Getting Started

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PRAW’s documentation is organized into the following sections:

- *Getting Started*
- *Code Overview*
- *Tutorials*
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CHAPTER 1

Documentation Conventions

Unless otherwise mentioned, all examples in this document assume the use of a **script** application. See *Authenticating via OAuth* for information on using **installed** applications and **web** applications.

## 1.1 Quick Start

In this section, we go over everything you need to know to start building scripts, or bots using PRAW, the Python Reddit API Wrapper. It’s fun and easy. Let’s get started.

### 1.1.1 Prerequisites

**Python Knowledge** You need to know at least a little Python to use PRAW; it’s a Python wrapper after all. PRAW supports Python 3.5+. If you are stuck on a problem, /r/learnpython is a great place to ask for help.

**Reddit Knowledge** A basic understanding of how reddit.com works is a must. In the event you are not already familiar with Reddit start with their FAQ.

**Reddit Account** A Reddit account is required to access Reddit’s API. Create one at reddit.com.

**Client ID & Client Secret** These two values are needed to access Reddit’s API as a **script** application (see *Authenticating via OAuth* for other application types). If you don’t already have a client ID and client secret, follow Reddit’s First Steps Guide to create them.

**User Agent** A user agent is a unique identifier that helps Reddit determine the source of network requests. To use Reddit’s API, you need a unique and descriptive user agent. The recommended format is <platform>:{app ID}:{version string} (by /u/{Reddit username}). For example, android:com.example.myredditapp:v1.2.3 (by /u/kemitche). [Read more about user-agents at Reddit’s API wiki page](https://wiki.reddit.com). With these prerequisites satisfied, you are ready to learn how to do some of the most common tasks with Reddit’s API.
1.1.2 Common Tasks

Obtain a Reddit Instance

**Warning:** For the sake of brevity, the following examples pass authentication information via arguments to `praw.Reddit()`. If you do this, you need to be careful not to reveal this information to the outside world if you share your code. It is recommended to use a `praw.ini` file in order to keep your authentication information separate from your code.

You need an instance of the `Reddit` class to do anything with PRAW. There are two distinct states a `Reddit` instance can be in: *read-only*, and *authorized*.

**Read-only Reddit Instances**

To create a read-only `Reddit` instance, you need three pieces of information:

1) client ID
2) client secret
3) user agent

You may choose to provide these by passing in three keyword arguments when calling the initializer of the `Reddit` class: `client_id`, `client_secret`, `user_agent` (see *Configuring PRAW* for other methods of providing this information). For example:

```python
import praw

reddit = praw.Reddit(client_id='my client id',
                     client_secret='my client secret',
                     user_agent='my user agent')
```

Just like that, you now have a read-only `Reddit` instance.

```python
print(reddit.read_only)  # Output: True
```

With a read-only instance, you can do something like obtaining 10 ‘hot’ submissions from `/r/learnpython`:

```python
# continued from code above

for submission in reddit.subreddit('learnpython').hot(limit=10):
    print(submission.title)
# Output: 10 submission
```

If you want to do more than retrieve public information from Reddit, then you need an authorized `Reddit` instance.

**Note:** In the above example we are limiting the results to 10. Without the `limit` parameter PRAW should yield as many results as it can with a single request. For most endpoints this results in 100 items per request. If you want to retrieve as many as possible pass in `limit=None`.  

---
Authorized Reddit Instances

In order to create an authorized Reddit instance, two additional pieces of information are required for script applications (see Authenticating via OAuth for other application types):

4) your Reddit user name, and

5) your Reddit password

Again, you may choose to provide these by passing in keyword arguments username and password when you call the Reddit initializer, like the following:

```python
import praw

reddit = praw.Reddit(client_id='my client id',
                     client_secret='my client secret',
                     user_agent='my user agent',
                     username='my username',
                     password='my password')

print(reddit.read_only)  # Output: False
```

Now you can do whatever your Reddit account is authorized to do. And you can switch back to read-only mode whenever you want:

```python
# continued from code above
reddit.read_only = True
```

**Note:** If you are uncomfortable hard coding your credentials into your program, there are some options available to you. Please see: Configuring PRAW.

Obtain a Subreddit

To obtain a Subreddit instance, pass the subreddit’s name when calling subreddit on your Reddit instance. For example:

```python
# assume you have a Reddit instance bound to variable `reddit`
subreddit = reddit.subreddit('redditdev')

print(subreddit.display_name)  # Output: redditdev
print(subreddit.title)          # Output: reddit Development
print(subreddit.description)    # Output: A subreddit for discussion of ...
```

Obtain Submission Instances from a Subreddit

Now that you have a Subreddit instance, you can iterate through some of its submissions, each bound to an instance of Submission. There are several sorts that you can iterate through:

- controversial
- gilded
- hot
- new
Each of these methods will immediately return a `ListingGenerator`, which is to be iterated through. For example, to iterate through the first 10 submissions based on the `hot` sort for a given subreddit try:

```python
# assume you have a Subreddit instance bound to variable `subreddit`
for submission in subreddit.hot(limit=10):
    print(submission.title) # Output: the submission's title
    print(submission.score) # Output: the submission's score
    print(submission.id)   # Output: the submission's ID
    print(submission.url)  # Output: the URL the submission points to
                          # or the submission's URL if it's a self post
```

**Note:** The act of calling a method that returns a `ListingGenerator` does not result in any network requests until you begin to iterate through the `ListingGenerator`.

You can create `Submission` instances in other ways too:

```python
# assume you have a Reddit instance bound to variable `reddit`
submission = reddit.submission(id='39zje0')
print(submission.title) # Output: reddit will soon only be available ...
# or
submission = reddit.submission(url='https://www.reddit.com/...')
```

### Obtain Redditor Instances

There are several ways to obtain a redditor (a `Redditor` instance). Two of the most common ones are:

- via the `author` attribute of a `Submission` or `Comment` instance
- via the `redditor()` method of `Reddit`

For example:

```python
# assume you have a Submission instance bound to variable `submission`
redditor1 = submission.author
print(redditor1.name)   # Output: name of the redditor
# assume you have a Reddit instance bound to variable `reddit`
redditor2 = reddit.redditor('bboe')
print(redditor2.link_karma) # Output: bboe's karma
```

### Obtain Comment Instances

Submissions have a `comments` attribute that is a `CommentForest` instance. That instance is iterable and represents the top-level comments of the submission by the default comment sort (`best`). If you instead want to iterate over all comments as a flattened list you can call the `list()` method on a `CommentForest` instance. For example:

```python
# assume you have a Reddit instance bound to variable `reddit`
top_level_comments = list(submission.comments)
all_comments = submission.comments.list()
```
Note: The comment sort order can be changed by updating the value of `comment_sort` on the `Submission` instance prior to accessing `comments` (see: `/api/set_suggested_sort` for possible values). For example to have comments sorted by `new` try something like:

```python
# assume you have a Reddit instance bound to variable 'reddit'
submission = reddit.submission(id='39zje0')
submission.comment_sort = 'new'
top_level_comments = list(submission.comments)
```

As you may be aware there will periodically be `MoreComments` instances scattered throughout the forest. Replace those `MoreComments` instances at any time by calling `replace_more()` on a `CommentForest` instance. Calling `replace_more()` access comments, and so must be done after `comment_sort` is updated. See Extracting comments with PRAW for an example.

### Determine Available Attributes of an Object

If you have a PRAW object, e.g., `Comment`, `Message`, `Redditor`, or `Submission`, and you want to see what attributes are available along with their values, use the built-in `vars()` function of python. For example:

```python
import pprint

# assume you have a Reddit instance bound to variable 'reddit'
submission = reddit.submission(id='39zje0')
print(submission.title) # to make it non-lazy
pprint.pprint(vars(submission))
```

Note the line where we print the title. PRAW uses lazy objects so that network requests to Reddit’s API are only issued when information is needed. Here, before the print line, `submission` points to a lazy `Submission` object. When we try to print its title, additional information is needed, thus a network request is made, and the instances ceases to be lazy. Outputting all the attributes of a lazy object will result in fewer attributes than expected.

### 1.2 Installing PRAW

PRAW supports python 3.5+. The recommended way to install PRAW is via `pip`.

```bash
pip install praw
```

Note: Depending on your system, you may need to use `pip3` to install packages for python 3.

**Warning:** Avoid using `sudo` to install packages. Do you really trust this package?

For instructions on installing python and pip see “The Hitchhiker’s Guide to Python” Installation Guides.

### 1.2.1 Updating PRAW

PRAW can be updated by running:
1.2.2 Installing Older Versions

Older versions of PRAW can be installed by specifying the version number as part of the installation command:

```
pip install praw==3.6.0
```

1.2.3 Installing the Latest Development Version

Is there a feature that was recently merged into PRAW that you cannot wait to take advantage of? If so, you can install PRAW directly from github like so:

```
pip install --upgrade https://github.com/praw-dev/praw/archive/master.zip
```

1.3 Authenticating via OAuth

PRAW supports the three types of applications that can be registered on Reddit. Those are:

- Web Applications
- Installed Applications
- Script Applications

Before you can use any one of these with PRAW, you must first register an application of the appropriate type on Reddit.

If your app does not require a user context, it is read only.

PRAW supports the flows that each of these applications can use. The following table defines which tables can use which flows:

<table>
<thead>
<tr>
<th>Application Type</th>
<th>Script</th>
<th>Web</th>
<th>Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Flow</td>
<td><code>Password</code></td>
<td><code>Code</code></td>
<td></td>
</tr>
<tr>
<td>Alternative Flows</td>
<td><code>Code</code></td>
<td><code>Application Only (Client Credentials)</code></td>
<td><code>Implicit</code></td>
</tr>
<tr>
<td></td>
<td><code>Application Only (Client Credentials)</code></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><code>Application Only (Installed Client)</code></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1.3.1 Password Flow

Password Flow is the simplest type of authentication flow to work with because no callback process is involved in obtaining an access_token.

While password flow applications do not involve a redirect uri, Reddit still requires that you provide one when registering your script application – `http://localhost:8080` is a simple one to use.

In order to use a password flow application with PRAW you need four pieces of information:

- **client_id** The client ID is the 14 character string listed just under “personal use script” for the desired developed application
- **client_secret** The client secret is the 27 character string listed adjacent to secret for the application.
password  The password for the Reddit account used to register the application.

username  The username of the Reddit account used to register the application.

With this information authorizing as username using a password flow app is as simple as:

```python
reddit = praw.Reddit(client_id='SI8pN3DSbt0zor',
                     client_secret='xaxkj7HNh8kwg8e5t4m6KvSrbTI',
                     password='1guiwevlfo00esyy',
                     user_agent='testscript by /u/fakebot3',
                     username='fakebot3')
```

To verify that you are authenticated as the correct user run:

```python
print(reddit.user.me())
```

The output should contain the same name as you entered for username.

**Note:** If the following exception is raised, double check your credentials, and ensure that that the username and password you are using are for the same user with which the application is associated:

```
OAuthException: invalid_grant error processing request
```

## Two-Factor Authentication

A 2FA token can be used by joining it to the password with a colon:

```python
reddit = praw.Reddit(client_id='SI8pN3DSbt0zor',
                     client_secret='xaxkj7HNh8kwg8e5t4m6KvSrbTI',
                     password='1guiwevlfo00esyy:955413',
                     user_agent='testscript by /u/fakebot3',
                     username='fakebot3')
```

However, for such an app there is little benefit to using 2FA. The token must be refreshed after one hour; therefore, the 2FA secret would have to be stored along with the rest of the credentials in order to generate the token, which defeats the point of having an extra credential beyond the password.

If you do choose to use 2FA, you must handle the `prawcore.OAuthException` that will be raised by API calls after one hour.

### 1.3.2 Code Flow

A code flow application is useful for two primary purposes:

- You have an application and want to be able to access Reddit from your users’ accounts.
- You have a personal-use script application and you either want to * limit the access one of your PRAW-based programs has to Reddit * avoid the hassle of 2FA (described above) * not pass your username and password to PRAW (and thus not keep it in memory)

When registering your application you must provide a valid redirect uri. If you are running a website you will want to enter the appropriate callback URL and configure that endpoint to complete the code flow.

If you aren’t actually running a website, you can use the *Obtaining a Refresh Token* script to obtain refresh_tokens. Enter `http://localhost:8080` as the redirect uri when using this script.

Whether or not you use the script there are two processes involved in obtaining access or refresh tokens.

### 1.3. Authenticating via OAuth
Obtain the Authorization URL

The first step to completing the code flow is to obtain the authorization URL. You can do that as follows:

```python
reddit = praw.Reddit(client_id='SI8pN3DSbt0zor',
                     client_secret='xaxkj7HNh8kwg8e5t4m6KvSrbiT',
                     redirect_uri='http://localhost:8080',
                     user_agent='testscript by /u/fakebot3')
print(reddit.auth.url(["identity"], '...', 'permanent'))
```

The above will output an authorization URL for a permanent token that has only the identity scope. See `url()` for more information on these parameters.

This URL should be accessed by the account that desires to authorize their Reddit access to your application. On completion of that flow, the user’s browser will be redirected to the specified redirect_uri. After extracting verifying the state and extracting the code you can obtain the refresh token via:

```python
print(reddit.auth.authorize(code))
print(reddit.user.me())
```

The first line of output is the refresh_token. You can save this for later use (see Using a Saved Refresh Token).

The second line of output reveals the name of the Redditor that completed the code flow. It also indicates that the reddit instance is now associated with that account.

The code flow can be used with an installed application just as described above with one change: set the value of client_secret to None when initializing Reddit.

1.3.3 Implicit Flow

The implicit flow requires a similar instantiation of the Reddit class as done in Code Flow, however, the token is returned directly as part of the redirect. For the implicit flow call `url()` like so:

```python
print(reddit.auth.url(["identity"], '...', implicit=True))
```

Then use `implicit()` to provide the authorization to the Reddit instance.

1.3.4 Read Only Mode

All application types support a read only mode. Read only mode provides access to Reddit like a logged out user would see including the default Subreddits in the reddit.front listings.

In the absence of a refresh_token both Code Flow and Implicit Flow applications start in the read only mode. With such applications read only mode is disabled when authorize(), or implicit() are successfully called. Password Flow applications start up with read only mode disabled.

Read only mode can be toggled via:

```
# Enable read only mode
reddit.read_only = True

# Disable read only mode (must have a valid authorization)
reddit.read_only = False
```
Aplication Only Flows

The following flows are the read only mode flows for Reddit applications

Application Only (Client Credentials)

This is the default flow for read only mode in script and web applications. The idea behind this is that Reddit can trust these applications as coming from a given developer, however the application requires no logged-in user context. An installed application cannot use this flow, because it Reddit requires a client_secret to be given it this flow is being used. In other words, installed applications are not considered confidential clients.

Application Only (Installed Client)

This is the default flow for read only mode in installed applications. The idea behind this is that Reddit might not be able to trust these applications as coming from a given developer. This would be able to happen if someone other than the developer can potentially replicate the client information and then pretend to be the application, such as in installed applications where the end user could retrieve the client_id.

Note: No benefit is really gained from this in script or web apps. The one exception is for when a script or web app has multiple end users, this will allow you to give Reddit the information needed in order to distinguish different users of your app from each other (as the supplied device id should be a unique string per both device (in the case of a web app, server) and user (in the case of a web app, browser session).

1.3.5 Using a Saved Refresh Token

A saved refresh token can be used to immediately obtain an authorized instance of Reddit like so:

```python
reddit = praw.Reddit(client_id='SI8pN3DSbt0zor',
                     client_secret='xaxkj7HNh8kwq8e5t4m6KvSrbTI',
                     refresh_token='WeheY7PwgeCZj4S3QgUcLhKE5S2s4eAYdxM',
                     user_agent='testscript by /u/fakebot3')
print(reddit.auth.scopes())
```

The output from the above code displays which scopes are available on the Reddit instance.

Note: Observe that redirect_uri does not need to be provided in such cases. It is only needed when url() is used.

1.4 Configuring PRAW

1.4.1 Configuration Options

PRAW’s configuration options are broken down into the following categories:

- Basic Configuration Options
- OAuth Configuration Options
• Reddit Site Configuration Options
• Custom Configuration Options

All of these options can be provided in any of the ways mentioned in Configuring PRAW.

Basic Configuration Options

check_for_updates When true, check for new versions of PRAW. When a newer version of PRAW is available a message is reported via standard out (default: true).

user_agent (Required) A unique description of your application. The following format is recommended according to Reddit’s API Rules: <platform>:<app ID>:<version string> (by /u/<reddit username>).

OAuth Configuration Options

client_id (Required) The OAuth client id associated with your registered Reddit application. See Authenticating via OAuth for instructions on registering a Reddit application.

client_secret The OAuth client secret associated with your registered Reddit application. This option is required for all application types, however, the value must be set to None for installed applications.

refresh_token For either web applications, or installed applications using the code flow, you can directly provide a previously obtained refresh token. Using a web application in conjunction with this option is useful, for example, if you prefer to not have your username and password available to your program, as required for a script application. See: Obtaining a Refresh Token and Using a Saved Refresh Token

redirect_uri The redirect URI associated with your registered Reddit application. This field is unused for script applications and is only needed for both web applications, and installed applications when the url() method is used.

password The password of the Reddit account associated with your registered Reddit script application. This field is required for script applications, and PRAW assumes it is working with a script application by its presence.

username The username of the Reddit account associated with your registered Reddit script application. This field is required for script applications, and PRAW assumes it is working with a script application by its presence.

Reddit Site Configuration Options

PRAW can be configured to work with instances of Reddit which are not hosted at reddit.com. The following options may need to be updated in order to successfully access a third-party Reddit site:

comment_kind The type prefix for comments on the Reddit instance (default: t1_).

message_kind The type prefix for messages on the Reddit instance (default: t4_).

oauth_url The URL used to access the Reddit instance’s API (default: https://oauth.reddit.com).

reddit_url The URL used to access the Reddit instance. PRAW assumes the endpoints for establishing OAuth authorization are accessible under this URL (default: https://www.reddit.com).

redditor_kind The type prefix for redditors on the Reddit instance (default: t2_).

short_url The URL used to generate short links on the Reddit instance (default: https://redd.it).
**submission_kind**  The type prefix for submissions on the Reddit instance (default: t3_).

**subreddit_kind**  The type prefix for subreddits on the Reddit instance (default: t5_).

### Custom Configuration Options

Your application can utilize PRAW’s configuration system in order to provide its own custom settings.

For instance you might want to add an `app_debugging: true` option to your application’s `praw.ini` file. To retrieve the value of this custom option from an instance of `Reddit` you can execute:

```python
reddit.config.custom['app_debugging']
```

**Note:** Custom PRAW configuration environment variables are not supported. You can directly access environment variables via `os.getenv`.

Configuration options can be provided to PRAW in one of three ways:

#### 1.4.2 `praw.ini` Files

PRAW comes with a `praw.ini` file in the package directory, and looks for user defined `praw.ini` files in a few other locations:

1. In the current working directory at the time `Reddit` is initialized.
2. In the launching user’s config directory. This directory, if available, is detected in order as one of the following:
   1. In the directory specified by the `XDG_CONFIG_HOME` environment variable on operating systems that define such an environment variable (some modern Linux distributions).
   2. In the directory specified by `$HOME/.config` if the `HOME` environment variable is defined (Linux and Mac OS systems).
   3. In the directory specified by the `APPDATA` environment variable (Windows).

**Format of `praw.ini`**

`praw.ini` uses the INI file format, which can contain multiple groups of settings separated into sections. PRAW refers to each section as a site. The default site, `DEFAULT`, is provided in the package’s `praw.ini` file. This site defines the default settings for interaction with Reddit. The contents of the package’s `praw.ini` file are:

```ini
[DEFAULT]
# A boolean to indicate whether or not to check for package updates.
check_for_updates=True

# Object to kind mappings
comment_kind=t1
message_kind=t4
redditor_kind=t2
submission_kind=t3
subreddit_kind=t5
trophy_kind=t6

# The URL prefix for OAuth-related requests.
```

(continues on next page)
oauth_url=https://oauth.reddit.com
# The URL prefix for regular requests.
reddit_url=https://www.reddit.com
# The URL prefix for short URLs.
short_url=https://redd.it

Warning: Avoid modifying the package’s praw.ini file. Prefer instead to override its values in your own praw.ini file. You can even override settings of the DEFAULT site in user defined praw.ini files.

Defining Additional Sites

In addition to the DEFAULT site, additional sites can be configured in user defined praw.ini files. All sites inherit settings from the DEFAULT site and can override whichever settings desired.

Defining additional sites is a convenient way to store OAuth credentials for various accounts, or distinct OAuth applications. For example if you have three separate bots, you might create a site for each:

```
[bot1]
client_id=Y4PJOc1pDQy3xZ
client_secret=UkGLTe6oqsmK5nHCJTHLrwgHpr
password=pni9ubeht4w50gk
username=fakebot1

[bot2]
client_id=6abruJdcIqbc1b
client_secret=Kcn6Bj8Gclyu4FjV077MYtTynfj
password=mi1ky2qzpiq8s59j
username=fakebot2

[bot3]
client_id=S18pN3DSbt0zor
client_secret=xaxkj7HNN8kwg8e5t4m6KvSrbTI
password=1guiwev1fo00esy
username=fakebot3
```

Choosing a Site

Site selection is done via the site_name parameter to Reddit. For example, to use the settings defined for bot2 as shown above, initialize Reddit like so:

```python
reddit = praw.Reddit('bot2', user_agent='bot2 user agent')
```

Note: In the above example you can obviate passing user_agent if you add the setting user_agent=... in the [bot2] site definition.

A site can also be selected via a praw_site environment variable. This approach has precedence over the site_name parameter described above.
1.4.3 Keyword Arguments to Reddit

Most of PRAW’s documentation will demonstrate configuring PRAW through the use of keyword arguments when initializing instances of Reddit. All of the Configuration Options can be specified using a keyword argument of the same name.

For example, if we wanted to explicitly pass the information for bot3 defined in the praw.ini custom site example without using the bot3 site, we would initialize Reddit as:

```python
reddit = praw.Reddit(client_id='SI8pN3DSbt0zor',
                     client_secret='xaxkj7HNh8kwg8e5t4m6KvSrbTI',
                     password='1guiwevlfo00esyy',
                     user_agent='testscript by /u/fakebot3',
                     username='fakebot3')
```

1.4.4 PRAW Environment Variables

The highest priority configuration options can be passed to a program via environment variables prefixed with praw_.

For example, you can invoke your script as follows:

```
praw_username=bboe praw_password=not_my_password python my_script.py
```

The username and password provided via environment variables will override any such values passed directly when initializing an instance of Reddit, as well as any such values contained in a praw.ini file.

All Configuration Options can be provided in this manner, except for custom options.

Environment variables have the highest priority, followed by keyword arguments to Reddit, and finally settings in praw.ini files.

1.4.5 Using an HTTP or HTTPS proxy with PRAW

PRAW internally relies upon the requests package to handle HTTP requests. Requests supports use of HTTP_PROXY and HTTPS_PROXY environment variables in order to proxy HTTP and HTTPS requests respectively [ref].

Given that PRAW exclusively communicates with Reddit via HTTPS, only the HTTPS_PROXY option should be required.

For example, if you have a script named prawbot.py, the HTTPS_PROXY environment variable can be provided on the command line like so:

```
HTTPS_PROXY=https://localhost:3128 ./prawbot.py
```

1.4.6 Configuring a custom requests Session

PRAW uses requests to handle networking. If your use-case requires custom configuration, it is possible to configure a Session and then use it with PRAW.

For example, some networks use self-signed SSL certificates when connecting to HTTPS sites. By default, this would raise an exception in Requests. To use a self-signed SSL certificate without an exception from Requests, first export the certificate as a .pem file. Then configure PRAW like so:
import praw
from requests import Session

session = Session()
session.verify = '/path/to/certfile.pem'
reddit = praw.Reddit(client_id='SI8pN3DSbt0zor',
                     client_secret='xaxkj7Hnh8kwg8e5t4m6KvSrbTI',
                     password='1guiwevlfo00esyy',
                     requestor_kwargs={'session': session},  # pass Session
                     user_agent='testscript by /u/fakebot3',
                     username='fakebot3')

The code above creates a Session and configures it to use a custom certificate, then passes it as a parameter when creating the Reddit instance. Note that the example above uses a Password Flow authentication type, but this method will work for any authentication type.

1.5 Running Multiple Instances of PRAW

PRAW, as of version 4, performs rate limiting dynamically based on the HTTP response headers from Reddit. As a result you can safely run a handful of PRAW instances without any additional configuration.

Note: Running more than a dozen or so instances of PRAW concurrently from may occasionally result in exceeding Reddit’s rate limits as each instance can only guess how many other instances are running.

If you are authorized on other users behalf, each authorization should have its own rate limit, even when running from a single IP address.

1.5.1 Multiple Programs

The recommended way to run multiple instances of PRAW is to simply write separate independent python programs. With this approach one program can monitor a comment stream and reply as needed, and another program can monitor a submission stream, for example.

If these programs need to share data consider using a third party system such as a database, or queuing system.

1.5.2 Multiple Threads

Warning: PRAW is not thread safe.

In a nutshell, instances of Reddit are not thread safe for a number of reasons in its own code and each instance depends on an instance of requests.Session, which is not thread safe [ref].

In theory having a unique Reddit instance for each thread should work. However, until someone perpetually volunteers to be PRAW’s thread safety instructor, little to no support will go toward any PRAW issues that could be affected by the use of multiple threads. Consider using multiple processes instead.

Please see this discussion for more information.
1.6 Logging in PRAW

Occasionally it is useful to observe the HTTP requests that PRAW is issuing. To do so you have to configure and enable logging.

To log everything available add the following to your code:

```python
import logging

handler = logging.StreamHandler()
handler.setLevel(logging.DEBUG)
logger = logging.getLogger('prawcore')
logger.setLevel(logging.DEBUG)
logger.addHandler(handler)
```

When properly configured HTTP requests that are issued should produce output similar to the following:

```
Fetching: GET https://oauth.reddit.com/api/v1/me
Data: None
Params: {'raw_json': 1}
Response: 200 (876 bytes)
```

For more information on logging, see `logging.Logger`.

1.7 The Reddit Instance

```python
class praw.Reddit (site_name=None, requestor_class=None, requestor_kwargs=None, **config_settings))
```

The Reddit class provides convenient access to Reddit’s API. Instances of this class are the gateway to interacting with Reddit’s API through PRAW. The canonical way to obtain an instance of this class is via:

```python
import praw
reddit = praw.Reddit(client_id='CLIENT_ID',
                    client_secret='CLIENT_SECRET',
                    password='PASSWORD',
                    user_agent='USERAGENT',
                    username='USERNAME')
```

```
__init__ (site_name=None, requestor_class=None, requestor_kwargs=None, **config_settings))
```

Initialize a Reddit instance.

**Parameters**

- **site_name** – The name of a section in your `praw.ini` file from which to load settings from. This parameter, in tandem with an appropriately configured `praw.ini` file is useful if you wish to easily save credentials for different applications, or communicate with other servers running `reddit`. If `site_name` is `None`, then the site name will be looked for in the environment variable `praw_site`. If it is not found there, the `DEFAULT` site will be used.

- **requestor_class** – A class that will be used to create a requestor. If not set, use `prawcore.Requestor` (default: `None`).

- **requestor_kwargs** – Dictionary with additional keyword arguments used to initialize the requestor (default: `None`).
Additional keyword arguments will be used to initialize the `Config` object. This can be used to specify configuration settings during instantiation of the `Reddit` instance. For more details please see [Configuring PRAW](#).

Required settings are:

- `client_id`
- `client_secret` (for installed applications set this value to `None`)
- `user_agent`

The `requestor_class` and `requestor_kwargs` allow for customization of the requestor `Reddit` will use. This allows, e.g., easily adding behavior to the requestor or wrapping its `Session` in a caching layer. Example usage:

```python
import json, betamax, requests

class JSONDebugRequestor(Requestor):
    def request(self, *args, **kwargs):
        response = super().request(*args, **kwargs)
        print(json.dumps(response.json(), indent=4))
        return response

my_session = betamax.Betamax(requests.Session())
reddit = Reddit(..., requestor_class=JSONDebugRequestor,
                 requestor_kwargs={'session': my_session})
```

**auth** = `None`

An instance of `Auth`.

Provides the interface for interacting with installed and web applications. See [Obtain the Authorization URL](#).

**comment** *(id=None, url=None)*

Return a lazy instance of `Comment` for `id`.

**Parameters**

- `id` – The ID of the comment.
- `url` – A permalink pointing to the comment.

**Note:** If you want to obtain the comment’s replies, you will need to call `refresh()` on the returned `Comment`.

**domain** *(domain)*

Return an instance of `DomainListing`.

**Parameters**

- `domain` – The domain to obtain submission listings for.

**front** = `None`

An instance of `Front`.

Provides the interface for interacting with front page listings. For example:

```python
for submission in reddit.front.hot():
    print(submission)
```

**get** *(path, params=None)*

Return parsed objects returned from a GET request to `path`.

---

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Parameters

- **path** – The path to fetch.
- **params** – The query parameters to add to the request (default: None).

```python
inbox = None
An instance of Inbox.

Provides the interface to a user’s inbox which produces Message, Comment, and Submission instances. For example to iterate through comments which mention the authorized user run:

```python
for comment in reddit.inbox.mentions():
    print(comment)
```

**info**(fullnames=None, url=None)

Fetch information about each item in fullnames or from url.

Parameters

- **fullnames** – A list of fullnames for comments, submissions, and/or subreddits.
- **url** – A url (as a string) to retrieve lists of link submissions from.

Returns A generator that yields found items in their relative order.

Items that cannot be matched will not be generated. Requests will be issued in batches for each 100 fullnames.

**Note:** For comments that are retrieved via this method, if you want to obtain its replies, you will need to call `refresh()` on the yielded Comment.

**Note:** When using the URL option, it is important to be aware that URLs are treated literally by Reddit’s API. As such, the URLs “youtube.com” and “https://www.youtube.com” will provide a different set of submissions.

```python
live = None
An instance of LiveHelper.

Provides the interface for working with LiveThread instances. At present only new LiveThreads can be created.

```python
reddit.live.create('title', 'description')
```

**multireddit** = None

An instance of MultiredditHelper.

Provides the interface to working with Multireddit instances. For example you can obtain a Multireddit instance via:

```python
reddit.multireddit('samuraisam', 'programming')
```

**patch**(path, data=None)

Return parsed objects returned from a PATCH request to path.

Parameters

- **path** – The path to fetch.
• **data** – Dictionary, bytes, or file-like object to send in the body of the request (default: None).

**post**(path, data=None, files=None, params=None)

Return parsed objects returned from a POST request to path.

**Parameters**

• **path** – The path to fetch.

• **data** – Dictionary, bytes, or file-like object to send in the body of the request (default: None).

• **files** – Dictionary, filename to file (like) object mapping (default: None).

• **params** – The query parameters to add to the request (default: None).

**put**(path, data=None)

Return parsed objects returned from a PUT request to path.

**Parameters**

• **path** – The path to fetch.

• **data** – Dictionary, bytes, or file-like object to send in the body of the request (default: None).

**random_subreddit**(nsfw=False)

Return a random lazy instance of Subreddit.

**Parameters**

nsfw – Return a random NSFW (not safe for work) subreddit (default: False).

**read_only**

Return True when using the ReadOnlyAuthorizer.

**redditor**(name)

Return a lazy instance of Redditor for name.

**Parameters**

name – The name of the redditor.

**redditors = None**

An instance of Redditors.

Provides the interface for Redditor discovery. For example to iterate over the newest Redditors, run:

```python
for redditor in reddit.redditors.new(limit=None):
    print(redditor)
```

**request**(method, path, params=None, data=None, files=None)

Return the parsed JSON data returned from a request to URL.

**Parameters**

• **method** – The HTTP method (e.g., GET, POST, PUT, DELETE).

• **path** – The path to fetch.

• **params** – The query parameters to add to the request (default: None).

• **data** – Dictionary, bytes, or file-like object to send in the body of the request (default: None).

• **files** – Dictionary, filename to file (like) object mapping (default: None).

**submission**(id=None, url=None)

Return a lazy instance of Submission.
Parameters

• **id** – A reddit base36 submission ID, e.g., 2gmzqe.
• **url** – A URL supported by `id_from_url()`.

Either `id` or `url` can be provided, but not both.

**subreddit = None**

An instance of `SubredditHelper`.

Provides the interface to working with `Subreddit` instances. For example to create a Subreddit run:

```python
reddit.subreddit.create('coolnewsubname')
```

To obtain a lazy a `Subreddit` instance run:

```python
reddit.subreddit('redditdev')
```

Note that multiple subreddits can be combined and filtered views of `/r/all` can also be used just like a subreddit:

```python
reddit.subreddit('redditdev+learnpython+botwatch')
reddit.subreddit('all-redditdev-learnpython')
```

**subreddits = None**

An instance of `Subreddits`.

Provides the interface for `Subreddit` discovery. For example to iterate over the set of default subreddits run:

```python
for subreddit in reddit.subreddits.default(limit=None):
    print(subreddit)
```

**user = None**

An instance of `User`.

Provides the interface to the currently authorized `Redditor`. For example to get the name of the current user run:

```python
print(reddit.user.me())
```

### 1.7.1 `reddit.front`

**class praw.models.Front(reddit)**

Front is a Listing class that represents the front page.

```python
__init__(reddit)
```

Initialize a Front instance.

**best(**

**generator_kwargs**)

Return a ListingGenerator for best items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

**comments**

Provide an instance of `CommentHelper`.

For example, to output the author of the 25 most recent comments of `/r/redditdev` execute:
for comment in reddit.subreddit('redditdev').comments(limit=25):
    print(comment.author)

**controversial** *(time_filter='all', **generator_kwargs)*

Return a ListingGenerator for controversial submissions.

Parameters **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

Raise ValueError if time_filter is invalid.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```
reddit.domain('imgur.com').controversial('week')
reddit.multireddit('samuraisam', 'programming').controversial('day')
reddit.redditor('spez').controversial('month')
reddit.redditor('spez').comments.controversial('year')
reddit.redditor('spez').submissions.controversial('all')
reddit.subreddit('all').controversial('hour')
```

**gilded** (**generator_kwargs**)

Return a ListingGenerator for gilded items.

Additional keyword arguments are passed in the initialization of ListingGenerator.

**hot** (**generator_kwargs**)

Return a ListingGenerator for hot items.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```
reddit.domain('imgur.com').hot()
reddit.multireddit('samuraisam', 'programming').hot()
reddit.redditor('spez').hot()
reddit.redditor('spez').comments.hot()
reddit.redditor('spez').submissions.hot()
reddit.subreddit('all').hot()
```

**new** (**generator_kwargs**)

Return a ListingGenerator for new items.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```
reddit.domain('imgur.com').new()
reddit.multireddit('samuraisam', 'programming').new()
reddit.redditor('spez').new()
reddit.redditor('spez').comments.new()
reddit.redditor('spez').submissions.new()
reddit.subreddit('all').new()
```

**classmethod parse**(data, reddit)

Return an instance of cls from data.

Parameters

- **data** – The structured data.
- **reddit** – An instance of Reddit.
random_rising(**generator_kwargs)
Return a ListingGenerator for random rising submissions.

Additional keyword arguments are passed in the initialization of ListingGenerator.

rising(**generator_kwargs)
Return a ListingGenerator for rising submissions.

Additional keyword arguments are passed in the initialization of ListingGenerator.

top(time_filter='all', **generator_kwargs)
Return a ListingGenerator for top submissions.

Parameters time_filter – Can be one of: all, day, hour, month, week, year (default: all).

Raise ValueError if time_filter is invalid.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```python
code
reddit.domain('imgur.com').top('week')
reddit.multireddit('samuraisam', 'programming').top('day')
reddit.redditor('spez').top('month')
reddit.redditor('spez').comments.top('year')
reddit.redditor('spez').submissions.top('all')
reddit.subreddit('all').top('hour')
```

1.7.2 reddit.inbox

class praw.models.Inbox(reddit, _data)
Inbox is a Listing class that represents the Inbox.

