



# **python-telegram-bot Documentation**

*Release 20.0a5*

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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 **3.7+**.

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 **6.2** 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 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 >= 0.23.0` 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.

#### 3.1.1 Optional Dependencies

PTB can be installed with optional dependencies:

- `pip install python-telegram-bot[passport]` installs the `cryptography>=3.0` 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[rate-limiter]` installs `aiolimiter~1.0.0`. Use this, if you want to use `telegram.ext.AIORateLimiter`.
- `pip install python-telegram-bot[webhooks]` installs the `tornado~6.2` library. Use this, if you want to use `telegram.ext.Updater.start_webhook/telegram.ext.Application.start_webhook`.
- `pip install python-telegram-bot[callback-data]` installs the `cachetools~5.2.0` library. Use this, if you want to use `arbitrary_callback_data`.

- `pip install python-telegram-bot[job-queue]` installs the `APScheduler~=3.9.1` 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__ = '6.3'
```

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__ = BotAPIVersion(major=6, minor=3)
```

Shortcut for `telegram.constants.BOT_API_VERSION_INFO`.

New in version 20.0.

**Type**

`typing.NamedTuple`

```
telegram.__version__ = '20.0a5'
```

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__ = Version(major=20, minor=0, micro=0, releaselevel='alpha', serial=5)
```

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

### telegram.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`, `AbstractAsyncContextManager`

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 request_object.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`.
- 

---

#### Examples

*Raw API Bot*

---

#### See also:

`telegram.ext.Application.bot`, `telegram.ext.CallbackContext.bot`, `telegram.ext.Updater.bot`, [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`.
- 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.

#### 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_live_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_member()</code>	Used for unbanning a member from the chat
<code>ban_chat_sender_chat()</code>	Used for banning a channel in a channel or supergroup
<code>unban_chat_sender_chat()</code>	Used for unbanning a channel in a channel or supergroup
<code>restrict_chat_member()</code>	Used for restricting a chat member
<code>promote_chat_member()</code>	Used for promoting a chat member
<code>set_chat_administrator_custom_title()</code>	Used for assigning a custom admin title to an admin
<code>set_chat_permissions()</code>	Used for setting the permissions of a chat
<code>export_chat_invite_link()</code>	Used for creating a new primary invite link for a chat
<code>create_chat_invite_link()</code>	Used for creating an additional invite link for a chat
<code>edit_chat_invite_link()</code>	Used for editing a non-primary invite link
<code>revoke_chat_invite_link()</code>	Used for revoking an invite link created by the bot
<code>approve_chat_join_request()</code>	Used for approving a chat join request
<code>decline_chat_join_request()</code>	Used for declining a chat join request
<code>set_chat_photo()</code>	Used for setting a photo to a chat
<code>delete_chat_photo()</code>	Used for deleting a chat photo
<code>set_chat_title()</code>	Used for setting a chat title
<code>set_chat_description()</code>	Used for setting the description of a chat
<code>pin_chat_message()</code>	Used for pinning a message
<code>unpin_chat_message()</code>	Used for unpinning a message
<code>unpin_all_chat_messages()</code>	Used for unpinning all pinned chat messages
<code>get_user_profile_photos()</code>	Used for obtaining user's profile pictures
<code>get_chat()</code>	Used for getting information about a chat
<code>get_chat_administrators()</code>	Used for getting the list of admins in a chat
<code>get_chat_member_count()</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>set_my_commands()</code>	Used for setting the list of commands
<code>delete_my_commands()</code>	Used for deleting the list of commands
<code>get_my_commands()</code>	Used for obtaining the list of commands
<code>get_my_default_administrator_rights()</code>	Used for obtaining the default administrator rights for the bot
<code>set_my_default_administrator_rights()</code>	Used for setting the default administrator rights for the bot
<code>get_chat_menu_button()</code>	Used for obtaining the menu button of a private chat or the default menu button
<code>set_chat_menu_button()</code>	Used for setting the menu button of a private chat or the default menu button
<code>leave_chat()</code>	Used for leaving a chat

<code>add_sticker_to_set()</code>	Used for adding a sticker to a set
<code>delete_sticker_file()</code>	Used for deleting a sticker from a set
<code>create_new_sticker_set()</code>	Used for creating a new sticker set
<code>set_chat_sticker_set()</code>	Used for setting a sticker set
<code>delete_chat_sticker_set()</code>	Used for deleting the set sticker set
<code>set_sticker_position()</code>	Used for moving a sticker's position in the set
<code>set_sticker_set_thumbnail()</code>	Used for setting the thumbnail of a sticker set
<code>get_sticker_set()</code>	Used for getting a sticker set
<code>upload_sticker_file()</code>	Used for uploading a sticker file
<code>get_custom_emoji_files()</code>	Used for getting custom emoji files based on their IDs

<code>get_game_high_scores()</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_info()</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_topic()</code>	Used for closing a forum topic
<code>create_forum_topic()</code>	Used to create a topic
<code>delete_forum_topic()</code>	Used for deleting a forum topic
<code>edit_forum_topic()</code>	Used to edit a topic
<code>reopen_forum_topic()</code>	Used to reopen a topic
<code>get_forum_topic_icons()</code>	Used to get custom emojis to use as topic icons
<code>unpin_all_forum_messages()</code>	Used to unpin all messages in a forum topic

<code>create_invoice_link()</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_group_messages</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_queries</code>	Whether the bot supports inline queries
<code>token</code>	Bot's unique authentication token

```
async addStickerToSet(user_id, name, emojis, png_sticker=None, mask_position=None,
                      tgs_sticker=None, webm_sticker=None, *, 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, emojis, png_sticker=None, mask_position=None,
                        tgs_sticker=None, webm_sticker=None, *, 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. You **must** use exactly one of the fields `png_sticker`, `tgs_sticker` or `webm_sticker`. Animated stickers can be added to animated sticker sets and only to them. Animated sticker sets can have up to 50 stickers. Static sticker sets can have up to 120 stickers.

**Warning:** As of API 4.7 `png_sticker` 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.

### Parameters

- **`user_id`** (`int`) – User identifier of created sticker set owner.
- **`name`** (`str`) – Sticker set name.
- **`png_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – **PNG** image with the sticker, must be up to 512 kilobytes in size, dimensions must not exceed 512px, and either width or height must be exactly 512px. 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.

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`.

- **`tgs_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – **TGS** animation with the sticker. 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. See <https://core.telegram.org/stickers#animation-requirements> for technical requirements.

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`.

- **`webm_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – **WEBM** video with the sticker. 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. See <https://core.telegram.org/stickers#video-requirements> for technical requirements.

New in version 13.11.



Changed in version 20.0: File paths as input is also accepted for bots *not* running in *local\_mode*.

- **emojis** (*str*) – One or more emoji corresponding to the sticker.
- **mask\_position** (*telegram.MaskPosition*, optional) – Position where the mask should be placed on faces.

#### 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, switch_pm_text=None, switch_pm_parameter=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.

See also:

`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, switch_pm_text=None, switch_pm_parameter=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.

---

#### 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.

---

**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.

See also:

`telegram.InlineQuery.answer`

#### 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.
- **`switch_pm_text`** (`str`, optional) – If passed, clients will display a button with specified text that switches the user to a private chat with the bot and sends the bot a start message with the parameter `switch_pm_parameter`.
- **`switch_pm_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.

#### 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 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.

---

**See also:**

`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 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.

See also:

`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`** (`List[telegram.ShippingOption]`) – Required if `ok` is `True`. A list of available shipping options.
- **`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 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.

**See also:**

`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.

See also:

`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.

**See also:**

`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** `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.

See also:

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

See also:

`telegram.Message.copy`, `telegram.Chat.send_copy`, `telegram.Chat.copy_message`,  
`telegram.User.send_copy`, `telegram.User.copy_message`

#### 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** (List[`telegram.MessageEntity`], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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, emojis, png_sticker=None, mask_position=None,
                          tgs_sticker=None, webm_sticker=None, sticker_type=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()`.

See also:

`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.

### See also:

`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** (List[`telegram.LabeledPrice`]) – Price breakdown, a list of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.).
- **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** (List[`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`.
- **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, emojis, png_sticker=None,
                             mask_position=None, tgs_sticker=None, webm_sticker=None,
                             sticker_type=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. You must use exactly one of the fields `png_sticker`, `tgs_sticker`, or `webm_sticker`.

**Warning:** As of API 4.7 `png_sticker` 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 20.0: The parameter `contains_masks` has been removed. Use `sticker_type` instead.

#### 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.
- **`png_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – **PNG** image with the sticker, must be up to 512 kilobytes in size, dimensions must not exceed 512px, and



either width or height must be exactly 512px. 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.

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`.

- **`tgs_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – **TGS** animation with the sticker. 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. See <https://core.telegram.org/stickers#animation-requirements> for technical requirements.

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`.

- **`webm_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – **WEBM** video with the sticker. 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. See <https://core.telegram.org/stickers#video-requirements> for technical requirements.

New in version 13.11.

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

- **`emojis`** (`str`) – One or more emoji corresponding to the sticker.
- **`mask_position`** (`telegram.MaskPosition`, optional) – Position where the mask should be placed on faces.
- **`sticker_type`** (`str`, optional) – Type of stickers in the set, pass `telegram.Sticker.REGULAR` or `telegram.Sticker.MASK`. Custom emoji sticker sets can't be created via the Bot API at the moment. By default, a regular sticker set is created.

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 `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.

**See also:**

`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 def 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 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.

**See also:**

`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.

#### See also:

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

**See also:**

`telegram.Message.delete()`, `telegram.CallbackQuery.delete_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 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.

#### 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\_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*, *icon\_custom\_emoji\_id*, \*, *read\_timeout=None*, *write\_timeout=None*, *connect\_timeout=None*, *pool\_timeout=None*, *api\_kwargs=None*)

Alias for `edit_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.

---

#### See also:

`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, icon_custom_emoji_id, *,
                       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.

**See also:**

`telegram.Message.edit_forum_topic()`, `telegram.Chat.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) – New topic name, 1- 128 characters.
- **icon\_custom\_emoji\_id** (str) – 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**

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.

---

**See also:**

`telegram.Message.edit_caption`, `telegram.CallbackQuery.edit_message_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`** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **`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*.

---

**See also:**

`telegram.Message.edit_live_location`, `telegram.CallbackQuery.edit_message_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.

---

**See also:**

`telegram.Message.edit_media`, `telegram.CallbackQuery.edit_message_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.

---

**See also:**

`telegram.Message.edit_reply_markup`, `telegram.CallbackQuery.edit_message_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..

---

See also:

`telegram.Message.edit_text`, `telegram.CallbackQuery.edit_message_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** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in message text, which can be specified instead of `parse_mode`.
- **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.

---

See also:

`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.

---

**See also:**

`telegram.Message.forward`, `telegram.Chat.forward_to`, `telegram.Chat.forward_from`

**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.
- **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 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 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.

#### See also:

`telegram.Chat.get_administrators`

#### 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 list 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**

List[`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.

See also:

`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.

See also:

`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.

**See also:**

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

**Parameters**

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

**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**

List[*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\_memory()*. 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.

---

**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

List[`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.

---

#### See also:

`telegram.CallbackQuery.get_game_high_scores`

#### Parameters

- **user\_id** (int) – Target user id.
- **chat\_id** (int | str, 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**

List[`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.

**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 list is returned if commands are not set.

**Return type**

List[`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_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`
- 

**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 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** (*List[str]*, optional) – A list 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 list 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.



**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**

List[`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.

See also:

`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`

#### 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.

#### See also:

`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.

**See also:**

`telegram.Chat.pin_message`, `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, *,
                           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, *,
                           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.

**See also:**

`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, message statistics in channels, see channel members, 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 create channel posts, 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.
- `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 his own privileges or demote administrators that he has promoted, directly or indirectly (promoted by administrators that were appointed by him).
- `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.

#### 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 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.

#### See also:

`telegram.Message.reopen_forum_topic()`, `telegram.Chat.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` –

#### 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*, \*, *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*, \*, *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.

#### See also:

`telegram.ChatPermissions.all_permissions()`, `telegram.Chat.restrict_member`

#### 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.

#### 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.

#### See also:

`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, thumb=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, *, 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, thumb=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_audio()`

```
async sendChatAction(chat_id, action, *, 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,
                   thumb=None, disable_content_type_detection=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_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, *, 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, *, 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, thumb=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_video()`

```
async sendVideoNote(chat_id, video_note, duration=None, length=None, disable_notification=None,
                     reply_to_message_id=None, reply_markup=None, thumb=None,
                     allow_sending_without_reply=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_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, thumb=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, *, 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:** `thumb` will be ignored for small files, for which Telegram can easily generate thumbnails. However, this behaviour is undocumented and might be changed by Telegram.

---

#### See also:

`telegram.Message.reply_animation`, `telegram.Chat.send_animation`, `telegram.User.send_animation`

#### 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.
- **`thumb`** (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.

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) – 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`** (List[`telegram.MessageEntity`], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **`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 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, thumb=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 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.

**See also:**

`telegram.Message.reply_audio`, `telegram.Chat.send_audio`, `telegram.User.send_audio`

**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** (List[[telegram.MessageEntity](#)], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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.
- **thumb** (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.

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

- **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, *, 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.

**See also:**

*telegram.Message.reply\_chat\_action*, *telegram.Chat.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*.

**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`.

---

See also:

`telegram.Message.reply_contact`, `telegram.Chat.send_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.

**See also:**

`telegram.Message.reply_dice`, `telegram.Chat.send_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 " ", 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.

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 send_document(chat_id, document, caption=None, disable_notification=None,
                    reply_to_message_id=None, reply_markup=None, parse_mode=None,
                    thumb=None, disable_content_type_detection=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 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.

**See also:**

`telegram.Message.reply_document`, `telegram.Chat.send_document`, `telegram.User.send_document`

**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** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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.
- **thumb** (`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.

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

- **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.

See also:

[`telegram.Message.reply\_game`](#), [`telegram.Chat.send\_game`](#), [`telegram.User.send\_game`](#)

#### Parameters

- **`chat_id`** (`int` | `str`) – 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.

See also:

`telegram.Message.reply_invoice`, `telegram.Chat.send_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** (List[`telegram.LabeledPrice`]) – Price breakdown, a list of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.).
- **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** (List[`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.

- **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`.

---

**See also:**

`telegram.Message.reply_location`, `telegram.Chat.send_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 or videos as an album.

---

**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.

---

#### See also:

`telegram.Message.reply_media_group`, `telegram.Chat.send_media_group`, `telegram.User.send_media_group`

#### Parameters

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

`List[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.

#### See also:

*telegram.Message.reply\_text*,      *telegram.Chat.send\_message*,      *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** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in message text, which can be specified instead of `parse_mode`.
- **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, *, filename=None,
                 read_timeout=None, write_timeout=20, connect_timeout=None,
                 pool_timeout=None, api_kwargs=None)
```

Use this method to send photos.

**See also:**

`telegram.Message.reply_photo`, `telegram.Chat.send_photo`, `telegram.User.send_photo`

### 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.

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** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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 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.

#### See also:

`telegram.Message.reply_poll`, `telegram.Chat.send_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** (*List[str]*) – List of answer options, 2- 10 strings 1- 100 characters each.
- **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`** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in message text, which can be specified instead of `explanation_parse_mode`.
- **`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, *, 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.

See also:

`telegram.Message.reply_sticker`, `telegram.Chat.send_sticker`, `telegram.User.send_sticker`

#### 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. 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`.

- **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.

---

**See also:**

`telegram.Message.reply_venue`, `telegram.Chat.send_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, thumb=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 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:** `thumb` 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.

---



See also:

`telegram.Message.reply_video`, `telegram.Chat.send_video`, `telegram.User.send_video`

### 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** (List[`telegram.MessageEntity`], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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.
- **thumb** (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.

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

- **`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, thumb=None, allow_sending_without_reply=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)
```

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:** `thumb` 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.

---

### See also:

`telegram.Message.reply_video_note`, `telegram.Chat.send_video_note`, `telegram.User.send_video_note`

### 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.
- **thumb** (`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.

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

- **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.

---

**See also:**

`telegram.Message.reply_voice`, `telegram.Chat.send_voice`, `telegram.User.send_voice`

**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** (List[*telegram.MessageEntity*], optional) – List of special entities that appear in the caption, which can be specified instead of *parse\_mode*.
- **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, *, 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 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 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 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 setStickerSetThumb(name, user_id, thumb=None, *, read_timeout=None,
                        write_timeout=None, connect_timeout=None, pool_timeout=None,
                        api_kwargs=None)
```

Alias for `set_sticker_set_thumb()`

```
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.

See also:

`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.

See also:

`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 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.

#### See also:

```
get_chat_menu_button(),      telegram.Chat.set_menu_button(),      telegram.Chat.
get_menu_button(),          telegram.User.set_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 set_chat_permissions(chat_id, permissions, *, 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.

**See also:**

`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.

**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_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.

**See also:**

`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.

**See also:**

`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_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.

**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` | `str`, 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 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.

#### Parameters

- **commands** (List[*BotCommand* | (*str*, *str*)]) – A list of bot commands to be set as the list of the bot's commands. At most *100* commands can be specified.
- **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_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** (`List[PassportElementError]`) – A list describing the errors.

#### 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_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_thumb(name, user_id, thumb=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 sticker set. Animated thumbnails can be set for animated sticker sets only. Video thumbnails can be set only for video sticker sets only.

**Parameters**

- **name** (`str`) – Sticker set name
- **user\_id** (`int`) – User identifier of created sticker set owner.
- **thumb** (`str` | `file object` | `bytes` | `pathlib.Path`, optional) – A **PNG** image with the thumbnail, must be up to 128 kilobytes in size and have width and height exactly 100px, or a **TGS** animation with the thumbnail up to 32 kilobytes in size; see <https://core.telegram.org/stickers#animation-requirements> for animated sticker technical requirements, or a **WEBM** video with the thumbnail up to 32 kilobytes in size; see <https://core.telegram.org/stickers#video-requirements> 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 sticker set thumbnails can't be uploaded via `HTTP URL`.

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

**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](#).

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**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](#).

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**Examples**

*Custom Webhook Bot*

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**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` (`List[str]`, optional) – A list 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 list 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.
- `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.

See also:

`telegram.Message.stop_live_location`,  
`stop_message_live_location`

`telegram.CallbackQuery.`

#### 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.

#### See also:

`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`.

**See also:**

`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.

**See also:**

`telegram.Chat.unban_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 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 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.

See also:

`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.

See also:

`telegram.Message.unpin_all_forum_topic_messages()`, `telegram.Chat.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\_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.

See also:

`telegram.Chat.unpin_message`, `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, png_sticker, *, 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, png_sticker, *, read_timeout=None, write_timeout=20,
                        connect_timeout=None, pool_timeout=None, api_kwargs=None)
```

Use this method to upload a .PNG file with a sticker for later use in `create_new_sticker_set()` and `add_sticker_to_set()` methods (can be used multiple times).

**Parameters**

- **`user_id`** (`int`) – User identifier of sticker file owner.
- **`png_sticker`** (`str` | `file object` | `bytes` | `pathlib.Path`) – PNG image with the sticker, must be up to 512 kilobytes in size, dimensions must not exceed 512px, and either width or height must be exactly 512px. 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, 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

### telegram.Animation

**class** telegram.**Animation**(*file\_id, file\_unique\_id, width, height, duration, thumb=None, file\_name=None, mime\_type=None, file\_size=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.

#### 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.
- *thumb* ([telegram.PhotoSize](#), optional) – Animation thumbnail 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.

#### **file\_id**

File identifier.

##### 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](#)



**thumb**

Optional. Animation thumbnail as defined by sender.

**Type**

`telegram.PhotoSize`

**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`

**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` –

## telegram.Audio

**class** `telegram.Audio(file_id, file_unique_id, duration, performer=None, title=None, mime_type=None, file_size=None, thumb=None, file_name=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.

**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.
- ***thumb*** (*telegram.PhotoSize*, optional) – Thumbnail of the album cover to which the music file belongs.

**file\_id**

Identifier for this 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.

**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*

**thumb**

Optional. Thumbnail of the album cover to which the music file belongs.

**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` –

## `telegram.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.

**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.

**Type**

`str`

**description**

Description of the command.

**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.

## telegram.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.

---

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.

**telegram.BotCommandScopeAllChatAdministrators**

**class** telegram.**BotCommandScopeAllChatAdministrators**(\*, *api\_kwargs=None*)

Bases: *telegram.BotCommandScope*

Represents the scope of bot commands, covering all group and supergroup chat administrators.

New in version 13.7.

**type**

Scope type '*all\_chat\_administrators*'.

**Type**

*str*

**telegram.BotCommandScopeAllGroupChats**

**class** telegram.**BotCommandScopeAllGroupChats**(\*, *api\_kwargs=None*)

Bases: *telegram.BotCommandScope*

Represents the scope of bot commands, covering all group and supergroup chats.

New in version 13.7.

**type**

Scope type '*all\_group\_chats*'.

**Type**

*str*

**telegram.BotCommandScopeAllPrivateChats**

**class** telegram.**BotCommandScopeAllPrivateChats**(\*, *api\_kwargs=None*)

Bases: *telegram.BotCommandScope*

Represents the scope of bot commands, covering all private chats.

New in version 13.7.

**type**

Scope type '*all\_private\_chats*'.

**Type**

*str*

### telegram.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.

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](#)

### telegram.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.

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](#)

## telegram.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.

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](#)

## telegram.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.

New in version 13.7.

### type

Scope type '[default](#)'.

#### Type

[str](#)

## telegram.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.

---

### 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.

**Type**`str`**message**

Optional. Message with the callback button that originated the query.

**Type**`telegram.Message`**data**

Optional. Data associated with the callback button.

---

**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.

**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

List[[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`

## telegram.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, *,
                    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.

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`** (List[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.

#### **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()`.

New in version 20.0.

**Type**`List[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`**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 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

On success, `True` is returned.

