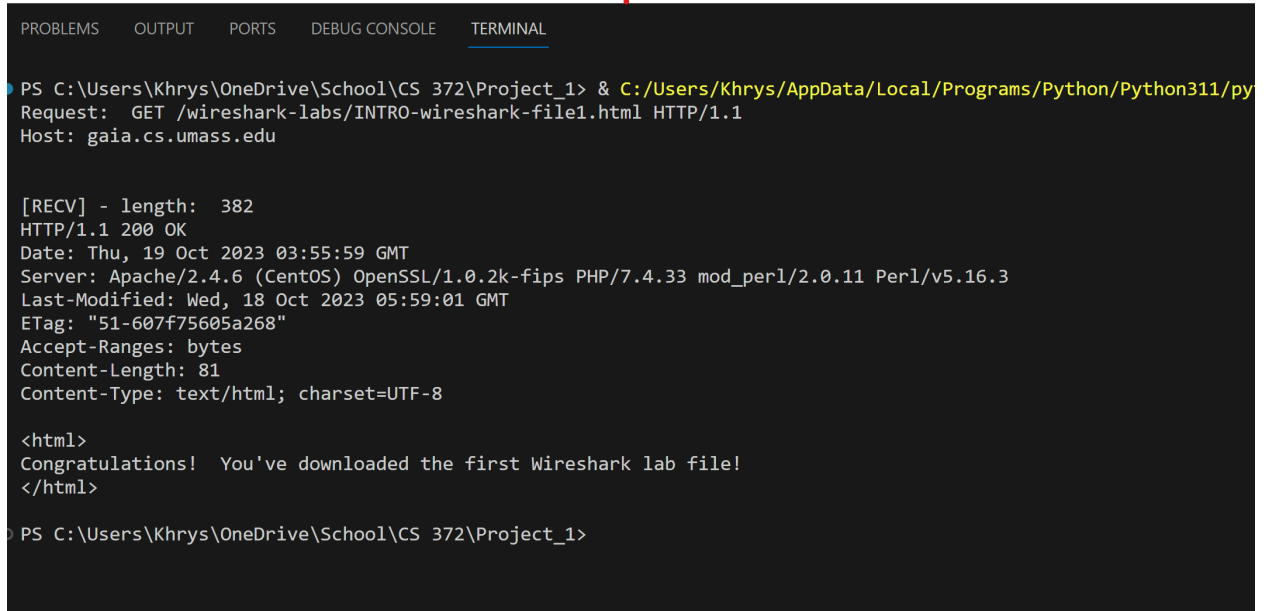Name: <u>Khrystian Clark</u>

Project 1 - Sockets and HTTP

Using a socket to GET a file

    a. Once you save the file locally, open a terminal window. Navigate to the folder the file is located in and enter the command "python SKT_GET.py"

    b. Screenshot: (sources are cited inline, in code)


```
PROBLEMS    OUTPUT    PORTS    DEBUG CONSOLE    TERMINAL

PS C:\Users\Khrys\OneDrive\School\CS 372\Project_1> & C:/Users/Khrys/AppData/Local/Programs/Python/Python311/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: Thu, 19 Oct 2023 03:55:59 GMT
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 Perl/v5.16.3
Last-Modified: Wed, 18 Oct 2023 05:59:01 GMT
ETag: "51-607f75605a268"
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\Khrys\OneDrive\School\CS 372\Project_1>
```

    c. Only question – I manually had to add print lines to my code to print the request and response so that the outcome is like the example in the assignment. Is there an easier way to do this?

