

## Casey Levy

### CS 372 – Project 1 – Sockets & HTTP

#### TO RUN:

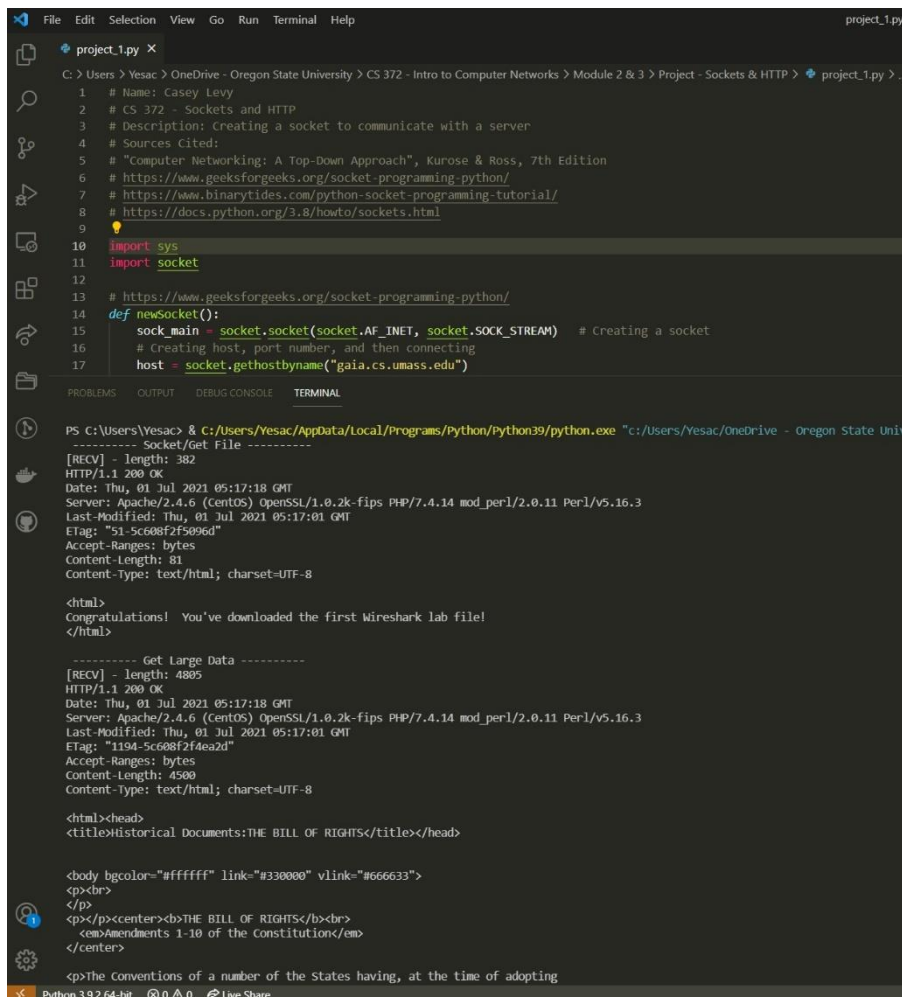
Program was written in Python 3 using Visual Studio Code. I used the “run” button in the top right corner to run my code, as well as using the “py” command within the VSC terminal. (e.g. “py project\_1.py”). The first program to run is the get small file program, followed by the large file program, and concluding with the HTTP server program. The HTTP server program alerts the user to open a browser to “127.0.0.1:2050”.

#### COMMENTS:

- Not sure why the “python3” command doesn’t work in VSC terminal but luckily the “py” command does.
- Program 2, the large data program, takes a few seconds to load up.

#### SCREENSHOTS:

Shot of first program, get small file and part of second program, get large file



The screenshot shows the Visual Studio Code interface with a Python file named `project_1.py` open. The file contains a script that uses the `socket` module to connect to a server and retrieve data. The terminal output shows the execution of the script, which successfully connects to the server and retrieves a small file (382 bytes) and a large file (4805 bytes). The output also shows the HTTP headers and the content of the files, which are HTML documents.

```
1 # Name: Casey Levy
2 # CS 372 - Sockets and HTTP
3 # Description: Creating a socket to communicate with a server
4 # Sources Cited:
5 # "Computer Networking: A Top-Down Approach", Kurose & Ross, 7th Edition
6 # https://www.geeksforgeeks.org/socket-programming-python/
7 # https://www.binarytides.com/python-socket-programming-tutorial/
8 # https://docs.python.org/3.8/howto/sockets.html
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10 import sys
11 import socket
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13 # https://www.geeksforgeeks.org/socket-programming-python/
14 def newSocket():
15     sock_main = socket.socket(socket.AF_INET, socket.SOCK_STREAM) # Creating a socket
16     # Creating host, port number, and then connecting
17     host = socket.gethostbyname("gaia.cs.umass.edu")
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```

```
PS C:\Users\Yesac> & C:\Users\Yesac\AppData\Local\Programs\Python\Python39\python.exe "c:\Users\Yesac\OneDrive - Oregon State Univ
----- Socket/Get File -----
[RECV] - length: 382
HTTP/1.1 200 OK
Date: Thu, 01 Jul 2021 05:17:18 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.14 mod_perl/2.0.11 Perl/v5.16.3
Last-Modified: Thu, 01 Jul 2021 05:17:01 GMT
ETag: "51-5c08f2f5096d"
Accept-Ranges: bytes
Content-Length: 81
Content-Type: text/html; charset=UTF-8