__init__(reddit, _data)
Initialize a PRAWModel instance.

Parameters reddit – An instance of Reddit.

all(**generator_kwargs)
Return a ListingGenerator for all inbox comments and messages.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To output the type and ID of all items available via this listing do:

```python
code
for item in reddit.inbox.all(limit=None):
    print(repr(item))
```

collapse(items)
Mark an inbox message as collapsed.

Parameters items – A list containing instances of Message.

Requests are batched at 25 items (reddit limit).

For example, to collapse all unread Messages, try:

```python
code
from praw.models import Message
unread_messages = []
for item in reddit.inbox.unread(limit=None):
    if isinstance(item, Message):
        # collapse the message
```

(continues on next page)
unread_messages.append(item)
reddit.inbox.collapse(unread_messages)

See also:
Message.uncollapse()

**comment_replies(**generator_kwargs)**

Return a ListingGenerator for comment replies.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To output the author of one request worth of comment replies try:

```python
for reply in reddit.inbox.comment_replies():
    print(reply.author)
```

**mark_read**(items)

Mark Comments or Messages as read.

**Parameters items** – A list containing instances of Comment and/or Message to be be marked as read relative to the authorized user’s inbox.

Requests are batched at 25 items (reddit limit).

For example, to mark all unread Messages as read, try:

```python
from praw.models import Message
unread_messages = []
for item in reddit.inbox.unread(limit=None):
    if isinstance(item, Message):
        unread_messages.append(item)
reddit.inbox.mark_read(unread_messages)
```

See also:
Comment.mark_read() and Message.mark_read()

**mark_unread**(items)

Unmark Comments or Messages as read.

**Parameters items** – A list containing instances of Comment and/or Message to be be marked as unread relative to the authorized user’s inbox.

Requests are batched at 25 items (reddit limit).

For example, to mark the first 10 items as unread try:

```python
to_unread = list(reddit.inbox.all(limit=10))
reddit.inbox.mark_unread(to_unread)
```

See also:
Comment.mark_unread() and Message.mark_unread()

**mentions(**generator_kwargs)**

Return a ListingGenerator for mentions.

A mention is Comment in which the authorized redditor is named in its body like /u/redditor_name.

Additional keyword arguments are passed in the initialization of ListingGenerator.

For example, to output the author and body of the first 25 mentions try:
```python
for mention in reddit.inbox.mentions(limit=25):
    print('{}\n\n{}'.format(mention.author, mention.body))
```

**message** *(message_id)*

Return a Message corresponding to `message_id`.

Parameters  

- **message_id** – The base36 id of a message.

For example:

```python
message = reddit.inbox.message('7bnlgu')
```

**messages** (**generator_kwargs**)

Return a ListingGenerator for inbox messages.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

For example, to output the subject of the most recent 5 messages try:

```python
for message in reddit.inbox.messages(limit=5):
    print(message.subject)
```

**classmethod parse** *(data, reddit)*

Return an instance of `cls` from `data`.

Parameters

- **data** – The structured data.
- **reddit** – An instance of `Reddit`.

**sent** (**generator_kwargs**)

Return a ListingGenerator for sent messages.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

For example, to output the recipient of the most recent 15 messages try:

```python
for message in reddit.inbox.sent(limit=15):
    print(message.dest)
```

**stream** (**stream_options**)

Yield new inbox items as they become available.

Items are yielded oldest first. Up to 100 historical items will initially be returned.

Keyword arguments are passed to `stream_generator()`.

For example, to retrieve all new inbox items, try:

```python
for item in reddit.inbox.stream():
    print(item)
```

**submission_replies** (**generator_kwargs**)

Return a ListingGenerator for submission replies.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

To output the author of one request worth of submission replies try:

```python
for reply in reddit.inbox.submission_replies():
    print(reply.author)
```
uncollapse(items)
Mark an inbox message as uncollapsed.

Parameters items – A list containing instances of Message.

Requests are batched at 25 items (reddit limit).

For example, to uncollapse all unread Messages, try:

```python
from praw.models import Message
unread_messages = []
for item in reddit.inbox.unread(limit=None):
    if isinstance(item, Message):
        unread_messages.append(item)
reddit.inbox.uncollapse(unread_messages)
```

See also:
Message.collapse()

unread(mark_read=False, **generator_kwargs)
Return a ListingGenerator for unread comments and messages.

Parameters mark_read – Marks the inbox as read (default: False).

Note: This only marks the inbox as read not the messages. Use Inbox.mark_read() to mark the messages.

Additional keyword arguments are passed in the initialization of ListingGenerator.

For example, to output the author of unread comments try:

```python
from praw.models import Comment
for item in reddit.inbox.unread(limit=None):
    if isinstance(item, Comment):
        print(item.author)
```

1.7.3 reddit.live

class praw.models.LiveHelper(reddit, _data)
Provide a set of functions to interact with LiveThreads.

__call__(id)
Return a new lazy instance of LiveThread.

This method is intended to be used as:

```python
livethread = reddit.live('ukaeulik4sw5')
```

Parameters id – A live thread ID, e.g., ukaeulik4sw5.

__init__(reddit, _data)
Initialize a PRAWModel instance.

Parameters reddit – An instance of Reddit.

create(title, description=None, nsfw=False, resources=None)
Create a new LiveThread.
Parameters

• **title** – The title of the new LiveThread.
• **description** – (Optional) The new LiveThread’s description.
• **nsfw** – (boolean) Indicate whether this thread is not safe for work (default: False).
• **resources** – (Optional) Markdown formatted information that is useful for the LiveThread.

**Returns**  The new LiveThread object.

**info**(ids)
Fetch information about each live thread in ids.

**Parameters** ids – A list of IDs for a live thread.

**Returns** A generator that yields LiveThread instances.

Live threads that cannot be matched will not be generated. Requests will be issued in batches for each 100 IDs.

**Note:** This method doesn’t support IDs for live updates.

Usage:

```python
ids = ['3rgnbke2rai6hen7ciytwcxadi',
       'sw7babeycai6hey4ciytwaw3a',
       't8jnufoxss07']
for thread in reddit.live.info(ids)
    print(thread.title)
```

**now()**
Get the currently featured live thread.

**Returns** The LiveThread object, or None if there is no currently featured live thread.

Usage:

```python
thread = reddit.live.now()  # LiveThread object or None
```

classmethod **parse**(data, reddit)
Return an instance of cls from data.

**Parameters**

• **data** – The structured data.
• **reddit** – An instance of Reddit.

### 1.7.4 reddit.multireddit

class **praw.models.MultiredditHelper**(reddit, _data)
Provide a set of functions to interact with Multireddits.

```python
__call__(redditor, name)
Return a lazy instance of Multireddit.
```
Parameters

• **redditor** – A redditor name (e.g., 'spez') or `Redditor` instance who owns the multireddit.

• **name** – The name of the multireddit.

___init___(reddit, _data)
Initialize a PRAWModel instance.

Parameters **reddit** – An instance of `Reddit`.

create(display_name, subreddits, description_md=None, icon_name=None, key_color=None, visibility='private', weighting_scheme='classic')
Create a new multireddit.

Parameters

• **display_name** – The display name for the new multireddit.

• **subreddits** – Subreddits to add to the new multireddit.

• **description_md** – (Optional) Description for the new multireddit, formatted in markdown.

• **icon_name** – (Optional) Can be one of: art and design, ask, books, business, cars, comics, cute animals, diy, entertainment, food and drink, funny, games, grooming, health, life advice, military, models pinup, music, news, philosophy, pictures and gifs, science, shopping, sports, style, tech, travel, unusual stories, video, or None.

• **key_color** – (Optional) RGB hex color code of the form '#FFFFFF'.

• **visibility** – (Optional) Can be one of: hidden, private, public (default: private).

• **weighting_scheme** – (Optional) Can be one of: classic, fresh (default: classic).

Returns The new Multireddit object.

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters

• **data** – The structured data.

• **reddit** – An instance of `Reddit`.

1.7.5 **reedit.redditors**

class praw.models.Redditors(reddit, _data)
Redditors is a Listing class that provides various Redditor lists.

___init___(reddit, _data)
Initialize a PRAWModel instance.

Parameters **reddit** – An instance of `Reddit`.

class **new(**generator_kwargs)
Return a `ListingGenerator` for new Redditors.

:returns Redditor profiles, which are a type of `Subreddit`. 
classmethod parse(data, reddit)
    Return an instance of cls from data.

    Parameters
    • data – The structured data.
    • reddit – An instance of Reddit.

popular(**generator_kwargs)
    Return a ListingGenerator for popular Redditors.
    :returns Redditor profiles, which are a type of Subreddit.

search(query, **generator_kwargs)
    Return a ListingGenerator of Redditors for query.

    Parameters query – The query string to filter Redditors by.
    :returns Redditors.

stream(**stream_options)
    Yield new Redditors as they are created.

    Redditors are yielded oldest first. Up to 100 historical Redditors will initially be returned.
    Keyword arguments are passed to stream_generator().
    :returns Redditor profiles, which are a type of Subreddit.

1.7.6 reddit.subreddit

class praw.models.SubredditHelper(reddit, _data)
    Provide a set of functions to interact with Subreddits.

    __call__(display_name)
        Return a lazy instance of Subreddit.

        Parameters display_name – The name of the subreddit.

    __init__(reddit, _data)
        Initialize a PRAWModel instance.

        Parameters reddit – An instance of Reddit.

create(name, title=None, link_type='any', subreddit_type='public', wikimode='disabled', **other_settings)
    Create a new subreddit.

    Parameters
    • name – The name for the new subreddit.
    • title – The title of the subreddit. When None or '' use the value of name.
    • link_type – The types of submissions users can make. One of any, link, self (default: any).
    • subreddit_type – One of archived, employees_only, gold_only, gold_restricted, private, public, restricted (default: public).
    • wikimode – One of anyone, disabled, modonly.
See `update()` for documentation of other available settings.

Any keyword parameters not provided, or set explicitly to `None`, will take on a default value assigned by the Reddit server.

classmethod `parse` *(data, reddit)*

Return an instance of `cls` from `data`.

Parameters

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

1.7.7 `reddit.subreddits`

```python
class praw.models.Subreddits(reddit, _data)
```

Subreddits is a Listing class that provides various subreddit lists.

```python
__init__ (reddit, _data)
```

Initialize a PRAWModel instance.

Parameters `reddit` – An instance of `Reddit`.

```python
default (**generator_kwars)
```

Return a `ListingGenerator` for default subreddits.

```python
gold (**generator_kwars)
```

Return a `ListingGenerator` for gold subreddits.

```python
new (**generator_kwars)
```

Return a `ListingGenerator` for new subreddits.

```python
classmethod `parse` *(data, reddit)*
```

Return an instance of `cls` from `data`.

Parameters

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

```python
popular (**generator_kwars)
```

Return a `ListingGenerator` for popular subreddits.

```python
recommended (subreddits, omit_subreddits=None)
```

Return subreddits recommended for the given list of subreddits.

Parameters

- `subreddits` – A list of Subreddit instances and/or subreddit names.
- `omit_subreddits` – A list of Subreddit instances and/or subreddit names to exclude from the results (Reddit’s end may not work as expected).

```python
search (query, **generator_kwars)
```

Return a `ListingGenerator` of subreddits matching `query`.

Subreddits are searched by both their title and description. To search names only see `search_by_name`.

Parameters `query` – The query string to filter subreddits by.

```python
search_by_name (query, include_nsfw=True, exact=False)
```

Return list of Subreddits whose names begin with `query`.
Parameters

- **query** – Search for subreddits beginning with this string.
- **include_nsfw** – Include subreddits labeled NSFW (default: True).
- **exact** – Return only exact matches to query (default: False).

`search_by_topic(query)`
Return list of Subreddits whose topics match query.

Parameters **query** – Search for subreddits relevant to the search topic.

`stream(**stream_options)`
Yield new subreddits as they are created.
Subreddits are yielded oldest first. Up to 100 historical subreddits will initially be returned.
Keyword arguments are passed to `stream_generator()`.

### 1.7.8 `reddit.user`

class `praw.models.User(reddit)`
The user class provides methods for the currently authenticated user.

```
__init__(reddit)
Initialize a User instance.

This class is intended to be interfaced with through `reddit.user`.
```

`blocked()`
Return a RedditorList of blocked Redditors.

`contributor_subreddits(**generator_kwargs)`
Return a ListingGenerator of subreddits user is a contributor of.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

`friends()`
Return a RedditorList of friends.

`karma()`
Return a dictionary mapping subreddits to their karma.

`me(use_cache=True)`
Return a `Redditor` instance for the authenticated user.

In `read_only` mode, this method returns `None`.

Parameters **use_cache** – When true, and if this function has been previously called, returned the cached version (default: True).

**Note:** If you change the Reddit instance’s authorization, you might want to refresh the cached value. Prefer using separate Reddit instances, however, for distinct authorizations.

`moderator_subreddits(**generator_kwargs)`
Return a ListingGenerator of subreddits the user is a moderator of.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

`multireddits()`
Return a list of multireddits belonging to the user.

1.7. The Reddit Instance
### classmethod `parse(data, reddit)`

Return an instance of `cls` from `data`.

**Parameters**

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

### preferences

Get an instance of `Preferences`.

The preferences can be accessed as a `dict` like so:

```python
preferences = reddit.user.preferences()
print(preferences['show_link_flair'])
```

Preferences can be updated via:

```python
reddit.user.preferences.update(show_link_flair=True)
```

The `Preferences.update()` method returns the new state of the preferences as a `dict`, which can be used to check whether a change went through. Changes with invalid types or parameter names fail silently.

```python
original_preferences = reddit.user.preferences()
new_preferences = reddit.user.preferences.update(invalid_param=123)
print(original_preferences == new_preferences)  # True, no change
```

### subreddits (**generator_kwargs**)

Return a ListingGenerator of subreddits the user is subscribed to.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

## 1.8 Working with PRAW’s Models

### 1.8.1 Comment

#### class `praw.models.Comment(reddit, id=None, url=None, _data=None)`

A class that represents a reddit comments.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see `Determine Available Attributes of an Object`), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>author</td>
<td>Provides an instance of Redditor.</td>
</tr>
<tr>
<td>body</td>
<td>The body of the comment.</td>
</tr>
<tr>
<td>created_utc</td>
<td>Time the comment was created, represented in Unix Time.</td>
</tr>
<tr>
<td>distinguished</td>
<td>Whether or not the comment is distinguished.</td>
</tr>
<tr>
<td>edited</td>
<td>Whether or not the comment has been edited.</td>
</tr>
<tr>
<td>id</td>
<td>The ID of the comment.</td>
</tr>
<tr>
<td>is_submitter</td>
<td>Whether or not the comment author is also the author of the submission.</td>
</tr>
<tr>
<td>link_id</td>
<td>The submission ID that the comment belongs to.</td>
</tr>
<tr>
<td>parent_id</td>
<td>The ID of the parent comment. If it is a top-level comment, this returns the submission ID instead (prefixed with ‘t3’).</td>
</tr>
<tr>
<td>permalink</td>
<td>A permalink for the comment. Comment objects from the inbox have a context attribute instead.</td>
</tr>
<tr>
<td>replies</td>
<td>Provides an instance of CommentForest.</td>
</tr>
<tr>
<td>score</td>
<td>The number of upvotes for the comment.</td>
</tr>
<tr>
<td>stickied</td>
<td>Whether or not the comment is stickied.</td>
</tr>
<tr>
<td>submission</td>
<td>Provides an instance of Submission. The submission that the comment belongs to.</td>
</tr>
<tr>
<td>subreddit</td>
<td>Provides an instance of Subreddit. The subreddit that the comment belongs to.</td>
</tr>
<tr>
<td>subreddit_id</td>
<td>The subreddit ID that the comment belongs to.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, id=None, url=None, _data=None)
Construct an instance of the Comment object.
```

```python
block()
Block the user who sent the item.

Note: This method pertains only to objects which were retrieved via the inbox.
```

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.block()
# or, identically:
comment.author.block()
```

```python
clear_vote()
Clear the authenticated user’s vote on the object.

Note: Votes must be cast by humans. That is, API clients proxying a human’s action one-for-one are OK, but bots deciding how to vote on content or amplifying a human’s vote are not. See the reddit rules for more details on what constitutes vote cheating. [Ref]
```

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.clear_vote()
comment = reddit.comment(id='dxolpyc')
comment.clear_vote()
```
**collapse()**
Mark the item as collapsed.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox()
# select first inbox item and collapse it
message = next(inbox)
message.collapse()
```

See also **uncollapse()**

**delete()**
Delete the object.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.delete()

submission = reddit.submission('8dmv8z')
submission.delete()
```

**disable_inbox_replies()**
Disable inbox replies for the item.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.disable_inbox_replies()

submission = reddit.submission('8dmv8z')
submission.disable_inbox_replies()
```

See also **enable_inbox_replies()**

**downvote()**
Downvote the object.

**Note:** Votes must be cast by humans. That is, API clients proxying a human's action one-for-one are OK, but bots deciding how to vote on content or amplifying a human's vote are not. See the reddit rules for more details on what constitutes vote cheating. [Ref]

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.downvote()

comment = reddit.comment(id='dxolpyc')
comment.downvote()
```

See also **upvote()**
**edit** *(body)*
Replace the body of the object with body.

**Parameters**  
*body* – The markdown formatted content for the updated object.

**Returns**  
The current instance after updating its attributes.

Example usage:

```python
comment = reddit.comment('dkk4qjd')

# construct edited comment text by appending to old body
edited_body = comment.body + "Edit: thanks for the gold!"
comment.edit(edited_body)
```

**enable_inbox_replies()**
Enable inbox replies for the item.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.enable_inbox_replies()

submission = reddit.submission('8dmv8z')
submission.enable_inbox_replies()
```

See also **disable_inbox_replies()**

**fullname**
Return the object’s fullname.

A fullname is an object’s kind mapping like `t3` followed by an underscore and the object’s base36 ID, e.g., `t1_c5s96e0`.

**gild()**
Gild the author of the item.

**Note:** Requires the authenticated user to own reddit gold creddits. Calling this method will consume one reddit gold creditt.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.gild()

submission = reddit.submission('8dmv8z')
submission.gild()
```

**static id_from_url(url)**
Get the ID of a comment from the full URL.

**is_root**
Return True when the comment is a top level comment.

**mark_read()**
Mark a single inbox item as read.

**Note:** This method pertains only to objects which were retrieved via the inbox.
Example usage:
```python
inbox = reddit.inbox.unread()
for message in inbox:
    # process unread messages
```

See also `mark_unread()`
To mark the whole inbox as read with a single network request, use `praw.models.Inbox.mark_read()`

`mark_unread()`
Mark the item as unread.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:
```python
inbox = reddit.inbox(limit=10)
for message in inbox:
    # process messages
```

See also `mark_read()`

`mod`
Provide an instance of `CommentModeration`.

`parent()`
Return the parent of the comment.

The returned parent will be an instance of either `Comment`, or `Submission`.

If this comment was obtained through a `Submission`, then its entire ancestry should be immediately available, requiring no extra network requests. However, if this comment was obtained through other means, e.g., `reddit.comment('COMMENT_ID')`, `reddit.inbox.comment_replies`, then the returned parent may be a lazy instance of either `Comment`, or `Submission`.

Lazy comment example:
```python
comment = reddit.comment('ck1hv0f')
parent = comment.parent()
    # 'replies' is empty until the comment is refreshed
print(parent.replies)    # Output: []
parent.refresh()
print(parent.replies)    # Output is at least: [Comment(id='ck1hv0f')]
```

**Warning:** Successive calls to `parent()` may result in a network request per call when the comment is not obtained through a `Submission`. See below for an example of how to minimize requests.

If you have a deeply nested comment and wish to most efficiently discover its top-most `Comment` ancestor you can chain successive calls to `parent()` with calls to `refresh()` at every 9 levels. For example:
```python
comment = reddit.comment('dkk4qjd')
ancestor = comment
(continues on next page)```
refresh_counter = 0

while not ancestor.is_root:
    ancestor = ancestor.parent()
    if refresh_counter % 9 == 0:
        ancestor.refresh()
    refresh_counter += 1

print('Top-most Ancestor: {}\n'.format(ancestor))

The above code should result in 5 network requests to Reddit. Without the calls to refresh() it would make at least 31 network requests.

classmethod parse(data, reddit)
    Return an instance of cls from data.

Parameters
    • data – The structured data.
    • reddit – An instance of Reddit.

refresh()
    Refresh the comment’s attributes.
    If using Reddit.comment() this method must be called in order to obtain the comment’s replies.
    Example usage:

        comment = reddit.comment('dkk4qjd')
        comment.refresh()

replies
    Provide an instance of CommentForest.
    This property may return an empty list if the comment has not been refreshed with refresh()
    Sort order and reply limit can be set with the reply_sort and reply_limit attributes before replies
    are fetched, including any call to refresh():

        comment.reply_sort = 'new'
        comment.refresh()
        replies = comment.replies

reply(body)
    Reply to the object.

    Parameters body – The markdown formatted content for a comment.

    Returns A Comment object for the newly created comment or None if Reddit doesn’t provide
    one.
    A None value can be returned if the target is a comment or submission in a quarantined subreddit and
    the authenticated user has not opt-ed in to viewing the content. When this happens the comment will be
    sucessfully created on Reddit and can be retried by drawing the comment from the user’s comment history.
    Example usage:

        submission = reddit.submission(id='5or86n')
        submission.reply('reply')

        comment = reddit.comment(id='dxolpyc')
        comment.reply('reply')
**report (reason)**

Report this object to the moderators of its subreddit.

**Parameters** reason – The reason for reporting.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.report('report reason')

comment = reddit.comment(id='dxolpyc')
comment.report('report reason')
```

**save (category=None)**

Save the object.

**Parameters** category – (Gold) The category to save to. If your user does not have gold this value is ignored by Reddit (default: None).

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.save(category="view later")

comment = reddit.comment(id='dxolpyc')
comment.save()
```

See also **unsave()**

**submission**

Return the Submission object this comment belongs to.

**uncollapse()**

Mark the item as uncollapsed.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox()

# select first inbox item and uncollapse it
message = next(inbox)
message.uncollapse()
```

See also **collapse()**

**unsave()**

Unsave the object.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.unsave()

comment = reddit.comment(id='dxolpyc')
comment.unsave()
```

See also **save()**
**upvote()**

Upvote the object.

*Note:* Votes must be cast by humans. That is, API clients proxying a human’s action one-for-one are OK, but bots deciding how to vote on content or amplifying a human’s vote are not. See the reddit rules for more details on what constitutes vote cheating. [Ref]

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.upvote()

comment = reddit.comment(id='dxolpyc')
comment.upvote()
```

See also `downvote()`

*Note:* This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.2 LiveThread

class praw.models.LiveThread(reddit, id=None, _data=None)

An individual LiveThread object.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list necessarily comprehensive.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>created_utc</td>
<td>The creation time of the live thread, in Unix Time.</td>
</tr>
<tr>
<td>description</td>
<td>Description of the live thread, as Markdown.</td>
</tr>
<tr>
<td>description_html</td>
<td>Description of the live thread, as HTML.</td>
</tr>
<tr>
<td>id</td>
<td>The ID of the live thread.</td>
</tr>
<tr>
<td>nsfw</td>
<td>A bool representing whether or not the live thread is marked as NSFW.</td>
</tr>
</tbody>
</table>

__getitem__(update_id)

Return a lazy LiveUpdate instance.

**Parameters** update_id – A live update ID, e.g., '7827987a-c998-11e4-a0b9-22000b6a88d2'.

Usage:

```python
thread = reddit.live('ukaeulik4sw5')
update = thread['7827987a-c998-11e4-a0b9-22000b6a88d2']
update.thread # LiveThread(id='ukaeulik4sw5')
update.id # '7827987a-c998-11e4-a0b9-22000b6a88d2'
update.author # 'umbrae'
```
__init__(reddit, id=None, _data=None)
Initialize a lazy LiveThread instance.

Parameters

• **reddit** – An instance of Reddit.
• **id** – A live thread ID, e.g., 'ukauelik4sw5'

ccontrib
Provide an instance of LiveThreadContribution.
Usage:

```python
thread = reddit.live('ukauelik4sw5')
thread.contrib.add('### update')
```

contributor
Provide an instance of LiveContributorRelationship.

You can call the instance to get a list of contributors which is represented as RedditorList instance consists of Redditor instances. Those Redditor instances have permissions attributes as contributors:

```python
thread = reddit.live('ukauelik4sw5')
for contributor in thread.contributor():
    # prints `(Redditor(name='Acidtwist'), [u'all'])`
    print(contributor, contributor.permissions)
```

discussions(**generator_kwargs)
Get submissions linking to the thread.

Parameters **generator_kwargs** – keyword arguments passed to ListingGenerator constructor.

Returns A ListingGenerator object which yields Submission object.

Usage:

```python
thread = reddit.live('ukauelik4sw5')
for submission in thread.discussions(limit=None):
    print(submission.title)
```

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters

• **data** – The structured data.
• **reddit** – An instance of Reddit.

report(type)
Report the thread violating the Reddit rules.

Parameters **type** – One of 'spam', 'vote-manipulation', 'personal-information', 'sexualizing-minors', 'site-breaking'.

Usage:

```python
thread = reddit.live('xyu8kmjvfrww')
thread.report('spam')
```
updates(**generator_kwargs)**

Return a ListingGenerator yielding LiveUpdates.

Parameters generator_kwargs – keyword arguments passed to ListingGenerator constructor.

Returns A ListingGenerator object which yields LiveUpdate object.

Usage:

```python
thread = reddit.live('ukaeu1ik4sw5')
after = 'LiveUpdate_fefb3dae-7534-11e6-b259-0ef8c7233633'
for submission in thread.updates(limit=5, params={'after': after}):
    print(submission.body)
```

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

### 1.8.3 LiveUpdate

class praw.models.LiveUpdate(reddit, thread_id=None, update_id=None, _data=None)

An individual LiveUpdate object.

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list necessarily comprehensive.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>author</td>
<td>The Redditor who made the update.</td>
</tr>
<tr>
<td>body</td>
<td>Body of the update, as Markdown.</td>
</tr>
<tr>
<td>body_html</td>
<td>Body of the update, as HTML.</td>
</tr>
<tr>
<td>created_utc</td>
<td>The time the update was created, as Unix Time.</td>
</tr>
<tr>
<td>stricken</td>
<td>A bool representing whether or not the update was stricken (see strike()).</td>
</tr>
</tbody>
</table>

__init__(reddit, thread_id=None, update_id=None, _data=None)

Initialize a lazy LiveUpdate instance.

Either thread_id and update_id, or _data must be provided.

Parameters

• reddit – An instance of Reddit.

• thread_id – A live thread ID, e.g., 'ukaeulik4sw5'.

• update_id – A live update ID, e.g., '7827987a-c998-11e4-a0b9-22000b6a88d2'.

Usage:

```python
update = LiveUpdate(reddit, 'ukaeulik4sw5',
                    '7827987a-c998-11e4-a0b9-22000b6a88d2')
update.thread # LiveThread(id='ukaeulik4sw5')
```
contrib

Provide an instance of `LiveUpdateContribution`.

Usage:

```python
thread = reddit.live('ukaeu1ik4sw5')
update = thread['7827987a-c998-11e4-a0b9-22000b6a88d2']
update.contrib # LiveUpdateContribution instance
```

fullname

Return the object’s fullname.

A fullname is an object’s kind mapping like `t3` followed by an underscore and the object’s base36 ID, e.g., `t1_c5s96e0`.

**classmethod parse**(data, reddit)

Return an instance of `cls` from `data`.

Parameters

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

thread

Return `LiveThread` object the update object belongs to.

---

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.4 Message

**class** `praw.models.Message**(reddit, _data)**

A class for private messages.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>author</td>
<td>Provides an instance of Redditor.</td>
</tr>
<tr>
<td>body</td>
<td>The body of the message.</td>
</tr>
<tr>
<td>created_utc</td>
<td>Time the message was created, represented in Unix Time.</td>
</tr>
<tr>
<td>dest</td>
<td>Provides an instance of Redditor. The recipient of the message.</td>
</tr>
<tr>
<td>id</td>
<td>The ID of the message.</td>
</tr>
<tr>
<td>name</td>
<td>The full ID of the message, prefixed with ‘t4’.</td>
</tr>
<tr>
<td>subject</td>
<td>The subject of the message.</td>
</tr>
<tr>
<td>subreddit</td>
<td>If the message was sent from a subreddit, provides an instance of Subreddit.</td>
</tr>
<tr>
<td>was_comment</td>
<td>Whether or not the message was a comment reply.</td>
</tr>
</tbody>
</table>

```
__init__(reddit, _data)

Construct an instance of the Message object.
```

```
block()

Block the user who sent the item.

**Note:** This method pertains only to objects which were retrieved via the inbox.
```

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.block()
# or, identically:
comment.author.block()
```

```
collapse()

Mark the item as collapsed.

**Note:** This method pertains only to objects which were retrieved via the inbox.
```

Example usage:

```python
inbox = reddit.inbox()
# select first inbox item and collapse it
message = next(inbox)
message.collapse()
```

See also `uncollapse()`

```
delete()

Delete the message.

**Note:** Reddit does not return an indication of whether or not the message was successfully deleted.
```

```
fullname

Return the object’s fullname.

A fullname is an object’s kind mapping like t3 followed by an underscore and the object’s base36 ID, e.g., t1_c5s96e0.
```

1.8. Working with PRAW’s Models
**mark_read()**

Mark a single inbox item as read.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox.unread()
for message in inbox:
    # process unread messages
```

See also **mark_unread()**

To mark the whole inbox as read with a single network request, use `praw.models.Inbox.mark_read()`.

**mark_unread()**

Mark the item as unread.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox(limit=10)
for message in inbox:
    # process messages
```

See also **mark_read()**

**classmethod parse**(data, reddit)

Return an instance of Message or SubredditMessage from data.

**Parameters**

- `data` – The structured data.
- `reddit` – An instance of Reddit.

**reply**(body)

Reply to the object.

**Parameters**

- `body` – The markdown formatted content for a comment.

**Returns**

A `Comment` object for the newly created comment or `None` if Reddit doesn’t provide one.

A `None` value can be returned if the target is a comment or submission in a quarantined subreddit and the authenticated user has not opt-ed in to viewing the content. When this happens the comment will be successfully created on Reddit and can be retried by drawing the comment from the user's comment history.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.reply('reply')

comment = reddit.comment(id='dxolpyc')
comment.reply('reply')
```
**uncollapse()**
Mark the item as uncollapsed.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox()
# select first inbox item and uncollapse it
message = next(inbox)
message.uncollapse()
```

See also **collapse()**

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.5 ModmailConversation

**class praw.models.ModmailConversation**(reddit, id=None, mark_read=False, _data=None)
A class for modmail conversations.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>authors</td>
<td>Provides an ordered list of Redditor instances. The authors of each message in the modmail conversation.</td>
</tr>
<tr>
<td>id</td>
<td>The ID of the ModmailConversation.</td>
</tr>
<tr>
<td>is_highlighted</td>
<td>Whether or not the ModmailConversation is highlighted.</td>
</tr>
<tr>
<td>is_internal</td>
<td>Whether or not the ModmailConversation is a private mod conversation.</td>
</tr>
<tr>
<td>last_mod_update</td>
<td>Time of the last mod message reply, represented in the ISO 8601 standard with timezone.</td>
</tr>
<tr>
<td>last_updated</td>
<td>Time of the last message reply, represented in the ISO 8601 standard with timezone.</td>
</tr>
<tr>
<td>last_user_update</td>
<td>Time of the last user message reply, represented in the ISO 8601 standard with timezone.</td>
</tr>
<tr>
<td>num_messages</td>
<td>The number of messages in the ModmailConversation.</td>
</tr>
<tr>
<td>obj_ids</td>
<td>Provides a list of dictionaries representing mod actions on the ModmailConversation. Each dict contains attributes of ‘key’ and ‘id’. The key can be either ‘messages’ or ‘ModAction’. ModAction represents archiving/highlighting etc.</td>
</tr>
<tr>
<td>owner</td>
<td>Provides an instance of Subreddit. The subreddit that the ModmailConversation belongs to.</td>
</tr>
<tr>
<td>participant</td>
<td>Provides an instance of Redditor. The participating user in the ModmailConversation.</td>
</tr>
<tr>
<td>subject</td>
<td>The subject of the ModmailConversation.</td>
</tr>
</tbody>
</table>

**__init__(reddit, id=None, mark_read=False, _data=None)**
Construct an instance of the ModmailConversation object.

**Parameters**

- **mark_read** – If True, conversation is marked as read (default: False).
archive()    
Archive the conversation.
For example:

```python
reddit.subreddit('redditdev').modmail('2gmz').archive()
```

highlight()    
Highlight the conversation.
For example:

```python
reddit.subreddit('redditdev').modmail('2gmz').highlight()
```

mute()    
Mute the non-mod user associated with the conversation.
For example:

```python
reddit.subreddit('redditdev').modmail('2gmz').mute()
```

classmethod parse(data, reddit, convert_objects=True)    
Return an instance of ModmailConversation from data.
Parameters
- `data` – The structured data.
- `reddit` – An instance of Reddit.
- `convert_objects` – If True, convert message and mod action data into objects (default: True).

read(other_conversations=None)    
Mark the conversation(s) as read.
Parameters `other_conversations` – A list of other conversations to mark (default: None).
For example, to mark the conversation as read along with other recent conversations from the same user:

```python
subreddit = reddit.subreddit('redditdev')
conversation = subreddit.modmail.conversation('2gmz')
conversation.read(other_conversations=conversation.user.recent_convos)
```

reply(body, author_hidden=False, internal=False)    
Reply to the conversation.
Parameters
- `body` – The markdown formatted content for a message.
- `author_hidden` – When True, author is hidden from non-moderators (default: False).
- `internal` – When True, message is a private moderator note, hidden from non-moderators (default: False).

Returns A ModmailMessage object for the newly created message.
For example, to reply to the non-mod user while hiding your username:

```python
conversation = reddit.subreddit('redditdev').modmail('2gmz')
conversation.reply('Message body', author_hidden=True)
```
To create a private moderator note on the conversation:

```python
conversation.reply('Message body', internal=True)
```

**unarchive()**
Unarchive the conversation.
For example:

```python
reddit.subreddit('redditdev').modmail('2gmz').unarchive()
```

**unhighlight()**
Un-highlight the conversation.
For example:

```python
reddit.subreddit('redditdev').modmail('2gmz').unhighlight()
```

**unmute()**
Unmute the non-mod user associated with the conversation.
For example:

```python
reddit.subreddit('redditdev').modmail('2gmz').unmute()
```

**unread(other_conversations=None)**
Mark the conversation(s) as unread.

**Parameters**

other_conversations – A list of other conversations to mark (default: None).

For example, to mark the conversation as unread along with other recent conversations from the same user:

```python
subreddit = reddit.subreddit('redditdev')
conversation = subreddit.modmail.conversation('2gmz')
conversation.unread(other_conversations=conversation.user.recent_convos)
```

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.6 MoreComments

**class praw.models.MoreComments(reddit, _data)**
A class indicating there are more comments.

**__init__(reddit, _data)**
Construct an instance of the MoreComments object.

**comments(update=True)**
Fetch and return the comments for a single MoreComments object.

**classmethod parse(data, reddit)**
Return an instance of cls from data.

**Parameters**

...
• **data** – The structured data.
• **reddit** – An instance of *Reddit*.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.7 Multireddit

**class praw.models.Multireddit**(reddit, _data)

A class for users’ Multreddits.