#### Return type

`bool`

```
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, icon\_custom\_emoji\_id, \*, 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\_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`](#)

**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 list 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

List[[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.set\\_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 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, *,
                    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.

**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 restrict_member(user_id, permissions, until_date=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.

**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, *, 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, thumb=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, *, 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, thumb=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_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, *, 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,
                    thumb=None, disable_content_type_detection=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_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, instance representing the message posted.

#### Return type

List[[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, *,
                 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, *, 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, thumb=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_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, thumb=None,
                      allow_sending_without_reply=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_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*, \*, *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\(\)`](#).

**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 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_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`

## telegram.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, *,
                                       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](#) are equal.

Changed in version 20.0: [can\\_manage\\_topics](#) is considered as well when comparing objects of this type in terms of equality.

New in version 20.0.

#### 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, 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.
- **`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 their 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 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; 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_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, message statistics in channels, see channel members, 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.

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; 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\_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.

## telegram.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.

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.
- **`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.

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.

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()`.

## telegram.ChatJoinRequest

**class** `telegram.ChatJoinRequest(chat, from_user, date, 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.

---

New in version 13.8.



**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.
- **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.

**Type**

*datetime.datetime*

**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.

**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 def 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`

## telegram.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.

#### 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.

#### Type

`telegram.Location`

#### address

Location address, 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()`.

## telegram.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.

---

### 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.

#### 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().
```

## telegram.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, *, api_kwargs=None)
```

Bases: [telegram.ChatMember](#)

Represents a chat member that has some additional privileges.

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 in the channel, 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_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, message statistics in channels, see channel members, 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.

**Type**

`bool`

**can\_promote\_members**

`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).

**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 in the channel, 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\_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`

### telegram.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.

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.

#### 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.

#### Type

[datetime.datetime](#)

### telegram.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.

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](#)

### telegram.ChatMemberMember

**class** telegram.ChatMemberMember(*user*, \*, *api\_kwargs=None*)

Bases: [telegram.ChatMember](#)

Represents a chat member that has no additional privileges or restrictions.

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](#)

### telegram.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.

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`



## telegram.ChatMemberRestricted

```
class telegram.ChatMemberRestricted(user, is_member, can_change_info, can_invite_users,
                                     can_pin_messages, can_send_messages,
                                     can_send_media_messages, can_send_polls,
                                     can_send_other_messages, can_add_web_page_previews,
                                     can_manage_topics, until_date, *, api_kwargs=None)
```

Bases: `telegram.ChatMember`

Represents a chat member that is under certain restrictions in the chat. Supergroups only.

New in version 13.7.

Changed in version 20.0: The argument `can_manage_topics` was added, which changes the position of the optional argument `until_date`.

### 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, locations and venues.
- **can\_send\_media\_messages** (`bool`) – `True`, if the user is allowed to send audios, documents, photos, videos, video notes and voice notes.
- **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.

### 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\_media\_messages**

`True`, if the user is allowed to send audios, documents, photos, videos, video notes and voice notes.

**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.

**Type**

`datetime.datetime`

## telegram.ChatMemberUpdated

```
class telegram.ChatMemberUpdated(chat, from_user, date, old_chat_member, new_chat_member,
                                 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.

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](#).
- [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.

#### 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](#).

##### 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.

**Type**

`telegram.ChatInviteLink`

**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]]

**telegram.ChatPermissions**

```
class telegram.ChatPermissions(can_send_messages=None, can_send_media_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, *, 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_media_messages`, `can_send_polls`, `can_send_other_messages`, `can_add_web_page_previews`, `can_change_info`, `can_invite_users`, `can_pin_messages`, and `can_manage_topics` are equal.

Changed in version 20.0: `can_manage_topics` is considered as well when comparing objects of this type in terms of equality.

---

**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_media_messages`** (`bool`, optional) – `True`, if the user is allowed to send audios, documents, photos, videos, video notes and voice notes, implies `can_send_messages`.
- **`can_send_polls`** (`bool`, optional) – `True`, if the user is allowed to send polls, implies `can_send_messages`.
- **`can_send_other_messages`** (`bool`, optional) – `True`, if the user is allowed to send animations, games, stickers and use inline bots, implies `can_send_media_messages`.
- **`can_add_web_page_previews`** (`bool`, optional) – `True`, if the user is allowed to add web page previews to their messages, implies `can_send_media_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_messages`**

Optional. `True`, if the user is allowed to send text messages, contacts, locations and venues.

##### Type

`bool`

#### **`can_send_media_messages`**

Optional. `True`, if the user is allowed to send audios, documents, photos, videos, video notes and voice notes, implies `can_send_messages`.

##### 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, implies `can_send_media_messages`.

##### Type

`bool`

#### **`can_add_web_page_previews`**

Optional. `True`, if the user is allowed to add web page previews to their messages, implies `can_send_media_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`

**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 no\_permissions()**

This method returns an `ChatPermissions` instance with all attributes set to `False`.

New in version 20.0.

**telegram.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.

**Parameters**

- **`small_file_id` (str)** – Unique 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)** – Unique 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` –

## telegram.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.

### 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](#)

## telegram.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 at our [wiki](#). However, this behaviour is undocumented and might be changed by Telegram.

---

### 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.

##### 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*

## telegram.Document

```
class telegram.Document(file_id, file_unique_id, thumb=None, file_name=None, mime_type=None,
                        file_size=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.

### 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.
- *thumb* (*telegram.PhotoSize*, optional) – Document thumbnail as defined by sender.
- *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.

**file\_id**

File identifier.

**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`

**thumb**

Optional. Document thumbnail.

**Type**

`telegram.PhotoSize`

**file\_name**

Original filename.

**Type**

`str`

**mime\_type**

Optional. MIME type of the file.

**Type**

`str`

**file\_size**

Optional. File size in bytes.

**Type**

`int`

**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` –

**telegram.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_memory`. 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.

Changed in version 20.0:: `download` was split into `download_to_memory()` and `download_to_object()`.

---

**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_memory()`.
- 

#### 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) – Optional. File size in bytes, if known.
- **`file_path`** (`str`, optional) – File path. Use e.g. `download_to_memory()` to get the file.

#### **`file_id`**

Identifier for this 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.

##### Type

`str`

#### **`file_path`**

Optional. File path. Use e.g. `download_to_memory()` to get the file.

##### Type

`str`

#### **`async download_as_bytearray(buf=None)`**

Download this file and return it as a bytearray.

##### Parameters

**`buf`** (`bytearray`, optional) – Extend the given bytearray with the downloaded data.

##### Returns

The same object as `buf` if it was specified. Otherwise a newly allocated `bytearray`.

##### Return type

`bytearray`

#### **`async download_to_memory(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 its original filename as reported by Telegram. 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.

---

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_memory()` and `download_to_object()`.

#### 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.
- **`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_object`**(*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.

New in version 20.0.

#### Parameters

- **`out`** (`io.BufferedIOBase`) – A file-like object. Must be opened for writing in binary mode.
- **`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.

## telegram.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.

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.

#### Type

`bool`

### input\_field\_placeholder

Optional. The placeholder shown in the input field when the reply is active.

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.

## telegram.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.

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](#)

## telegram.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.

New in version 20.0.

## telegram.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.

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](#)

## telegram.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.

New in version 20.0.

## telegram.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, *,
                                     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`.
- 

**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.
- **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.

**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. 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.

**Type**

[str](#)

**switch\_inline\_query\_current\_chat**

Optional. Will insert the bot's username and the specified inline query in the current chat's input field. Can be empty, in which case just the bot's username will be inserted.

**Type**

[str](#)

**callback\_game**

Optional. Description of the game that will be launched when the user presses the button.

**Type**

[telegram.CallbackGame](#)

**pay**

Optional. Specify [True](#), to send a Pay button.

**Type**

[bool](#)

**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.

## telegram.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.

---

### Examples

- [Inline Keyboard 1](#)
  - [Inline Keyboard 2](#)
- 

#### Parameters

[inline\\_keyboard](#) (List[List[[telegram.InlineKeyboardButton](#)]]) – List of button rows, each represented by a list of InlineKeyboardButton objects.

#### inline\_keyboard

List of button rows, each represented by a list of InlineKeyboardButton objects.

#### Type

List[List[[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](#) (List[[telegram.InlineKeyboardButton](#)]) – The button to use in the markup

**classmethod** from\_row(*button\_row*, \*\**kwargs*)

Shortcut for:

```
InlineKeyboardMarkup([button_row], **kwargs)
```

Return an InlineKeyboardMarkup from a single row of InlineKeyboardButtons

#### Parameters

[button\\_row](#) (List[[telegram.InlineKeyboardButton](#)]) – The button to use in the markup

## telegram.InputFile

**class** telegram.**InputFile**(*obj*, *filename=None*, *attach=False*)

Bases: `object`

This object represents a Telegram InputFile.

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 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`]

## telegram.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.

Changed in version 20.0:: Added arguments and attributes [type](#), [media](#), [caption](#), [caption\\_entities](#), [parse\\_mode](#).

### 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](#) ([List](#)[[telegram.MessageEntity](#)], optional) – List of special entities that appear in the caption, which can be specified instead of [parse\\_mode](#).
- [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.

#### Type

[str](#)

### parse\_mode

Optional. The parse mode to use for text formatting.

#### Type

[str](#)

### caption\_entities

Optional. List of special entities that appear in the caption.

#### Type

[List](#)[[telegram.MessageEntity](#)]

## telegram.InputMediaAnimation

```
class telegram.InputMediaAnimation(media, thumb=None, caption=None, parse_mode=None,
                                   width=None, height=None, duration=None,
                                   caption_entities=None, filename=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.

---

### 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.

- **thumb** ([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.

Changed in version 13.2: Accept [bytes](#) as input.

- **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** ([List\[telegram.MessageEntity\]](#), optional) – List of special entities that appear in the caption, which can be specified instead of *parse\_mode*.
- **width** ([int](#), optional) – Animation width.
- **height** ([int](#), optional) – Animation height.
- **duration** ([int](#), optional) – Animation duration in seconds.

type

`'animation'`.

Type

`str`

**media**

Animation to send.

**Type**

`str` | `telegram.InputFile`

**caption**

Optional. Caption of the document to be sent.

**Type**

`str`

**parse\_mode**

Optional. The parse mode to use for text formatting.

**Type**

`str`

**caption\_entities**

Optional. List of special entities that appear in the caption.

**Type**

List[`telegram.MessageEntity`]

**thumb**

Optional. Thumbnail of the file to send.

**Type**

`telegram.InputFile`

**width**

Optional. Animation width.

**Type**

`int`

**height**

Optional. Animation height.

**Type**

`int`

**duration**

Optional. Animation duration in seconds.

**Type**

`int`

**telegram.InputMediaAudio**

```
class telegram.InputMediaAudio(media, thumb=None, caption=None, parse_mode=None,
                               duration=None, performer=None, title=None, caption_entities=None,
                               filename=None, *, api_kwargs=None)
```

Bases: `telegram.InputMedia`

Represents an audio file to be treated as music to be sent.

---

**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.

---

**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** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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.
- **thumb** (`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.

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

#### type

`'audio'`.

#### Type

`str`

#### media

Audio file to send.

#### Type

`str` | `telegram.InputFile`

#### caption

Optional. Caption of the document to be sent.

#### Type

`str`

#### parse\_mode

Optional. The parse mode to use for text formatting.

#### Type

`str`

**caption\_entities**

Optional. List of special entities that appear in the caption.

**Type**

List[[telegram.MessageEntity](#)]

**duration**

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

**thumb**

Optional. Thumbnail of the file to send.

**Type**

[telegram.InputFile](#)

**telegram.InputMediaDocument**

```
class telegram.InputMediaDocument(media, thumb=None, caption=None, parse_mode=None,  
                                  disable_content_type_detection=None, caption_entities=None,  
                                  filename=None, *, api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents a general file to be sent.

**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** (List[[telegram.MessageEntity](#)], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

- **thumb** (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.

Changed in version 13.2: Accept bytes as input.

- **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.

**type**

`'document'`.

**Type**

str

**media**

File to send.

**Type**

str | `telegram.InputFile`

**caption**

Optional. Caption of the document to be sent.

**Type**

str

**parse\_mode**

Optional. The parse mode to use for text formatting.

**Type**

str

**caption\_entities**

Optional. List of special entities that appear in the caption.

**Type**

List[`telegram.MessageEntity`]

**thumb**

Optional. Thumbnail of the file to send.

**Type**

`telegram.InputFile`

**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

## telegram.InputMediaPhoto

```
class telegram.InputMediaPhoto(media, caption=None, parse_mode=None, caption_entities=None,
                               filename=None, *, api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents a photo to be sent.

### 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** ([List\[telegram.MessageEntity\]](#), optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

### type

['photo'](#).

### Type

[str](#)

### media

Photo to send.

### Type

[str](#) | [telegram.InputFile](#)

### caption

Optional. Caption of the document to be sent.

### Type

[str](#)

### parse\_mode

Optional. The parse mode to use for text formatting.

### Type

[str](#)

### caption\_entities

Optional. List of special entities that appear in the caption.

### Type

[List\[telegram.MessageEntity\]](#)

## telegram.InputMediaVideo

```
class telegram.InputMediaVideo(media, caption=None, width=None, height=None, duration=None,
                               supports_streaming=None, parse_mode=None, thumb=None,
                               caption_entities=None, filename=None, *, api_kwargs=None)
```

Bases: [telegram.InputMedia](#)

Represents a video to be sent.

---

### 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.
  - *thumb* 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.
- 

### 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* ([List](#)[[telegram.MessageEntity](#)], optional) – List of special entities that appear in the caption, which can be specified instead of *parse\_mode*.
- *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.
- *thumb* ([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.

Changed in version 13.2: Accept [bytes](#) as input.

**type**  
`'video'.`  
**Type**  
`str`

**media**  
Video file to send.  
**Type**  
`str | telegram.InputFile`

**caption**  
Optional. Caption of the document to be sent.  
**Type**  
`str`

**parse\_mode**  
Optional. The parse mode to use for text formatting.  
**Type**  
`str`

**caption\_entities**  
Optional. List of special entities that appear in the caption.  
**Type**  
`List[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. Pass `True`, if the uploaded video is suitable for streaming.  
**Type**  
`bool`

**thumb**  
Optional. Thumbnail of the file to send.  
**Type**  
`telegram.InputFile`

## telegram.KeyboardButton

```
class telegram.KeyboardButton(text, request_contact=None, request_location=None, request_poll=None,
                              web_app=None, *, api_kwargs=None)
```

Bases: [telegram.TelegramObject](#)

This object represents one button of the reply keyboard. For simple text buttons String 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](#) and [web\\_app](#) 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.
- 

Changed in version 20.0: [web\\_app](#) is 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.

### text

Text of the button.

#### Type

[str](#)

### request\_contact

Optional. The user's phone number will be sent.

#### Type

[bool](#)

### request\_location

Optional. The user's current location will be sent.

Type

`bool`

**request\_poll**

Optional. If the user should create a poll.

Type

`KeyboardButtonPollType`

**web\_app**

Optional. If the described Web App will be launched when the button is pressed.

New in version 20.0.

Type

`WebAppInfo`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

## telegram.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.

---

### Examples

*Poll Bot*

---

**type**

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

`str`

## telegram.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.

### 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.

**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. 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.

## telegram.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](#)

---

### 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.

#### 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.

#### Type

[str](#)

### request\_write\_access

Optional. Pass [True](#) to request the permission for your bot to send messages to the user.

#### Type

[bool](#)

## telegram.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.

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.

## telegram.MenuButtonCommands

**class** telegram.**MenuButtonCommands**(\*, *api\_kwargs*=None)

Bases: *telegram.MenuButton*

Represents a menu button, which opens the bot's list of commands.

New in version 20.0.

**type**  
`'commands'.`  
**Type**  
`str`

### telegram.MenuButtonDefault

**class** telegram.MenuButtonDefault(\*, api\_kwargs=None)

Bases: [telegram.MenuButton](#)

Describes that no specific value for the menu button was set.

New in version 20.0.

**type**  
`'default'.`  
**Type**  
`str`

### telegram.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.

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\(\)](#).

**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\(\)](#).  
**Type**  
`telegram.WebAppInfo`

**classmethod** [de\\_json](#)(data, bot)  
See [telegram.TelegramObject.de\\_json\(\)](#).

## telegram.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, *, 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.

---

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`.

- **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*.
- **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*.
- **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** (*List[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.
- **caption\_entities** (*List[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.
- **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** (*List[telegram.PhotoSize]*, optional) – Message is a photo, available sizes of the photo. This list is empty if the message does not contain a photo.
- **sticker** (*telegram.Sticker*, optional) – Message is a sticker, information about the sticker.
- **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** (List[*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.
- **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** (List[*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.
- **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.
- **`forward_sender_name`** – Sender’s name for messages forwarded from users who disallow adding a link to their account in forwarded messages.
- **`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.

**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*.

**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*.

**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`.

**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.

**Type**

List[`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.

**Type**

List[`telegram.MessageEntity`]

**audio**

Optional. Message is an audio file, information about the file.

**Type**

`telegram.Audio`

**document**

Optional. Message is a general file, information about the file.

**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.

**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.

**Type**

List[*telegram.PhotoSize*]

**sticker**

Optional. Message is a sticker, information about the sticker.

**Type**

*telegram.Sticker*

**video**

Optional. Message is a video, information about the video.

**Type**

*telegram.Video*

**voice**

Optional. Message is a voice message, information about the file.

**Type**

*telegram.Voice*

**video\_note**

Optional. Message is a video note, information about the video message.

**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.

**Type**

List[*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.

**Type**

List[`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*

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as HTML.

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as HTML.

**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 currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

**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 currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

**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, icon_custom_emoji_id, *, 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.SuccessfulPayment`

- [`telegram.Venue`](#)
- [`telegram.Video`](#)
- [`telegram.VideoNote`](#)
- [`telegram.Voice`](#)

Otherwise `None` is returned.

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

List[[`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.

**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*, *thumb=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*, \*, *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*, *thumb=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_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 def reply_chat_action(action, *, 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 def 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 def 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 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, *, 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 send_document(document, caption=None, disable_notification=None,
                        reply_to_message_id=None, reply_markup=None, parse_mode=None,
                        thumb=None, disable_content_type_detection=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_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 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, *, 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 def 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 def 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,
    **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 def 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 def 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**

List[[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, *,
                  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, *, 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, thumb=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_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, thumb=None,
                      allow_sending_without_reply=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_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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as HTML.

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as HTML.

**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 currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.
-

**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 currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.
- 

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

**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.

---

**Note:** Custom emoji entities will currently be ignored by this function. Instead, the supplied replacement for the emoji will be used.

---

Changed in version 13.10: Spoiler entities are now formatted as Markdown V2.

#### 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`

## telegram.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.

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`

**telegram.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.

**Parameters**

- **type** (`str`) – Type of the entity. Can be `MENTION` (@username), `HASHTAG`, `BOT_COMMAND`, `URL`, `EMAIL`, `PHONE_NUMBER`, `BOLD` (bold text), `ITALIC` (italic 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`, `BOT_COMMAND`, `URL`, `EMAIL`, `PHONE_NUMBER`, `BOLD` (bold text), `ITALIC` (italic 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. 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().
```

## telegram.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.

### Parameters

*message\_id* ([int](#)) – Unique message identifier.

### message\_id

Unique message identifier.

### Type

[int](#)



## telegram.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.

### 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.

#### 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](#) –

## telegram.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.

---

### Examples

*Poll Bot*

---

#### Parameters

- **id** (*str*) – Unique poll identifier.
  - **question** (*str*) – Poll question, 1- 300 characters.
  - **options** (List[[PollOption](#)]) – List of poll options.
  - **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** (List[[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*.
- **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*.

#### id

Unique poll identifier.

##### Type

*str*

#### question

Poll question, 1- 300 characters.

##### Type

*str*

**options**

List of poll options.

**Type**

List[*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 always a (possibly empty) list and never *None*.

**Type**

List[*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.

**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.

**telegram.PollAnswer**

**class** telegram.PollAnswer(*poll\_id, user, option\_ids, \*, 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.

**Parameters**

- **poll\_id** (`str`) – Unique poll identifier.
- **user** (`telegram.User`) – The user, who changed the answer to the poll.
- **option\_ids** (List[`int`]) – 0-based identifiers of answer options, chosen by the user. May be empty if the user retracted their vote.

**poll\_id**

Unique poll identifier.

**Type**

`str`

**user**

The user, who changed the answer to the poll.

**Type**

`telegram.User`

**option\_ids**

Identifiers of answer options, chosen by the user.

**Type**

`List[int]`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**telegram.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.

**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.

## telegram.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.

### 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\(\)](#).

## telegram.ReplyKeyboardMarkup

**class** telegram.ReplyKeyboardMarkup(*keyboard, resize\_keyboard=None, one\_time\_keyboard=None, selective=None, input\_field\_placeholder=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.

---

### 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** (List[List[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.

**keyboard**

Array of button rows.

**Type**

List[List[*telegram.KeyboardButton* | str]]

**resize\_keyboard**

Optional. Requests clients to resize the keyboard.

**Type**

bool

**one\_time\_keyboard**

Optional. Requests clients to hide the keyboard as soon as it's been used.

**Type**

bool

**selective**

Optional. Show the keyboard to specific users only.

**Type**

bool

**input\_field\_placeholder**

Optional. The placeholder shown in the input field when the reply is active.

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.

**classmethod** `from_button`(*button*, *resize\_keyboard=False*, *one\_time\_keyboard=False*, *selective=False*, *input\_field\_placeholder=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.

**classmethod** `from_column`(*button\_column*, *resize\_keyboard=False*, *one\_time\_keyboard=False*, *selective=False*, *input\_field\_placeholder=None*, *\*\*kwargs*)

Shortcut for:

```
ReplyKeyboardMarkup([[button] for button in button_column], **kwargs)
```

Return a ReplyKeyboardMarkup from a single column of KeyboardButtons.

#### Parameters

- **button\_column** (List[`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.

**classmethod** `from_row`(*button\_row*, *resize\_keyboard=False*, *one\_time\_keyboard=False*, *selective=False*, *input\_field\_placeholder=None*, *\*\*kwargs*)

Shortcut for:

`ReplyKeyboardMarkup([button_row], **kwargs)`

Return a `ReplyKeyboardMarkup` from a single row of `KeyboardButtons`.