GET the data for a large file

    a. Once you save the file locally, open a terminal window. Navigate to the folder the file is located in and enter the command "python SKT_Bigger_GET.py"

b. Screenshot: (sources are cited inline, in code)

```
PROBLEMS   OUTPUT   PORTS   DEBUG CONSOLE   TERMINAL                                                                    Python + ∨   ⊡ ⊟ ⋯ ✕

● PS C:\Users\Khrys\OneDrive\School\CS 372\Project_1> & C:/Users/Khrys/AppData/Local/Programs/Python/Python311/python.exe "c:/Users/Khrys/OneDrive/School/CS 372/Project_1/SKT_Bigger_GET.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: Thu, 19 Oct 2023 03:57:44 GMT
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 Perl/v5.16.3
    Last-Modified: Wed, 18 Oct 2023 05:59:01 GMT
    ETag: "1194-607f756058327"
    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 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
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    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.

    </p><p><a name="6"><strong><h3>Amendment VI</h3></strong></a>
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    <p></p><p>In all criminal prosecutions, the accused shall enjoy the right
    to a speedy and public trial, by an impartial jury of the state
    and district wherein the crime shall have been committed, which
    district shall have been previously ascertained by law, and
    to be informed of the nature and cause of the accusation;
    to be confronted with the witnesses against him; to have
    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\Khrys\OneDrive\School\CS 372\Project_1>
```
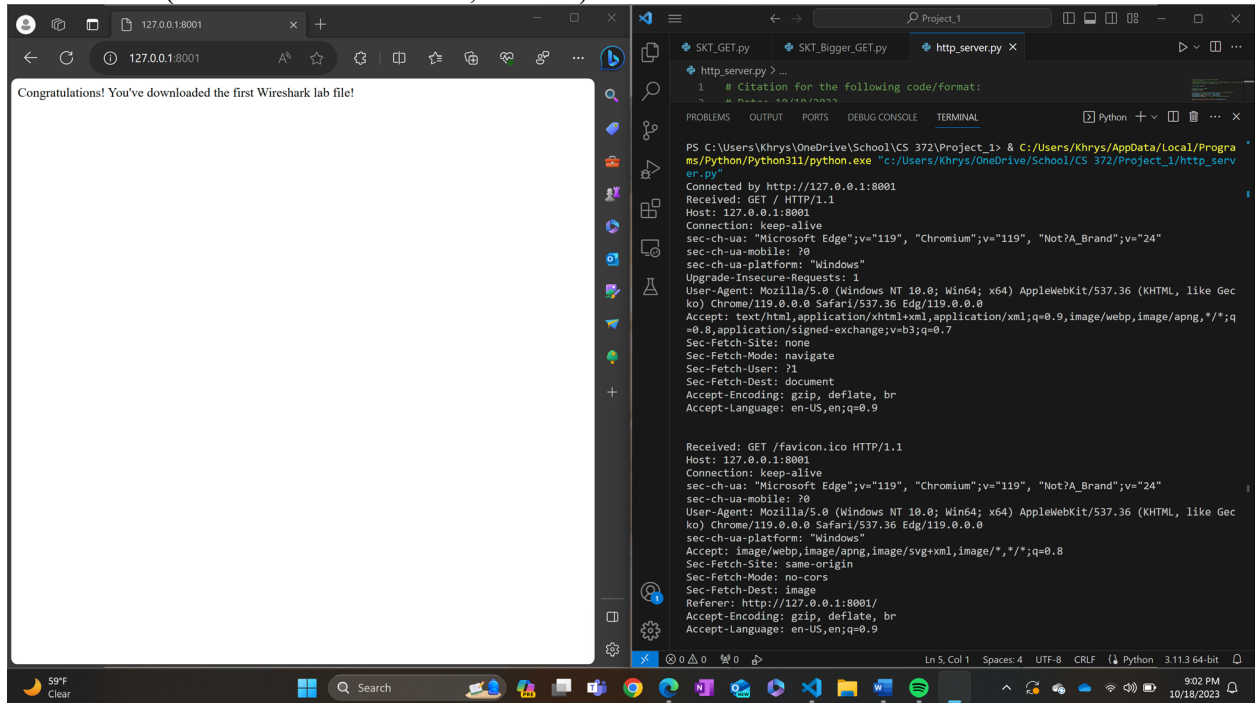
c. The logic of the while statement was pretty tricky, and took a couple of searches. Is information from stackoverflow okay in the future, so long as we cite it?

The world's simplest HTTP server
a. Once you save the file locally, open a terminal window. Navigate to the folder the file is located in and enter the command "python http_server.py"
b. Screenshot: (sources are cited inline, in code)

c. No comments. This part was pretty straight forward.