MyCurl

Web Science

10 points

Write a Python script called **mycurl.py** that works like curl. The user supplies an optional argument like -i or -I and a URL at the command line, and the program should make an HTTP request with the URL and show:

1. Just the HTTP response header if **`-I`** argument is given.
2. The header, a single blank line, and the body if **`-i`** argument is given.
3. Just the response body if no arguments are given.

Example run:

```
$ python mycurl.py -i http://cs.harding.edu/
Date: Wed, 21 Aug 2019 18:59:11 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_apreq2-20090110/2.8.0
mod_perl/2.0.10 Perl/v5.16.3
Last-Modified: Tue, 23 Apr 2019 20:24:42 GMT
ETag: "ac2-587385ffeb680"
Accept-Ranges: bytes
Content-Length: 2754
Connection: close
Content-Type: text/html; charset=UTF-8

<!DOCTYPE HTML>
<html>
<head>
<meta charset="UTF-8">
Etc…
```

Implementation

Use the Python urllib.request library to make HTTP requests.
https://docs.python.org/3/library/urllib.request.html

```
import urllib.request
response = urllib.request.urlopen('http://python.org/')
html = response.read()              # get response body
html = str(html, encoding='utf8')   # convert into a string
print(html.split('\n')[0])          # print just the first line
print(response.info())              # print the header
```

Use the sys module and sys.argv array to access command-line arguments.
https://docs.python.org/3/library/sys.html

```
import sys
print(sys.argv)   # Show all arguments
```

Error Handling

If mycurl.py is executed with no URL, show the message:

MyCurl: Supply a URL to retrieve

If mycurl.py is executed with an argument that is not recognized, output the message:

MyCurl: Only -i and -I arguments are supported

If mycurl.py is executed with a URL that does not start with “http://” or “https://”, output the message:

MyCurl: Only http or https URLs can be requested

If mycurl.py downloads non-textual content that can’t be converted into a string (str() throws an exception when decoding) and body output was requested, output instead:

NON-TEXTUAL CONTENT

Turn In

Submit your completed program to Canvas. You may work in pairs using pair programming if you’d like, and only one person needs to submit the program. Put the programmer’s name(s) in comments at the top of the mycurl.py file.