#### Parameters

- **`button_row`** (List[`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.

## telegram.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`.

---

---

### 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. Use this parameter if you want to remove the keyboard for specific users only.

#### Type

*bool*

## telegram.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.

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*

## telegram.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__()`.

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__()`.

### 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

Dict[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`

### \_\_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`

**\_\_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.

**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 JSON data to a list of Telegram objects.

**Parameters**

- **data** (`Dict[str, ...]`) – The JSON data.
- **bot** (`telegram.Bot`) – The bot associated with these objects.

**Returns**

A list 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`.

**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*

**telegram.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.

##### **Type**

*`int`*

#### **message**

Optional. New incoming message.

##### **Type**

*`telegram.Message`*

#### **edited\_message**

Optional. New version of a message.

##### **Type**

*`telegram.Message`*

#### **channel\_post**

Optional. New incoming channel post.

##### **Type**

*`telegram.Message`*

#### **edited\_channel\_post**

Optional. New version of a channel post.

##### **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.



**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.

**Type***telegram.ShippingQuery***pre\_checkout\_query**

Optional. New incoming pre-checkout query.

**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*

## telegram.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.

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 bots first name.
- **`last_name`** (`str`, optional) – User’s or bots last name.
- **`username`** (`str`, optional) – User’s or bots 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()`.

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()`.

**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()`.

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()`

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()`.

**Returns**

On success, *True* is returned.

**Return type**

*bool*

**async send\_action**(*action*, \*, *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*, *thumb=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*, \*, *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()`.

**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*, *thumb=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_audio(update.effective_user.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, *, 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\(\)](#).

#### 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\(\)](#).

#### 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\(\)](#).

#### 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\(\)](#).

#### 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,
                    thumb=None, disable_content_type_detection=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_document(update.effective_user.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_user.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_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.

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\(\)](#).

#### 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\(\)](#).

#### Returns

] On success, instance representing the message posted.

#### Return type

List[[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\(\)](#).

**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, *,
                 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\(\)`](#).

**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\(\)`](#).

**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, *, 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\(\)`](#).

**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\(\)](#).

#### 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, thumb=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_video(update.effective_user.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, thumb=None,
                       allow_sending_without_reply=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_video_note(update.effective_user.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_user.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_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\(\)](#)

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\(\)](#).

**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\(\)](#).

**Returns**

On success, [True](#) is returned.

**Return type**

[bool](#)

## telegram.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.

### Parameters

- **total\_count** (*int*) – Total number of profile pictures the target user has.
- **photos** (List[List[[telegram.PhotoSize](#)]]) – Requested profile pictures (in up to 4 sizes each).

### total\_count

Total number of profile pictures.

#### Type

*int*

### photos

Requested profile pictures.

#### Type

List[List[[telegram.PhotoSize](#)]]

**classmethod** **de\_json**(*data*, *bot*)

See [telegram.TelegramObject.de\\_json\(\)](#).

## telegram.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.

---

### 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.

**Type**

`str`

**google\_place\_id**

Optional. Google Places identifier of the venue.

**Type**

`str`

**google\_place\_type**

Optional. Google Places type of the venue.

**Type**

`str`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

**telegram.Video**

```
class telegram.Video(file_id, file_unique_id, width, height, duration, thumb=None, mime_type=None,
                    file_size=None, file_name=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.

**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.
- **thumb** (`telegram.PhotoSize`, optional) – Video thumbnail.
- **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.

**file\_id**

Identifier for this 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`

**thumb**

Optional. Video thumbnail.

**Type**

`telegram.PhotoSize`

**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`

**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` –

## **telegram.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.

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`

## **telegram.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.

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` (`List[telegram.User]`) – New members that were invited to the video chat.

**users**

New members that were invited to the video chat.

**Type**

`List[telegram.User]`

**classmethod** `de_json(data, bot)`

See `telegram.TelegramObject.de_json()`.

## telegram.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.

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

### start\_date

Point in time (Unix timestamp) when the video chat is supposed to be started by a chat administrator

### Type

[datetime.datetime](#)

**classmethod** [de\\_json](#)(*data*, *bot*)

See [telegram.TelegramObject.de\\_json\(\)](#).

## telegram.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.

New in version 13.4.

Changed in version 20.0: This class was renamed from VoiceChatStarted in accordance to Bot API 6.0.

## telegram.VideoNote

**class** telegram.VideoNote(*file\_id*, *file\_unique\_id*, *length*, *duration*, *thumb*=None, *file\_size*=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.

### 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.
- **[thumb](#)** ([telegram.PhotoSize](#), optional) – Video thumbnail.
- **[file\\_size](#)** ([int](#), optional) – File size in bytes.

**file\_id**

Identifier for this 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 as defined by sender.

**Type**

`int`

**duration**

Duration of the video in seconds as defined by sender.

**Type**

`int`

**thumb**

Optional. Video thumbnail.

**Type**

`telegram.PhotoSize`

**file\_size**

Optional. File size in bytes.

**Type**

`int`

**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` –

**telegram.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.

**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`, optional) – 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.

**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` –

**telegram.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.

---

**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`

**telegram.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.

---

**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`

## telegram.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.

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](#) ([int](#), optional) – Unix time for the most recent error that happened when trying to deliver an update via webhook.
- [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](#) ([List\[str\]](#), optional) – A list of update types the bot is subscribed to. Defaults to all update types, except [telegram.Update.chat\\_member](#).
- [last\\_synchronization\\_error\\_date](#) ([int](#), optional) – Unix time of the most recent error that happened when trying to synchronize available updates with Telegram data-centers.

New in version 20.0.

### 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. Unix time for the most recent error that happened when trying to deliver an update via webhook.

**Type**

`int`

**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`.

**Type**

`List[str]`

**last\_synchronization\_error\_date**

Optional. Unix time of the most recent error that happened when trying to synchronize available updates with Telegram datacenters.

New in version 20.0.

**Type**

`int`

**classmethod de\_json(data, bot)**

See `telegram.TelegramObject.de_json()`.

## Stickers

### telegram.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.

**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.

**Type**`float`**y\_shift**

Shift by Y-axis measured in heights of the mask scaled to the face size, from top to bottom.

**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`

**telegram.Sticker**

```
class telegram.Sticker(file_id, file_unique_id, width, height, is_animated, is_video, type, thumb=None,
                       emoji=None, file_size=None, set_name=None, mask_position=None,
                       premium_animation=None, custom_emoji_id=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.

---

### 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.

- **thumb** (*telegram.PhotoSize*, optional) – Sticker thumbnail in the *.WEBP* or *.JPG* format.
- **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.

### **file\_id**

Identifier for this 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`

**thumb**

Optional. Sticker thumbnail in the `.WEBP` or `.JPG` format.

**Type**

`telegram.PhotoSize`

**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``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` –**telegram.StickerSet****class** `telegram.StickerSet(name, title, is_animated, stickers, is_video, sticker_type, thumb=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.

---

Changed in version 20.0:: The parameter `contains_masks` has been removed. Use `sticker_type` instead.**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`** (List[`telegram.Sticker`]) – List of all set stickers.
- **`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.
- **`thumb`** (`telegram.PhotoSize`, optional) – Sticker set thumbnail in the `.WEBP`, `.TGS`, or `.WEBM` format.

**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.  
**Type**  
List[[`telegram.Sticker`](#)]

**sticker\_type**  
Type of stickers in the set.  
New in version 20.0.  
**Type**  
`str`

**thumb**  
Optional. Sticker set thumbnail in the `.WEBP`, `.TGS` or `.WEBM` format.  
**Type**  
[`telegram.PhotoSize`](#)

**classmethod `de_json(data, bot)`**  
See [`telegram.TelegramObject.de\_json\(\)`](#).

## Inline Mode

### `telegram.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.
- 

#### 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.

##### Type

`telegram.Location`

#### **`inline_message_id`**

Optional. Identifier of the sent inline 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()`.

### **`telegram.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.

---

**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`

#### **location**

Optional. Sender location, only for bots that request user location.

##### Type

`telegram.Location`

#### **chat\_type**

Optional. Type of the chat, from which the inline query was sent.

New in version 13.5.

##### Type

`str`

**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*, *switch\_pm\_text=None*, *switch\_pm\_parameter=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()`.

## telegram.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*.

---

---

## 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.

## telegram.InlineQueryResultArticle

```
class telegram.InlineQueryResultArticle(id, title, input_message_content, reply_markup=None,
                                         url=None, hide_url=None, description=None,
                                         thumb_url=None, thumb_width=None,
                                         thumb_height=None, *, api_kwargs=None)
```

Bases: *telegram.InlineQueryResult*

This object represents a Telegram InlineQueryResultArticle.

---

## Examples

*Inline Bot*

---

### 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.
- **`thumb_url`** (*`str`*, optional) – Url of the thumbnail for the result.
- **`thumb_width`** (*`int`*, optional) – Thumbnail width.
- **`thumb_height`** (*`int`*, optional) – Thumbnail height.

**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`

**thumb\_url**

Optional. Url of the thumbnail for the result.

Type

`str`

**thumb\_width**

Optional. Thumbnail width.

Type

`int`

**thumb\_height**

Optional. Thumbnail height.

Type

`int`

### telegram.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.

#### 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** (List[`telegram.MessageEntity`], optional) – List 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 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[[`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`](#)

## telegram.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.

### 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** (List[[telegram.MessageEntity](#)], optional) – List 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 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

Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

### Type

[str](#), optionals

### caption\_entities

Optional. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**List[[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](#)**telegram.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.

**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*** (List[[telegram.MessageEntity](#)], optional) – List 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 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[`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`

**telegram.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.

**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** (*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** (List[[telegram.MessageEntity](#)], optional) – List 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 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[[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`

**telegram.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.

**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** (`List[telegram.MessageEntity]`, optional) – List 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 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[`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`

**telegram.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.

**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`** (List[[`telegram.MessageEntity`](#)], optional) – List 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 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[[`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*

**telegram.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.

**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*

## telegram.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.

### 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** (List[[telegram.MessageEntity](#)], optional) – List 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[`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`

**telegram.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.

**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** (List[`telegram.MessageEntity`], optional) – List 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 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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**`List[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`

## telegram.InlineQueryResultContact

```
class telegram.InlineQueryResultContact(id, phone_number, first_name, last_name=None,
                                         reply_markup=None, input_message_content=None,
                                         thumb_url=None, thumb_width=None,
                                         thumb_height=None, vcard=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.

### 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.
- **thumb\_url** (`str`, optional) – Url of the thumbnail for the result.
- **thumb\_width** (`int`, optional) – Thumbnail width.
- **thumb\_height** (`int`, optional) – Thumbnail height.

### 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`

**thumb\_url**

Optional. Url of the thumbnail for the result.

**Type**

`str`

**thumb\_width**

Optional. Thumbnail width.

**Type**

`int`

**thumb\_height**

Optional. Thumbnail height.

**Type**

`int`

**telegram.InlineQueryResultDocument**

```
class telegram.InlineQueryResultDocument(id, document_url, title, mime_type, caption=None,
                                         description=None, reply_markup=None,
                                         input_message_content=None, thumb_url=None,
                                         thumb_width=None, thumb_height=None,
                                         parse_mode=None, caption_entities=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.

**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`** (List[`telegram.MessageEntity`], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

- **`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.
- **`thumb_url`** (`str`, optional) – URL of the thumbnail (JPEG only) for the file.
- **`thumb_width`** (`int`, optional) – Thumbnail width.
- **`thumb_height`** (`int`, optional) – Thumbnail height.

**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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[`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`

**thumb\_url**

Optional. URL of the thumbnail (JPEG only) for the file.

**Type**

`str`

**thumb\_width**

Optional. Thumbnail width.

**Type**

`int`

**thumb\_height**

Optional. Thumbnail height.

**Type**

`int`

**telegram.InlineQueryResultGame**

```
class telegram.InlineQueryResultGame(id, game_short_name, reply_markup=None, *,
                                     api_kwargs=None)
```

Bases: `telegram.InlineQueryResult`

Represents a `telegram.Game`.

**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`

## telegram.InlineQueryResultGif

```
class telegram.InlineQueryResultGif(id, gif_url, thumb_url, gif_width=None, gif_height=None,
                                     title=None, caption=None, reply_markup=None,
                                     input_message_content=None, gif_duration=None,
                                     parse_mode=None, thumb_mime_type=None,
                                     caption_entities=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.

### 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.
- **thumb\_url** (`str`) – URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.
- **thumb\_mime\_type** (`str`, optional) – MIME type of the thumbnail, must be one of 'image/jpeg', 'image/gif', or 'video/mp4'. Defaults to 'image/jpeg'.
- **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** (List[`telegram.MessageEntity`], optional) – List 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 GIF animation.

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`

**thumb\_url**

URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.

**Type**

`str`

**thumb\_mime\_type**

Optional. MIME type of the thumbnail.

**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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Type

List[[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](#)

## telegram.InlineQueryResultLocation

```
class telegram.InlineQueryResultLocation(id, latitude, longitude, title, live_period=None,
                                         reply_markup=None, input_message_content=None,
                                         thumb_url=None, thumb_width=None,
                                         thumb_height=None, horizontal_accuracy=None,
                                         heading=None, proximity_alert_radius=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.

### 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.
- **thumb\_url** ([str](#), optional) – Url of the thumbnail for the result.
- **thumb\_width** ([int](#), optional) – Thumbnail width.
- **thumb\_height** ([int](#), optional) – Thumbnail height.

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.

**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.

**Type**`int`**proximity\_alert\_radius**

Optional. For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters.

**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`

**thumb\_url**

Optional. Url of the thumbnail for the result.

Type

`str`

**thumb\_width**

Optional. Thumbnail width.

Type

`int`

**thumb\_height**

Optional. Thumbnail height.

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.

### **telegram.InlineQueryResultMpeg4Gif**

```
class telegram.InlineQueryResultMpeg4Gif(id, mpeg4_url, thumb_url, mpeg4_width=None,
                                          mpeg4_height=None, title=None, caption=None,
                                          reply_markup=None, input_message_content=None,
                                          mpeg4_duration=None, parse_mode=None,
                                          thumb_mime_type=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). 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.

#### 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.
- **thumb\_url** (`str`) – URL of the static thumbnail (jpeg or gif) for the result.
- **thumb\_mime\_type** (`str`) – Optional. MIME type of the thumbnail, must be one of 'image/jpeg', 'image/gif', or 'video/mp4'. Defaults to 'image/jpeg'.
- **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** (`List[telegram.MessageEntity]`, optional) – List 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 animation.

#### 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`

**thumb\_url**

URL of the static (JPEG or GIF) or animated (MPEG4) thumbnail for the result.

Type

`str`

**thumb\_mime\_type**

Optional. MIME type of the thumbnail.

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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Type

List[[\*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\*](#)

**telegram.InlineQueryResultPhoto**

```
class telegram.InlineQueryResultPhoto(id, photo_url, thumb_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.

**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.
- ***thumb\_url*** ([str](#)) – URL of the thumbnail for the photo.
- ***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*** ([List\[telegram.MessageEntity\]](#), optional) – List 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 photo.

**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](#)

**thumb\_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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

Type

List[[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](#)

## telegram.InlineQueryResultVenue

```
class telegram.InlineQueryResultVenue(id, latitude, longitude, title, address, foursquare_id=None,
                                       foursquare_type=None, reply_markup=None,
                                       input_message_content=None, thumb_url=None,
                                       thumb_width=None, thumb_height=None,
                                       google_place_id=None, google_place_type=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.

---

### 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 location.
- **thumb\_url** (`str`, optional) – Url of the thumbnail for the result.
- **thumb\_width** (`int`, optional) – Thumbnail width.
- **thumb\_height** (`int`, optional) – Thumbnail height.

### 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.

**Type**

`str`

**google\_place\_id**

Optional. Google Places identifier of the venue.

**Type**

`str`

**google\_place\_type**

Optional. Google Places type of the venue.

**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`

**thumb\_url**

Optional. Url of the thumbnail for the result.

**Type**

`str`

**thumb\_width**

Optional. Thumbnail width.

**Type**

`int`

**thumb\_height**

Optional. Thumbnail height.

**Type**

`int`

**telegram.InlineQueryResultVideo**

```
class telegram.InlineQueryResultVideo(id, video_url, mime_type, thumb_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`.

---

**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”.
- **thumb\_url** (`str`) – URL of the thumbnail (JPEG only) for the video.
- **title** (`str`) – Title for the result.
- **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** (`List[telegram.MessageEntity]`, optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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).

**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`**thumb\_url**

URL of the thumbnail (JPEG only) for the video.

**Type**`str`**title**

Title for the result.

**Type**`str`**caption**

Caption of the video to be sent, 0-[1024](#) characters after entities parsing.

**Type**`str`, optional**parse\_mode**

Mode for parsing entities. See [telegram.constants.ParseMode](#) and [formatting options](#) for more details.

**Type**`str`, optional**caption\_entities**

List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**List[[telegram.MessageEntity](#)], optional**video\_width**

Video width.

**Type**`int`, optional**video\_height**

Video height.

**Type**`int`, optional



**video\_duration**

Video duration in seconds.

**Type**

`int`, optional

**description**

Short description of the result.

**Type**

`str`, optional

**reply\_markup**

Inline keyboard attached to the message.

**Type**

`telegram.InlineKeyboardMarkup`, optional

**input\_message\_content**

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`, optional

**telegram.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.

**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** (List[`telegram.MessageEntity`], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

**Type**

List[`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`

## telegram.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.

## telegram.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.

---

### 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** (List[[telegram.MessageEntity](#)], optional) – List of special entities that appear in the caption, which can be specified instead of `parse_mode`.
- **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. List of special entities that appear in the caption, which can be specified instead of `parse_mode`.

##### Type

List[[telegram.MessageEntity](#)]

**disable\_web\_page\_preview**

Optional. Disables link previews for links in the sent message.

**Type**

`bool`

**telegram.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.

**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.

**Type**

`float`

**live\_period**

Optional. Period in seconds for which the location can be updated.

**Type**

`int`

**heading**

Optional. For live locations, a direction in which the user is moving, in degrees.

**Type**

`int`

**proximity\_alert\_radius**

Optional. For live locations, a maximum distance for proximity alerts about approaching another chat member, in meters.

**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.

**telegram.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.

---

**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.

**Type**

`str`

**google\_place\_id**

Optional. Google Places identifier of the venue.

**Type**

`str`

**google\_place\_type**

Optional. Google Places type of the venue.

**Type**

`str`

## telegram.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.

### 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](#)

## telegram.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 an 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.

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** (List[[telegram.LabeledPrice](#)]) – Price breakdown, a list of components (e.g. product price, tax, discount, delivery cost, delivery tax, bonus, etc.)
- **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** (List[`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`.
- **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.

**Type**

`List[telegram.LabeledPrice]`

**max\_tip\_amount**

Optional. The maximum accepted amount for tips in the smallest units of the currency (integer, not float/double).

**Type**

`int`

**suggested\_tip\_amounts**

Optional. An array of suggested amounts of tip in the smallest units of the currency (integer, not float/double).

**Type**

`List[int]`

**provider\_data**

Optional. An object for data about the invoice, which will be shared with the payment provider.

**Type**

`str`

**photo\_url**

Optional. URL of the product photo for the invoice.

**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

### telegram.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.

#### 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.

##### **Type**

[str](#)

#### **currency**

Three-letter ISO 4217 currency code.

##### **Type**

[str](#)

#### **total\_amount**

Total price in the smallest units of the currency.

##### **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\_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.

## telegram.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.

---

### 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.

##### Type

`int`

## telegram.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.

### 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\(\)](#).

## telegram.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.

---

### 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.

**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\(\)`](#).

## **telegram.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.

### **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`

## telegram.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.

---

### Examples

*Payment Bot*

---

#### Parameters

- *id* ([str](#)) – Shipping option identifier.
- *title* ([str](#)) – Option title.
- *prices* (List[[telegram.LabeledPrice](#)]) – List of price portions.

#### *id*

Shipping option identifier.

#### Type

[str](#)

#### *title*

Option title.

#### Type

[str](#)

#### *prices*

List of price portions.

#### Type

List[[telegram.LabeledPrice](#)]

## telegram.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.

---

#### 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()*.

## telegram.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.

### 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.

**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

### telegram.Callbackgame

**class telegram.CallbackGame**(\*, *api\_kwargs=None*)

Bases: *telegram.TelegramObject*

A placeholder, currently holds no information. Use BotFather to set up your game.

## telegram.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.

### Parameters

- **title** ([str](#)) – Title of the game.
- **description** ([str](#)) – Description of the game.
- **photo** (List[[telegram.PhotoSize](#)]) – Photo that will be displayed in the game message in chats.
- **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** (List[[telegram.MessageEntity](#)], optional) – Special entities that appear in text, such as usernames, URLs, bot commands, etc.
- **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.

#### Type

List[[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\(\)](#).

#### Type

[str](#)

### text\_entities

Special entities that appear in text, such as usernames, URLs, bot commands, etc. This list is empty if the message does not contain text entities.

#### Type

List[[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.

## telegram.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

## telegram.Credentials

**class** telegram.**Credentials**(*secure\_data*, *nonce*, \*, *api\_kwargs*=None)

Bases: [telegram.TelegramObject](#)

### 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\(\)](#).

## telegram.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.

### 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](#)

## telegram.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](#).

---

### Parameters

- **data** ([telegram.Credentials](#) or [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](#) or [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`

**telegram.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`.

---

**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”, “identity\_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** (List[`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.
- **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** (List[`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.

**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”, “identity\_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.

**Type**

List[`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.

**Type**

List[*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*

**telegram.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.

**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`

### telegram.IdDocumentData

**class** telegram.IdDocumentData(*document\_no*, *expiry\_date*, \*, *api\_kwargs=None*)

Bases: [telegram.TelegramObject](#)

This object represents the data of an identity document.

**document\_no**

Document number.

Type  
`str`

**expiry\_date**

Optional. Date of expiry, in DD.MM.YYYY format.

Type  
`str`

### telegram.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`.

---

#### Parameters

- **data** (List[[telegram.EncryptedPassportElement](#)]) – Array with encrypted information about documents and other Telegram Passport elements that was shared with the bot.
- **credentials** ([telegram.EncryptedCredentials](#)) – Encrypted credentials.

