncio
21 import html
22 import logging
23 from dataclasses import dataclass
24 from http import HTTPStatus
25
26 import uvicorn
27 from quart import Quart, Response, abort, make_response, request
28
29 from telegram import Update
30 from telegram.constants import ParseMode
31 from telegram.ext import (
32     Application,
33     CallbackContext,
34     CommandHandler,
35     ContextTypes,
36     ExtBot,
37     TypeHandler,
38 )
39
40 # Enable logging
41 logging.basicConfig(
42     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
43 )
44 # set higher logging level for httpx to avoid all GET and POST requests being logged
45 logging.getLogger("httpx").setLevel(logging.WARNING)

```

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```

42 logger = logging.getLogger(__name__)
43
44 # Define configuration constants
45 URL = "https://domain.tld"
46 ADMIN_CHAT_ID = 123456
47 PORT = 8000
48 TOKEN = "123:ABC" # nsec B105
49
50
51
52 @dataclass
53 class WebhookUpdate:
54     """Simple dataclass to wrap a custom update type"""
55
56     user_id: int
57     payload: str
58
59
60 class CustomContext(CallbackContext[ExtBot, dict, dict, dict]):
61     """
62     Custom CallbackContext class that makes `user_data` available for updates of type
63     `WebhookUpdate`.
64     """
65
66     @classmethod
67     def from_update(
68         cls,
69         update: object,
70         application: "Application",
71     ) -> "CustomContext":
72         if isinstance(update, WebhookUpdate):
73             return cls(application=application, user_id=update.user_id)
74         return super().from_update(update, application)
75
76
77 async def start(update: Update, context: CustomContext) -> None:
78     """Display a message with instructions on how to use this bot."""
79     payload_url = html.escape(f"{URL}/submitpayload?user_id=<your user id>&payload=
80     ↪<payload>")
81     text = (
82         f"To check if the bot is still running, call <code>{URL}/healthcheck</code>.\n
83     ↪\n\n"
84         f"To post a custom update, call <code>{payload_url}</code>."
85     )
86     await update.message.reply_html(text=text)
87
88
89 async def webhook_update(update: WebhookUpdate, context: CustomContext) -> None:
90     """Handle custom updates."""
91     chat_member = await context.bot.get_chat_member(chat_id=update.user_id, user_
92     ↪id=update.user_id)
93     payloads = context.user_data.setdefault("payloads", [])
94     payloads.append(update.payload)
95     combined_payloads = "<code>\n• <code>".join(payloads)
96     text = (
97         f"The user {chat_member.user.mention_html()} has sent a new payload. "

```

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```
f" So far they have sent the following payloads: \n\n• <code>{combined_
payloads}</code>"
    )
    await context.bot.send_message(chat_id=ADMIN_CHAT_ID, text=text, parse_
mode=ParseMode.HTML)

async def main() -> None:
    """Set up PTB application and a web application for handling the incoming
requests."""
    context_types = ContextTypes(context=CustomContext)
    # Here we set updater to None because we want our custom webhook server to handle
the updates
    # and hence we don't need an Updater instance
    application = (
        Application.builder().token(TOKEN).updater(None).context_types(context_types).
build()
    )

    # register handlers
    application.add_handler(CommandHandler("start", start))
    application.add_handler(TypeHandler(type=WebhookUpdate, callback=webhook_update))

    # Pass webhook settings to telegram
    await application.bot.set_webhook(url=f"{URL}/telegram", allowed_updates=Update.
ALL_TYPES)

    # Set up webserver
    quart_app = Quart(__name__)

    @quart_app.post("/telegram") # type: ignore[misc]
    async def telegram() -> Response:
        """Handle incoming Telegram updates by putting them into the `update_queue`"""
        await application.update_queue.put(
            Update.de_json(data=await request.get_json(), bot=application.bot)
        )
        return Response(status=HTTPStatus.OK)

    @quart_app.route("/submitpayload", methods=["GET", "POST"]) # type: ignore[misc]
    async def custom_updates() -> Response:
        """
        Handle incoming webhook updates by also putting them into the `update_queue`
        if
        the required parameters were passed correctly.
        """
        try:
            user_id = int(request.args["user_id"])
            payload = request.args["payload"]
        except KeyError:
            abort(
                HTTPStatus.BAD_REQUEST,
                "Please pass both `user_id` and `payload` as query parameters.",
            )
        except ValueError:
            abort(HTTPStatus.BAD_REQUEST, "The `user_id` must be a string!")
```

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```

144     await application.update_queue.put(WebhookUpdate(user_id=user_id,
↳ payload=payload))
145     return Response(status=HTTPStatus.OK)
146
147     @quart_app.get("/healthcheck") # type: ignore[misc]
148     async def health() -> Response:
149         """For the health endpoint, reply with a simple plain text message."""
150         response = await make_response("The bot is still running fine :)", HTTPStatus.
↳ OK)
151         response.mimetype = "text/plain"
152         return response
153
154     webserver = uvicorn.Server(
155         config=uvicorn.Config(
156             app=quart_app,
157             port=PORT,
158             use_colors=False,
159             host="127.0.0.1",
160         )
161     )
162
163     # Run application and webserver together
164     async with application:
165         await application.start()
166         await webserver.serve()
167         await application.stop()
168
169
170 if __name__ == "__main__":
171     asyncio.run(main())

```

```

1  #!/usr/bin/env python
2  # This program is dedicated to the public domain under the CC0 license.
3  # pylint: disable=import-error,unused-argument
4  """
5  Simple example of a bot that uses a custom webhook setup and handles custom updates.
6  For the custom webhook setup, the libraries `Django` and `uvicorn` are used. Please
7  install them as `pip install Django~=4.2.4 uvicorn~=0.23.2`.
8  Note that any other `asyncio` based web server framework can be used for a custom
↳ webhook setup
9  just as well.
10
11  Usage:
12  Set bot Token, URL, admin CHAT_ID and PORT after the imports.
13  You may also need to change the `listen` value in the uvicorn configuration to match
↳ your setup.
14  Press Ctrl-C on the command line or send a signal to the process to stop the bot.
15  """
16  import asyncio
17  import html
18  import json
19  import logging
20  from dataclasses import dataclass
21  from uuid import uuid4
22
23  import uvicorn

```

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```

24 from django.conf import settings
25 from django.core.asgi import get_asgi_application
26 from django.http import HttpRequest, HttpResponse, HttpResponseBadRequest
27 from django.urls import path
28
29 from telegram import Update
30 from telegram.constants import ParseMode
31 from telegram.ext import (
32     Application,
33     CallbackContext,
34     CommandHandler,
35     ContextTypes,
36     ExtBot,
37     TypeHandler,
38 )
39
40 # Enable logging
41 logging.basicConfig(
42     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
43 )
44 # set higher logging level for httpx to avoid all GET and POST requests being logged
45 logging.getLogger("httpx").setLevel(logging.WARNING)
46
47 logger = logging.getLogger(__name__)
48
49 # Define configuration constants
50 URL = "https://domain.tld"
51 ADMIN_CHAT_ID = 123456
52 PORT = 8000
53 TOKEN = "123:ABC" # nsec B105
54
55
56 @dataclass
57 class WebhookUpdate:
58     """Simple dataclass to wrap a custom update type"""
59
60     user_id: int
61     payload: str
62
63
64 class CustomContext(CallbackContext[ExtBot, dict, dict, dict]):
65     """
66     Custom CallbackContext class that makes `user_data` available for updates of type
67     `WebhookUpdate`.
68     """
69
70     @classmethod
71     def from_update(
72         cls,
73         update: object,
74         application: "Application",
75     ) -> "CustomContext":
76         if isinstance(update, WebhookUpdate):
77             return cls(application=application, user_id=update.user_id)
78         return super().from_update(update, application)
79

```

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```

80
81 async def start(update: Update, context: CustomContext) -> None:
82     """Display a message with instructions on how to use this bot."""
83     payload_url = html.escape(f"{URL}/submitpayload?user_id=<your user id>&payload=
84     ↪<payload>")
85     text = (
86         f"To check if the bot is still running, call <code>{URL}/healthcheck</code>.\n
87     ↪\n\n"
88         f"To post a custom update, call <code>{payload_url}</code>."
89     )
90     await update.message.reply_html(text=text)
91
92 async def webhook_update(update: WebhookUpdate, context: CustomContext) -> None:
93     """Handle custom updates."""
94     chat_member = await context.bot.get_chat_member(chat_id=update.user_id, user_
95     ↪id=update.user_id)
96     payloads = context.user_data.setdefault("payloads", [])
97     payloads.append(update.payload)
98     combined_payloads = "</code>\n• <code>".join(payloads)
99     text = (
100         f"The user {chat_member.user.mention_html()} has sent a new payload. "
101         ↪f"So far they have sent the following payloads: \n\n• <code>{combined_
102         ↪payloads}</code>"
103     )
104     await context.bot.send_message(chat_id=ADMIN_CHAT_ID, text=text, parse_
105     ↪mode=ParseMode.HTML)
106
107 async def telegram(request: HttpRequest) -> HttpResponse:
108     """Handle incoming Telegram updates by putting them into the `update_queue`"""
109     await ptb_application.update_queue.put(
110         Update.de_json(data=json.loads(request.body), bot=ptb_application.bot)
111     )
112     return HttpResponse()
113
114 async def custom_updates(request: HttpRequest) -> HttpResponse:
115     """
116     Handle incoming webhook updates by also putting them into the `update_queue` if
117     the required parameters were passed correctly.
118     """
119     try:
120         user_id = int(request.GET["user_id"])
121         payload = request.GET["payload"]
122     except KeyError:
123         return HttpResponseBadRequest(
124             "Please pass both `user_id` and `payload` as query parameters.",
125         )
126     except ValueError:
127         return HttpResponseBadRequest("The `user_id` must be a string!")
128
129     await ptb_application.update_queue.put(WebhookUpdate(user_id=user_id,
130     ↪payload=payload))
131     return HttpResponse()

```

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```

130
131 async def health(_: HttpRequest) -> HttpResponse:
132     """For the health endpoint, reply with a simple plain text message."""
133     return HttpResponse("The bot is still running fine :)")
134
135
136 # Set up PTB application and a web application for handling the incoming requests.
137
138 context_types = ContextTypes(context=CustomContext)
139 # Here we set updater to None because we want our custom webhook server to handle the
140 ↪ updates
141 # and hence we don't need an Updater instance
142 ptb_application = (
143     Application.builder().token(TOKEN).updater(None).context_types(context_types).
144     ↪ build()
145 )
146
147 # register handlers
148 ptb_application.add_handler(CommandHandler("start", start))
149 ptb_application.add_handler(TypeHandler(type=WebhookUpdate, callback=webhook_update))
150
151 urlpatterns = [
152     path("telegram", telegram, name="Telegram updates"),
153     path("submitpayload", custom_updates, name="custom updates"),
154     path("healthcheck", health, name="health check"),
155 ]
156
157 settings.configure(ROOT_URLCONF=__name__, SECRET_KEY=uuid4().hex)
158
159
160 async def main() -> None:
161     """Finalize configuration and run the applications."""
162     webserver = uvicorn.Server(
163         config=uvicorn.Config(
164             app=get_asgi_application(),
165             port=PORT,
166             use_colors=False,
167             host="127.0.0.1",
168         )
169     )
170
171     # Pass webhook settings to telegram
172     await ptb_application.bot.set_webhook(url=f"{URL}/telegram", allowed_
173     ↪ updates=Update.ALL_TYPES)
174
175     # Run application and webserver together
176     async with ptb_application:
177         await ptb_application.start()
178         await webserver.serve()
179         await ptb_application.stop()
180
181 if __name__ == "__main__":
182     asyncio.run(main())
183

```

## deeplinking.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """Bot that explains Telegram's "Deep Linking Parameters" functionality.
6
7  This program is dedicated to the public domain under the CC0 license.
8
9  This Bot uses the Application class to handle the bot.
10
11 First, a few handler functions are defined. Then, those functions are passed to
12 the Application and registered at their respective places.
13 Then, the bot is started and runs until we press Ctrl-C on the command line.
14
15 Usage:
16 Deep Linking example. Send /start to get the link.
17 Press Ctrl-C on the command line or send a signal to the process to stop the
18 bot.
19 """
20
21 import logging
22
23 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update, helpers
24 from telegram.constants import ParseMode
25 from telegram.ext import Application, CallbackQueryHandler, CommandHandler, ContextTypes, filters
26
27 # Enable logging
28 logging.basicConfig(
29     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
30 )
31
32 # set higher logging level for httpx to avoid all GET and POST requests being logged
33 logging.getLogger("httpx").setLevel(logging.WARNING)
34
35 logger = logging.getLogger(__name__)
36
37 # Define constants that will allow us to reuse the deep-linking parameters.
38 CHECK_THIS_OUT = "check-this-out"
39 USING_ENTITIES = "using-entities-here"
40 USING_KEYBOARD = "using-keyboard-here"
41 SO_COOL = "so-cool"
42
43 # Callback data to pass in 3rd level deep-linking
44 KEYBOARD_CALLBACKDATA = "keyboard-callback-data"
45
46
47 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
48     """Send a deep-linked URL when the command /start is issued."""
49     bot = context.bot
50     url = helpers.create_deep_linked_url(bot.username, CHECK_THIS_OUT, group=True)
51     text = "Feel free to tell your friends about it:\n\n" + url
52     await update.message.reply_text(text)
53
54

```

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```

55 async def deep_linked_level_1(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
56     """Reached through the CHECK_THIS_OUT payload"""
57     bot = context.bot
58     url = helpers.create_deep_linked_url(bot.username, SO_COOL)
59     text = (
60         "Awesome, you just accessed hidden functionality! Now let's get back to the
↳ private chat."
61     )
62     keyboard = InlineKeyboardMarkup.from_button(
63         InlineKeyboardButton(text="Continue here!", url=url)
64     )
65     await update.message.reply_text(text, reply_markup=keyboard)
66
67
68 async def deep_linked_level_2(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
69     """Reached through the SO_COOL payload"""
70     bot = context.bot
71     url = helpers.create_deep_linked_url(bot.username, USING_ENTITIES)
72     text = f'You can also mask the deep-linked URLs as links: <a href="{url}"> CLICK
↳ HERE</a>.'
73     await update.message.reply_text(text, parse_mode=ParseMode.HTML, disable_web_page_
↳ preview=True)
74
75
76 async def deep_linked_level_3(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
77     """Reached through the USING_ENTITIES payload"""
78     await update.message.reply_text(
79         "It is also possible to make deep-linking using InlineKeyboardButtons.",
80         reply_markup=InlineKeyboardMarkup(
81             [[InlineKeyboardButton(text="Like this!", callback_data=KEYBOARD_
↳ CALLBACKDATA)]]
82         ),
83     )
84
85
86 async def deep_link_level_3_callback(update: Update, context: ContextTypes.DEFAULT_
↳ TYPE) -> None:
87     """Answers CallbackQuery with deeplinking url."""
88     bot = context.bot
89     url = helpers.create_deep_linked_url(bot.username, USING_KEYBOARD)
90     await update.callback_query.answer(url=url)
91
92
93 async def deep_linked_level_4(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
94     """Reached through the USING_KEYBOARD payload"""
95     payload = context.args
96     await update.message.reply_text(
97         f"Congratulations! This is as deep as it gets \n\nThe payload was: {payload}"
98     )
99
100
101 def main() -> None:

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```

102 """Start the bot."""
103 # Create the Application and pass it your bot's token.
104 application = Application.builder().token("TOKEN").build()
105
106 # More info on what deep linking actually is (read this first if it's unclear to
107 ↪you):
108 # https://core.telegram.org/bots/features#deep-linking
109
110 # Register a deep-linking handler
111 application.add_handler(
112     CommandHandler("start", deep_linked_level_1, filters.Regex(CHECK_THIS_OUT))
113 )
114
115 # This one works with a textual link instead of an URL
116 ↪application.add_handler(CommandHandler("start", deep_linked_level_2, filters.
117 ↪Regex(SO_COOL)))
118
119 # We can also pass on the deep-linking payload
120 application.add_handler(
121     CommandHandler("start", deep_linked_level_3, filters.Regex(USING_ENTITIES))
122 )
123
124 # Possible with inline keyboard buttons as well
125 application.add_handler(
126     CommandHandler("start", deep_linked_level_4, filters.Regex(USING_KEYBOARD))
127 )
128
129 # register callback handler for inline keyboard button
130 application.add_handler(
131     CallbackQueryHandler(deep_link_level_3_callback, pattern=KEYBOARD_
132 ↪CALLBACKDATA)
133 )
134
135 # Make sure the deep-linking handlers occur *before* the normal /start handler.
136 application.add_handler(CommandHandler("start", start))
137
138 # Run the bot until the user presses Ctrl-C
139 application.run_polling(allowed_updates=Update.ALL_TYPES)
140
141 if __name__ == "__main__":
142     main()

```

### echobot.py

```

1 #!/usr/bin/env python
2 # pylint: disable=unused-argument
3 # This program is dedicated to the public domain under the CC0 license.
4
5 """
6 Simple Bot to reply to Telegram messages.
7
8 First, a few handler functions are defined. Then, those functions are passed to
9 the Application and registered at their respective places.
10 Then, the bot is started and runs until we press Ctrl-C on the command line.

```

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```

11
12 Usage:
13 Basic Echobot example, repeats messages.
14 Press Ctrl-C on the command line or send a signal to the process to stop the
15 bot.
16 """
17
18 import logging
19
20 from telegram import ForceReply, Update
21 from telegram.ext import Application, CommandHandler, ContextTypes, MessageHandler, filters
22
23 # Enable logging
24 logging.basicConfig(
25     format="%(asctime)s - (name)s - (levelname)s - (message)s", level=logging.INFO
26 )
27 # set higher logging level for httpx to avoid all GET and POST requests being logged
28 logging.getLogger("httpx").setLevel(logging.WARNING)
29
30 logger = logging.getLogger(__name__)
31
32
33 # Define a few command handlers. These usually take the two arguments update and
34 # context.
35 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
36     """Send a message when the command /start is issued."""
37     user = update.effective_user
38     await update.message.reply_html(
39         rf"Hi {user.mention_html()}!",
40         reply_markup=ForceReply(selective=True),
41     )
42
43
44 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
45     """Send a message when the command /help is issued."""
46     await update.message.reply_text("Help!")
47
48
49 async def echo(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
50     """Echo the user message."""
51     await update.message.reply_text(update.message.text)
52
53
54 def main() -> None:
55     """Start the bot."""
56     # Create the Application and pass it your bot's token.
57     application = Application.builder().token("TOKEN").build()
58
59     # on different commands - answer in Telegram
60     application.add_handler(CommandHandler("start", start))
61     application.add_handler(CommandHandler("help", help_command))
62
63     # on non command i.e message - echo the message on Telegram
64     application.add_handler(MessageHandler(filters.TEXT & ~filters.COMMAND, echo))
65

```

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```

66     # Run the bot until the user presses Ctrl-C
67     application.run_polling(allowed_updates=Update.ALL_TYPES)
68
69
70 if __name__ == "__main__":
71     main()

```

**errorhandlerbot.py**

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """This is a very simple example on how one could implement a custom error handler."""
6  import html
7  import json
8  import logging
9  import traceback
10
11 from telegram import Update
12 from telegram.constants import ParseMode
13 from telegram.ext import Application, CommandHandler, ContextTypes
14
15 # Enable logging
16 logging.basicConfig(
17     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
18 )
19 # set higher logging level for httpx to avoid all GET and POST requests being logged
20 logging.getLogger("httpx").setLevel(logging.WARNING)
21
22 logger = logging.getLogger(__name__)
23
24 # This can be your own ID, or one for a developer group/channel.
25 # You can use the /start command of this bot to see your chat id.
26 DEVELOPER_CHAT_ID = 123456789
27
28
29 async def error_handler(update: object, context: ContextTypes.DEFAULT_TYPE) -> None:
30     """Log the error and send a telegram message to notify the developer."""
31     # Log the error before we do anything else, so we can see it even if something
32     ↪ breaks.
33     logger.error("Exception while handling an update:", exc_info=context.error)
34
35     # traceback.format_exception returns the usual python message about an exception,
36     ↪ but as a
37     # list of strings rather than a single string, so we have to join them together.
38     tb_list = traceback.format_exception(None, context.error, context.error.__
39     ↪ traceback__)
40     tb_string = "".join(tb_list)
41
42     # Build the message with some markup and additional information about what
43     ↪ happened.
44     # You might need to add some logic to deal with messages longer than the 4096
45     ↪ character limit.
46     update_str = update.to_dict() if isinstance(update, Update) else str(update)