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

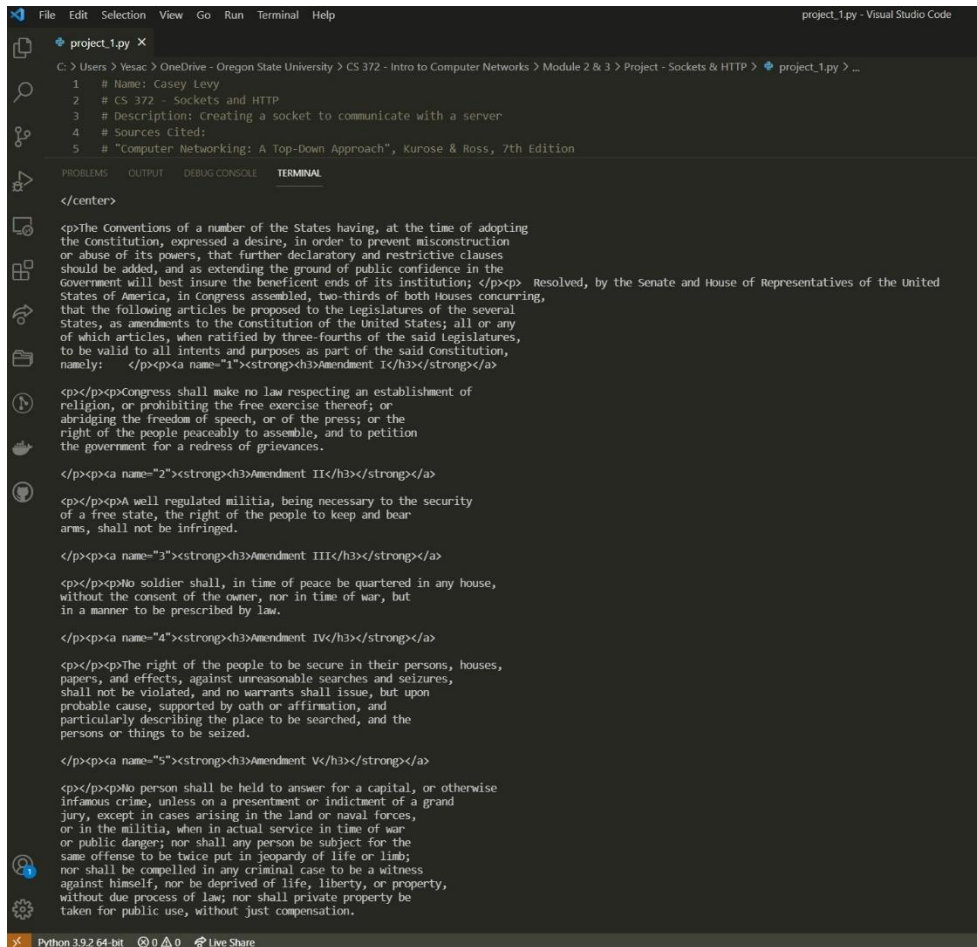
----- Get Large Data -----
[RECV] - length: 4805
HTTP/1.1 200 OK
Date: Thu, 01 Jul 2021 05:17:18 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.14 mod_perl/2.0.11 Perl/v5.16.3
Last-Modified: Thu, 01 Jul 2021 05:17:01 GMT
ETag: "1194-5c608f2f4ea2d"
Accept-Ranges: bytes
Content-Length: 4500
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
```

Get large file contd.



```
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</center>

<p><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 Representatives of the United
States of America, in Congress assembled, two-thirds of both houses concurring,
that the following articles be proposed to the Legislatures of the several
States, as amendments to the Constitution of the United States; all or any
of which articles, when ratified by three-fourths of the said Legislatures,
to be valid to all intents and purposes as part of the said Constitution,
namely: </p><p><a name="1"><strong><h3>Amendment I</h3></strong></a>

<p><p><p>Congress shall make no Law respecting an establishment of
religion, or prohibiting the free exercise thereof; or
abridging the freedom of speech, or of the press; or the
right of the people peaceably to assemble, and to petition
the government for a redress of grievances.

</p><p><a name="2"><strong><h3>Amendment II</h3></strong></a>

<p><p><p>A well regulated militia, being necessary to the security
of a free state, the right of the people to keep and bear
arms, shall not be infringed.

</p><p><a name="3"><strong><h3>Amendment III</h3></strong></a>

<p><p><p>No soldier shall, in time of peace be quartered in any house,
without the consent of the owner, nor in time of war, but
in a manner to be prescribed by Law.

</p><p><a name="4"><strong><h3>Amendment IV</h3></strong></a>

<p><p><p>The right of the people to be secure in their persons, houses,
papers, and effects, against unreasonable searches and seizures,
shall not be violated, and no warrants shall issue, but upon
probable cause, supported by oath or affirmation, and
particularly describing the place to be searched, and the
persons or things to be seized.

</p><p><a name="5"><strong><h3>Amendment V</h3></strong></a>

<p><p><p>No person shall be held to answer for a capital, or otherwise
infamous crime, unless on a presentment or indictment of a grand
jury, except in cases arising in the land or naval forces,
or in the militia, when in actual service in time of war
or public danger; nor shall any person be subject for the
same offense to be twice put in jeopardy of life or limb;
nor shall be compelled in any criminal case to be a witness
against himself, nor be deprived of life, liberty, or property,
without due process of law; nor shall private property be
taken for public use, without just compensation.
```

End of get large file and also program three, http server

[illegible]

Web browser



Congratulations! You've downloaded the first Wireshark lab file!