This is referred to as a Custom Feed on the Reddit UI.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list necessarily comprehensive.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>can_edit</td>
<td>A bool representing whether or not the authenticated user may edit the multireddit.</td>
</tr>
<tr>
<td>copied_from</td>
<td>The multireddit that the multireddit was copied from, if it exists, otherwise None.</td>
</tr>
<tr>
<td>created_utc</td>
<td>When the multireddit was created, in Unix Time.</td>
</tr>
<tr>
<td>description_html</td>
<td>The description of the multireddit, as HTML.</td>
</tr>
<tr>
<td>description_md</td>
<td>The description of the multireddit, as Markdown.</td>
</tr>
<tr>
<td>display_name</td>
<td>The display name of the multireddit.</td>
</tr>
<tr>
<td>name</td>
<td>The name of the multireddit.</td>
</tr>
<tr>
<td>over_18</td>
<td>A bool representing whether or not the multireddit is restricted for users over 18.</td>
</tr>
<tr>
<td>subreddits</td>
<td>A list of <em>Subreddits</em> that make up the multireddit.</td>
</tr>
<tr>
<td>visibility</td>
<td>The visibility of the multireddit, either private, public, or hidden.</td>
</tr>
</tbody>
</table>

**__init__**(reddit, _data)

Construct an instance of the Multireddit object.

**add**(subreddit)

Add a subreddit to this multireddit.

**Parameters**

*subreddit* – The subreddit to add to this multi.

**comments**

Provide an instance of *CommentHelper*.

For example, to output the author of the 25 most recent comments of /r/redditdev execute:

```python
for comment in reddit.subreddit('redditdev').comments(limit=25):
    print(comment.author)
```

**controversial**(time_filter='all', **generator_kwargs)**

Return a ListingGenerator for controversial submissions.

**Parameters**

*time_filter* – Can be one of: all, day, hour, month, week, year (default: all).
Raise `ValueError` if `time_filter` is invalid.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').controversial('week')
reddit.multireddit('samuraisam', 'programming').controversial('day')
reddit.redditor('spez').controversial('month')
reddit.redditor('spez').comments.controversial('year')
reddit.redditor('spez').submissions.controversial('all')
reddit.subreddit('all').controversial('hour')
```

copy (display_name=None)
Copy this multireddit and return the new multireddit.

**Parameters**

- `display_name` – (optional) The display name for the copied multireddit. Reddit will generate the `name` field from this display name. When not provided the copy will use the same display name and name as this multireddit.

delete()
Delete this multireddit.

gilded(**generator_kwargs)
Return a ListingGenerator for gilded items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

hot(**generator_kwargs)
Return a ListingGenerator for hot items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').hot()
reddit.multireddit('samuraisam', 'programming').hot()
reddit.redditor('spez').hot()
reddit.redditor('spez').comments.hot()
reddit.redditor('spez').submissions.hot()
reddit.subreddit('all').hot()
```

new(**generator_kwargs)
Return a ListingGenerator for new items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').new()
reddit.multireddit('samuraisam', 'programming').new()
reddit.redditor('spez').new()
reddit.redditor('spez').comments.new()
reddit.redditor('spez').submissions.new()
reddit.subreddit('all').new()
```

classmethod parse(data, reddit)
Return an instance of `cls` from `data`.

**Parameters**

- `data` – The structured data.
• **reddit** – An instance of *Reddit*.

**random_rising(**generator_kwargs)**
Return a ListingGenerator for random rising submissions.
Additional keyword arguments are passed in the initialization of *ListingGenerator*.

**remove**(subreddit)
Remove a subreddit from this multireddit.

**Parameters**

• **subreddit** – The subreddit to remove from this multi.

**rising(**generator_kwargs)**
Return a ListingGenerator for rising submissions.
Additional keyword arguments are passed in the initialization of *ListingGenerator*.

**static sluggify**(title)
Return a slug version of the title.

**Parameters**

• **title** – The title to make a slug of.

Adapted from reddit’s `utils.py`.

**stream**
Provide an instance of *SubredditStream*.

Streams can be used to indefinitely retrieve new comments made to a subreddit, like:

```python
for comment in reddit.multireddit('spez', 'fun').stream.comments():
    print(comment)
```

Additionally, new submissions can be retrieved via the stream. In the following example all submissions are fetched via the special subreddit `all`:

```python
for submission in reddit.multireddit('bboe', 'games').stream.submissions():
    print(submission)
```

**top**(time_filter='all', **generator_kwargs)
Return a ListingGenerator for top submissions.

**Parameters**

• **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

Raise `ValueError` if **time_filter** is invalid.

Additional keyword arguments are passed in the initialization of *ListingGenerator*.

This method can be used like:

```python
reddit.domain('imgur.com').top('week')
reddit.multireddit('samuraisam', 'programming').top('day')
reddit.redditor('spez').top('month')
reddit.redditor('spez').comments.top('year')
reddit.redditor('spez').submissions.top('all')
reddit.subreddit('all').top('hour')
```

**update**(**updated_settings**)
Update this multireddit.

Keyword arguments are passed for settings that should be updated. They can any of:

**Parameters**
• **display_name** – The display name for this multireddit. Must be no longer than 50 characters.

• **subreddits** – Subreddits for this multireddit.

• **description_md** – Description for this multireddit, formatted in markdown.

• **icon_name** – Can be one of: art and design, ask, books, business, cars, comics, cute animals, diy, entertainment, food and drink, funny, games, grooming, health, life advice, military, models pinup, music, news, philosophy, pictures and gifs, science, shopping, sports, style, tech, travel, unusual stories, video, or None.

• **key_color** – RGB hex color code of the form '#FFFFFF'.

• **visibility** – Can be one of: hidden, private, public.

• **weighting_scheme** – Can be one of: classic, fresh.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.8 Redditor

**class** `praw.models.Redditor(reddit, name=None, _data=None)`

A class representing the users of reddit.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>comment_karma</td>
<td>The comment karma for the Redditor.</td>
</tr>
<tr>
<td>comments</td>
<td>Provide an instance of SubListing for comment access.</td>
</tr>
<tr>
<td>created_utc</td>
<td>Time the account was created, represented in Unix Time.</td>
</tr>
<tr>
<td>has_verified_email</td>
<td>Whether or not the Redditor has verified their email.</td>
</tr>
<tr>
<td>icon_img</td>
<td>The url of the Redditors’ avatar.</td>
</tr>
<tr>
<td>id</td>
<td>The ID of the Redditor.</td>
</tr>
<tr>
<td>is_employee</td>
<td>Whether or not the Redditor is a Reddit employee.</td>
</tr>
<tr>
<td>is_friend</td>
<td>Whether or not the Redditor is friends with the authenticated user.</td>
</tr>
<tr>
<td>is_mod</td>
<td>Whether or not the Redditor mods any subreddits.</td>
</tr>
<tr>
<td>is_gold</td>
<td>Whether or not the Redditor has active gold status.</td>
</tr>
<tr>
<td>link_karma</td>
<td>The link karma for the Redditor.</td>
</tr>
<tr>
<td>name</td>
<td>The Redditor’s username.</td>
</tr>
<tr>
<td>subreddit</td>
<td>If the Redditor has created a user-subreddit, provides a dictionary of</td>
</tr>
<tr>
<td></td>
<td>additional attributes. See below.</td>
</tr>
<tr>
<td>subreddit['banner_img']</td>
<td>The URL of the user-subreddit banner.</td>
</tr>
<tr>
<td>subreddit['name']</td>
<td>The fullname of the user-subreddit.</td>
</tr>
<tr>
<td>subreddit['over_18']</td>
<td>Whether or not the user-subreddit is NSFW.</td>
</tr>
<tr>
<td>subreddit['public_description']</td>
<td>The public description of the user-subreddit.</td>
</tr>
<tr>
<td>subreddit['subscribers']</td>
<td>The number of users subscribed to the user-subreddit.</td>
</tr>
<tr>
<td>subreddit['title']</td>
<td>The title of the user-subreddit.</td>
</tr>
</tbody>
</table>

__init__(reddit, name=None, _data=None)

Initialize a Redditor instance.

Parameters

- **reddit** – An instance of Reddit.
- **name** – The name of the redditor.

block()

Block the Redditor.

comments

Provide an instance of SubListing for comment access.

For example, to output the first line of all new comments by /u/spez try:

```python
for comment in reddit.redditor('spez').comments.new(limit=None):
    print(comment.body.split('
', 1)[0][:79])
```

controversial(time_filter='all', **generator_kwargs)

Return a ListingGenerator for controversial submissions.

Parameters **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

Raise ValueError if time_filter is invalid.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```python
reddit.domain('imgur.com').controversial('week')
reddit.multireddit('samuraisam', 'programming').controversial('day')
reddit.redditor('spez').controversial('month')
reddit.redditor('spez').comments.controversial('year')
```
```python
redditredditor('spez').submissions.controversial('all')
reddit.subreddit('all').controversial('hour')
```

downvoted(**generator_kwargs)
Return a ListingGenerator for items the user has downvoted.

May raise `prawcore.Forbidden` after issuing the request if the user is not authorized to access the list. Note that because this function returns a `ListingGenerator` the exception may not occur until sometime after this function has returned.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

friend(note=None)
Friend the Redditor.

Parameters

- **note** – A note to save along with the relationship. Requires reddit Gold (default: None).

Calling this method subsequent times will update the note.

friend_info()
Return a Redditor instance with specific friend-related attributes.

Returns

A `Redditor` instance with fields `date`, `id`, and possibly `note` if the authenticated user has reddit Gold.

classmethod from_data(reddit, data)
Return an instance of Redditor, or None from `data`.

fullname
Return the object’s fullname.

A fullname is an object’s kind mapping like `t3` followed by an underscore and the object’s base36 ID, e.g., `t1_c5s96e0`.

gild(months=1)
Gild the Redditor.

Parameters

- **months** – Specifies the number of months to gild up to 36 (default: 1).

gilded(**generator_kwargs)
Return a ListingGenerator for gilded items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

gildings(**generator_kwargs)
Return a ListingGenerator for items the user has gilded.

May raise `prawcore.Forbidden` after issuing the request if the user is not authorized to access the list. Note that because this function returns a `ListingGenerator` the exception may not occur until sometime after this function has returned.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

hidden(**generator_kwargs)
Return a ListingGenerator for items the user has hidden.

May raise `prawcore.Forbidden` after issuing the request if the user is not authorized to access the list. Note that because this function returns a `ListingGenerator` the exception may not occur until sometime after this function has returned.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.  

1.8. Working with PRAW’s Models
hot(**generator_kwargs)
Return a ListingGenerator for hot items.
Additional keyword arguments are passed in the initialization of ListingGenerator.
This method can be used like:

```python
reddit.domain('imgur.com').hot()
reddit.multireddit('samuraisam', 'programming').hot()
reddit.redditor('spez').hot()
reddit.redditor('spez').comments.hot()
reddit.redditor('spez').submissions.hot()
reddit.subreddit('all').hot()
```

message(subject, message, from_subreddit=None)
Send a message to a redditor or a subreddit’s moderators (mod mail).

Parameters

• **subject** – The subject of the message.
• **message** – The message content.
• **from_subreddit** – A Subreddit instance or string to send the message from. When provided, messages are sent from the subreddit rather than from the authenticated user. Note that the authenticated user must be a moderator of the subreddit and have mail permissions.

For example, to send a private message to /u/spez, try:

```python
reddit.redditor('spez').message('TEST', 'test message from PRAW')
```

To send a message to u/spez from the moderators of r/test try:

```python
reddit.redditor('spez').message('TEST', 'test message from r/test',
                               from_subreddit='test')
```

To send a message to the moderators of /r/test, try:

```python
reddit.subreddit('test').message('TEST', 'test PM from PRAW')
```

multireddits()
Return a list of the redditor’s public multireddits.

new(**generator_kwargs)
Return a ListingGenerator for new items.
Additional keyword arguments are passed in the initialization of ListingGenerator.
This method can be used like:

```python
reddit.domain('imgur.com').new()
reddit.multireddit('samuraisam', 'programming').new()
reddit.redditor('spez').new()
reddit.redditor('spez').comments.new()
reddit.redditor('spez').submissions.new()
reddit.subreddit('all').new()
```

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters
• **data** – The structured data.

• **reddit** – An instance of `Reddit`.

**saved(****generator_kwargs**)

Return a ListingGenerator for items the user has saved.

May raise `prawcore.Forbidden` after issuing the request if the user is not authorized to access the list. Note that because this function returns a `ListingGenerator` the exception may not occur until sometime after this function has returned.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

**stream**

Provide an instance of `RedditorStream`.

Streams can be used to indefinitely retrieve new comments made by a redditor, like:

```python
for comment in reddit.redditor('spez').stream.comments():
    print(comment)
```

Additionally, new submissions can be retrieved via the stream. In the following example all submissions are fetched via the redditor `spez`:

```python
for submission in reddit.redditor('spez').stream.submissions():
    print(submission)
```

**submissions**

Provide an instance of `SubListing` for submission access.

For example, to output the title’s of top 100 of all time submissions for `/u/spez` try:

```python
for submission in reddit.redditor('spez').submissions.top('all'):
    print(submission.title)
```

**top**(time_filter='all', **generator_kwargs**)

Return a ListingGenerator for top submissions.

**Parameters**

- **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

Raise `ValueError` if `time_filter` is invalid.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').top('week')
reddit.multireddit('samuraisam', 'programming').top('day')
reddit.redditor('spez').top('month')
reddit.redditor('spez').comments.top('year')
reddit.redditor('spez').submissions.top('all')
reddit.subreddit('all').top('hour')
```

**trophies**()

Return a list of the redditor’s trophies.

**Returns**

A list of `Trophy` objects. Return `[]` if the redditor has no trophy.

Raise `prawcore.exceptions.BadRequest` if the redditor doesn’t exist.

Usage:
```python
for trophy in reddit.redditor('spez').trophies():
    print(trophy.name)
    print(trophy.description)
```

`unblock()`
Unblock the Redditor.

`unfriend()`
Unfriend the Redditor.

`upvoted(**generator_kwargs)`
Return a ListingGenerator for items the user has upvoted.

May raise `prawcore.Forbidden` after issuing the request if the user is not authorized to access the list. Note that because this function returns a `ListingGenerator` the exception may not occur until sometime after this function has returned.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See [Determine Available Attributes of an Object](#) for detailed information.

### 1.8.9 Submission

```python
class praw.models.Submission(reddit, id=None, url=None, _data=None)
```
A class for submissions to reddit.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see [Determine Available Attributes of an Object](#)), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>author</td>
<td>Provides an instance of Redditor.</td>
</tr>
<tr>
<td>clicked</td>
<td>Whether or not the submission has been clicked by the client.</td>
</tr>
<tr>
<td>comments</td>
<td>Provides an instance of CommentForest.</td>
</tr>
<tr>
<td>created_utc</td>
<td>Time the submission was created, represented in Unix Time.</td>
</tr>
<tr>
<td>distinguished</td>
<td>Whether or not the submission is distinguished.</td>
</tr>
<tr>
<td>edited</td>
<td>Whether or not the submission has been edited.</td>
</tr>
<tr>
<td>id</td>
<td>ID of the submission.</td>
</tr>
<tr>
<td>is_self</td>
<td>Whether or not the submission is a selfpost (text-only).</td>
</tr>
<tr>
<td>link_flair_template_id</td>
<td>The link flair’s ID, or None if not flaired.</td>
</tr>
<tr>
<td>link_flair_text</td>
<td>The link flair’s text content, or None if not flaired.</td>
</tr>
<tr>
<td>locked</td>
<td>Whether or not the submission has been locked.</td>
</tr>
<tr>
<td>name</td>
<td>Fullname of the submission.</td>
</tr>
<tr>
<td>num_comments</td>
<td>The number of comments on the submission.</td>
</tr>
<tr>
<td>over_18</td>
<td>Whether or not the submission has been marked as NSFW.</td>
</tr>
<tr>
<td>permalink</td>
<td>A permalink for the submission.</td>
</tr>
<tr>
<td>score</td>
<td>The number of upvotes for the submission.</td>
</tr>
<tr>
<td>selftext</td>
<td>The submissions’ selftext - an empty string if a link post.</td>
</tr>
<tr>
<td>spoiler</td>
<td>Whether or not the submission has been marked as a spoiler.</td>
</tr>
<tr>
<td>stickied</td>
<td>Whether or not the submission is stickied.</td>
</tr>
<tr>
<td>subreddit</td>
<td>Provides an instance of Subreddit.</td>
</tr>
<tr>
<td>title</td>
<td>The title of the submission.</td>
</tr>
<tr>
<td>upvote_ratio</td>
<td>The percentage of upvotes from all votes on the submission.</td>
</tr>
<tr>
<td>url</td>
<td>The URL the submission links to, or the permalink if a selfpost.</td>
</tr>
</tbody>
</table>

__init__ (reddit, id=None, url=None, _data=None)

Initialize a Submission instance.

**Parameters**

- `reddit` – An instance of Reddit.
- `id` – A reddit base36 submission ID, e.g., 2gmzqe.
- `url` – A URL supported by id_from_url().

Either `id` or `url` can be provided, but not both.

clear_vote()

Clear the authenticated user’s vote on the object.

**Note:** Votes must be cast by humans. That is, API clients proxying a human’s action one-for-one are OK, but bots deciding how to vote on content or amplifying a human’s vote are not. See the reddit rules for more details on what constitutes vote cheating. [Ref]

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.clear_vote()

comment = reddit.comment(id='dxolpyc')
comment.clear_vote()
```

**comments**

Provide an instance of CommentForest.

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This attribute can be used, for example, to obtain a flat list of comments, with any `MoreComments` removed:

```python
submission.comments.replace_more(limit=0)
comments = submission.comments.list()
```

Sort order and comment limit can be set with the `comment_sort` and `comment_limit` attributes before comments are fetched, including any call to `replace_more()`:

```python
submission.comment_sort = 'new'
comments = submission.comments.list()
```

See *Extracting comments with PRAW* for more on working with a `CommentForest`.

**crosspost**

```python
crosspost(subreddit, title=None, send_replies=True, flair_id=None, flair_text=None, nsfw=False, spoiler=False)
```

Crosspost the submission to a subreddit.

**Note:** Be aware you have to be subscribed to the target subreddit.

**Parameters**

- **subreddit** – Name of the subreddit or `Subreddit` object to crosspost into.
- **title** – Title of the submission. Will use this submission’s title if `None` (default: `None`).
- **flair_id** – The flair template to select (default: `None`).
- **flair_text** – If the template’s `flair_text_editable` value is True, this value will set a custom text (default: `None`).
- **send_replies** – When True, messages will be sent to the submission author when comments are made to the submission (default: True).
- **nsfw** – Whether or not the submission should be marked NSFW (default: False).
- **spoiler** – Whether or not the submission should be marked as a spoiler (default: False).

**Returns** A `Submission` object for the newly created submission.

Example usage:

```python
submission = reddit.submission(id='5or86n')
cross_post = submission.crosspost(subreddit="learnprogramming",
                                  send_replies=False)
```

See also *hide()*

**delete()**

Delete the object.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.delete()

submission = reddit.submission('8dmv8z')
submission.delete()
```
disable_inbox_replies()  
Disable inbox replies for the item.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.disable_inbox_replies()

submission = reddit.submission('8dmv8z')
submission.disable_inbox_replies()
```

See also enable_inbox_replies()

downvote()  
Downvote the object.

**Note:** Votes must be cast by humans. That is, API clients proxying a human’s action one-for-one are OK, but bots deciding how to vote on content or amplifying a human’s vote are not. See the reddit rules for more details on what constitutes vote cheating. [Ref]

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.downvote()

comment = reddit.comment(id='dxolpyc')
comment.downvote()
```

See also upvote()

duplicates(**generator_kwargs)  
Return a ListingGenerator for the submission’s duplicates.

Additional keyword arguments are passed in the initialization of ListingGenerator.

Example usage:

```python
submission = reddit.submission(id='5or86n')

for duplicate in submission.duplicates():
    # process each duplicate
```

See also upvote()

edit(body)  
Replace the body of the object with body.

**Parameters** body – The markdown formatted content for the updated object.

**Returns** The current instance after updating its attributes.

Example usage:

```python
comment = reddit.comment('dkk4qjd')

# construct edited comment text by appending to old body
edited_body = comment.body + "Edit: thanks for the gold!"
comment.edit(edited_body)
```
**enable_inbox_replies()**

Enable inbox replies for the item.

Example usage:

```python
comment = reddit.comment('dxx4qjd')
comment.enable_inbox_replies()
submission = reddit.submission('8dmv8z')
submission.enable_inbox_replies()
```

See also **disable_inbox_replies()**

**flair**

Provide an instance of `SubmissionFlair`.

This attribute is used to work with flair as a regular user of the subreddit the submission belongs to. Moderators can directly use `flair()`.

For example, to select an arbitrary editable flair text (assuming there is one) and set a custom value try:

```python
choices = submission.flair.choices()
template_id = next(x for x in choices if x['flair_text_editable'])['flair_template_id']
submission.flair.select(template_id, 'my custom value')
```

**fullname**

Return the object’s fullname.

A fullname is an object’s kind mapping like t3 followed by an underscore and the object’s base36 ID, e.g., t1_c5s96e0.

**gild()**

Gild the author of the item.

**Note:** Requires the authenticated user to own reddit gold creddits. Calling this method will consume one reddit gold creddit.

Example usage:

```python
comment = reddit.comment('dxx4qjd')
comment.gild()
submission = reddit.submission('8dmv8z')
submission.gild()
```

**hide**(other_submissions=None)

Hide Submission.

**Parameters other_submissions** – When provided, additionally hide this list of `Submission` instances as part of a single request (default: None).

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.hide()
```

See also **unhide()**
**static id_from_url(url)**

Return the ID contained within a submission URL.

**Parameters url** – A url to a submission in one of the following formats (http urls will also work): * https://redd.it/2gmzqe * https://reddit.com/comments/2gmzqe/ * https://www.reddit.com/r/redditdev/comments/2gmzqe/praw_https/

Raise **ClientException** if URL is not a valid submission URL.

**mark_visited()**

Mark submission as visited.

This method requires a subscription to reddit premium.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.mark_visited()
```

**mod**

Provide an instance of **SubmissionModeration**.

**classmethod parse(data, reddit)**

Return an instance of cls from data.

**Parameters**

- **data** – The structured data.
- **reddit** – An instance of Reddit.

**reply(body)**

Reply to the object.

**Parameters body** – The markdown formatted content for a comment.

**Returns** A **Comment** object for the newly created comment or **None** if Reddit doesn’t provide one.

A **None** value can be returned if the target is a comment or submission in a quarantined subreddit and the authenticated user has not opt-ed in to viewing the content. When this happens the comment will be successfully created on Reddit and can be retried by drawing the comment from the user’s comment history.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.reply('reply')

comment = reddit.comment(id='dxolpyc')
comment.reply('reply')
```

**report(reason)**

Report this object to the moderators of its subreddit.

**Parameters reason** – The reason for reporting.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.report('report reason')

comment = reddit.comment(id='dxolpyc')
comment.report('report reason')
```
**save** *(category=None)*

Save the object.

**Parameters** **category** – (Gold) The category to save to. If your user does not have gold this value is ignored by Reddit (default: None).

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.save(category="view later")

comment = reddit.comment(id='dxolpyc')
comment.save()
```

See also **unsave**

**shortlink**

Return a shortlink to the submission.

For example http://redd.it/eorhm is a shortlink for https://www.reddit.com/r/announcements/comments/eorhm/reddit_30_less_typing/.

**unhide** *(other_submissions=None)*

Unhide Submission.

**Parameters** **other_submissions** – When provided, additionally unhide this list of Submission instances as part of a single request (default: None).

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.unhide()
```

See also **hide**

**unsave**

Unsave the object.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.unsave()

comment = reddit.comment(id='dxolpyc')
comment.unsave()
```

See also **save**

**upvote**

Upvote the object.

**Note:** Votes must be cast by humans. That is, API clients proxying a human’s action one-for-one are OK, but bots deciding how to vote on content or amplifying a human’s vote are not. See the reddit rules for more details on what constitutes vote cheating. [Ref]

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.upvote()
```
comment = reddit.comment(id='dxolpyc')
comment.upvote()

See also `downvote()`

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.

### 1.8.10 Subreddit

class praw.models.Subreddit(reddit, display_name=None, _data=None)

A class for Subreddits.

To obtain an instance of this class for subreddit `/r/redditdev` execute:

```python
subreddit = reddit.subreddit('redditdev')
```

While `/r/all` is not a real subreddit, it can still be treated like one. The following outputs the titles of the 25 hottest submissions in `/r/all`:

```python
for submission in reddit.subreddit('all').hot(limit=25):
    print(submission.title)
```

Multiple subreddits can be combined like so:

```python
for submission in reddit.subreddit('redditdev+learnpython').top('all'):
    print(submission)
```

Subreddits can be filtered from combined listings as follows. Note that these filters are ignored by certain methods, including `comments`, `gilded()`, and `SubredditStream.comments()`.

```python
for submission in reddit.subreddit('all-redditdev').new():
    print(submission)
```

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
### Attribute | Description
--- | ---
`can_assign_link_flair` | Whether users can assign their own link flair.
`can_assign_user_flair` | Whether users can assign their own user flair.
`created_utc` | Time the subreddit was created, represented in Unix Time.
`description` | Subreddit description, in Markdown.
`description_html` | Subreddit description, in HTML.
`display_name` | Name of the subreddit.
`id` | ID of the subreddit.
`name` | Fullname of the subreddit.
`over18` | Whether the subreddit is NSFW.
`public_description` | Description of the subreddit, shown in searches and on the “You must be invited to visit this community” page (if applicable).
`spoilers_enabled` | Whether the spoiler tag feature is enabled.
`subscribers` | Count of subscribers.
`user_is_banned` | Whether the authenticated user is banned.
`user_is_moderator` | Whether the authenticated user is a moderator.
`user_is_subscriber` | Whether the authenticated user is subscribed.

```python
__init__(reddit, display_name=None, _data=None)
```
Initialize a Subreddit instance.

**Parameters**

- **reddit** – An instance of Reddit.
- **display_name** – The name of the subreddit.

**Note:** This class should not be initialized directly. Instead obtain an instance via: `reddit.subreddit('subreddit_name')`

---

### banned

Provide an instance of `SubredditRelationship`.

For example to ban a user try:

```python
reddit.subreddit('SUBREDDIT').banned.add('NAME', ban_reason='...')
```

To list the banned users along with any notes, try:

```python
for ban in reddit.subreddit('SUBREDDIT').banned():
    print('{}: {}'.format(ban, ban.note))
```

### collections

Provide an instance of `SubredditCollections`.

To see the permalinks of all Collections that belong to a subreddit, try:

```python
for collection in reddit.subreddit('SUBREDDIT').collections:
    print(collection.permalink)
```

To get a specific Collection by its UUID or permalink, use one of the following:

```python
collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
collection = reddit.subreddit('SUBREDDIT').collections(permalink='https://reddit.com/r/SUBREDDIT/collection/some_uuid')
```
comments
Provide an instance of `CommentHelper`.

For example, to output the author of the 25 most recent comments of `/r/redditdev` execute:

```python
for comment in reddit.subreddit('redditdev').comments(limit=25):
    print(comment.author)
```

contributor
Provide an instance of `ContributorRelationship`.

Contributors are also known as approved submitters.

To add a contributor try:

```python
reddit.subreddit('SUBREDDIT').contributor.add('NAME')
```

controversial
Return a ListingGenerator for controversial submissions.

Parameters:
- `time_filter` – Can be one of: all, day, hour, month, week, year (default: all).

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').controversial('week')
reddit.multireddit('samuraisam', 'programming').controversial('day')
reddit.redditor('spez').controversial('year')
reddit.redditor('spez').submissions.controversial('all')
reddit.subreddit('all').controversial('hour')
```

domains
Return a ListingGenerator for domains.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.subreddit('all').controversial('all')
```

emoji
Provide an instance of `SubredditEmoji`.

This attribute can be used to discover all emoji for a subreddit:

```python
for emoji in reddit.subreddit('iama').emoji:
    print(emoji)
```

A single emoji can be lazily retrieved via:

```python
reddit.subreddit('blah').emoji['emoji_name']
```

Note: Attempting to access attributes of an nonexistent emoji will result in a `ClientException`.

filters
Provide an instance of `SubredditFilters`.

flair
Provide an instance of `SubredditFlair`.

Use this attribute for interacting with a subreddit’s flair. For example to list all the flair for a subreddit which you have the flair moderator permission on try:

```python
for flair in reddit.subreddit('NAME').flair():
    print(flair)
```
Flair templates can be interacted with through this attribute via:

```python
for template in reddit.subreddit('NAME').flair.templates:
    print(template)
```

**fullname**
Return the object’s fullname.

A fullname is an object’s kind mapping like t3 followed by an underscore and the object’s base36 ID, e.g., t1_c5s96e0.

**gilded(**
Return a ListingGenerator for gilded items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

**hot(**
Return a ListingGenerator for hot items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').hot()
reddit.multireddit('samuraisam', 'programming').hot()
reddit.redditor('spez').hot()
reddit.redditor('spez').comments.hot()
reddit.redditor('spez').submissions.hot()
reddit.subreddit('all').hot()
```

**message**(subject, message, from_subreddit=None)
Send a message to a redditor or a subreddit’s moderators (mod mail).

- **subject** – The subject of the message.
- **message** – The message content.
- **from_subreddit** – A Subreddit instance or string to send the message from. When provided, messages are sent from the subreddit rather than from the authenticated user. Note that the authenticated user must be a moderator of the subreddit and have mail permissions.

For example, to send a private message to `/u/spez`, try:

```python
reddit.redditor('spez').message('TEST', 'test message from PRAW')
```

To send a message to `/u/spez` from the moderators of `/r/test` try:

```python
reddit.redditor('spez').message('TEST', 'test message from /r/test',
    from_subreddit='test')
```

To send a message to the moderators of `/r/test`, try:

```python
reddit.subreddit('test').message('TEST', 'test PM from PRAW')
```

**mod**
Provide an instance of `SubredditModeration`.

**moderator**
Provide an instance of `ModeratorRelationship`.
For example to add a moderator try:

```python
reddit.subreddit('SUBREDDIT').moderator.add('NAME')
```

To list the moderators along with their permissions try:

```python
for moderator in reddit.subreddit('SUBREDDIT').moderator():
    print('{}: {}'.format(moderator, moderator.mod_permissions))
```

**modmail**

Provide an instance of `Modmail`.

**muted**

Provide an instance of `SubredditRelationship`.

**new(**`**generator_kwargs**`)**

Return a ListingGenerator for new items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').new()
reddit.multireddit('samuraisam', 'programming').new()
reddit.redditor('spez').new()
reddit.redditor('spez').comments.new()
reddit.redditor('spez').submissions.new()
reddit.subreddit('all').new()
```

**classmethod parse**(`data`, `reddit`)**

Return an instance of `cls` from `data`.

**Parameters**

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

**quaran**

Provide an instance of `SubredditQuarantine`.

This property is named `quaran` because `quarantine` is a Subreddit attribute returned by Reddit to indicate whether or not a Subreddit is quarantined.

**random()**

Return a random Submission.

Returns `None` on subreddits that do not support the random feature. One example, at the time of writing, is /r/wallpapers.

**random_rising(**`**generator_kwargs**`)**

Return a ListingGenerator for random rising submissions.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

**rising(**`**generator_kwargs**`)**

Return a ListingGenerator for rising submissions.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

**rules()**

Return rules for the subreddit.

For example to show the rules of /r/redditdev try:
search\(\text{(query, sort='relevance', syntax='lucene', time_filter='all', **generator_kwargs)}\)

Return a ListingGenerator for items that match \text{query}.

**Parameters**

- **query** – The query string to search for.
- **sort** – Can be one of: relevance, hot, top, new, comments. (default: relevance).
- **syntax** – Can be one of: cloudsearch, lucene, plain (default: lucene).
- **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

For more information on building a search query see: https://www.reddit.com/wiki/search

For example to search all subreddits for praw try:

```python
for submission in reddit.subreddit('all').search('praw'):
    print(submission.title)
```

sticky\(\text{(number=1)}\)

Return a Submission object for a sticky of the subreddit.

**Parameters**

- **number** – Specify which sticky to return. 1 appears at the top (default: 1).

Raises prawcore.NotFound if the sticky does not exist.

stream

Provide an instance of SubredditStream.

Streams can be used to indefinitely retrieve new comments made to a subreddit, like:

```python
for comment in reddit.subreddit('iama').stream.comments():
    print(comment)
```

Additionally, new submissions can be retrieved via the stream. In the following example all submissions are fetched via the special subreddit all:

```python
for submission in reddit.subreddit('all').stream.submissions():
    print(submission)
```

stylesheet

Provide an instance of SubredditStylesheet.

submit\(\text{(title, selftext=None, url=None, flair_id=None, flair_text=None, resubmit=True, send_replies=True, nsfw=False, spoiler=False, collection_id=None)}\)

Add a submission to the subreddit.

**Parameters**

- **title** – The title of the submission.
- **selftext** – The markdown formatted content for a text submission. Use an empty string, '', to make a title-only submission.
- **url** – The URL for a link submission.
- **collection_id** – The UUID of a Collection to add the newly-submitted post to.
- **flair_id** – The flair template to select (default: None).
• **flair_text** – If the template’s `flair_text_editable` value is True, this value will set a custom text (default: None).

• **resubmit** – When False, an error will occur if the URL has already been submitted (default: True).

• **send_replies** – When True, messages will be sent to the submission author when comments are made to the submission (default: True).

• **nsfw** – Whether or not the submission should be marked NSFW (default: False).

• **spoiler** – Whether or not the submission should be marked as a spoiler (default: False).

Returns A `Submission` object for the newly created submission.

Either `selftext` or `url` can be provided, but not both.

For example to submit a URL to `/r/reddit_api_test` do:

```python
title = 'PRAW documentation'
url = 'https://praw.readthedocs.io'
reddit.subreddit('reddit_api_test').submit(title, url=url)
```

Note: For submitting images, videos, and videogifs, see `submit_image()` and `submit_video()`.

---

**submit_image** *(title, image_path, flair_id=None, flair_text=None, resubmit=True, send_replies=True, nsfw=False, spoiler=False, timeout=10, collection_id=None)*

Add an image submission to the subreddit.

Parameters

• **title** – The title of the submission.

• **image_path** – The path to an image, to upload and post.

• **collection_id** – The UUID of a `Collection` to add the newly-submitted post to.

• **flair_id** – The flair template to select (default: None).

• **flair_text** – If the template’s `flair_text_editable` value is True, this value will set a custom text (default: None).

• **resubmit** – When False, an error will occur if the URL has already been submitted (default: True).

• **send_replies** – When True, messages will be sent to the submission author when comments are made to the submission (default: True).

• **nsfw** – Whether or not the submission should be marked NSFW (default: False).

• **spoiler** – Whether or not the submission should be marked as a spoiler (default: False).

• **timeout** – Specifies a particular timeout, in seconds. Use to avoid “Websocket error” exceptions (default: 10).

Note: Reddit’s API uses WebSockets to respond with the link of the newly created post. If this fails, the method will raise `ClientException`. Occasionally, the Reddit post will still be created. More often, there is an error with the image file. If you frequently get exceptions but successfully created posts, try setting the `timeout` parameter to a value above 10.

Returns A `Submission` object for the newly created submission.
For example to submit an image to /r/reddit_api_test do:

```python
title = 'My favorite picture'
image = '/path/to/image.png'
reddit.subreddit('reddit_api_test').submit_image(title, image)
```

**submit_video** (*title*, *video_path*, *videogif=False*, *thumbnail_path=None*, *flair_id=None*,
*flair_text=None*, *resubmit=True*, *send_replies=True*, *nsfw=False*, *spoiler=False*,
*timeout=10*, *collection_id=None*)

Add a video or videogif submission to the subreddit.

**Parameters**

- **title** – The title of the submission.
- **video_path** – The path to a video, to upload and post.
- **videogif** – A *bool* value. If True, the video is uploaded as a videogif, which is essentially a silent video (default: False).
- **thumbnail_path** – (Optional) The path to an image, to be uploaded and used as the thumbnail for this video. If not provided, the PRAW logo will be used as the thumbnail.
- **collection_id** – The UUID of a *Collection* to add the newly-submitted post to.
- **flair_id** – The flair template to select (default: None).
- **flair_text** – If the template’s flair_text_editable value is True, this value will set a custom text (default: None).
- **resubmit** – When False, an error will occur if the URL has already been submitted (default: True).
- **send_replies** – When True, messages will be sent to the submission author when comments are made to the submission (default: True).
- **nsfw** – Whether or not the submission should be marked NSFW (default: False).
- **spoiler** – Whether or not the submission should be marked as a spoiler (default: False).
- **timeout** – Specifies a particular timeout, in seconds. Use to avoid “Websocket error” exceptions (default: 10).

**Note:** Reddit’s API uses WebSockets to respond with the link of the newly created post. If this fails, the method will raise *ClientException*. Occasionally, the Reddit post will still be created. More often, there is an error with the video file. If you frequently get exceptions but successfully created posts, try setting the timeout parameter to a value above 10.

**Returns** A *Submission* object for the newly created submission.

For example to submit a video to /r/reddit_api_test do:

```python
title = 'My favorite movie'
video = '/path/to/video.mp4'
reddit.subreddit('reddit_api_test').submit_video(title, video)
```

**subscribe** (*other_subreddits=None*)

Subscribe to the subreddit.

**Parameters** *other_subreddits* – When provided, also subscribe to the provided list of subreddits.
**top**(time_filter='all', **generator_kwargs)

Return a ListingGenerator for top submissions.

**Parameters**  
**time_filter** – Can be one of: all, day, hour, month, week, year (default: all).  
Raise **ValueError** if time_filter is invalid.

Additional keyword arguments are passed in the initialization of **ListingGenerator**.

This method can be used like:

```python
reddit.domain('imgur.com').top('week')
reddit.multireddit('samuraisam', 'programming').top('day')
reddit.redditor('spez').top('month')
reddit.redditor('spez').comments.top('year')
reddit.redditor('spez').submissions.top('all')
reddit.subreddit('all').top('hour')
```

**traffic()**

Return a dictionary of the subreddit’s traffic statistics.

Raises **prawcore.NotFound** when the traffic stats aren’t available to the authenticated user, that is, they are not public and the authenticated user is not a moderator of the subreddit.

**unsubscribe**(other_subreddits=None)

Unsubscribe from the subreddit.

**Parameters**  
**other_subreddits** – When provided, also unsubscribe to the provided list of subreddits.

**widgets**

Provide an instance of **SubredditWidgets**.

**Example usage**

Get all sidebar widgets:

```python
for widget in reddit.subreddit('redditdev').widgets.sidebar:
    print(widget)
```

Get ID card widget:

```python
print(reddit.subreddit('redditdev').widgets.id_card)
```

**wiki**

Provide an instance of **SubredditWiki**.

This attribute can be used to discover all wikipages for a subreddit:

```python
for wikipage in reddit.subreddit('iama').wiki:
    print(wikipage)
```

To fetch the content for a given wikipage try:

```python
wikipage = reddit.subreddit('iama').wiki['proof']
print(wikipage.content_md)
```

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other
than to instruct you on how to discover what is available. See \textit{Determine Available Attributes of an Object} for detailed information.

### 1.8.11 WikiPage

\texttt{class praw.modelsWikiPage(reddit, subreddit, name, revision=None, \_data=None)}

An individual WikiPage object.

#### Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see \textit{Determine Available Attributes of an Object}), there is not a guarantee that these attributes will always be present, nor is this list necessarily comprehensive.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>content_html</td>
<td>The contents of the wiki page, as HTML.</td>
</tr>
<tr>
<td>content_md</td>
<td>The contents of the wiki page, as Markdown.</td>
</tr>
<tr>
<td>may_revise</td>
<td>A bool representing whether or not the authenticated user may edit the wiki page.</td>
</tr>
<tr>
<td>name</td>
<td>The name of the wiki page.</td>
</tr>
<tr>
<td>revision_by</td>
<td>The Redditor who authored this revision of the wiki page.</td>
</tr>
<tr>
<td>revision_date</td>
<td>The time of this revision, in Unix Time.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit this wiki page belongs to.</td>
</tr>
</tbody>
</table>

\texttt{\_init\_ (reddit, subreddit, name, revision=None, \_data=None)}

Construct an instance of the WikiPage object.

- **Parameters**
  - \texttt{revision} – A specific revision ID to fetch. By default, fetches the most recent revision.

\texttt{edit (content, reason=None, **other\_settings)}

Edit this WikiPage’s contents.

- **Parameters**
  - \texttt{content} – The updated markdown content of the page.
  - \texttt{reason} – (Optional) The reason for the revision.
  - \texttt{other\_settings} – Additional keyword arguments to pass.

\texttt{mod}

Provide an instance of \texttt{WikiPageModeration}.

\texttt{classmethod parse (data, reddit)}

Return an instance of \texttt{cls} from \texttt{data}.

- **Parameters**
  - \texttt{data} – The structured data.
  - \texttt{reddit} – An instance of \texttt{Reddit}.

\texttt{revision (revision)}

Return a specific version of this page by revision ID.

To view revision [ID] of 'praw_test' in '/r/test':

\begin{verbatim}
page = reddit.subreddit('test').wiki['praw_test'].revision('[ID]')
\end{verbatim}
revisions(**generator_kwargs)

Return a generator for page revisions.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To view the wiki revisions for 'praw_test' in '/r/test' try:

```python
for item in reddit.subreddit('test').wiki['praw_test'].revisions():
    print(item)
```

To get WikiPage objects for each revision:

```python
for item in reddit.subreddit('test').wiki['praw_test'].revisions():
    print(item['page'])
```

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

1.9 Exceptions in PRAW

In addition to exceptions under the praw.exceptions namespace shown below, exceptions might be raised that inherit from prawcore.PrawcoreException. Please see the following resource for information on those exceptions: https://github.com/praw-dev/prawcore/blob/master/prawcore/exceptions.py

1.9.1 praw.exceptions

PRAW exception classes.

Includes two main exceptions: APIException for when something goes wrong on the server side, and ClientException when something goes wrong on the client side. Both of these classes extend PRAWEException.

```python
exception praw.exceptions.APIException(error_type, message, field)

Indicate exception that involve responses from Reddit's API.

__init__(error_type, message, field)

Initialize an instance of APIException.

Parameters

• error_type – The error type set on Reddit’s end.
• message – The associated message for the error.
• field – The input field associated with the error if available.

Note: Calling str() on the instance returns unicode_escape-d ASCII string because the message may be localized and may contain UNICODE characters. If you want a non-escaped message, access the message attribute on the instance.

with_traceback()

Exception.with_traceback(tb) – set self.__traceback__ to tb and return self.
exception praw.exceptions.ClientException
    Indicate exceptions that don’t involve interaction with Reddit’s API.
    __init__
    Initialize self. See help(type(self)) for accurate signature.
    with_traceback()
    Exception.with_traceback(tb) – set self.__traceback__ to tb and return self.

exception praw.exceptions.PRAWException
    The base PRAW Exception that all other exception classes extend.
    __init__
    Initialize self. See help(type(self)) for accurate signature.
    with_traceback()
    Exception.with_traceback(tb) – set self.__traceback__ to tb and return self.

1.10 Other Classes

The following list of classes are provided here for complete documentation. You should not likely need to work with these classes directly, but rather through instances of them bound to an attribute of one of the PRAW models.

1.10.1 Collection

class praw.models.Collection(reddit, _data=None, collection_id=None, permalink=None)
    Class to represent a Collection.

Obtain an instance via:

    collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')

or

    collection = reddit.subreddit('SUBREDDIT').collections(
        permalink='https://reddit.com/r/SUBREDDIT/collection/some_uuid')

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor that they will be the only attributes present.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>author</td>
<td>The Redditor who created the collection.</td>
</tr>
<tr>
<td>collection_id</td>
<td>The UUID of the collection.</td>
</tr>
<tr>
<td>created_at_utc</td>
<td>Time the collection was created, represented in Unix Time.</td>
</tr>
<tr>
<td>description</td>
<td>The collection description.</td>
</tr>
<tr>
<td>last_update_utc</td>
<td>Time the collection was last updated, represented in Unix Time.</td>
</tr>
<tr>
<td>link_ids</td>
<td>A list of Submission fullnames.</td>
</tr>
<tr>
<td>permalink</td>
<td>The collection’s permalink (to view on the web).</td>
</tr>
<tr>
<td>sorted_links</td>
<td>An iterable listing of the posts in this collection.</td>
</tr>
<tr>
<td>title</td>
<td>The title of the collection.</td>
</tr>
</tbody>
</table>
__init__ (reddit, _data=None, collection_id=None, permalink=None)
Initialize this collection.

Parameters

• reddit – An instance of Reddit.
• _data – Any data associated with the Collection (optional).
• collection_id – The ID of the Collection (optional).
• permalink – The permalink of the Collection (optional).

__iter__ ()
Provide a way to iterate over the posts in this Collection.

Example usage:

collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
for submission in collection:
    print(submission.title, submission.permalink)

__len__ ()
Get the number of posts in this Collection.

Example usage:

collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
print(len(collection))

follow ()
Follow this Collection.

Example usage:

reddit.subreddit('SUBREDDIT').collections('some_uuid').follow()

See also unfollow () .

mod
Get an instance of CollectionModeration.

Provides access to various methods, including add_post (), delete (), reorder (), and update_title () .

Example usage:

collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
collection.mod.update_title('My new title!')

classmethod parse (data, reddit)
Return an instance of cls from data.

Parameters

• data – The structured data.
• reddit – An instance of Reddit.

subreddit
Get the subreddit that this collection belongs to.
unfollow()
Unfollow this Collection.
Example usage:
```
reddit.subreddit('SUBREDDIT').collections('some_uuid').unfollow()
```

See also follow().

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

### 1.10.2 CollectionModeration

class praw.models.reddit.collections.CollectionModeration(reddit, collection_id)
Class to support moderation actions on a Collection.

Obtain an instance via:
```
reddit.subreddit('SUBREDDIT').collections('some_uuid').mod
```

__init__(reddit, collection_id)
Initialize an instance of CollectionModeration.

**Parameters**

- **collection_id**: The ID of a collection.

add_post(submission)
Add a post to the collection.

**Parameters**

- **submission**: The post to add, a Submission, its permalink as a str, its fullname as a str, or its ID as a str.

Example usage:
```
collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
collection.mod.add_post('bgibu9')
```

See also remove_post().

delete()
Delete this collection.

Example usage:
```
reddit.subreddit('SUBREDDIT').collections('some_uuid').mod.delete()
```

See also create().

classmethod parse(data, reddit)
Return an instance of cls from data.

**Parameters**

- **data**: The structured data.
- **reddit**: An instance of Reddit.
**remove_post** *(submission)*

Remove a post from the collection.

**Parameters** *submission* – The post to remove, a *Submission*, its permalink as a *str*, its fullname as a *str*, or its ID as a *str*.

Example usage:

```python
collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
collection.mod.remove_post('bgibu9')
```

See also *add_post()*.

**reorder** *(links)*

Reorder posts in the collection.

**Parameters** *links* – A list of submissions, as *Submission*, permalink as a *str*, fullname as a *str*, or ID as a *str*.

Example usage:

```python
collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
current_order = collection.link_ids
ew_order = reversed(current_order)
collection.mod.reorder(new_order)
```

**update_description** *(description)*

Update the collection’s description.

**Parameters** *description* – The new description.

Example usage:

```python
collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
collection.mod.update_description('Please enjoy these links!')
```

See also *update_title()*.

**update_title** *(title)*

Update the collection’s title.

**Parameters** *title* – The new title.

Example usage:

```python
collection = reddit.subreddit('SUBREDDIT').collections('some_uuid')
collection.mod.update_title('Titley McTitleface')
```

See also *update_description()*.

### 1.10.3 SubredditCollections

**class** *praw.models.reddit.collections.SubredditCollections*(reddit, subreddit, _data=None)*

Class to represent a Subreddit’s *Collections*.

Obtain an instance via:

```python
reddit.subreddit('SUBREDDIT').collections
```
__call__(collection_id=None, permalink=None)

Return the Collection with the specified ID.

Parameters

- **collection_id** – The ID of a Collection (default: None).
- **permalink** – The permalink of a Collection (default: None).

Returns The specified Collection.

Exactly one of `collection_id` and `permalink` is required.

Example usage:

```python
subreddit = reddit.subreddit('SUBREDDIT')
uuid = '847e4548-a3b5-4ad7-afb4-edbfc2ed0a6b'
collection = subreddit.collections(uuid)
print(collection.title)
print(collection.description)

permalink = 'https://www.reddit.com/r/SUBREDDIT/collection/' + uuid
collection = subreddit.collections(permalink=permalink)
print(collection.title)
print(collection.description)
```

__init__(reddit, subreddit, _data=None)

Initialize an instance of SubredditCollections.

__iter__()

Iterate over the Subreddit’s Collections.

Example usage:

```python
for collection in reddit.subreddit('SUBREDDIT').collections:
    print(collection.permalink)
```

`mod`

Get an instance of `SubredditCollectionsModeration`.

Provides `create()`:

```python
my_sub = reddit.subreddit('SUBREDDIT')
new_collection = my_sub.collections.mod.create('Title', 'desc')
```

classmethod `parse`(data, reddit)

Return an instance of `cls` from `data`.

Parameters

- **data** – The structured data.
- **reddit** – An instance of `Reddit`.

1.10.4 SubredditCollectionsModeration

class praw.models.reddit.collections.SubredditCollectionsModeration(reddit, sub_fullname, _data=None)

Class to represent moderator actions on a Subreddit’s Collections.
Obtain an instance via:

```python
reddit.subreddit('SUBREDDIT').collections.mod
```

**`__init__`(reddit, sub_fullname, _data=None)**

Initialize the SubredditCollectionsModeration instance.

**`create`(title, description)**

Create a new `Collection`.

The authenticated account must have appropriate moderator permissions in the subreddit this collection belongs to.

**Parameters**

- `title` – The title of the collection, up to 300 characters.
- `description` – The description, up to 500 characters.

**Returns** The newly created `Collection`.

Example usage:

```python
my_sub = reddit.subreddit('SUBREDDIT')
new_collection = my_sub.collections.mod.create('Title', 'desc')
new_collection.mod.add_post('bgibu9')
```

See also `delete()`.

**class method `parse`(data, reddit)**

Return an instance of cls from data.

**Parameters**

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

### 1.10.5 SubmissionFlair

**class praw.models.reddit.submission.SubmissionFlair(submission)**

Provide a set of functions pertaining to Submission flair.

**`__init__`(submission)**

Create a SubmissionFlair instance.

**Parameters** `submission` – The submission associated with the flair functions.

**choices()**

Return list of available flair choices.

Choices are required in order to use `select()`.

For example:

```python
choices = submission.flair.choices()
```

**select**(flair_template_id, text=None)

Select flair for submission.

**Parameters**
• \texttt{flair\_template\_id} – The flair template to select. The possible \texttt{flair\_template\_id} values can be discovered through \texttt{choices()}.  

• \texttt{text} – If the template’s \texttt{flair\_text\_editable} value is True, this value will set a custom text (default: None).

For example, to select an arbitrary editable flair text (assuming there is one) and set a custom value try:

```python
classes = submission.flair.choices()
template_id = next(x for x in classes if x[‘flair\_text\_editable’])[‘flair\_template\_id’]
submission.flair.select(template_id, ‘my custom value’)
```

### 1.10.6 SubredditFlair

```python
class praw.models.reddit.subreddit.SubredditFlair(subreddit)
```

Provide a set of functions to interact with a Subreddit’s flair.

```
__call__(redditor=None, **generator\_kwargs)
Return a generator for Redditors and their associated flair.

Parameters
redditor – When provided, yield at most a single Redditor instance (default: None).

This method is intended to be used like:

```python
for flair in reddit.subreddit(‘NAME’).flair(limit=None):
    print(flair)
```

```
__init__(subreddit)
Create a SubredditFlair instance.

Parameters subreddit – The subreddit whose flair to work with.

```
configure(position=’right’, self\_assign=False, link\_position=’left’, link\_self\_assign=False, **settings)
Update the subreddit’s flair configuration.

Parameters

• \texttt{position} – One of left, right, or False to disable (default: right).

• \texttt{self\_assign} – (boolean) Permit self assignment of user flair (default: False).

• \texttt{link\_position} – One of left, right, or False to disable (default: left).

• \texttt{link\_self\_assign} – (boolean) Permit self assignment of link flair (default: False).

Additional keyword arguments can be provided to handle new settings as Reddit introduces them.

```
delete(redditor)
Delete flair for a Redditor.

Parameters redditor – A redditor name (e.g., ‘spez’) or Redditor instance.

Note: To delete the flair of many Redditors at once, please see update().

```
delete\_all()
Delete all Redditor flair in the Subreddit.

Returns List of dictionaries indicating the success or failure of each delete.
link_templates
Provide an instance of SubredditLinkFlairTemplates.
Use this attribute for interacting with a subreddit’s link flair templates. For example to list all the link flair templates for a subreddit which you have the flair moderator permission on try:

```python
for template in reddit.subreddit('NAME').flair.link_templates:
    print(template)
```

set(redditor=None, text=", css_class=", flair_template_id=None)
Set flair for a Redditor.

Parameters
- **redditor** – (Required) A redditor name (e.g., 'spez') or Redditor instance.
- **text** – The flair text to associate with the Redditor or Submission (default: '').
- **css_class** – The css class to associate with the flair html (default: ''). Use either this or flair_template_id.
- **flair_template_id** – The ID of the flair template to be used (default: None). Use either this or css_class.

This method can only be used by an authenticated user who is a moderator of the associated Subreddit.
For example:

```python
reddit.subreddit('redditdev').flair.set('bboe', 'PRAW author',
    css_class='mods')
template = '6bd28436-1aa7-11e9-9902-0e05ab0fad46'
reddit.subreddit('redditdev').flair.set('spez', 'Reddit CEO',
    flair_template_id=template)
```

templates
Provide an instance of SubredditRedditorFlairTemplates.
Use this attribute for interacting with a subreddit’s flair templates. For example to list all the flair templates for a subreddit which you have the flair moderator permission on try:

```python
for template in reddit.subreddit('NAME').flair.templates:
    print(template)
```

update(flair_list=text=", css_class=")
Set or clear the flair for many Redditors at once.

Parameters
- **flair_list** – Each item in this list should be either: the name of a Redditor, an instance of Redditor, or a dictionary mapping keys user, flair_text, and flair_css_class to their respective values. The user key should map to a Redditor, as described above. When a dictionary isn’t provided, or the dictionary is missing one of flair_text, or flair_css_class attributes the default values will come from the the following arguments.
- **text** – The flair text to use when not explicitly provided in flair_list (default: '').
- **css_class** – The css class to use when not explicitly provided in flair_list (default: '').

Returns List of dictionaries indicating the success or failure of each update.
For example to clear the flair text, and set the praw flair css class on a few users try:
1.10.7 SubredditFlairTemplates

class praw.models.reddit.subreddit.SubredditFlairTemplates(subreddit)

Provide functions to interact with a Subreddit’s flair templates.

__init__(subreddit)

Create a SubredditFlairTemplate instance.

Parameters subreddit – The subreddit whose flair templates to work with.

Note: This class should not be initialized directly. Instead obtain an instance via: reddit.subreddit('subreddit_name').flair.templates or reddit.subreddit('subreddit_name').flair.link_templates.

delete(template_id)

Remove a flair template provided by template_id.

For example, to delete the first Redditor flair template listed, try:

    template_info = list(subreddit.flair.templates)[0]
    subreddit.flair.templates.delete(template_info['id'])

static flair_type(is_link)

Return LINK_FLAIR or USER_FLAIR depending on is_link value.

update(template_id, text, css_class='', text_editable=False, background_color=None, text_color=None, mod_only=None)

Update the flair template provided by template_id.

Parameters

• template_id – The flair template to update. If not valid then a new flair template will be made.

• text – The flair template’s new text (required).

• css_class – The flair template’s new css_class (default: '').

• text_editable – (boolean) Indicate if the flair text can be modified for each Redditor that sets it (default: False).

• background_color – The flair template’s new background color, as a hex color.

• text_color – The flair template’s new text color, either 'light' or 'dark'.

• mod_only – (boolean) Indicate if the flair can only be used by moderators.

For example to make a user flair template text_editable, try:

    template_info = list(subreddit.flair.templates)[0]
    subreddit.flair.templates.update(
        template_info['id'],
        template_info['flair_text'],
        text_editable=True)
1.10.8 SubredditLinkFlairTemplates

class praw.models.reddit.subreddit.SubredditLinkFlairTemplates(subreddit)

Provide functions to interact with link flair templates.

__init__(subreddit)
Create a SubredditFlairTemplate instance.

Parameters subreddit – The subreddit whose flair templates to work with.

__iter__()
Iterate through the link flair templates.

For example:

```python
for template in reddit.subreddit('NAME').flair.link_templates:
    print(template)
```

add(text, css_class='', text_editable=False, background_color=None, text_color=None, mod_only=None)
Add a link flair template to the associated subreddit.

Parameters

- **text** – The flair template’s text (required).
- **css_class** – The flair template’s css_class (default: '').
- **text_editable** – (boolean) Indicate if the flair text can be modified for each Redditor that sets it (default: False).
- **background_color** – The flair template’s new background color, as a hex color.
- **text_color** – The flair template’s new text color, either 'light' or 'dark'.
- **mod_only** – (boolean) Indicate if the flair can only be used by moderators.

For example, to add an editable link flair try:

```python
reddit.subreddit('NAME').flair.link_templates.add(
    css_class='praw', text_editable=True)
```

clear()
Remove all link flair templates from the subreddit.

For example:

```python
reddit.subreddit('NAME').flair.link_templates.clear()
```
**delete**(template_id)

Remove a flair template provided by template_id.

For example, to delete the first Redditor flair template listed, try:

```python
template_info = list(subreddit.flair.templates)[0]
subreddit.flair.templates.delete(template_info['id'])
```

**static flair_type**(is_link)

Return LINK_FLAIR or USER_FLAIR depending on is_link value.

**update**(template_id, text, css_class=",", text_editable=False, background_color=None, text_color=None, mod_only=None)

Update the flair template provided by template_id.

**Parameters**

- **template_id** – The flair template to update. If not valid then a new flair template will be made.
- **text** – The flair template’s new text (required).
- **css_class** – The flair template’s new css_class (default: ").
- **text_editable** – (boolean) Indicate if the flair text can be modified for each Redditor that sets it (default: False).
- **background_color** – The flair template’s new background color, as a hex color.
- **text_color** – The flair template’s new text color, either 'light' or 'dark'.
- **mod_only** – (boolean) Indicate if the flair can only be used by moderators.

For example to make a user flair template text_editable, try:

```python
template_info = list(subreddit.flair.templates)[0]
subreddit.flair.templates.update(
    template_info['id'],
    template_info['flair_text'],
    text_editable=True)
```

**Note:** Any parameters not provided will be set to default values (usually None or False) on Reddit’s end.

### 1.10.9 SubredditRedditorFlairTemplates

**class** praw.models.reddit.subreddit.SubredditRedditorFlairTemplates(subreddit)

Provide functions to interact with Redditor flair templates.

**__init__**(subreddit)

Create a SubredditFlairTemplate instance.

**Parameters**

- **subreddit** – The subreddit whose flair templates to work with.

**Note:** This class should not be initialized directly. Instead obtain an instance via: reddit.subreddit('subreddit_name').flair.templates or reddit.subreddit('subreddit_name').flair.link_templates.
__iter__()
Iterate through the user flair templates.

For example:
```python
for template in reddit.subreddit('NAME').flair.templates:
    print(template)
```

add(text, css_class='', text_editable=False, background_color=None, text_color=None, mod_only=None)
Add a Redditor flair template to the associated subreddit.

Parameters
- **text** – The flair template’s text (required).
- **css_class** – The flair template’s css_class (default: '').
- **text_editable** – (boolean) Indicate if the flair text can be modified for each Redditor that sets it (default: False).
- **background_color** – The flair template’s new background color, as a hex color.
- **text_color** – The flair template’s new text color, either 'light' or 'dark'.
- **mod_only** – (boolean) Indicate if the flair can only be used by moderators.

For example, to add an editable Redditor flair try:
```python
reddit.subreddit('NAME').flair.templates.add(css_class='praw', text_editable=True)
```

clear()
Remove all Redditor flair templates from the subreddit.

For example:
```python
reddit.subreddit('NAME').flair.templates.clear()
```

delete(template_id)
Remove a flair template provided by template_id.

For example, to delete the first Redditor flair template listed, try:
```python
template_info = list(subreddit.flair.templates)[0]
subreddit.flair.templates.delete(template_info['id'])
```

static flair_type(is_link)
Return LINK_FLAIR or USER_FLAIR depending on is_link value.

update(template_id, text, css_class='', text_editable=False, background_color=None, text_color=None, mod_only=None)
Update the flair template provided by template_id.

Parameters
- **template_id** – The flair template to update. If not valid then a new flair template will be made.
- **text** – The flair template’s new text (required).
- **css_class** – The flair template’s new css_class (default: '').
• **text_editable** – (boolean) Indicate if the flair text can be modified for each Redditor that sets it (default: False).

• **background_color** – The flair template’s new background color, as a hex color.

• **text_color** – The flair template’s new text color, either 'light' or 'dark'.

• **mod_only** – (boolean) Indicate if the flair can only be used by moderators.

For example to make a user flair template text_editable, try:

```python
template_info = list(subreddit.flair.templates)[0]
subreddit.flair.templates.update(
    template_info['id'],
    template_info['flair_text'],
    text_editable=True)
```

**Note:** Any parameters not provided will be set to default values (usually None or False) on Reddit’s end.

## 1.10.10 LiveContributorRelationship

**class praw.models.reddit.live.LiveContributorRelationship(thread)**

Provide methods to interact with live threads’ contributors.

**__call__**

Return a `RedditorList` for live threads’ contributors.

**Usage:**

```python
thread = reddit.live('ukaelik4sw5')
for contributor in thread.contributor():
    print(contributor)
```

**__init__**(thread)

Create a `LiveContributorRelationship` instance.

**Parameters** thread – An instance of `LiveThread`.

**Note:** This class should not be initialized directly. Instead obtain an instance via: thread.contributor where thread is a `LiveThread` instance.

**accept_invite()**

Accept an invite to contribute the live thread.

**Usage:**

```python
thread = reddit.live('ydwwxneu7vsa')
thread.contributor.accept_invite()
```

**invite**(redditor, permissions=None)

Invite a redditor to be a contributor of the live thread.

**Raise** `praw.exceptions.APIException` if the invitation already exists.

**Parameters**
• **redditor** – A redditor name (e.g., 'spez') or *Redditor* instance.

• **permissions** – When provided (not *None*), permissions should be a list of strings specifying which subset of permissions to grant. An empty list [] indicates no permissions, and when not provided (*None*), indicates full permissions.

Usage:

```python
thread = reddit.live('ukaeulik4sw5')
redditor = reddit.redditor('spez')

# 'manage' and 'settings' permissions
thread.contributor.invite(redditor, ['manage', 'settings'])
```

See also *LiveContributorRelationship.remove_invite()* to remove the invite for redditor.

**leave()**

Abdicate the live thread contributor position (use with care).

Usage:

```python
thread = reddit.live('ydwwxneu7vsa')
thread.contributor.leave()
```

**remove**(redditor)

Remove the redditor from the live thread contributors.

Parameters **redditor** – A redditor fullname (e.g., 't2_1w72') or *Redditor* instance.

Usage:

```python
thread = reddit.live('ukaeulik4sw5')
redditor = reddit.redditor('spez')
thread.contributor.remove(redditor)
thread.contributor.remove('t2_1w72')  # with fullname
```

**remove_invite**(redditor)

Remove the invite for redditor.

Parameters **redditor** – A redditor fullname (e.g., 't2_1w72') or *Redditor* instance.

Usage:

```python
thread = reddit.live('ukaeulik4sw5')
redditor = reddit.redditor('spez')
thread.contributor.remove_invite(redditor)
thread.contributor.remove_invite('t2_1w72')  # with fullname
```

See also *LiveContributorRelationship.invite()* to invite a redditor to be a contributor of the live thread.

**update**(redditor, permissions=None)

Update the contributor permissions for redditor.

Parameters

• **redditor** – A redditor name (e.g., 'spez') or *Redditor* instance.
• **permissions** – When provided (not None), permissions should be a list of strings specifying which subset of permissions to grant (other permissions are removed). An empty list [] indicates no permissions, and when not provided (None), indicates full permissions.

For example, to grant all permissions to the contributor, try:

```python
thread = reddit.live('ukaeulik4sw5')
thread.contributor.update('spez')
```

To grant ‘access’ and ‘edit’ permissions (and to remove other permissions), try:

```python
thread.contributor.update('spez', ['access', 'edit'])
```

To remove all permissions from the contributor, try:

```python
subreddit.moderator.update('spez', [])
```

### update_invite (redditor, permissions=None)
Update the contributor invite permissions for redditor.

**Parameters**

• **redditor** – A redditor name (e.g., 'spez') or Redditor instance.

• **permissions** – When provided (not None), permissions should be a list of strings specifying which subset of permissions to grant (other permissions are removed). An empty list [] indicates no permissions, and when not provided (None), indicates full permissions.

For example, to set all permissions to the invitation, try:

```python
thread = reddit.live('ukaeulik4sw5')
thread.contributor.update_invite('spez')
```

To set ‘access’ and ‘edit’ permissions (and to remove other permissions) to the invitation, try:

```python
thread.contributor.update_invite('spez', ['access', 'edit'])
```

To remove all permissions from the invitation, try:

```python
thread.contributor.update_invite('spez', [])
```

### 1.10.11 LiveThreadContribution

class praw.models.reddit.live.LiveThreadContribution(thread)
Provides a set of contribution functions to a LiveThread.

```python
__init__(thread)
Create an instance of LiveThreadContribution.
```

**Parameters** **thread** – An instance of LiveThread.

This instance can be retrieved through `thread.contrib` where `thread` is a LiveThread instance. E.g.,

```python
thread = reddit.live('ukaeulik4sw5')
thread.contrib.add('### update')
```
add *(body)*
Add an update to the live thread.

**Parameters**

- **body** – The markdown formatted content for the update.

**Usage:**

```python
thread = reddit.live('ydwwxneu7vsa')
thread.contrib.add('test `LiveThreadContribution.add()`')
```

close ()
Close the live thread permanently (cannot be undone).

**Usage:**

```python
thread = reddit.live('ukaeulik4sw5')
thread.contrib.close()
```

update *(title=None, description=None, nsfw=None, resources=None, **other_settings)*
Update settings of the live thread.

**Parameters**

- **title** – (Optional) The title of the live thread (default: None).
- **description** – (Optional) The live thread’s description (default: None).
- **nsfw** – (Optional) Indicate whether this thread is not safe for work (default: None).
- **resources** – (Optional) Markdown formatted information that is useful for the live thread (default: None).

Does nothing if no arguments are provided.

Each setting will maintain its current value if `None` is specified.

Additional keyword arguments can be provided to handle new settings as Reddit introduces them.

**Usage:**

```python
thread = reddit.live('xyu8kmjvfrww')

# update `title` and `nsfw`
updated_thread = thread.contrib.update(title=new_title, nsfw=True)

# update `nsfw` and maintain new setting `foo`
thread.contrib.update(nsfw=True, foo=None)
```

**1.10.12 LiveUpdateContribution**

**class praw.models.reddit.live.LiveUpdateContribution**(update)
Provides a set of contribution functions to LiveUpdate.

**__init__**(update)
Create an instance of `LiveUpdateContribution`.

**Parameters**

- **update** – An instance of `LiveUpdate`.

This instance can be retrieved through `update.contrib` where `update` is a `LiveUpdate` instance.

E.g.,
thread = reddit.live('ukaeulik4sw5')
update = thread['7827987a-c998-11e4-a0b9-22000b6a88d2']
update.contrib  # LiveUpdateContribution instance
update.contrib.remove()

remove()
Remove a live update.
Usage:
thread = reddit.live('ydwwxneu7vsa')
update = thread['6854605a-efec-11e6-b0c7-0eafac4ff094']
update.contrib.remove()

strike()
Strike a content of a live update.
thread = reddit.live('xyu8kmjvfrww')
update = thread['cb5fe532-dbee-11e6-9a91-0e6d74fabcc4']
update.contrib.strike()

To check whether the update is stricken or not, use update.stricken attribute. But note that accessing lazy attributes on updates (includes update.stricken) may raises AttributeError. See LiveUpdate for details.

1.10.13 CommentModeration

class praw.models.reddit.comment.CommentModeration(comment)
Provide a set of functions pertaining to Comment moderation.

Example usage:

```python
comment = reddit.comment('dkk4qjd')
comment.mod.approve()
```

__init__(comment)
Create a CommentModeration instance.

Parameters comment – The comment to moderate.

approve()
Approve a Comment or Submission.

Approving a comment or submission reverts a removal, resets the report counter, adds a green check mark indicator (only visible to other moderators) on the website view, and sets the approved_by attribute to the authenticated user.

Example usage:

```python
# approve a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.approve()
# approve a submission:
submission = reddit.submission(id='5or86n')
submission.mod.approve()
```

distinguish (how='yes', sticky=False)
Distinguish a Comment or Submission.
Parameters

- **how** – One of ‘yes’, ‘no’, ‘admin’, ‘special’. ‘yes’ adds a moderator level distinguish. ‘no’ removes any distinction. ‘admin’ and ‘special’ require special user privileges to use.

- **sticky** – Comment is stickied if True, placing it at the top of the comment page regardless of score. If thing is not a top-level comment, this parameter is silently ignored.

Example usage:

```python
# distinguish and sticky a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.distinguish(how='yes', sticky=True)

# undistinguish a submission:
submission = reddit.submission(id='5or86n')
submission.mod.distinguish(how='no')
```

See also `undistinguish()`

**ignore_reports()**

Ignore future reports on a Comment or Submission.

Calling this method will prevent future reports on this Comment or Submission from both triggering notifications and appearing in the various moderation listings. The report count will still increment on the Comment or Submission.

Example usage:

```python
# ignore future reports on a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.ignore_reports()

# ignore future reports on a submission
submission = reddit.submission(id='5or86n')
submission.mod.ignore_reports()
```

See also `unignore_reports()`

**lock()**

Lock the a Comment or Submission.

Example usage:

```python
# lock a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.lock()

# lock a submission:
submission = reddit.submission(id='5or86n')
submission.mod.lock()
```

See also `unlock()`

**remove**(spam=False)

Remove a Comment or Submission.

**Parameters** **spam** – When True, use the removal to help train the Subreddit’s spam filter (default: False).

Example usage:

```python
# remove a comment and mark as spam:
comment = reddit.comment('dkk4qjd')
```
comment.mod.remove(spam=True)
# remove a submission
submission = reddit.submission(id='5or86n')
submission.mod.remove()

**send_removal_message**(message, title='ignored', type='public')

Send a removal message for a Comment or Submission.

Reddit adds human-readable information about the object to the message.

**Parameters**

- **type** – One of ‘public’, ‘private’, ‘private_exposed’. ‘public’ leaves a stickied comment on the post. ‘private’ sends a Modmail message with hidden username. ‘private_exposed’ sends a Modmail message without hidden username.
- **title** – The short reason given in the message. (Ignored if type is ‘public’.)
- **message** – The body of the message.

If type is ‘public’, the new Comment is returned.

**undistinguish()**

Remove mod, admin, or special distinguishing on object.

Also unstickies the object if applicable.

Example usage:

```python
# undistinguish a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.undistinguish()

# undistinguish a submission:
submission = reddit.submission(id='5or86n')
submission.mod.undistinguish()
```

See also **distinguish()**

**unignore_reports()**

Resume receiving future reports on a Comment or Submission.

Future reports on this Comment or Submission will cause notifications, and appear in the various moderation listings.

Example usage:

```python
# accept future reports on a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.unignore_reports()

# accept future reports on a submission
submission = reddit.submission(id='5or86n')
submission.mod.unignore_reports()
```

See also **ignore_reports()**

**unlock()**

Unlock the a Comment or Submission.

Example usage:

```python
# unlock a comment: comment = reddit.comment('dkk4qjd') comment.mod.unlock()

# unlock a submission: submission = reddit.submission(id='5or86n') submission.mod.unlock()
```
See also `lock()`

### 1.10.14 SubmissionModeration

```python
class praw.models.reddit.submission.SubmissionModeration(submission)
    Provide a set of functions pertaining to Submission moderation.
```

Example usage:

```python
submission = reddit.submission(id="8dmv8z")
submission.mod.approve()
```

```python
__init__(submission)
    Create a SubmissionModeration instance.