```

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```

42     message = (
43         "An exception was raised while handling an update\n"
44         f"<pre>update = {html.escape(json.dumps(update_str, indent=2, ensure_
↪ascii=False))}"
45         "</pre>\n\n"
46         f"<pre>context.chat_data = {html.escape(str(context.chat_data))}</pre>\n\n"
47         f"<pre>context.user_data = {html.escape(str(context.user_data))}</pre>\n\n"
48         f"<pre>{html.escape(tb_string)}</pre>"
49     )
50
51     # Finally, send the message
52     await context.bot.send_message(
53         chat_id=DEVELOPER_CHAT_ID, text=message, parse_mode=ParseMode.HTML
54     )
55
56
57 async def bad_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
58     """Raise an error to trigger the error handler."""
59     await context.bot.wrong_method_name() # type: ignore[attr-defined]
60
61
62 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
63     """Displays info on how to trigger an error."""
64     await update.effective_message.reply_html(
65         "Use /bad_command to cause an error.\n"
66         f"Your chat id is <code>{update.effective_chat.id}</code>."
67     )
68
69
70 def main() -> None:
71     """Run the bot."""
72     # Create the Application and pass it your bot's token.
73     application = Application.builder().token("TOKEN").build()
74
75     # Register the commands...
76     application.add_handler(CommandHandler("start", start))
77     application.add_handler(CommandHandler("bad_command", bad_command))
78
79     # ...and the error handler
80     application.add_error_handler(error_handler)
81
82     # Run the bot until the user presses Ctrl-C
83     application.run_polling(allowed_updates=Update.ALL_TYPES)
84
85
86 if __name__ == "__main__":
87     main()

```



## inlinebot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Don't forget to enable inline mode with @BotFather
7
8  First, a few handler functions are defined. Then, those functions are passed to
9  the Application and registered at their respective places.
10 Then, the bot is started and runs until we press Ctrl-C on the command line.
11
12 Usage:
13 Basic inline bot example. Applies different text transformations.
14 Press Ctrl-C on the command line or send a signal to the process to stop the
15 bot.
16 """
17 import logging
18 from html import escape
19 from uuid import uuid4
20
21 from telegram import InlineQueryResultArticle, InputTextMessageContent, Update
22 from telegram.constants import ParseMode
23 from telegram.ext import Application, CommandHandler, ContextTypes, InlineQueryHandler
24
25 # Enable logging
26 logging.basicConfig(
27     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
28 )
29 # set higher logging level for httpx to avoid all GET and POST requests being logged
30 logging.getLogger("httpx").setLevel(logging.WARNING)
31
32 logger = logging.getLogger(__name__)
33
34
35 # Define a few command handlers. These usually take the two arguments update and
36 # context.
37 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
38     """Send a message when the command /start is issued."""
39     await update.message.reply_text("Hi!")
40
41
42 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
43     """Send a message when the command /help is issued."""
44     await update.message.reply_text("Help!")
45
46
47 async def inline_query(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
48     """Handle the inline query. This is run when you type: @botusername <query>"""
49     query = update.inline_query.query
50
51     if not query: # empty query should not be handled
52         return
53
54     results = [
55         InlineQueryResultArticle(

```

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```

56         id=str(uuid4()),
57         title="Caps",
58         input_message_content=InputTextMessageContent(query.upper()),
59     ),
60     InlineQueryResultArticle(
61         id=str(uuid4()),
62         title="Bold",
63         input_message_content=InputTextMessageContent(
64             f"<b>{escape(query)}</b>", parse_mode=ParseMode.HTML
65         ),
66     ),
67     InlineQueryResultArticle(
68         id=str(uuid4()),
69         title="Italic",
70         input_message_content=InputTextMessageContent(
71             f"<i>{escape(query)}</i>", parse_mode=ParseMode.HTML
72         ),
73     ),
74 ]
75
76 await update.inline_query.answer(results)
77
78
79 def main() -> None:
80     """Run the bot."""
81     # Create the Application and pass it your bot's token.
82     application = Application.builder().token("TOKEN").build()
83
84     # on different commands - answer in Telegram
85     application.add_handler(CommandHandler("start", start))
86     application.add_handler(CommandHandler("help", help_command))
87
88     # on inline queries - show corresponding inline results
89     application.add_handler(InlineQueryHandler(inline_query))
90
91     # Run the bot until the user presses Ctrl-C
92     application.run_polling(allowed_updates=Update.ALL_TYPES)
93
94
95 if __name__ == "__main__":
96     main()

```

### inlinekeyboard.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Basic example for a bot that uses inline keyboards. For an in-depth explanation,
7  ↪ check out
8  https://github.com/python-telegram-bot/python-telegram-bot/wiki/InlineKeyboard-
9  ↪ Example.
10 """
11
12 import logging

```

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```

10
11 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
12 from telegram.ext import Application, CallbackQueryHandler, CommandHandler,
13     ContextTypes
14
15 # Enable logging
16 logging.basicConfig(
17     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
18 )
19 # set higher logging level for httpx to avoid all GET and POST requests being logged
20 logging.getLogger("httpx").setLevel(logging.WARNING)
21
22 logger = logging.getLogger(__name__)
23
24 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
25     """Sends a message with three inline buttons attached."""
26     keyboard = [
27         [
28             InlineKeyboardButton("Option 1", callback_data="1"),
29             InlineKeyboardButton("Option 2", callback_data="2"),
30         ],
31         [InlineKeyboardButton("Option 3", callback_data="3")],
32     ]
33
34     reply_markup = InlineKeyboardMarkup(keyboard)
35
36     await update.message.reply_text("Please choose:", reply_markup=reply_markup)
37
38
39 async def button(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
40     """Parses the CallbackQuery and updates the message text."""
41     query = update.callback_query
42
43     # CallbackQueries need to be answered, even if no notification to the user is
44     # needed
45     # Some clients may have trouble otherwise. See https://core.telegram.org/bots/api
46     # #callbackquery
47     await query.answer()
48
49     await query.edit_message_text(text=f"Selected option: {query.data}")
50
51
52 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
53     """Displays info on how to use the bot."""
54     await update.message.reply_text("Use /start to test this bot.")
55
56
57 def main() -> None:
58     """Run the bot."""
59     # Create the Application and pass it your bot's token.
60     application = Application.builder().token("TOKEN").build()
61
62     application.add_handler(CommandHandler("start", start))
63     application.add_handler(CallbackQueryHandler(button))
64     application.add_handler(CommandHandler("help", help_command))

```

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```

63     # Run the bot until the user presses Ctrl-C
64     application.run_polling(allowed_updates=Update.ALL_TYPES)
65
66
67
68 if __name__ == "__main__":
69     main()

```

**inlinekeyboard2.py**

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """Simple inline keyboard bot with multiple CallbackQueryHandlers.
6
7  This Bot uses the Application class to handle the bot.
8  First, a few callback functions are defined as callback query handler. Then, those
9  ↪ functions are
10 passed to the Application and registered at their respective places.
11 Then, the bot is started and runs until we press Ctrl-C on the command line.
12 Usage:
13 Example of a bot that uses inline keyboard that has multiple CallbackQueryHandlers
14 ↪ arranged in a
15 ConversationHandler.
16 Send /start to initiate the conversation.
17 Press Ctrl-C on the command line to stop the bot.
18 """
19 import logging
20
21 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
22 from telegram.ext import (
23     Application,
24     CallbackQueryHandler,
25     CommandHandler,
26     ContextTypes,
27     ConversationHandler,
28 )
29
30 # Enable logging
31 logging.basicConfig(
32     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
33 )
34 # set higher logging level for httpx to avoid all GET and POST requests being logged
35 logging.getLogger("httpx").setLevel(logging.WARNING)
36
37 logger = logging.getLogger(__name__)
38
39 # Stages
40 START_ROUTES, END_ROUTES = range(2)
41 # Callback data
42 ONE, TWO, THREE, FOUR = range(4)
43
44 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:

```

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```

44     """Send message on `/start`."""
45     # Get user that sent /start and log his name
46     user = update.message.from_user
47     logger.info("User %s started the conversation.", user.first_name)
48     # Build InlineKeyboard where each button has a displayed text
49     # and a string as callback_data
50     # The keyboard is a list of button rows, where each row is in turn
51     # a list (hence `[...]`).
52     keyboard = [
53         [
54             InlineKeyboardButton("1", callback_data=str(ONE)),
55             InlineKeyboardButton("2", callback_data=str(TWO)),
56         ]
57     ]
58     reply_markup = InlineKeyboardMarkup(keyboard)
59     # Send message with text and appended InlineKeyboard
60     await update.message.reply_text("Start handler, Choose a route", reply_
↪ markup=reply_markup)
61     # Tell ConversationHandler that we're in state `FIRST` now
62     return START_ROUTES
63
64
65 async def start_over(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
66     """Prompt same text & keyboard as `start` does but not as new message"""
67     # Get CallbackQuery from Update
68     query = update.callback_query
69     # CallbackQueries need to be answered, even if no notification to the user is
↪ needed
70     # Some clients may have trouble otherwise. See https://core.telegram.org/bots/api
↪ #callbackquery
71     await query.answer()
72     keyboard = [
73         [
74             InlineKeyboardButton("1", callback_data=str(ONE)),
75             InlineKeyboardButton("2", callback_data=str(TWO)),
76         ]
77     ]
78     reply_markup = InlineKeyboardMarkup(keyboard)
79     # Instead of sending a new message, edit the message that
80     # originated the CallbackQuery. This gives the feeling of an
81     # interactive menu.
82     await query.edit_message_text(text="Start handler, Choose a route", reply_
↪ markup=reply_markup)
83     return START_ROUTES
84
85
86 async def one(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
87     """Show new choice of buttons"""
88     query = update.callback_query
89     await query.answer()
90     keyboard = [
91         [
92             InlineKeyboardButton("3", callback_data=str(THREE)),
93             InlineKeyboardButton("4", callback_data=str(FOUR)),
94         ]
95     ]

```

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```

96     reply_markup = InlineKeyboardMarkup(keyboard)
97     await query.edit_message_text(
98         text="First CallbackQueryHandler, Choose a route", reply_markup=reply_markup
99     )
100     return START_ROUTES
101
102
103 async def two(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
104     """Show new choice of buttons"""
105     query = update.callback_query
106     await query.answer()
107     keyboard = [
108         [
109             InlineKeyboardButton("1", callback_data=str(ONE)),
110             InlineKeyboardButton("3", callback_data=str(THREE)),
111         ]
112     ]
113     reply_markup = InlineKeyboardMarkup(keyboard)
114     await query.edit_message_text(
115         text="Second CallbackQueryHandler, Choose a route", reply_markup=reply_markup
116     )
117     return START_ROUTES
118
119
120 async def three(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
121     """Show new choice of buttons. This is the end point of the conversation."""
122     query = update.callback_query
123     await query.answer()
124     keyboard = [
125         [
126             InlineKeyboardButton("Yes, let's do it again!", callback_data=str(ONE)),
127             InlineKeyboardButton("Nah, I've had enough ...", callback_data=str(TWO)),
128         ]
129     ]
130     reply_markup = InlineKeyboardMarkup(keyboard)
131     await query.edit_message_text(
132         text="Third CallbackQueryHandler. Do want to start over?", reply_markup=reply_
↩ markup
133     )
134     # Transfer to conversation state `SECOND`
135     return END_ROUTES
136
137
138 async def four(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
139     """Show new choice of buttons"""
140     query = update.callback_query
141     await query.answer()
142     keyboard = [
143         [
144             InlineKeyboardButton("2", callback_data=str(TWO)),
145             InlineKeyboardButton("3", callback_data=str(THREE)),
146         ]
147     ]
148     reply_markup = InlineKeyboardMarkup(keyboard)
149     await query.edit_message_text(
150         text="Fourth CallbackQueryHandler, Choose a route", reply_markup=reply_markup

```

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```

151     )
152     return START_ROUTES
153
154
155 async def end(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
156     """Returns `ConversationHandler.END`, which tells the
157     ConversationHandler that the conversation is over.
158     """
159     query = update.callback_query
160     await query.answer()
161     await query.edit_message_text(text="See you next time!")
162     return ConversationHandler.END
163
164
165 def main() -> None:
166     """Run the bot."""
167     # Create the Application and pass it your bot's token.
168     application = Application.builder().token("TOKEN").build()
169
170     # Setup conversation handler with the states FIRST and SECOND
171     # Use the pattern parameter to pass CallbackQueries with specific
172     # data pattern to the corresponding handlers.
173     # ^ means "start of line/string"
174     # $ means "end of line/string"
175     # So ^ABC$ will only allow 'ABC'
176     conv_handler = ConversationHandler(
177         entry_points=[CommandHandler("start", start)],
178         states={
179             START_ROUTES: [
180                 CallbackQueryHandler(one, pattern="^" + str(ONE) + "$"),
181                 CallbackQueryHandler(two, pattern="^" + str(TWO) + "$"),
182                 CallbackQueryHandler(three, pattern="^" + str(THREE) + "$"),
183                 CallbackQueryHandler(four, pattern="^" + str(FOUR) + "$"),
184             ],
185             END_ROUTES: [
186                 CallbackQueryHandler(start_over, pattern="^" + str(ONE) + "$"),
187                 CallbackQueryHandler(end, pattern="^" + str(TWO) + "$"),
188             ],
189         },
190         fallbacks=[CommandHandler("start", start)],
191     )
192
193     # Add ConversationHandler to application that will be used for handling updates
194     application.add_handler(conv_handler)
195
196     # Run the bot until the user presses Ctrl-C
197     application.run_polling(allowed_updates=Update.ALL_TYPES)
198
199
200 if __name__ == "__main__":
201     main()

```

## nestedconversationbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  First, a few callback functions are defined. Then, those functions are passed to
7  the Application and registered at their respective places.
8  Then, the bot is started and runs until we press Ctrl-C on the command line.
9
10 Usage:
11 Example of a bot-user conversation using nested ConversationHandlers.
12 Send /start to initiate the conversation.
13 Press Ctrl-C on the command line or send a signal to the process to stop the
14 bot.
15 """
16
17 import logging
18 from typing import Any, Dict, Tuple
19
20 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
21 from telegram.ext import (
22     Application,
23     CallbackQueryHandler,
24     CommandHandler,
25     ContextTypes,
26     ConversationHandler,
27     MessageHandler,
28     filters,
29 )
30
31 # Enable logging
32 logging.basicConfig(
33     format="%(%asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
34 )
35 # set higher logging level for httpx to avoid all GET and POST requests being logged
36 logging.getLogger("httpx").setLevel(logging.WARNING)
37
38 logger = logging.getLogger(__name__)
39
40 # State definitions for top level conversation
41 SELECTING_ACTION, ADDING_MEMBER, ADDING_SELF, DESCRIBING_SELF = map(chr, range(4))
42 # State definitions for second level conversation
43 SELECTING_LEVEL, SELECTING_GENDER = map(chr, range(4, 6))
44 # State definitions for descriptions conversation
45 SELECTING_FEATURE, TYPING = map(chr, range(6, 8))
46 # Meta states
47 STOPPING, SHOWING = map(chr, range(8, 10))
48 # Shortcut for ConversationHandler.END
49 END = ConversationHandler.END
50
51 # Different constants for this example
52 (
53     PARENTS,
54     CHILDREN,
55     SELF,

```

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```

56     GENDER,
57     MALE,
58     FEMALE,
59     AGE,
60     NAME,
61     START_OVER,
62     FEATURES,
63     CURRENT_FEATURE,
64     CURRENT_LEVEL,
65 ) = map(chr, range(10, 22))
66
67
68 # Helper
69 def _name_switcher(level: str) -> Tuple[str, str]:
70     if level == PARENTS:
71         return "Father", "Mother"
72     return "Brother", "Sister"
73
74
75 # Top level conversation callbacks
76 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
77     """Select an action: Adding parent/child or show data."""
78     text = (
79         "You may choose to add a family member, yourself, show the gathered data, or
↪end the "
80         "conversation. To abort, simply type /stop."
81     )
82
83     buttons = [
84         [
85             InlineKeyboardButton(text="Add family member", callback_data=str(ADDING_
↪MEMBER)),
86             InlineKeyboardButton(text="Add yourself", callback_data=str(ADDING_SELF)),
87         ],
88         [
89             InlineKeyboardButton(text="Show data", callback_data=str(SHOWING)),
90             InlineKeyboardButton(text="Done", callback_data=str(END)),
91         ],
92     ]
93     keyboard = InlineKeyboardMarkup(buttons)
94
95     # If we're starting over we don't need to send a new message
96     if context.user_data.get(START_OVER):
97         await update.callback_query.answer()
98         await update.callback_query.edit_message_text(text=text, reply_
↪markup=keyboard)
99     else:
100         await update.message.reply_text(
101             "Hi, I'm Family Bot and I'm here to help you gather information about
↪your family."
102         )
103         await update.message.reply_text(text=text, reply_markup=keyboard)
104
105     context.user_data[START_OVER] = False
106     return SELECTING_ACTION
107

```

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```

108
109 async def adding_self(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
110     """Add information about yourself."""
111     context.user_data[CURRENT_LEVEL] = SELF
112     text = "Okay, please tell me about yourself."
113     button = InlineKeyboardButton(text="Add info", callback_data=str(MALE))
114     keyboard = InlineKeyboardMarkup.from_button(button)
115
116     await update.callback_query.answer()
117     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
118
119     return DESCRIBING_SELF
120
121
122 async def show_data(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
123     """Pretty print gathered data."""
124
125     def pretty_print(data: Dict[str, Any], level: str) -> str:
126         people = data.get(level)
127         if not people:
128             return "\nNo information yet."
129
130         return_str = ""
131         if level == SELF:
132             for person in data[level]:
133                 return_str += f"\nName: {person.get(NAME, '-')}, Age: {person.get(AGE,
134 ↪ '-'})}"
135         else:
136             male, female = _name_switcher(level)
137
138             for person in data[level]:
139                 gender = female if person[GENDER] == FEMALE else male
140                 return_str += (
141 ↪ f"\n{gender}: Name: {person.get(NAME, '-')}, Age: {person.get(AGE,
142 ↪ '-'})}"
143             )
144         return return_str
145
146     user_data = context.user_data
147     text = f"Yourself:{pretty_print(user_data, SELF)}"
148     text += f"\n\nParents:{pretty_print(user_data, PARENTS)}"
149     text += f"\n\nChildren:{pretty_print(user_data, CHILDREN)}"
150
151     buttons = [[InlineKeyboardButton(text="Back", callback_data=str(END))]]
152     keyboard = InlineKeyboardMarkup(buttons)
153
154     await update.callback_query.answer()
155     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
156     user_data[START_OVER] = True
157
158     return SHOWING
159
160
161 async def stop(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
162     """End Conversation by command."""
163     await update.message.reply_text("Okay, bye.")

```

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```

162     return END
163
164
165
166 async def end(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
167     """End conversation from InlineKeyboardButton."""
168     await update.callback_query.answer()
169
170     text = "See you around!"
171     await update.callback_query.edit_message_text(text=text)
172
173     return END
174
175
176 # Second level conversation callbacks
177 async def select_level(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
178     """Choose to add a parent or a child."""
179     text = "You may add a parent or a child. Also you can show the gathered data or ↵
↵go back."
180     buttons = [
181         [
182             InlineKeyboardButton(text="Add parent", callback_data=str(PARENTS)),
183             InlineKeyboardButton(text="Add child", callback_data=str(CHILDREN)),
184         ],
185         [
186             InlineKeyboardButton(text="Show data", callback_data=str(SHOWING)),
187             InlineKeyboardButton(text="Back", callback_data=str(END)),
188         ],
189     ]
190     keyboard = InlineKeyboardMarkup(buttons)
191
192     await update.callback_query.answer()
193     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
194
195     return SELECTING_LEVEL
196
197
198 async def select_gender(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
199     """Choose to add mother or father."""
200     level = update.callback_query.data
201     context.user_data[CURRENT_LEVEL] = level
202
203     text = "Please choose, whom to add."
204
205     male, female = _name_switcher(level)
206
207     buttons = [
208         [
209             InlineKeyboardButton(text=f"Add {male}", callback_data=str(MALE)),
210             InlineKeyboardButton(text=f"Add {female}", callback_data=str(FEMALE)),
211         ],
212         [
213             InlineKeyboardButton(text="Show data", callback_data=str(SHOWING)),
214             InlineKeyboardButton(text="Back", callback_data=str(END)),
215         ],
216     ]

```

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```

217     keyboard = InlineKeyboardMarkup(buttons)
218
219     await update.callback_query.answer()
220     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
221
222     return SELECTING_GENDER
223
224
225 async def end_second_level(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
226     """Return to top level conversation."""
227     context.user_data[START_OVER] = True
228     await start(update, context)
229
230     return END
231
232
233 # Third level callbacks
234 async def select_feature(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
235     """Select a feature to update for the person."""
236     buttons = [
237         [
238             InlineKeyboardButton(text="Name", callback_data=str(NAME)),
239             InlineKeyboardButton(text="Age", callback_data=str(AGE)),
240             InlineKeyboardButton(text="Done", callback_data=str(END)),
241         ]
242     ]
243     keyboard = InlineKeyboardMarkup(buttons)
244
245     # If we collect features for a new person, clear the cache and save the gender
246     if not context.user_data.get(START_OVER):
247         context.user_data[FEATURES] = {GENDER: update.callback_query.data}
248         text = "Please select a feature to update."
249
250         await update.callback_query.answer()
251         await update.callback_query.edit_message_text(text=text, reply_
↩ markup=keyboard)
252     # But after we do that, we need to send a new message
253     else:
254         text = "Got it! Please select a feature to update."
255         await update.message.reply_text(text=text, reply_markup=keyboard)
256
257     context.user_data[START_OVER] = False
258     return SELECTING_FEATURE
259
260
261 async def ask_for_input(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
262     """Prompt user to input data for selected feature."""
263     context.user_data[CURRENT_FEATURE] = update.callback_query.data
264     text = "Okay, tell me."
265
266     await update.callback_query.answer()
267     await update.callback_query.edit_message_text(text=text)
268
269     return TYPING
270
271

```

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```

272 async def save_input(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
273     """Save input for feature and return to feature selection."""
274     user_data = context.user_data
275     user_data[FEATURES][user_data[CURRENT_FEATURE]] = update.message.text
276
277     user_data[START_OVER] = True
278
279     return await select_feature(update, context)
280
281
282 async def end_describing(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
283     """End gathering of features and return to parent conversation."""
284     user_data = context.user_data
285     level = user_data[CURRENT_LEVEL]
286     if not user_data.get(level):
287         user_data[level] = []
288     user_data[level].append(user_data[FEATURES])
289
290     # Print upper level menu
291     if level == SELF:
292         user_data[START_OVER] = True
293         await start(update, context)
294     else:
295         await select_level(update, context)
296
297     return END
298
299
300 async def stop_nested(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
301     """Completely end conversation from within nested conversation."""
302     await update.message.reply_text("Okay, bye.")
303
304     return STOPPING
305
306
307 def main() -> None:
308     """Run the bot."""
309     # Create the Application and pass it your bot's token.
310     application = Application.builder().token("TOKEN").build()
311
312     # Set up third level ConversationHandler (collecting features)
313     description_conv = ConversationHandler(
314         entry_points=[
315             CallbackQueryHandler(
316                 select_feature, pattern="^" + str(MALE) + "$|^" + str(FEMALE) + "$"
317             )
318         ],
319         states={
320             SELECTING_FEATURE: [
321                 CallbackQueryHandler(ask_for_input, pattern="^(?!" + str(END) + ").*$"
322                 ↪")
323             ],
324             TYPING: [MessageHandler(filters.TEXT & ~filters.COMMAND, save_input)],
325         },
326         fallbacks=[
327             CallbackQueryHandler(end_describing, pattern="^" + str(END) + "$"),