**data**

Array with encrypted information about documents and other Telegram Passport elements that was shared with the bot.

Type  
List[[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.

**Raises**

`telegram.error.PassportDecryptionError` – Decryption failed. Usually due to bad private/public key but can also suggest malformed/tampered data.

**Type**

List[`telegram.EncryptedPassportElement`]

## `telegram.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.

**Parameters**

- `source` (`str`) – Error source.
- `type` (`str`) – The section of the user's Telegram Passport which has the error.

**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`

## telegram.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.

### 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*

## telegram.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.

### 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*

**telegram.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.

**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*

**file\_hashes**

List of base64-encoded file hashes.

**Type**

List[*str*]

**message**

Error message.

**Type**

*str*

### telegram.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.

#### 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](#)

### telegram.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.

#### 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`

### **telegram.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.

#### **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`

## telegram.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.

### 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](#)

## telegram.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.

### 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`

**file\_hashes**

List of base64-encoded file hashes.

**Type**

`List[str]`

**message**

Error message.

**Type**

`str`

**telegram.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.

**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`

## telegram.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.

### 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.

### file\_id

Identifier for this 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](#)

### file\_date

Unix time when the file was uploaded.

#### 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.

### Parameters

- [data](#) ([Dict\[str, ...\]](#)) – The JSON data.

- **bot** (*telegram.Bot*) – The bot associated with these objects.
- **credentials** (*telegram.FileCredentials*) – The credentials

**Return type**

List[*telegram.PassportFile*]

**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* –

## telegram.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.

**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`

**telegram.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.

**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`

**telegram.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.

**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()*.

**telegram.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.

**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”.

**Type**List[[telegram.FileCredentials](#)]**files**

Optional. Credentials for encrypted files. Available for “utility\_bill”, “bank\_statement”, “rental\_agreement”, “passport\_registration” and “temporary\_registration” types.

**Type**List[[telegram.FileCredentials](#)]**classmethod** `de_json(data, bot)`See [telegram.TelegramObject.de\\_json\(\)](#).

## 10.2 telegram.ext package

### 10.2.1 telegram.ext.Application

**class** `telegram.ext.Application(*, bot, update_queue, updater, job_queue, concurrent_updates, persistence, context_types, post_init, post_shutdown)`Bases: [typing.Generic](#), [AbstractAsyncContextManager](#)

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()
```

---

**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`

**job\_queue**

Optional. The `telegram.ext.JobQueue` instance to pass onto handler callbacks.

**Type**

`telegram.ext.JobQueue`

**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.

---

**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.

---

**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

**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(...)],
```

(continues on next page)

(continued from previous page)

```
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.

**See also:**

Concurrency

**Type**

`int`

**create\_task(coroutine, update=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** (coroutine function) – The coroutine to run as task.
- **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.

**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.

Does *not* call `post_init` - that is only done by `run_polling()` and `run_webhook()`.

**See also:**

`shutdown()`

**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`.

**Warning:** 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_update()`.

**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*.

If *post\_init* is set, it will be called between *initialize()* and *telegram.ext.Updater.start\_polling()*.

If *post\_shutdown* is set, it will be called after both *shutdown()* and *telegram.ext.Updater.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.

---

#### See also:

*initialize()*, *start()*, *stop()*, *shutdown()* *telegram.ext.Updater.start\_polling()*, *telegram.ext.Updater.stop()*, *run\_webhook()*

#### Parameters

- **poll\_interval** (*float*, optional) – Time to wait between polling updates from Telegram in seconds. Default is 0.0.
- **timeout** (*float*, 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.

If `post_init` is set, it will be called between `initialize()` and `telegram.ext.Updater.start_webhook()`.

If `post_shutdown` is set, it will be called after both `shutdown()` and `telegram.ext.Updater.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.

---

See also:

`initialize()`, `start()`, `stop()`, `shutdown()` `telegram.ext.Updater.start_webhook()`,  
`telegram.ext.Updater.stop()`, `run_polling()`, `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()`

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.
- `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()`.

---

**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()`.

---

#### Raises

**RuntimeError** – If the application is not running.

#### `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`, `chat_data`, only entries used since the last run of this method are updated.

---

**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`.

## 10.2.2 telegram.ext.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 for Application

#### `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]
```

---

**See also:**

`Arbitrary callback_data`, `arbitrarycallbackdatabot.py`

**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.

**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*) – Passing `True` will allow for 256 updates to be

processed concurrently. Pass an integer to specify a different number of updates that may be processed concurrently.

**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.

**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.

**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*.

**See also:**

*contexttypesbot.py*

**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*

**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.

**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.

**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\_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 `None`.

**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`.

**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.

**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.

**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*

**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.

**See also:**

*JobQueue*, *timerbot.py*

---

**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.

---

**See also:**Making your bot persistent, *persistentconversationbot.py***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 `None`.**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()
```

---

**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()
```

---

**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*

**private\_key**(*private\_key*, *password*=None)

Sets the private key and corresponding password for decryption of telegram passport data for *telegram.ext.Application.bot*.

**See also:**

*passportbot.py*, 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*.

**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.

**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.

**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 telegram.ext.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 telegram.ext.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 a coroutine run with `Application.create_task()` or a handler callback with `block=False`.

### Type

`coroutine function`

### 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` (`coroutine function`, optional) – The coroutine function 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.

**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`

## 10.2.5 telegram.ext.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.

---

**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, dict, dict, dict]`

**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.

## 10.2.6 telegram.ext.Defaults

```
class telegram.ext.Defaults(parse_mode=None, disable_notification=None,
                           disable_web_page_preview=None, quote=None, tzinfo=<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

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`

### 10.2.7 telegram.ext.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.

---

## 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.

### 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.

### 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()`.

## 10.2.8 telegram.ext.Job

**class** `telegram.ext.Job(callback, data=None, name=None, chat_id=None, user_id=None)`

Bases: `object`

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.

---

**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.

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

**property enabled**

Whether this job is enabled.

**Type**

`bool`

**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.

## 10.2.9 telegram.ext.JobQueue

### class telegram.ext.JobQueue

Bases: `object`

This class allows you to periodically perform tasks with the bot. It is a convenience wrapper for the APScheduler library.

---

**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]
```

---

## Examples

*Timer Bot*

---

### See also:

[telegram.ext.Application.job\\_queue](#), [telegram.ext.CallbackContext.job\\_queue](#), [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`

### 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](#)]

### 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`

- **`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`.

### 10.2.10 telegram.ext.Updater

**class** telegram.ext.Updater(*bot*, *update\_queue*)

Bases: [AbstractAsyncContextManager](#)

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()
```

**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](#)

#### 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`** (`float`, 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`. \* To use this method, PTB must be installed via `pip install python-telegram-bot[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 (`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.

## 10.2.11 Handlers

### telegram.ext.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`.

---

**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

#### `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.

### telegram.ext.CallbackQueryHandler

**class** telegram.ext.CallbackQueryHandler(*callback, pattern=None, block=True*)

Bases: *telegram.ext.BaseHandler*

BaseHandler 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.

#### 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 sub-class), 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.

## **telegram.ext.ChatJoinRequestHandler**

**class** `telegram.ext.ChatJoinRequestHandler`(`callback`, `chat_id=None`, `username=None`, `block=True`)

Bases: `telegram.ext.BaseHandler`

BaseHandler 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.

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`

## telegram.ext.ChatMemberHandler

**class** telegram.ext.ChatMemberHandler(callback, chat\_member\_types=-1, block=True)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

---

### 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`

## telegram.ext.ChosenInlineResultHandler

**class** telegram.ext.ChosenInlineResultHandler(*callback*, *block=True*, *pattern=None*)

Bases: `telegram.ext.BaseHandler`

BaseHandler 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.

### 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`.

**telegram.ext.CommandHandler**

**class** telegram.ext.**CommandHandler**(*command, callback, filters=None, block=True*)

Bases: `telegram.ext.BaseHandler`

BaseHandler 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.

---

**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 described [here](#)
- **`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](#)

#### 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`



**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.

## telegram.ext.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.Application.concurrent\_updates* should be *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`.

---

---

## 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.
- **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`**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]]`

## telegram.ext.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.

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).

#### name

Name for this filter.

#### Type

`str`

**data\_filter**

Whether this filter is a data filter.

**Type**

`bool`

**check\_update(update)**

Checks if the specified update is a message.

`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 complete 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.

**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.

**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_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.

**See also:**

[Advanced Filters](#)

**name**

Name for this filter. Defaults to the type of filter.

**Type**

[str](#)

**data\_filter**

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).

**Type**

[bool](#)

**check\_update**(*update*)

Checks if the specified update is a message.

**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.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.

**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`.

**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`.

**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`.

**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.

**FORUM\_TOPIC\_CREATED = filters.StatusUpdate.FORUM\_TOPIC\_CREATED**

Messages that contain `telegram.Message.forum_topic_created`.

New in version 20.0.

**FORUM\_TOPIC\_CLOSED = filters.StatusUpdate.FORUM\_TOPIC\_CLOSED**

Messages that contain `telegram.Message.forum_topic_closed`.

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.

`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.

**name**

Name for this filter. Defaults to the type of filter.

**Type**

str

**data\_filter**

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).

**Type**

bool

**check\_update(update)**

Checks if the specified update is a message.

**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.



**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)`

**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.

#### 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.

**telegram.ext.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.

---

**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.

### telegram.ext.MessageHandler

**class** `telegram.ext.MessageHandler(filters, callback, block=True)`

Bases: `telegram.ext.BaseHandler`

BaseHandler 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.

### 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). This defaults to all message updates being: *telegram.Update.message*, *telegram.Update.edited\_message*, *telegram.Update.channel\_post* and *telegram.Update.edited\_channel\_post*. If you don't want or need any of those pass *~filters.UpdateType.\** in the filter argument.

#### 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*.

## telegram.ext.PollAnswerHandler

**class** telegram.ext.PollAnswerHandler(*callback*, *block=True*)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

---

### 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](#)

## telegram.ext.PollHandler

**class** telegram.ext.PollHandler(*callback*, *block=True*)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

---

### 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](#)

## telegram.ext.PreCheckoutQueryHandler

**class** telegram.ext.PreCheckoutQueryHandler(*callback*, *block=True*)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

---

### 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](#)



## telegram.ext.PrefixHandler

**class** telegram.ext.PrefixHandler(*prefix, command, callback, filters=None, block=True*)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

---

### 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.

## telegram.ext.ShippingQueryHandler

**class** telegram.ext.ShippingQueryHandler(*callback*, *block=True*)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

---

### 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](#)

## telegram.ext.StringCommandHandler

**class** telegram.ext.StringCommandHandler(*command*, *callback*, *block=True*)

Bases: [telegram.ext.BaseHandler](#)

BaseHandler 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.

### 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.

**telegram.ext.StringRegexHandler**

**class** telegram.ext.StringRegexHandler(*pattern, callback, block=True*)

Bases: `telegram.ext.BaseHandler`

BaseHandler 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.

**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.

**telegram.ext.TypeHandler**

**class** telegram.ext.**TypeHandler**(*type, callback, strict=False, block=True*)

Bases: `telegram.ext.BaseHandler`

BaseHandler 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.

**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`

## 10.2.12 Persistence

### telegram.ext.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()`.

**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.

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.

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.

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` or `callback_data_cache` is `None`.

**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*].

**telegram.ext.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()`.

---

**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`

## **telegram.ext.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`.

**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`



## telegram.ext.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.

---

---

### 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].

## 10.2.13 Arbitrary Callback Data

### telegram.ext.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]
```

---

### Examples

*Arbitrary Callback Data Bot*

---

See also:

[`telegram.ext.ExtBot.callback\_data\_cache`](#), [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.

### telegram.ext.InvalidCallbackData

**class** telegram.ext.InvalidCallbackData(*callback\_data=None*)

Bases: `telegram.error.TelegramError`

Raised when the received callback data has been tempered 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`

## 10.2.14 Rate Limiting

### telegram.ext.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.

---

**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.

### telegram.ext.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.

---

**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_time_period` 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 = '6.3'`

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 = BotAPIVersion(major=6, minor=3)`

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.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.

---

**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.

---

**Note:**

- `telegram.Message.from_user` will contain this ID for backwards compatibility only. It's recommended to use `telegram.Message.sender_chat` instead.
  - This value is undocumented and might be changed by Telegram.
- 

Type  
`int`

**SERVICE\_CHAT = 777000**

Telegram service chat, that also acts as sender of channel posts forwarded to discussion groups.

---

**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/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 = 20000000**

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 = 50000000**

Bots can upload non-photo files of up to 50MB in size.

Type  
`int`

**FILESIZE\_UPLOAD\_LOCAL\_MODE = 2000000000**

Bots can upload non-photo files of up to 2000MB in size when using a local bot API server.

Type  
`int`

**PHOTOSIZE\_UPLOAD = 10000000**

Bots can upload photo files of up to 10MB in size.

Type  
`int`

**VOICE\_NOTE\_FILE\_SIZE = 1000000**

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 the `name` parameter of `telegram.Bot.create_forum_topic()` and `name` parameter of `telegram.Bot.edit_forum_topic()`.

Type  
`int`

**MIN\_NAME\_LENGTH = 1**

Minimum length of a `str` passed as the `name` parameter of `telegram.Bot.create_forum_topic()` and `name` parameter of `telegram.Bot.edit_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()`.

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()`.

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.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.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\_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.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`

**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`

**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.StickerLimit**(*value, names=None, \*, module=None, qualname=None, type=None, start=1, boundary=None*)

Bases: *enum.IntEnum*

This enum contains limitations for *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\_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*

**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*



```
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.

---

**Examples**

[Raw API Bot](#)

---

**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.

**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.

**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`

`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.

**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'`, 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.

#### telegram.request.BaseRequest

**class** telegram.request.BaseRequest

Bases: [AbstractAsyncContextManager](#), [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](#).

---

#### 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 v20.0a5 (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



**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.

#### Return type

`Dict[str, ...]`

**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.

**telegram.request.RequestData**

**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 will be 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()`.

## telegram.request.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)

Bases: `telegram.request.BaseRequest`

Implementation of `BaseRequest` using the library `httpx`.

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!

**async** `do_request`(`url`, `method`, `request_data=None`, `read_timeout=None`, `write_timeout=None`, `connect_timeout=None`, `pool_timeout=None`)

See `BaseRequest.do_request()`.

**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](#).

### 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 `ConversationHandlers`, 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.

### 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.

### 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, wrong-import-position
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
12 import logging
13 from typing import List, Tuple, cast
14
15 from telegram import __version__ as TG_VER
16
17 try:
18     from telegram import __version_info__
19 except ImportError:
20     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
21
22 if __version_info__ < (20, 0, 0, "alpha", 1):
23     raise RuntimeError(
24         f"This example is not compatible with your current PTB version {TG_VER}. To
25         ↪view the "
26         f"{TG_VER} version of this example, "
27         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
28     )
29
30 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
31 from telegram.ext import (
32     Application,
33     CallbackQueryHandler,
34     CommandHandler,
35     ContextTypes,
36     InvalidCallbackData,
37     PicklePersistence,
38 )
39
40 # Enable logging
41 logging.basicConfig(
42     format="%(asctime)s - (name)s - (levelname)s - (message)s", level=logging.INFO
43 )
44 logger = logging.getLogger(__name__)
45
46 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
```

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```

44     """Sends a message with 5 inline buttons attached."""
45     number_list: List[int] = []
46     await update.message.reply_text("Please choose:", reply_markup=build_
↳ keyboard(number_list))
47
48
49     async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
50         """Displays info on how to use the bot."""
51         await update.message.reply_text(
52             "Use /start to test this bot. Use /clear to clear the stored data so that you_
↳ can see "
53             "what happens, if the button data is not available. "
54         )
55
56
57     async def clear(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
58         """Clears the callback data cache"""
59         context.bot.callback_data_cache.clear_callback_data()
60         context.bot.callback_data_cache.clear_callback_queries()
61         await update.effective_message.reply_text("All clear!")
62
63
64     def build_keyboard(current_list: List[int]) -> InlineKeyboardMarkup:
65         """Helper function to build the next inline keyboard."""
66         return InlineKeyboardMarkup.from_column(
67             [InlineKeyboardButton(str(i), callback_data=(i, current_list)) for i in_
↳ range(1, 6)]
68         )
69
70
71     async def list_button(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
72         """Parses the CallbackQuery and updates the message text."""
73         query = update.callback_query
74         await query.answer()
75         # Get the data from the callback_data.
76         # If you're using a type checker like MyPy, you'll have to use typing.cast
77         # to make the checker get the expected type of the callback_data
78         number, number_list = cast(Tuple[int, List[int]], query.data)
79         # append the number to the list
80         number_list.append(number)
81
82         await query.edit_message_text(
83             text=f"So far you've selected {number_list}. Choose the next item:",
84             reply_markup=build_keyboard(number_list),
85         )
86
87         # we can delete the data stored for the query, because we've replaced the buttons
88         context.drop_callback_data(query)
89
90
91     async def handle_invalid_button(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↳ None:
92         """Informs the user that the button is no longer available."""
93         await update.callback_query.answer()
94         await update.effective_message.edit_text(
95             "Sorry, I could not process this button click Please send /start to get a_

```

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```

↪new keyboard."
    )
96
97
98
99 def main() -> None:
100     """Run the bot."""
101     # We use persistence to demonstrate how buttons can still work after the bot was
↪restarted
102     persistence = PicklePersistence(filepath="arbitrarycallbackdatabot")
103     # Create the Application and pass it your bot's token.
104     application = (
105         Application.builder()
106         .token("TOKEN")
107         .persistence(persistence)
108         .arbitrary_callback_data(True)
109         .build()
110     )
111
112     application.add_handler(CommandHandler("start", start))
113     application.add_handler(CommandHandler("help", help_command))
114     application.add_handler(CommandHandler("clear", clear))
115     application.add_handler(
116         CallbackQueryHandler(handle_invalid_button, pattern=InvalidCallbackData)
117     )
118     application.add_handler(CallbackQueryHandler(list_button))
119
120     # Run the bot until the user presses Ctrl-C
121     application.run_polling()
122
123
124 if __name__ == "__main__":
125     main()

```

#### chatmemberbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
18
19 try:
20     from telegram import __version_info__

```

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```

21 except ImportError:
22     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
23
24 if __version_info__ < (20, 0, 0, "alpha", 1):
25     raise RuntimeError(
26         f"This example is not compatible with your current PTB version {TG_VER}. To
↪view the "
27         f"{TG_VER} version of this example, "
28         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
29     )
30 from telegram import Chat, ChatMember, ChatMemberUpdated, Update
31 from telegram.constants import ParseMode
32 from telegram.ext import Application, ChatMemberHandler, CommandHandler, ContextTypes
33
34 # Enable logging
35
36 logging.basicConfig(
37     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
38 )
39
40 logger = logging.getLogger(__name__)
41
42
43 def extract_status_change(chat_member_update: ChatMemberUpdated) ->
↪Optional[Tuple[bool, bool]]:
44     """Takes a ChatMemberUpdated instance and extracts whether the 'old_chat_member'
↪was a member
45     of the chat and whether the 'new_chat_member' is a member of the chat. Returns
↪None, if
46     the status didn't change.
47     """
48     status_change = chat_member_update.difference().get("status")
49     old_is_member, new_is_member = chat_member_update.difference().get("is_member",
↪(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)

```

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```

72     if result is None:
73         return
74     was_member, is_member = result
75
76     # Let's check who is responsible for the change
77     cause_name = update.effective_user.full_name
78
79     # Handle chat types differently:
80     chat = update.effective_chat
81     if chat.type == Chat.PRIVATE:
82         if not was_member and is_member:
83             logger.info("%s started the bot", cause_name)
84             context.bot_data.setdefault("user_ids", set()).add(chat.id)
85         elif was_member and not is_member:
86             logger.info("%s blocked the bot", cause_name)
87             context.bot_data.setdefault("user_ids", set()).discard(chat.id)
88         elif chat.type in [Chat.GROUP, Chat.SUPERGROUP]:
89             if not was_member and is_member:
90                 logger.info("%s added the bot to the group %s", cause_name, chat.title)
91                 context.bot_data.setdefault("group_ids", set()).add(chat.id)
92             elif was_member and not is_member:
93                 logger.info("%s removed the bot from the group %s", cause_name, chat.
94 ↪title)
95                 context.bot_data.setdefault("group_ids", set()).discard(chat.id)
96             else:
97                 if not was_member and is_member:
98                     logger.info("%s added the bot to the channel %s", cause_name, chat.title)
99                     context.bot_data.setdefault("channel_ids", set()).add(chat.id)
100                 elif was_member and not is_member:
101                     logger.info("%s removed the bot from the channel %s", cause_name, chat.
102 ↪title)
103                     context.bot_data.setdefault("channel_ids", set()).discard(chat.id)
104
105     async def show_chats(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
106         """Shows which chats the bot is in"""
107         user_ids = ", ".join(str(uid) for uid in context.bot_data.setdefault("user_ids",
108 ↪set()))
109         group_ids = ", ".join(str(gid) for gid in context.bot_data.setdefault("group_ids",
110 ↪set()))
111         channel_ids = ", ".join(str(cid) for cid in context.bot_data.setdefault("channel_
112 ↪ids", set()))
113         text = (
114             f"@{context.bot.username} is currently in a conversation with the user IDs
115 ↪{user_ids}."
116             f" Moreover it is a member of the groups with IDs {group_ids} "
117             f"and administrator in the channels with IDs {channel_ids}."
118         )
119         await update.effective_message.reply_text(text)
120
121     async def greet_chat_members(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
122 ↪None:
123         """Greets new users in chats and announces when someone leaves"""
124         result = extract_status_change(update.chat_member)
125         if result is None:

```

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```

121     return
122
123     was_member, is_member = result
124     cause_name = update.chat_member.from_user.mention_html()
125     member_name = update.chat_member.new_chat_member.user.mention_html()
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 def main() -> None:
140     """Start the bot."""
141     # Create the Application and pass it your bot's token.
142     application = Application.builder().token("TOKEN").build()
143
144     # Keep track of which chats the bot is in
145     application.add_handler(ChatMemberHandler(track_chats, ChatMemberHandler.MY_CHAT_
146 ↪ MEMBER))
147     application.add_handler(CommandHandler("show_chats", show_chats))
148
149     # Handle members joining/leaving chats.
150     application.add_handler(ChatMemberHandler(greet_chat_members, ChatMemberHandler.
151 ↪ CHAT_MEMBER))
152
153     # Run the bot until the user presses Ctrl-C
154     # We pass 'allowed_updates' handle *all* updates including `chat_member` updates
155     # To reset this, simply pass `allowed_updates=[]`
156     application.run_polling(allowed_updates=Update.ALL_TYPES)
157
158 if __name__ == "__main__":
159     main()