    Parameters submission – The submission to moderate.
```

```
approve()
    Approve a Comment or Submission.

    Approving a comment or submission reverts a removal, resets the report counter, adds a green check mark indicator (only visible to other moderators) on the website view, and sets the approved_by attribute to the authenticated user.

Example usage:

```python
# approve a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.approve()
# approve a submission:
submission = reddit.submission(id='5or86n')
submission.mod.approve()
```

```python
contest_mode(state=True)
    Set contest mode for the comments of this submission.

    Parameters state – (boolean) True enables contest mode, False, disables (default: True).

    Contest mode have the following effects:
    • The comment thread will default to being sorted randomly.
    • Replies to top-level comments will be hidden behind “[show replies]” buttons.
    • Scores will be hidden from non-moderators.
    • Scores accessed through the API (mobile apps, bots) will be obscured to “1” for non-moderators.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.mod.contest_mode(state=True)
```

```python
distinguish(how='yes', sticky=False)
    Distinguish a Comment or Submission.

    Parameters
    • how – One of ‘yes’, ‘no’, ‘admin’, ‘special’. ‘yes’ adds a moderator level distinguish. ‘no’ removes any distinction. ‘admin’ and ‘special’ require special user privileges to use.
```

1.10. Other Classes
• **sticky** – Comment is stickied if True, placing it at the top of the comment page regardless of score. If thing is not a top-level comment, this parameter is silently ignored.

Example usage:

```python
# distinguish and sticky a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.distinguish(how='yes', sticky=True)

# undistinguish a submission:
submission = reddit.submission(id='5or86n')
submission.mod.distinguish(how='no')
```

See also `undistinguish()`

**flair**(text="", css_class="")

Set flair for the submission.

**Parameters**

- **text** – The flair text to associate with the Submission (default: '').
- **css_class** – The css class to associate with the flair html (default: '').

This method can only be used by an authenticated user who is a moderator of the Submission’s Subreddit.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.mod.flair(text='PRAW', css_class='bot')
```

**ignore_reports()**

Ignore future reports on a Comment or Submission.

Calling this method will prevent future reports on this Comment or Submission from both triggering notifications and appearing in the various moderation listings. The report count will still increment on the Comment or Submission.

Example usage:

```python
# ignore future reports on a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.ignore_reports()

# ignore future reports on a submission
submission = reddit.submission(id='5or86n')
submission.mod.ignore_reports()
```

See also `unignore_reports()`

**lock()**

Lock the a Comment or Submission.

Example usage:

```python
# lock a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.lock()

# lock a submission:
submission = reddit.submission(id='5or86n')
submission.mod.lock()
```

See also `unlock()`
nsfw()
Mark as not safe for work.
This method can be used both by the submission author and moderators of the subreddit that the submission belongs to.

Example usage:
```python
submission = reddit.subreddit('test').submit('nsfw test',
    selftext='nsfw')
submission.mod.nsfw()
```

See also sfw()

remove (spam=False)
Remove a Comment or Submission.

Parameters spam – When True, use the removal to help train the Subreddit’s spam filter (default: False).

Example usage:
```python
# remove a comment and mark as spam:
comment = reddit.comment('dkk4qjd')
comment.mod.remove(spam=True)
# remove a submission
submission = reddit.submission(id='5or86n')
submission.mod.remove()
```

send_removal_message (message, title='ignored', type='public')
Send a removal message for a Comment or Submission.
Reddit adds human-readable information about the object to the message.

Parameters
• type – One of ‘public’, ‘private’, ‘private_exposed’. ‘public’ leaves a stickied comment on the post. ‘private’ sends a Modmail message with hidden username. ‘private_exposed’ sends a Modmail message without hidden username.
• title – The short reason given in the message. (Ignored if type is ‘public’.)
• message – The body of the message.

If type is ‘public’, the new Comment is returned.

sfw()
Mark as safe for work.
This method can be used both by the submission author and moderators of the subreddit that the submission belongs to.

Example usage:
```python
submission = reddit.submission(id='5or86n')
submission.mod.sfw()
```

See also nsfw()

spoiler()
Indicate that the submission contains spoilers.
This method can be used both by the submission author and moderators of the subreddit that the submission belongs to.
Example usage:
```
submission = reddit.submission(id='5or86n')
submission.mod.spoiler()
```

See also `unspoilr()`

### sticky (state=True, bottom=True)
Set the submission's sticky state in its subreddit.

**Parameters**

- **state** – (boolean) True sets the sticky for the submission, false unsets (default: True).
- **bottom** – (boolean) When true, set the submission as the bottom sticky. If no top sticky exists, this submission will become the top sticky regardless (default: True).

This submission will replace an existing stickied submission if one exists.

For example:
```
submission = reddit.submission(id='5or86n')
submission.mod.sticky()
```

### suggested_sort (sort='blank')
Set the suggested sort for the comments of the submission.

**Parameters** sort – Can be one of: confidence, top, new, controversial, old, random, qa, blank (default: blank).

### undistinguish()
Remove mod, admin, or special distinguishing on object.

Also unstickies the object if applicable.

Example usage:
```
# undistinguish a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.undistinguish()

# undistinguish a submission:
submission = reddit.submission(id='5or86n')
submission.mod.undistinguish()
```

See also `distinguish()`

### unignore_reports()
Resume receiving future reports on a Comment or Submission.

Future reports on this Comment or Submission will cause notifications, and appear in the various moderation listings.

Example usage:
```
# accept future reports on a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.unignore_reports()

# accept future reports on a submission
submission = reddit.submission(id='5or86n')
submission.mod.unignore_reports()
```

See also `ignore_reports()`
unlock()  
Unlock the a Comment or Submission.

Example usage:

    # unlock a comment: comment = reddit.comment('dkk4qjd') comment.mod.unlock()  
    # unlock a submission: submission = reddit.submission(id='5or86n') submission.mod.unlock()

See also lock()

unspoiler()  
Indicate that the submission does not contain spoilers.

This method can be used both by the submission author and moderators of the subreddit that the submission belongs to.

For example:

```
submission = reddit.subreddit('test').submit('not spoiler', selftext='spoiler')
submission.mod.unspoiler()
```

See also spoiler()

1.10.15 SubredditModeration

class praw.models.reddit.subreddit.SubredditModeration(subreddit)
Provides a set of moderation functions to a Subreddit.

__init__(subreddit)  
Create a SubredditModeration instance.

Parameters subreddit – The subreddit to moderate.

accept_invite()  
Accept an invitation as a moderator of the community.

edited(only=None, **generator_kwargs)  
Return a ListingGenerator for edited comments and submissions.

Parameters only – If specified, one of 'comments', or 'submissions' to yield only results of that type.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To print all items in the edited queue try:

```
for item in reddit.subreddit('mod').mod.edited(limit=None):
    print(item)
```

inbox(**generator_kwargs)  
Return a ListingGenerator for moderator messages.

Additional keyword arguments are passed in the initialization of ListingGenerator.

See unread for unread moderator messages.

To print the last 5 moderator mail messages and their replies, try:
for message in reddit.subreddit('mod').mod.inbox(limit=5):
    print("From: {}, Body: {}").format(message.author, message.body)
for reply in message.replies:
    print("From: {}, Body: {}").format(reply.author, reply.body)

log(action=None, mod=None, **generator_kwargs)
Return a ListingGenerator for moderator log entries.

Parameters
- action – If given, only return log entries for the specified action.
- mod – If given, only return log entries for actions made by the passed in Redditor.

To print the moderator and subreddit of the last 5 modlog entries try:

for log in reddit.subreddit('mod').mod.log(limit=5):
    print("Mod: {}, Subreddit: {}").format(log.mod, log.subreddit)

modqueue(only=None, **generator_kwargs)
Return a ListingGenerator for comments/submissions in the modqueue.

Parameters only – If specified, one of 'comments', or 'submissions' to yield only results of that type.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To print all modqueue items try:

for item in reddit.subreddit('mod').mod.modqueue(limit=None):
    print(item)

reports(only=None, **generator_kwargs)
Return a ListingGenerator for reported comments and submissions.

Parameters only – If specified, one of 'comments', or 'submissions' to yield only results of that type.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To print the user and mod report reasons in the report queue try:

for reported_item in reddit.subreddit('mod').mod.reports():
    print("User Reports: {}").format(reported_item.user_reports)
    print("Mod Reports: {}").format(reported_item.mod_reports)

settings()
Return a dictionary of the subreddit’s current settings.

spam(only=None, **generator_kwargs)
Return a ListingGenerator for spam comments and submissions.

Parameters only – If specified, one of 'comments', or 'submissions' to yield only results of that type.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To print the items in the spam queue try:

for item in reddit.subreddit('mod').mod.spam():
    print(item)
**unmoderated(**generator_kwargs)**

Return a ListingGenerator for unmoderated submissions.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To print the items in the unmoderated queue try:

```
for item in reddit.subreddit('mod').mod.unmoderated():
    print(item)
```

**unread(**generator_kwargs)**

Return a ListingGenerator for unread moderator messages.

Additional keyword arguments are passed in the initialization of ListingGenerator.

See inbox for all messages.

To print the mail in the unread modmail queue try:

```
for message in reddit.subreddit('mod').mod.unread():
    print("From: {}, To: {}").format(message.author, message.dest)
```

**update(**settings)**

Update the subreddit’s settings.

**Parameters**

- **allow_images** – Allow users to upload images using the native image hosting. Only applies to link-only subreddits.
- **allow_post_crossposts** – Allow users to crosspost submissions from other subreddits.
- **allow_top** – Allow the subreddit to appear on /r/all as well as the default and trending lists.
- **collapse_deleted_comments** – Collapse deleted and removed comments on comments pages by default.
- **comment_score_hide_mins** – The number of minutes to hide comment scores.
- **description** – Shown in the sidebar of your subreddit.
- **disable_contributor_requests** (bool) – Specifies whether redditors may send automated modmail messages requesting approval as a submitter.
- **domain** – Domain name with a cname that points to {subreddit}.reddit.com.
- **exclude_banned_modqueue** – Exclude posts by site-wide banned users from modqueue/unmoderated.
- **header_hover_text** – The text seen when hovering over the snoo.
- **hide_ads** – Don’t show ads within this subreddit. Only applies to gold-user only subreddits.
- **key_color** – A 6-digit rgb hex color (e.g. '#AABBCC'), used as a thematic color for your subreddit on mobile.
- **lang** – A valid IETF language tag (underscore separated).
- **link_type** – The types of submissions users can make. One of any, link, self.
- **over_18** – Viewers must be over 18 years old (i.e. NSFW).
• **public_description** – Public description blurb. Appears in search results and on the landing page for private subreddits.

• **public_traffic** – Make the traffic stats page public.

• **restrict_commenting** *(bool)* – Specifies whether approved users have the ability to comment.

• **restrict_posting** *(bool)* – Specifies whether approved users have the ability to submit posts.

• **show_media** – Show thumbnails on submissions.

• **show_media_preview** – Expand media previews on comments pages.

• **spam_comments** – Spam filter strength for comments. One of *all*, *low*, *high*.

• **spam_links** – Spam filter strength for links. One of *all*, *low*, *high*.

• **spam_selfposts** – Spam filter strength for selfposts. One of *all*, *low*, *high*.

• **spoilers_enabled** – Enable marking posts as containing spoilers.

• **sr** – The fullname of the subreddit whose settings will be updated.

• **submit_link_label** – Custom label for submit link button (None for default).

• **submit_text** – Text to show on submission page.

• **submit_text_label** – Custom label for submit text post button (None for default).

• **subreddit_type** – One of *archived*, *employees_only*, *gold_only*, *gold_restricted*, *private*, *public*, *restricted*.

• **suggested_comment_sort** – All comment threads will use this sorting method by default. Leave None, or choose one of *confidence*, *controversial*, *new*, *old*, *qa*, *random*, *top*.

• **title** – The title of the subreddit.

• **wiki_edit_age** – Account age, in days, required to edit and create wiki pages.

• **wiki_edit_karma** – Subreddit karma required to edit and create wiki pages.

• **wikimode** – One of *anyone*, *disabled*, *modonly*.

Additional keyword arguments can be provided to handle new settings as Reddit introduces them.

Settings that are documented here and aren’t explicitly set by you in a call to SubredditModeration.update() should retain their current value. If they do not please file a bug.

**Warning:** Undocumented settings, or settings that were very recently documented, may not retain their current value when updating. This often occurs when Reddit adds a new setting but forgets to add that setting to the API endpoint that is used to fetch the current settings.

### 1.10.16 SubredditWidgetsModeration

**class** `praw.models.SubredditWidgetsModeration` *(subreddit, reddit)*

Class for moderating a subreddit’s widgets.

Get an instance of this class from SubredditWidgets.mod.

Example usage:
Note: To use this class’s methods, the authenticated user must be a moderator with appropriate permissions.

__init__(subreddit, reddit)
Initialize the class.

add_button_widget(short_name, description, buttons, styles, **other_settings)
Add and return a ButtonWidget.

Parameters
- *short_name* – A name for the widget, no longer than 30 characters.
- *description* – Markdown text to describe the widget.
- *buttons* – A list of dicts describing buttons, as specified in Reddit docs. As of this writing, the format is:

Each button is either a text button or an image button. A text button looks like this:

```json
{
  "kind": "text",
  "text": a string no longer than 30 characters,
  "url": a valid URL,
  "color": a 6-digit rgb hex color, e.g. `#AABBCC`,
  "textColor": a 6-digit rgb hex color, e.g. `#AABBCC`,
  "fillColor": a 6-digit rgb hex color, e.g. `#AABBCC`,
  "hoverState": {...}
}
```

An image button looks like this:

```json
{
  "kind": "image",
  "text": a string no longer than 30 characters,
  "linkUrl": a valid URL,
  "url": a valid URL of a reddit-hosted image,
  "height": an integer,
  "width": an integer,
  "hoverState": {...}
}
```

Both types of buttons have the field hoverState. The field does not have to be included (it is optional). If it is included, it can be one of two types: text or image. A text hoverState looks like this:

```json
{
  "kind": "text",
  "text": a string no longer than 30 characters,
  "color": a 6-digit rgb hex color, e.g. `#AABBCC`,
  "textColor": a 6-digit rgb hex color, e.g. `#AABBCC`,
  "fillColor": a 6-digit rgb hex color, e.g. `#AABBCC`
}
```

An image hoverState looks like this:
Note: The method `upload_image()` can be used to upload images to Reddit for a `url` field that holds a Reddit-hosted image.

Note: An image `hoverState` may be paired with a text widget, and a text `hoverState` may be paired with an image widget.

- **styles** – A dict with keys `backgroundColor` and `headerColor`, and values of hex colors. For example, `{‘backgroundColor’: ‘#FFFF66’, ‘headerColor’: ‘#3333EE’}.

Example usage:

```python
widget_moderation = reddit.subreddit(‘mysub’).widgets.mod
my_image = widget_moderation.upload_image(‘/path/to/pic.jpg’)
buttons = [
    {
        ‘kind’: ‘text’,
        ‘text’: ‘View source’,
        ‘color’: ‘#FF0000’,
        ‘textColor’: ‘#00FF00’,
        ‘fillColor’: ‘#0000FF’,
        ‘hoverState’: {
            ‘kind’: ‘text’,
            ‘text’: ‘ecruos weiV’,
            ‘color’: ‘#FFFFFE’,
            ‘textColor’: ‘#000000’,
            ‘fillColor’: ‘#0000FF’
        }
    },
    {
        ‘kind’: ‘image’,
        ‘text’: ‘View documentation’,
        ‘linkUrl’: ‘https://praw.readthedocs.io’,
        ‘url’: my_image,
        ‘height’: 200,
        ‘width’: 200,
        ‘hoverState’: {
            ‘kind’: ‘image’,
            ‘url’: my_image,
            ‘height’: 200,
            ‘width’: 200
        }
    }
]
styles = {‘backgroundColor’: ‘#FFFF66’, ‘headerColor’: ‘#3333EE’}
new_widget = widget_moderation.add_button_widget(
```
add_calendar(short_name, google_calendar_id, requires_sync, configuration, styles, **other_settings)

Add and return a Calendar widget.

Parameters

- **short_name** – A name for the widget, no longer than 30 characters.
- **google_calendar_id** – An email-style calendar ID. To share a Google Calendar, make it public, then find the “Calendar ID.”
- **requires_sync** – A bool.
- **configuration** – A dict as specified in Reddit docs.

For example:

```python
{'numEvents': 10,
 'showDate': True,
 'showDescription': False,
 'showLocation': False,
 'showTime': True,
 'showTitle': True}
```

- **styles** – A dict with keys `backgroundColor` and `headerColor`, and values of hex colors. For example, `{"backgroundColor": '#FFFF66', 'headerColor': '#3333EE'}`.

Example usage:

```python
widget_moderation = reddit.subreddit('mysub').widgets.mod
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
config = {'numEvents': 10,
          'showDate': True,
          'showDescription': False,
          'showLocation': False,
          'showTime': True,
          'showTitle': True}

new_widget = widget_moderation.add_calendar('Upcoming Events',
                                             cal_id, True,
                                             config, styles)
```

add_community_list(short_name, data, styles, description=", "**,other_settings)

Add and return a CommunityList widget.

Parameters

- **short_name** – A name for the widget, no longer than 30 characters.
- **data** – A list of subreddits. Subreddits can be represented as `str` (e.g. the string 'redditdev') or as `Subreddit` (e.g. `reddit.subreddit('redditdev')`). These types may be mixed within the list.
- **styles** – A dict with keys `backgroundColor` and `headerColor`, and values of hex colors. For example, `{"backgroundColor": '#FFFF66', 'headerColor': '#3333EE'}`.
• **description** – A string containing Markdown (default: '').

Example usage:

```python
widget_moderation = reddit.subreddit('mysub').widgets.mod
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
subreddits = ['learnpython', reddit.subreddit('redditdev')]
new_widget = widget_moderation.add_community_list('My fav subs',
                                             subreddits,
                                             styles,
                                             'description')
```

**add_custom_widget** *(short_name, text, css, height, image_data, styles, **other_settings)*

Add and return a `CustomWidget`.

**Parameters**

• **short_name** – A name for the widget, no longer than 30 characters.

• **text** – The Markdown text displayed in the widget.

• **css** – The CSS for the widget, no longer than 100000 characters.

**Note:** As of this writing, Reddit will not accept empty CSS. If you wish to create a custom widget without CSS, consider using `'/**/` (an empty comment) as your CSS.

• **height** – The height of the widget, between 50 and 500.

• **image_data** – A list of dicts as specified in Reddit docs. Each dict represents an image and has the key 'url' which maps to the URL of an image hosted on Reddit’s servers. Images should be uploaded using `upload_image()`.

For example:

```python
image_paths = ['/path/to/image1.jpg', '/path/to/image2.png']
image_urls = [widget_moderation.upload_image(img_path)
             for img_path in image_paths]
image_dicts = [{'width': 600, 'height': 450, 'name': 'logo'},
               {'width': 450, 'height': 600, 'name': 'icon'}]
```

• **styles** – A dict with keys `backgroundColor` and `headerColor`, and values of hex colors. For example, `{'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}`.

Example usage:

```python
widget_moderation = reddit.subreddit('mysub').widgets.mod
image_paths = ['/path/to/image1.jpg', '/path/to/image2.png']
image_urls = [widget_moderation.upload_image(img_path)
             for img_path in image_paths]
image_dicts = [{'width': 600, 'height': 450, 'name': 'logo',
                'url': image_urls[0]},
               {'width': 450, 'height': 600, 'name': 'icon',
                'url': image_urls[1]}]
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
new_widget = widget_moderation.add_custom_widget('My widget',
                                               '# Hello world!',
                                               short_name='My custom widget',
                                               text='Hello world!',
                                               height=500,
                                               image_data=image_dicts,
                                               styles=styles)
```
**add_image_widget** *(short_name, data, styles, **other_settings)*

Add and return an *ImageWidget*.

**Parameters**

- **short_name** – A name for the widget, no longer than 30 characters.
- **data** – A list of dicts as specified in Reddit docs. Each dict has the key 'url' which maps to the URL of an image hosted on Reddit’s servers. Images should be uploaded using *upload_image()*.

For example:

```python
[{'url': 'https://some.link', # from upload_image()
'width': 600, 'height': 450,
'linkUrl': 'https://github.com/praw-dev/praw'},
{'url': 'https://other.link', # from upload_image()
'width': 450, 'height': 600,
'linkUrl': 'https://praw.readthedocs.io'}]
```

- **styles** – A dict with keys **backgroundColor** and **headerColor**, and values of hex colors. For example, {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}.

Example usage:

```python
widget_moderation = reddit.subreddit('mysub').widgets.mod
image_paths = ['/path/to/image1.jpg', '/path/to/image2.png']
image_dicts = [{
    'width': 600, 'height': 450,
    'linkUrl': '',
    'url': widget_moderation.upload_image(img_path)}
    for img_path in image_paths]
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
new_widget = widget_moderation.add_image_widget('My cool pictures', image_dicts, styles)
```

**add_menu** *(data, **other_settings)*

Add and return a *Menu* widget.

**Parameters data** – A list of dicts describing menu contents, as specified in Reddit docs. As of this writing, the format is:

```python
[
    {
        "text": a string no longer than 20 characters,
        "url": a valid URL
    },
    {
        "children": [
            {
                "text": a string no longer than 20 characters,
                "url": a valid URL,
            }
        ]
    }
]
```
Example usage:

```python
text = 'My homepage', 'url': 'https://example.com'},
  {'text': 'Python packages',
   'children': [
     {'text': 'PRAW', 'url': 'https://praw.readthedocs.io/'},
     {'text': 'requests', 'url': 'http://python-requests.org'}
   ],
  {'text': 'Reddit homepage', 'url': 'https://reddit.com'}
]
new_widget = widget_moderation.add_menu(menu_contents)
```

**add_post_flair_widget** *(short_name, display, order, styles, **other_settings)*

Add and return a *PostFlairWidget*.

**Parameters**

- **short_name** – A name for the widget, no longer than 30 characters.
- **display** – Display style. Either 'cloud' or 'list'.
- **order** – A list of flair template IDs. You can get all flair template IDs in a subreddit with:

  ```python
  flairs = [f['id'] for f in subreddit.flair.link_templates]
  ```

- **styles** – A dict with keys `backgroundColor` and `headerColor`, and values of hex colors. For example, {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}.

Example usage:

```python
subreddit = reddit.subreddit('mysub')
widget_moderation = subreddit.widgets.mod
flairs = [f['id'] for f in subreddit.flair.link_templates]
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
new_widget = widget_moderation.add_post_flair_widget('Some flairs', 'list', flairs, styles)
```

**add_text_area** *(short_name, text, styles, **other_settings)*

Add and return a *TextArea* widget.

**Parameters**

- **short_name** – A name for the widget, no longer than 30 characters.
- **text** – The Markdown text displayed in the widget.
• **styles** – A `dict` with keys `backgroundColor` and `headerColor`, and values of hex colors. For example, `{'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}`.

Example usage:

```python
widget_moderation = reddit.subreddit('mysub').widgets.mod
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
new_widget = widget_moderation.add_text_area('My cool title', '*Hello* **world**!', styles)
```

**reorder**(new_order, section=’sidebar’)

Reorder the widgets.

**Parameters**

- **new_order** – A list of widgets. Represented as a list that contains `Widget` objects, or widget IDs as strings. These types may be mixed.
- **section** – The section to reorder. (default: ’sidebar’)

Example usage:

```python
widgets = reddit.subreddit('mysub').widgets
order = list(widgets.sidebar)
order.reverse()
widgets.mod.reorder(order)
```

**upload_image**(file_path)

Upload an image to Reddit and get the URL.

**Parameters**

- **file_path** – The path to the local file.

**Returns**

The URL of the uploaded image as a `str`.

This method is used to upload images for widgets. For example, it can be used in conjunction with `add_image_widget()`, `add_custom_widget()`, and `add_button_widget()`.

Example usage:

```python
my_sub = reddit.subreddit('my_sub')
image_url = my_sub.widgets.mod.upload_image('/path/to/image.jpg')
images = [{'width': 300, 'height': 300, 'url': image_url, 'linkUrl': ''}]
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
my_sub.widgets.mod.add_image_widget('My cool pictures', images, styles)
```

### 1.10.17 ThingModerationMixin

**class** praw.models.reddit.mixins.ThingModerationMixin

Provides moderation methods for Comments and Submissions.

**__init__**

Initialize self. See `help(type(self))` for accurate signature.

**approve()**

Approve a `Comment` or `Submission`. 

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Approving a comment or submission reverts a removal, resets the report counter, adds a green check mark indicator (only visible to other moderators) on the website view, and sets the `approved_by` attribute to the authenticated user.

Example usage:

```python
# approve a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.approve()
# approve a submission:
submission = reddit.submission(id='5or86n')
submission.mod.approve()
```

distinguish (`how='yes', sticky=False`)  
Distinguish a Comment or Submission.

Parameters

- how – One of ‘yes’, ‘no’, ‘admin’, ‘special’. ‘yes’ adds a moderator level distinguish. ‘no’ removes any distinction. ‘admin’ and ‘special’ require special user privileges to use.
- sticky – Comment is stickied if True, placing it at the top of the comment page regardless of score. If thing is not a top-level comment, this parameter is silently ignored.

Example usage:

```python
# distinguish and sticky a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.distinguish(how='yes', sticky=True)
# undistinguish a submission:
submission = reddit.submission(id='5or86n')
submission.mod.distinguish(how='no')
```

See also undistinguish()  
ignore_reports()  
Ignore future reports on a Comment or Submission.

Calling this method will prevent future reports on this Comment or Submission from both triggering notifications and appearing in the various moderation listings. The report count will still increment on the Comment or Submission.

Example usage:

```python
# ignore future reports on a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.ignore_reports()
# ignore future reports on a submission
submission = reddit.submission(id='5or86n')
submission.mod.ignore_reports()
```

See also unignore_reports()  
lock()  
Lock the a Comment or Submission.

Example usage:

```python
# lock a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.lock()
```
# lock a submission:
submission = reddit.submission(id='5or86n')
submission.mod.lock()

See also unlock()

removed (spam=False)
Remove a Comment or Submission.

Parameters spam – When True, use the removal to help train the Subreddit’s spam filter (default: False).

Example usage:

# remove a comment and mark as spam:
comment = reddit.comment('dkk4qjd')
comment.mod.remove(spam=True)

# remove a submission
submission = reddit.submission(id='5or86n')
submission.mod.remove()

send_removal_message (message, title='ignored', type='public')
Send a removal message for a Comment or Submission.

Reddit adds human-readable information about the object to the message.

Parameters

- **type** – One of ‘public’, ‘private’, ‘private_exposed’. ‘public’ leaves a stickied comment on the post. ‘private’ sends a Modmail message with hidden username. ‘private_exposed’ sends a Modmail message without hidden username.

- **title** – The short reason given in the message. (Ignored if type is ‘public’.)

- **message** – The body of the message.

If type is ‘public’, the new Comment is returned.

undistinguish ()
Remove mod, admin, or special distinguishing on object.
Also unsticksies the object if applicable.

Example usage:

# undistinguish a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.undistinguish()

# undistinguish a submission:
submission = reddit.submission(id='5or86n')
submission.mod.undistinguish()

See also distinguish()

unignore_reports ()
Resume receiving future reports on a Comment or Submission.

Future reports on this Comment or Submission will cause notifications, and appear in the various moderation listings.

Example usage:
```python
# accept future reports on a comment:
comment = reddit.comment('dkk4qjd')
comment.mod.unignore_reports()

# accept future reports on a submission
submission = reddit.submission(id='5or86n')
submission.mod.unignore_reports()

See also `ignore_reports()`

unlock()
Unlock the a Comment or Submission.

Example usage:

# unlock a comment: comment = reddit.comment('dkk4qjd') comment.mod.unlock() # unlock a submission: submission = reddit.submission(id='5or86n') submission.mod.unlock()

See also `lock()`

## 1.10.18 WidgetModeration

class praw.models.WidgetModeration(widget, subreddit, reddit)

Class for moderating a particular widget.

Example usage:

```python
widget = reddit.subreddit('my_sub').widgets.sidebar[0]
widget.mod.update(shortName='My new title')
widget.mod.delete()
```

__init__(widget, subreddit, reddit)
Initialize the widget moderation object.

delete()
Delete the widget.

Example usage:

```python
widget.mod.delete()
```

update(**kwargs)
Update the widget. Returns the updated widget.

Parameters differ based on the type of widget. See Reddit documentation or the document of the particular type of widget. For example, update a text widget like so:

```python
text_widget.mod.update(shortName='New text area', text='Hello!')
```

**Note:** Most parameters follow the lowerCamelCase convention. When in doubt, check the Reddit documentation linked above.

## 1.10.19 WikiPageModeration

class praw.models.reddit.wikipage.WikiPageModeration(wikipage)

Provides a set of moderation functions for a WikiPage.
__init__(wikipage)
Create a WikiPageModeration instance.

Parameters wikipage – The wikipage to moderate.

add(redditor)
Add an editor to this WikiPage.

Parameters redditor – A redditor name (e.g., 'spez') or Redditor instance.

To add 'spez' as an editor on the wikipage 'praw_test' try:

```
reddit.subreddit('test').wiki['praw_test'].mod.add('spez')
```

remove(redditor)
Remove an editor from this WikiPage.

Parameters redditor – A redditor name (e.g., 'spez') or Redditor instance.

To remove 'spez' as an editor on the wikipage 'praw_test' try:

```
reddit.subreddit('test').wiki['praw_test'].mod.remove('spez')
```

settings()
Return the settings for this WikiPage.

update(listed, permlevel, **other_settings)
Update the settings for this WikiPage.

Parameters

- listed – (boolean) Show this page on page list.
- permlevel – (int) Who can edit this page? (0) use subreddit wiki permissions, (1) only approved wiki contributors for this page may edit (see WikiPageModeration.add()), (2) only mods may edit and view
- other_settings – Additional keyword arguments to pass.

Returns The updated WikiPage settings.

To set the wikipage 'praw_test' in '/r/test' to mod only and disable it from showing in the page list, try:

```
reddit.subreddit('test').wiki['praw_test'].mod.update(listed=False, permlevel=2)
```

1.10.20 ContributorRelationship

class praw.models.reddit.subreddit.ContributorRelationship(subreddit, relationship)

Provides methods to interact with a Subreddit’s contributors.

Contributors are also known as approved submitters.

Contributors of a subreddit can be iterated through like so:

```
for contributor in reddit.subreddit('redditdev').contributor():
    print(contributor)
```
__call__(redditor=None, **generator_kwargs)

Return a generator for Redditors belonging to this relationship.

Parameters

redditor – When provided, yield at most a single Redditor instance. This is useful to confirm if a relationship exists, or to fetch the metadata associated with a particular relationship (default: None).

Additional keyword arguments are passed in the initialization of ListingGenerator.

__init__(subreddit, relationship)

Create a SubredditRelationship instance.

Parameters

- subreddit – The subreddit for the relationship.
- relationship – The name of the relationship.

add(redditor, **other_settings)

Add redditor to this relationship.

Parameters

redditor – A redditor name (e.g., 'spez') or Redditor instance.

leave()

Abdicate the contributor position.

remove(redditor)

Remove redditor from this relationship.

Parameters

redditor – A redditor name (e.g., 'spez') or Redditor instance.

1.10.21 ModeratorRelationship

class praw.models.reddit.subreddit.ModeratorRelationship(subreddit, relationship)

Provides methods to interact with a Subreddit's moderators.

Moderators of a subreddit can be iterated through like so:

```python
for moderator in reddit.subreddit('redditdev').moderator():
    print(moderator)
```

__call__(redditor=None)

Return a list of Redditors who are moderators.

Parameters

redditor – When provided, return a list containing at most one Redditor instance. This is useful to confirm if a relationship exists, or to fetch the metadata associated with a particular relationship (default: None).

Note: Unlike other relationship callables, this relationship is not paginated. Thus it simply returns the full list, rather than an iterator for the results.

To be used like:

```python
moderators = reddit.subreddit('nameofsub').moderator()
```

For example, to list the moderators along with their permissions try:

```python
for moderator in reddit.subreddit('SUBREDDIT').moderator():
    print('{}: {}'.format(moderator, moderator.mod_permissions))
```
__init__ (subreddit, relationship)
Create a SubredditRelationship instance.

Parameters

• subreddit – The subreddit for the relationship.
• relationship – The name of the relationship.

add (redditor, permissions=None, **other_settings)
Add or invite redditor to be a moderator of the subreddit.

Parameters

• redditor – A redditor name (e.g., 'spez') or Redditor instance.
• permissions – When provided (not None), permissions should be a list of strings specifying which subset of permissions to grant. An empty list [] indicates no permissions, and when not provided None, indicates full permissions.

An invite will be sent unless the user making this call is an admin user.

For example, to invite 'spez' with 'posts' and 'mail' permissions to '/r/test/', try:
```
reddit.subreddit('test').moderator.add('spez', ['posts', 'mail'])
```

invite (redditor, permissions=None, **other_settings)
Invite redditor to be a moderator of the subreddit.

Parameters

• redditor – A redditor name (e.g., 'spez') or Redditor instance.
• permissions – When provided (not None), permissions should be a list of strings specifying which subset of permissions to grant. An empty list [] indicates no permissions, and when not provided None, indicates full permissions.

For example, to invite 'spez' with 'posts' and 'mail' permissions to '/r/test/', try:
```
reddit.subreddit('test').moderator.invite('spez', ['posts', 'mail'])
```

leave ()
Abdicate the moderator position (use with care).

For example:
```
reddit.subreddit('subredditname').moderator.leave()
```

remove (redditor)
Remove redditor from this relationship.

Parameters redditor – A redditor name (e.g., 'spez') or Redditor instance.

remove_invite (redditor)
Remove the moderator invite for redditor.

Parameters redditor – A redditor name (e.g., 'spez') or Redditor instance.

For example:
```
reddit.subreddit('subredditname').moderator.remove_invite('spez')
```
**update**(redditor, permissions=None)

Update the moderator permissions for redditor.

**Parameters**

- **redditor** – A redditor name (e.g., 'spez') or Redditor instance.
- **permissions** – When provided (not None), permissions should be a list of strings specifying which subset of permissions to grant. An empty list [] indicates no permissions, and when not provided, None, indicates full permissions.

For example, to add all permissions to the moderator, try:

```python
subreddit.moderator.update('spez')
```

To remove all permissions from the moderator, try:

```python
subreddit.moderator.update('spez', [])
```

**update_invite**(redditor, permissions=None)

Update the moderator invite permissions for redditor.

**Parameters**

- **redditor** – A redditor name (e.g., 'spez') or Redditor instance.
- **permissions** – When provided (not None), permissions should be a list of strings specifying which subset of permissions to grant. An empty list [] indicates no permissions, and when not provided, None, indicates full permissions.

For example, to grant the flair and mail permissions to the moderator invite, try:

```python
subreddit.moderator.update_invite('spez', ['flair', 'mail'])
```

### 1.10.22 SubredditRelationship

class praw.models.reddit.subreddit.SubredditRelationship(subreddit, relationship)

Represents a relationship between a redditor and subreddit.

Instances of this class can be iterated through in order to discover the Redditors that make up the relationship.