```

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```

327         CommandHandler("stop", stop_nested),
328     ],
329     map_to_parent={
330         # Return to second level menu
331         END: SELECTING_LEVEL,
332         # End conversation altogether
333         STOPPING: STOPPING,
334     },
335 )
336
337 # Set up second level ConversationHandler (adding a person)
338 add_member_conv = ConversationHandler(
339     entry_points=[CallbackQueryHandler(select_level, pattern="^" + str(ADDING_
↪ MEMBER) + "$")],
340     states={
341         SELECTING_LEVEL: [
342             CallbackQueryHandler(select_gender, pattern=f"^{PARENTS}$|^{CHILDREN}$
↪ ")
343         ],
344         SELECTING_GENDER: [description_conv],
345     },
346     fallbacks=[
347         CallbackQueryHandler(show_data, pattern="^" + str(SHOWING) + "$"),
348         CallbackQueryHandler(end_second_level, pattern="^" + str(END) + "$"),
349         CommandHandler("stop", stop_nested),
350     ],
351     map_to_parent={
352         # After showing data return to top level menu
353         SHOWING: SHOWING,
354         # Return to top level menu
355         END: SELECTING_ACTION,
356         # End conversation altogether
357         STOPPING: END,
358     },
359 )
360
361 # Set up top level ConversationHandler (selecting action)
362 # Because the states of the third level conversation map to the ones of the
↪ second level
363 # conversation, we need to make sure the top level conversation can also handle
↪ them
364 selection_handlers = [
365     add_member_conv,
366     CallbackQueryHandler(show_data, pattern="^" + str(SHOWING) + "$"),
367     CallbackQueryHandler(adding_self, pattern="^" + str(ADDING_SELF) + "$"),
368     CallbackQueryHandler(end, pattern="^" + str(END) + "$"),
369 ]
370 conv_handler = ConversationHandler(
371     entry_points=[CommandHandler("start", start)],
372     states={
373         SHOWING: [CallbackQueryHandler(start, pattern="^" + str(END) + "$")],
374         SELECTING_ACTION: selection_handlers,
375         SELECTING_LEVEL: selection_handlers,
376         DESCRIBING_SELF: [description_conv],
377         STOPPING: [CommandHandler("start", start)],
378     },

```

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```

379     fallbacks=[CommandHandler("stop", stop)],
380 )
381
382 application.add_handler(conv_handler)
383
384 # Run the bot until the user presses Ctrl-C
385 application.run_polling(allowed_updates=Update.ALL_TYPES)
386
387
388 if __name__ == "__main__":
389     main()

```

## State Diagram

### passportbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Simple Bot to print/download all incoming passport data
7
8  See https://telegram.org/blog/passport for info about what telegram passport is.
9
10 See https://github.com/python-telegram-bot/python-telegram-bot/wiki/Telegram-Passport
11 for how to use Telegram Passport properly with python-telegram-bot.
12
13 Note:
14 To use Telegram Passport, you must install PTB via
15 `pip install "python-telegram-bot[passport]"`
16 """
17 import logging
18 from pathlib import Path
19
20 from telegram import Update
21 from telegram.ext import Application, ContextTypes, MessageHandler, filters
22
23 # Enable logging
24
25 logging.basicConfig(
26     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
27 )
28
29 # set higher logging level for httpx to avoid all GET and POST requests being logged
30 logging.getLogger("httpx").setLevel(logging.WARNING)
31
32 logger = logging.getLogger(__name__)
33
34
35 async def msg(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
36     """Downloads and prints the received passport data."""
37     # Retrieve passport data
38     passport_data = update.message.passport_data

```

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```

39  # If our nonce doesn't match what we think, this Update did not originate from us
40  # Ideally you would randomize the nonce on the server
41  if passport_data.decrypted_credentials.nonce != "thisisatest":
42      return
43
44  # Print the decrypted credential data
45  # For all elements
46  # Print their decrypted data
47  # Files will be downloaded to current directory
48  for data in passport_data.decrypted_data: # This is where the data gets decrypted
49      if data.type == "phone_number":
50          print("Phone: ", data.phone_number)
51      elif data.type == "email":
52          print("Email: ", data.email)
53      if data.type in (
54          "personal_details",
55          "passport",
56          "driver_license",
57          "identity_card",
58          "internal_passport",
59          "address",
60      ):
61          print(data.type, data.data)
62      if data.type in (
63          "utility_bill",
64          "bank_statement",
65          "rental_agreement",
66          "passport_registration",
67          "temporary_registration",
68      ):
69          print(data.type, len(data.files), "files")
70          for file in data.files:
71              actual_file = await file.get_file()
72              print(actual_file)
73              await actual_file.download_to_drive()
74      if (
75  ↪ passport")
76          and data.front_side
77      ):
78          front_file = await data.front_side.get_file()
79          print(data.type, front_file)
80          await front_file.download_to_drive()
81      if data.type in ("driver_license" and "identity_card") and data.reverse_side:
82          reverse_file = await data.reverse_side.get_file()
83          print(data.type, reverse_file)
84          await reverse_file.download_to_drive()
85      if (
86  ↪ passport")
87          and data.selfie
88      ):
89          selfie_file = await data.selfie.get_file()
90          print(data.type, selfie_file)
91          await selfie_file.download_to_drive()
92      if data.translation and data.type in (

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```

93         "passport",
94         "driver_license",
95         "identity_card",
96         "internal_passport",
97         "utility_bill",
98         "bank_statement",
99         "rental_agreement",
100        "passport_registration",
101        "temporary_registration",
102    ):
103        print(data.type, len(data.translation), "translation")
104        for file in data.translation:
105            actual_file = await file.get_file()
106            print(actual_file)
107            await actual_file.download_to_drive()
108
109
110 def main() -> None:
111     """Start the bot."""
112     # Create the Application and pass it your token and private key
113     private_key = Path("private.key")
114     application = (
115         Application.builder().token("TOKEN").private_key(private_key.read_bytes()).
116         ↪ build()
117     )
118
119     # On messages that include passport data call msg
120     application.add_handler(MessageHandler(filters.PASSPORT_DATA, msg))
121
122     # Run the bot until the user presses Ctrl-C
123     application.run_polling(allowed_updates=Update.ALL_TYPES)
124
125 if __name__ == "__main__":
126     main()

```

## HTML Page

```

1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <title>Telegram passport test!</title>
5      <meta charset="utf-8">
6      <meta content="IE=edge" http-equiv="X-UA-Compatible">
7      <meta content="width=device-width, initial-scale=1" name="viewport">
8  </head>
9  <body>
10     <h1>Telegram passport test</h1>
11
12     <div id="telegram_passport_auth"></div>
13 </body>
14
15 <!-- Needs file from https://github.com/TelegramMessenger/TGPassportJsSDK downloaded_
    ↪ -->

```

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```

16 <script src="telegram-passport.js"></script>
17 <script>
18     "use strict";
19
20     Telegram.Passport.createAuthButton('telegram_passport_auth', {
21         bot_id: 1234567890, // YOUR BOT ID
22         scope: {
23             data: [{
24                 type: 'id_document',
25                 selfie: true
26             }, 'address_document', 'phone_number', 'email'], v: 1
27         }, // WHAT DATA YOU WANT TO RECEIVE
28         public_key: '-----BEGIN PUBLIC KEY-----\n', // YOUR PUBLIC KEY
29         nonce: 'thisisatest', // YOUR BOT WILL RECEIVE THIS DATA WITH THE REQUEST
30         callback_url: 'https://example.org' // TELEGRAM WILL SEND YOUR USER BACK TO
31         ↪ THIS URL
32     });
33 </script>
34 </html>

```

**paymentbot.py**

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """Basic example for a bot that can receive payment from user."""
6
7  import logging
8
9  from telegram import LabeledPrice, ShippingOption, Update
10 from telegram.ext import (
11     Application,
12     CommandHandler,
13     ContextTypes,
14     MessageHandler,
15     PreCheckoutQueryHandler,
16     ShippingQueryHandler,
17     filters,
18 )
19
20 # Enable logging
21 logging.basicConfig(
22     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
23 )
24 # set higher logging level for httpx to avoid all GET and POST requests being logged
25 logging.getLogger("httpx").setLevel(logging.WARNING)
26
27 logger = logging.getLogger(__name__)
28
29 PAYMENT_PROVIDER_TOKEN = "PAYMENT_PROVIDER_TOKEN"
30
31
32 async def start_callback(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:

```

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```

33     """Displays info on how to use the bot."""
34     msg = (
35         "Use /shipping to get an invoice for shipping-payment, or /noshipping for an "
36         "invoice without shipping."
37     )
38
39     await update.message.reply_text(msg)
40
41
42 async def start_with_shipping_callback(update: Update, context: ContextTypes.DEFAULT_
↳ TYPE) -> None:
43     """Sends an invoice with shipping-payment."""
44     chat_id = update.message.chat_id
45     title = "Payment Example"
46     description = "Payment Example using python-telegram-bot"
47     # select a payload just for you to recognize its the donation from your bot
48     payload = "Custom-Payload"
49     # In order to get a provider_token see https://core.telegram.org/bots/payments
↳ #getting-a-token
50     currency = "USD"
51     # price in dollars
52     price = 1
53     # price * 100 so as to include 2 decimal points
54     # check https://core.telegram.org/bots/payments#supported-currencies for more_
↳ details
55     prices = [LabeledPrice("Test", price * 100)]
56
57     # optionally pass need_name=True, need_phone_number=True,
58     # need_email=True, need_shipping_address=True, is_flexible=True
59     await context.bot.send_invoice(
60         chat_id,
61         title,
62         description,
63         payload,
64         PAYMENT_PROVIDER_TOKEN,
65         currency,
66         prices,
67         need_name=True,
68         need_phone_number=True,
69         need_email=True,
70         need_shipping_address=True,
71         is_flexible=True,
72     )
73
74
75 async def start_without_shipping_callback(
76     update: Update, context: ContextTypes.DEFAULT_TYPE
77 ) -> None:
78     """Sends an invoice without shipping-payment."""
79     chat_id = update.message.chat_id
80     title = "Payment Example"
81     description = "Payment Example using python-telegram-bot"
82     # select a payload just for you to recognize its the donation from your bot
83     payload = "Custom-Payload"
84     # In order to get a provider_token see https://core.telegram.org/bots/payments
↳ #getting-a-token

```

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```

85     currency = "USD"
86     # price in dollars
87     price = 1
88     # price * 100 so as to include 2 decimal points
89     prices = [LabeledPrice("Test", price * 100)]
90
91     # optionally pass need_name=True, need_phone_number=True,
92     # need_email=True, need_shipping_address=True, is_flexible=True
93     await context.bot.send_invoice(
94         chat_id, title, description, payload, PAYMENT_PROVIDER_TOKEN, currency, prices
95     )
96
97
98     async def shipping_callback(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
99     None:
100         """Answers the ShippingQuery with ShippingOptions"""
101         query = update.shipping_query
102         # check the payload, is this from your bot?
103         if query.invoice_payload != "Custom-Payload":
104             # answer False pre_checkout_query
105             await query.answer(ok=False, error_message="Something went wrong...")
106             return
107
108         # First option has a single LabeledPrice
109         options = [ShippingOption("1", "Shipping Option A", [LabeledPrice("A", 100)])]
110         # second option has an array of LabeledPrice objects
111         price_list = [LabeledPrice("B1", 150), LabeledPrice("B2", 200)]
112         options.append(ShippingOption("2", "Shipping Option B", price_list))
113         await query.answer(ok=True, shipping_options=options)
114
115     # after (optional) shipping, it's the pre-checkout
116     async def precheckout_callback(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
117     None:
118         """Answers the PreQecheckoutQuery"""
119         query = update.pre_checkout_query
120         # check the payload, is this from your bot?
121         if query.invoice_payload != "Custom-Payload":
122             # answer False pre_checkout_query
123             await query.answer(ok=False, error_message="Something went wrong...")
124         else:
125             await query.answer(ok=True)
126
127     # finally, after contacting the payment provider...
128     async def successful_payment_callback(update: Update, context: ContextTypes.DEFAULT_
129     TYPE) -> None:
130         """Confirms the successful payment."""
131         # do something after successfully receiving payment?
132         await update.message.reply_text("Thank you for your payment!")
133
134     def main() -> None:
135         """Run the bot."""
136         # Create the Application and pass it your bot's token.
137         application = Application.builder().token("TOKEN").build()

```

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```

138
139 # simple start function
140 application.add_handler(CommandHandler("start", start_callback))
141
142 # Add command handler to start the payment invoice
143 application.add_handler(CommandHandler("shipping", start_with_shipping_callback))
144 application.add_handler(CommandHandler("noshipping", start_without_shipping_
↳ callback))
145
146 # Optional handler if your product requires shipping
147 application.add_handler(ShippingQueryHandler(shipping_callback))
148
149 # Pre-checkout handler to final check
150 application.add_handler(PreCheckoutQueryHandler(precheckout_callback))
151
152 # Success! Notify your user!
153 application.add_handler(
154     MessageHandler(filters.SUCCESSFUL_PAYMENT, successful_payment_callback)
155 )
156
157 # Run the bot until the user presses Ctrl-C
158 application.run_polling(allowed_updates=Update.ALL_TYPES)
159
160
161 if __name__ == "__main__":
162     main()

```

**persistentconversationbot.py**

```

1 #!/usr/bin/env python
2 # pylint: disable=unused-argument
3 # This program is dedicated to the public domain under the CC0 license.
4
5 """
6 First, a few callback functions are defined. Then, those functions are passed to
7 the Application and registered at their respective places.
8 Then, the bot is started and runs until we press Ctrl-C on the command line.
9
10 Usage:
11 Example of a bot-user conversation using ConversationHandler.
12 Send /start to initiate the conversation.
13 Press Ctrl-C on the command line or send a signal to the process to stop the
14 bot.
15 """
16
17 import logging
18 from typing import Dict
19
20 from telegram import ReplyKeyboardMarkup, ReplyKeyboardRemove, Update
21 from telegram.ext import (
22     Application,
23     CommandHandler,
24     ContextTypes,
25     ConversationHandler,
26     MessageHandler,

```

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```

27     PicklePersistence,
28     filters,
29 )
30
31 # Enable logging
32 logging.basicConfig(
33     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
34 )
35 # set higher logging level for httpx to avoid all GET and POST requests being logged
36 logging.getLogger("httpx").setLevel(logging.WARNING)
37
38 logger = logging.getLogger(__name__)
39
40 CHOOSING, TYPING_REPLY, TYPING_CHOICE = range(3)
41
42 reply_keyboard = [
43     ["Age", "Favourite colour"],
44     ["Number of siblings", "Something else..."],
45     ["Done"],
46 ]
47 markup = ReplyKeyboardMarkup(reply_keyboard, one_time_keyboard=True)
48
49
50 def facts_to_str(user_data: Dict[str, str]) -> str:
51     """Helper function for formatting the gathered user info."""
52     facts = [f"{key} - {value}" for key, value in user_data.items()]
53     return "\n".join(facts).join(["\n", "\n"])
54
55
56 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
57     """Start the conversation, display any stored data and ask user for input."""
58     reply_text = "Hi! My name is Doctor Botter."
59     if context.user_data:
60         reply_text += (
61             f" You already told me your {' '.join(context.user_data.keys())}. Why don
        ↪ 't you "
62             "tell me something more about yourself? Or change anything I already know.
        ↪ "
63         )
64     else:
65         reply_text += (
66             " I will hold a more complex conversation with you. Why don't you tell me
        ↪ "
67             "something about yourself?"
68         )
69     await update.message.reply_text(reply_text, reply_markup=markup)
70
71     return CHOOSING
72
73
74 async def regular_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
75     """Ask the user for info about the selected predefined choice."""
76     text = update.message.text.lower()
77     context.user_data["choice"] = text
78     if context.user_data.get(text):
79         reply_text = (

```

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```

80         f"Your {text}? I already know the following about that: {context.user_
↪data[text]}]"
81     )
82     else:
83         reply_text = f"Your {text}? Yes, I would love to hear about that!"
84         await update.message.reply_text(reply_text)
85
86     return TYPING_REPLY
87
88
89 async def custom_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
90     """Ask the user for a description of a custom category."""
91     await update.message.reply_text(
92         'Alright, please send me the category first, for example "Most impressive_
↪skill"'
93     )
94
95     return TYPING_CHOICE
96
97
98 async def received_information(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↪int:
99     """Store info provided by user and ask for the next category."""
100     text = update.message.text
101     category = context.user_data["choice"]
102     context.user_data[category] = text.lower()
103     del context.user_data["choice"]
104
105     await update.message.reply_text(
106         "Neat! Just so you know, this is what you already told me:"
107         f"{facts_to_str(context.user_data)}"
108         "You can tell me more, or change your opinion on something.",
109         reply_markup=markup,
110     )
111
112     return CHOOSING
113
114
115 async def show_data(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
116     """Display the gathered info."""
117     await update.message.reply_text(
118         f"This is what you already told me: {facts_to_str(context.user_data)}"
119     )
120
121
122 async def done(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
123     """Display the gathered info and end the conversation."""
124     if "choice" in context.user_data:
125         del context.user_data["choice"]
126
127     await update.message.reply_text(
128         f"I learned these facts about you: {facts_to_str(context.user_data)}Until_
↪next time!",
129         reply_markup=ReplyKeyboardRemove(),
130     )
131     return ConversationHandler.END

```

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```

132
133
134 def main() -> None:
135     """Run the bot."""
136     # Create the Application and pass it your bot's token.
137     persistence = PicklePersistence(filepath="conversationbot")
138     application = Application.builder().token("TOKEN").persistence(persistence).
↳ build()
139
140     # Add conversation handler with the states CHOOSING, TYPING_CHOICE and TYPING_
↳ REPLY
141     conv_handler = ConversationHandler(
142         entry_points=[CommandHandler("start", start)],
143         states={
144             CHOOSING: [
145                 MessageHandler(
146                     filters.Regex("^Age|Favourite colour|Number of siblings)$"),↳
↳ regular_choice
147                 ),
148                 MessageHandler(filters.Regex("^Something else...$"), custom_choice),
149             ],
150             TYPING_CHOICE: [
151                 MessageHandler(
152                     filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")),↳
↳ regular_choice
153                 )
154             ],
155             TYPING_REPLY: [
156                 MessageHandler(
157                     filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")),
158                     received_information,
159                 )
160             ],
161         },
162         fallbacks=[MessageHandler(filters.Regex("^Done$"), done)],
163         name="my_conversation",
164         persistent=True,
165     )
166
167     application.add_handler(conv_handler)
168
169     show_data_handler = CommandHandler("show_data", show_data)
170     application.add_handler(show_data_handler)
171
172     # Run the bot until the user presses Ctrl-C
173     application.run_polling(allowed_updates=Update.ALL_TYPES)
174
175
176 if __name__ == "__main__":
177     main()

```



## pollbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Basic example for a bot that works with polls. Only 3 people are allowed to interact,
7  ↪ with each
8  poll/quiz the bot generates. The preview command generates a closed poll/quiz,
9  ↪ exactly like the
10 one the user sends the bot
11 """
12 import logging
13
14 from telegram import (
15     KeyboardButton,
16     KeyboardButtonPollType,
17     Poll,
18     ReplyKeyboardMarkup,
19     ReplyKeyboardRemove,
20     Update,
21 )
22 from telegram.constants import ParseMode
23 from telegram.ext import (
24     Application,
25     CommandHandler,
26     ContextTypes,
27     MessageHandler,
28     PollAnswerHandler,
29     PollHandler,
30     filters,
31 )
32
33 # Enable logging
34 logging.basicConfig(
35     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
36 )
37 # set higher logging level for httpx to avoid all GET and POST requests being logged
38 logging.getLogger("httpx").setLevel(logging.WARNING)
39
40 logger = logging.getLogger(__name__)
41
42
43 TOTAL_VOTER_COUNT = 3
44
45 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
46     """Inform user about what this bot can do"""
47     await update.message.reply_text(
48         "Please select /poll to get a Poll, /quiz to get a Quiz or /preview"
49         " to generate a preview for your poll"
50     )
51
52 async def poll(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
53     """Sends a predefined poll"""

```

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```

54     questions = ["Good", "Really good", "Fantastic", "Great"]
55     message = await context.bot.send_poll(
56         update.effective_chat.id,
57         "How are you?",
58         questions,
59         is_anonymous=False,
60         allows_multiple_answers=True,
61     )
62     # Save some info about the poll the bot_data for later use in receive_poll_answer
63     payload = {
64         message.poll.id: {
65             "questions": questions,
66             "message_id": message.message_id,
67             "chat_id": update.effective_chat.id,
68             "answers": 0,
69         }
70     }
71     context.bot_data.update(payload)
72
73
74     async def receive_poll_answer(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
75         """Summarize a users poll vote"""
76         answer = update.poll_answer
77         answered_poll = context.bot_data[answer.poll_id]
78         try:
79             questions = answered_poll["questions"]
80             # this means this poll answer update is from an old poll, we can't do our
81             answering then
82             except KeyError:
83                 return
84             selected_options = answer.option_ids
85             answer_string = ""
86             for question_id in selected_options:
87                 if question_id != selected_options[-1]:
88                     answer_string += questions[question_id] + " and "
89                 else:
90                     answer_string += questions[question_id]
91             await context.bot.send_message(
92                 answered_poll["chat_id"],
93                 f"{update.effective_user.mention_html()} feels {answer_string}!",
94                 parse_mode=ParseMode.HTML,
95             )
96             answered_poll["answers"] += 1
97             # Close poll after three participants voted
98             if answered_poll["answers"] == TOTAL_VOTER_COUNT:
99                 await context.bot.stop_poll(answered_poll["chat_id"], answered_poll["message_
100                 id"])
101
102     async def quiz(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
103         """Send a predefined poll"""
104         questions = ["1", "2", "4", "20"]
105         message = await update.effective_message.reply_poll(
106             "How many eggs do you need for a cake?", questions, type=Poll.QUIZ, correct_
107             option_id=2

