CSE 4344 Project 1 Webserver Project Writeup

About:

This program is written in python 3 and developed/tested in a Linux Environment. The web server has been tested on Firefox and Google Chrome.

To run:

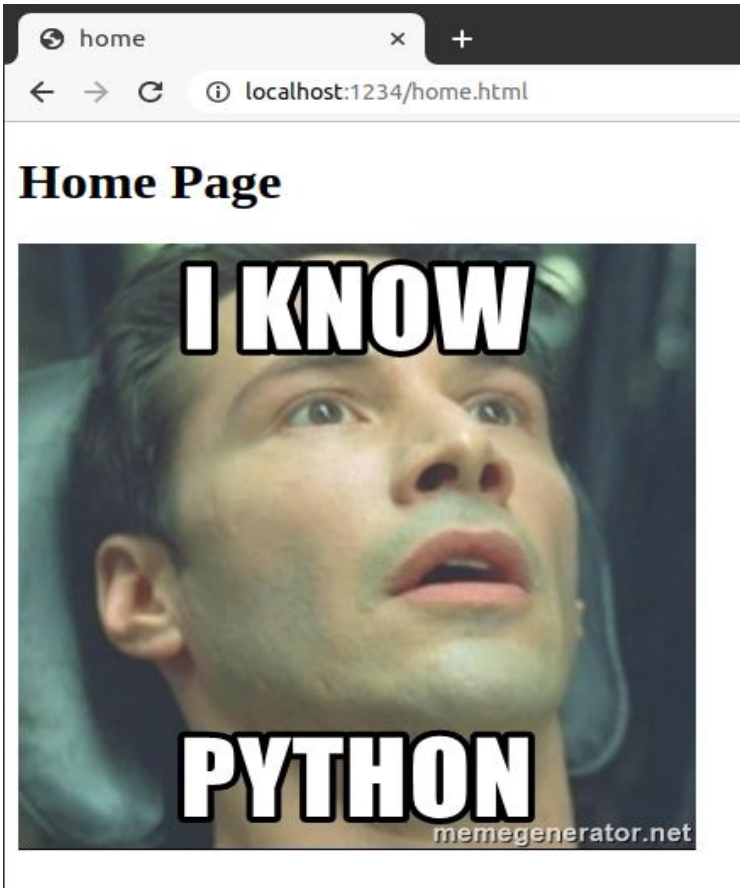
There is no need to pip/install packages to run this program. It runs entirely on the default modules. Open a terminal and run the following command:

 # python3 start_server.py

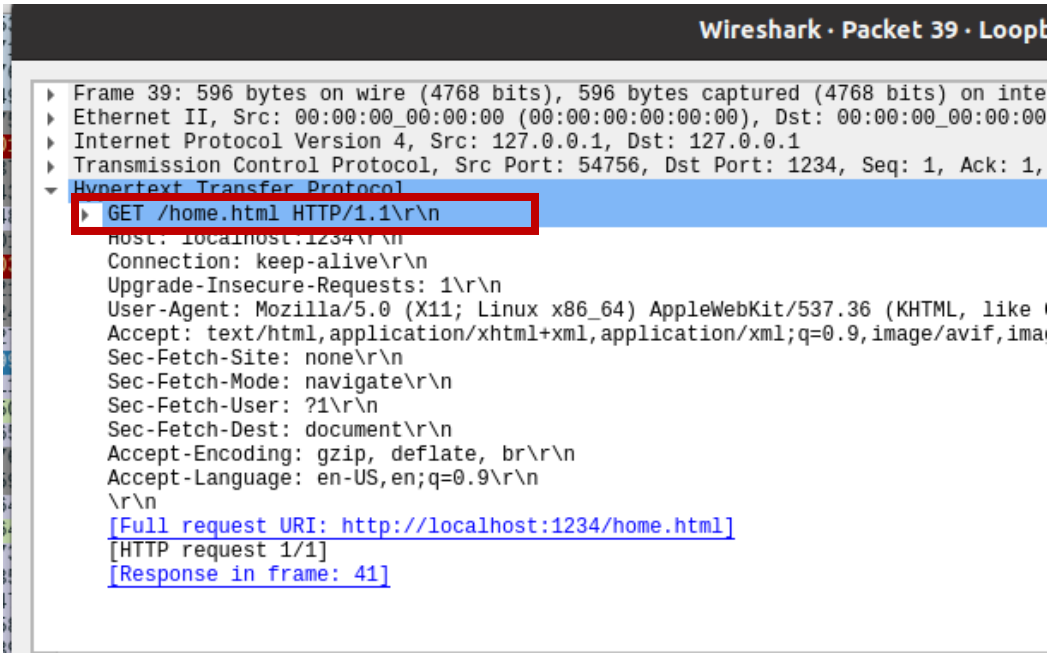
Use ctrl+c in the terminal to stop the server.