For example, banned users of a subreddit can be iterated through like so:

```python
for ban in reddit.subreddit('redditdev').banned():
    print('{}: {}'.format(ban, ban.note))
```

__call__ (redditor=None, **generator_kwargs)

Return a generator for Redditors belonging to this relationship.

**Parameters**

- **redditor** – When provided, yield at most a single Redditor instance. This is useful to confirm if a relationship exists, or to fetch the metadata associated with a particular relationship (default: None).

Additional keyword arguments are passed in the initialization of ListingGenerator.

__init__ (subreddit, relationship)

Create a SubredditRelationship instance.

**Parameters**

- **subreddit** – The subreddit for the relationship.
relationship – The name of the relationship.

add(redditor, **other_settings)
Add redditor to this relationship.

Parameters redditor – A redditor name (e.g., 'spez') or Redditor instance.

remove(redditor)
Remove redditor from this relationship.

Parameters redditor – A redditor name (e.g., 'spez') or Redditor instance.

1.10.23 SubredditFilters
class praw.models.reddit.subreddit.SubredditFilters(subreddit)
Provide functions to interact with the special Subreddit’s filters.

Members of this class should be utilized via Subreddit.filters. For example to add a filter run:

```python
reddit.subreddit('all').filters.add('subreddit_name')
```

__init__(subreddit)
Create a SubredditFilters instance.

Parameters subreddit – The special subreddit whose filters to work with.

As of this writing filters can only be used with the special subreddits all and mod.

__iter__()
Iterate through the special subreddit’s filters.
This method should be invoked as:

```python
for subreddit in reddit.subreddit('NAME').filters:
    ...
```

add(subreddit)
Add subreddit to the list of filtered subreddits.

Parameters subreddit – The subreddit to add to the filter list.

Items from subreddits added to the filtered list will no longer be included when obtaining listings for /r/all.

Alternatively, you can filter a subreddit temporarily from a special listing in a manner like so:

```python
reddit.subreddit('all-redditdev-learnpython')
```

Raises prawcore.NotFound when calling on a non-special subreddit.

remove(subreddit)
Remove subreddit from the list of filtered subreddits.

Parameters subreddit – The subreddit to remove from the filter list.

Raises prawcore.NotFound when calling on a non-special subreddit.

1.10.24 SubredditQuarantine
class praw.models.reddit.subreddit.SubredditQuarantine(subreddit)
Provides subreddit quarantine related methods.
__init__(subreddit)
Create a SubredditQuarantine instance.

Parameters subreddit – The subreddit associated with the quarantine.

opt_in()
Permit your user access to the quarantined subreddit.

Usage:
```
subreddit = reddit.subreddit('QUESTIONABLE')
next(subreddit.hot())  # Raises prawcoreForbidden
subreddit.quaran.opt_in()
next(subreddit.hot())  # Returns Submission
```

opt_out()
Remove access to the quarantined subreddit.

Usage:
```
subreddit = reddit.subreddit('QUESTIONABLE')
next(subreddit.hot())  # Returns Submission
subreddit.quaran.opt_out()
next(subreddit.hot())  # Raises prawcoreForbidden
```

1.10.25 SubredditStream
class praw.models.reddit.subreddit.SubredditStream(subreddit)
Provides submission and comment streams.

__init__(subreddit)
Create a SubredditStream instance.

Parameters subreddit – The subreddit associated with the streams.

comments(**stream_options)
Yield new comments as they become available.

Comments are yielded oldest first. Up to 100 historical comments will initially be returned.

Keyword arguments are passed to stream_generator().

For example, to retrieve all new comments made to the iama subreddit, try:
```
for comment in reddit.subreddit('iama').stream.comments():
    print(comment)
```

To only retrieve new submissions starting when the stream is created, pass skip_existing=True:
```
subreddit = reddit.subreddit('iama')
for comment in subreddit.stream.comments(skip_existing=True):
    print(comment)
```

submissions(**stream_options)
Yield new submissions as they become available.

Submissions are yielded oldest first. Up to 100 historical submissions will initially be returned.

Keyword arguments are passed to stream_generator().
For example to retrieve all new submissions made to all of Reddit, try:

```python
for submission in reddit.subreddit('all').stream.submissions():
    print(submission)
```

1.10.26 SubredditStylesheet

class praw.models.reddit.subreddit.SubredditStylesheet(subreddit)

Provides a set of stylesheet functions to a Subreddit.

__call__()

Return the subreddit’s stylesheet.

To be used as:

```python
stylesheet = reddit.subreddit('SUBREDDIT').stylesheet()
```

__init__(subreddit)

Create a SubredditStylesheet instance.

Parameters subreddit – The subreddit associated with the stylesheet.

An instance of this class is provided as:

```python
reddit.subreddit('SUBREDDIT').stylesheet
```

delete_banner()

Remove the current subreddit (redesign) banner image.

Succeeds even if there is no banner image.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.delete_banner()
```

delete_banner_additional_image()

Remove the current subreddit (redesign) banner additional image.

Succeeds even if there is no additional image. Will also delete any configured hover image.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.delete_banner_additional_image()
```

delete_banner_hover_image()

Remove the current subreddit (redesign) banner hover image.

Succeeds even if there is no hover image.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.delete_banner_hover_image()
```

delete_header()

Remove the current subreddit header image.

Succeeds even if there is no header image.

For example:
delete_image (name)
Remove the named image from the subreddit.
Succeeds even if the named image does not exist.
For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.delete_image('smile')
```

delete_mobile_header()
Remove the current subreddit mobile header.
Succeeds even if there is no mobile header.
For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.delete_mobile_header()
```

delete_mobile_icon()
Remove the current subreddit mobile icon.
Succeeds even if there is no mobile icon.
For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.delete_mobile_icon()
```

update (stylesheet, reason=None)
Update the subreddit’s stylesheet.

Parameters

- `stylesheet` – The CSS for the new stylesheet.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.update('p { color: green; }', 'color text green')
```

upload (name, image_path)
Upload an image to the Subreddit.

Parameters

- `name` – The name to use for the image. If an image already exists with the same name, it will be replaced.
- `image_path` – A path to a jpeg or png image.

Returns

A dictionary containing a link to the uploaded image under the key `img_src`.

Raises `prawcore.TooLarge` if the overall request body is too large.

Raises `APIException` if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.upload('smile', 'img.png')
```

upload_banner (image_path)
Upload an image for the subreddit’s (redesign) banner image.
Parameters `image_path` – A path to a jpeg or png image.

Raises `prawcore.TooLarge` if the overall request body is too large.

Raises `APIException` if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.upload_banner('banner.png')
```

`upload_banner_additional_image` *(image_path, align=None)*

Upload an image for the subreddit’s (redesign) additional image.

Parameters

- `image_path` – A path to a jpeg or png image.
- `align` – Either `left`, `centered`, or `right` (default: `left`).

Raises `prawcore.TooLarge` if the overall request body is too large.

Raises `APIException` if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.upload_banner_additional_image('banner.png')
```

`upload_banner_hover_image` *(image_path)*

Upload an image for the subreddit’s (redesign) additional image.

Parameters `image_path` – A path to a jpeg or png image.

Fails if the Subreddit does not have an additional image defined

Raises `prawcore.TooLarge` if the overall request body is too large.

Raises `APIException` if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.upload_banner_hover_image('banner.png')
```

`upload_header` *(image_path)*

Upload an image to be used as the Subreddit’s header image.

Parameters `image_path` – A path to a jpeg or png image.

Returns A dictionary containing a link to the uploaded image under the key `img_src`.

Raises `prawcore.TooLarge` if the overall request body is too large.

Raises `APIException` if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:
upload_mobile_header(image_path)

Upload an image to be used as the Subreddit’s mobile header.

**Parameters** image_path – A path to a jpeg or png image.

**Returns** A dictionary containing a link to the uploaded image under the key **img_src**.

Raises prawcore.TooLarge if the overall request body is too large.

Raises APIException if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.upload_mobile_header('header.png')
```

upload_mobile_icon(image_path)

Upload an image to be used as the Subreddit’s mobile icon.

**Parameters** image_path – A path to a jpeg or png image.

**Returns** A dictionary containing a link to the uploaded image under the key **img_src**.

Raises prawcore.TooLarge if the overall request body is too large.

Raises APIException if there are other issues with the uploaded image. Unfortunately the exception info might not be very specific, so try through the website with the same image to see what the problem actually might be.

For example:

```python
reddit.subreddit('SUBREDDIT').stylesheet.upload_mobile_icon('icon.png')
```

### 1.10.27 SubredditWidgets

class praw.models.SubredditWidgets(subreddit)

Class to represent a subreddit’s widgets.

Create an instance like so:

```python
widgets = reddit.subreddit('redditdev').widgets
```

Data will be lazy-loaded. By default, PRAW will not request progressively loading images from Reddit. To enable this, instantiate a SubredditWidgets object, then set the attribute `progressive_images` to `True` before performing any action that would result in a network request.

```python
widgets = reddit.subreddit('redditdev').widgets
widgets.progressive_images = True
for widget in widgets.sidebar:
    # do something
```

Access a subreddit’s widgets with the following attributes:
The attribute `id_card` contains the subreddit’s ID card, which displays information like the number of subscribers.

The attribute `moderators_widget` contains the subreddit’s moderators widget, which lists the moderators of the subreddit.

The attribute `sidebar` contains a list of widgets which make up the sidebar of the subreddit.

The attribute `topbar` contains a list of widgets which make up the top bar of the subreddit.

To edit a subreddit’s widgets, use `mod`. For example:

```python
widgets.mod.add_text_area('My title', '**bold text**',
                          {'backgroundColor': '#FFFF66',
                          'headerColor': '#3333EE'})
```

For more information, see `SubredditWidgetsModeration`.

To edit a particular widget, use `.mod` on the widget. For example:

```python
for widget in widgets.sidebar:
    widget.mod.update(shortName='Exciting new name')
```

For more information, see `WidgetModeration`.

Currently available Widgets:

- `ButtonWidget`
- `Calendar`
- `CommunityList`
- `CustomWidget`
- `IDCard`
- `ImageWidget`
- `Menu`
- `ModeratorsWidget`
- `PostFlairWidget`
- `RulesWidget`
- `TextArea`

```python
__init__(subreddit)
```

Initialize the class.

**Parameters** `subreddit` – The `Subreddit` the widgets belong to.

**id_card**

Get this subreddit’s `IDCard` widget.

**items**

Get this subreddit’s widgets as a dict from ID to widget.
mod

Get an instance of *SubredditWidgetsModeration*.

**Note:** Using any of the methods of *SubredditWidgetsModeration* will likely result in the data of this *SubredditWidgets* being outdated. To re-sync, call *refresh()*.

**moderators_widget**

Get this subreddit’s *ModeratorsWidget*.

classmethod *parse*(data, reddit)

Return an instance of *cls* from *data*.

**Parameters**

- *data* – The structured data.
- *reddit* – An instance of *Reddit*.

refresh()

Refresh the subreddit’s widgets.

By default, PRAW will not request progressively loading images from Reddit. To enable this, set the attribute *progressive_images* to *True* prior to calling *refresh()*.

```python
widgets = reddit.subreddit('redditdev').widgets
widgets.progressive_images = True
widgets.refresh()
```

**sidebar**

Get a list of Widgets that make up the sidebar.

**topbar**

Get a list of Widgets that make up the top bar.

1.10.28 SubredditWiki

class praw.models.reddit.subreddit.SubredditWiki(subreddit)

Provides a set of wiki functions to a Subreddit.

**__getitem__**(page_name)

Lazily return the WikiPage for the subreddit named *page_name*.

This method is to be used to fetch a specific wikipage, like so:

```python
wikipage = reddit.subreddit('iama').wiki['proof']
print(wikipage.content_md)
```

**__init__**(subreddit)

Create a SubredditWiki instance.

**Parameters** *subreddit* – The subreddit whose wiki to work with.

**__iter__**()

Iterate through the pages of the wiki.

This method is to be used to discover all wikipages for a subreddit:

```python
for wikipage in reddit.subreddit('iama').wiki:
    print(wikipage)
```
create(name, content, reason=None, **other_settings)
Create a new wiki page.

Parameters

• name – The name of the new WikiPage. This name will be normalized.
• content – The content of the new WikiPage.
• reason – (Optional) The reason for the creation.
• other_settings – Additional keyword arguments to pass.

To create the wiki page 'praw_test' in '/r/test' try:

```python
reddit.subreddit('test').wiki.create('praw_test', 'wiki body text', reason='PRAW Test Creation')
```

revisions(**generator_kwargs)
Return a generator for recent wiki revisions.

Additional keyword arguments are passed in the initialization of ListingGenerator.

To view the wiki revisions for 'praw_test' in '/r/test' try:

```python
for item in reddit.subreddit('test').wiki['praw_test'].revisions():
    print(item)
```

1.10.29 ButtonWidget

class praw.models.ButtonWidget(reddit, _data)
Class to represent a widget containing one or more buttons.

Find an existing one:

```python
button_widget = None
widgets = reddit.subreddit('redditdev').widgets
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.ButtonWidget):
        button_widget = widget
        break
for button in button_widget:
    print(button.text, button.url)
```

Create one (requires proper moderator permissions):

```python
widgets = reddit.subreddit('redditdev').widgets
buttons = [
    {
        'kind': 'text',
        'text': 'View source',
        'url': 'https://github.com/praw-dev/praw',
        'color': '#FF0000',
        'textColor': '#00FF00',
        'fillColor': '#0000FF',
        'hoverState': {
            'kind': 'text',
            'text': 'ecruos weiV',
        }
    }
]
_widgets = reddit.subreddit('redditdev').widgets
```
For more information on creation, see `add_button_widget()`.

Update one (requires proper moderator permissions):

```python
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
button_widget = button_widget.mod.update(shortName='My fav buttons',
                                          styles=new_styles)
```

Delete one (requires proper moderator permissions):

```python
button_widget.mod.delete()
```

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>buttons</td>
<td>A list of <code>Buttons</code>. These can also be accessed just by iterating over the <code>ButtonWidget</code> (e.g., for button in button_widget).</td>
</tr>
<tr>
<td>description</td>
<td>The description, in Markdown.</td>
</tr>
<tr>
<td>description_html</td>
<td>The description, in HTML.</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'button').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
</tbody>
</table>

**Contains** *(item)*

Test if item exists in the list.

**getitem** *(index)*

Return the item at position index in the list.

**init** *(reddit, _data)*

Initialize an instance of the class.
__iter__
Return an iterator to the list.

__len__
Return the number of items in the list.

mod
Get an instance of WidgetModeration for this widget.

Note: Using any of the methods of WidgetModeration will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call refresh().

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters
• data – The structured data.
• reddit – An instance of Reddit.

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

1.10.30 Calendar

class praw.models.Calendar(reddit, _data)
Class to represent a calendar widget.

Find an existing one:

```python
calendar = None
widgets = reddit.subreddit('redditdev').widgets
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.Calendar):
        calendar = widget
        break
print(calendar.googleCalendarId)
```

Create one (requires proper moderator permissions):

```python
widgets = reddit.subreddit('redditdev').widgets
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
config = {'numEvents': 10,
          'showDate': True,
          'showDescription': False,
          'showLocation': False,
          'showTime': True,
          'showTitle': True}
cal_id = 'y6mm89jy427drk8l71w75w9wjn8group.calendar.google.com'
calendar = widgets.mod.add_calendar('Upcoming Events', cal_id, True, config, styles)
```
For more information on creation, see `add_calendar()`.

Update one (requires proper moderator permissions):

```python
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
calendar = calendar.mod.update(shortName='My fav events',
                                styles=new_styles)
```

Delete one (requires proper moderator permissions):

```python
calendar.mod.delete()
```

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see `Determine Available Attributes of an Object`), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configuration</td>
<td>A dict describing the calendar configuration.</td>
</tr>
<tr>
<td>data</td>
<td>A list of dicts that represent events.</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'calendar').</td>
</tr>
<tr>
<td>requiresSync</td>
<td>A bool.</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
</tbody>
</table>

`__init__`(reddit, _data)

Initialize an instance of the class.

`mod`

Get an instance of `WidgetModeration` for this widget.

**Note:** Using any of the methods of `WidgetModeration` will likely make outdated the data in the `SubredditWidgets` that this widget belongs to. To remedy this, call `refresh()`.

`classmethod parse`(data, reddit)

Return an instance of `cls` from `data`.

**Parameters**

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See `Determine Available Attributes of an Object` for detailed information.
# 1.10.31 CommunityList

**class praw.models.CommunityList(reddit, _data)**

Class to represent a Related Communities widget.

Find an existing one:

```python
community_list = None
widgets = reddit.subreddit('redditdev').widgets
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.CommunityList):
        community_list = widget
        break
print(community_list)
```

Create one (requires proper moderator permissions):

```python
widgets = reddit.subreddit('redditdev').widgets
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
subreddits = ['learnpython', reddit.subreddit('announcements')]
community_list = widgets.mod.add_community_list('Related subreddits',
                                                 subreddits, styles,
                                                 'description')
```

For more information on creation, see `add_community_list()`.

Update one (requires proper moderator permissions):

```python
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
community_list = community_list.mod.update(shortName='My fav subs',
                                          styles=new_styles)
```

Delete one (requires proper moderator permissions):

```python
community_list.mod.delete()
```

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see [Determine Available Attributes of an Object](#)), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>A list of Subreddits. These can also be iterated over by iterating over the CommunityList (e.g. for sub in community_list).</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'community-list').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
</tbody>
</table>

**__contains__(item)**

Test if item exists in the list.

**__getitem__(index)**

Return the item at position index in the list.
__init__(reddit, _data)
Initialize an instance of the class.

__iter__()
Return an iterator to the list.

__len__()
Return the number of items in the list.

mod
Get an instance of WidgetModeration for this widget.

Note: Using any of the methods of WidgetModeration will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call refresh().

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters
• data – The structured data.
• reddit – An instance of Reddit.

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

1.10.32 CustomWidget
class praw.models.CustomWidget(reddit, _data)
Class to represent a custom widget.

Find an existing one:

```python
custom = None
widgets = reddit.subreddit('redditdev').widgets
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.CustomWidget):
        custom = widget
        break

print(custom.text)
print(custom.css)
```

Create one (requires proper moderator permissions):

```python
widgets = reddit.subreddit('redditdev').widgets
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
custom = widgets.mod.add_custom_widget(
    'My custom widget', '# Hello world!', '/**/', 200, [], styles)
```

For more information on creation, see add_custom_widget().

Update one (requires proper moderator permissions):
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
custom = custom.mod.update(shortName='My fav customization',
                           styles=new_styles)

Delete one (requires proper moderator permissions):
custom.mod.delete()

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>css</td>
<td>The CSS of the widget, as a str.</td>
</tr>
<tr>
<td>height</td>
<td>The height of the widget, as an int.</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>imageData</td>
<td>A list of <code>ImageData</code> that belong to the widget.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'custom').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>stylesheetUrl</td>
<td>A link to the widget’s stylesheet.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The <code>Subreddit</code> the button widget belongs to.</td>
</tr>
<tr>
<td>text</td>
<td>The text contents, as Markdown.</td>
</tr>
<tr>
<td>textHtml</td>
<td>The text contents, as HTML.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, _data)
```
Initialize the class.

```python
mod
```
Get an instance of `WidgetModeration` for this widget.

**Note:** Using any of the methods of `WidgetModeration` will likely make outdated the data in the `SubredditWidgets` that this widget belongs to. To remedy this, call `refresh()`.

```python
classmethod parse(data, reddit)
```
Return an instance of `cls` from `data`.

**Parameters**

- `data` – The structured data.
- `reddit` – An instance of `Reddit`.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See *Determine Available Attributes of an Object* for detailed information.
class praw.models.IDCard(reddit, _data)
    Class to represent an ID card widget.

    widgets = reddit.subreddit('redditdev').widgets
    id_card = widgets.id_card
    print(id_card.subscribersText)

    Update one (requires proper moderator permissions):

    widgets.id_card.mod.update(currentlyViewingText='Bots')

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>currentlyViewingCount</td>
<td>The number of Redditors viewing the subreddit.</td>
</tr>
<tr>
<td>currentlyViewingText</td>
<td>The text displayed next to the view count. For example, “users online”.</td>
</tr>
<tr>
<td>description</td>
<td>The subreddit description.</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'id-card').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
<tr>
<td>subscribersCount</td>
<td>The number of subscribers to the subreddit.</td>
</tr>
</tbody>
</table>
| subscribersText      | The text displayed next to the subscriber count. For example, “users sub-
                        subscribed”.                                                            |

__init__ (reddit, _data)

    Initialize an instance of the class.

    mod

    Get an instance of WidgetModeration for this widget.

    Note: Using any of the methods of WidgetModeration will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call refresh().

classmethod parse (data, reddit)

    Return an instance of cls from data.

    Parameters

    • data – The structured data.
    • reddit – An instance of Reddit.

    Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.
## 1.10.34 ImageWidget

**class praw.models.ImageWidget**(reddit, _data)

Class to represent an image widget.

Find an existing one:

```python
image_widget = None
widgets = reddit.subreddit('redditdev').widgets
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.ImageWidget):
        image_widget = widget
        break

for image in image_widget:
    print(image.url)
```

Create one (requires proper moderator permissions):

```python
widgets = reddit.subreddit('redditdev').widgets
image_paths = ['/path/to/image1.jpg', '/path/to/image2.png']
image_dicts = [{
    'width': 600, 'height': 450, 'linkUrl': '',
    'url': widgets.mod.upload_image(img_path)
    for img_path in image_paths}
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
image_widget = widgets.mod.add_image_widget('My cool pictures', image_dicts, styles)
```

For more information on creation, see `add_image_widget()`.

Update one (requires proper moderator permissions):

```python
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
image_widget = image_widget.mod.update(shortName='My fav images',
    styles=new_styles)
```

Delete one (requires proper moderator permissions):

```python
image_widget.mod.delete()
```

### Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>A list of the Images in this widget. Can be iterated over by iterating over the ImageWidget (e.g. for img in image_widget).</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'image').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
</tbody>
</table>

```python
__contains__(item)
```

Test if item exists in the list.
__getitem__(index)
Return the item at position index in the list.

__init__(reddit, _data)
Initialize an instance of the class.

__iter__()
Return an iterator to the list.

__len__()
Return the number of items in the list.

mod
Get an instance of WidgetModeration for this widget.

Note: Using any of the methods of WidgetModeration will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call refresh().

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters
• data – The structured data.
• reddit – An instance of Reddit.

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

1.10.35 Menu

class praw.models.Menu(reddit, _data)
Class to represent the top menu widget of a subreddit.

Menus can generally be found as the first item in a subreddit’s top bar.

```python
topbar = reddit.subreddit('redditdev').widgets.topbar
if len(topbar) > 0:
    probably_menu = topbar[0]
    assert isinstance(probably_menu, praw.models.Menu)
    for item in probably_menu:
        if isinstance(item, praw.models.Submenu):
            print(item.text)
            for child in item:
                print('	', child.text, child.url)
        else:  # MenuLink
            print(item.text, item.url)
```

Create one (requires proper moderator permissions):

```python
widgets = reddit.subreddit('redditdev').widgets
menu_contents = [
```
For more information on creation, see `add_menu()`.

Update one (requires proper moderator permissions):

```python
menu_items = list(menu)
menu_items.reverse()
menu = menu.mod.update(data=menu_items)
```

Delete one (requires proper moderator permissions):

```python
menu.mod.delete()
```

### Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>A list of the MenuLinks and Submenus in this widget. Can be iterated over by iterating over the Menu (e.g. for item in menu).</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'menu').</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
</tbody>
</table>

```python
__contains__(item)
    Test if item exists in the list.
__getitem__(index)
    Return the item at position index in the list.
__init__(reddit, _data)
    Initialize an instance of the class.
__iter__()
    Return an iterator to the list.
__len__()
    Return the number of items in the list.
mod
    Get an instance of WidgetModeration for this widget.
```

**Note:** Using any of the methods of `WidgetModeration` will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call `refresh()`.
classmethod parse(data, reddit)

Return an instance of cls from data.

Parameters

- data – The structured data.
- reddit – An instance of Reddit.

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

1.10.36 ModeratorsWidget

class praw.models.ModeratorsWidget(reddit, _data)

Class to represent a moderators widget.

widgets = reddit.subreddit('redditdev').widgets
print(widgets.moderators_widget)

Update one (requires proper moderator permissions):

new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
widgets.moderators_widget.mod.update(styles=new_styles)

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'moderators').</td>
</tr>
<tr>
<td>mods</td>
<td>A list of the Redditors that moderate the subreddit. Can be iterated over by iterating over the ModeratorsWidget (e.g. for mod in widgets.moderators_widget).</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
<tr>
<td>totalMods</td>
<td>The total number of moderators in the subreddit.</td>
</tr>
</tbody>
</table>

__contains__(item)

Test if item exists in the list.

__getitem__(index)

Return the item at position index in the list.

__init__(reddit, _data)

Initialize the moderators widget.

__iter__()

Return an iterator to the list.
__len__()  
Return the number of items in the list.

mod  
Get an instance of WidgetModeration for this widget.

**Note:** Using any of the methods of WidgetModeration will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call refresh().

classmethod parse(data, reddit)  
Return an instance of cls from data.

**Parameters**

- **data** – The structured data.
- **reddit** – An instance of Reddit.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

### 1.10.37 PostFlairWidget

class praw.models.PostFlairWidget(reddit, _data)  
Class to represent a post flair widget.

Find an existing one:

```python
post_flair_widget = None
widgets = reddit.subreddit('redditdev').widgets
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.PostFlairWidget):
        post_flair_widget = widget
        break
for flair in post_flair_widget:
    print(flair)
    print(post_flair_widget.templates[flair])
```

Create one (requires proper moderator permissions):

```python
subreddit = reddit.subreddit('redditdev')
widgets = subreddit.widgets
flairs = [f['id'] for f in subreddit.flair.link_templates]
styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
post_flair = widgets.mod.add_post_flair_widget('Some flairs', 'list', flairs, styles)
```

For more information on creation, see add_post_flair_widget().

Update one (requires proper moderator permissions):
```python
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
post_flair = post_flair.mod.update(shortName='My fav flairs',
                                   styles=new_styles)
```

Delete one (requires proper moderator permissions):

```python
post_flair.mod.delete()
```

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>display</td>
<td>The display style of the widget, either 'cloud' or 'list'.</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'post-flair').</td>
</tr>
<tr>
<td>order</td>
<td>A list of the flair IDs in this widget. Can be iterated over by iterating over the <code>PostFlairWidget</code> (e.g. for flair_id in post_flair).</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The <code>Subreddit</code> the button widget belongs to.</td>
</tr>
<tr>
<td>templates</td>
<td>A dict that maps flair IDs to dicts that describe flairs.</td>
</tr>
</tbody>
</table>

**__contains__(item)**

Test if item exists in the list.

**__getitem__(index)**

Return the item at position index in the list.

**__init__(reddit, _data)**

Initialize an instance of the class.

**__iter__()**

Return an iterator to the list.

**__len__()**

Return the number of items in the list.

**mod**

Get an instance of `WidgetModeration` for this widget.

---

**Note:** Using any of the methods of `WidgetModeration` will likely make outdated the data in the `SubredditWidgets` that this widget belongs to. To remedy this, call `refresh()`.

**classmethod parse(data, reddit)**

Return an instance of `cls` from `data`.

**Parameters**

- **data** – The structured data.
- **reddit** – An instance of `Reddit`.

---

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1.10.38 RulesWidget

```
class praw.models.RulesWidget(reddit, _data)
Class to represent a rules widget.
```

```
widgets = reddit.subreddit('redditdev').widgets
rules_widget = None
for widget in widgets.sidebar:
    if isinstance(widget, praw.models.RulesWidget):
        rules_widget = widget
        break
from pprint import pprint; pprint(rules_widget.data)
```

Update one (requires proper moderator permissions):

```
new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
rules_widget.mod.update(display='compact', shortName='The LAWS',
styles=new_styles)
```

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see [Determine Available Attributes of an Object](#)), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>A list of the subreddit rules. Can be iterated over by iterating over the <code>RulesWidget</code> (e.g. for <code>rule in rules_widget</code>).</td>
</tr>
<tr>
<td>display</td>
<td>The display style of the widget, either 'full' or 'compact'.</td>
</tr>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'subreddit-rules').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
</tbody>
</table>

```
__contains__(item)
    Test if item exists in the list.

__getitem__(index)
    Return the item at position index in the list.

__init__(reddit, _data)
    Initialize the rules widget.

__iter__()
    Return an iterator to the list.

__len__()
    Return the number of items in the list.

mod
    Get an instance of `WidgetModeration` for this widget.
```

**Note:** Using any of the methods of `WidgetModeration` will likely make outdated the data in the `SubredditWidgets` that this widget belongs to. To remedy this, call `refresh()`.

---

1.10. Other Classes
classmethod parse(data, reddit)
    Return an instance of cls from data.

    Parameters
    • data – The structured data.
    • reddit – An instance of Reddit.

Note: This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

1.10.39 TextArea

class praw.models.TextArea(reddit, _data)
    Class to represent a text area widget.

    Find a text area in a subreddit:

    ```python
    widgets = reddit.subreddit('redditdev').widgets
    text_area = None
    for widget in widgets.sidebar:
        if isinstance(widget, praw.models.TextArea):
            text_area = widget
            break
    print(text_area.text)
    ```

    Create one (requires proper moderator permissions):

    ```python
    widgets = reddit.subreddit('redditdev').widgets
    styles = {'backgroundColor': '#FFFF66', 'headerColor': '#3333EE'}
    text_area = widgets.mod.add_text_area('My cool title', '*Hello* **world**!', styles)
    ```

    For more information on creation, see add_text_area().

    Update one (requires proper moderator permissions):

    ```python
    new_styles = {'backgroundColor': '#FFFFFF', 'headerColor': '#FF9900'}
    text_area = text_area.mod.update(shortName='My fav text',
                                      styles=new_styles)
    ```

    Delete one (requires proper moderator permissions):

    ```python
    text_area.mod.delete()
    ```

    Typical Attributes

    This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>The widget ID.</td>
</tr>
<tr>
<td>kind</td>
<td>The widget kind (always 'textarea').</td>
</tr>
<tr>
<td>shortName</td>
<td>The short name of the widget.</td>
</tr>
<tr>
<td>styles</td>
<td>A dict with the keys 'backgroundColor' and 'headerColor'.</td>
</tr>
<tr>
<td>subreddit</td>
<td>The Subreddit the button widget belongs to.</td>
</tr>
<tr>
<td>text</td>
<td>The widget’s text, as Markdown.</td>
</tr>
<tr>
<td>textHtml</td>
<td>The widget’s text, as HTML.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, _data)
Initialize an instance of the class.
```

```python
mod
Get an instance of WidgetModeration for this widget.
```

**Note:** Using any of the methods of WidgetModeration will likely make outdated the data in the SubredditWidgets that this widget belongs to. To remedy this, call refresh().

```python
classmethod parse(data, reddit)
Return an instance of cls from data.
```

**Parameters**
- `data` – The structured data.
- `reddit` – An instance of Reddit.

**Note:** This list of attributes is not complete. PRAW dynamically provides the attributes that Reddit returns via the API. Because those attributes are subject to change on Reddit’s end, PRAW makes no effort to document them, other than to instruct you on how to discover what is available. See Determine Available Attributes of an Object for detailed information.

### 1.10.40 Auth

```python
class praw.models.Auth(reddit, _data)
Auth provides an interface to Reddit’s authorization.
```

```python
__init__(reddit, _data)
Initialize a PRAWModel instance.
```

**Parameters**
- `reddit` – An instance of Reddit.

```python
authorize(code)
Complete the web authorization flow and return the refresh token.
```

**Parameters**
- `code` – The code obtained through the request to the redirect uri.

**Returns**
The obtained refresh token, if available, otherwise None.

The session’s active authorization will be updated upon success.

```python
implicit(access_token, expires_in, scope)
Set the active authorization to be an implicit authorization.
```

**Parameters**
• **access_token** – The access_token obtained from Reddit’s callback.

• **expires_in** – The number of seconds the access_token is valid for. The origin of this value was returned from Reddit’s callback. You may need to subtract an offset before passing in this number to account for a delay between when Reddit prepared the response, and when you make this function call.

• **scope** – A space-delimited string of Reddit OAuth2 scope names as returned from Reddit’s callback.

Raise `ClientException` if `Reddit` was initialized for a non-installed application type.

**limits**

Return a dictionary containing the rate limit info.

The keys are:

- **Remaining** The number of requests remaining to be made in the current rate limit window.
- **Reset_timestamp** A unix timestamp providing an upper bound on when the rate limit counters will reset.
- **Used** The number of requests made in the current rate limit window.

All values are initially `None` as these values are set in response to issued requests.

The `reset_timestamp` value is an upper bound as the real timestamp is computed on Reddit’s end in preparation for sending the response. This value may change slightly within a given window due to slight changes in response times and rounding.

**classmethod** `parse(data, reddit)`

Return an instance of `cls` from `data`.

**Parameters**

- **data** – The structured data.
- **reddit** – An instance of `Reddit`.

**scopes()**

Return a set of scopes included in the current authorization.

For read-only authorizations this should return `{'*'}`.

**url(scopes, state, duration='permanent', implicit=False)**

Return the URL used out-of-band to grant access to your application.

**Parameters**

- **scopes** – A list of OAuth scopes to request authorization for.
- **state** – A string that will be reflected in the callback to `redirect_uri`. This value should be temporarily unique to the client for whom the URL was generated for.
- **duration** – Either `permanent` or `temporary` (default: `permanent`). `temporary` authorizations generate access tokens that last only 1 hour. `permanent` authorizations additionally generate a refresh token that can be indefinitely used to generate new hour-long access tokens. This value is ignored when `implicit=True`.
- **implicit** – For `installed` applications, this value can be set to use the implicit, rather than the code flow. When True, the `duration` argument has no effect as only temporary tokens can be retrieved.
1.10.41 Button

```python
class praw.models.Button(reddit, _data)
Class to represent a single button inside a ButtonWidget.
```

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>color</td>
<td>The hex color used to outline the button.</td>
</tr>
<tr>
<td>height</td>
<td>Image height. Only present on image buttons.</td>
</tr>
<tr>
<td>hoverState</td>
<td>A dict describing the state of the button when hovered over. Optional.</td>
</tr>
<tr>
<td>kind</td>
<td>Either 'text' or 'image'.</td>
</tr>
<tr>
<td>linkUrl</td>
<td>A link that can be visited by clicking the button. Only present on image buttons.</td>
</tr>
<tr>
<td>text</td>
<td>The text displayed on the button.</td>
</tr>
<tr>
<td>url</td>
<td>If the button is a text button, a link that can be visited by clicking the button. If the button is an image button, the URL of a Reddit-hosted image.</td>
</tr>
<tr>
<td>width</td>
<td>Image width. Only present on image buttons.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, _data)
Initialize a PRAWModel instance.
```

**Parameters**

- **reddit** – An instance of Reddit.

```python
classmethod parse(data, reddit)
Return an instance of cls from data.
```

**Parameters**

- **data** – The structured data.
- **reddit** – An instance of Reddit.

1.10.42 CommentForest

```python
class praw.models.comment_forest.CommentForest(submission, comments=None)
A forest of comments starts with multiple top-level comments.
```

Each of these comments can be a tree of replies.