```

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```

106     )
107     # Save some info about the poll the bot_data for later use in receive_quiz_answer
108     payload = {
109         message.poll.id: {"chat_id": update.effective_chat.id, "message_id": message.
↪message_id}
110     }
111     context.bot_data.update(payload)
112
113
114 async def receive_quiz_answer(update: Update, context: ContextTypes.DEFAULT_TYPE) -> ↪
↪None:
115     """Close quiz after three participants took it"""
116     # the bot can receive closed poll updates we don't care about
117     if update.poll.is_closed:
118         return
119     if update.poll.total_voter_count == TOTAL_VOTER_COUNT:
120         try:
121             quiz_data = context.bot_data[update.poll.id]
122             # this means this poll answer update is from an old poll, we can't stop it ↪
↪then
123         except KeyError:
124             return
125         await context.bot.stop_poll(quiz_data["chat_id"], quiz_data["message_id"])
126
127
128 async def preview(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
129     """Ask user to create a poll and display a preview of it"""
130     # using this without a type lets the user chooses what he wants (quiz or poll)
131     button = [[KeyboardButton("Press me!", request_poll=KeyboardButtonPollType())]]
132     message = "Press the button to let the bot generate a preview for your poll"
133     # using one_time_keyboard to hide the keyboard
134     await update.effective_message.reply_text(
135         message, reply_markup=ReplyKeyboardMarkup(button, one_time_keyboard=True)
136     )
137
138
139 async def receive_poll(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
140     """On receiving polls, reply to it by a closed poll copying the received poll"""
141     actual_poll = update.effective_message.poll
142     # Only need to set the question and options, since all other parameters don't ↪
↪matter for
143     # a closed poll
144     await update.effective_message.reply_poll(
145         question=actual_poll.question,
146         options=[o.text for o in actual_poll.options],
147         # with is_closed true, the poll/quiz is immediately closed
148         is_closed=True,
149         reply_markup=ReplyKeyboardRemove(),
150     )
151
152
153 async def help_handler(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
154     """Display a help message"""
155     await update.message.reply_text("Use /quiz, /poll or /preview to test this bot.")
156
157

```

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```

158 def main() -> None:
159     """Run bot."""
160     # Create the Application and pass it your bot's token.
161     application = Application.builder().token("TOKEN").build()
162     application.add_handler(CommandHandler("start", start))
163     application.add_handler(CommandHandler("poll", poll))
164     application.add_handler(CommandHandler("quiz", quiz))
165     application.add_handler(CommandHandler("preview", preview))
166     application.add_handler(CommandHandler("help", help_handler))
167     application.add_handler(MessageHandler(filters.POLL, receive_poll))
168     application.add_handler(PollAnswerHandler(receive_poll_answer))
169     application.add_handler(PollHandler(receive_quiz_answer))
170
171     # Run the bot until the user presses Ctrl-C
172     application.run_polling(allowed_updates=Update.ALL_TYPES)
173
174
175 if __name__ == "__main__":
176     main()

```

### rawapibot.py

This example uses only the pure, “bare-metal” API wrapper.

```

1  #!/usr/bin/env python
2  """Simple Bot to reply to Telegram messages.
3
4  This is built on the API wrapper, see echobot.py to see the same example built
5  on the telegram.ext bot framework.
6  This program is dedicated to the public domain under the CC0 license.
7  """
8  import asyncio
9  import contextlib
10 import logging
11 from typing import NoReturn
12
13 from telegram import Bot, Update
14 from telegram.error import Forbidden, NetworkError
15
16 logging.basicConfig(
17     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
18 )
19 # set higher logging level for httpx to avoid all GET and POST requests being logged
20 logging.getLogger("httpx").setLevel(logging.WARNING)
21
22 logger = logging.getLogger(__name__)
23
24
25 async def main() -> NoReturn:
26     """Run the bot."""
27     # Here we use the `async with` syntax to properly initialize and shutdown
28     ↪resources.
29     async with Bot("TOKEN") as bot:
30         # get the first pending update_id, this is so we can skip over it in case
31         # we get a "Forbidden" exception.

```

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```

31     try:
32         update_id = (await bot.get_updates())[0].update_id
33     except IndexError:
34         update_id = None
35
36     logger.info("listening for new messages...")
37     while True:
38         try:
39             update_id = await echo(bot, update_id)
40         except NetworkError:
41             await asyncio.sleep(1)
42         except Forbidden:
43             # The user has removed or blocked the bot.
44             update_id += 1
45
46
47 async def echo(bot: Bot, update_id: int) -> int:
48     """Echo the message the user sent."""
49     # Request updates after the last update_id
50     updates = await bot.get_updates(offset=update_id, timeout=10, allowed_
↪updates=Update.ALL_TYPES)
51     for update in updates:
52         next_update_id = update.update_id + 1
53
54         # your bot can receive updates without messages
55         # and not all messages contain text
56         if update.message and update.message.text:
57             # Reply to the message
58             logger.info("Found message %s!", update.message.text)
59             await update.message.reply_text(update.message.text)
60         return next_update_id
61     return update_id
62
63
64 if __name__ == "__main__":
65     with contextlib.suppress(KeyboardInterrupt): # Ignore exception when Ctrl-C is_
↪pressed
66         asyncio.run(main())

```

**timerbot.py**

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Simple Bot to send timed Telegram messages.
7
8  This Bot uses the Application class to handle the bot and the JobQueue to send
9  timed messages.
10
11  First, a few handler functions are defined. Then, those functions are passed to
12  the Application and registered at their respective places.
13  Then, the bot is started and runs until we press Ctrl-C on the command line.
14

```

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```

15 Usage:
16 Basic Alarm Bot example, sends a message after a set time.
17 Press Ctrl-C on the command line or send a signal to the process to stop the
18 bot.
19
20 Note:
21 To use the JobQueue, you must install PTB via
22 `pip install "python-telegram-bot[job-queue]"`
23 """
24
25 import logging
26
27 from telegram import Update
28 from telegram.ext import Application, CommandHandler, ContextTypes
29
30 # Enable logging
31 logging.basicConfig(
32     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
33 )
34
35 # Define a few command handlers. These usually take the two arguments update and
36 # context.
37 # Best practice would be to replace context with an underscore,
38 # since context is an unused local variable.
39 # This being an example and not having context present confusing beginners,
40 # we decided to have it present as context.
41
42 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
43     """Sends explanation on how to use the bot."""
44     await update.message.reply_text("Hi! Use /set <seconds> to set a timer")
45
46
47 async def alarm(context: ContextTypes.DEFAULT_TYPE) -> None:
48     """Send the alarm message."""
49     job = context.job
50     await context.bot.send_message(job.chat_id, text=f"Beep! {job.data} seconds are_
51     ↪over!")
52
53 def remove_job_if_exists(name: str, context: ContextTypes.DEFAULT_TYPE) -> bool:
54     """Remove job with given name. Returns whether job was removed."""
55     current_jobs = context.job_queue.get_jobs_by_name(name)
56     if not current_jobs:
57         return False
58     for job in current_jobs:
59         job.schedule_removal()
60     return True
61
62
63 async def set_timer(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
64     """Add a job to the queue."""
65     chat_id = update.effective_message.chat_id
66     try:
67         # args[0] should contain the time for the timer in seconds
68         due = float(context.args[0])
69         if due < 0:

```

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```

70         await update.effective_message.reply_text("Sorry we can not go back to
↪future!")
71         return
72
73         job_removed = remove_job_if_exists(str(chat_id), context)
74         context.job_queue.run_once(alarm, due, chat_id=chat_id, name=str(chat_id),
↪data=due)
75
76         text = "Timer successfully set!"
77         if job_removed:
78             text += " Old one was removed."
79         await update.effective_message.reply_text(text)
80
81     except (IndexError, ValueError):
82         await update.effective_message.reply_text("Usage: /set <seconds>")
83
84
85 async def unset(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
86     """Remove the job if the user changed their mind."""
87     chat_id = update.message.chat_id
88     job_removed = remove_job_if_exists(str(chat_id), context)
89     text = "Timer successfully cancelled!" if job_removed else "You have no active
↪timer."
90     await update.message.reply_text(text)
91
92
93 def main() -> None:
94     """Run bot."""
95     # Create the Application and pass it your bot's token.
96     application = Application.builder().token("TOKEN").build()
97
98     # on different commands - answer in Telegram
99     application.add_handler(CommandHandler(["start", "help"], start))
100    application.add_handler(CommandHandler("set", set_timer))
101    application.add_handler(CommandHandler("unset", unset))
102
103    # Run the bot until the user presses Ctrl-C
104    application.run_polling(allowed_updates=Update.ALL_TYPES)
105
106
107 if __name__ == "__main__":
108     main()

```

### webappbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument
3  # This program is dedicated to the public domain under the CC0 license.
4
5  """
6  Simple example of a Telegram WebApp which displays a color picker.
7  The static website for this website is hosted by the PTB team for your convenience.
8  Currently only showcases starting the WebApp via a KeyboardButton, as all other
↪methods would
9  require a bot token.

```

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```

10 """
11 import json
12 import logging
13
14 from telegram import KeyboardButton, ReplyKeyboardMarkup, ReplyKeyboardRemove, Update,
15     ↳ WebAppInfo
16 from telegram.ext import Application, CommandHandler, ContextTypes, MessageHandler,
17     ↳ filters
18
19 # Enable logging
20 logging.basicConfig(
21     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
22 )
23 # set higher logging level for httpx to avoid all GET and POST requests being logged
24 logging.getLogger("httpx").setLevel(logging.WARNING)
25
26 logger = logging.getLogger(__name__)
27
28 # Define a `/start` command handler.
29 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
30     """Send a message with a button that opens a the web app."""
31     await update.message.reply_text(
32         "Please press the button below to choose a color via the WebApp.",
33         reply_markup=ReplyKeyboardMarkup.from_button(
34             KeyboardButton(
35                 text="Open the color picker!",
36                 web_app=WebAppInfo(url="https://python-telegram-bot.org/static/
37     ↳webappbot"),
38             )
39         ),
40     )
41
42 # Handle incoming WebAppData
43 async def web_app_data(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
44     """Print the received data and remove the button."""
45     # Here we use `json.loads`, since the WebApp sends the data JSON serialized string
46     # (see webappbot.html)
47     data = json.loads(update.effective_message.web_app_data.data)
48     await update.message.reply_html(
49         text=(
50             f"You selected the color with the HEX value <code>{data['hex']}</code>."
51     ↳The "
52             f"corresponding RGB value is <code>{tuple(data['rgb'].values())}</code>."
53         ),
54         reply_markup=ReplyKeyboardRemove(),
55     )
56
57 def main() -> None:
58     """Start the bot."""
59     # Create the Application and pass it your bot's token.
60     application = Application.builder().token("TOKEN").build()
61
62     application.add_handler(CommandHandler("start", start))

```

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```

62     application.add_handler(MessageHandler(filters.StatusUpdate.WEB_APP_DATA, web_app_
    ↪data))
63
64     # Run the bot until the user presses Ctrl-C
65     application.run_polling(allowed_updates=Update.ALL_TYPES)
66
67
68 if __name__ == "__main__":
69     main()

```

## HTML Page

```

1  <!--
2      Simple static Telegram WebApp. Does not verify the WebAppInitData, as a bot token_
    ↪would be needed for that.
3  -->
4  <!DOCTYPE html>
5  <html lang="en">
6  <head>
7      <meta charset="UTF-8">
8      <title>python-telegram-bot Example WebApp</title>
9      <script src="https://telegram.org/js/telegram-web-app.js"></script>
10     <script src="https://cdn.jsdelivr.net/npm/@jaames/iro@5"></script>
11 </head>
12 <script type="text/javascript">
13     const colorPicker = new iro.ColorPicker('#picker', {
14         borderColor: "#ffffff",
15         borderWidth: 1,
16         width: Math.round(document.documentElement.clientWidth / 2),
17     });
18     colorPicker.on('color:change', function (color) {
19         document.body.style.background = color.hexString;
20     });
21
22     Telegram.WebApp.ready();
23     Telegram.WebApp.MainButton.setText('Choose Color').show().onClick(function () {
24         const data = JSON.stringify({hex: colorPicker.color.hexString, rgb:
    ↪colorPicker.color.rgb});
25         Telegram.WebApp.sendData(data);
26         Telegram.WebApp.close();
27     });
28 </script>
29 <body style="background-color: #ffffff">
30 <div style="position: absolute; margin-top: 5vh; margin-left: 5vw; height: 90vh;
    ↪width: 90vw; border-radius: 5vh; background-color: var(--tg-theme-bg-color); box-
    ↪shadow: 0 0 2vw
31 #000000;">
32     <div id="picker"
33         style="display: flex; justify-content: center; align-items: center; height:
    ↪100%; width: 100%"></div>
34 </div>
35 </body>
36 <script type="text/javascript">
37     Telegram.WebApp.expand();

```

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```
</script>
</html>
```

## 10.5 Stability Policy

---

**Important:** This stability policy is in place since version 20.3. While earlier versions of `python-telegram-bot` also had stable interfaces, they had no explicit stability policy and hence did not follow the rules outlined below in all detail. Please also refer to the [changelog](#).

---

**Caution:** Large parts of the `telegram` package are the Python representations of the Telegram Bot API, whose stability policy PTB can not influence. This policy hence includes some special cases for those parts.

### 10.5.1 What does this policy cover?

This policy includes any API or behavior that is covered in this documentation. This covers both the `telegram` package and the `telegram.ext` package.

### 10.5.2 What doesn't this policy cover?

Introduction of new features or changes of flavors of comparable behavior (e.g. the default for the HTTP protocol version being used) are not covered by this policy.

The internal structure of classes in PTB, i.e. things like the result of `dir(obj)` or the contents of `obj.__dict__`, is not covered by this policy.

Objects are in general not guaranteed to be pickleable (unless stated otherwise) and pickled objects from one version of PTB may not be loadable in future versions. We may provide a way to convert pickled objects from one version to another, but this is not guaranteed.

Functionality that is part of PTBs API but is explicitly documented as not being intended to be used directly by users (e.g. `telegram.request.BaseRequest.do_request()`) may change. This also applies to functions or attributes marked as final in the sense of [PEP 591](#).

PTB has dependencies to third-party packages. The versions that PTB uses of these third-party packages may change if that does not affect PTBs public API.

PTB does not give guarantees about which Python versions are supported. In general, we will try to support all Python versions that have not yet reached their end of life, but we reserve ourselves the option to drop support for Python versions earlier if that benefits the advancement of the library.

PTB provides static type hints for all public attributes, parameters, return values and generic classes. These type hints are not covered by this policy and may change at any time under the condition that these changes have no impact on the runtime behavior of PTB.

## Bot API Functionality

Comparison of equality of instances of the classes in the `telegram` package is subject to change and the PTB team will update the behavior to best reflect updates in the Bot API. Changes in this regard will be documented in the affected classes. Note that equality comparison with objects that were serialized by an older version of PTB may hence give unexpected results.

When the order of arguments of the Bot API methods changes or they become optional/mandatory due to changes in the Bot API, PTB will always try to reflect these changes. While we try to make such changes backward compatible, this is not always possible or only with significant effort. In such cases we will find a trade-off between backward compatibility and fully complying with the Bot API, which may result in breaking changes. We highly recommend using keyword arguments, which can help make such changes non-breaking on your end.

When the Bot API changes attributes of classes, the method `telegram.TelegramObject.to_dict()` will change as necessary to reflect these changes. In particular, attributes deprecated by Telegram will be removed from the returned dictionary. Deprecated attributes that are still passed by Telegram will be available in the `api_kwargs` dictionary as long as PTB can support that with feasible effort. Since attributes of the classes in the `telegram` package are not writable, we may change them to properties where appropriate.

## Development Versions

Pre-releases marked as alpha, beta or release candidate are not covered by this policy. Before a feature is in a stable release, i.e. the feature was merged into the master branch but not released yet (or only in a pre-release), it is not covered by this policy either and may change.

## Security

We make exceptions from our stability policy for security. We will violate this policy as necessary in order to resolve a security issue or harden PTB against a possible attack.

## 10.5.3 Versioning

PTB uses a versioning scheme that roughly follows <https://semver.org/>, although it may not be quite as strict.

Given a version of PTB X.Y.Z,

- X indicates the major version number. This is incremented when backward incompatible changes are introduced.
- Y indicates the minor version number. This is incremented when new functionality or backward compatible changes are introduced by PTB. *This is also incremented when PTB adds support for a new Bot API version, which may include backward incompatible changes in some cases as outlined [below](#).*
- Z is the patch version. This is incremented if backward compatible bug fixes or smaller changes are introduced. If this number is 0, it can be omitted, i.e. we just write X.Y instead of X.Y.0.

## Deprecation

From time to time we will want to change the behavior of an API or remove it entirely, or we do so to comply with changes in the Telegram Bot API. In those cases, we follow a deprecation schedule as detailed below.

Functionality is marked as deprecated by a corresponding note in the release notes and the documentation. Where possible, a `PTBDeprecationWarning` is issued when deprecated functionality is used, but this is not mandatory.

From time to time, we may decide to deprecate an API that is particularly widely used. In these cases, we may decide to provide an extended deprecation period, at our discretion.

With version 20.0.0, PTB introduced major structural breaking changes without the above deprecation period. Should a similarly big change ever be deemed necessary again by the development team and should a deprecation

period prove too much additional effort, this violation of the stability policy will be announced well ahead of the release in our channel, [as was done for v20](#).

## Non-Bot API Functionality

Starting with version 20.3, deprecated functionality will stay available for the current and the next major version. For example:

- In PTB v20.1.1 the feature exists
- In PTB v20.1.2 or v20.2.0 the feature is marked as deprecated
- In PTB v21.\*.\* the feature is marked as deprecated
- In PTB v22.0 the feature is removed or changed

## Bot API Functionality

As PTB has no control over deprecations introduced by Telegram and the schedule of these deprecations rarely coincides with PTBs deprecation schedule, we have a special policy for Bot API functionality.

Starting with 20.3, deprecated Bot API functionality will stay available for the current and the next major version of PTB *or* until the next version of the Bot API. More precisely, two cases are possible, for which we show examples below.