200 Ok

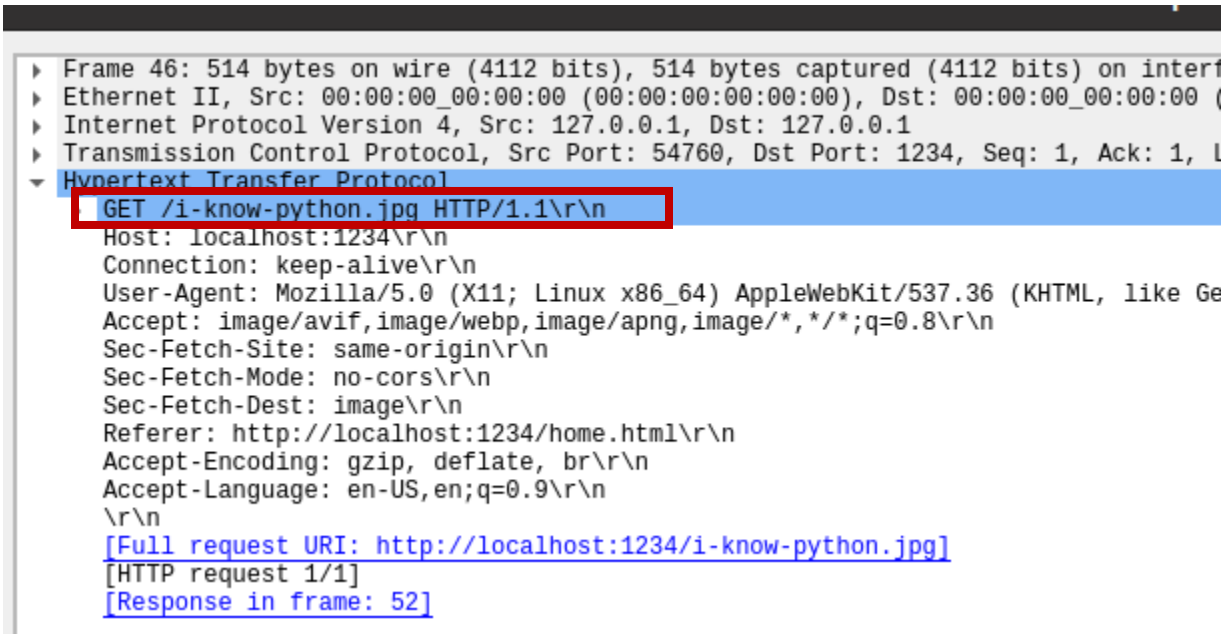
To demonstrate the 200 response go start the server using the command above and go to the url in the web browser: http://localhost:1234/home.html