```python
__getitem__(index)
Return the comment at position index in the list.
```

This method is to be used like an array access, such as:

```python
first_comment = submission.comments[0]
```

Alternatively, the presence of this method enables one to iterate over all top_level comments, like so:

```python
for comment in submission.comments:
    print(comment.body)
```

```python
__init__(submission, comments=None)
Initialize a CommentForest instance.
```
Parameters

- **submission** – An instance of `Subreddit` that is the parent of the comments.
- **comments** – Initialize the Forest with a list of comments (default: None).

__len__()
Return the number of top-level comments in the forest.

list()
Return a flattened list of all Comments.

This list may contain `MoreComments` instances if `replace_more()` was not called first.

replace_more(\(limit=32, \text{threshold}=0\))
Update the comment forest by resolving instances of `MoreComments`.

Parameters

- **limit** – The maximum number of `MoreComments` instances to replace. Each replacement requires 1 API request. Set to None to have no limit, or to 0 to remove all `MoreComments` instances without additional requests (default: 32).
- **threshold** – The minimum number of children comments a `MoreComments` instance must have in order to be replaced. `MoreComments` instances that represent “continue this thread” links unfortunately appear to have 0 children. (default: 0).

Returns A list of `MoreComments` instances that were not replaced.

For example, to replace up to 32 `MoreComments` instances of a submission try:

```python
submission = reddit.submission('3hahrw')
submission.comments.replace_more()
```

Alternatively, to replace `MoreComments` instances within the replies of a single comment try:

```python
comment = reddit.comment('d8r4im1')
comment.refresh()
comment.replies.replace_more()
```

Note: This method can take a long time as each replacement will discover at most 20 new `Comment` or `MoreComments` instances. As a result, consider looping and handling exceptions until the method returns successfully. For example:

```python
while True:
    try:
        submission.comments.replace_more()
        break
    except PossibleExceptions:
        print('Handling replace_more exception')
        sleep(1)
```

1.10.43 CommentHelper

class praw.models.listing.mixins.subreddit.CommentHelper(subreddit)
Provide a set of functions to interact with a subreddit’s comments.
__call__ (**generator_kwargs)
Return a ListingGenerator for the Subreddit’s comments.
Additional keyword arguments are passed in the initialization of ListingGenerator.
This method should be used in a way similar to the example below:

```python
for comment in reddit.subreddit('redditdev').comments(limit=25):
    print(comment.author)
```

__init__ (subreddit)
Initialize a CommentHelper instance.

classmethod parse (data, reddit)
Return an instance of cls from data.

Parameters
• data – The structured data.
• reddit – An instance of Reddit.

1.10.44 Config

class praw.config.Config (site_name, **settings)
A class containing the configuration for a reddit site.

__init__ (site_name, **settings)
Initialize a Config instance.

short_url
Return the short url or raise a ClientException when not set.

1.10.45 DomainListing

class praw.models.DomainListing (reddit, domain)
Provide a set of functions to interact with domain listings.

__init__ (reddit, domain)
Initialize a DomainListing instance.

Parameters
• reddit – An instance of Reddit.
• domain – The domain for which to obtain listings.

controversial (time_filter='all', **generator_kwargs)
Return a ListingGenerator for controversial submissions.

Parameters time_filter – Can be one of: all, day, hour, month, week, year (default: all).
Raise ValueError if time_filter is invalid.
Additional keyword arguments are passed in the initialization of ListingGenerator.
This method can be used like:
hot (**generator_kwargs)**

Return a ListingGenerator for hot items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').hot()
reddit.multireddit('samuraisam', 'programming').hot()
reddit.redditor('spez').hot()
reddit.redditor('spez').comments.hot()
reddit.redditor('spez').submissions.hot()
reddit.subreddit('all').hot()
```

new (**generator_kwargs)**

Return a ListingGenerator for new items.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

This method can be used like:

```python
reddit.domain('imgur.com').new()
reddit.multireddit('samuraisam', 'programming').new()
reddit.redditor('spez').new()
reddit.redditor('spez').comments.new()
reddit.redditor('spez').submissions.new()
reddit.subreddit('all').new()
```

classmethod parse (data, reddit)

Return an instance of cls from data.

Parameters

- **data** – The structured data.
- **reddit** – An instance of Reddit.

random_rising (**generator_kwargs)**

Return a ListingGenerator for random rising submissions.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

rising (**generator_kwargs)**

Return a ListingGenerator for rising submissions.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.

top (time_filter='all', **generator_kwargs)**

Return a ListingGenerator for top submissions.

Parameters **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

Raise ValueError if time_filter is invalid.

Additional keyword arguments are passed in the initialization of `ListingGenerator`.
This method can be used like:

```python
reddit.domain('imgur.com').top('week')
reddit.multireddit('samuraisam', 'programming').top('day')
reddit.redditor('spez').top('month')
reddit.redditor('spez').comments.top('year')
reddit.redditor('spez').submissions.top('all')
reddit.subreddit('all').top('hour')
```

### 1.10.46 Emoji

**class** `praw.models.reddit.emoji.Emoji(reddit, subreddit, name, _data=None)`

An individual Emoji object.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list necessarily comprehensive.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>The name of the emoji.</td>
</tr>
<tr>
<td>url</td>
<td>The URL of the emoji image.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, subreddit, name, _data=None)
```

Construct an instance of the Emoji object.

```python
delete()
```

Delete an emoji from this subreddit by Emoji.

To delete 'test' as an emoji on the subreddit 'praw_test' try:

```python
reddit.subreddit('praw_test').emoji['test'].delete()
```

```python
classmethod parse(data, reddit)
```

Return an instance of cls from data.

**Parameters**

- **data** – The structured data.
- **reddit** – An instance of Reddit.

### 1.10.47 ListingGenerator

**class** `praw.models.ListingGenerator(reddit, url, limit=100, params=None)`

Instances of this class generate **RedditBase** instances.

**Warning:** This class should not be directly utilized. Instead you will find a number of methods that return instances of the class:


```python
__init__(reddit, url, limit=100, params=None)
```

Initialize a ListingGenerator instance.
Parameters

- **reddit** – An instance of `Reddit`.
- **url** – A URL returning a reddit listing.
- **limit** – The number of content entries to fetch. If `limit` is None, then fetch as many entries as possible. Most of reddit's listings contain a maximum of 1000 items, and are returned 100 at a time. This class will automatically issue all necessary requests (default: 100).
- **params** – A dictionary containing additional query string parameters to send with the request.

```python
__iter__(self)
Permit ListingGenerator to operate as an iterator.
```

```python
classmethod parse(cls, data, reddit)
Return an instance of cls from data.
```

Parameters

- **data** – The structured data.
- **reddit** – An instance of `Reddit`.

## 1.10.48 Image

```python
class praw.models.Image(reddit, _data)
Class to represent an image that's part of a ImageWidget.
```

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see `Determine Available Attributes of an Object`), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>height</td>
<td>Image height.</td>
</tr>
<tr>
<td>linkUrl</td>
<td>A link that can be visited by clicking the image.</td>
</tr>
<tr>
<td>url</td>
<td>The URL of the (Reddit-hosted) image.</td>
</tr>
<tr>
<td>width</td>
<td>Image width.</td>
</tr>
</tbody>
</table>

```python
__init__(self, reddit, _data)
Initialize a PRAWModel instance.
```

Parameters **reddit** – An instance of `Reddit`.

```python
classmethod parse(cls, data, reddit)
Return an instance of cls from data.
```

Parameters

- **data** – The structured data.
- **reddit** – An instance of `Reddit`.


1.10.49 ImageData

```python
class praw.models.ImageData(reddit, _data)
```

Class for image data that’s part of a `CustomWidget`.

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see `Determine Available Attributes of an Object`), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>height</td>
<td>The image height.</td>
</tr>
<tr>
<td>name</td>
<td>The image name.</td>
</tr>
<tr>
<td>url</td>
<td>The URL of the image on Reddit’s servers.</td>
</tr>
<tr>
<td>width</td>
<td>The image width.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, _data)
```

Initialize a PRAWModel instance.

Parameters

- **reddit** – An instance of `Reddit`.

```python
classmethod parse(data, reddit)
```

Return an instance of cls from data.

Parameters

- • **data** – The structured data.
- • **reddit** – An instance of `Reddit`.

1.10.50 MenuLink

```python
class praw.models.MenuLink(reddit, _data)
```

Class to represent a single link inside a menu or submenu.

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see `Determine Available Attributes of an Object`), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text</td>
<td>The text of the menu link.</td>
</tr>
<tr>
<td>url</td>
<td>The URL that the menu item links to.</td>
</tr>
</tbody>
</table>

```python
__init__(reddit, _data)
```

Initialize a PRAWModel instance.

Parameters

- **reddit** – An instance of `Reddit`.

```python
classmethod parse(data, reddit)
```

Return an instance of cls from data.

Parameters

- • **data** – The structured data.
- • **reddit** – An instance of `Reddit`.
1.10.51 Modmail

```python
class praw.models.reddit.subreddit.Modmail(subreddit):
    Provides modmail functions for a subreddit.

    __call__(id=None, mark_read=False)
    Return an individual conversation.
    Parameters
    • id – A reddit base36 conversation ID, e.g., 2gmz.
    • mark_read – If True, conversation is marked as read (default: False).
    For example:
    reddit.subreddit('redditdev').modmail('2gmz', mark_read=True)
```

To print all messages from a conversation as Markdown source:

```python
conversation = reddit.subreddit('redditdev').modmail('2gmz', mark_read=True)
for message in conversation.messages:
    print(message.body_markdown)
```

ModmailConversation.user is a special instance of Redditor with extra attributes describing the non-moderator user’s recent posts, comments, and modmail messages within the subreddit, as well as information on active bans and mutes. This attribute does not exist on internal moderator discussions.

For example, to print the user’s ban status:

```python
conversation = reddit.subreddit('redditdev').modmail('2gmz', mark_read=True)
print(conversation.user.ban_status)
```

To print a list of recent submissions by the user:

```python
conversation = reddit.subreddit('redditdev').modmail('2gmz', mark_read=True)
print(conversation.user.recent_posts)
```

```python
__init__(subreddit)
Construct an instance of the Modmail object.
```

```python
bulk_read(other_subreddits=None, state=None)
Mark conversations for subreddit(s) as read.
Due to server-side restrictions, ‘all’ is not a valid subreddit for this method. Instead, use subreddits() to get a list of subreddits using the new modmail.
    Parameters
    • other_subreddits – A list of Subreddit instances for which to mark conversations (default: None).
    • state – Can be one of: all, archived, highlighted, inprogress, mod, new, notifications, (default: all). “all” does not include internal or archived conversations.
    Returns A list of ModmailConversation instances that were marked read.
    For example, to mark all notifications for a subreddit as read:
    subreddit = reddit.subreddit('redditdev')
    subreddit.modmail.bulk_read(state='notifications')
```
conversations (after=None, limit=None, other_subreddits=None, sort=None, state=None)
Generate ModmailConversation objects for subreddit(s).

Parameters
- **after** – A base36 modmail conversation id. When provided, the listing begins after this conversation (default: None).
- **limit** – The maximum number of conversations to fetch. If None, the server-side default is 25 at the time of writing (default: None).
- **other_subreddits** – A list of Subreddit instances for which to fetch conversations (default: None).
- **sort** – Can be one of: mod, recent, unread, user (default: recent).
- **state** – Can be one of: all, archived, highlighted, inprogress, mod, new, notifications, (default: all). “all” does not include internal or archived conversations.

For example:
```
conversations = reddit.subreddit('all').modmail.conversations(state='mod')
```

create (subject, body, recipient, author_hidden=False)
Create a new modmail conversation.

Parameters
- **subject** – The message subject. Cannot be empty.
- **body** – The message body. Cannot be empty.
- **recipient** – The recipient; a username or an instance of Redditor.
- **author_hidden** – When True, author is hidden from non-moderators (default: False).

Returns A ModmailConversation object for the newly created conversation.
```
subreddit = reddit.subreddit('redditdev')
redditor = reddit.redditor('bboe')
subreddit.modmail.create('Subject', 'Body', redditor)
```

subreddits ()
Yield subreddits using the new modmail that the user moderates.

For example:
```
subreddits = reddit.subreddit('all').modmail.subreddits()
```

unread_count ()
Return unread conversation count by conversation state.
At time of writing, possible states are: archived, highlighted, inprogress, mod, new, notifications.

Returns A dict mapping conversation states to unread counts.

For example, to print the count of unread moderator discussions:
```
subreddit = reddit.subreddit('redditdev')
unread_counts = subreddit.modmail.unread_count()
print(unread_counts['mod'])
```
1.10.52 ModmailMessage

class praw.models.ModmailMessage(reddit, _data)
A class for modmail messages.

__init__(reddit, _data)
Initialize a RedditBase instance (or a subclass).

Parameters
reddit -- An instance of Reddit.

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters

• data -- The structured data.
• reddit -- An instance of Reddit.

1.10.53 Preferences

class praw.models.Preferences(reddit)
A class for Reddit preferences.

The Preferences class provides access to the Reddit preferences of the currently authenticated user.

__call__()
Return the preference settings of the authenticated user as a dict.

This method is intended to be accessed as reddit.user.preferences() like so:

preferences = reddit.user.preferences()
print(preferences['show_link_flair'])

See https://www.reddit.com/dev/api#GET_api_v1_me_prefs for the list of possible values.

__init__(reddit)
Create a Preferences instance.

Parameters
reddit -- The Reddit instance.

update(**preferences)
Modify the specified settings.

Parameters

• 3rd_party_data_personalized_ads -- Allow Reddit to use data provided by
third-parties to show you more relevant advertisements on Reddit (boolean).

• 3rd_party_site_data_personalized_ads -- Allow personalization of adver-
tsizements using third-party website data (boolean).

• 3rd_party_site_data_personalized_content -- Allow personalization of
content using third-party website data (boolean).

• activity_relevant_ads -- Allow Reddit to use your activity on Reddit to show you
more relevant advertisements (boolean).

• allow_clicktracking -- Allow Reddit to log my outbound clicks for personalization
(BOOLEAN).

• beta -- I would like to beta test features for Reddit (boolean).
• **clickgadget** – Show me links I’ve recently viewed (boolean).

• **collapse_read_messages** – Collapse messages after I’ve read them (boolean).

• **compress** – Compress the link display (boolean).

• **creddit_autorenew** – Use a creddit to automatically renew my gold if it expires (boolean).

• **default_comment_sort** – Default comment sort (one of 'confidence', 'top', 'new', 'controversial', 'old', 'random', 'qa', 'live').

• **domain_details** – Show additional details in the domain text when available, such as the source subreddit or the content author’s url/name (boolean).

• **email_digests** – Send email digests (boolean).

• **email_messages** – Send messages as emails (boolean).

• **email_unsubscribe_all** – Unsubscribe from all emails (boolean).

• **enable_default_themes** – Use reddit theme (boolean).


• **hide_ads** – Hide ads (boolean).

• **hide_downs** – Don’t show me submissions after I’ve downvoted them, except my own (boolean).

• **hide_from_robots** – Don’t allow search engines to index my user profile (boolean).

• **hide_locationbar** – Hide location bar (boolean).

• **hide_ups** – Don’t show me submissions after I’ve upvoted them, except my own (boolean).

• **highlight_controversial** – Show a dagger on comments voted controversial (boolean).

• **highlight_new_comments** – Highlight new comments (boolean).

• **ignore_suggested_sort** – Ignore suggested sorts (boolean).

• **in_redesign_beta** – In redesign beta (boolean).

• **label_nsfw** – Label posts that are not safe for work (boolean).

• **lang** – Interface language (IETF language tag, underscore separated).

• **legacy_search** – Show legacy search page (boolean).

• **live_orangereds** – Send message notifications in my browser (boolean).

• **mark_messages_read** – Mark messages as read when I open my inbox (boolean).
- **media** – Thumbnail preference (one of 'on', 'off', 'subreddit').
- **media_preview** – Media preview preference (one of 'on', 'off', 'subreddit').
- **min_comment_score** – Don’t show me comments with a score less than this number (int between -100 and 100).
- **min_link_score** – Don’t show me submissions with a score less than this number (int between -100 and 100).
- **monitor_mentions** – Notify me when people say my username (boolean).
- **newwindow** – Open links in a new window (boolean).
- **no_profanity** – Don’t show thumbnails or media previews for anything labeled NSFW (boolean).
- **no_video_autoplay** – Don’t autoplay Reddit videos on the desktop comments page (boolean).
- **num_comments** – Display this many comments by default (int between 1 and 500).
- **numsites** – Number of links to display at once (int between 1 and 100).
- **organic** – Show the spotlight box on the home feed (boolean).
- **other_theme** – Subreddit theme to use (subreddit name).
- **over_18** – I am over eighteen years old and willing to view adult content (boolean).
- **private_feeds** – Enable private RSS feeds (boolean).
- **profile_opt_out** – View user profiles on desktop using legacy mode (boolean).
- **public_votes** – Make my votes public (boolean).
- **research** – Allow my data to be used for research purposes (boolean).
- **search_include_over_18** – Include not safe for work (NSFW) search results in searches (boolean).
- **show_flair** – Show user flair (boolean).
- **show_gold_expiration** – Show how much gold you have remaining on your user-page (boolean).
- **show_link_flair** – Show link flair (boolean).
- **show_promote** – Show promote (boolean).
- **show_stylesheets** – Allow subreddits to show me custom themes (boolean).
- **show_trending** – Show trending subreddits on the home feed (boolean).
- **store_visits** – Store visits (boolean)
- **theme_selector** – Theme selector (subreddit name).
- **threaded_messages** – Show message conversations in the inbox (boolean).
- **threaded_modmail** – Enable threaded modmail display (boolean).
- **top_karma_subreddits** – Top karma subreddits (boolean).
- **use_global_defaults** – Use global defaults (boolean).
Additional keyword arguments can be provided to handle new settings as Reddit introduces them. See https://www.reddit.com/dev/api#PATCH_api_v1_me_prefs for the most up-to-date list of possible parameters. This is intended to be used like so:

```python
reddit.user.preferences.update(show_link_flair=True)
```

This method returns the new state of the preferences as a `dict`, which can be used to check whether a change went through.

```python
original_preferences = reddit.user.preferences()
new_preferences = reddit.user.preferences.update(invalid_param=123)
print(original_preferences == new_preferences)  # True, no change
```

**Warning:** Passing an unknown parameter name or an illegal value (such as an int when a boolean is expected) does not result in an error from the Reddit API. As a consequence, any invalid input will fail silently. To verify that changes have been made, use the return value of this method, which is a dict of the preferences after the update action has been performed.

Some preferences have names that are not valid keyword arguments in Python. To update these, construct a `dict` and use `**` to unpack it as keyword arguments:

```python
reddit.user.preferences.update(**{'3rd_party_data_personalized_ads': False})
```

### 1.10.54 RedditBase

#### class praw.models.reddit.base.RedditBase (reddit, _data)

Base class that represents actual Reddit objects.

##### __init__ (reddit, _data)

Initialize a RedditBase instance (or a subclass).

- **Parameters**
  - `reddit` – An instance of `Reddit`.

##### classmethod parse (data, reddit)

Return an instance of cls from data.

- **Parameters**
  - `data` – The structured data.
  - `reddit` – An instance of `Reddit`.

### 1.10.55 RedditorList

#### class praw.models.RedditorList (reddit, _data)

A list of Redditors. Works just like a regular list.

- **__contains__ (item)**
  
  Test if item exists in the list.

- **__getitem__ (index)**
  
  Return the item at position index in the list.
___init__ (reddit, _data)
Initialize a BaseList instance.

Parameters

- reddit – An instance of Reddit.

___iter__ ()
Return an iterator to the list.

___len__ ()
Return the number of items in the list.

classmethod parse (data, reddit)
Return an instance of cls from data.

Parameters

- data – The structured data.
- reddit – An instance of Reddit.

1.10.56 SubListing

class praw.models.listing.mixins.redditor.SubListing (reddit, base_path, subpath)
Helper class for generating ListingGenerator objects.

___init__ (reddit, base_path, subpath)
Initialize a SubListing instance.

Parameters

- reddit – An instance of Reddit.
- base_path – The path to the object up to this point.
- subpath – The additional path to this sublisting.

controversial (time_filter='all', **generator_kwags)
Return a ListingGenerator for controversial submissions.

Parameters

- time_filter – Can be one of: all, day, hour, month, week, year (default: all).
- generator_kwags

Raise ValueError if time_filter is invalid.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

- reddit.domain('imgur.com').controversial('week')
- reddit.multireddit('samuraisam', 'programming').controversial('day')
- reddit.redditor('spez').controversial('month')
- reddit.redditor('spez').comments.controversial('year')
- reddit.redditor('spez').submissions.controversial('all')
- reddit.subreddit('all').controversial('hour')

hot (**generator_kwags)
Return a ListingGenerator for hot items.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:
new(**generator_kwargs)
Return a ListingGenerator for new items.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```python
reddit.domain('imgur.com').new()
reddit.multireddit('samuraisam', 'programming').new()
reddit.redditor('spez').new()
reddit.redditor('spez').comments.new()
reddit.redditor('spez').submissions.new()
reddit.subreddit('all').new()
```

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters

- **data** – The structured data.
- **reddit** – An instance of Reddit.

top(time_filter='all', **generator_kwargs)
Return a ListingGenerator for top submissions.

Parameters

- **time_filter** – Can be one of: all, day, hour, month, week, year (default: all).

Raise ValueError if time_filter is invalid.

Additional keyword arguments are passed in the initialization of ListingGenerator.

This method can be used like:

```python
reddit.domain('imgur.com').top('week')
reddit.multireddit('samuraisam', 'programming').top('day')
reddit.redditor('spez').top('month')
reddit.redditor('spez').comments.top('year')
reddit.redditor('spez').submissions.top('all')
reddit.subreddit('all').top('hour')
```

1.10.57 Submenu

class praw.models.Submenu(reddit, _data)
Class to represent a submenu of links inside a menu.

Typical Attributes

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see Determine Available Attributes of an Object), there is not a guarantee that these attributes will always be present, nor is this list comprehensive in any way.
At-  
tribute | Description
---|---
children | A list of the MenuLinks in this submenu. Can be iterated over by iterating over the Submenu (e.g. for menu_link in submenu).
text | The name of the submenu.

__contains__(item)
Test if item exists in the list.

__getitem__(index)
Return the item at position index in the list.

__init__(reddit, _data)
Initialize a BaseList instance.

Parameters
reddit – An instance of Reddit.

__iter__()
Return an iterator to the list.

__len__()
Return the number of items in the list.

classmethod parse(data, reddit)
Return an instance of cls from data.

Parameters
• data – The structured data.
• reddit – An instance of Reddit.

1.10.58 SubredditEmoji
class praw.models.reddit.emoji.SubredditEmoji(subreddit)
Provides a set of functions to a Subreddit for emoji.

__getitem__(name)
Lazily return the Emoji for the subreddit named name.

Parameters
name – The name of the emoji

This method is to be used to fetch a specific emoji url, like so:

```python
emoji = reddit.subreddit('praw_test').emoji['test']
print(emoji)
```

__init__(subreddit)
Create a SubredditEmoji instance.

Parameters
subreddit – The subreddit whose emoji are affected.

__iter__()
Return a list of Emoji for the subreddit.

This method is to be used to discover all emoji for a subreddit:

```python
for emoji in reddit.subreddit('praw_test').emoji:
    print(emoji)
```
**add** *(name, image_path)*

Add an emoji to this subreddit.

**Parameters**

- **name** – The name of the emoji
- **image_path** – A path to a jpeg or png image.

**Returns** The Emoji added.

To add 'test' to the subreddit 'praw_test' try:

```
reddit.subreddit('praw_test').emoji.add('test', 'test.png')
```

### 1.10.59 SubredditMessage

**class** *praw.models.SubredditMessage*(reddit, _data)*

A class for messages to a subreddit.

**__init__**(reddit, _data)

Construct an instance of the Message object.

**block()**

Block the user who sent the item.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```
comment = reddit.comment('dkk4qjd')
comment.block()

# or, identically:

comment.author.block()
```

**collapse()**

Mark the item as collapsed.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```
inbox = reddit.inbox()

# select first inbox item and collapse it
message = next(inbox)
message.collapse()
```

See also **uncollapse()**

**delete()**

Delete the message.
Note: Reddit does not return an indication of whether or not the message was successfully deleted.

fullname
Return the object’s fullname.

A fullname is an object’s kind mapping like t3 followed by an underscore and the object’s base36 ID, e.g., t1_c5s96e0.

mark_read()
Mark a single inbox item as read.

Note: This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox.unread()
for message in inbox:
    # process unread messages
```

See also mark_unread()
To mark the whole inbox as read with a single network request, use praw.models.Inbox.mark_read()

mark_unread()
Mark the item as unread.

Note: This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox(limit=10)
for message in inbox:
    # process messages
```

See also mark_read()

mute(_unmute=False)
Mute the sender of this SubredditMessage.

classmethod parse(data, reddit)
Return an instance of Message or SubredditMessage from data.

Parameters

- **data** – The structured data.
- **reddit** – An instance of Reddit.

reply(body)
Reply to the object.

Parameters **body** – The markdown formatted content for a comment.

Returns A Comment object for the newly created comment or None if Reddit doesn’t provide one.
A None value can be returned if the target is a comment or submission in a quarantined subreddit and the authenticated user has not opt-ed in to viewing the content. When this happens the comment will be successfully created on Reddit and can be retried by drawing the comment from the user’s comment history.

Example usage:

```python
submission = reddit.submission(id='5or86n')
submission.reply('reply')

comment = reddit.comment(id='dxolpyc')
comment.reply('reply')
```

**uncollapse()**

Mark the item as uncollapsed.

**Note:** This method pertains only to objects which were retrieved via the inbox.

Example usage:

```python
inbox = reddit.inbox()

# select first inbox item and uncollapse it
message = next(inbox)
message.uncollapse()
```

See also **collapse()**

**unmute()**

Unmute the sender of this SubredditMessage.

### 1.10.60 RedditorStream

**class** `praw.models.reddit.redditor.RedditorStream(redditor)`

Provides submission and comment streams.

**__init__(redditor)**

Create a RedditorStream instance.

**Parameters** `redditor` – The redditor associated with the streams.

**comments(**`**stream_options**`)**

Yield new comments as they become available.

Comments are yielded oldest first. Up to 100 historical comments will initially be returned.

Keyword arguments are passed to `stream_generator()`.

For example, to retrieve all new comments made by redditor spez, try:

```python
for comment in reddit.redditor('spez').stream.comments():
    print(comment)
```

**submissions(**`**stream_options**`)**

Yield new submissions as they become available.

Submissions are yielded oldest first. Up to 100 historical submissions will initially be returned.

Keyword arguments are passed to `stream_generator()`.
For example to retrieve all new submissions made by redditor spez, try:

```python
for submission in reddit.redditor('spez').stream.submissions():
    print(submission)
```

### 1.10.61 Trophy

class praw.models.Trophy (reddit, _data)

Represent a trophy.

End users should not instantiate this class directly. Redditor.trophies() can be used to get a list of the redditor’s trophies.

**Typical Attributes**

This table describes attributes that typically belong to objects of this class. Since attributes are dynamically provided (see *Determine Available Attributes of an Object*), there is not a guarantee that these attributes will always be present, nor is this list necessarily comprehensive.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>award_id</td>
<td>The ID of the trophy (sometimes None).</td>
</tr>
<tr>
<td>description</td>
<td>The description of the trophy (sometimes None).</td>
</tr>
<tr>
<td>icon_40</td>
<td>The URL of a 41x41 px icon for the trophy.</td>
</tr>
<tr>
<td>icon_70</td>
<td>The URL of a 71x71 px icon for the trophy.</td>
</tr>
<tr>
<td>name</td>
<td>The name of the trophy.</td>
</tr>
<tr>
<td>url</td>
<td>A relevant URL (sometimes None).</td>
</tr>
</tbody>
</table>

__str__() Return a name of the trophy.

### 1.10.62 Util

class praw.models.util.BoundedSet (max_items)

A set with a maximum size that evicts the oldest items when necessary.

This class does not implement the complete set interface.

__contains__(item) Test if the BoundedSet contains item.

__init__(max_items) Construct an instance of the BoundedSet.

add(item) Add an item to the set discarding the oldest item if necessary.

class praw.models.util.ExponentialCounter (max_counter)

A class to provide an exponential counter with jitter.

__init__(max_counter) Initialize an instance of ExponentialCounter.

Parameters max_counter – The maximum base value. Note that the computed value may be 3.125% higher due to jitter.

counter() Increment the counter and return the current value with jitter.
reset()
Reset the counter to 1.

praw.models.util.permissions_string(permissions, known_permissions)
Return a comma separated string of permission changes.

Parameters
- permissions – A list of strings, or None. These strings can exclusively contain + or - prefixes, or contain no prefixes at all. When prefixed, the resulting string will simply be the joining of these inputs. When not prefixed, all permissions are considered to be additions, and all permissions in the known_permissions set that aren’t provided are considered to be removals. When None, the result is +all.

- known_permissions – A set of strings representing the available permissions.

praw.models.util.stream_generator(function, pause_after=None, skip_existing=False, attribute_name='fullname', **function_kwargs)
Yield new items from ListingGenerators and None when paused.

Parameters
- function – A callable that returns a ListingGenerator, e.g. subreddit.comments or subreddit.new.

- pause_after – An integer representing the number of requests that result in no new items before this function yields None, effectively introducing a pause into the stream. A negative value yields None after items from a single response have been yielded, regardless of number of new items obtained in that response. A value of 0 yields None after every response resulting in no new items, and a value of None never introduces a pause (default: None).

- skip_existing – When True does not yield any results from the first request thereby skipping any items that existed in the stream prior to starting the stream (default: False).

- attribute_name – The field to use as an id (default: “fullname”).

Additional keyword arguments will be passed to function.

Note: This function internally uses an exponential delay with jitter between subsequent responses that contain no new results, up to a maximum delay of just over a 16 seconds. In practice that means that the time before pause for pause_after=N+1 is approximately twice the time before pause for pause_after=N.

For example, to create a stream of comment replies, try:

```python
reply_function = reddit.inbox.comment_replies
for reply in praw.models.util.stream_generator(reply_function):
    print(reply)
```

To pause a comment stream after six responses with no new comments, try:

```python
subreddit = reddit.subreddit('redditdev')
for comment in subreddit.stream.comments(pause_after=6):
    if comment is None:
        break
    print(comment)
```

To resume fetching comments after a pause, try:
subreddit = reddit.subreddit('help')
comment_stream = subreddit.stream.comments(pause_after=5)

for comment in comment_stream:
    if comment is None:
        break
    print(comment)

# Do any other processing, then try to fetch more data
for comment in comment_stream:
    if comment is None:
        break
    print(comment)

To bypass the internal exponential backoff, try the following. This approach is useful if you are monitoring a subreddit with infrequent activity, and you want the to consistently learn about new items from the stream as soon as possible, rather than up to a delay of just over sixteen seconds.

subreddit = reddit.subreddit('help')
for comment in subreddit.stream.comments(pause_after=0):
    if comment is None:
        continue
    print(comment)

1.11 Comment Extraction and Parsing

A common use for Reddit’s API is to extract comments from submissions and use them to perform keyword or phrase analysis.

As always, you need to begin by creating an instance of Reddit:

```python
import praw

reddit = praw.Reddit(user_agent='Comment Extraction (by /u/USERNAME)',
                     client_id='CLIENT_ID', client_secret="CLIENT_SECRET",
                     username='USERNAME', password='PASSWORD')
```

**Note:** If you are only analyzing public comments, entering a username and password is optional.

In this document we will detail the process of finding all the comments for a given submission. If you instead want process all comments on Reddit, or comments belonging to one or more specific subreddits, please see `praw.models.reddit.subreddit.SubredditStream.comments()`.

1.11.1 Extracting comments with PRAW

Assume we want to process the comments for this submission: [https://www.reddit.com/r/funny/comments/3g1jfi/buttons/](https://www.reddit.com/r/funny/comments/3g1jfi/buttons/)

We first need to obtain a submission object. We can do that either with the entire URL:

```python
submission = reddit.submission(url='https://www.reddit.com/r/funny/comments/3g1jfi/buttons/')
```

or with the submission’s ID which comes after `comments/` in the URL:

```python
submission = reddit.submission(url='https://www.reddit.com/r/funny/comments/3g1jfi/buttons/)
```
submission = reddit.submission(id='3gljfi')

With a submission object we can then interact with its CommentForest through the submission’s comments attribute. A CommentForest is a list of top-level comments each of which contains a CommentForest of replies.

If we wanted to output only the body of the top level comments in the thread we could do:

```python
for top_level_comment in submission.comments:
    print(top_level_comment.body)
```

While running this you will most likely encounter the exception AttributeError: 'MoreComments' object has no attribute 'body'. This submission’s comment forest contains a number of MoreComments objects. These objects represent the “load more comments”, and “continue this thread” links encountered on the website. While we could ignore MoreComments in our code, like so:

```python
from praw.models import MoreComments
for top_level_comment in submission.comments:
    if isinstance(top_level_comment, MoreComments):
        continue
    print(top_level_comment.body)
```

### 1.11.2 The replace_more method

In the previous snippet, we used `isinstance` to check whether the item in the comment list was a MoreComments so that we could ignore it. But there is a better way: the CommentForest object has a method called `replace_more()`, which replaces or removes MoreComments objects from the forest.

Each replacement requires one network request, and its response may yield additional MoreComments instances. As a result, by default, `replace_more()` only replaces at most thirty-two MoreComments instances – all other instances are simply removed. The maximum number of instances to replace can be configured via the limit parameter. Additionally a threshold parameter can be set to only perform replacement of MoreComments instances that represent a minimum number of comments; it defaults to 0, meaning all MoreComments instances will be replaced up to limit.

A limit of 0 simply removes all MoreComments from the forest. The previous snippet can thus be simplified:

```python
submission.comments.replace_more(limit=0)
for top_level_comment in submission.comments:
    print(top_level_comment.body)
```

**Note:** Calling `replace_more()` is destructive. Calling it again on the same submission instance has no effect.

Meanwhile, a limit of None means that all MoreComments objects will be replaced until there are none left, as long as they satisfy the threshold.

```python
submission.comments.replace_more(limit=None)
for top_level_comment in submission.comments:
    print(top_level_comment.body)
```

Now we are able to successfully iterate over all the top-level comments. What about their replies? We could output all second-level comments like so:
However, the comment forest can be arbitrarily deep, so we’ll want a more robust solution. One way to iterate over a
tree, or forest, is via a breadth-first traversal using a queue:

```python
submission.comments.replace_more(limit=None)
for top_level_comment in submission.comments:
    for second_level_comment in top_level_comment.replies:
        print(second_level_comment.body)
```

The above code will output all the top-level comments, followed by second-level, third-level, etc. While it is awesome
to be able to do your own breadth-first traversals, CommentForest provides a convenience method, `list()`, which
returns a list of comments traversed in the same order as the code above. Thus the above can be rewritten as:

```python
submission.comments.replace_more(limit=None)
for comment in submission.comments.list():
    print(comment.body)
```

You can now properly extract and parse all (or most) of the comments belonging to a single submission. Combine this
with `submission iteration` and you can build some really cool stuff.

Finally, note that the value of `submission.num_comments` may not match up 100% with the number of com-
ments extracted via PRAW. This discrepancy is normal as that count includes deleted, removed, and spam comments.

### 1.12 Obtaining a Refresh Token

The following program can be used to obtain a refresh token with the desired scopes. Such a token can be used in
conjunction with the `refresh_token` keyword argument using in initializing an instance of `Reddit`. A list of all
possible scopes can be found in the `reddit API docs`

```python
#!/usr/bin/env python

"""This example demonstrates the flow for retrieving a refresh token.
In order for this example to work your application’s redirect URI must be set
This tool can be used to conveniently create refresh tokens for later use with
your web application OAuth2 credentials.
"""
import praw
import random
import socket
import sys

def receive_connection():
    """Wait for and then return a connected socket."
```
Opens a TCP connection on port 8080, and waits for a single client.