### Case 1

- In PTB v20.1 the feature exists
- Bot API version 6.6 is released and deprecates the feature
- PTB v20.2 adds support for Bot API 6.6 and the feature is marked as deprecated
- In PTB v21.0 the feature is removed or changed

### Case 2

- In PTB v20.1 the feature exists
- Bot API version 6.6 is released and deprecates the feature
- PTB v20.2 adds support for Bot API version 6.6 and the feature is marked as deprecated
- In PTB v20.2.\* and v20.3.\* the feature is marked as deprecated
- Bot API version 6.7 is released
- PTB v20.4 adds support for Bot API version 6.7 and the feature is removed or changed

## 10.6 Changelog

### 10.6.1 Version 20.6

*Released 2023-10-03*

This is the technical changelog for version 20.6. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Major Changes

- Drop Backward Compatibility Layer Introduced in #3853 (API 6.8) (#3873)
- Full Support for Bot API 6.9 (#3898)

## New Features

- Add Rich Equality Comparison to `WriteAccessAllowed` (#3911 closes #3909)
- Add `__repr__` Methods Added in #3826 closes #3770 to Sphinx Documentation (#3901 closes #3889)
- Add String Representation for Selected Classes (#3826 closes #3770)

## Minor Changes

- Add Support Python 3.12 (#3915)
- Documentation Improvements (#3910)

## Internal Changes

- Verify Type Hints for Bot Method & Telegram Class Parameters (#3868)
- Move Bot API Tests to Separate Workflow File (#3912)
- Fix Failing `file_size` Tests (#3906)
- Set Threshold for DeepSource's PY-R1000 to High (#3888)
- One-Time Code Formatting Improvement via `--preview` Flag of `black` (#3882)
- Move Dunder Methods to the Top of Class Bodies (#3883)
- Remove Superfluous Defaults `.__ne__` (#3884)

## Dependency Updates

- `pre-commit` autoupdate (#3876)
- Update `pre-commit` Dependencies (#3916)
- Bump `actions/checkout` from 3 to 4 (#3914)
- Update `httpx` requirement from `~0.24.1` to `~0.25.0` (#3891)
- Bump `furo` from 2023.8.19 to 2023.9.10 (#3890)
- Bump `sphinx` from 7.2.5 to 7.2.6 (#3892)
- Update `tornado` requirement from `~6.2` to `~6.3.3` (#3675)
- Bump `pytest` from 7.4.0 to 7.4.2 (#3881)

## 10.6.2 Version 20.5

*Released 2023-09-03*

This is the technical changelog for version 20.5. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes

- API 6.8 (#3853)
- Remove Functionality Deprecated Since Bot API 6.5, 6.6 or 6.7 (#3858)

### New Features

- Extend Allowed Values for HTTP Version (#3823 closes #3821)
- Add `has_args` Parameter to `CommandHandler` (#3854 by @thatguylah closes #3798)
- Add `Application.stop_running()` and Improve Marking Updates as Read on `Updater.stop()` (#3804)

### Minor Changes

- Type Hinting Fixes for `WebhookInfo` (#3871)
- Test and Document `Exception.__cause__` on `NetworkError` (#3792 closes #3778)
- Add Support for Python 3.12 RC (#3847)

### Documentation Improvements

- Remove Version Check from Examples (#3846)
- Documentation Improvements (#3803, #3797, #3816 by @trim21, #3829 by @aelkheir)
- Provide Versions of `customwebhookbot.py` with Different Frameworks (#3820 closes #3717)

### Dependency Updates

- `pre-commit` autoupdate (#3824)
- Bump `srvaroa/labeler` from 1.6.0 to 1.6.1 (#3870)
- Bump `sphinx` from 7.0.1 to 7.1.1 (#3818)
- Bump `sphinx` from 7.2.3 to 7.2.5 (#3869)
- Bump `furo` from 2023.5.20 to 2023.7.26 (#3817)
- Update `apscheduler` requirement from `~3.10.3` to `~3.10.4` (#3862)
- Bump `sphinx` from 7.2.2 to 7.2.3 (#3861)
- Bump `pytest-asyncio` from 0.21.0 to 0.21.1 (#3801)
- Bump `sphinx-paramlinks` from 0.5.4 to 0.6.0 (#3840)
- Update `apscheduler` requirement from `~3.10.1` to `~3.10.3` (#3851)
- Bump `furo` from 2023.7.26 to 2023.8.19 (#3850)
- Bump `sphinx` from 7.1.2 to 7.2.2 (#3852)
- Bump `sphinx` from 7.1.1 to 7.1.2 (#3827)

## 10.6.3 Version 20.4

*Released 2023-07-09*

This is the technical changelog for version 20.4. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes

- Drop Support for Python 3.7 (#3728, #3742 by @Trifase, #3749 by @thefunkycat, #3740 closes #3732, #3754 closes #3731, #3753, #3764, #3762, #3759 closes #3733)

### New Features

- Make Integration of APScheduler into JobQueue More Explicit (#3695)
- Introduce BaseUpdateProcessor for Customized Concurrent Handling of Updates (#3654 closes #3509)

### Minor Changes

- Fix Inconsistent Type Hints for timeout Parameter of Bot.get\_updates (#3709 by @revolter)
- Use Explicit Optionals (#3692 by @MiguelX413)

### Bug Fixes

- Fix Wrong Warning Text in KeyboardButton.\_\_eq\_\_ (#3768)

### Documentation Improvements

- Explicitly set allowed\_updates in Examples (#3741 by @Trifase closes #3726)
- Bump furo and sphinx (#3719)
- Documentation Improvements (#3698, #3708 by @revolter, #3767)
- Add Quotes for Installation Instructions With Optional Dependencies (#3780)
- Exclude Type Hints from Stability Policy (#3712)
- Set httpx Logging Level to Warning in Examples (#3746 closes #3743)

### Internal Changes

- Drop a Legacy pre-commit.ci Configuration (#3697)
- Add Python 3.12 Beta to the Test Matrix (#3751)
- Use Temporary Files for Testing File Downloads (#3777)
- Auto-Update Changed Version in Other Files After Dependabot PRs (#3716)
- Add More ruff Rules (#3763)
- Rename \_handler.py to \_basehandler.py (#3761)
- Automatically Label pre-commit-ci PRs (#3713)
- Rework pytest Integration into GitHub Actions (#3776)
- Fix Two Bugs in GitHub Actions Workflows (#3739)

## Dependency Updates

- Update cachetools requirement from `~=5.3.0` to `~=5.3.1` (#3738)
- Update aiolimiter requirement from `~=1.0.0` to `~=1.1.0` (#3707)
- `pre-commit` autoupdate (#3791)
- Bump sphinxcontrib-mermaid from 0.8.1 to 0.9.2 (#3737)
- Bump pytest-xdist from 3.2.1 to 3.3.0 (#3705)
- Bump srvaroa/labeler from 1.5.0 to 1.6.0 (#3786)
- Bump dependabot/fetch-metadata from 1.5.1 to 1.6.0 (#3787)
- Bump dessant/lock-threads from 4.0.0 to 4.0.1 (#3785)
- Bump pytest from 7.3.2 to 7.4.0 (#3774)
- Update httpx requirement from `~=0.24.0` to `~=0.24.1` (#3715)
- Bump pytest-xdist from 3.3.0 to 3.3.1 (#3714)
- Bump pytest from 7.3.1 to 7.3.2 (#3758)
- `pre-commit` autoupdate (#3747)

## 10.6.4 Version 20.3

*Released 2023-05-07*

This is the technical changelog for version 20.3. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Major Changes

- Full support for API 6.7 (#3673)
- Add a Stability Policy (#3622)

## New Features

- Add `Application.mark_data_for_update_persistence` (#3607)
- Make `Message.link` Point to Thread View Where Possible (#3640)
- Localize Received datetime Objects According to `Defaults.tzinfo` (#3632)

## Minor Changes, Documentation Improvements and CI

- Empower `ruff` (#3594)
- Drop Usage of `sys.maxunicode` (#3630)
- Add String Representation for `RequestParameter` (#3634)
- Stabilize CI by Rerunning Failed Tests (#3631)
- Give Loggers Better Names (#3623)
- Add Logging for Invalid JSON Data in `BasePersistence.parse_json_payload` (#3668)
- Improve Warning Categories & Stacklevels (#3674)
- Stabilize `test_delete_sticker_set` (#3685)



- Shield Update Fetcher Task in `Application.start` (#3657)
- Recover 100% Type Completeness (#3676)
- Documentation Improvements (#3628, #3636, #3694)

## Dependencies

- Bump `actions/stale` from 7 to 8 (#3644)
- Bump `furo` from 2023.3.23 to 2023.3.27 (#3643)
- `pre-commit` autoupdate (#3646, #3688)
- Remove Deprecated `codecov` Package from CI (#3664)
- Bump `sphinx-copybutton` from 0.5.1 to 0.5.2 (#3662)
- Update `httpx` requirement from `~0.23.3` to `~0.24.0` (#3660)
- Bump `pytest` from 7.2.2 to 7.3.1 (#3661)

## 10.6.5 Version 20.2

*Released 2023-03-25*

This is the technical changelog for version 20.2. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Major Changes

- Full Support for API 6.6 (#3584)
- Revert to HTTP/1.1 as Default and make HTTP/2 an Optional Dependency (#3576)

## Minor Changes, Documentation Improvements and CI

- Documentation Improvements (#3565, #3600)
- Handle Symbolic Links in `was_called_by` (#3552)
- Tidy Up Tests Directory (#3553)
- Enhance `Application.create_task` (#3543)
- Make Type Completeness Workflow Usable for PRs from Forks (#3551)
- Refactor and Overhaul the Test Suite (#3426)

## Dependencies

- Bump `pytest-asyncio` from 0.20.3 to 0.21.0 (#3624)
- Bump `furo` from 2022.12.7 to 2023.3.23 (#3625)
- Bump `pytest-xdist` from 3.2.0 to 3.2.1 (#3606)
- `pre-commit` autoupdate (#3577)
- Update `apscheduler` requirement from `~3.10.0` to `~3.10.1` (#3572)
- Bump `pytest` from 7.2.1 to 7.2.2 (#3573)
- Bump `pytest-xdist` from 3.1.0 to 3.2.0 (#3550)
- Bump `sphinxcontrib-mermaid` from 0.7.1 to 0.8 (#3549)

## 10.6.6 Version 20.1

*Released 2023-02-09*

This is the technical changelog for version 20.1. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes

- Full Support for Bot API 6.5 (#3530)

### New Features

- Add `Application(Builder).post_stop` (#3466)
- Add `Chat.effective_name` Convenience Property (#3485)
- Allow to Adjust HTTP Version and Use HTTP/2 by Default (#3506)

### Documentation Improvements

- Enhance `chatmemberbot` Example (#3500)
- Automatically Generate Cross-Reference Links (#3501, #3529, #3523)
- Add Some Graphic Elements to Docs (#3535)
- Various Smaller Improvements (#3464, #3483, #3484, #3497, #3512, #3515, #3498)

### Minor Changes, Documentation Improvements and CI

- Update Copyright to 2023 (#3459)
- Stabilize Tests on Closing and Hiding the General Forum Topic (#3460)
- Fix Dependency Warning Typo (#3474)
- Cache Dependencies on GitHub Actions (#3469)
- Store Documentation Builds as GitHub Actions Artifacts (#3468)
- Add `ruff` to pre-commit Hooks (#3488)
- Improve Warning for `days` Parameter of `JobQueue.run_daily` (#3503)
- Improve Error Message for `NetworkError` (#3505)
- Lock Inactive Threads Only Once Each Day (#3510)
- Bump `pytest` from 7.2.0 to 7.2.1 (#3513)
- Check for 3D Arrays in `check_keyboard_type` (#3514)
- Explicit Type Annotations (#3508)
- Increase Verbosity of Type Completeness CI Job (#3531)
- Fix CI on Python 3.11 + Windows (#3547)

## Dependencies

- Bump actions/stale from 6 to 7 (#3461)
- Bump dessant/lock-threads from 3.0.0 to 4.0.0 (#3462)
- pre-commit autoupdate (#3470)
- Update httpx requirement from ~=0.23.1 to ~=0.23.3 (#3489)
- Update cachetools requirement from ~=5.2.0 to ~=5.2.1 (#3502)
- Improve Config for ruff and Bump to v0.0.222 (#3507)
- Update cachetools requirement from ~=5.2.1 to ~=5.3.0 (#3520)
- Bump isort to 5.12.0 (#3525)
- Update apscheduler requirement from ~=3.9.1 to ~=3.10.0 (#3532)
- pre-commit autoupdate (#3537)
- Update cryptography requirement to >=39.0.1 to address Vulnerability (#3539)

## 10.6.7 Version 20.0

*Released 2023-01-01*

This is the technical changelog for version 20.0. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Major Changes

- Full Support For Bot API 6.4 (#3449)

## Minor Changes, Documentation Improvements and CI

- Documentation Improvements (#3428, #3423, #3429, #3441, #3404, #3443)
- Allow Sequence Input for Bot Methods (#3412)
- Update Link-Check CI and Replace a Dead Link (#3456)
- Freeze Classes Without Arguments (#3453)
- Add New Constants (#3444)
- Override Bot.\_\_deepcopy\_\_ to Raise TypeError (#3446)
- Add Log Decorator to Bot.get\_webhook\_info (#3442)
- Add Documentation On Verifying Releases (#3436)
- Drop Undocumented Job.\_\_lt\_\_ (#3432)

## Dependencies

- Downgrade sphinx to 5.3.0 to Fix Search (#3457)
- Bump sphinx from 5.3.0 to 6.0.0 (#3450)

## 10.6.8 Version 20.0b0

*Released 2022-12-15*

This is the technical changelog for version 20.0b0. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Major Changes

- Make TelegramObject Immutable (#3249)

## Minor Changes, Documentation Improvements and CI

- Reduce Code Duplication in Testing Defaults (#3419)
- Add Notes and Warnings About Optional Dependencies (#3393)
- Simplify Internals of Bot Methods (#3396)
- Reduce Code Duplication in Several Bot Methods (#3385)
- Documentation Improvements (#3386, #3395, #3398, #3403)

## Dependencies

- Bump pytest-xdist from 3.0.2 to 3.1.0 (#3415)
- Bump pytest-asyncio from 0.20.2 to 0.20.3 (#3417)
- pre-commit autoupdate (#3409)

## 10.6.9 Version 20.0a6

*Released 2022-11-24*

This is the technical changelog for version 20.0a6. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Bug Fixes

- Only Persist Arbitrary callback\_data if ExtBot.callback\_data\_cache is Present (#3384)
- Improve Backwards Compatibility of TelegramObjects Pickle Behavior (#3382)
- Fix Naming and Keyword Arguments of File.download\_\* Methods (#3380)
- Fix Return Value Annotation of Chat.create\_forum\_topic (#3381)

## 10.6.10 Version 20.0a5

*Released 2022-11-22*

This is the technical changelog for version 20.0a5. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes

- API 6.3 ([#3346](#), [#3343](#), [#3342](#), [#3360](#))
- Explicit `local_mode` Setting ([#3154](#))
- Make Almost All 3rd Party Dependencies Optional ([#3267](#))
- Split `File.download` Into `File.download_to_drive` And `File.download_to_memory` ([#3223](#))

### New Features

- Add Properties for API Settings of Bot ([#3247](#))
- Add `chat_id` and `username` Parameters to `ChatJoinRequestHandler` ([#3261](#))
- Introduce `TelegramObject.api_kwargs` ([#3233](#))
- Add Two Constants Related to Local Bot API Servers ([#3296](#))
- Add `recursive` Parameter to `TelegramObject.to_dict()` ([#3276](#))
- Overhaul String Representation of `TelegramObject` ([#3234](#))
- Add Methods `Chat.mention_{html, markdown, markdown_v2}` ([#3308](#))
- Add `constants.MessageLimit.DEEP_LINK_LENGTH` ([#3315](#))
- Add Shortcut Parameters `caption`, `parse_mode` and `caption_entities` to `Bot.send_media_group` ([#3295](#))
- Add Several New Enums To Constants ([#3351](#))

### Bug Fixes

- Fix `CallbackQueryHandler` Not Handling Non-String Data Correctly With Regex Patterns ([#3252](#))
- Fix Defaults Handling in `Bot.answer_web_app_query` ([#3362](#))

### Documentation Improvements

- Update PR Template ([#3361](#))
- Document Dunder Methods of `TelegramObject` ([#3319](#))
- Add Several References to Wiki pages ([#3306](#))
- Overhaul Search bar ([#3218](#))
- Unify Documentation of Arguments and Attributes of Telegram Classes ([#3217](#), [#3292](#), [#3303](#), [#3312](#), [#3314](#))
- Several Smaller Improvements ([#3214](#), [#3271](#), [#3289](#), [#3326](#), [#3370](#), [#3376](#), [#3366](#))

## Minor Changes, Documentation Improvements and CI

- Improve Warning About Unknown ConversationHandler States (#3242)
- Switch from Stale Bot to GitHub Actions (#3243)
- Bump Python 3.11 to RC2 in Test Matrix (#3246)
- Make Job.job a Property and Make Jobs Hashable (#3250)
- Skip JobQueue Tests on Windows Again (#3280)
- Read-Only CallbackDataCache (#3266)
- Type Hinting Fix for Message.effective\_attachment (#3294)
- Run Unit Tests in Parallel (#3283)
- Update Test Matrix to Use Stable Python 3.11 (#3313)
- Don't Edit Objects In-Place When Inserting ext.Defaults (#3311)
- Add a Test for MessageAttachmentType (#3335)
- Add Three New Test Bots (#3347)
- Improve Unit Tests Regarding ChatMemberUpdated.difference (#3352)
- Flaky Unit Tests: Use pytest Marker (#3354)
- Fix DeepSource Issues (#3357)
- Handle Lists and Tuples and Datetimes Directly in TelegramObject.to\_dict (#3353)
- Update Meta Config (#3365)
- Merge ChatDescriptionLimit Enum Into ChatLimit (#3377)

## Dependencies

- Bump pytest from 7.1.2 to 7.1.3 (#3228)
- pre-commit Updates (#3221)
- Bump sphinx from 5.1.1 to 5.2.3 (#3269)
- Bump furo from 2022.6.21 to 2022.9.29 (#3268)
- Bump actions/stale from 5 to 6 (#3277)
- pre-commit autoupdate (#3282)
- Bump sphinx from 5.2.3 to 5.3.0 (#3300)
- Bump pytest-asyncio from 0.19.0 to 0.20.1 (#3299)
- Bump pytest from 7.1.3 to 7.2.0 (#3318)
- Bump pytest-xdist from 2.5.0 to 3.0.2 (#3317)
- pre-commit autoupdate (#3325)
- Bump pytest-asyncio from 0.20.1 to 0.20.2 (#3359)
- Update httpx requirement from ~=0.23.0 to ~=0.23.1 (#3373)

### 10.6.11 Version 20.0a4

*Released 2022-08-27*

This is the technical changelog for version 20.0a4. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

#### Hot Fixes

- Fix a Bug in `setup.py` Regarding Optional Dependencies ([#3209](#))

### 10.6.12 Version 20.0a3

*Released 2022-08-27*

This is the technical changelog for version 20.0a3. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

#### Major Changes

- Full Support for API 6.2 ([#3195](#))

#### New Features

- New Rate Limiting Mechanism ([#3148](#))
- Make `chat/user_data` Available in Error Handler for Errors in Jobs ([#3152](#))
- Add `Application.post_shutdown` ([#3126](#))

#### Bug Fixes

- Fix `helpers.mention_markdown` for Markdown V1 and Improve Related Unit Tests ([#3155](#))
- Add `api_kwargs` Parameter to `Bot.log_out` and Improve Related Unit Tests ([#3147](#))
- Make `Bot.delete_my_commands` a Coroutine Function ([#3136](#))
- Fix `ConversationHandler.check_update` not respecting `per_user` ([#3128](#))

#### Minor Changes, Documentation Improvements and CI

- Add Python 3.11 to Test Suite & Adapt Enum Behaviour ([#3168](#))
- Drop Manual Token Validation ([#3167](#))
- Simplify Unit Tests for `Bot.send_chat_action` ([#3151](#))
- Drop pre-commit Dependencies from `requirements-dev.txt` ([#3120](#))
- Change Default Values for `concurrent_updates` and `connection_pool_size` ([#3127](#))
- Documentation Improvements ([#3139](#), [#3153](#), [#3135](#))
- Type Hinting Fixes ([#3202](#))

## Dependencies

- Bump sphinx from 5.0.2 to 5.1.1 (#3177)
- Update pre-commit Dependencies (#3085)
- Bump pytest-asyncio from 0.18.3 to 0.19.0 (#3158)
- Update tornado requirement from ~=6.1 to ~=6.2 (#3149)
- Bump black from 22.3.0 to 22.6.0 (#3132)
- Bump actions/setup-python from 3 to 4 (#3131)

### 10.6.13 Version 20.0a2

*Released 2022-06-27*

This is the technical changelog for version 20.0a2. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

## Major Changes

- Full Support for API 6.1 (#3112)

## New Features

- Add Additional Shortcut Methods to Chat (#3115)
- Mermaid-based Example State Diagrams (#3090)

## Minor Changes, Documentation Improvements and CI

- Documentation Improvements (#3103, #3121, #3098)
- Stabilize CI (#3119)
- Bump pyupgrade from 2.32.1 to 2.34.0 (#3096)
- Bump furo from 2022.6.4 to 2022.6.4.1 (#3095)
- Bump mypy from 0.960 to 0.961 (#3093)

### 10.6.14 Version 20.0a1

*Released 2022-06-09*

This is the technical changelog for version 20.0a1. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).