```

### contexttypesbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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

```

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```

13 import logging
14 from collections import defaultdict
15 from typing import DefaultDict, Optional, Set
16
17 from telegram import __version__ as TG_VER
18
19 try:
20     from telegram import __version_info__
21 except ImportError:
22     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
23
24 if __version_info__ < (20, 0, 0, "alpha", 1):
25     raise RuntimeError(
26         f"This example is not compatible with your current PTB version {TG_VER}. To
↪ view the "
27         f"{TG_VER} version of this example, "
28         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
29     )
30 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
31 from telegram.constants import ParseMode
32 from telegram.ext import (
33     Application,
34     CallbackContext,
35     CallbackQueryHandler,
36     CommandHandler,
37     ContextTypes,
38     ExtBot,
39     TypeHandler,
40 )
41
42 # Enable logging
43 logging.basicConfig(
44     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
45 )
46 logger = logging.getLogger(__name__)
47
48
49 class ChatData:
50     """Custom class for chat_data. Here we store data per message."""
51
52     def __init__(self) -> None:
53         self.clicks_per_message: DefaultDict[int, int] = defaultdict(int)
54
55
56 # The [ExtBot, dict, ChatData, dict] is for type checkers like mypy
57 class CustomContext(CallbackContext[ExtBot, dict, ChatData, dict]):
58     """Custom class for context."""
59
60     def __init__(self, application: Application, chat_id: int = None, user_id: int =
↪ None):
61         super().__init__(application=application, chat_id=chat_id, user_id=user_id)
62         self.message_id: Optional[int] = None
63
64     @property
65     def bot_user_ids(self) -> Set[int]:
66         """Custom shortcut to access a value stored in the bot_data dict"""

```

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```

67         return self.bot_data.setdefault("user_ids", set())
68
69     @property
70     def message_clicks(self) -> Optional[int]:
71         """Access the number of clicks for the message this context object was built
72         ↪ for."""
73         if self._message_id:
74             return self.chat_data.clicks_per_message[self._message_id]
75         return None
76
77     @message_clicks.setter
78     def message_clicks(self, value: int) -> None:
79         """Allow to change the count"""
80         if not self._message_id:
81             raise RuntimeError("There is no message associated with this context
82             ↪ object.")
83         self.chat_data.clicks_per_message[self._message_id] = value
84
85     @classmethod
86     def from_update(cls, update: object, application: "Application") -> "CustomContext
87     ↪ ":
88         """Override from_update to set _message_id."""
89         # Make sure to call super()
90         context = super().from_update(update, application)
91
92         if context.chat_data and isinstance(update, Update) and update.effective_
93         ↪ message:
94             # pylint: disable=protected-access
95             context._message_id = update.effective_message.message_id
96
97             # Remember to return the object
98             return context
99
100     async def start(update: Update, context: CustomContext) -> None:
101         """Display a message with a button."""
102         await update.message.reply_html(
103             "This button was clicked <i>0</i> times.",
104             reply_markup=InlineKeyboardMarkup.from_button(
105                 InlineKeyboardButton(text="Click me!", callback_data="button")
106             ),
107         )
108
109     async def count_click(update: Update, context: CustomContext) -> None:
110         """Update the click count for the message."""
111         context.message_clicks += 1
112         await update.callback_query.answer()
113         await update.effective_message.edit_text(
114             f"This button was clicked <i>{context.message_clicks}</i> times.",
115             reply_markup=InlineKeyboardMarkup.from_button(
116                 InlineKeyboardButton(text="Click me!", callback_data="button")
117             ),
118             parse_mode=ParseMode.HTML,
119         )

```

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```

119 async def print_users(update: Update, context: CustomContext) -> None:
120     """Show which users have been using this bot."""
121     await update.message.reply_text(
122         "The following user IDs have used this bot: "
123         f'{"", ".join(map(str, context.bot_user_ids))}'
124     )
125
126
127 async def track_users(update: Update, context: CustomContext) -> None:
128     """Store the user id of the incoming update, if any."""
129     if update.effective_user:
130         context.bot_user_ids.add(update.effective_user.id)
131
132
133 def main() -> None:
134     """Run the bot."""
135     context_types = ContextTypes(context=CustomContext, chat_data=ChatData)
136     application = Application.builder().token("TOKEN").context_types(context_types).
137     ↪ build()
138
139     # run track_users in its own group to not interfere with the user handlers
140     application.add_handler(TypeHandler(Update, track_users), group=-1)
141     application.add_handler(CommandHandler("start", start))
142     application.add_handler(CallbackQueryHandler(count_click))
143     application.add_handler(CommandHandler("print_users", print_users))
144
145     application.run_polling()
146
147 if __name__ == "__main__":
148     main()
149 
```

**conversationbot.py**

```

1 #!/usr/bin/env python
2 # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
20 
```

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```

21 try:
22     from telegram import __version_info__
23 except ImportError:
24     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
25
26 if __version_info__ < (20, 0, 0, "alpha", 5):
27     raise RuntimeError(
28         f"This example is not compatible with your current PTB version {TG_VER}. To
↪view the "
29         f"{TG_VER} version of this example, "
30         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
31     )
32 from telegram import ReplyKeyboardMarkup, ReplyKeyboardRemove, Update
33 from telegram.ext import (
34     Application,
35     CommandHandler,
36     ContextTypes,
37     ConversationHandler,
38     MessageHandler,
39     filters,
40 )
41
42 # Enable logging
43 logging.basicConfig(
44     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
45 )
46 logger = logging.getLogger(__name__)
47
48 GENDER, PHOTO, LOCATION, BIO = range(4)
49
50
51 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
52     """Starts the conversation and asks the user about their gender."""
53     reply_keyboard = [["Boy", "Girl", "Other"]]
54
55     await update.message.reply_text(
56         "Hi! My name is Professor Bot. I will hold a conversation with you. "
57         "Send /cancel to stop talking to me.\n\n"
58         "Are you a boy or a girl?",
59         reply_markup=ReplyKeyboardMarkup(
60             reply_keyboard, one_time_keyboard=True, input_field_placeholder="Boy or
↪Girl?"
61         ),
62     )
63
64     return GENDER
65
66
67 async def gender(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
68     """Stores the selected gender and asks for a photo."""
69     user = update.message.from_user
70     logger.info("Gender of %s: %s", user.first_name, update.message.text)
71     await update.message.reply_text(
72         "I see! Please send me a photo of yourself, "
73         "so I know what you look like, or send /skip if you don't want to.",
74         reply_markup=ReplyKeyboardRemove(),

```

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```

75     )
76
77     return PHOTO
78
79
80 async def photo(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
81     """Stores the photo and asks for a location."""
82     user = update.message.from_user
83     photo_file = await update.message.photo[-1].get_file()
84     await photo_file.download_to_memory("user_photo.jpg")
85     logger.info("Photo of %s: %s", user.first_name, "user_photo.jpg")
86     await update.message.reply_text(
87         "Gorgeous! Now, send me your location please, or send /skip if you don't want_
↪to."
88     )
89
90     return LOCATION
91
92
93 async def skip_photo(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
94     """Skips the photo and asks for a location."""
95     user = update.message.from_user
96     logger.info("User %s did not send a photo.", user.first_name)
97     await update.message.reply_text(
98         "I bet you look great! Now, send me your location please, or send /skip."
99     )
100
101     return LOCATION
102
103
104 async def location(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
105     """Stores the location and asks for some info about the user."""
106     user = update.message.from_user
107     user_location = update.message.location
108     logger.info(
109         "Location of %s: %f / %f", user.first_name, user_location.latitude, user_
↪location.longitude
110     )
111     await update.message.reply_text(
112         "Maybe I can visit you sometime! At last, tell me something about yourself."
113     )
114
115     return BIO
116
117
118 async def skip_location(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
119     """Skips the location and asks for info about the user."""
120     user = update.message.from_user
121     logger.info("User %s did not send a location.", user.first_name)
122     await update.message.reply_text(
123         "You seem a bit paranoid! At last, tell me something about yourself."
124     )
125
126     return BIO
127
128

```

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```

129 async def bio(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
130     """Stores the info about the user and ends the conversation."""
131     user = update.message.from_user
132     logger.info("Bio of %s: %s", user.first_name, update.message.text)
133     await update.message.reply_text("Thank you! I hope we can talk again some day.")
134
135     return ConversationHandler.END
136
137
138 async def cancel(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
139     """Cancels and ends the conversation."""
140     user = update.message.from_user
141     logger.info("User %s canceled the conversation.", user.first_name)
142     await update.message.reply_text(
143         "Bye! I hope we can talk again some day.", reply_markup=ReplyKeyboardRemove()
144     )
145
146     return ConversationHandler.END
147
148
149 def main() -> None:
150     """Run the bot."""
151     # Create the Application and pass it your bot's token.
152     application = Application.builder().token("TOKEN").build()
153
154     # Add conversation handler with the states GENDER, PHOTO, LOCATION and BIO
155     conv_handler = ConversationHandler(
156         entry_points=[CommandHandler("start", start)],
157         states={
158             GENDER: [MessageHandler(filters.Regex("^(Boy|Girl|Other)$"), gender)],
159             PHOTO: [MessageHandler(filters.PHOTO, photo), CommandHandler("skip", skip_
160 ↪photo)],
161             LOCATION: [
162                 MessageHandler(filters.LOCATION, location),
163                 CommandHandler("skip", skip_location),
164             ],
165             BIO: [MessageHandler(filters.TEXT & ~filters.COMMAND, bio)],
166         },
167         fallbacks=[CommandHandler("cancel", cancel)],
168     )
169
170     application.add_handler(conv_handler)
171
172     # Run the bot until the user presses Ctrl-C
173     application.run_polling()
174
175 if __name__ == "__main__":
176     main()

```

## State Diagram

### conversationbot2.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
21
22 try:
23     from telegram import __version_info__
24 except ImportError:
25     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
26
27 if __version_info__ < (20, 0, 0, "alpha", 1):
28     raise RuntimeError(
29         f"This example is not compatible with your current PTB version {TG_VER}. To
30 ↪view the "
31         f"{TG_VER} version of this example, "
32         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
33     )
34 from telegram import ReplyKeyboardMarkup, ReplyKeyboardRemove, Update
35 from telegram.ext import (
36     Application,
37     CommandHandler,
38     ContextTypes,
39     ConversationHandler,
40     MessageHandler,
41     filters,
42 )
43
44 # Enable logging
45 logging.basicConfig(
46     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
47 )
48 logger = logging.getLogger(__name__)
49
50 CHOOSING, TYPING_REPLY, TYPING_CHOICE = range(3)
51
52 reply_keyboard = [
53     ["Age", "Favourite colour"],

```

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```

53     ["Number of siblings", "Something else..."],
54     ["Done"],
55 ]
56 markup = ReplyKeyboardMarkup(reply_keyboard, one_time_keyboard=True)
57
58
59 def facts_to_str(user_data: Dict[str, str]) -> str:
60     """Helper function for formatting the gathered user info."""
61     facts = [f"{key} - {value}" for key, value in user_data.items()]
62     return "\n".join(facts).join(["\n", "\n"])
63
64
65 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
66     """Start the conversation and ask user for input."""
67     await update.message.reply_text(
68         "Hi! My name is Doctor Botter. I will hold a more complex conversation with
↪you. "
69         "Why don't you tell me something about yourself?",
70         reply_markup=markup,
71     )
72
73     return CHOOSING
74
75
76 async def regular_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
77     """Ask the user for info about the selected predefined choice."""
78     text = update.message.text
79     context.user_data["choice"] = text
80     await update.message.reply_text(f"Your {text.lower()}? Yes, I would love to hear
↪about that!")
81
82     return TYPING_REPLY
83
84
85 async def custom_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
86     """Ask the user for a description of a custom category."""
87     await update.message.reply_text(
88         'Alright, please send me the category first, for example "Most impressive
↪skill"'
89     )
90
91     return TYPING_CHOICE
92
93
94 async def received_information(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
↪int:
95     """Store info provided by user and ask for the next category."""
96     user_data = context.user_data
97     text = update.message.text
98     category = user_data["choice"]
99     user_data[category] = text
100     del user_data["choice"]
101
102     await update.message.reply_text(
103         "Neat! Just so you know, this is what you already told me:"
104         f"{facts_to_str(user_data)}You can tell me more, or change your opinion"

```

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```

105         " on something.",
106         reply_markup=markup,
107     )
108
109     return CHOOSING
110
111
112 async def done(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
113     """Display the gathered info and end the conversation."""
114     user_data = context.user_data
115     if "choice" in user_data:
116         del user_data["choice"]
117
118     await update.message.reply_text(
119         f"I learned these facts about you: {facts_to_str(user_data)}Until next time!",
120         reply_markup=ReplyKeyboardRemove(),
121     )
122
123     user_data.clear()
124     return ConversationHandler.END
125
126
127 def main() -> None:
128     """Run the bot."""
129     # Create the Application and pass it your bot's token.
130     application = Application.builder().token("TOKEN").build()
131
132     # Add conversation handler with the states CHOOSING, TYPING_CHOICE and TYPING_
133     ↪REPLY
134     conv_handler = ConversationHandler(
135         entry_points=[CommandHandler("start", start)],
136         states={
137             CHOOSING: [
138                 MessageHandler(
139                     filters.Regex("^Age|Favourite colour|Number of siblings)$"), ↪
140                 ↪regular_choice
141             ),
142             MessageHandler(filters.Regex("^Something else...$"), custom_choice),
143             ],
144             TYPING_CHOICE: [
145                 MessageHandler(
146                     filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")), ↪
147                 ↪regular_choice
148             ),
149             ],
150             TYPING_REPLY: [
151                 MessageHandler(
152                     filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")),
153                     received_information,
154                 )
155             ],
156             },
157             fallbacks=[MessageHandler(filters.Regex("^Done$"), done)],
158         )
159
160     application.add_handler(conv_handler)

```

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```

158
159     # Run the bot until the user presses Ctrl-C
160     application.run_polling()
161
162
163 if __name__ == "__main__":
164     main()

```

## State Diagram

### customwebhookbot.py

```

1  #!/usr/bin/env python
2  # This program is dedicated to the public domain under the CC0 license.
3  # pylint: disable=import-error,wrong-import-position
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~=0.17.0`.
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 at the start of the `main` function.
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
27 import uvicorn
28 from starlette.applications import Starlette
29 from starlette.requests import Request
30 from starlette.responses import PlainTextResponse, Response
31 from starlette.routing import Route
32
33
34 from telegram import __version__ as TG_VER
35
36
37 try:
38     from telegram import __version_info__
39 except ImportError:
40     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
41
42
43 if __version_info__ < (20, 0, 0, "alpha", 1):
44     raise RuntimeError(
45         f"This example is not compatible with your current PTB version {TG_VER}. To
46 ↪view the "
47         f"{TG_VER} version of this example, "

```

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```

39         f"visit https://docs.python-telegram-bot.org/en/v{TG_VER}/examples.html"
40     )
41
42     from telegram import Update
43     from telegram.constants import ParseMode
44     from telegram.ext import (
45         Application,
46         CallbackContext,
47         CommandHandler,
48         ContextTypes,
49         ExtBot,
50         TypeHandler,
51     )
52
53     # Enable logging
54     logging.basicConfig(
55         format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
56     )
57     logger = logging.getLogger(__name__)
58
59
60     @dataclass
61     class WebhookUpdate:
62         """Simple dataclass to wrap a custom update type"""
63
64         user_id: int
65         payload: str
66
67
68     class CustomContext(CallbackContext[ExtBot, dict, dict, dict]):
69         """
70         Custom CallbackContext class that makes `user_data` available for updates of type
71         `WebhookUpdate`.
72         """
73
74         @classmethod
75         def from_update(
76             cls,
77             update: object,
78             application: "Application",
79         ) -> "CustomContext":
80             if isinstance(update, WebhookUpdate):
81                 return cls(application=application, user_id=update.user_id)
82             return super().from_update(update, application)
83
84
85     async def start(update: Update, context: CustomContext) -> None:
86         """Display a message with instructions on how to use this bot."""
87         url = context.bot_data["url"]
88         payload_url = html.escape(f"{url}/submitpayload?user_id=<your user id>&payload=
89         ↪<payload>")
89         text = (
90             f"To check if the bot is still running, call <code>{url}/healthcheck</code>.\n
91             ↪\n"
92             f"To post a custom update, call <code>{payload_url}</code>."
93         )

```

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```

93     await update.message.reply_html(text=text)
94
95
96 async def webhook_update(update: WebhookUpdate, context: CustomContext) -> None:
97     """Callback that handles the custom updates."""
98     chat_member = await context.bot.get_chat_member(chat_id=update.user_id, user_
↪ id=update.user_id)
99     payloads = context.user_data.setdefault("payloads", [])
100     payloads.append(update.payload)
101     combined_payloads = "</code>\n• <code>".join(payloads)
102     text = (
103         f"The user {chat_member.user.mention_html()} has sent a new payload. "
104         f"So far they have sent the following payloads: \n\n• <code>{combined_
↪ payloads}</code>"
105     )
106     await context.bot.send_message(
107         chat_id=context.bot_data["admin_chat_id"], text=text, parse_mode=ParseMode.
↪ HTML
108     )
109
110
111 async def main() -> None:
112     """Set up the application and a custom webserver."""
113     url = "https://domain.tld"
114     admin_chat_id = 123456
115     port = 8000
116
117     context_types = ContextTypes(context=CustomContext)
118     # Here we set updater to None because we want our custom webhook server to handle_
↪ the updates
119     # and hence we don't need an Updater instance
120     application = (
121         Application.builder().token("TOKEN").updater(None).context_types(context_
↪ types).build()
122     )
123     # save the values in `bot_data` such that we may easily access them in the_
↪ callbacks
124     application.bot_data["url"] = url
125     application.bot_data["admin_chat_id"] = admin_chat_id
126
127     # register handlers
128     application.add_handler(CommandHandler("start", start))
129     application.add_handler(TypeHandler(type=WebhookUpdate, callback=webhook_update))
130
131     # Pass webhook settings to telegram
132     await application.bot.set_webhook(url=f"{url}/telegram")
133
134     # Set up webserver
135     async def telegram(request: Request) -> Response:
136         """Handle incoming Telegram updates by putting them into the `update_queue`"""
137         await application.update_queue.put(
138             Update.de_json(data=await request.json(), bot=application.bot)
139         )
140         return Response()
141
142     async def custom_updates(request: Request) -> PlainTextResponse:

```

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```

143     """
144     Handle incoming webhook updates by also putting them into the `update_queue`
145     if the required parameters were passed correctly.
146     """
147     try:
148         user_id = int(request.query_params["user_id"])
149         payload = request.query_params["payload"]
150     except KeyError:
151         return PlainTextResponse(
152             status_code=HTTPStatus.BAD_REQUEST,
153             content="Please pass both `user_id` and `payload` as query parameters.
154         ",
155     )
156     except ValueError:
157         return PlainTextResponse(
158             status_code=HTTPStatus.BAD_REQUEST,
159             content="The `user_id` must be a string!",
160         )
161     await application.update_queue.put(WebhookUpdate(user_id=user_id,
162     payload=payload))
163     return PlainTextResponse("Thank you for the submission! It's being forwarded.
164     ")
165
166     async def health(_: Request) -> PlainTextResponse:
167         """For the health endpoint, reply with a simple plain text message."""
168         return PlainTextResponse(content="The bot is still running fine :)")
169
170     starlette_app = Starlette(
171         routes=[
172             Route("/telegram", telegram, methods=["POST"]),
173             Route("/healthcheck", health, methods=["GET"]),
174             Route("/submitpayload", custom_updates, methods=["POST", "GET"]),
175         ]
176     )
177     webserver = uvicorn.Server(
178         config=uvicorn.Config(
179             app=starlette_app,
180             port=port,
181             use_colors=False,
182             host="127.0.0.1",
183         )
184     )
185
186     # Run application and webserver together
187     async with application:
188         await application.start()
189         await webserver.serve()
190         await application.stop()
191
192     if __name__ == "__main__":
193         asyncio.run(main())

```

**deeplinking.py**

```
1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
24
25 try:
26     from telegram import __version_info__
27 except ImportError:
28     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
29
30 if __version_info__ < (20, 0, 0, "alpha", 1):
31     raise RuntimeError(
32         f"This example is not compatible with your current PTB version {TG_VER}. To
33         ↪view the "
34         f"{TG_VER} version of this example, "
35         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
36     )
37 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update, helpers
38 from telegram.constants import ParseMode
39 from telegram.ext import Application, CallbackQueryHandler, CommandHandler, ↪
40     ↪ContextTypes, filters
41
42 # Enable logging
43 logging.basicConfig(
44     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
45 )
46
47 logger = logging.getLogger(__name__)
48
49 # Define constants that will allow us to reuse the deep-linking parameters.
50 CHECK_THIS_OUT = "check-this-out"
51 USING_ENTITIES = "using-entities-here"
52 USING_KEYBOARD = "using-keyboard-here"
53 SO_COOL = "so-cool"
54
55 # Callback data to pass in 3rd level deep-linking
```

