

Team Members:

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Usage:

Use the following command to run the code:

```
python Asg1Main.py http://www.yahoo.com
```

Include any link to check for appropriate errors by changing the argument in the above command.

ToDo list status:

The code for this assignment needs to meet the following items to meet a perfect score.

 Include this emoji if currently working on it to avoid overlap

Function	Points	Break down	Item	Status
Input	1	1	No usage info if incorrect args	✓
Request	3	1	Correct GET syntax	✓
		1	Hostname in rqst	✓
		1	User agent in rqst	✓
Receive loop	4	1	Dynamic buffer resizing	✓
		2	Fails to receive/parse 96MB file	✓
		1	Select()	✓
Output	10	3	Correct host/port/rqst	✓
		1	Correct DNS info	✓
		1	Timing of connect()	✓
		1	Timing of recv()	✓
		1	Correct page size	✓
		1	Correct HTTP status	✓
		1	Correct number of links	✓
		1	Correct HTTP header shown	✓

Function	Points	Break down	Item	Status
Errors	6	1	Handle invalid port/scheme	✓
		1	Notify of DNS failure	✓
		1	Notify of connect failure	✓
		1	Notify of recv() failure	✓
		1	Notify of non-HTTP reply	✓
		1	Parses non-2xx pages	✓
Other	1	1	No Missing files for compilation	✓

Code Output:

Output code of running different websites:

```
python Asg1Main.py http://www.yahoo.com
```

```
(base) yassinej@yassinej-HP-ZBook-14-G2:~/Documents/CPSS570/assignments/asg1$ python Asg1Main.py http://www.yahoo.com
URL: http://www.yahoo.com
Parsing URL... host www.yahoo.com, port 80, path /, request
Doing DNS... done in 34.13 ms, found 74.6.143.25
Connecting on page... done in 64.69 ms
Loading... done in 0.07 ms with 831 bytes
Verifying header... status code 301

-----
HTTP/1.0 301 Moved Permanently
Date: Wed, 02 Sep 2020 17:59:49 GMT
Server: ATS
Cache-Control: no-store, no-cache
Content-Type: text/html
Content-Language: en
Connection: keep-alive
Content-Security-Policy: frame-ancestors 'self' https://*.techcrunch.com https://*.yahoo.com https://*.aol.com https://*.huffingtonpost.com https://*.oath.com https://*.verizonmedia.com https://*.publishing.oath.com https://*.autoblog.com; sandbox allow-forms allow-same-origin allow-scripts allow-popups allow-popups-to-escape-sandbox allow-presentati
on; report-uri https://csp.yahoo.com/beacon/csp?src=ats&site=frontpage&region=US&lang=en-US&device=&yrid=&partner=;
X-Frame-Options: SAMEORIGIN
X-XSS-Protection: 1; report="https://csp.yahoo.com/beacon/csp?src=fp-hpkp-www"
Location: https://www.yahoo.com/robots.txt
Content-Length: 8
```

```
python Asg1Main.py http://www.runescape.com
```

```
(base) yassinej@yassinej-HP-ZBook-14-G2:~/Documents/CPSS570/assignments/asg1$ python Asg1Main.py http://www.runescape.com
URL: http://www.runescape.com
Parsing URL... host www.runescape.com, port 80, path /, request
Doing DNS... done in 6.6 ms, found 91.235.140.148
Connecting on page... done in 46.07 ms
Loading... done in 0.03 ms with 477 bytes
Verifying header... status code 302

-----
HTTP/1.1 302 MOVED
Server: nginx
Date: Wed, 02 Sep 2020 18:25:56 GMT
Content-Length: 0
Connection: close
Location: https://www.runescape.com/robots.txt
Set-Cookie: JXTRACKING=0141BA36870000017450117A00; version=1; path=/; domain=.runescape.com; HttpOnly
Set-Cookie: JXWEBUID=F48F1DAB546D55687817F8B338994FB39D56C94431C0A7294D1147D8AE8982BF34755C10CCD75731; version=1; path=/; domain=.runescape.com; HttpOnly; Expires=Mon, 20-Sep-2088 21:40:03 GMT; Max-Age=2147483647
```

```
python Asg1Main.py http://www.128.194.135.11?viewcart.php/
```

```
(base) yassinej@yassinej-HP-ZBook-14-G2:~/Documents/CPSS70/assignments/asg1$ python Asg1Main.py http://128.194.135.11?viewcart.php/
create an object of TCPsocket
created a tcp socket!
URL: http://128.194.135.11?viewcart.php/
  Parsing URL... host 128.194.135.11, port 80, path /, request ?viewcart.php/
  Doing DNS... done in 1.21 ms, found 128.194.135.11
  Connecting on page... Failed to connect: [Errno 110] Connection timed out
```

Goal of this part 1 of the assignment:

```
hw1.exe http://www.yahoo.com
```

Output:

```
URL: http://www.yahoo.com
  Parsing URL... host www.yahoo.com, port 80, request /
  Doing DNS... done in 484 ms, found 98.138.253.109
  * Connecting on page... done in 31 ms
  Loading... done in 109 ms with 1746 bytes
  Verifying header... status code 301

-----
HTTP/1.0 301 Redirect
Date: Sun, 18 Jan 2015 01:39:06 GMT
Via: http/1.1 ir24.fp.nel.yahoo.com (ApacheTrafficServer)
Server: ATS
Location: https://www.yahoo.com/
Content-Type: text/html
Content-Language: en
Cache-Control: no-store, no-cache
Connection: keep-alive
Content-Length: 1450
```

Another example:

```
hw1.exe http://128.194.135.11?viewcart.php/
```

```
URL: http://128.194.135.11?viewcart.php/
  Parsing URL... host 128.194.135.11, port 80, request /?viewcart.php/
  Doing DNS... done in 4 ms, found 128.194.135.11
  * Connecting on page... failed with 10060
```