### Major Changes:

- Drop Support for `ujson` and instead `BaseRequest.parse_json_payload` (#3037, #3072)
- Drop `InputFile.is_image` (#3053)
- Drop Explicit Type conversions in `__init__`s (#3056)
- Handle List-Valued Attributes More Consistently (#3057)
- Split `{Command, Prefix}Handler` And Make Attributes Immutable (#3045)
- Align Behavior Of `JobQueue.run_daily` With `cron` (#3046)
- Make PTB Specific Keyword-Only Arguments for PTB Specific in Bot methods (#3035)
- Adjust Equality Comparisons to Fit Bot API 6.0 (#3033)
- Add Tuple Based Version Info (#3030)
- Improve Type Annotations for `CallbackContext` and Move Default Type Alias to `ContextTypes.DEFAULT_TYPE` (#3017, #3023)
- Rename `Job.context` to `Job.data` (#3028)
- Rename `Handler` to `BaseHandler` (#3019)

### New Features:

- Add `Application.post_init` (#3078)
- Add Arguments `chat/user_id` to `CallbackContext` And Example On Custom Webhook Setups (#3059)
- Add Convenience Property `Message.id` (#3077)
- Add Example for `WebApp` (#3052)
- Rename `telegram.bot_api_version` to `telegram.__bot_api_version__` (#3030)

### Bug Fixes:

- Fix Non-Blocking Entry Point in `ConversationHandler` (#3068)
- Escape Backslashes in `escape_markdown` (#3055)

### Dependencies:

- Update `httpx` requirement from `~=0.22.0` to `~=0.23.0` (#3069)
- Update `cachetools` requirement from `~=5.0.0` to `~=5.2.0` (#3058, #3080)

### Minor Changes, Documentation Improvements and CI:

- Move Examples To Documentation (#3089)
- Documentation Improvements and Update Dependencies (#3010, #3007, #3012, #3067, #3081, #3082)
- Improve Some Unit Tests (#3026)
- Update Code Quality dependencies (#3070, #3032, :pr:2998, #2999)
- Don't Set Signal Handlers On Windows By Default (#3065)
- Split `{Command, Prefix}Handler` And Make Attributes Immutable (#3045)
- Apply `isort` and Update `pre-commit.ci` Configuration (#3049)

- Adjust pre-commit Settings for isort (#3043)
- Add Version Check to Examples (#3036)
- Use Collection Instead of List and Tuple (#3025)
- Remove Client-Side Parameter Validation (#3024)
- Don't Pass Default Values of Optional Parameters to Telegram (#2978)
- Stabilize `Application.run_*` on Python 3.7 (#3009)
- Ignore Code Style Commits in `git blame` (#3003)
- Adjust Tests to Changed API Behavior (#3002)

### 10.6.15 Version 20.0a0

*Released 2022-05-06*

This is the technical changelog for version 20.0a0. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

#### Major Changes:

- Refactor Initialization of Persistence Classes (#2604)
- Drop Non-CallbackContext API (#2617)
- Remove `__dict__` from `__slots__` and drop Python 3.6 (#2619, #2636)
- Move and Rename `TelegramDecryptionError` to `telegram.error.PassportDecryptionError` (#2621)
- Make BasePersistence Methods Abstract (#2624)
- Remove `day_is_strict` argument of `JobQueue.run_monthly` (#2634 by [iota-008](#))
- Move Defaults to `telegram.ext` (#2648)
- Remove Deprecated Functionality (#2644, #2740, #2745)
- Overhaul of Filters (#2759, #2922)
- Switch to `asyncio` and Refactor PTBs Architecture (#2731)
- Improve `Job.__getattr__` (#2832)
- Remove `telegram.ReplyMarkup` (#2870)
- Persistence of Bots: Refactor Automatic Replacement and Integration with `TelegramObject` (#2893)

#### New Features:

- Introduce Builder Pattern (#2646)
- Add `Filters.update.edited` (#2705 by [PhilippFr](#))
- Introduce Enums for `telegram.constants` (#2708)
- Accept File Paths for `private_key` (#2724)
- Associate Jobs with `chat/user_id` (#2731)
- Convenience Functionality for `ChatInviteLinks` (#2782)
- Add `Dispatcher.add_handlers` (#2823)
- Improve Error Messages in `CommandHandler.__init__` (#2837)

- `Defaults.protect_content` (#2840)
- Add `Dispatcher.migrate_chat_data` (#2848 by [DonalDuck004](#))
- Add Method `drop_chat/user_data` to `Dispatcher` and `Persistence` (#2852)
- Add methods `ChatPermissions.{all, no}_permissions` (#2948)
- Full Support for API 6.0 (#2956)
- Add Python 3.10 to Test Suite (#2968)

### Bug Fixes & Minor Changes:

- Improve Type Hinting for `CallbackContext` (#2587 by [revolter](#))
- Fix Signatures and Improve `test_official` (#2643)
- Refine `Dispatcher.dispatch_error` (#2660)
- Make `InlineQuery.answer` Raise `ValueError` (#2675)
- Improve Signature Inspection for Bot Methods (#2686)
- Introduce `TelegramObject.set/get_bot` (#2712 by [zpavloudis](#))
- Improve Subscription of `TelegramObject` (#2719 by [SimonDamberg](#))
- Use Enums for Dynamic Types & Rename Two Attributes in `ChatMember` (#2817)
- Return Plain Dicts from `BasePersistence.get_*_data` (#2873)
- Fix a Bug in `ChatMemberUpdated.difference` (#2947)
- Update Dependency Policy (#2958)

### Internal Restructurings & Improvements:

- Add User Friendly Type Check For Init Of `{Inline, Reply}KeyboardMarkup` (#2657)
- Warnings Overhaul (#2662)
- Clear Up Import Policy (#2671)
- Mark Internal Modules As Private (#2687 by [kencx](#))
- Handle Filepaths via the `pathlib` Module (#2688 by [eldbud](#))
- Refactor MRO of `InputMedia*` and Some File-Like Classes (#2717 by [eldbud](#))
- Update Exceptions for Immutable Attributes (#2749)
- Refactor Warnings in `ConversationHandler` (#2755, #2784)
- Use `__all__` Consistently (#2805)

### CI, Code Quality & Test Suite Improvements:

- Add Custom `pytest` Marker to Ease Development (#2628)
- Pass Failing Jobs to Error Handlers (#2692)
- Update Notification Workflows (#2695)
- Use Error Messages for `pylint` Instead of Codes (#2700 by [Piraty](#))
- Make Tests Agnostic of the CWD (#2727 by [eldbud](#))
- Update Code Quality Dependencies (#2748)

- Improve Code Quality (#2783)
- Update pre-commit Settings & Improve a Test (#2796)
- Improve Code Quality & Test Suite (#2843)
- Fix failing animation tests (#2865)
- Update and Expand Tests & pre-commit Settings and Improve Code Quality (#2925)
- Extend Code Formatting With Black (#2972)
- Update Workflow Permissions (#2984)
- Adapt Tests to Changed Bot.get\_file Behavior (#2995)

#### Documentation Improvements:

- Doc Fixes (#2597)
- Add Code Comment Guidelines to Contribution Guide (#2612)
- Add Cross-References to External Libraries & Other Documentation Improvements (#2693, #2691 by joesinghh, #2739 by eldbud)
- Use Furo Theme, Make Parameters Referenceable, Add Documentation Building to CI, Improve Links to Source Code & Other Improvements (#2856, #2798, #2854, #2841)
- Documentation Fixes & Improvements (#2822)
- Replace git.io Links (#2872 by murugu-21)
- Overhaul Readmes, Update RTD Startpage & Other Improvements (#2969)

### 10.6.16 Version 13.11

*Released 2022-02-02*

This is the technical changelog for version 13.11. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

#### Major Changes:

- Full Support for Bot API 5.7 (#2881)

### 10.6.17 Version 13.10

*Released 2022-01-03*

This is the technical changelog for version 13.10. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

#### Major Changes:

- Full Support for API 5.6 (#2835)

#### Minor Changes & Doc fixes:

- Update Copyright to 2022 (#2836)
- Update Documentation of BotCommand (#2820)

## 10.6.18 Version 13.9

*Released 2021-12-11*

This is the technical changelog for version 13.9. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes:

- Full Support for Api 5.5 (#2809)

### Minor Changes

- Adjust Automated Locking of Inactive Issues (#2775)

## 10.6.19 Version 13.8.1

*Released 2021-11-08*

This is the technical changelog for version 13.8.1. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Doc fixes:

- Add ChatJoinRequest(Handler) to Docs (#2771)

## 10.6.20 Version 13.8

*Released 2021-11-08*

This is the technical changelog for version 13.8. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes:

- Full support for API 5.4 (#2767)

### Minor changes, CI improvements, Doc fixes and Type hinting:

- Create Issue Template Forms (#2689)
- Fix camelCase Functions in ExtBot (#2659)
- Fix Empty Captions not Being Passed by Bot.copy\_message (#2651)
- Fix Setting Thumbs When Uploading A Single File (#2583)
- Fix Bug in BasePersistence.insert/replace\_bot for Objects with \_\_dict\_\_ not in \_\_slots\_\_ (#2603)

## 10.6.21 Version 13.7

*Released 2021-07-01*

This is the technical changelog for version 13.7. More elaborate release notes can be found in the news channel [@pythontelegrambotchannel](#).

### Major Changes:

- Full support for Bot API 5.3 (#2572)

### Bug Fixes:

- Fix Bug in BasePersistence.insert/replace\_bot for Objects with \_\_dict\_\_ in their slots (#2561)
- Remove Incorrect Warning About Defaults and ExtBot (#2553)

**Minor changes, CI improvements, Doc fixes and Type hinting:**

- Type Hinting Fixes (#2552)
- Doc Fixes (#2551)
- Improve Deprecation Warning for `__slots__` (#2574)
- Stabilize CI (#2575)
- Fix Coverage Configuration (#2571)
- Better Exception-Handling for `BasePersistence.replace/insert_bot` (#2564)
- Remove Deprecated `pass_args` from Deeplinking Example (#2550)

## 10.6.22 Version 13.6

*Released 2021-06-06*

**New Features:**

- Arbitrary `callback_data` (#1844)
- Add `ContextTypes` & `BasePersistence.refresh_user/chat/bot_data` (#2262)
- Add `Filters.attachment` (#2528)
- Add `pattern` Argument to `ChosenInlineResultHandler` (#2517)

**Major Changes:**

- Add `slots` (#2345)

**Minor changes, CI improvements, Doc fixes and Type hinting:**

- Doc Fixes (#2495, #2510)
- Add `max_connections` Parameter to `Updater.start_webhook` (#2547)
- Fix for `Promise.done_callback` (#2544)
- Improve Code Quality (#2536, #2454)
- Increase Test Coverage of `CallbackQueryHandler` (#2520)
- Stabilize CI (#2522, #2537, #2541)
- Fix `send_phone_number_to_provider` argument for `Bot.send_invoice` (#2527)
- Handle Classes as Input for `BasePersistence.replace/insert_bot` (#2523)
- Bump Tornado Version and Remove Workaround from #2067 (#2494)

## 10.6.23 Version 13.5

*Released 2021-04-30*

**Major Changes:**

- Full support of Bot API 5.2 (#2489).

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**Note:** The `start_parameter` argument of `Bot.send_invoice` and the corresponding shortcuts is now optional, so the order of parameters had to be changed. Make sure to update your method calls accordingly.

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- Update `ChatActions`, Deprecating `ChatAction.RECORD_AUDIO` and `ChatAction.UPLOAD_AUDIO` (#2460)

**New Features:**

- Convenience Utilities & Example for Handling ChatMemberUpdated (#2490)
- `Filters.forwarded_from` (#2446)

**Minor changes, CI improvements, Doc fixes and Type hinting:**

- Improve Timeouts in ConversationHandler (#2417)
- Stabilize CI (#2480)
- Doc Fixes (#2437)
- Improve Type Hints of Data Filters (#2456)
- Add Two UserWarnings (#2464)
- Improve Code Quality (#2450)
- Update Fallback Test-Bots (#2451)
- Improve Examples (#2441, #2448)

### 10.6.24 Version 13.4.1

*Released 2021-03-14*

**Hot fix release:**

- Fixed a bug in `setup.py` (#2431)

### 10.6.25 Version 13.4

*Released 2021-03-14*

**Major Changes:**

- Full support of Bot API 5.1 (#2424)

**Minor changes, CI improvements, doc fixes and type hinting:**

- Improve Updater.set\_webhook (#2419)
- Doc Fixes (#2404)
- Type Hinting Fixes (#2425)
- Update pre-commit Settings (#2415)
- Fix Logging for Vendored urllib3 (#2427)
- Stabilize Tests (#2409)

### 10.6.26 Version 13.3

*Released 2021-02-19*

**Major Changes:**

- Make cryptography Dependency Optional & Refactor Some Tests (#2386, #2370)
- Deprecate MessageQueue (#2393)

**Bug Fixes:**

- Refactor Defaults Integration (#2363)
- Add Missing telegram.SecureValue to init and Docs (#2398)

**Minor changes:**

- Doc Fixes (#2359)

## 10.6.27 Version 13.2

*Released 2021-02-02*

### Major Changes:

- Introduce `python-telegram-bot-raw` (#2324)
- Explicit Signatures for Shortcuts (#2240)

### New Features:

- Add Missing Shortcuts to `Message` (#2330)
- Rich Comparison for `Bot` (#2320)
- Add `run_async` Parameter to `ConversationHandler` (#2292)
- Add New Shortcuts to `Chat` (#2291)
- Add New Constant `MAX_ANSWER_CALLBACK_QUERY_TEXT_LENGTH` (#2282)
- Allow Passing Custom Filename For All Media (#2249)
- Handle Bytes as File Input (#2233)

### Bug Fixes:

- Fix Escaping in Nested Entities in Message Properties (#2312)
- Adjust Calling of `Dispatcher.update_persistence` (#2285)
- Add `quote` kwarg to `Message.reply_copy` (#2232)
- `ConversationHandler`: Docs & `edited_channel_post` behavior (#2339)

### Minor changes, CI improvements, doc fixes and type hinting:

- Doc Fixes (#2253, #2225)
- Reduce Usage of `typing.Any` (#2321)
- Extend Deeplinking Example (#2335)
- Add `pyupgrade` to pre-commit Hooks (#2301)
- Add PR Template (#2299)
- Drop Nightly Tests & Update Badges (#2323)
- Update Copyright (#2289, #2287)
- Change Order of Class DocStrings (#2256)
- Add macOS to Test Matrix (#2266)
- Start Using Versioning Directives in Docs (#2252)
- Improve Annotations & Docs of Handlers (#2243)



## 10.6.28 Version 13.1

*Released 2020-11-29*

### Major Changes:

- Full support of Bot API 5.0 (#2181, #2186, #2190, #2189, #2183, #2184, #2188, #2185, #2192, #2196, #2193, #2223, #2199, #2187, #2147, #2205)

### New Features:

- Add Defaults.run\_async (#2210)
- Improve and Expand CallbackQuery Shortcuts (#2172)
- Add XOR Filters and make Filters.name a Property (#2179)
- Add Filters.document.file\_extension (#2169)
- Add Filters.caption\_regex (#2163)
- Add Filters.chat\_type (#2128)
- Handle Non-Binary File Input (#2202)

### Bug Fixes:

- Improve Handling of Custom Objects in BasePersistence.insert/replace\_bot (#2151)
- Fix bugs in replace/insert\_bot (#2218)

### Minor changes, CI improvements, doc fixes and type hinting:

- Improve Type hinting (#2204, #2118, #2167, #2136)
- Doc Fixes & Extensions (#2201, #2161)
- Use F-Strings Where Possible (#2222)
- Rename kwargs to \_kwargs where possible (#2182)
- Comply with PEP561 (#2168)
- Improve Code Quality (#2131)
- Switch Code Formatting to Black (#2122, #2159, #2158)
- Update Wheel Settings (#2142)
- Update timerbot.py to v13.0 (#2149)
- Overhaul Constants (#2137)
- Add Python 3.9 to Test Matrix (#2132)
- Switch Codecov to GitHub Action (#2127)
- Specify Required pytz Version (#2121)

## 10.6.29 Version 13.0

*Released 2020-10-07*

**For a detailed guide on how to migrate from v12 to v13, see [this wiki page](#).**

### Major Changes:

- Deprecate old-style callbacks, i.e. set use\_context=True by default (#2050)
- Refactor Handling of Message VS Update Filters (#2032)
- Deprecate Message.default\_quote (#1965)
- Refactor persistence of Bot instances (#1994)

- Refactor JobQueue (#1981)
- Refactor handling of kwargs in Bot methods (#1924)
- Refactor Dispatcher.run\_async, deprecating the @run\_async decorator (#2051)

**New Features:**

- Type Hinting (#1920)
- Automatic Pagination for answer\_inline\_query (#2072)
- Defaults.tzinfo (#2042)
- Extend rich comparison of objects (#1724)
- Add Filters.via\_bot (#2009)
- Add missing shortcuts (#2043)
- Allow DispatcherHandlerStop in ConversationHandler (#2059)
- Make Errors picklable (#2106)

**Minor changes, CI improvements, doc fixes or bug fixes:**

- Fix Webhook not working on Windows with Python 3.8+ (#2067)
- Fix setting thumbs with send\_media\_group (#2093)
- Make MessageHandler filter for Filters.update first (#2085)
- Fix PicklePersistence.flush() with only bot\_data (#2017)
- Add test for clean argument of Updater.start\_polling/webhook (#2002)
- Doc fixes, refinements and additions (#2005, #2008, #2089, #2094, #2090)
- CI fixes (#2018, #2061)
- Refine pollbot.py example (#2047)
- Refine Filters in examples (#2027)
- Rename echobot examples (#2025)
- Use Lock-Bot to lock old threads (#2048, #2052, #2049, #2053)

## 10.6.30 Version 12.8

*Released 2020-06-22*

**Major Changes:**

- Remove Python 2 support (#1715)
- Bot API 4.9 support (#1980)
- IDs/Usernames of Filters.user and Filters.chat can now be updated (#1757)

**Minor changes, CI improvements, doc fixes or bug fixes:**

- Update contribution guide and stale bot (#1937)
- Remove NullHandlers (#1913)
- Improve and expand examples (#1943, #1995, #1983, #1997)
- Doc fixes (#1940, #1962)
- Add User.send\_poll() shortcut (#1968)
- Ignore private attributes en TelegramObject.to\_dict() (#1989)
- Stabilize CI (#2000)

### 10.6.31 Version 12.7

*Released 2020-05-02*

#### Major Changes:

- Bot API 4.8 support. **Note:** The Dice object now has a second positional argument `emoji`. This is relevant, if you instantiate Dice objects manually. (#1917)
- Added `tzinfo` argument to `helpers.from_timestamp`. It now returns a timezone aware object. This is relevant for `Message.date`, `Message.forward_date`, `Message.edit_date`, `Poll.close_date` and `ChatMember.until_date` (#1621)

#### New Features:

- New method `run_monthly` for the `JobQueue` (#1705)
- `Job.next_t` now gives the datetime of the jobs next execution (#1685)

#### Minor changes, CI improvements, doc fixes or bug fixes:

- Stabilize CI (#1919, #1931)
- Use ABCs `@abstractmethod` instead of raising `NotImplementedError` for `Handler`, `BasePersistence` and `BaseFilter` (#1905)
- Doc fixes (#1914, #1902, #1910)

### 10.6.32 Version 12.6.1

*Released 2020-04-11*

#### Bug fixes:

- Fix serialization of `reply_markup` in media messages (#1889)

### 10.6.33 Version 12.6

*Released 2020-04-10*

#### Major Changes:

- Bot API 4.7 support. **Note:** In `Bot.create_new_sticker_set` and `Bot.add_sticker_to_set`, the order of the parameters had to be changed, as the `png_sticker` parameter is now optional. (#1858)

#### Minor changes, CI improvements or bug fixes:

- Add tests for `switch_inline_query(_current_chat)` with empty string (#1635)
- Doc fixes (#1854, #1874, #1884)
- Update issue templates (#1880)
- Favor concrete types over “Iterable” (#1882)
- Pass last valid `CallbackContext` to `TIMEOUT` handlers of `ConversationHandler` (#1826)
- Tweak handling of persistence and update persistence after job calls (#1827)
- Use `checkout@v2` for GitHub actions (#1887)

### 10.6.34 Version 12.5.1

Released 2020-03-30

#### Minor changes, doc fixes or bug fixes:

- Add missing docs for *PollHandler* and *PollAnswerHandler* (#1853)
- Fix wording in *Filters* docs (#1855)
- Reorder tests to make them more stable (#1835)
- Make *ConversationHandler* attributes immutable (#1756)
- Make *PrefixHandler* attributes *command* and *prefix* editable (#1636)
- Fix UTC as default *tzinfo* for *Job* (#1696)

### 10.6.35 Version 12.5

Released 2020-03-29

#### New Features:

- *Bot.link* gives the *t.me* link of the bot (#1770)

#### Major Changes:

- Bot API 4.5 and 4.6 support. (#1508, #1723)

#### Minor changes, CI improvements or bug fixes:

- Remove legacy CI files (#1783, #1791)
- Update pre-commit config file (#1787)
- Remove builtin names (#1792)
- CI improvements (#1808, #1848)
- Support Python 3.8 (#1614, #1824)
- Use stale bot for auto closing stale issues (#1820, #1829, #1840)
- Doc fixes (#1778, #1818)
- Fix typo in *edit\_message\_media* (#1779)
- In examples, answer *CallbackQueries* and use *edit\_message\_text* shortcut (#1721)
- Revert accidental change in vendored *urllib3* (#1775)

### 10.6.36 Version 12.4.2

Released 2020-02-10

#### Bug Fixes

- Pass correct *parse\_mode* to *InlineResults* if *bot.defaults* is *None* (#1763)
- Make sure PP can read files that dont have *bot\_data* (#1760)

### 10.6.37 Version 12.4.1

*Released 2020-02-08*

This is a quick release for [#1744](#) which was accidently left out of v12.4.0 though mentioned in the release notes.

### 10.6.38 Version 12.4.0

*Released 2020-02-08*

#### New features:

- Set default values for arguments appearing repeatedly. We also have a [wiki page for the new defaults](#). ([#1490](#))
- Store data in `CallbackContext.bot_data` to access it in every callback. Also persists. ([#1325](#))
- `Filters.poll` allows only messages containing a poll ([#1673](#))

#### Major changes:

- `Filters.text` now accepts messages that start with a slash, because `CommandHandler` checks for `MessageEntity.BOT_COMMAND` since v12. This might lead to your `MessageHandlers` receiving more updates than before ([#1680](#)).
- `Filters.command` now checks for `MessageEntity.BOT_COMMAND` instead of just a leading slash. Also by `Filters.command(False)` you can now filter for messages containing a command *anywhere* in the text ([#1744](#)).

#### Minor changes, CI improvements or bug fixes:

- Add `dispatcher` argument to `Updater` to allow passing a customized `Dispatcher` ([#1484](#))
- Add missing names for `Filters` ([#1632](#))
- Documentation fixes ([#1624](#), [#1647](#), [#1669](#), [#1703](#), [#1718](#), [#1734](#), [#1740](#), [#1642](#), [#1739](#), [#1746](#))
- CI improvements ([#1716](#), [#1731](#), [#1738](#), [#1748](#), [#1749](#), [#1750](#), [#1752](#))
- Fix spelling issue for `encode_conversations_to_json` ([#1661](#))
- Remove double assignement of `Dispatcher.job_queue` ([#1698](#))
- Expose dispatcher as property for `CallbackContext` ([#1684](#))
- Fix `None` check in `JobQueue._put()` ([#1707](#))
- Log datetimes correctly in `JobQueue` ([#1714](#))
- Fix false `Message.link` creation for private groups ([#1741](#))
- Add option `--with-upstream-urllib3` to `setup.py` to allow using non-vendored version ([#1725](#))
- Fix persistence for nested `ConversationHandlers` ([#1679](#))
- Improve handling of non-decodable server responses ([#1623](#))
- Fix download for files without `file_path` ([#1591](#))
- `test_webhook_invalid_posts` is now considered flaky and retried on failure ([#1758](#))

### 10.6.39 Version 12.3.0

Released 2020-01-11

#### New features:

- *Filters.caption* allows only messages with caption (#1631).
- Filter for exact messages/captions with new capability of *Filters.text* and *Filters.caption*. Especially useful in combination with *ReplyKeyboardMarkup*. (#1631).

#### Major changes:

- Fix inconsistent handling of naive datetimes (#1506).