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```

54 KEYBOARD_CALLBACKDATA = "keyboard-callback-data"
55
56
57 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
58     """Send a deep-linked URL when the command /start is issued."""
59     bot = context.bot
60     url = helpers.create_deep_linked_url(bot.username, CHECK_THIS_OUT, group=True)
61     text = "Feel free to tell your friends about it:\n\n" + url
62     await update.message.reply_text(text)
63
64
65 async def deep_linked_level_1(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
66     None:
67     """Reached through the CHECK_THIS_OUT payload"""
68     bot = context.bot
69     url = helpers.create_deep_linked_url(bot.username, SO_COOL)
70     text = (
71         "Awesome, you just accessed hidden functionality! "
72         "Now let's get back to the private chat."
73     )
74     keyboard = InlineKeyboardMarkup.from_button(
75         InlineKeyboardButton(text="Continue here!", url=url)
76     )
77     await update.message.reply_text(text, reply_markup=keyboard)
78
79 async def deep_linked_level_2(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
80     None:
81     """Reached through the SO_COOL payload"""
82     bot = context.bot
83     url = helpers.create_deep_linked_url(bot.username, USING_ENTITIES)
84     text = f'You can also mask the deep-linked URLs as links: <a href="{url}"> CLICK
85     HERE</a>.'
86     await update.message.reply_text(text, parse_mode=ParseMode.HTML, disable_web_page_
87     preview=True)
88
89 async def deep_linked_level_3(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
90     None:
91     """Reached through the USING_ENTITIES payload"""
92     await update.message.reply_text(
93         "It is also possible to make deep-linking using InlineKeyboardButtons.",
94         reply_markup=InlineKeyboardMarkup(
95             [[InlineKeyboardButton(text="Like this!", callback_data=KEYBOARD_
96             CALLBACKDATA)]]
97         ),
98     )
99
100 async def deep_link_level_3_callback(update: Update, context: ContextTypes.DEFAULT_
101     TYPE) -> None:
102     """Answers CallbackQuery with deeplinking url."""
103     bot = context.bot
104     url = helpers.create_deep_linked_url(bot.username, USING_KEYBOARD)
105     await update.callback_query.answer(url=url)

```

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```

103
104 async def deep_linked_level_4(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
105     """Reached through the USING_KEYBOARD payload"""
106     payload = context.args
107     await update.message.reply_text(
108         f"Congratulations! This is as deep as it gets \n\nThe payload was: {payload}"
109     )
110
111
112 def main() -> None:
113     """Start the bot."""
114     # Create the Application and pass it your bot's token.
115     application = Application.builder().token("TOKEN").build()
116
117     # More info on what deep linking actually is (read this first if it's unclear to
118     you):
119     # https://core.telegram.org/bots/features#deep-linking
120
121     # Register a deep-linking handler
122     application.add_handler(
123         CommandHandler("start", deep_linked_level_1, filters.Regex(CHECK_THIS_OUT))
124     )
125
126     # This one works with a textual link instead of an URL
127     application.add_handler(CommandHandler("start", deep_linked_level_2, filters.
128         Regex(SO_COOL)))
129
130     # We can also pass on the deep-linking payload
131     application.add_handler(
132         CommandHandler("start", deep_linked_level_3, filters.Regex(USING_ENTITIES))
133     )
134
135     # Possible with inline keyboard buttons as well
136     application.add_handler(
137         CommandHandler("start", deep_linked_level_4, filters.Regex(USING_KEYBOARD))
138     )
139
140     # register callback handler for inline keyboard button
141     application.add_handler(
142         CallbackQueryHandler(deep_link_level_3_callback, pattern=KEYBOARD_
143         CALLBACKDATA)
144     )
145
146     # Make sure the deep-linking handlers occur *before* the normal /start handler.
147     application.add_handler(CommandHandler("start", start))
148
149     # Run the bot until the user presses Ctrl-C
150     application.run_polling()
151
152 if __name__ == "__main__":
153     main()

```

## echobot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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.
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 __version__ as TG_VER
21
22 try:
23     from telegram import __version_info__
24 except ImportError:
25     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
26
27 if __version_info__ < (20, 0, 0, "alpha", 1):
28     raise RuntimeError(
29         f"This example is not compatible with your current PTB version {TG_VER}. To
↵view the "
30         f"{TG_VER} version of this example, "
31         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
32     )
33 from telegram import ForceReply, Update
34 from telegram.ext import Application, CommandHandler, ContextTypes, MessageHandler, ↵
↵filters
35
36 # Enable logging
37 logging.basicConfig(
38     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
39 )
40 logger = logging.getLogger(__name__)
41
42
43 # Define a few command handlers. These usually take the two arguments update and
44 # context.
45 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
46     """Send a message when the command /start is issued."""
47     user = update.effective_user
48     await update.message.reply_html(
49         rf"Hi {user.mention_html()}!",
50         reply_markup=ForceReply(selective=True),
51     )
52
53

```

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```

54 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
55     """Send a message when the command /help is issued."""
56     await update.message.reply_text("Help!")
57
58
59 async def echo(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
60     """Echo the user message."""
61     await update.message.reply_text(update.message.text)
62
63
64 def main() -> None:
65     """Start the bot."""
66     # Create the Application and pass it your bot's token.
67     application = Application.builder().token("TOKEN").build()
68
69     # on different commands - answer in Telegram
70     application.add_handler(CommandHandler("start", start))
71     application.add_handler(CommandHandler("help", help_command))
72
73     # on non command i.e message - echo the message on Telegram
74     application.add_handler(MessageHandler(filters.TEXT & ~filters.COMMAND, echo))
75
76     # Run the bot until the user presses Ctrl-C
77     application.run_polling()
78
79
80 if __name__ == "__main__":
81     main()

```

### errorhandlerbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
12
13  try:
14      from telegram import __version_info__
15  except ImportError:
16      __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
17
18  if __version_info__ < (20, 0, 0, "alpha", 1):
19      raise RuntimeError(
20          f"This example is not compatible with your current PTB version {TG_VER}. To 
21          ↪view the "
22          f"{TG_VER} version of this example, "
23          f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
24          )

```

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```

24 from telegram import Update
25 from telegram.constants import ParseMode
26 from telegram.ext import Application, CommandHandler, ContextTypes
27
28 # Enable logging
29 logging.basicConfig(
30     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
31 )
32 logger = logging.getLogger(__name__)
33
34 # This can be your own ID, or one for a developer group/channel.
35 # You can use the /start command of this bot to see your chat id.
36 DEVELOPER_CHAT_ID = 123456789
37
38
39 async def error_handler(update: object, context: ContextTypes.DEFAULT_TYPE) -> None:
40     """Log the error and send a telegram message to notify the developer."""
41     # Log the error before we do anything else, so we can see it even if something
42     ↪ breaks.
43     logger.error(msg="Exception while handling an update:", exc_info=context.error)
44
45     # traceback.format_exception returns the usual python message about an exception,
46     ↪ but as a
47     # list of strings rather than a single string, so we have to join them together.
48     tb_list = traceback.format_exception(None, context.error, context.error.__
49     ↪ traceback__)
50     tb_string = "".join(tb_list)
51
52     # Build the message with some markup and additional information about what
53     ↪ happened.
54     # You might need to add some logic to deal with messages longer than the 4096
55     ↪ character limit.
56     update_str = update.to_dict() if isinstance(update, Update) else str(update)
57     message = (
58         f"An exception was raised while handling an update\n"
59         f"<pre>update = {html.escape(json.dumps(update_str, indent=2, ensure_
60     ↪ ascii=False))}\n"
61         f"</pre>\n\n"
62         f"<pre>context.chat_data = {html.escape(str(context.chat_data))}</pre>\n\n"
63         f"<pre>context.user_data = {html.escape(str(context.user_data))}</pre>\n\n"
64         f"<pre>{html.escape(tb_string)}</pre>"
65     )
66
67     # Finally, send the message
68     await context.bot.send_message(
69         chat_id=DEVELOPER_CHAT_ID, text=message, parse_mode=ParseMode.HTML
70     )
71
72
73 async def bad_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
74     """Raise an error to trigger the error handler."""
75     await context.bot.wrong_method_name() # type: ignore[attr-defined]
76
77
78 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
79     """Displays info on how to trigger an error."""

```

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```

74     await update.effective_message.reply_html(
75         "Use /bad_command to cause an error.\n"
76         f"Your chat id is <code>{update.effective_chat.id}</code>."
77     )
78
79
80 def main() -> None:
81     """Run the bot."""
82     # Create the Application and pass it your bot's token.
83     application = Application.builder().token("TOKEN").build()
84
85     # Register the commands...
86     application.add_handler(CommandHandler("start", start))
87     application.add_handler(CommandHandler("bad_command", bad_command))
88
89     # ...and the error handler
90     application.add_error_handler(error_handler)
91
92     # Run the bot until the user presses Ctrl-C
93     application.run_polling()
94
95
96 if __name__ == "__main__":
97     main()

```

### inlinebot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
22
23 try:
24     from telegram import __version_info__
25 except ImportError:
26     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
27
28 if __version_info__ < (20, 0, 0, "alpha", 1):

```

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```

29     raise RuntimeError(
30         f"This example is not compatible with your current PTB version {TG_VER}. To
↪view the "
31         f"{TG_VER} version of this example, "
32         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
33     )
34 from telegram import InlineQueryResultArticle, InputTextMessageContent, Update
35 from telegram.constants import ParseMode
36 from telegram.ext import Application, CommandHandler, ContextTypes, InlineQueryHandler
37
38 # Enable logging
39 logging.basicConfig(
40     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
41 )
42 logger = logging.getLogger(__name__)
43
44
45 # Define a few command handlers. These usually take the two arguments update and
46 # context.
47 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
48     """Send a message when the command /start is issued."""
49     await update.message.reply_text("Hi!")
50
51
52 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
53     """Send a message when the command /help is issued."""
54     await update.message.reply_text("Help!")
55
56
57 async def inline_query(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
58     """Handle the inline query. This is run when you type: @botusername <query>"""
59     query = update.inline_query.query
60
61     if query == "":
62         return
63
64     results = [
65         InlineQueryResultArticle(
66             id=str(uuid4()),
67             title="Caps",
68             input_message_content=InputTextMessageContent(query.upper()),
69         ),
70         InlineQueryResultArticle(
71             id=str(uuid4()),
72             title="Bold",
73             input_message_content=InputTextMessageContent(
74                 f"<b>{escape(query)}</b>", parse_mode=ParseMode.HTML
75             ),
76         ),
77         InlineQueryResultArticle(
78             id=str(uuid4()),
79             title="Italic",
80             input_message_content=InputTextMessageContent(
81                 f"<i>{escape(query)}</i>", parse_mode=ParseMode.HTML
82             ),
83         ),

```

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```

84 ]
85
86 await update.inline_query.answer(results)
87
88
89 def main() -> None:
90     """Run the bot."""
91     # Create the Application and pass it your bot's token.
92     application = Application.builder().token("TOKEN").build()
93
94     # on different commands - answer in Telegram
95     application.add_handler(CommandHandler("start", start))
96     application.add_handler(CommandHandler("help", help_command))
97
98     # on non command i.e message - echo the message on Telegram
99     application.add_handler(InlineQueryHandler(inline_query))
100
101     # Run the bot until the user presses Ctrl-C
102     application.run_polling()
103
104
105 if __name__ == "__main__":
106     main()

```

### inlinekeyboard.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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
13
14 from telegram import __version__ as TG_VER
15
16 try:
17     from telegram import __version_info__
18 except ImportError:
19     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
20
21 if __version_info__ < (20, 0, 0, "alpha", 1):
22     raise RuntimeError(
23         f"This example is not compatible with your current PTB version {TG_VER}. To ↪
24         ↪ view the "
25         f"{TG_VER} version of this example, "
26         f"visit https://docs.python-telegram-bot.org/en/v{TG_VER}/examples.html"
27     )
28
29 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
30 from telegram.ext import Application, CallbackQueryHandler, CommandHandler, ↪
31 ↪ ContextTypes

```

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```

26
27 # Enable logging
28 logging.basicConfig(
29     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
30 )
31 logger = logging.getLogger(__name__)
32
33
34 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
35     """Sends a message with three inline buttons attached."""
36     keyboard = [
37         [
38             InlineKeyboardButton("Option 1", callback_data="1"),
39             InlineKeyboardButton("Option 2", callback_data="2"),
40         ],
41         [InlineKeyboardButton("Option 3", callback_data="3")],
42     ]
43
44     reply_markup = InlineKeyboardMarkup(keyboard)
45
46     await update.message.reply_text("Please choose:", reply_markup=reply_markup)
47
48
49 async def button(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
50     """Parses the CallbackQuery and updates the message text."""
51     query = update.callback_query
52
53     # CallbackQueries need to be answered, even if no notification to the user is
54     ↪needed
55     # Some clients may have trouble otherwise. See https://core.telegram.org/bots/api
56     ↪#callbackquery
57     await query.answer()
58
59     await query.edit_message_text(text=f"Selected option: {query.data}")
60
61
62 async def help_command(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
63     """Displays info on how to use the bot."""
64     await update.message.reply_text("Use /start to test this bot.")
65
66
67 def main() -> None:
68     """Run the bot."""
69     # Create the Application and pass it your bot's token.
70     application = Application.builder().token("TOKEN").build()
71
72     application.add_handler(CommandHandler("start", start))
73     application.add_handler(CallbackQueryHandler(button))
74     application.add_handler(CommandHandler("help", help_command))
75
76     # Run the bot until the user presses Ctrl-C
77     application.run_polling()
78
79 if __name__ == "__main__":
80     main()

```

## inlinekeyboard2.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
22
23 try:
24     from telegram import __version_info__
25 except ImportError:
26     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
27
28 if __version_info__ < (20, 0, 0, "alpha", 1):
29     raise RuntimeError(
30         f"This example is not compatible with your current PTB version {TG_VER}. To ↪
31         ↪ view the "
32         f"{TG_VER} version of this example, "
33         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
34     )
35 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
36 from telegram.ext import (
37     Application,
38     CallbackQueryHandler,
39     CommandHandler,
40     ContextTypes,
41     ConversationHandler,
42 )
43
44 # Enable logging
45 logging.basicConfig(
46     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
47 )
48 logger = logging.getLogger(__name__)
49
50 # Stages
51 START_ROUTES, END_ROUTES = range(2)
52 # Callback data
53 ONE, TWO, THREE, FOUR = range(4)

```

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```

53 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
54     """Send message on `/start`."""
55     # Get user that sent /start and log his name
56     user = update.message.from_user
57     logger.info("User %s started the conversation.", user.first_name)
58     # Build InlineKeyboard where each button has a displayed text
59     # and a string as callback_data
60     # The keyboard is a list of button rows, where each row is in turn
61     # a list (hence `[...]`).
62     keyboard = [
63         [
64             InlineKeyboardButton("1", callback_data=str(ONE)),
65             InlineKeyboardButton("2", callback_data=str(TWO)),
66         ]
67     ]
68     reply_markup = InlineKeyboardMarkup(keyboard)
69     # Send message with text and appended InlineKeyboard
70     await update.message.reply_text("Start handler, Choose a route", reply_
↪ markup=reply_markup)
71     # Tell ConversationHandler that we're in state `FIRST` now
72     return START_ROUTES
73
74
75 async def start_over(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
76     """Prompt same text & keyboard as `start` does but not as new message"""
77     # Get CallbackQuery from Update
78     query = update.callback_query
79     # CallbackQueries need to be answered, even if no notification to the user is_
↪ needed
80     # Some clients may have trouble otherwise. See https://core.telegram.org/bots/api
↪ #callbackquery
81     await query.answer()
82     keyboard = [
83         [
84             InlineKeyboardButton("1", callback_data=str(ONE)),
85             InlineKeyboardButton("2", callback_data=str(TWO)),
86         ]
87     ]
88     reply_markup = InlineKeyboardMarkup(keyboard)
89     # Instead of sending a new message, edit the message that
90     # originated the CallbackQuery. This gives the feeling of an
91     # interactive menu.
92     await query.edit_message_text(text="Start handler, Choose a route", reply_
↪ markup=reply_markup)
93     return START_ROUTES
94
95
96 async def one(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
97     """Show new choice of buttons"""
98     query = update.callback_query
99     await query.answer()
100     keyboard = [
101         [
102             InlineKeyboardButton("3", callback_data=str(THREE)),
103             InlineKeyboardButton("4", callback_data=str(FOUR)),
104         ]

```

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```

105 ]
106 reply_markup = InlineKeyboardMarkup(keyboard)
107 await query.edit_message_text(
108     text="First CallbackQueryHandler, Choose a route", reply_markup=reply_markup
109 )
110 return START_ROUTES
111
112
113 async def two(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
114     """Show new choice of buttons"""
115     query = update.callback_query
116     await query.answer()
117     keyboard = [
118         [
119             InlineKeyboardButton("1", callback_data=str(ONE)),
120             InlineKeyboardButton("3", callback_data=str(THREE)),
121         ]
122     ]
123     reply_markup = InlineKeyboardMarkup(keyboard)
124     await query.edit_message_text(
125         text="Second CallbackQueryHandler, Choose a route", reply_markup=reply_markup
126     )
127     return START_ROUTES
128
129
130 async def three(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
131     """Show new choice of buttons. This is the end point of the conversation."""
132     query = update.callback_query
133     await query.answer()
134     keyboard = [
135         [
136             InlineKeyboardButton("Yes, let's do it again!", callback_data=str(ONE)),
137             InlineKeyboardButton("Nah, I've had enough ...", callback_data=str(TWO)),
138         ]
139     ]
140     reply_markup = InlineKeyboardMarkup(keyboard)
141     await query.edit_message_text(
142         text="Third CallbackQueryHandler. Do want to start over?", reply_markup=reply_
↪ markup
143     )
144     # Transfer to conversation state `SECOND`
145     return END_ROUTES
146
147
148 async def four(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
149     """Show new choice of buttons"""
150     query = update.callback_query
151     await query.answer()
152     keyboard = [
153         [
154             InlineKeyboardButton("2", callback_data=str(TWO)),
155             InlineKeyboardButton("3", callback_data=str(THREE)),
156         ]
157     ]
158     reply_markup = InlineKeyboardMarkup(keyboard)
159     await query.edit_message_text(

```

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```

160     text="Fourth CallbackQueryHandler, Choose a route", reply_markup=reply_markup
161 )
162 return START_ROUTES
163
164
165 async def end(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
166     """Returns `ConversationHandler.END`, which tells the
167     ConversationHandler that the conversation is over.
168     """
169     query = update.callback_query
170     await query.answer()
171     await query.edit_message_text(text="See you next time!")
172     return ConversationHandler.END
173
174
175 def main() -> None:
176     """Run the bot."""
177     # Create the Application and pass it your bot's token.
178     application = Application.builder().token("TOKEN").build()
179
180     # Setup conversation handler with the states FIRST and SECOND
181     # Use the pattern parameter to pass CallbackQueries with specific
182     # data pattern to the corresponding handlers.
183     # ^ means "start of line/string"
184     # $ means "end of line/string"
185     # So ^ABC$ will only allow 'ABC'
186     conv_handler = ConversationHandler(
187         entry_points=[CommandHandler("start", start)],
188         states={
189             START_ROUTES: [
190                 CallbackQueryHandler(one, pattern="^" + str(ONE) + "$"),
191                 CallbackQueryHandler(two, pattern="^" + str(TWO) + "$"),
192                 CallbackQueryHandler(three, pattern="^" + str(THREE) + "$"),
193                 CallbackQueryHandler(four, pattern="^" + str(FOUR) + "$"),
194             ],
195             END_ROUTES: [
196                 CallbackQueryHandler(start_over, pattern="^" + str(ONE) + "$"),
197                 CallbackQueryHandler(end, pattern="^" + str(TWO) + "$"),
198             ],
199         },
200         fallbacks=[CommandHandler("start", start)],
201     )
202
203     # Add ConversationHandler to application that will be used for handling updates
204     application.add_handler(conv_handler)
205
206     # Run the bot until the user presses Ctrl-C
207     application.run_polling()
208
209
210 if __name__ == "__main__":
211     main()

```

**nestedconversationbot.py**

```
1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
21
22 try:
23     from telegram import __version_info__
24 except ImportError:
25     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
26
27 if __version_info__ < (20, 0, 0, "alpha", 1):
28     raise RuntimeError(
29         f"This example is not compatible with your current PTB version {TG_VER}. To_
↵view the "
30         f"{TG_VER} version of this example, "
31         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
32     )
33 from telegram import InlineKeyboardButton, InlineKeyboardMarkup, Update
34 from telegram.ext import (
35     Application,
36     CallbackQueryHandler,
37     CommandHandler,
38     ContextTypes,
39     ConversationHandler,
40     MessageHandler,
41     filters,
42 )
43
44 # Enable logging
45 logging.basicConfig(
46     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
47 )
48 logger = logging.getLogger(__name__)
49
50 # State definitions for top level conversation
51 SELECTING_ACTION, ADDING_MEMBER, ADDING_SELF, DESCRIBING_SELF = map(chr, range(4))
52 # State definitions for second level conversation
53 SELECTING_LEVEL, SELECTING_GENDER = map(chr, range(4, 6))
54 # State definitions for descriptions conversation
```