```python
server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
server.setsockopt(socket.SOL_SOCKET, socket.SO_REUSEADDR, 1)
server.bind(("localhost", 8080))
server.listen(1)
client = server.accept()[0]
server.close()
return client
```

def send_message(client, message):
    """Send message to client and close the connection."""
    print(message)
    client.send("HTTP/1.1 200 OK\r\n\r\n{}".format(message).encode("utf-8"))
    client.close()

def main():
    """Provide the program's entry point when directly executed."""
    print("Go here while logged into the account you want to create a "
          "token for: https://www.reddit.com/prefs/apps/"
    )
    print("Click the create an app button. Put something in the name "
          "field and select the script radio button."
    )
    print("Put http://localhost:8080 in the redirect uri field and "
          "click create app"
    )
    client_id = input("Enter the client ID, it's the line just under "
                      "Personal use script at the top: "
    )
    client_secret = input("Enter the client secret, it's the line next "
                          "to secret: "
    )
    commaScopes = input("Now enter a comma separated list of scopes, or "
                        "all for all tokens: "
    )
    if commaScopes.lower() == "all":
        scopes = ["*"]
    else:
        scopes = commaScopes.strip().split(",")
    reddit = praw.Reddit(
        client_id=client_id.strip(),
        client_secret=client_secret.strip(),
        redirect_uri="http://localhost:8080",
        user_agent="praw_refresh_token_example",
    )
    state = str(random.randint(0, 65000))
```

1.12. Obtaining a Refresh Token
url = reddit.auth.url(scopes, state, "permanent")
print("Now open this url in your browser: " + url)
sys.stdout.flush()

client = receive_connection()
data = client.recv(1024).decode("utf-8")
param_tokens = data.split(" ", 2)[1].split("?", 1)[1].split("&")
params = {
    key: value
    for (key, value) in [token.split("=") for token in param_tokens]
}

if state != params["state"]:  
    send_message(
        client,
        "State mismatch. Expected: {} Received: {}".format(
            state, params["state"]
        ),
    )
    return 1
elif "error" in params:
    send_message(client, params["error"])
    return 1

refresh_token = reddit.auth.authorize(params["code"])  
send_message(client, "Refresh token: {}".format(refresh_token))
return 0

if __name__ == "__main__":
sys.exit(main())

1.13 Submission Stream Reply Bot

Most redditors have seen bots in action on the site. Reddit bots can perform a number of tasks including providing useful information, e.g., an Imperial to Metric units bot; convenience, e.g., a link corrector bot; or analytical information, e.g., redditor analyzer bot for writing complexity.

PRAW provides a simple way to build your own bot using the python programming language. As a result, it is little surprise that a majority of bots on Reddit are powered by PRAW.

This tutorial will show you how to build a bot that monitors a particular subreddit, /r/AskReddit, for new submissions containing simple questions and replies with an appropriate link to lmgtfy (Let Me Google That For You).

There are three key components we will address to perform this task:

1. Monitor new submissions.
2. Analyze the title of each submission to see if it contains a simple question.
3. Reply with an appropriate lmgtfy link.
1.13.1 LMGTFY Bot

The goal of the LMGTFY Bot is to point users in the right direction when they ask a simple question that is unlikely to be upvoted or answered by other users.

Two examples of such questions are:

1. “What is the capital of Canada?”
2. “How many feet are in a yard?”

Once we identify these questions, the LMGTFY Bot will reply to the submission with an appropriate lmgtfy link. For the example questions those links are:

1. http://lmgtfy.com/?q=What+is+the+capital+of+Canada%3F
2. http://lmgtfy.com/?q=How+many+feet+are+in+a+yard%3F

Step 1: Getting Started

Access to Reddit’s API requires a set of OAuth2 credentials. Those credentials are obtained by registering an application with Reddit. To register an application and receive a set of OAuth2 credentials please follow only the “First Steps” section of Reddit’s OAuth2 Quick Start Example wiki page.

Once the credentials are obtained we can begin writing the LMGTFY Bot. Start by creating an instance of Reddit:

```python
import praw

reddit = praw.Reddit(user_agent='LMGTFY (by /u/USERNAME)',
    client_id='CLIENT_ID', client_secret='CLIENT_SECRET',
    username='USERNAME', password='PASSWORD')
```

In addition to the OAuth2 credentials, the username and password of the Reddit account that registered the application are required.

Note: This example demonstrates use of a script type application. For other application types please see Reddit’s wiki page OAuth2 App Types.

Step 2: Monitoring New Submissions to /r/AskReddit

PRAW provides a convenient way to obtain new submissions to a given subreddit. To indefinitely iterate over new submissions to a subreddit add:

```python
subreddit = reddit.subreddit('AskReddit')
for submission in subreddit.stream.submissions():
    # do something with submission
```

Replace AskReddit with the name of another subreddit if you want to iterate through its new submissions. Additionally multiple subreddits can be specified by joining them with pluses, for example AskReddit+NoStupidQuestions. All subreddits can be specified using the special name all.

Step 3: Analyzing the Submission Titles

Now that we have a stream of new submissions to /r/AskReddit, it is time to see if their titles contain a simple question. We naively define a simple question as:
1. It must contain no more than ten words.
2. It must contain one of the phrases “what is”, “what are”, or “who is”.

**Warning:** These naïve criteria result in many false positives. It is strongly recommended that you develop more precise heuristics before launching a bot on any popular subreddits.

First we filter out titles that contain more than ten words:

```python
if len(submission.title.split()) > 10:
    return
```

We then check to see if the submission’s title contains any of the desired phrases:

```python
questions = ['what is', 'who is', 'what are']
normalized_title = submission.title.lower()
for question_phrase in questions:
    if question_phrase in normalized_title:
        # do something with a matched submission
        break
```

String comparison in python is case sensitive. As a result, we only compare a normalized version of the title to our lower-case question phrases. In this case, “normalized” means only lower-case.

The `break` at the end prevents us from matching more than once on a single submission. For instance, what would happen without the `break` if a submission’s title was “Who is or what are buffalo?”

**Step 4: Automatically Replying to the Submission**

The LMGTFY Bot is nearly complete. We iterate through submissions, and find ones that appear to be simple questions. All that is remaining is to reply to those submissions with an appropriate `lmgtfy` link.

First we will need to construct a working `lmgtfy` link. In essence we want to pass the entire submission title to `lmgtfy`. However, there are certain characters that are not permitted in URLs or have other . For instance, the space character, ` `, is not permitted, and the question mark, `?`, has a special meaning. Thus we will transform those into their URL-safe representation so that a question like “What is the capital of Canada?” is transformed into the link `http://lmgtfy.com/?q=What+is+the+capital+of+Canada%3F`.

There are a number of ways we could accomplish this task. For starters we could write a function to replace spaces with pluses, `+`, and question marks with `%3F`. However, there is even an easier way; using an existing built-in function to do so.

Add the following code where the “do something with a matched submission” comment is located:

```python
from urllib.parse import quote_plus

reply_template = '[Let me google that for you](http://lmgtfy.com/?q={})'
url_title = quote_plus(submission.title)
reply_text = reply_template.format(url_title)
```

**Note:** This example assumes the use of Python 3. For Python 2 replace `from urllib.parse import quote_plus` with `from urllib import quote_plus`.

Now that we have the reply text, replying to the submission is easy:
If all went well, your comment should have been made. If your bot account is brand new, you will likely run into rate limit issues. These rate limits will persist until that account acquires sufficient karma.

**Step 5: Cleaning Up The Code**

While we have a working bot, we have added little segments here and there. If we were to continue to do so in this fashion our code would be quite unreadable. Let’s clean it up some.

The first thing we should do is put all of our import statements at the top of the file. It is common to list built-in packages before third party ones:

```python
from urllib.parse import quote_plus
import praw
```

Next we extract a few constants that are used in our script:

```python
QUESTIONS = ["what is", "who is", "what are"]
REPLY_TEMPLATE = "[Let me google that for you](http://lmgtfy.com/?q={})"
```

We then extract the segment of code pertaining to processing a single submission into its own function:

```python
for submission in subreddit.stream.submissions():
    process_submission(submission)

def process_submission(submission):
    # Ignore titles with more than 10 words as they probably are not simple
    # questions.
    if len(submission.title.split()) > 10:
        return

    normalized_title = submission.title.lower()
    for question_phrase in QUESTIONS:
        if question_phrase in normalized_title:
            url_title = quote_plus(submission.title)
            reply_text = REPLY_TEMPLATE.format(url_title)
```

Observe that we added some comments and a print call. The print addition informs us every time we are about to reply to a submission, which is useful to ensure the script is running.

Next, it is a good practice to not have any top-level executable code in case you want to turn your Python script into a Python module, i.e., import it from another Python script or module. A common way to do that is to move the top-level code to a main function:

```python
def main():
    reddit = praw.Reddit(
        user_agent="LMGTFY (by /u/USERNAME)",
        client_id="CLIENT_ID",
        client_secret="CLIENT_SECRET",
        username="USERNAME",
        password="PASSWORD",
    )
```

Finally we need to call main only in the cases that this script is the one being executed:
The Complete LMGTFY Bot

The following is the complete LMGTFY Bot:

```python
from urllib.parse import quote_plus

import praw

QUESTIONS = ['what is', 'who is', 'what are']
REPLY_TEMPLATE = '[Let me google that for you](http://lmgtfy.com/?q={})

def main():
    reddit = praw.Reddit(
        user_agent="LMGTFY (by /u/USERNAME)",
        client_id="CLIENT_ID",
        client_secret="CLIENT_SECRET",
        username="USERNAME",
        password="PASSWORD",
    )

    subreddit = reddit.subreddit("AskReddit")
    for submission in subreddit.stream.submissions():
        process_submission(submission)

def process_submission(submission):
    # Ignore titles with more than 10 words as they probably are not simple
    # questions.
    if len(submission.title.split()) > 10:
        return

    normalized_title = submission.title.lower()
    for question_phrase in QUESTIONS:
        if question_phrase in normalized_title:
            url_title = quote_plus(submission.title)
            reply_text = REPLY_TEMPLATE.format(url_title)
            print("Replying to: {}".format(submission.title))
            submission.reply(reply_text)
            # A reply has been made so do not attempt to match other phrases.
            break

if __name__ == "__main__":
    main()
```

# A reply has been made so do not attempt to match other phrases.
break

if __name__ == "__main__":
    main()
1.14 Change Log

1.14.1 Unreleased

Added

• `crosspost()` support parameter `flair_id` to flair the submission immediately upon crossposting.
• `crosspost()` support parameter `flair_text` to set a custom text to the flair immediately upon crossposting.
• `crosspost()` support parameter `nsfw` to mark the submission NSFW immediately upon crossposting.
• `crosspost()` support parameter `spoiler` to mark the submission as a spoiler immediately upon crossposting.

Fixed

• `add_community_list()` has parameter `description` to support unannounced upstream Reddit API changes.
• `update()` supports passing a list of `Subreddit` objects.

Changed

• Removed `css_class` parameter cannot be used with `background_color`, `text_color`, or `mod_only` constraint on methods:
  – `SubredditFlairTemplates.update()`
  – `SubredditRedditorFlairTemplates.add()`
  – `SubredditLinkFlairTemplates.add()`

Removed

• Drop official support for Python 2.7.
• `Multireddit.rename()` no longer works due to a change in the Reddit API.

1.14.2 6.3.1 (2019/06/10)

Removed

• `SubredditListingMixin.gilded()`, as this was supposed to be removed in 6.0.0 after deprecation in 5.2.0.

1.14.3 6.3.0 (2019/06/09)

Added

• Collections (`Collection` and helper classes).
• `submit()`, `submit_image()`, and `submit_video()` can be used to submit a post directly to a collection.
• `praw.util.camel_to_snake` and `praw.util.snake_case_keys`.
• Comments can now be locked and unlocked via `comment.mod.lock()` and `comment.mod.unlock()`.
  See: (`ThingModerationMixin.lock()` and `ThingModerationMixin.unlock()`).
• `align` parameter to `SubredditStylesheet.upload_banner_additional_image()`
Changed

- `Reddit.info()` now accepts any non-str iterable for fullnames (not just list).
- `Reddit.info()` now returns a generator instead of a list when using the `url` parameter.

1.14.4 6.2.0 (2019/05/05)

Added

- `SubredditStylesheet.upload_banner()`
- `SubredditStylesheet.upload_banner_additional_image()`
- `SubredditStylesheet.upload_banner_hover_image()`
- `SubredditStylesheet.delete_banner()`
- `SubredditStylesheet.delete_banner_additional_image()`
- `SubredditStylesheet.delete_banner_hover_image()`
- `submit()`, `submit_image()`, and `submit_video()` support parameter `nsfw` to mark the submission NSFW immediately upon posting.
- `submit()`, `submit_image()`, and `submit_video()` support parameter `spoiler` to mark the submission as a spoiler immediately upon posting.
- `submit_image()` and `submit_video()` support parameter `timeout`. Default timeout has been raised from 2 seconds to 10 seconds.
- Added parameter `function_kwargs` to `stream_generator()` to pass additional kwargs to function.

Fixed

- `Subreddit.random()` returns `None` instead of raising `ClientException` when the subreddit does not support generating random submissions.

Other

- Bumped minimum prawcore version to 1.0.1.

1.14.5 6.1.1 (2019/01/29)

Added

- `set()` supports parameter `flair_template_id` for giving a user redesign flair.

1.14.6 6.1.0 (2019/01/19)

Added

- Add method `Redditor.trophies()` to get a list of the Redditor’s trophies.
- Add class `PostFlairWidget`.
- Add attributes `reply_limit` and `reply_sort` to class `Comment`
- Add class `SubredditWidgetsModeration` (accessible through `SubredditWidgets.mod`) and method `add_text_area()`.
• Add class `WidgetModeration` (accessible through the `.mod` attribute on any widget) with methods `update()` and `delete()`.
• Add method `Reddit.put()` for HTTP PUT requests.
• Add methods `add_calendar()` and `add_community_list()`.
• Add methods `add_image_widget()` and `upload_image()`.
• Add method `add_custom_widget()`.
• Add method `add_post_flair_widget()`.
• Add method `add_menu()`.
• Add method `add_button_widget()`.
• Add method `reorder()` to reorder a subreddit’s widgets.
• Add `Redditors(reddit.redditors)` to provide Redditor listings.
• Add `submit_image()` for submitting native images to Reddit.
• Add `submit_video()` for submitting native videos and videogifs to Reddit.

**Changed**

• `User.me()` returns None in `read_only` mode.
• `SubredditLinkFlairTemplates.__iter__()` uses the v2 flair API endpoint. This change will result in additional fields being returned. All fields that were previously returned will still be returned.
• `SubredditRedditorFlairTemplates.__iter__()` uses the v2 flair API endpoint. The method will still return the exact same items.
• Methods `add()`, `add()`, `update()`, and `update()` can add and update redesign-style flairs with the v2 flair API endpoint. They can still update pre-redesign-style flairs with the older endpoint.

**Fixed**

• Widgets of unknown types are parsed as `Widgets` rather than raising an exception

1.14.7 6.0.0 (2018/07/24)

**Added**

• Add method `WikiPage.revision()` to get a specific wiki page revision.
• Added parameter `skip_existing` to `stream_generator()` to skip existing items when starting a stream.
• Add method `Front.best()` to get the front page “best” listing.
• Add `Subreddit.widgets`, `SubredditWidgets`, and widget subclasses like `TextArea` to support fetching Reddit widgets.
• Add method `Submission.mark_visited()` to mark a submission as visited on the Reddit backend.

**Fixed**

• Fix `RecursionError` on `SubredditEmoji`'s `repr` and `str`.
• `SubredditFilters.add()` and `SubredditFilters.remove()` also accept a `Subreddit` for the subreddit parameter.
• Remove restriction which prevents installed (non-confidential) apps from using OAuth2 authorization code grant flow.
Removed

- `Subreddit.submissions` as the API endpoint backing the method is no more. See https://www.reddit.com/r/changelog/comments/7tus5f/update_to_search_api/.

1.14.8 5.4.0 (2018/03/27)

Added

- Add method `patch()` to `Reddit` class to support HTTP PATCH requests.
- Add class `Preferences` to access and update Reddit preferences.
- Add attribute `User.preferences` to access an instance of `Preferences`.
- Add method `Message.delete()`.
- Add class `Emoji` to work with custom subreddit emoji.

Deprecated

- `Subreddit.submissions` as the API endpoint backing the method is going away. See https://www.reddit.com/r/changelog/comments/7tus5f/update_to_search_api/.

Fixed

- Fix bug with positive `pause_after` values in streams provided by `stream_generator()` where the wait time was not reset after a yielded `None`.
- Parse URLs with trailing slashes and no 'comments' element when creating `Submission` objects.
- Fix bug where `Subreddit.submissions` returns a same submission more than once.
- Fix bug where `ListingGenerator` fetches the same batch of submissions in an infinite loop when 'before' parameter is provided.

Removed

- Removed support for Python 3.3 as it is no longer supported by requests.

1.14.9 5.3.0 (2017/12/16)

Added

- `Multireddit.stream`, to stream submissions and comments from a Multireddit.
- `Redditor.block()`

Fixed

- Now raises `prawcore.UnavailableForLegalReasons` instead of an `AssertionError` when encountering a HTTP 451 response.

1.14.10 5.2.0 (2017/10/24)

Changed

- An attribute on `LiveUpdate` now works as lazy attribute (i.e. populate an attribute when the attribute is first accessed).

Deprecated

-
• subreddit.comments.gilded because there isn’t actually an endpoint that returns only gilded comments. Use subreddit.gilded instead.

**Fixed**

• Removed comment.permalink() because comment.permalink is now an attribute returned by Reddit.

### 1.14.11 5.1.0 (2017/08/31)

**Added**

• Redditor.stream, with methods RedditorStream.submissions() and RedditorStream.comments() to stream a Redditor’s comments or submissions

• RedditorStream has been added to facilitate Redditor.stream

• Inbox.collapse() to mark messages as collapsed.

• Inbox.uncollapse() to mark messages as uncollapsed.

• Raise ClientException when calling refresh() when the comment does not appear in the resulting comment tree.

• Submission.crosspost() to crosspost to a subreddit.

**Fixed**

• Calling refresh() on a directly fetched, deeply nested Comment will additionally pull in as many parent comments as possible (currently 8) enabling significantly quicker traversal to the top-most Comment via successive parent() calls.

• Calling refresh() previously could have resulted in a AttributeError: 'MoreComments' object has no attribute '_replies' exception. This situation will now result in a ClientException.

• Properly handle BAD_CSS_NAME errors when uploading stylesheet images with invalid filenames. Previously an AssertionError was raised.

• Submission's gilded attribute properly returns the expected value from reddit.

### 1.14.12 5.0.1 (2017/07/11)

**Fixed**

• Calls to hide() and unhide() properly batch into requests of 50 submissions at a time.

• Lowered the average maximum delay between inactive stream checks by 4x to 16 seconds. It was previously 64 seconds, which was too long.

### 1.14.13 5.0.0 (2017/07/04)

**Added**

• Comment.disable_inbox_replies(), Comment.enable_inbox_replies() Submission.disable_inbox_replies(), and Submission.enable_inbox_replies() to toggle inbox replies on comments and submissions.

**Changed**
- cloudsearch is no longer the default syntax for `Subreddit.search()`. lucene is now the default syntax so that PRAW's default is aligned with Reddit's default.
- `Reddit.info()` will now take either a list of fullnames or a single URL string.
- `Subreddit.submit()` accepts a flair template ID and text.

**Fixed**
- Fix accessing `LiveUpdate.contrib` raises `AttributeError`.

**Removed**
- Iterating directly over `SubredditRelationship` (e.g., `subreddit.banned`, `subreddit.contributor`, `subreddit.moderator`, etc) and `SubredditFlair` is no longer possible. Iterate instead over their callables, e.g. `subreddit.banned()` and `subreddit.flair()`.
- The following methods are removed: `Subreddit.mod.approve`, `Subreddit.mod.distinguish`, `Subreddit.mod.ignore_reports`, `Subreddit.mod.remove`, `Subreddit.mod.undistinguish`, `Subreddit.mod.unignore_reports`.
- Support for passing a `Submission` to `SubredditFlair.set()` is removed.
- The `thing` argument to `SubredditFlair.set()` is removed.
- Return values from `Comment.block()`, `Message.block()`, `SubredditMessage.block()`, `SubredditFlair.delete()`, `friend()`, `Redditor.message()`, `Subreddit.message()`, `select()`, and `unfriend()` are removed as they do not provide any useful information.
- `praw.ini` no longer reads in `http_proxy` and `https_proxy` settings.
- `is_link` parameter of `SubredditRedditorFlairTemplates.add()` and `SubredditRedditorFlairTemplates.clear()`. Use `SubredditLinkFlairTemplates` instead.

**1.14.14 4.6.0 (2017/07/04)**

The release's sole purpose is to announce the deprecation of the `is_link` parameter as described below:

**Added**
- `SubredditFlair.link_templates` to manage link flair templates.

**Deprecated**
- `is_link` parameter of `SubredditRedditorFlairTemplates.add()` and `SubredditRedditorFlairTemplates.clear()`. Use `SubredditLinkFlairTemplates` instead.

**1.14.15 4.5.1 (2017/05/07)**

**Fixed**
- Calling `parent()` works on `Comment` instances obtained via `comment_replies()`.

**1.14.16 4.5.0 (2017/04/29)**

**Added**
- `unread_count()` to get unread count by conversation state.
• `bulk_read()` to mark conversations as read by conversation state.
• `subreddits()` to fetch subreddits using new modmail.
• `create()` to create a new modmail conversation.
• `read()` to mark modmail conversations as read.
• `unread()` to mark modmail conversations as unread.
• `conversations()` to get new modmail conversations.
• `highlight()` to highlight modmail conversations.
• `unhighlight()` to unhighlight modmail conversations.
• `mute()` to mute modmail conversations.
• `unmute()` to unmute modmail conversations.
• `archive()` to archive modmail conversations.
• `unarchive()` to unarchive modmail conversations.
• `reply()` to reply to modmail conversations.
• `__call__()` to get a new modmail conversation.
• `Inbox.stream()` to stream new items in the inbox.

• Exponential request delay to all streams when no new items are returned in a request. The maximum delay between requests is 66 seconds.

**Changed**

• `submit()` accepts `selftext=''` to create a title-only submission.

• `Reddit` accepts `requestor_class=cls` for a customized requestor class and `requestor_kwargs={'param': value}` for passing arguments to requestor initialization.

• `comments()`, `submissions()`, and `stream()` accept a `pause_after` argument to allow pausing of the stream. The default value of `None` retains the preexisting behavior.

**Deprecated**

• `cloudsearch` will no longer be the default syntax for `Subreddit.search()` in PRAW 5. Instead `lucene` will be the default syntax so that PRAW’s default is aligned with Reddit’s default.

**Fixed**

• Fix bug where `WikiPage` revisions with deleted authors caused `TypeError`.

• `Submission` attributes `comment_limit` and `comment_sort` maintain their values after making instances non-lazy.

1.14.17 4.4.0 (2017/02/21)

**Added**

• `LiveThreadContribution.update()` to update settings of a live thread.

• `reset_timestamp` to `limits()` to provide insight into when the current rate limit window will expire.

• `upload_mobile_header()` to upload subreddit mobile header.

• `upload_mobile_icon()` to upload subreddit mobile icon.

• `delete_mobile_header()` to remove subreddit mobile header.
• `delete_mobile_icon()` to remove subreddit mobile icon.
• `LiveUpdateContribution.strike()` to strike a content of a live thread.
• `LiveContributorRelationship.update()` to update contributor permissions for a redditor.
• `LiveContributorRelationship.update_invite()` to update contributor invite permissions for a redditor.
• `LiveThread.discussions()` to get submissions linking to the thread.
• `LiveThread.report()` to report the thread violating the Reddit rules.
• `LiveHelper.now()` to get the currently featured live thread.
• `LiveHelper.info()` to fetch information about each live thread in live thread IDs.

Fixed

• Uploading an image resulting in too large of a request (>500 KB) now raises `prawcore.TooLarge` instead of an `AssertionError`.
• Uploading an invalid image raises `APIException`.
• `Redditor` instances obtained via `moderator` (e.g., `reddit.subreddit('subreddit').moderator()`) will contain attributes with the relationship metadata (e.g., `mod_permissions`).
• `Message` instances retrieved from the inbox now have attributes `author`, `dest_replies` and `subreddit` properly converted to their appropriate PRAW model.

1.14.18 4.3.0 (2017/01/19)

Added

• `LiveContributorRelationship.leave()` to abdicate the live thread contributor position.
• `LiveContributorRelationship.remove()` to remove the redditor from the live thread contributors.
• `limits()` to provide insight into number of requests made and remaining in the current rate limit window.
• `LiveThread.contrib` to obtain an instance of `LiveThreadContribution`.
• `LiveThreadContribution.add()` to add an update to the live thread.
• `LiveThreadContribution.close()` to close the live thread permanently.
• `LiveUpdate.contrib` to obtain an instance of `LiveUpdateContribution`.
• `LiveUpdateContribution.remove()` to remove a live update.
• `LiveContributorRelationship.accept_invite()` to accept an invite to contribute the live thread.
• `SubredditHelper.create()` and `SubredditModeration.update()` have documented support for `spoilers_enabled`. Note, however, that `SubredditModeration.update()` will currently unset the `spoilers_enabled` value until such a time that Reddit returns the value along with the other settings.
• `spoiler()` and `unspoiler()` to change a submission’s spoiler status.

Fixed

• `LiveContributorRelationship.invite()` and `LiveContributorRelationship.remove_invite()` now hit endpoints, which starts with ‘api/’, for consistency.
• `ModeratorRelationship.update()`, and `ModeratorRelationship.update_invite()` now always remove known unlisted permissions.
1.14.19 4.2.0 (2017/01/07)

Added

- `Subreddit.rules()` to get the rules of a subreddit.
- `LiveContributorRelationship`, which can be obtained through `LiveThread.contributor`, to interact with live threads’ contributors.
- `remove_invite()` to remove a moderator invite.
- `LiveContributorRelationship.invite()` to send a contributor invitation.
- `LiveContributorRelationship.remove_invite()` to remove the contributor invitation.

Deprecated

- Return values from `Comment.block()`, `Message.block()`, `SubredditMessage.block()`, `SubredditFlair.delete()`, `friend()`, `Redditor.message()`, `Subreddit.message()`, `select()`, and `unfriend()` will be removed in PRAW 5 as they do not provide any useful information.

Fixed

- `hide()` and `unhide()` now accept a list of additional submissions.
- `replace_more()` is now recoverable. Previously, when an exception was raised during the work done by `replace_more()`, all unreplaced `MoreComments` instances were lost. Now `MoreComments` instances are only removed once their children have been added to the `CommentForest` enabling callers of `replace_more()` to call the method as many times as required to complete the replacement.
- Working with contributors on `SubredditWiki` is done consistently through `contributor` not `contributors`.
- `Subreddit.moderator()` works.
- `live_thread.contributor()` now returns `RedditorList` correctly.

Removed

- `validate_time_filter` is no longer part of the public interface.

1.14.20 4.1.0 (2016/12/24)

Added

- `praw.models.LiveHelper.__call__()` to provide interface to `praw.models.LiveThread.__init__`.
- `SubredditFilters` to work with filters for special subreddits, like `/r/all`.
- Added callables for `SubredditRelationship` and `SubredditFlair` so that `limit` and other parameters can be passed.
- Add `reply()` to `Message` which was accidentally missed previously.
- Add `sticky` parameter to `CommentModeration.distinguish()` to sticky comments.
- `flair()` to add a submission’s flair from an instance of `Submission`.
- `Comment.parent()` to obtain the parent of a `Comment`.
- `opt_in()` and `opt_out()` to `Subreddit` to permit working with quarantined subreddits.
• **LiveUpdate** to represent an individual update in a **LiveThread**.

• Ability to access an individual **LiveUpdate** via `reddit.live('THREAD_ID')['UPDATE_ID']`.

• **LiveThread.updates()** to iterate the updates of the thread.

**Changed**

• **me()** now caches its result in order to reduce redundant requests for methods that depend on it. Set `use_cache=False` when calling to bypass the cache.

• **replace_more()** can be called on **Comment** replies.

**Deprecated**

• **validate_time_filter** will be removed from the public interface in PRAW 4.2 as it was never intended to be part of it to begin with.

• Iterating directly over **SubredditRelationship** (e.g., `subreddit.banned`, `subreddit.contributor`, `subreddit.moderator`, etc) and **SubredditFlair** will be removed in PRAW 5. Iterate instead over their callables, e.g. `subreddit.banned()` and `subreddit.flair()`.

• The following methods are deprecated to be removed in PRAW 5 and are replaced with similar **Comment**. mod... and **Submission**.mod... alternatives: `Subreddit.mod.approve`, `Subreddit.mod.distinguish`, `Subreddit.mod.ignore_reports`, `Subreddit.mod.remove`, `Subreddit.mod.undistinguish`, `Subreddit.mod.unignore_reports`.

• Support for passing a **Submission** to **SubredditFlair.set()** will be removed in PRAW 5. Use `flair()` instead.

• The thing argument to **SubredditFlair.set()** is replaced with `redditor` and will be removed in PRAW 5.

**Fixed**

• **SubredditModeration.update()** accurately updates `exclude_banned_modqueue`, `header_hover_text`, `show_media` and `show_media_preview` values.

• Instances of **Comment** obtained through the inbox (including mentions) are now refreshable.

• Searching `/r/all` should now work as intended for all users.

• Accessing an invalid attribute on an instance of **Message** will raise `AttributeError` instead of `PRAWException`.

### 1.14.21 4.0.0 (2016/11/29)

**Fixed**

• Fix bug where ipython tries to access attribute `_ipython_canary_method_should_not_exist_` resulting in a useless fetch.

• Fix bug where Comment replies becomes `[]` after attempting to access an invalid attribute on the Comment.

• Reddit.wiki[…] converts the passed in page name to lower case as pages are only saved in lower case and non-lower case page names results in a Redirect exception (thanks pcjonathan).

### 1.14.22 4.0.0rc3 (2016/11/26)

**Added**
• implicit parameter to url() to support the implicit flow for installed applications (see: https://github.com/reddit/reddit/wiki/OAuth2#authorization-implicit-grant-flow)

• scopes() to discover which scopes are available to the current authentication

• Lots of documentation: http://praw.readthedocs.io/

1.14.23 4.0.0rc2 (2016/11/20)

Fixed

• authorize() properly sets the session’s Authentication (thanks @williammck).

1.14.24 4.0.0rc1 (2016/11/20)

PRAW 4 introduces significant breaking changes. The numerous changes are not listed here, only the feature removals. Please read through Quick Start to help with updating your code to PRAW 4. If you require additional help please ask on /r/redditdev or in the praw-dev/praw channel on gitter.

Added

• praw.models.Comment.block(), praw.models.Message.block(), and praw.models.SubredditMessage.block() to permit blocking unwanted user contact.

• praw.models.LiveHelper.create() to create new live threads.

• praw.models.Redditor.unblock() to undo a block.

• praw.models.Subreddits.gold() to iterate through gold subreddits.

• praw.models.Subreddits.search() to search for subreddits by name and description.

• praw.models.Subreddits.stream() to obtain newly created subreddits in near-realtime.

• praw.models.User.karma() to retrieve the current user’s subreddit karma.

• praw.models.reddit.submission.SubmissionModeration.lock and praw.models.reddit.submission.SubmissionModeration.unlock to change a Submission’s lock state.

• praw.models.reddit.subreddit.SubredditFlairTemplates.delete() to delete a single flair template.

• praw.models.reddit.subreddit.SubredditModeration.unread() to iterate over unread moderation messages.

• praw.models.reddit.subreddit.ModeratorRelationship.invite() to invite a moderator to a subreddit.

• praw.models.reddit.subreddit.ModeratorRelationship.update() to update a moderator’s permissions.

• praw.models.reddit.subreddit.ModeratorRelationship.update_invite() to update an invited moderator’s permissions.

• praw.models.Front.random_rising(), praw.models.Subreddit.random_rising() and praw.models.Multireddit.random_rising().

• WikiPage supports a revision argument.

• revisions() to obtain a list of recent revisions to a subreddit.

• revisions() to obtain a list of revisions for a wiki page.
• Support installed-type OAuth apps.
• Support read-only OAuth for all application types.
• Support script-type OAuth apps.

**Changed**

**Note:** Only prominent changes are listed here.

- `helpers.comments_stream` is now `praw.models.reddit.subreddit.SubredditStream.comments()`
- `helpers.submissions_between` is now `Subreddit.submissions`. This new method now only iterates through newest submissions first and as a result makes approximately 33% fewer requests.
- `helpers.submission_stream` is now `praw.models.reddit.subreddit.SubredditStream.submissions()`

**Removed**

- Removed `Reddit's login` method. Authentication must be done through OAuth.
- Removed `praw-multiprocess` as this functionality is no longer needed with PRAW 4.
- Removed non-oauth functions `Message.collapse` and `Message.uncollapse`.
- Removed captcha related functions.

For changes prior to version 4.0 please see: [3.4.0 changelog](#)

### 1.15 Contributing to PRAW

PRAW gladly welcomes new contributions. As with most larger projects, we have an established consistent way of doing things. A consistent style increases readability, decreases bug-potential and makes it faster to understand how everything works together.

PRAW follows [PEP 8](#) and [PEP 257](#). The `pre_push.py` script can be used to test for compliance with these PEPs in addition to providing a few other checks. The following are PRAW-specific guidelines in addition to those PEP’s.

#### 1.15.1 Code

- Within a single file classes are sorted alphabetically where inheritance permits.
- Within a class, methods are sorted alphabetically within their respective groups with the following as the grouping order:
  - Static methods
  - Class methods
  - Properties
  - Instance Methods
- Use descriptive names for the catch-all keyword argument. E.g., `**other_options` rather than `**kwargs`.
1.15.2 Testing

Contributions to PRAW requires 100% test coverage as reported by Coveralls. If you know how to add a feature, but aren’t sure how to write the necessary tests, please open a PR anyway so we can work with you to write the necessary tests.

Running the Test Suite

Travis CI automatically runs all updates to known branches and pull requests. However, it’s useful to be able to run the tests locally. The simplest way is via:

```python
python setup.py test
```

Without any configuration or modification, all the tests should pass.

Adding and Updating Integration Tests

PRAW’s integration tests utilize Betamax to record an interaction with Reddit. The recorded interaction is then replayed for subsequent test runs.

To safely record a cassette without leaking your account credentials, PRAW utilizes a number of environment variables which are replaced with placeholders in the cassettes. The environment variables are (listed in bash export format):

```bash
export prawtest_client_id=myclientid
export prawtest_client_secret=myclientsecret
export prawtest_password=mypassword
export prawtest_test_subreddit=reddit_api_test
export prawtest_username=myusername
export prawtest_user_agent=praw_pytest
```

By setting these environment variables prior to running `python setup.py test`, when adding or updating cassettes, instances of `mypassword` will be replaced by the placeholder text `<PASSWORD>` and similar for the other environment variables.

When adding or updating a cassette, you will likely want to force requests to occur again rather than using an existing cassette. The simplest way to rebuild a cassette is to first delete it, and then rerun the test suite.

Please always verify that only the requests you expect to be made are contained within your cassette.

1.15.3 Documentation

- All publicly available functions, classes and modules should have a docstring.
- Use correct terminology. A subreddit’s fullname is something like `t5_xyfc7`. The correct term for a subreddit’s “name” like `python` is its display name.

1.15.4 Files to Update

AUTHORS.rst

For your first contribution, please add yourself to the end of the respective list in the AUTHORS.rst file.
For feature additions, bugfixes, or code removal please add an appropriate entry to CHANGES.rst. If the Unreleased section does not exist at the top of CHANGES.rst please add it. See commit 280525c16ba28cdd69cddb272a0e2764b1c7e6a0 for an example.

1.15.5 See Also

Please also read through: https://github.com/praw-dev/praw/blob/master/.github/CONTRIBUTING.md

1.16 References

- PRAW’s Source Code
- Reddit’s Source Code
- Reddit’s API Wiki Page
- Reddit’s API Documentation
- Reddit Markdown Primer
- reddit.com’s FAQ
- reddit.com’s Status Twitterbot. Tweets when Reddit goes up or down
- r/changelog. Significant changes to Reddit’s codebase will be announced here in non-developer speak
- r/redditdev. Ask questions about Reddit’s codebase, PRAW and other API clients here

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