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CS 372 - Intro Networks
Project 1

Instructions on running program:

- Download the python files into a directory
- Open terminal
- Navigate to directory where python files are located
- Run python files
- Command: python file_name.py (they are python3 files)

* Part 1

```
[Running] python -u "c:\Users\charl\OneDrive\CURRENT TERM\CS 372 Intro Comp Networks\proj
IP address of gaia.cs.umass.edu is 128.119.245.12
Socket connected to gaia.cs.umass.edu on IP: 128.119.245.12

Message send successfully

HTTP/1.1 200 OK

Date: Thu, 14 Oct 2021 06:33:25 GMT

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.24 mod_perl/2.0.11 Perl/v5.16.3

Last-Modified: Thu, 14 Oct 2021 05:59:01 GMT

ETag: "51-5ce49c67c99a1"

Accept-Ranges: bytes

Content-Length: 81

Content-Type: text/html; charset=UTF-8

<html>
Congratulations! You've downloaded the first Wireshark lab file!
</html>

[Done] exited with code=0 in 0.413 seconds
```

* Part 2

SCREENSHOT 01

```
[Running] python -u "c:\Users\charl\OneDrive\CURRENT TERM\CS 372 Intro Comp Networks\project1\gaia.py"
IP address of gaia.cs.umass.edu is 128.119.245.12
Socket connected to gaia.cs.umass.edu on IP: 128.119.245.12

Message send successfully

Request: GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1
Host: gaia.cs.umass.edu

HTTP/1.1 200 OK

Date: Thu, 14 Oct 2021 07:47:37 GMT

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.24 mod_perl/2.0.11 Perl/v5.16.3

Last-Modified: Thu, 14 Oct 2021 05:59:01 GMT

ETag: "1194-5ce49c67c7e48"

Accept-Ranges: bytes

Content-Length: 4500

Content-Type: text/html; charset=UTF-8

<html><head>
<title>Historical Documents:THE BILL OF RIGHTS</title></head>
```

SCREENSHOT 02

```
<p></p><p>Excessive bail shall not be required, nor excessive fines
imposed, nor cruel and unusual punishments inflicted.

</p><p><a name="9"><strong><h3>Amendment IX</h3></strong></a>

<p></p><p>The enumeration in the Constitution, of certain rights, shall
not be construed to deny or disparage others retained by the people.

</p><p><a name="10"><strong><h3>Amendment X</h3></strong></a>

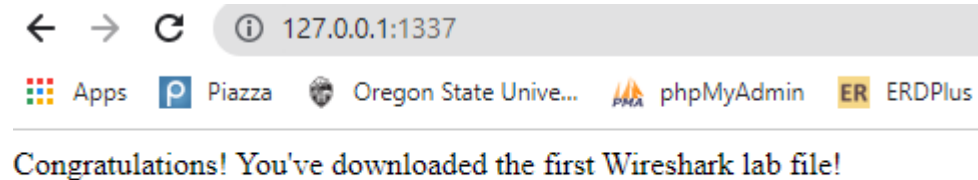
<p></p>
<p>The powers not delegated to the United States by the Constitution, nor prohibited-
by it to the states, are reserved to the states respectively, or to the people.</p>
</body></html>

[Done] exited with code=0 in 2.295 seconds
```

* Part 3 output instructions:

- Run the file `http_server.py` in terminal
- Open a web browser
- In the navigation bar, enter: `127.0.0.1:1337`
- Once it is connected, the output will appear on the web page as well as the terminal

SCREENSHOT 01



SCREENSHOT 02

```
PS C:\Users\charl\OneDrive\CURRENT TERM\CS 372 Intro Comp Networks\project01\Project01 - Code> python .\http_server.py  
Received: b'GET / HTTP/1.1\r\nHost: 127.0.0.1:1337\r\nConnection: keep-alive\r\nCache-Control: max-age=0\r\nsec-ch-ua: "Chromium";v="94", "Google Chrome";v="94", ";Not A Brand";v="99"\r\nsec-ch-ua-mobile: ?0\r\nsec-ch-ua-platform: "Windows"\r\nUpgrade-Insecure-Requests: 1\r\nUser-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/94.0.4606.81 Safari/537.36\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\nSec-Fetch-Site: none\r\nSec-Fetch-Mode: navigate\r\nSec-Fetch-User: ?1\r\n\r\nSec-Fetch-Dest: document\r\n\r\nAccept-Encoding: gzip, deflate, br\r\n\r\nAccept-Language: en-US,en;q=0.9\r\n\r\n'\nSending>>>>>>>>>>  
HTTP/1.1 200 OK  
Content-Type: text/html; charset=UTF-8  
  
<html>Congratulations! You've downloaded the first Wireshark lab file!</html>  
  
<<<<<<<<<<
```

COMMENTS:

In my python files, it may seem like I overused comments and I think I did, but it was intentional. I wasn't sure on the metrics of what makes a well documented file compared to a poor one in this course. I also added a few error checks when connecting to sockets and I'm aware it does make the files seem a bit cluttered, but I wanted to get in the habit of good coding practices. I apologize in advance if the files are hard to read. Overall, this was a great coding project!