Name: Katie Schaumleffle

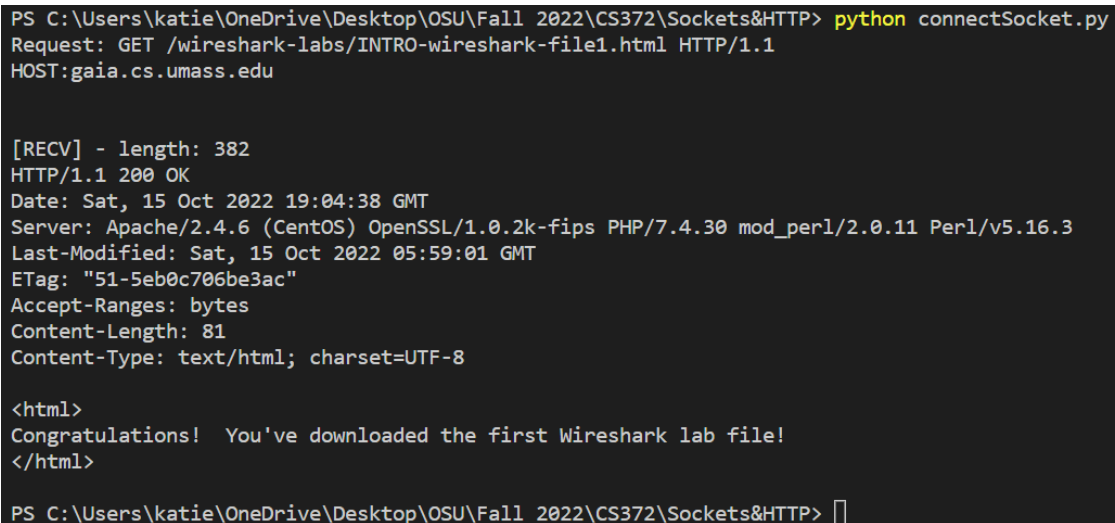# Project 1 - Sockets and HTTP

Include instructions on how to run your programs. Are they python3?

My code was written in Python3. To run the code, download the connectSocket.py file. Open your IDE (I use VS Code) and open the terminal. Once in the terminal, go into the directory where the file is saved. You can run the program by typing "python connectSocket.py" and hitting enter.

Include screenshots of your running code.

```
PS C:\Users\katie\OneDrive\Desktop\OSU\Fall 2022\CS372\Sockets&HTTP> python connectSocket.py
Request: GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
HOST:gaia.cs.umass.edu


[RECV] - length: 382
HTTP/1.1 200 OK
Date: Sat, 15 Oct 2022 19:04:38 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.30 mod_perl/2.0.11 Perl/v5.16.3
Last-Modified: Sat, 15 Oct 2022 05:59:01 GMT
ETag: "51-5eb0c706be3ac"
Accept-Ranges: bytes
Content-Length: 81
Content-Type: text/html; charset=UTF-8

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

PS C:\Users\katie\OneDrive\Desktop\OSU\Fall 2022\CS372\Sockets&HTTP> 
```

Include comments / questions (optional)
The most difficult aspect of this part of the assignment was finding different resources to get my code to work properly. I found https://zetcode.com/python/socket/, the textbook (Computer Networking; A Top Down Approach), and https://docs.python.org/3/howto/sockets.html to be the most helpful resources.

Include instructions on how to run your programs. Are they python3?

Similar to the previous file, this code was also written in Python3. To run the code, download the largeFile.py file. Open your IDE (I use VS Code) and open the terminal. Once in the terminal, go into the directory where the file is saved. You can run the program by typing "python largeFile.py" and hitting enter. Make sure you are in the correct directory, where this file is saved.

Include screenshots of your running code.

```
PS C:\Users\katie\OneDrive\Desktop\OSU\Fall 2022\CS372\Sockets&HTTP> python largeFile.py
Request: GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1
HOST: gaia.cs.umass.edu


[RECV] - length: 4805
HTTP/1.1 200 OK
Date: Sat, 15 Oct 2022 19:13:17 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.30 mod_perl/2.0.11 Perl/v5.16.3
Last-Modified: Sat, 15 Oct 2022 05:59:01 GMT
ETag: "1194-5eb0c706bc083"
Accept-Ranges: bytes
Content-Length: 4500
Content-Type: text/html; charset=UTF-8

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


<body bgcolor="#ffffff" link="#330000" vlink="#666633">
<p><br>
</p>
<p></p><center><b>THE BILL OF RIGHTS</b><br>
  <em>Amendments 1-10 of the Constitution</em>
</center>

<p>The Conventions of a number of the States having, at the time of adopting
the Constitution, expressed a desire, in order to prevent misconstruction
or abuse of its powers, that further declaratory and restrictive clauses
should be added, and as extending the ground of public confidence in the
Government will best insure the beneficent ends of its institution; </p><p>  Resolved, by the Senate and House of Represent
atives of the United
```

```
compulsory process for obtaining witnesses in his favor,
and to have the assistance of counsel for his defense.

</p><p><a name="7"><strong><h3>Amendment VII</h3></strong></a>

<p></p><p>In suits at common law, where the value in controversy shall
exceed twenty dollars, the right of trial by jury shall be
preserved, and no fact tried by a jury, shall be otherwise
reexamined in any court of the United States, than according
to the rules of the common law.

</p><p><a name="8"><strong><h3>Amendment VIII</h3></strong></a>

<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>
PS C:\Users\katie\OneDrive\Desktop\OSU\Fall 2022\CS372\Sockets&HTTP> 
```
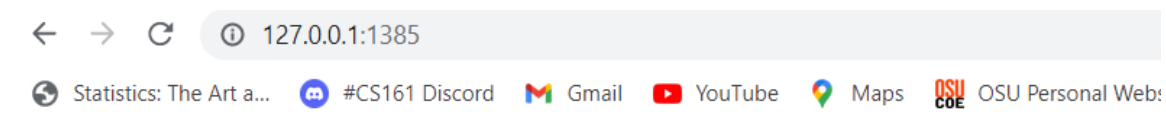
The world's simplest HTTP server

Include instructions on how to run your programs. Are they python3?

Just like the last two files, this code was also written in Python3. To run the code, download the http_server.py file. Open your IDE (I use VS Code) and open the terminal. Once in the terminal, go into the directory where the file is saved. You can run the program by typing "python http_server.py" and hitting enter.

Once you run the program in the terminal, go to your web browser and navigate to 127.0.0.1:1385. You should see the message "Congratulations! You've downloaded the first Wireshark lab file!"

You can then return to the terminal and the "Connected by", "Received", and "Sending" data should be displayed in the terminal window.

Include screenshots of your running code.