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```

55 SELECTING_FEATURE, TYPING = map(chr, range(6, 8))
56 # Meta states
57 STOPPING, SHOWING = map(chr, range(8, 10))
58 # Shortcut for ConversationHandler.END
59 END = ConversationHandler.END
60
61 # Different constants for this example
62 (
63     PARENTS,
64     CHILDREN,
65     SELF,
66     GENDER,
67     MALE,
68     FEMALE,
69     AGE,
70     NAME,
71     START_OVER,
72     FEATURES,
73     CURRENT_FEATURE,
74     CURRENT_LEVEL,
75 ) = map(chr, range(10, 22))
76
77
78 # Helper
79 def _name_switcher(level: str) -> Tuple[str, str]:
80     if level == PARENTS:
81         return "Father", "Mother"
82     return "Brother", "Sister"
83
84
85 # Top level conversation callbacks
86 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
87     """Select an action: Adding parent/child or show data."""
88     text = (
89         "You may choose to add a family member, yourself, show the gathered data, or_
↪end the "
90         "conversation. To abort, simply type /stop."
91     )
92
93     buttons = [
94         [
95             InlineKeyboardButton(text="Add family member", callback_data=str(ADDING_
↪MEMBER)),
96             InlineKeyboardButton(text="Add yourself", callback_data=str(ADDING_SELF)),
97         ],
98         [
99             InlineKeyboardButton(text="Show data", callback_data=str(SHOWING)),
100             InlineKeyboardButton(text="Done", callback_data=str(END)),
101         ],
102     ]
103     keyboard = InlineKeyboardMarkup(buttons)
104
105     # If we're starting over we don't need to send a new message
106     if context.user_data.get(START_OVER):
107         await update.callback_query.answer()
108         await update.callback_query.edit_message_text(text=text, reply_

```

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```

↪ markup=keyboard)
    else:
        await update.message.reply_text(
            "Hi, I'm Family Bot and I'm here to help you gather information about_
↪ your family."
        )
        await update.message.reply_text(text=text, reply_markup=keyboard)

    context.user_data[START_OVER] = False
    return SELECTING_ACTION

118
119 async def adding_self(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
120     """Add information about yourself."""
121     context.user_data[CURRENT_LEVEL] = SELF
122     text = "Okay, please tell me about yourself."
123     button = InlineKeyboardButton(text="Add info", callback_data=str(MALE))
124     keyboard = InlineKeyboardMarkup.from_button(button)
125
126     await update.callback_query.answer()
127     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
128
129     return DESCRIBING_SELF
130
131
132 async def show_data(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
133     """Pretty print gathered data."""
134
135     def pretty_print(data: Dict[str, Any], level: str) -> str:
136         people = data.get(level)
137         if not people:
138             return "\nNo information yet."
139
140         return_str = ""
141         if level == SELF:
142             for person in data[level]:
143                 return_str += f"\nName: {person.get(NAME, '-')}, Age: {person.get(AGE,
↪ '-' )}"
144             else:
145                 male, female = _name_switcher(level)
146
147                 for person in data[level]:
148                     gender = female if person[GENDER] == FEMALE else male
149                     return_str += (
150                         f"\n{gender}: Name: {person.get(NAME, '-')}, Age: {person.get(AGE,
↪ '-' )}"
151                 )
152             return return_str
153
154     user_data = context.user_data
155     text = f"Youself: {pretty_print(user_data, SELF)}"
156     text += f"\n\nParents: {pretty_print(user_data, PARENTS)}"
157     text += f"\n\nChildren: {pretty_print(user_data, CHILDREN)}"
158
159     buttons = [[InlineKeyboardButton(text="Back", callback_data=str(END))]]
160     keyboard = InlineKeyboardMarkup(buttons)

```

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```

161     await update.callback_query.answer()
162     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
163     user_data[START_OVER] = True
164
165     return SHOWING
166
167
168
169 async def stop(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
170     """End Conversation by command."""
171     await update.message.reply_text("Okay, bye.")
172
173     return END
174
175
176 async def end(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
177     """End conversation from InlineKeyboardButton."""
178     await update.callback_query.answer()
179
180     text = "See you around!"
181     await update.callback_query.edit_message_text(text=text)
182
183     return END
184
185
186 # Second level conversation callbacks
187 async def select_level(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
188     """Choose to add a parent or a child."""
189     text = "You may add a parent or a child. Also you can show the gathered data or ↩go back."
190     buttons = [
191         [
192             InlineKeyboardButton(text="Add parent", callback_data=str(PARENTS)),
193             InlineKeyboardButton(text="Add child", callback_data=str(CHILDREN)),
194         ],
195         [
196             InlineKeyboardButton(text="Show data", callback_data=str(SHOWING)),
197             InlineKeyboardButton(text="Back", callback_data=str(END)),
198         ],
199     ]
200     keyboard = InlineKeyboardMarkup(buttons)
201
202     await update.callback_query.answer()
203     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
204
205     return SELECTING_LEVEL
206
207
208 async def select_gender(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
209     """Choose to add mother or father."""
210     level = update.callback_query.data
211     context.user_data[CURRENT_LEVEL] = level
212
213     text = "Please choose, whom to add."
214
215     male, female = _name_switcher(level)

```

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```

216
217     buttons = [
218         [
219             InlineKeyboardButton(text=f"Add {male}", callback_data=str(MALE)),
220             InlineKeyboardButton(text=f"Add {female}", callback_data=str(FEMALE)),
221         ],
222         [
223             InlineKeyboardButton(text="Show data", callback_data=str(SHOWING)),
224             InlineKeyboardButton(text="Back", callback_data=str(END)),
225         ],
226     ]
227     keyboard = InlineKeyboardMarkup(buttons)
228
229     await update.callback_query.answer()
230     await update.callback_query.edit_message_text(text=text, reply_markup=keyboard)
231
232     return SELECTING_GENDER
233
234
235 async def end_second_level(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
236     """Return to top level conversation."""
237     context.user_data[START_OVER] = True
238     await start(update, context)
239
240     return END
241
242
243 # Third level callbacks
244 async def select_feature(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
245     """Select a feature to update for the person."""
246     buttons = [
247         [
248             InlineKeyboardButton(text="Name", callback_data=str(NAME)),
249             InlineKeyboardButton(text="Age", callback_data=str(AGE)),
250             InlineKeyboardButton(text="Done", callback_data=str(END)),
251         ]
252     ]
253     keyboard = InlineKeyboardMarkup(buttons)
254
255     # If we collect features for a new person, clear the cache and save the gender
256     if not context.user_data.get(START_OVER):
257         context.user_data[FEATURES] = {GENDER: update.callback_query.data}
258         text = "Please select a feature to update."
259
260         await update.callback_query.answer()
261         await update.callback_query.edit_message_text(text=text, reply_
↪ markup=keyboard)
262         # But after we do that, we need to send a new message
263         else:
264             text = "Got it! Please select a feature to update."
265             await update.message.reply_text(text=text, reply_markup=keyboard)
266
267     context.user_data[START_OVER] = False
268     return SELECTING_FEATURE
269
270

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```

271 async def ask_for_input(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
272     """Prompt user to input data for selected feature."""
273     context.user_data[CURRENT_FEATURE] = update.callback_query.data
274     text = "Okay, tell me."
275
276     await update.callback_query.answer()
277     await update.callback_query.edit_message_text(text=text)
278
279     return TYPING
280
281
282 async def save_input(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
283     """Save input for feature and return to feature selection."""
284     user_data = context.user_data
285     user_data[FEATURES][user_data[CURRENT_FEATURE]] = update.message.text
286
287     user_data[START_OVER] = True
288
289     return await select_feature(update, context)
290
291
292 async def end_describing(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
293     """End gathering of features and return to parent conversation."""
294     user_data = context.user_data
295     level = user_data[CURRENT_LEVEL]
296     if not user_data.get(level):
297         user_data[level] = []
298     user_data[level].append(user_data[FEATURES])
299
300     # Print upper level menu
301     if level == SELF:
302         user_data[START_OVER] = True
303         await start(update, context)
304     else:
305         await select_level(update, context)
306
307     return END
308
309
310 async def stop_nested(update: Update, context: ContextTypes.DEFAULT_TYPE) -> str:
311     """Completely end conversation from within nested conversation."""
312     await update.message.reply_text("Okay, bye.")
313
314     return STOPPING
315
316
317 def main() -> None:
318     """Run the bot."""
319     # Create the Application and pass it your bot's token.
320     application = Application.builder().token("TOKEN").build()
321
322     # Set up third level ConversationHandler (collecting features)
323     description_conv = ConversationHandler(
324         entry_points=[
325             CallbackQueryHandler(
326                 select_feature, pattern="^" + str(MALE) + "$|^" + str(FEMALE) + "$"

```

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```

327         )
328     ],
329     states={
330         SELECTING_FEATURE: [
331             CallbackQueryHandler(ask_for_input, pattern="^(?!" + str(END) + ").*$"
↪")
332         ],
333         TYPING: [MessageHandler(filters.TEXT & ~filters.COMMAND, save_input)],
334     },
335     fallbacks=[
336         CallbackQueryHandler(end_describing, pattern="^" + str(END) + "$"),
337         CommandHandler("stop", stop_nested),
338     ],
339     map_to_parent={
340         # Return to second level menu
341         END: SELECTING_LEVEL,
342         # End conversation altogether
343         STOPPING: STOPPING,
344     },
345 )
346
347 # Set up second level ConversationHandler (adding a person)
348 add_member_conv = ConversationHandler(
349     entry_points=[CallbackQueryHandler(select_level, pattern="^" + str(ADDING_
↪MEMBER) + "$")],
350     states={
351         SELECTING_LEVEL: [
352             CallbackQueryHandler(select_gender, pattern=f"^{PARENTS}$|^{CHILDREN}$"
↪")
353         ],
354         SELECTING_GENDER: [description_conv],
355     },
356     fallbacks=[
357         CallbackQueryHandler(show_data, pattern="^" + str(SHOWING) + "$"),
358         CallbackQueryHandler(end_second_level, pattern="^" + str(END) + "$"),
359         CommandHandler("stop", stop_nested),
360     ],
361     map_to_parent={
362         # After showing data return to top level menu
363         SHOWING: SHOWING,
364         # Return to top level menu
365         END: SELECTING_ACTION,
366         # End conversation altogether
367         STOPPING: END,
368     },
369 )
370
371 # Set up top level ConversationHandler (selecting action)
372 # Because the states of the third level conversation map to the ones of the
↪second level
373 # conversation, we need to make sure the top level conversation can also handle
↪them
374 selection_handlers = [
375     add_member_conv,
376     CallbackQueryHandler(show_data, pattern="^" + str(SHOWING) + "$"),
377     CallbackQueryHandler(adding_self, pattern="^" + str(ADDING_SELF) + "$"),

```

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```

378         CallbackQueryHandler(end, pattern="^" + str(END) + "$"),
379     ]
380     conv_handler = ConversationHandler(
381         entry_points=[CommandHandler("start", start)],
382         states={
383             SHOWING: [CallbackQueryHandler(start, pattern="^" + str(END) + "$")],
384             SELECTING_ACTION: selection_handlers,
385             SELECTING_LEVEL: selection_handlers,
386             DESCRIBING_SELF: [description_conv],
387             STOPPING: [CommandHandler("start", start)],
388         },
389         fallbacks=[CommandHandler("stop", stop)],
390     )
391
392     application.add_handler(conv_handler)
393
394     # Run the bot until the user presses Ctrl-C
395     application.run_polling()
396
397
398 if __name__ == "__main__":
399     main()

```

## State Diagram

### passportbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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
14 import logging
15 from pathlib import Path
16
17 from telegram import __version__ as TG_VER
18
19 try:
20     from telegram import __version_info__
21 except ImportError:
22     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
23
24 if __version_info__ < (20, 0, 0, "alpha", 5):
25     raise RuntimeError(
26         f"This example is not compatible with your current PTB version {TG_VER}. To
27         view the "

```

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```

27         f"{TG_VER} version of this example, "
28         f"visit https://docs.python-telegram-bot.org/en/v{TG_VER}/examples.html"
29     )
30     from telegram import Update
31     from telegram.ext import Application, ContextTypes, MessageHandler, filters
32
33     # Enable logging
34
35     logging.basicConfig(
36         format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
37     )
38
39     logger = logging.getLogger(__name__)
40
41
42     async def msg(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
43         """Downloads and prints the received passport data."""
44         # Retrieve passport data
45         passport_data = update.message.passport_data
46         # If our nonce doesn't match what we think, this Update did not originate from us
47         # Ideally you would randomize the nonce on the server
48         if passport_data.decrypted_credentials.nonce != "thisisatest":
49             return
50
51         # Print the decrypted credential data
52         # For all elements
53         # Print their decrypted data
54         # Files will be downloaded to current directory
55         for data in passport_data.decrypted_data: # This is where the data gets decrypted
56             if data.type == "phone_number":
57                 print("Phone: ", data.phone_number)
58             elif data.type == "email":
59                 print("Email: ", data.email)
60             if data.type in (
61                 "personal_details",
62                 "passport",
63                 "driver_license",
64                 "identity_card",
65                 "internal_passport",
66                 "address",
67             ):
68                 print(data.type, data.data)
69             if data.type in (
70                 "utility_bill",
71                 "bank_statement",
72                 "rental_agreement",
73                 "passport_registration",
74                 "temporary_registration",
75             ):
76                 print(data.type, len(data.files), "files")
77                 for file in data.files:
78                     actual_file = await file.get_file()
79                     print(actual_file)
80                     await actual_file.download_to_memory()
81             if (
82                 data.type in ("passport", "driver_license", "identity_card", "internal_

```

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```

↪passport")
    and data.front_side
83     ):
84         front_file = await data.front_side.get_file()
85         print(data.type, front_file)
86         await front_file.download_to_memory()
87     if data.type in ("driver_license" and "identity_card") and data.reverse_side:
88         reverse_file = await data.reverse_side.get_file()
89         print(data.type, reverse_file)
90         await reverse_file.download_to_memory()
91     if (
92         data.type in ("passport", "driver_license", "identity_card", "internal_
↪passport")
93         and data.selfie
94     ):
95         selfie_file = await data.selfie.get_file()
96         print(data.type, selfie_file)
97         await selfie_file.download_to_memory()
98     if data.translation and data.type in (
99         "passport",
100         "driver_license",
101         "identity_card",
102         "internal_passport",
103         "utility_bill",
104         "bank_statement",
105         "rental_agreement",
106         "passport_registration",
107         "temporary_registration",
108     ):
109         print(data.type, len(data.translation), "translation")
110         for file in data.translation:
111             actual_file = await file.get_file()
112             print(actual_file)
113             await actual_file.download_to_memory()
114
115
116 def main() -> None:
117     """Start the bot."""
118     # Create the Application and pass it your token and private key
119     private_key = Path("private.key")
120     application = (
121         Application.builder().token("TOKEN").private_key(private_key.read_bytes()).
↪build()
122     )
123
124     # On messages that include passport data call msg
125     application.add_handler(MessageHandler(filters.PASSPORT_DATA, msg))
126
127     # Run the bot until the user presses Ctrl-C
128     application.run_polling()
129
130
131 if __name__ == "__main__":
132     main()
133

```

## 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_
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     });
32
33 </script>
34 </html>
```

## paymentbot.py

```
1 #!/usr/bin/env python
2 # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
10
11 try:
12     from telegram import __version_info__
13 except ImportError:
14     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
```

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```

15 if __version_info__ < (20, 0, 0, "alpha", 1):
16     raise RuntimeError(
17         f"This example is not compatible with your current PTB version {TG_VER}. To
18 ↪view the "
19         f"{TG_VER} version of this example, "
20         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
21     )
22 from telegram import LabeledPrice, ShippingOption, Update
23 from telegram.ext import (
24     Application,
25     CommandHandler,
26     ContextTypes,
27     MessageHandler,
28     PreCheckoutQueryHandler,
29     ShippingQueryHandler,
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 logger = logging.getLogger(__name__)
38
39 PAYMENT_PROVIDER_TOKEN = "PAYMENT_PROVIDER_TOKEN"
40
41
42 async def start_callback(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
43     """Displays info on how to use the bot."""
44     msg = (
45         "Use /shipping to get an invoice for shipping-payment, or /noshipping for an "
46         "invoice without shipping."
47     )
48
49     await update.message.reply_text(msg)
50
51
52 async def start_with_shipping_callback(update: Update, context: ContextTypes.DEFAULT_
53 ↪TYPE) -> None:
54     """Sends an invoice with shipping-payment."""
55     chat_id = update.message.chat_id
56     title = "Payment Example"
57     description = "Payment Example using python-telegram-bot"
58     # select a payload just for you to recognize its the donation from your bot
59     payload = "Custom-Payload"
60     # In order to get a provider_token see https://core.telegram.org/bots/payments
61     ↪#getting-a-token
62     currency = "USD"
63     # price in dollars
64     price = 1
65     # price * 100 so as to include 2 decimal points
66     # check https://core.telegram.org/bots/payments#supported-currencies for more
67     ↪details
68     prices = [LabeledPrice("Test", price * 100)]

```

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```

67     # optionally pass need_name=True, need_phone_number=True,
68     # need_email=True, need_shipping_address=True, is_flexible=True
69     await context.bot.send_invoice(
70         chat_id,
71         title,
72         description,
73         payload,
74         PAYMENT_PROVIDER_TOKEN,
75         currency,
76         prices,
77         need_name=True,
78         need_phone_number=True,
79         need_email=True,
80         need_shipping_address=True,
81         is_flexible=True,
82     )
83
84
85 async def start_without_shipping_callback(
86     update: Update, context: ContextTypes.DEFAULT_TYPE
87 ) -> None:
88     """Sends an invoice without shipping-payment."""
89     chat_id = update.message.chat_id
90     title = "Payment Example"
91     description = "Payment Example using python-telegram-bot"
92     # select a payload just for you to recognize its the donation from your bot
93     payload = "Custom-Payload"
94     # In order to get a provider_token see https://core.telegram.org/bots/payments
95     ↪ #getting-a-token
96     currency = "USD"
97     # price in dollars
98     price = 1
99     # price * 100 so as to include 2 decimal points
100    prices = [LabeledPrice("Test", price * 100)]
101
102    # optionally pass need_name=True, need_phone_number=True,
103    # need_email=True, need_shipping_address=True, is_flexible=True
104    await context.bot.send_invoice(
105        chat_id, title, description, payload, PAYMENT_PROVIDER_TOKEN, currency, prices
106    )
107
108 async def shipping_callback(update: Update, context: ContextTypes.DEFAULT_TYPE) -> ↪
109 ↪ None:
110     """Answers the ShippingQuery with ShippingOptions"""
111     query = update.shipping_query
112     # check the payload, is this from your bot?
113     if query.invoice_payload != "Custom-Payload":
114         # answer False pre_checkout_query
115         await query.answer(ok=False, error_message="Something went wrong...")
116         return
117
118     # First option has a single LabeledPrice
119     options = [ShippingOption("1", "Shipping Option A", [LabeledPrice("A", 100)])]
120     # second option has an array of LabeledPrice objects
121     price_list = [LabeledPrice("B1", 150), LabeledPrice("B2", 200)]

```

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```

121     options.append(ShippingOption("2", "Shipping Option B", price_list))
122     await query.answer(ok=True, shipping_options=options)
123
124
125     # after (optional) shipping, it's the pre-checkout
126     async def precheckout_callback(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
127         None:
128         """Answers the PreQecheckoutQuery"""
129         query = update.pre_checkout_query
130         # check the payload, is this from your bot?
131         if query.invoice_payload != "Custom-Payload":
132             # answer False pre_checkout_query
133             await query.answer(ok=False, error_message="Something went wrong...")
134         else:
135             await query.answer(ok=True)
136
137     # finally, after contacting the payment provider...
138     async def successful_payment_callback(update: Update, context: ContextTypes.DEFAULT_
139         TYPE) -> None:
140         """Confirms the successful payment."""
141         # do something after successfully receiving payment?
142         await update.message.reply_text("Thank you for your payment!")
143
144     def main() -> None:
145         """Run the bot."""
146         # Create the Application and pass it your bot's token.
147         application = Application.builder().token("TOKEN").build()
148
149         # simple start function
150         application.add_handler(CommandHandler("start", start_callback))
151
152         # Add command handler to start the payment invoice
153         application.add_handler(CommandHandler("shipping", start_with_shipping_callback))
154         application.add_handler(CommandHandler("noshipping", start_without_shipping_
155             callback))
156
157         # Optional handler if your product requires shipping
158         application.add_handler(ShippingQueryHandler(shipping_callback))
159
160         # Pre-checkout handler to final check
161         application.add_handler(PreCheckoutQueryHandler(precheckout_callback))
162
163         # Success! Notify your user!
164         application.add_handler(
165             MessageHandler(filters.SUCCESSFUL_PAYMENT, successful_payment_callback)
166         )
167
168         # Run the bot until the user presses Ctrl-C
169         application.run_polling()
170
171     if __name__ == "__main__":
172         main()

```

**persistentconversationbot.py**

```
1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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 __version__ as TG_VER
21
22 try:
23     from telegram import __version_info__
24 except ImportError:
25     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
26
27 if __version_info__ < (20, 0, 0, "alpha", 1):
28     raise RuntimeError(
29         f"This example is not compatible with your current PTB version {TG_VER}. To_
↪view the "
30         f"{TG_VER} version of this example, "
31         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
32     )
33 from telegram import ReplyKeyboardMarkup, ReplyKeyboardRemove, Update
34 from telegram.ext import (
35     Application,
36     CommandHandler,
37     ContextTypes,
38     ConversationHandler,
39     MessageHandler,
40     PicklePersistence,
41     filters,
42 )
43
44 # Enable logging
45 logging.basicConfig(
46     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
47 )
48 logger = logging.getLogger(__name__)
49
50 CHOOSING, TYPING_REPLY, TYPING_CHOICE = range(3)
51
52 reply_keyboard = [
53     ["Age", "Favourite colour"],
54     ["Number of siblings", "Something else..."],
```

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```

55     ["Done"],
56 ]
57 markup = ReplyKeyboardMarkup(reply_keyboard, one_time_keyboard=True)
58
59
60 def facts_to_str(user_data: Dict[str, str]) -> str:
61     """Helper function for formatting the gathered user info."""
62     facts = [f"{key} - {value}" for key, value in user_data.items()]
63     return "\n".join(facts).join(["\n", "\n"])
64
65
66 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
67     """Start the conversation, display any stored data and ask user for input."""
68     reply_text = "Hi! My name is Doctor Botter."
69     if context.user_data:
70         reply_text += (
71             f" You already told me your {'', '.join(context.user_data.keys())}'. Why don
72             ↪ 't you "
73             f"tell me something more about yourself? Or change anything I already
74             ↪ know."
75         )
76     else:
77         reply_text += (
78             " I will hold a more complex conversation with you. Why don't you tell me
79             ↪ "
80             "something about yourself?"
81         )
82     await update.message.reply_text(reply_text, reply_markup=markup)
83
84     return CHOOSING
85
86
87 async def regular_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
88     """Ask the user for info about the selected predefined choice."""
89     text = update.message.text.lower()
90     context.user_data["choice"] = text
91     if context.user_data.get(text):
92         reply_text = (
93             f"Your {text}? I already know the following about that: {context.user_
94             ↪ data[text]}"
95         )
96     else:
97         reply_text = f"Your {text}? Yes, I would love to hear about that!"
98     await update.message.reply_text(reply_text)
99
100     return TYPING_REPLY
101
102
103 async def custom_choice(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
104     """Ask the user for a description of a custom category."""
105     await update.message.reply_text(
106         'Alright, please send me the category first, for example "Most impressive
107         ↪ skill"'
108     )
109
110     return TYPING_CHOICE

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106
107
108 async def received_information(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
109     """Store info provided by user and ask for the next category."""
110     text = update.message.text
111     category = context.user_data["choice"]
112     context.user_data[category] = text.lower()
113     del context.user_data["choice"]
114
115     await update.message.reply_text(
116         "Neat! Just so you know, this is what you already told me:"
117         f"{facts_to_str(context.user_data)}"
118         "You can tell me more, or change your opinion on something.",
119         reply_markup=markup,
120     )
121
122     return CHOOSING
123
124
125 async def show_data(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
126     """Display the gathered info."""
127     await update.message.reply_text(
128         f"This is what you already told me: {facts_to_str(context.user_data)}"
129     )
130
131
132 async def done(update: Update, context: ContextTypes.DEFAULT_TYPE) -> int:
133     """Display the gathered info and end the conversation."""
134     if "choice" in context.user_data:
135         del context.user_data["choice"]
136
137     await update.message.reply_text(
138         f"I learned these facts about you: {facts_to_str(context.user_data)}Until
139     ↪next time!",
140         reply_markup=ReplyKeyboardRemove(),
141     )
142     return ConversationHandler.END
143
144
145 def main() -> None:
146     """Run the bot."""
147     # Create the Application and pass it your bot's token.
148     persistence = PicklePersistence(filepath="conversationbot")
149     application = Application.builder().token("TOKEN").persistence(persistence).
150     ↪build()
151
152     # Add conversation handler with the states CHOOSING, TYPING_CHOICE and TYPING_
153     ↪REPLY
154     conv_handler = ConversationHandler(
155         entry_points=[CommandHandler("start", start)],
156         states={
157             CHOOSING: [
158                 MessageHandler(
159                     filters.Regex("^Age|Favourite colour|Number of siblings|$"),
160                     ↪regular_choice