#### Minor changes, CI improvements or bug fixes:

- Documentation fixes (#1558, #1569, #1579, #1572, #1566, #1577, #1656).
- Add mutex protection on *ConversationHandler* (#1533).
- Add *MAX\_PHOTOSIZE\_UPLOAD* constant (#1560).
- Add args and kwargs to *Message.forward()* (#1574).
- Transfer to GitHub Actions CI (#1555, #1556, #1605, #1606, #1607, #1612, #1615, #1645).
- Fix deprecation warning with Py3.8 by vendored urllib3 (#1618).
- Simplify assignments for optional arguments (#1600)
- Allow private groups for *Message.link* (#1619).
- Fix wrong signature call for *ConversationHandler.TIMEOUT* handlers (#1653).

### 10.6.40 Version 12.2.0

Released 2019-10-14

#### New features:

- Nested *ConversationHandlers* (#1512).

#### Minor changes, CI improvements or bug fixes:

- Fix CI failures due to non-backward compat attrs dependency (#1540).
- travis.yaml: *TEST\_OFFICIAL* removed from *allowed\_failures*.
- Fix typos in examples (#1537).
- Fix *Bot.to\_dict* to use proper *first\_name* (#1525).
- Refactor *test\_commandhandler.py* (#1408).
- Add Python 3.8 (RC version) to Travis testing matrix (#1543).
- *test\_bot.py*: Add *to\_dict* test (#1544).
- Flake config moved into *setup.cfg* (#1546).

### 10.6.41 Version 12.1.1

*Released 2019-09-18*

#### Hot fix release

Fixed regression in the vendored urllib3 (#1517).

### 10.6.42 Version 12.1.0

*Released 2019-09-13*

#### Major changes:

- Bot API 4.4 support (#1464, #1510)
- Add `get_file` method to `Animation` & `ChatPhoto`. Add, `get_small_file` & `get_big_file` methods to `ChatPhoto` (#1489)
- Tools for deep linking (#1049)

#### Minor changes and/or bug fixes:

- Documentation fixes (#1500, #1499)
- Improved examples (#1502)

### 10.6.43 Version 12.0.0

*Released 2019-08-29*

Well... This felt like decades. But here we are with a new release.

Expect minor releases soon (mainly complete Bot API 4.4 support)

#### Major and/or breaking changes:

- Context based callbacks
- Persistence
- PrefixHandler added (Handler overhaul)
- Deprecation of RegexHandler and `edited_messages`, `channel_post`, etc. arguments (Filter overhaul)
- Various ConversationHandler changes and fixes
- Bot API 4.1, 4.2, 4.3 support
- Python 3.4 is no longer supported
- Error Handler now handles all types of exceptions (#1485)
- Return UTC from `from_timestamp()` (#1485)

See the wiki page at <https://github.com/python-telegram-bot/python-telegram-bot/wiki/Transition-guide-to-Version-12.0> for a detailed guide on how to migrate from version 11 to version 12.

### Context based callbacks (#1100)

- Use of `pass_` in handlers is deprecated.
- Instead use `use_context=True` on `Updater` or `Dispatcher` and change callback from `(bot, update, others...)` to `(update, context)`.
- This also applies to error handlers `Dispatcher.add_error_handler` and `JobQueue` jobs (change `(bot, job)` to `(context)` here).
- For users with custom handlers subclassing `Handler`, this is mostly backwards compatible, but to use the new context based callbacks you need to implement the new `collect_additional_context` method.
- Passing `bot` to `JobQueue.__init__` is deprecated. Use `JobQueue.set_dispatcher` with a dispatcher instead.
- `Dispatcher` makes sure to use a single *CallbackContext* for a entire update. This means that if an update is handled by multiple handlers (by using the group argument), you can add custom arguments to the *CallbackContext* in a lower group handler and use it in higher group handler. NOTE: Never use with `@run_async`, see docs for more info. (#1283)
- If you have custom handlers they will need to be updated to support the changes in this release.
- Update all examples to use context based callbacks.

### Persistence (#1017)

- Added `PicklePersistence` and `DictPersistence` for adding persistence to your bots.
- `BasePersistence` can be subclassed for all your persistence needs.
- Add a new example that shows a persistent `ConversationHandler` bot

### Handler overhaul (#1114)

- `CommandHandler` now only triggers on actual commands as defined by telegram servers (everything that the clients mark as a tabable link).
- `PrefixHandler` can be used if you need to trigger on prefixes (like all messages starting with a “/” (old `CommandHandler` behaviour) or even custom prefixes like “#” or “!”).

### Filter overhaul (#1221)

- `RegexHandler` is deprecated and should be replaced with a `MessageHandler` with a regex filter.
- Use update filters to filter update types instead of arguments (`message_updates`, `channel_post_updates` and `edited_updates`) on the handlers.
- Completely remove `allow_edited` argument - it has been deprecated for a while.
- `data_filters` now exist which allows filters that return data into the callback function. This is how the regex filter is implemented.
- All this means that it no longer possible to use a list of filters in a handler. Use bitwise operators instead!



## ConversationHandler

- Remove `run_async_timeout` and `timed_out_behavior` arguments (#1344)
- Replace with `WAITING` constant and behavior from states (#1344)
- Only emit one warning for multiple `CallbackQueryHandlers` in a `ConversationHandler` (#1319)
- Use `warnings.warn` for `ConversationHandler` warnings (#1343)
- Fix unresolvable promises (#1270)

## Bug fixes & improvements

- Handlers should be faster due to deduped logic.
- Avoid compiling compiled regex in regex filter. (#1314)
- Add missing `left_chat_member` to `Message.MESSAGE_TYPES` (#1336)
- Make custom timeouts actually work properly (#1330)
- Add convenience classmethods (`from_button`, `from_row` and `from_column`) to `InlineKeyboardMarkup`
- Small typo fix in `setup.py` (#1306)
- Add `Conflict` error (HTTP error code 409) (#1154)
- Change `MAX_CAPTION_LENGTH` to 1024 (#1262)
- Remove some unnecessary clauses (#1247, #1239)
- Allow filenames without dots in them when sending files (#1228)
- Fix uploading files with unicode filenames (#1214)
- Replace `http.server` with `Tornado` (#1191)
- Allow `SOCKSConnection` to parse username and password from URL (#1211)
- Fix for arguments in `passport/data.py` (#1213)
- Improve message entity parsing by adding `text_mention` (#1206)
- Documentation fixes (#1348, #1397, #1436)
- Merged filters short-circuit (#1350)
- Fix webhook listen with `tornado` (#1383)
- Call `task_done()` on update queue after update processing finished (#1428)
- Fix `send_location()` - latitude may be 0 (#1437)
- Make `MessageEntity` objects comparable (#1465)
- Add prefix to thread names (#1358)

## Buf fixes since v12.0.0b1

- Fix setting bot on `ShippingQuery` (#1355)
- Fix `_trigger_timeout()` missing 1 required positional argument: `'job'` (#1367)
- Add missing `message.text` check in `PrefixHandler` `check_update` (#1375)
- Make updates persist even on `DispatcherHandlerStop` (#1463)
- `Dispatcher` force updating persistence object's chat data attribute (#1462)

## Internal improvements

- Finally fix our CI builds mostly (too many commits and PRs to list)
- Use multiple bots for CI to improve testing times significantly.
- Allow pypy to fail in CI.
- Remove the last CamelCase CheckUpdate methods from the handlers we missed earlier.
- test\_official is now executed in a different job

### 10.6.44 Version 11.1.0

*Released 2018-09-01*

Fixes and updates for Telegram Passport: (#1198)

- Fix passport decryption failing at random times
- Added support for middle names.
- Added support for translations for documents
- Add errors for translations for documents
- Added support for requesting names in the language of the user's country of residence
- Replaced the payload parameter with the new parameter nonce
- Add hash to EncryptedPassportElement

### 10.6.45 Version 11.0.0

*Released 2018-08-29*

Fully support Bot API version 4.0! (also some bugfixes :))

Telegram Passport (#1174):

- **Add full support for telegram passport.**
  - New types: PassportData, PassportFile, EncryptedPassportElement, EncryptedCredentials, PassportElementError, PassportElementErrorDataField, PassportElementErrorFrontSide, PassportElementErrorReverseSide, PassportElementErrorSelfie, PassportElementErrorFile and PassportElementErrorFiles.
  - New bot method: set\_passport\_data\_errors
  - New filter: Filters.passport\_data
  - Field passport\_data field on Message
  - PassportData can be easily decrypted.
  - PassportFiles are automatically decrypted if originating from decrypted PassportData.
- See new passportbot.py example for details on how to use, or go to [our telegram passport wiki page](#) for more info
- NOTE: Passport decryption requires new dependency *cryptography*.

Inputfile rework (#1184):

- Change how Inputfile is handled internally
- This allows support for specifying the thumbnails of photos and videos using the thumb= argument in the different send\_ methods.
- Also allows Bot.send\_media\_group to actually finally send more than one media.

- Add thumb to Audio, Video and Videonote
- Add Bot.edit\_message\_media together with InputMediaAnimation, InputMediaAudio, and InputMediaDocument.

Other Bot API 4.0 changes:

- Add forusquare\_type to Venue, InlineQueryResultVenue, InputVenueMessageContent, and Bot.send\_venue. (#1170)
- Add vCard support by adding vcard field to Contact, InlineQueryResultContact, InputContactMessageContent, and Bot.send\_contact. (#1166)
- **Support new message entities: CASHTAG and PHONE\_NUMBER. (#1179)**
  - Cashtag seems to be things like *\$USD* and *\$GBP*, but it seems telegram doesn't currently send them to bots.
  - Phone number also seems to have limited support for now
- Add Bot.send\_animation, add width, height, and duration to Animation, and add Filters.animation. (#1172)

Non Bot API 4.0 changes:

- Minor integer comparison fix (#1147)
- Fix Filters.regex failing on non-text message (#1158)
- Fix ProcessLookupError if process finishes before we kill it (#1126)
- Add t.me links for User, Chat and Message if available and update User.mention\_\* (#1092)
- Fix mention\_markdown/html on py2 (#1112)

### 10.6.46 Version 10.1.0

*Released 2018-05-02*

Fixes changing previous behaviour:

- Add urllib3 fix for socks5h support (#1085)
- Fix send\_sticker() timeout=20 (#1088)

Fixes:

- Add a caption\_entity filter for filtering caption entities (#1068)
- Inputfile encode filenames (#1086)
- InputFile: Fix proper naming of file when reading from subprocess.PIPE (#1079)
- Remove pytest-catchlog from requirements (#1099)
- Documentation fixes (#1061, #1078, #1081, #1096)

### 10.6.47 Version 10.0.2

*Released 2018-04-17*

Important fix:

- Handle utf8 decoding errors (#1076)

New features:

- Added Filter.regex (#1028)
- Filters for Category and file types (#1046)
- Added video note filter (#1067)

Fixes:

- Fix in telegram.Message (#1042)
- Make chat\_id a positional argument inside shortcut methods of Chat and User classes (#1050)
- Make Bot.full\_name return a unicode object. (#1063)
- CommandHandler faster check (#1074)
- Correct documentation of Dispatcher.add\_handler (#1071)
- Various small fixes to documentation.

### 10.6.48 Version 10.0.1

*Released 2018-03-05*

Fixes:

- Fix conversationhandler timeout (PR #1032)
- Add missing docs utils (PR #912)

### 10.6.49 Version 10.0.0

*Released 2018-03-02*

Non backward compatible changes and changed defaults

- JobQueue: Remove deprecated prevent\_autostart & put() (PR #1012)
- Bot, Updater: Remove deprecated network\_delay (PR #1012)
- Remove deprecated Message.new\_chat\_member (PR #1012)
- Retry bootstrap phase indefinitely (by default) on network errors (PR #1018)

New Features

- Support v3.6 API (PR #1006)
- User.full\_name convinience property (PR #949)
- Add `send_phone_number_to_provider` and `send_email_to_provider` arguments to `send_invoice` (PR #986)
- Bot: Add shortcut methods `reply_{markdown,html}` (PR #827)
- Bot: Add shortcut method `reply_media_group` (PR #994)
- Added `utils.helpers.effective_message_type` (PR #826)
- Bot.get\_file now allows passing a file in addition to file\_id (PR #963)
- Add `.get_file()` to Audio, Document, PhotoSize, Sticker, Video, VideoNote and Voice (PR #963)
- Add `.send_*`() methods to User and Chat (PR #963)
- Get jobs by name (PR #1011)
- Add Message caption html/markdown methods (PR #1013)
- File.download\_as\_bytearray - new method to get a d/led file as bytearray (PR #1019)
- File.download(): Now returns a meaningful return value (PR #1019)
- Added conversation timeout in ConversationHandler (PR #895)

Changes

- Store bot in PreCheckoutQuery (PR #953)

- Updater: Issue INFO log upon received signal (PR #951)
- JobQueue: Thread safety fixes (PR #977)
- WebhookHandler: Fix exception thrown during error handling (PR #985)
- Explicitly check update.effective\_chat in ConversationHandler.check\_update (PR #959)
- Updater: Better handling of timeouts during get\_updates (PR #1007)
- Remove unnecessary to\_dict() (PR #834)
- CommandHandler - ignore strings in entities and “/” followed by whitespace (PR #1020)
- Documentation & style fixes (PR #942, PR #956, PR #962, PR #980, PR #983)

### 10.6.50 Version 9.0.0

*Released 2017-12-08*

Breaking changes (possibly)

- Drop support for python 3.3 (PR #930)

New Features

- Support Bot API 3.5 (PR #920)

Changes

- Fix race condition in dispatcher start/stop (#887)
- Log error trace if there is no error handler registered (#694)
- Update examples with consistent string formatting (#870)
- Various changes and improvements to the docs.

### 10.6.51 Version 8.1.1

*Released 2017-10-15*

- Fix Commandhandler crashing on single character messages (PR #873).

### 10.6.52 Version 8.1.0

*Released 2017-10-14*

New features - Support Bot API 3.4 (PR #865).

Changes - MessageHandler & RegexHandler now consider channel\_updates. - Fix command not recognized if it is directly followed by a newline (PR #869). - Removed Bot.\_message\_wrapper (PR #822). - Unitests are now also running on AppVeyor (Windows VM). - Various unittest improvements. - Documentation fixes.

### 10.6.53 Version 8.0.0

*Released 2017-09-01*

New features

- Fully support Bot Api 3.3 (PR #806).
- DispatcherHandlerStop (see docs).
- Regression fix for text\_html & text\_markdown (PR #777).
- Added effective\_attachment to message (PR #766).

Non backward compatible changes

- Removed Botan support from the library (PR #776).
- Fully support Bot Api 3.3 (PR #806).
- Remove de\_json() (PR #789).

Changes

- Sane defaults for tcp socket options on linux (PR #754).
- Add RESTRICTED as constant to ChatMember (PR #761).
- Add rich comparison to CallbackQuery (PR #764).
- Fix get\_game\_high\_scores (PR #771).
- Warn on small con\_pool\_size during custom initialization of Updater (PR #793).
- Catch exceptions in error handler for errors that happen during polling (PR #810).
- For testing we switched to pytest (PR #788).
- Lots of small improvements to our tests and documentation.

### 10.6.54 Version 7.0.1

*Released 2017-07-28*

- Fix TypeError exception in RegexHandler (PR #751).
- Small documentation fix (PR #749).

### 10.6.55 Version 7.0.0

*Released 2017-07-25*

- Fully support Bot API 3.2.
- New filters for handling messages from specific chat/user id (PR #677).
- Add the possibility to add objects as arguments to send\_\* methods (PR #742).
- Fixed download of URLs with UTF-8 chars in path (PR #688).
- Fixed URL parsing for Message text properties (PR #689).
- Fixed args dispatching in MessageQueue's decorator (PR #705).
- Fixed regression preventing IPv6 only hosts from connecting to Telegram servers (Issue #720).
- ConversationHandler - check if a user exist before using it (PR #699).
- Removed deprecated telegram.Emoji.
- Removed deprecated Botan import from utils (Botan is still available through contrib).

- Removed deprecated `ReplyKeyboardHide`.
- Removed deprecated `edit_message` argument of `bot.set_game_score`.
- Internal restructure of files.
- Improved documentation.
- Improved unittests.

### 10.6.56 Pre-version 7.0

#### 2017-06-18

*Released 6.1.0*

- Fully support Bot API 3.0
- Add more fine-grained filters for status updates
- Bug fixes and other improvements

#### 2017-05-29

*Released 6.0.3*

- Faulty PyPI release

#### 2017-05-29

*Released 6.0.2*

- Avoid confusion with user's `urllib3` by renaming vendored `urllib3` to `ptb_urllib3`

#### 2017-05-19

*Released 6.0.1*

- Add support for `User.language_code`
- Fix `Message.text_html` and `Message.text_markdown` for messages with emoji

#### 2017-05-19

*Released 6.0.0*

- Add support for Bot API 2.3.1
- Add support for `deleteMessage` API method
- New, simpler API for `JobQueue` - [#484](#)
- Download files into file-like objects - [#459](#)
- Use vendor `urllib3` to address issues with timeouts - The default timeout for messages is now 5 seconds. For sending media, the default timeout is now 20 seconds.
- String attributes that are not set are now `None` by default, instead of empty strings
- Add `text_markdown` and `text_html` properties to `Message` - [#507](#)
- Add support for Socks5 proxy - [#518](#)
- Add support for filters in `CommandHandler` - [#536](#)
- Add the ability to invert (not) filters - [#552](#)
- Add `Filters.group` and `Filters.private`
- Compatibility with GAE via `urllib3.contrib` package - [#583](#)
- Add equality rich comparison operators to telegram objects - [#604](#)
- Several bugfixes and other improvements

- Remove some deprecated code

#### 2017-04-17

*Released 5.3.1*

- Hotfix release due to bug introduced by urllib3 version 1.21

#### 2016-12-11

*Released 5.3*

- Implement API changes of November 21st (Bot API 2.3)
- JobQueue now supports `datetime.timedelta` in addition to seconds
- JobQueue now supports running jobs only on certain days
- New `Filters.reply` filter
- Bugfix for `Message.edit_reply_markup`
- Other bugfixes

#### 2016-10-25

*Released 5.2*

- Implement API changes of October 3rd (games update)
- Add `Message.edit_*` methods
- Filters for the `MessageHandler` can now be combined using bitwise operators (`&` and `|`)
- Add a way to save user- and chat-related data temporarily
- Other bugfixes and improvements

#### 2016-09-24

*Released 5.1*

- Drop Python 2.6 support
- Deprecate `telegram.Emoji`
- Use `ujson` if available
- Add instance methods to `Message`, `Chat`, `User`, `InlineQuery` and `CallbackQuery`
- RegEx filtering for `CallbackQueryHandler` and `InlineQueryHandler`
- New `MessageHandler` filters: `forwarded` and `entity`
- Add `Message.get_entity` to correctly handle UTF-16 codepoints and `MessageEntity` offsets
- Fix bug in `ConversationHandler` when first handler ends the conversation
- Allow multiple `Dispatcher` instances
- Add `ChatMigrated` Exception
- Properly split and handle arguments in `CommandHandler`

#### 2016-07-15

*Released 5.0*

- Rework `JobQueue`
- Introduce `ConversationHandler`
- Introduce `telegram.constants` - [#342](#)

#### 2016-07-12

*Released 4.3.4*



- Fix proxy support with `urllib3` when proxy requires auth

**2016-07-08***Released 4.3.3*

- Fix proxy support with `urllib3`

**2016-07-04***Released 4.3.2*

- Fix: Use `timeout` parameter in all API methods

**2016-06-29***Released 4.3.1*

- Update wrong requirement: `urllib3>=1.10`

**2016-06-28***Released 4.3*

- Use `urllib3.PoolManager` for connection re-use
- Rewrite `run_async` decorator to re-use threads
- New requirements: `urllib3` and `certifi`

**2016-06-10***Released 4.2.1*

- Fix `CallbackQuery.to_dict()` bug (thanks to @jlmadurga)
- Fix `editMessageText` exception when receiving a `CallbackQuery`

**2016-05-28***Released 4.2*

- Implement Bot API 2.1
- Move `botan` module to `telegram.contrib`
- New exception type: `BadRequest`

**2016-05-22***Released 4.1.2*

- Fix `MessageEntity` decoding with Bot API 2.1 changes

**2016-05-16***Released 4.1.1*

- Fix deprecation warning in `Dispatcher`

**2016-05-15***Released 4.1*

- Implement API changes from May 6, 2016
- Fix bug when `start_polling` with `clean=True`
- Methods now have `snake_case` equivalent, for example `telegram.Bot.send_message` is the same as `telegram.Bot.sendMessage`

**2016-05-01***Released 4.0.3*

- Add missing attribute `location` to `InlineQuery`

## 2016-04-29

*Released 4.0.2*

- Bugfixes
- `KeyboardReplyMarkup` now accepts `str` again

## 2016-04-27

*Released 4.0.1*

- Implement Bot API 2.0
- Almost complete recode of `Dispatcher`
- Please read the [Transition Guide to 4.0](#)
- **Changes from 4.0rc1**
  - The syntax of filters for `MessageHandler` (upper/lower cases)
  - Handler groups are now identified by `int` only, and ordered
- **Note:** v4.0 has been skipped due to a PyPI accident

## 2016-04-22

*Released 4.0rc1*

- Implement Bot API 2.0
- Almost complete recode of `Dispatcher`
- Please read the [Transistion Guide to 4.0](#)

## 2016-03-22

*Released 3.4*

- Move `Updater`, `Dispatcher` and `JobQueue` to new `telegram.ext` submodule (thanks to @rahiel)
- Add `disable_notification` parameter (thanks to @aidarbiktimirov)
- Fix bug where commands sent by Telegram Web would not be recognized (thanks to @shelomentsevd)
- Add option to skip old updates on bot startup
- Send files from `BufferedReader`

