21.9. `urllib.error` — Exception classes raised by urllib.request

The `urllib.error` module defines the exception classes for exceptions raised by `urllib.request`. The base exception class is `URLError`.

The following exceptions are raised by `urllib.error` as appropriate:

exception `urllib.error.`**`URLError`**

> The handlers raise this exception (or derived exceptions) when they run into a problem. It is a subclass of `OSError`.
>
> **`reason`** ¶
>
> > The reason for this error. It can be a message string or another exception instance.
>
> *Changed in version 3.3:* `URLError` has been made a subclass of `OSError` instead of `IOError`.

exception `urllib.error.`**`HTTPError`**

> Though being an exception (a subclass of `URLError`), an `HTTPError` can also function as a non-exceptional file-like return value (the same thing that `urlopen()` returns). This is useful when handling exotic HTTP errors, such as requests for authentication.
>
> **`code`**
>
> > An HTTP status code as defined in RFC 2616. This numeric value corresponds to a value found in the dictionary of codes as found in `http.server.BaseHTTPRequestHandler.responses`.
>
> **`reason`**
>
> > This is usually a string explaining the reason for this error.

exception `urllib.error.`**`ContentTooShortError`**(*msg*, *content*)

> This exception is raised when the `urlretrieve()` function detects that the amount of the downloaded data is less than the expected amount (given by the *Content-Length* header). The `content` attribute stores the downloaded (and supposedly truncated) data.