```

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```

157         ),
158         MessageHandler(filters.Regex("^Something else...$"), custom_choice),
159     ],
160     TYPING_CHOICE: [
161         MessageHandler(
162             filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")),
163             ↪regular_choice
164         )
165     ],
166     TYPING_REPLY: [
167         MessageHandler(
168             filters.TEXT & ~(filters.COMMAND | filters.Regex("^Done$")),
169             received_information,
170         )
171     ],
172     fallbacks=[MessageHandler(filters.Regex("^Done$"), done)],
173     name="my_conversation",
174     persistent=True,
175 )
176
177 application.add_handler(conv_handler)
178
179 show_data_handler = CommandHandler("show_data", show_data)
180 application.add_handler(show_data_handler)
181
182 # Run the bot until the user presses Ctrl-C
183 application.run_polling()
184
185
186 if __name__ == "__main__":
187     main()

```

### pollbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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
13 import logging
14
15 from telegram import __version__ as TG_VER
16
17 try:
18     from telegram import __version_info__
19 except ImportError:
20     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]

```

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```

19 if __version_info__ < (20, 0, 0, "alpha", 1):
20     raise RuntimeError(
21         f"This example is not compatible with your current PTB version {TG_VER}. To
    ↪ view the "
22         f"{TG_VER} version of this example, "
23         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
24     )
25 from telegram import (
26     KeyboardButton,
27     KeyboardButtonPollType,
28     Poll,
29     ReplyKeyboardMarkup,
30     ReplyKeyboardRemove,
31     Update,
32 )
33 from telegram.constants import ParseMode
34 from telegram.ext import (
35     Application,
36     CommandHandler,
37     ContextTypes,
38     MessageHandler,
39     PollAnswerHandler,
40     PollHandler,
41     filters,
42 )
43
44 # Enable logging
45 logging.basicConfig(
46     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
47 )
48 logger = logging.getLogger(__name__)
49
50
51 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
52     """Inform user about what this bot can do"""
53     await update.message.reply_text(
54         "Please select /poll to get a Poll, /quiz to get a Quiz or /preview"
55         " to generate a preview for your poll"
56     )
57
58
59 async def poll(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
60     """Sends a predefined poll"""
61     questions = ["Good", "Really good", "Fantastic", "Great"]
62     message = await context.bot.send_poll(
63         update.effective_chat.id,
64         "How are you?",
65         questions,
66         is_anonymous=False,
67         allows_multiple_answers=True,
68     )
69     # Save some info about the poll the bot_data for later use in receive_poll_answer
70     payload = {
71         message.poll.id: {
72             "questions": questions,
73             "message_id": message.message_id,

```

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```

74         "chat_id": update.effective_chat.id,
75         "answers": 0,
76     }
77 }
78 context.bot_data.update(payload)
79
80
81 async def receive_poll_answer(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
82     None:
83     """Summarize a users poll vote"""
84     answer = update.poll_answer
85     answered_poll = context.bot_data[answer.poll_id]
86     try:
87         questions = answered_poll["questions"]
88         # this means this poll answer update is from an old poll, we can't do our
89         # answering then
90     except KeyError:
91         return
92     selected_options = answer.option_ids
93     answer_string = ""
94     for question_id in selected_options:
95         if question_id != selected_options[-1]:
96             answer_string += questions[question_id] + " and "
97         else:
98             answer_string += questions[question_id]
99     await context.bot.send_message(
100         answered_poll["chat_id"],
101         f"{update.effective_user.mention_html()} feels {answer_string}!",
102         parse_mode=ParseMode.HTML,
103     )
104     answered_poll["answers"] += 1
105     # Close poll after three participants voted
106     if answered_poll["answers"] == 3:
107         await context.bot.stop_poll(answered_poll["chat_id"], answered_poll["message_
108         id"])
109
110 async def quiz(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
111     """Send a predefined poll"""
112     questions = ["1", "2", "4", "20"]
113     message = await update.effective_message.reply_poll(
114         "How many eggs do you need for a cake?", questions, type=Poll.QUIZ, correct_
115         option_id=2
116     )
117     # Save some info about the poll the bot_data for later use in receive_quiz_answer
118     payload = {
119         message.poll.id: {"chat_id": update.effective_chat.id, "message_id": message.
120         message_id}
121     }
122     context.bot_data.update(payload)
123
124 async def receive_quiz_answer(update: Update, context: ContextTypes.DEFAULT_TYPE) ->
125     None:
126     """Close quiz after three participants took it"""
127     # the bot can receive closed poll updates we don't care about

```

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```

124     if update.poll.is_closed:
125         return
126     if update.poll.total_voter_count == 3:
127         try:
128             quiz_data = context.bot_data[update.poll.id]
129             # this means this poll answer update is from an old poll, we can't stop it.
130         except KeyError:
131             return
132         await context.bot.stop_poll(quiz_data["chat_id"], quiz_data["message_id"])
133
134
135 async def preview(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
136     """Ask user to create a poll and display a preview of it"""
137     # using this without a type lets the user chooses what he wants (quiz or poll)
138     button = [[KeyboardButton("Press me!", request_poll=KeyboardButtonPollType())]]
139     message = "Press the button to let the bot generate a preview for your poll"
140     # using one_time_keyboard to hide the keyboard
141     await update.effective_message.reply_text(
142         message, reply_markup=ReplyKeyboardMarkup(button, one_time_keyboard=True)
143     )
144
145
146 async def receive_poll(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
147     """On receiving polls, reply to it by a closed poll copying the received poll"""
148     actual_poll = update.effective_message.poll
149     # Only need to set the question and options, since all other parameters don't
150     # matter for
151     # a closed poll
152     await update.effective_message.reply_poll(
153         question=actual_poll.question,
154         options=[o.text for o in actual_poll.options],
155         # with is_closed true, the poll/quiz is immediately closed
156         is_closed=True,
157         reply_markup=ReplyKeyboardRemove(),
158     )
159
160
161 async def help_handler(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
162     """Display a help message"""
163     await update.message.reply_text("Use /quiz, /poll or /preview to test this bot.")
164
165
166 def main() -> None:
167     """Run bot."""
168     # Create the Application and pass it your bot's token.
169     application = Application.builder().token("TOKEN").build()
170     application.add_handler(CommandHandler("start", start))
171     application.add_handler(CommandHandler("poll", poll))
172     application.add_handler(CommandHandler("quiz", quiz))
173     application.add_handler(CommandHandler("preview", preview))
174     application.add_handler(CommandHandler("help", help_handler))
175     application.add_handler(MessageHandler(filters.POLL, receive_poll))
176     application.add_handler(PollAnswerHandler(receive_poll_answer))
177     application.add_handler(PollHandler(receive_quiz_answer))

```

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```

178     # Run the bot until the user presses Ctrl-C
179     application.run_polling()
180
181
182 if __name__ == "__main__":
183     main()

```

**rawapibot.py**

This example uses only the pure, “bare-metal” API wrapper.

```

1  #!/usr/bin/env python
2  # pylint: disable=wrong-import-position
3  """Simple Bot to reply to Telegram messages.
4
5  This is built on the API wrapper, see echobot.py to see the same example built
6  on the telegram.ext bot framework.
7  This program is dedicated to the public domain under the CC0 license.
8  """
9  import asyncio
10 import logging
11 from typing import NoReturn
12
13 from telegram import __version__ as TG_VER
14
15 try:
16     from telegram import __version_info__
17 except ImportError:
18     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment] # type:
19     ↪ ignore[assignment]
20
21 if __version_info__ < (20, 0, 0, "alpha", 1):
22     raise RuntimeError(
23         f"This example is not compatible with your current PTB version {TG_VER}. To
24         ↪ view the "
25         f"{TG_VER} version of this example, "
26         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
27     )
28
29 from telegram import Bot
30 from telegram.error import Forbidden, NetworkError
31
32 logging.basicConfig(
33     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
34 )
35 logger = logging.getLogger(__name__)
36
37
38 async def main() -> NoReturn:
39     """Run the bot."""
40     # Here we use the `async with` syntax to properly initialize and shutdown
41     ↪ resources.
42     async with Bot("TOKEN") as bot:
43         # get the first pending update_id, this is so we can skip over it in case
44         # we get a "Forbidden" exception.
45         try:

```

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```

42         update_id = (await bot.get_updates())[0].update_id
43     except IndexError:
44         update_id = None
45
46     logger.info("listening for new messages...")
47     while True:
48         try:
49             update_id = await echo(bot, update_id)
50         except NetworkError:
51             await asyncio.sleep(1)
52         except Forbidden:
53             # The user has removed or blocked the bot.
54             update_id += 1
55
56
57 async def echo(bot: Bot, update_id: int) -> int:
58     """Echo the message the user sent."""
59     # Request updates after the last update_id
60     updates = await bot.get_updates(offset=update_id, timeout=10)
61     for update in updates:
62         next_update_id = update.update_id + 1
63
64         # your bot can receive updates without messages
65         # and not all messages contain text
66         if update.message and update.message.text:
67             # Reply to the message
68             logger.info("Found message %s!", update.message.text)
69             await update.message.reply_text(update.message.text)
70         return next_update_id
71     return update_id
72
73
74 if __name__ == "__main__":
75     try:
76         asyncio.run(main())
77     except KeyboardInterrupt: # Ignore exception when Ctrl-C is pressed
78         pass

```

**timerbot.py**

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument, wrong-import-position
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
15 Usage:

```

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```

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
21 import logging
22
23 from telegram import __version__ as TG_VER
24
25 try:
26     from telegram import __version_info__
27 except ImportError:
28     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
29
30 if __version_info__ < (20, 0, 0, "alpha", 1):
31     raise RuntimeError(
32         f"This example is not compatible with your current PTB version {TG_VER}. To
33         ↪view the "
34         f"{TG_VER} version of this example, "
35         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
36     )
37 from telegram import Update
38 from telegram.ext import Application, CommandHandler, ContextTypes
39
40 # Enable logging
41 logging.basicConfig(
42     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
43 )
44
45 # Define a few command handlers. These usually take the two arguments update and
46 # context.
47 # Best practice would be to replace context with an underscore,
48 # since context is an unused local variable.
49 # This being an example and not having context present confusing beginners,
50 # we decided to have it present as context.
51 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
52     """Sends explanation on how to use the bot."""
53     await update.message.reply_text("Hi! Use /set <seconds> to set a timer")
54
55
56 async def alarm(context: ContextTypes.DEFAULT_TYPE) -> None:
57     """Send the alarm message."""
58     job = context.job
59     await context.bot.send_message(job.chat_id, text=f"Beep! {job.data} seconds are
60     ↪over!")
61
62 def remove_job_if_exists(name: str, context: ContextTypes.DEFAULT_TYPE) -> bool:
63     """Remove job with given name. Returns whether job was removed."""
64     current_jobs = context.job_queue.get_jobs_by_name(name)
65     if not current_jobs:
66         return False
67     for job in current_jobs:
68         job.schedule_removal()
69     return True

```

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```

70
71
72 async def set_timer(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
73     """Add a job to the queue."""
74     chat_id = update.effective_message.chat_id
75     try:
76         # args[0] should contain the time for the timer in seconds
77         due = float(context.args[0])
78         if due < 0:
79             await update.effective_message.reply_text("Sorry we can not go back to_
↪future!")
80             return
81
82         job_removed = remove_job_if_exists(str(chat_id), context)
83         context.job_queue.run_once(alarm, due, chat_id=chat_id, name=str(chat_id),_
↪data=due)
84
85         text = "Timer successfully set!"
86         if job_removed:
87             text += " Old one was removed."
88         await update.effective_message.reply_text(text)
89
90     except (IndexError, ValueError):
91         await update.effective_message.reply_text("Usage: /set <seconds>")
92
93
94 async def unset(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
95     """Remove the job if the user changed their mind."""
96     chat_id = update.message.chat_id
97     job_removed = remove_job_if_exists(str(chat_id), context)
98     text = "Timer successfully cancelled!" if job_removed else "You have no active_
↪timer."
99     await update.message.reply_text(text)
100
101
102 def main() -> None:
103     """Run bot."""
104     # Create the Application and pass it your bot's token.
105     application = Application.builder().token("TOKEN").build()
106
107     # on different commands - answer in Telegram
108     application.add_handler(CommandHandler(["start", "help"], start))
109     application.add_handler(CommandHandler("set", set_timer))
110     application.add_handler(CommandHandler("unset", unset))
111
112     # Run the bot until the user presses Ctrl-C
113     application.run_polling()
114
115
116 if __name__ == "__main__":
117     main()

```



## webappbot.py

```

1  #!/usr/bin/env python
2  # pylint: disable=unused-argument,wrong-import-position
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
9  ↪ methods would
10 require a bot token.
11 """
12 import json
13 import logging
14
15 from telegram import __version__ as TG_VER
16
17 try:
18     from telegram import __version_info__
19 except ImportError:
20     __version_info__ = (0, 0, 0, 0, 0) # type: ignore[assignment]
21
22 if __version_info__ < (20, 0, 0, "alpha", 1):
23     raise RuntimeError(
24         f"This example is not compatible with your current PTB version {TG_VER}. To ↪
25         ↪ view the "
26         f"{TG_VER} version of this example, "
27         f"visit https://docs.python-telegram-bot.org/en/v{TG\_VER}/examples.html"
28     )
29
30 from telegram import KeyboardButton, ReplyKeyboardMarkup, ReplyKeyboardRemove, Update,
31 ↪ WebAppInfo
32 from telegram.ext import Application, CommandHandler, ContextTypes, MessageHandler, ↪
33 ↪ filters
34
35 # Enable logging
36 logging.basicConfig(
37     format="%(asctime)s - %(name)s - %(levelname)s - %(message)s", level=logging.INFO
38 )
39 logger = logging.getLogger(__name__)
40
41 # Define a `/start` command handler.
42 async def start(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
43     """Send a message with a button that opens a the web app."""
44     await update.message.reply_text(
45         "Please press the button below to choose a color via the WebApp.",
46         reply_markup=ReplyKeyboardMarkup.from_button(
47             KeyboardButton(
48                 text="Open the color picker!",
49                 web_app=WebAppInfo(url="https://python-telegram-bot.org/static/
50 ↪ webappbot"),
51             )
52         ),
53     )

```

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```

51 # Handle incoming WebAppData
52 async def web_app_data(update: Update, context: ContextTypes.DEFAULT_TYPE) -> None:
53     """Print the received data and remove the button."""
54     # Here we use `json.loads`, since the WebApp sends the data JSON serialized string
55     # (see webappbot.html)
56     data = json.loads(update.effective_message.web_app_data.data)
57     await update.message.reply_html(
58         text=f"You selected the color with the HEX value <code>{data['hex']}</code>..
↪The "
59         f"corresponding RGB value is <code>{tuple(data['rgb'].values())}</code>.",
60         reply_markup=ReplyKeyboardRemove(),
61     )
62
63
64 def main() -> None:
65     """Start the bot."""
66     # Create the Application and pass it your bot's token.
67     application = Application.builder().token("TOKEN").build()
68
69     application.add_handler(CommandHandler("start", start))
70     application.add_handler(MessageHandler(filters.StatusUpdate.WEB_APP_DATA, web_app_
↪data))
71
72     # Run the bot until the user presses Ctrl-C
73     application.run_polling()
74
75
76 if __name__ == "__main__":
77     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

```

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```

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();
38 </script>
39 </html>

```

## 10.5 Changelog

### 10.5.1 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)

## 10.5.2 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)

## 10.5.3 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)

## 10.5.4 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)

## 10.5.5 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, #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)

## 10.5.6 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)

## 10.5.7 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)

## 10.5.8 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)

## 10.5.9 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)

## 10.5.10 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)

### 10.5.11 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)

### 10.5.12 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)

### 10.5.13 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)

## 10.5.14 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)

### 10.5.15 Version 13.4.1

*Released 2021-03-14*

#### Hot fix release:

- Fixed a bug in `setup.py` (#2431)

### 10.5.16 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)

### 10.5.17 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)

### 10.5.18 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)

## 10.5.19 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)

## 10.5.20 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)

### 10.5.21 Version 12.8

*Released 2020-06-22*

#### Major Changes:

- Remove Python 2 support (#1715)
- Bot API 4.9 support (#1980)
- IDs/Username 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 in `TelegramObject.to_dict()` (#1989)
- Stabilize CI (#2000)

### 10.5.22 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)

### 10.5.23 Version 12.6.1

Released 2020-04-11

#### Bug fixes:

- Fix serialization of `reply_markup` in media messages (#1889)

### 10.5.24 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 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)

### 10.5.25 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)

### 10.5.26 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)

### 10.5.27 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)

### 10.5.28 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.

### 10.5.29 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 assignment 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)

### 10.5.30 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).

### 10.5.31 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).

### 10.5.32 Version 12.1.1

*Released 2019-09-18*

#### Hot fix release

Fixed regression in the vendored urllib3 (#1517).

### 10.5.33 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)

### 10.5.34 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

## 10.5.35 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

## 10.5.36 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)

### 10.5.37 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)

### 10.5.38 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.

### 10.5.39 Version 10.0.1

*Released 2018-03-05*

Fixes:

- Fix conversationhandler timeout (PR #1032)
- Add missing docs utils (PR #912)

### 10.5.40 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)

### 10.5.41 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.

### 10.5.42 Version 8.1.1

*Released 2017-10-15*

- Fix Commandhandler crashing on single character messages (PR #873).

### 10.5.43 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.

### 10.5.44 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.

### 10.5.45 Version 7.0.1

*Released 2017-07-28*

- Fix TypeError exception in RegexHandler (PR #751).
- Small documentation fix (PR #749).

### 10.5.46 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.

### 10.5.47 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` - <https://github.com/python-telegram-bot/python-telegram-bot/pull/484>
- Download files into file-like objects - <https://github.com/python-telegram-bot/python-telegram-bot/pull/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` - <https://github.com/python-telegram-bot/python-telegram-bot/pull/507>
- Add support for Socks5 proxy - <https://github.com/python-telegram-bot/python-telegram-bot/pull/518>
- Add support for filters in `CommandHandler` - <https://github.com/python-telegram-bot/python-telegram-bot/pull/536>
- Add the ability to invert (not) filters - <https://github.com/python-telegram-bot/python-telegram-bot/pull/552>
- Add `Filters.group` and `Filters.private`

- Compatibility with GAE via `urllib3.contrib` package - <https://github.com/python-telegram-bot/python-telegram-bot/pull/583>
- Add equality rich comparison operators to telegram objects - <https://github.com/python-telegram-bot/python-telegram-bot/pull/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` - <https://github.com/python-telegram-bot/python-telegram-bot/pull/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

## 10.6 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.

### 10.6.1 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
```

### 10.6.2 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.

### 10.6.3 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.

- 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.
  - In addition to that, we provide the `dev` marker for `pytest`. If you write one or multiple tests and want to run only those, you can decorate them via `@pytest.mark.dev` and then run it with minimal overhead with `pytest ./path/to/test_file.py -m dev`.
- Don't break backward compatibility.
- Add yourself to the [AUTHORS.rst](#) file in an alphabetical fashion.
- Before making a commit ensure that all automated tests still pass:

```
$ pytest -v
```

Since the tests can take a while to run, you can speed things up by running them in parallel using [pytest-xdist](#) (note that this may effect the result of the test in some rare cases):

```
$ pytest -v -n auto --dist=loadfile
```

To run `test_official` (particularly useful if you made API changes), run

```
$ export TEST_OFFICIAL=true
```

prior to running the tests.

- 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!

## 10.6.4 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 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:: version`, `.. versionchanged:: version` or `.. deprecated:: 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.

## 10.6.5 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.

## Properly defining optional arguments

It's always good to not initialize optional arguments at class creation, instead use `**kwargs` to get them. It's well known Telegram API can change without notice, in that case if a new argument is added it won't break the API classes. For example:

```
# GOOD
def __init__(self, id, name, last_name=None, **kwargs):
    self.last_name = last_name

# BAD
def __init__(self, id, name, last_name=None):
    self.last_name = last_name
```

# 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>.

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