## 2016-02-28

*Released 3.3*

- Inline bots
- Send any file by URL
- Specialized exceptions: `Unauthorized`, `InvalidToken`, `NetworkError` and `TimedOut`
- Integration for botan.io (thanks to @ollmer)
- HTML Parsemode (thanks to @jlmadurga)
- Bugfixes and under-the-hood improvements

**Very special thanks to Noam Meltzer (@tsnoam) for all of his work!**

## 2016-01-09

*Released 3.3b1*

- Implement inline bots (beta)

## 2016-01-05

*Released 3.2.0*

- Introducing `JobQueue` (original author: @franciscod)
- Streamlining all exceptions to `TelegramError` (Special thanks to @tsnoam)
- Proper locking of `Updater` and `Dispatcher` start and stop methods
- Small bugfixes

**2015-12-29**

*Released 3.1.2*

- Fix custom path for file downloads
- Don't stop the dispatcher thread on uncaught errors in handlers

**2015-12-21**

*Released 3.1.1*

- Fix a bug where asynchronous handlers could not have additional arguments
- Add `groups` and `groupdict` as additional arguments for regex-based handlers

**2015-12-16**

*Released 3.1.0*

- The `chat`-field in `Message` is now of type `Chat`. (API update Oct 8 2015)
- `Message` now contains the optional fields `supergroup_chat_created`, `migrate_to_chat_id`, `migrate_from_chat_id` and `channel_chat_created`. (API update Nov 2015)

**2015-12-08**

*Released 3.0.0*

- Introducing the `Updater` and `Dispatcher` classes

**2015-11-11**

*Released 2.9.2*

- Error handling on request timeouts has been improved

**2015-11-10**

*Released 2.9.1*

- Add parameter `network_delay` to `Bot.getUpdates` for slow connections

**2015-11-10**

*Released 2.9*

- `Emoji` class now uses `bytes_to_native_str` from future 3rd party lib
- Make `user_from` optional to work with channels
- Raise exception if Telegram times out on long-polling

*Special thanks to @jh0ker for all hard work*

**2015-10-08**

*Released 2.8.7*

- Type as optional for `GroupChat` class

**2015-10-08**

*Released 2.8.6*

- Adds type to `User` and `GroupChat` classes (pre-release Telegram feature)

## 2015-09-24

*Released 2.8.5*

- Handles HTTP Bad Gateway (503) errors on request
- Fixes regression on `Audio` and `Document` for unicode fields

## 2015-09-20

*Released 2.8.4*

- `getFile` and `File.download` is now fully supported

## 2015-09-10

*Released 2.8.3*

- Moved `Bot._requestURL` to its own class (`telegram.utils.request`)
- Much better, such wow, Telegram Objects tests
- Add consistency for `str` properties on Telegram Objects
- Better design to test if `chat_id` is invalid
- Add ability to set custom filename on `Bot.sendDocument(..., filename='')`
- Fix Sticker as `InputFile`
- Send JSON requests over urlencoded post data
- Markdown support for `Bot.sendMessage(..., parse_mode=ParseMode.MARKDOWN)`
- Refactor of `TelegramError` class (no more handling `IOError` or `URLError`)

## 2015-09-05

*Released 2.8.2*

- Fix regression on Telegram `ReplyMarkup`
- Add certificate to `is_inputfile` method

## 2015-09-05

*Released 2.8.1*

- Fix regression on Telegram objects with thumb properties

## 2015-09-04

*Released 2.8*

- `TelegramError` when `chat_id` is empty for `send*` methods
- `setWebhook` now supports sending self-signed certificate
- Huge redesign of existing Telegram classes
- Added support for PyPy
- Added docstring for existing classes

## 2015-08-19

*Released 2.7.1*

- Fixed JSON serialization for `message`

## 2015-08-17

*Released 2.7*

- Added support for `Voice` object and `sendVoice` method
- Due backward compatibility performer or/and title will be required for `sendAudio`

- Fixed JSON serialization when forwarded message

**2015-08-15***Released 2.6.1*

- Fixed parsing image header issue on < Python 2.7.3

**2015-08-14***Released 2.6.0*

- Depreciation of `require_authentication` and `clearCredentials` methods
- Giving AUTHORS the proper credits for their contribution for this project
- `Message.date` and `Message.forward_date` are now `datetime` objects

**2015-08-12***Released 2.5.3*

- `telegram.Bot` now supports to be unpickled

**2015-08-11***Released 2.5.2*

- New changes from Telegram Bot API have been applied
- `telegram.Bot` now supports to be pickled
- Return empty `str` instead `None` when `message.text` is empty

**2015-08-10***Released 2.5.1*

- Moved from GPLv2 to LGPLv3

**2015-08-09***Released 2.5*

- Fixes logging calls in API

**2015-08-08***Released 2.4*

- Fixes `Emoji` class for Python 3
- PEP8 improvements

**2015-08-08***Released 2.3*

- Fixes `ForceReply` class
- Remove `logging.basicConfig` from library

**2015-07-25***Released 2.2*

- Allows `debug=True` when initializing `telegram.Bot`

**2015-07-20***Released 2.1*

- Fix `to_dict` for `Document` and `Video`

**2015-07-19***Released 2.0*

- Fixes bugs
- Improves `__str__` over `to_json()`
- Creates abstract class `TelegramObject`

#### **2015-07-15**

*Released 1.9*

- Python 3 officially supported
- PEP8 improvements

#### **2015-07-12**

*Released 1.8*

- Fixes crash when replying an unicode text message (special thanks to JRoot3D)

#### **2015-07-11**

*Released 1.7*

- Fixes crash when `username` is not defined on `chat` (special thanks to JRoot3D)

#### **2015-07-10**

*Released 1.6*

- Improvements for GAE support

#### **2015-07-10**

*Released 1.5*

- Fixes randomly unicode issues when using `InputFile`

#### **2015-07-10**

*Released 1.4*

- `requests` lib is no longer required
- Google App Engine (GAE) is supported

#### **2015-07-10**

*Released 1.3*

- Added support to `setWebhook` (special thanks to macrojames)

#### **2015-07-09**

*Released 1.2*

- `CustomKeyboard` classes now available
- Emojis available
- PEP8 improvements

#### **2015-07-08**

*Released 1.1*

- PyPi package now available

#### **2015-07-08**

*Released 1.0*

- Initial checkin of python-telegram-bot

## 10.7 Contributor Covenant Code of Conduct

### 10.7.1 Our Pledge

In the interest of fostering an open and welcoming environment, we as contributors and maintainers pledge to making participation in our project and our community a harassment-free experience for everyone, regardless of age, body size, disability, ethnicity, gender identity and expression, level of experience, nationality, personal appearance, race, religion, or sexual identity and orientation.

### 10.7.2 Our Standards

Examples of behavior that contributes to creating a positive environment include:

- Using welcoming and inclusive language
- Being respectful of differing viewpoints and experiences
- Gracefully accepting constructive criticism
- Focusing on what is best for the community
- Showing empathy towards other community members

Examples of unacceptable behavior by participants include:

- The use of sexualized language or imagery and unwelcome sexual attention or advances
- Publication of any content supporting, justifying or otherwise affiliating with terror and/or hate towards others
- Trolling, insulting/derogatory comments, and personal or political attacks
- Public or private harassment
- Publishing others' private information, such as a physical or electronic address, without explicit permission
- Other conduct which could reasonably be considered inappropriate in a professional setting

### 10.7.3 Our Responsibilities

Project maintainers are responsible for clarifying the standards of acceptable behavior and are expected to take appropriate and fair corrective action in response to any instances of unacceptable behavior.

Project maintainers have the right and responsibility to remove, edit, or reject comments, commits, code, wiki edits, issues, and other contributions that are not aligned to this Code of Conduct, or to ban temporarily or permanently any contributor for other behaviors that they deem inappropriate, threatening, offensive, or harmful.

### 10.7.4 Scope

This Code of Conduct applies both within project spaces and in public spaces when an individual is representing the project or its community. Examples of representing a project or community include using an official project e-mail address, posting via an official social media account, or acting as an appointed representative at an online or offline event. Representation of a project may be further defined and clarified by project maintainers.

### 10.7.5 Enforcement

Instances of abusive, harassing, or otherwise unacceptable behavior may be reported by contacting the project team at [devs@python-telegram-bot.org](mailto:devs@python-telegram-bot.org). The project team will review and investigate all complaints, and will respond in a way that it deems appropriate to the circumstances. The project team is obligated to maintain confidentiality with regard to the reporter of an incident. Further details of specific enforcement policies may be posted separately.

Project maintainers who do not follow or enforce the Code of Conduct in good faith may face temporary or permanent repercussions as determined by other members of the project's leadership.

### 10.7.6 Attribution

This Code of Conduct is adapted from the [Contributor Covenant](https://www.contributor-covenant.org/version/1/4), version 1.4, available at <https://www.contributor-covenant.org/version/1/4>.

## 10.8 How To Contribute

Every open source project lives from the generous help by contributors that sacrifice their time and `python-telegram-bot` is no different. To make participation as pleasant as possible, this project adheres to the [Code of Conduct](#) by the Python Software Foundation.

### 10.8.1 Setting things up

1. Fork the `python-telegram-bot` repository to your GitHub account.
2. Clone your forked repository of `python-telegram-bot` to your computer:

```
$ git clone https://github.com/<your username>/python-telegram-bot
$ cd python-telegram-bot
```

3. Add a track to the original repository:

```
$ git remote add upstream https://github.com/python-telegram-bot/python-telegram-
↪ bot
```

4. Install dependencies:

```
$ pip install -r requirements-all.txt
```

5. Install pre-commit hooks:

```
$ pre-commit install
```

### 10.8.2 Finding something to do

If you already know what you'd like to work on, you can skip this section.

If you have an idea for something to do, first check if it's already been filed on the [issue tracker](#). If so, add a comment to the issue saying you'd like to work on it, and we'll help you get started! Otherwise, please file a new issue and assign yourself to it.

Another great way to start contributing is by writing tests. Tests are really important because they help prevent developers from accidentally breaking existing code, allowing them to build cool things faster. If you're interested in helping out, let the development team know by posting to the [Telegram group](#), and we'll help you get started.

That being said, we want to mention that we are very hesitant about adding new requirements to our projects. If you intend to do this, please state this in an issue and get a verification from one of the maintainers.



### 10.8.3 Instructions for making a code change

The central development branch is `master`, which should be clean and ready for release at any time. In general, all changes should be done as feature branches based off of `master`.

If you want to do solely documentation changes, base them and PR to the branch `doc-fixes`. This branch also has its own [RTD build](#).

Here's how to make a one-off code change.

1. **Choose a descriptive branch name.** It should be lowercase, hyphen-separated, and a noun describing the change (so, `fuzzy-rules`, but not `implement-fuzzy-rules`). Also, it shouldn't start with `hotfix` or `release`.
2. **Create a new branch with this name, starting from master.** In other words, run:

```
$ git fetch upstream
$ git checkout master
$ git merge upstream/master
$ git checkout -b your-branch-name
```

3. **Make a commit to your feature branch.** Each commit should be self-contained and have a descriptive commit message that helps other developers understand why the changes were made. We also have a checklist for PRs [below](#).

- You can refer to relevant issues in the commit message by writing, e.g., “#105”.
- Your code should adhere to the [PEP 8 Style Guide](#), with the exception that we have a maximum line length of 99.
- Provide static typing with signature annotations. The documentation of `MyPy` will be a good start, the cheat sheet is [here](#). We also have some custom type aliases in `telegram._utils.types`.
- Document your code. This step is pretty important to us, so it has its own [section](#).
- For consistency, please conform to [Google Python Style Guide](#) and [Google Python Style Docstrings](#).
- The following exceptions to the above (Google's) style guides applies:
  - Documenting types of global variables and complex types of class members can be done using the Sphinx docstring convention.
- In addition, PTB uses some formatting/styling and linting tools in the pre-commit setup. Some of those tools also have command line tools that can help to run these tools outside of the pre-commit step. If you'd like to leverage that, please have a look at the [pre-commit config file](#) for an overview of which tools (and which versions of them) are used. For example, we use `Black` for code formatting. Plugins for `Black` exist for some [popular editors](#). You can use those instead of manually formatting everything.
- Please ensure that the code you write is well-tested and that all automated tests still pass. We have dedicated an [testing page](#) to help you with that.
- Don't break backward compatibility.
- Add yourself to the `AUTHORS.rst` file in an alphabetical fashion.
- If you want run style & type checks before committing run

```
$ pre-commit run -a
```

- To actually make the commit (this will trigger tests style & type checks automatically):

```
$ git add your-file-changed.py
```

- Finally, push it to your GitHub fork, run:

```
$ git push origin your-branch-name
```

#### 4. When your feature is ready to merge, create a pull request.

- Go to your fork on GitHub, select your branch from the dropdown menu, and click “New pull request”.
- Add a descriptive comment explaining the purpose of the branch (e.g. “Add the new API feature to create inline bot queries.”). This will tell the reviewer what the purpose of the branch is.
- Click “Create pull request”. An admin will assign a reviewer to your commit.

#### 5. Address review comments until all reviewers give LGTM (‘looks good to me’).

- When your reviewer has reviewed the code, you’ll get a notification. You’ll need to respond in two ways:
  - Make a new commit addressing the comments you agree with, and push it to the same branch. Ideally, the commit message would explain what the commit does (e.g. “Fix lint error”), but if there are lots of disparate review comments, it’s fine to refer to the original commit message and add something like “(address review comments)”.
  - In order to keep the commit history intact, please avoid squashing or amending history and then force-pushing to the PR. Reviewers often want to look at individual commits.
  - In addition, please reply to each comment. Each reply should be either “Done” or a response explaining why the corresponding suggestion wasn’t implemented. All comments must be resolved before LGTM can be given.
- Resolve any merge conflicts that arise. To resolve conflicts between ‘your-branch-name’ (in your fork) and ‘master’ (in the python-telegram-bot repository), run:

```
$ git checkout your-branch-name
$ git fetch upstream
$ git merge upstream/master
$ ...[fix the conflicts]...
$ ...[make sure the tests pass before committing]...
$ git commit -a
$ git push origin your-branch-name
```

- At the end, the reviewer will merge the pull request.

#### 6. Tidy up! Delete the feature branch from both your local clone and the GitHub repository:

```
$ git branch -D your-branch-name
$ git push origin --delete your-branch-name
```

#### 7. Celebrate. Congratulations, you have contributed to python-telegram-bot!

### Check-list for PRs

This checklist is a non-exhaustive reminder of things that should be done before a PR is merged, both for you as contributor and for the maintainers. Feel free to copy (parts of) the checklist to the PR description to remind you or the maintainers of open points or if you have questions on anything.

- Added `.. versionadded:: NEXT.VERSION`, `.. versionchanged:: NEXT.VERSION` or `.. deprecated:: NEXT.VERSION` to the docstrings for user facing changes (for methods/class descriptions, arguments and attributes)
- Created new or adapted existing unit tests
- Documented code changes according to the [CSI standard](#)
- Added myself alphabetically to `AUTHORS.rst` (optional)
- Added new classes & modules to the docs and all suitable `__all__`s
- Checked the [Stability Policy](#) in case of deprecations or changes to documented behavior

If the PR contains API changes (otherwise, you can ignore this passage)

- Checked the Bot API specific sections of the [Stability Policy](#)
- Created a PR to remove functionality deprecated in the previous Bot API release ([see here](#))
- New classes:
  - Added `self._id_attrs` and corresponding documentation
  - `__init__` accepts `api_kwargs` as kw-only
- Added new shortcuts:
  - In [Chat](#) & [User](#) for all methods that accept `chat/user_id`
  - In [Message](#) for all methods that accept `chat_id` and `message_id`
  - For new [Message](#) shortcuts: Added `quote` argument if methods accepts `reply_to_message_id`
  - In [CallbackQuery](#) for all methods that accept either `chat_id` and `message_id` or `inline_message_id`
- If relevant:
  - Added new constants at [telegram.constants](#) and shortcuts to them as class variables
  - Link new and existing constants in docstrings instead of hard-coded numbers and strings
  - Add new message types to [telegram.Message.effective\\_attachment](#)
  - Added new handlers for new update types
    - \* Add the handlers to the warning loop in the [ConversationHandler](#)
  - Added new filters for new message (sub)types
  - Added or updated documentation for the changed class(es) and/or method(s)
  - Added the new method(s) to `_extbot.py`
  - Added or updated `bot_methods.rst`
  - Updated the Bot API version number in all places: `README.rst` and `README_RAW.rst` (including the badge), as well as `telegram.constants.BOT_API_VERSION_INFO`
  - Added logic for arbitrary callback data in [telegram.ext.ExtBot](#) for new methods that either accept a `reply_markup` in some form or have a return type that is/contains [Message](#)

## 10.8.4 Documenting

The documentation of this project is separated in two sections: User facing and dev facing.

User facing docs are hosted at [RTD](#). They are the main way the users of our library are supposed to get information about the objects. They don't care about the internals, they just want to know what they have to pass to make it work, what it actually does. You can/should provide examples for non obvious cases (like the `Filter` module), and notes/warnings.

Dev facing, on the other side, is for the devs/maintainers of this project. These doc strings don't have a separate documentation site they generate, instead, they document the actual code.

## User facing documentation

We use [sphinx](#) to generate static HTML docs. To build them, first make sure you're running Python 3.9 or above and have the required dependencies:

```
$ pip install -r docs/requirements-docs.txt
```

then run the following from the PTB root directory:

```
$ make -C docs html
```

or, if you don't have make available (e.g. on Windows):

```
$ sphinx-build docs/source docs/build/html
```

Once the process terminates, you can view the built documentation by opening `docs/build/html/index.html` with a browser.

- Add `.. versionadded:: NEXT.VERSION`, `.. versionchanged:: NEXT.VERSION` or `.. deprecated:: NEXT.VERSION` to the associated documentation of your changes, depending on what kind of change you made. This only applies if the change you made is visible to an end user. The directives should be added to class/method descriptions if their general behaviour changed and to the description of all arguments & attributes that changed.

## Dev facing documentation

We adhere to the [CSI](#) standard. This documentation is not fully implemented in the project, yet, but new code changes should comply with the *CSI* standard. The idea behind this is to make it very easy for you/a random maintainer or even a totally foreign person to drop anywhere into the code and more or less immediately understand what a particular line does. This will make it easier for new to make relevant changes if said lines don't do what they are supposed to.

## 10.8.5 Style commandments

### Assert comparison order

Assert statements should compare in **actual == expected** order. For example (assuming `test_call` is the thing being tested):

```
# GOOD
assert test_call() == 5

# BAD
assert 5 == test_call()
```

### Properly calling callables

Methods, functions and classes can specify optional parameters (with default values) using Python's keyword arg syntax. When providing a value to such a callable we prefer that the call also uses keyword arg syntax. For example:

```
# GOOD
f(0, optional=True)

# BAD
f(0, True)
```

This gives us the flexibility to re-order arguments and more importantly to add new required arguments. It's also more explicit and easier to read.

## 10.9 Testing in PTB

PTB uses `pytest` for testing. To run the tests, you need to have `pytest` installed along with a few other dependencies. You can find the list of dependencies in the `requirements-dev.txt` file in the root of the repository.

### 10.9.1 Running tests

To run the entire test suite, you can use the following command:

```
$ pytest
```

This will run all the tests, including the ones which make a request to the Telegram servers, which may take a long time (total > 13 mins). To run only the tests that don't require a connection, you can run the following command:

```
$ pytest -m no_req
```

Or alternatively, you can run the following command to run only the tests that require a connection:

```
$ pytest -m req
```

To further speed up the tests, you can run them in parallel using the `-n` flag (requires `pytest-xdist`). But beware that this will use multiple CPU cores on your machine. The `--dist` flag is used to specify how the tests will be distributed across the cores. The `loadgroup` option is used to distribute the tests such that tests marked with `@pytest.mark.xdist_group("name")` are run on the same core — important if you want avoid race conditions in some tests:

```
$ pytest -n auto --dist=loadgroup
```

This will result in a significant speedup, but may cause some tests to fail. If you want to run the failed tests in isolation, you can use the `--lf` flag:

```
$ pytest --lf
```

### 10.9.2 Writing tests

PTB has a separate test file for every file in the `telegram.*` namespace. Further, the tests for the `telegram` module are split into two classes, based on whether the test methods in them make a request or not. When writing tests, make sure to split them into these two classes, and make sure to name the test class as: `TestXXXWithoutRequest` for tests that don't make a request, and `TestXXXWithRequest` for tests that do.

Writing tests is a creative process; allowing you to design your test however you'd like, but there are a few conventions that you should follow:

- Each new test class needs a `test_slot_behaviour`, `test_to_dict`, `test_de_json` and `test_equality` (in most cases).
- Make use of `pytest`'s fixtures and `parametrize` wherever possible. Having knowledge of `pytest`'s tooling can help you as well. You can look at the existing tests for examples and inspiration.
- New fixtures should go into `conftest.py`. New auxiliary functions and classes, used either directly in the tests or in the fixtures, should go into the `tests/auxil` directory.

If you have made some API changes, you may want to run `test_official` to validate that the changes are complete and correct. To run it, export an environment variable first:

```
$ export TEST_OFFICIAL=true
```

and then run `pytest tests/test_official.py`. Note: You need py 3.10+ to run this test.

We also have another marker, `@pytest.mark.dev`, which you can add to tests that you want to run selectively. Use as follows:

```
$ pytest -m dev
```

### 10.9.3 Bots used in tests

If you run the tests locally, the test setup will use one of the two public bots available. Which bot of the two gets chosen for the test session is random. Whereas when the tests on the Github Actions CI are run, the test setup allocates a different, but same bot is for every combination of Python version and OS. The operating systems and Python versions the CI runs the tests on can be viewed in the [corresponding workflow](#).

That's it! If you have any questions, feel free to ask them in the [PTB dev group](#).

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