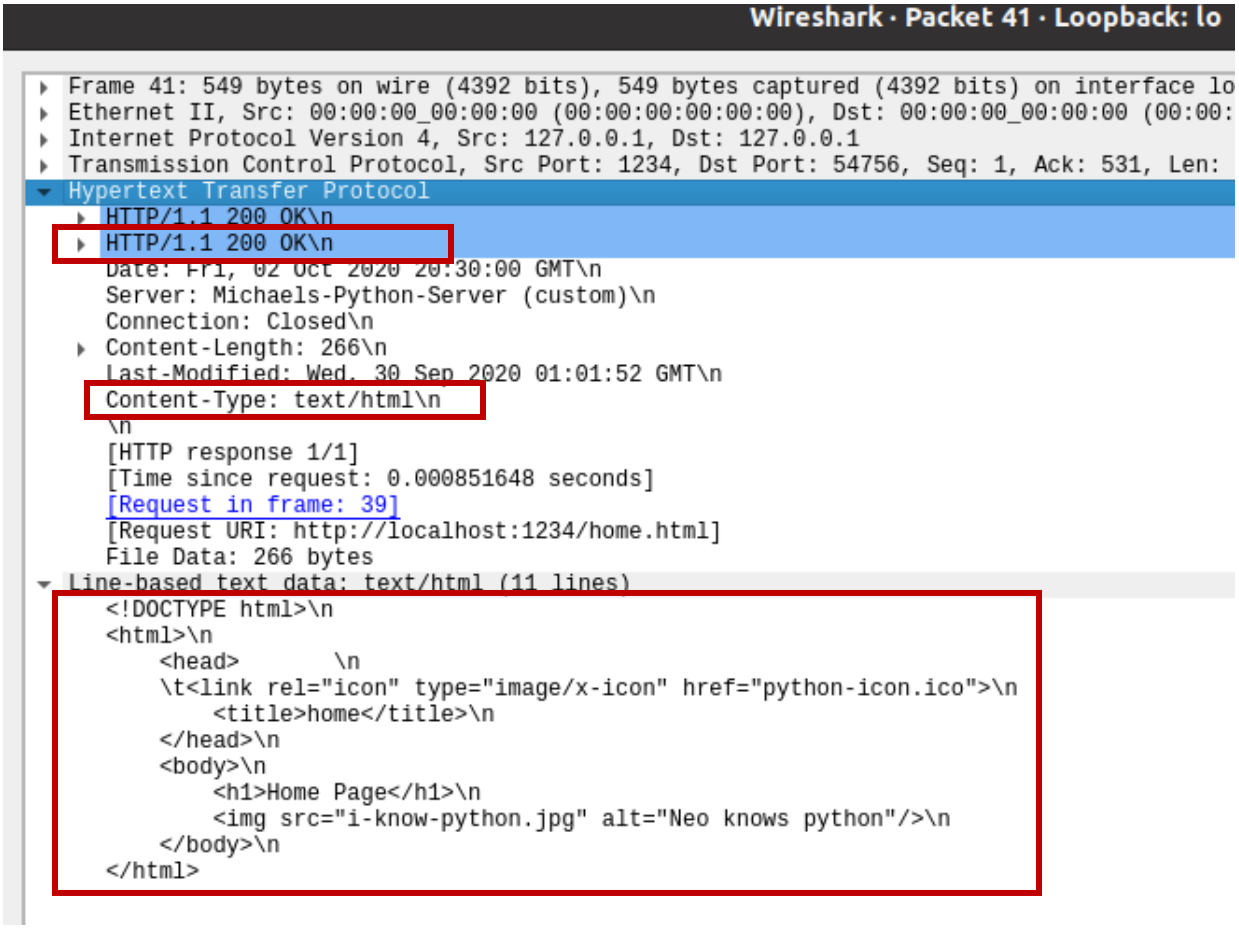
Home.html get request from the web browser:



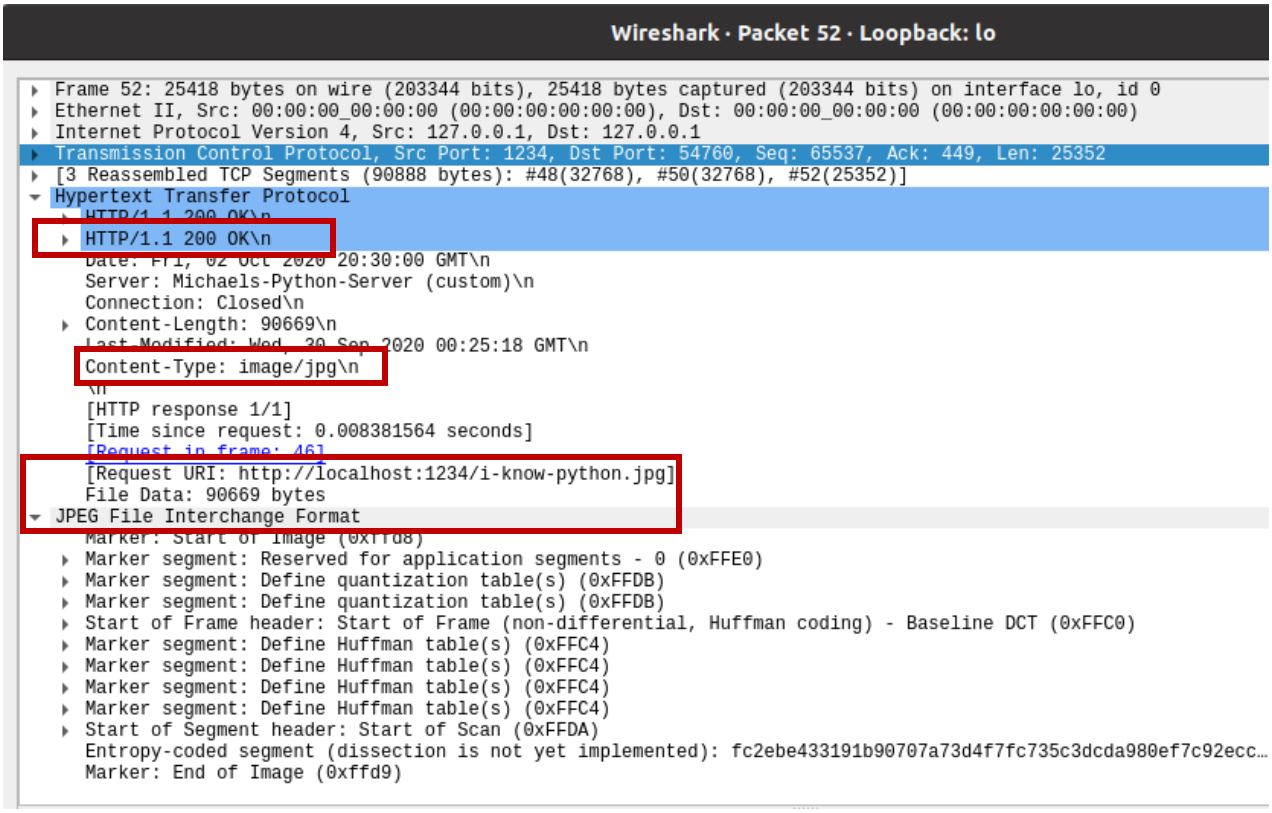
i-know-python.jpg get request from the browser:



Server response for home.html:



Server response for i-know-python.jpg:

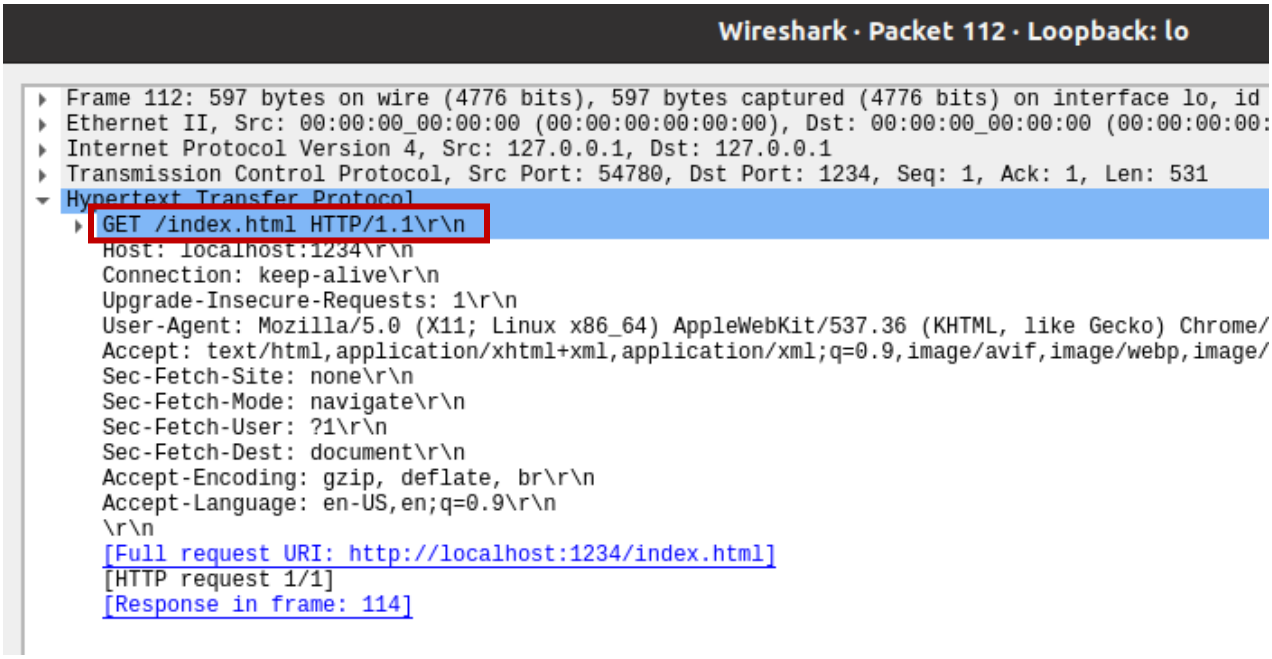


301 Moved Permanently

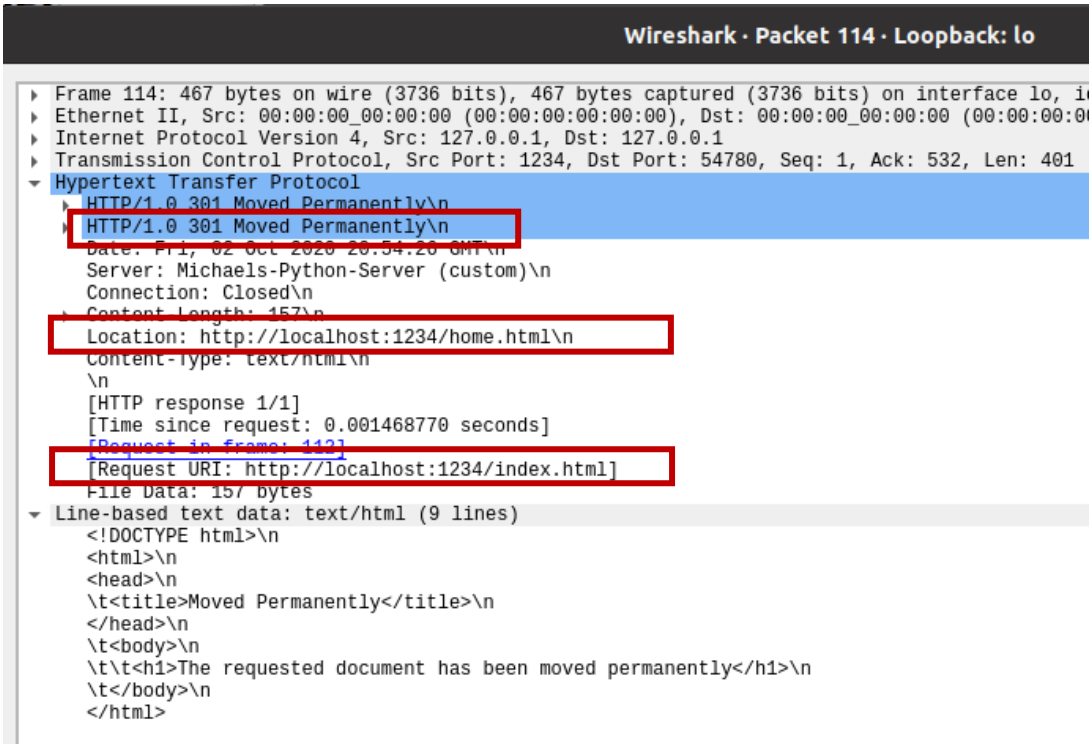
To demonstrate a 301 response go to the browser and type: http://localhost:1234/index.html

This will redirect to the home.html page as shown previously. The screenshots are displayed below.

index.html get request from the web browser:



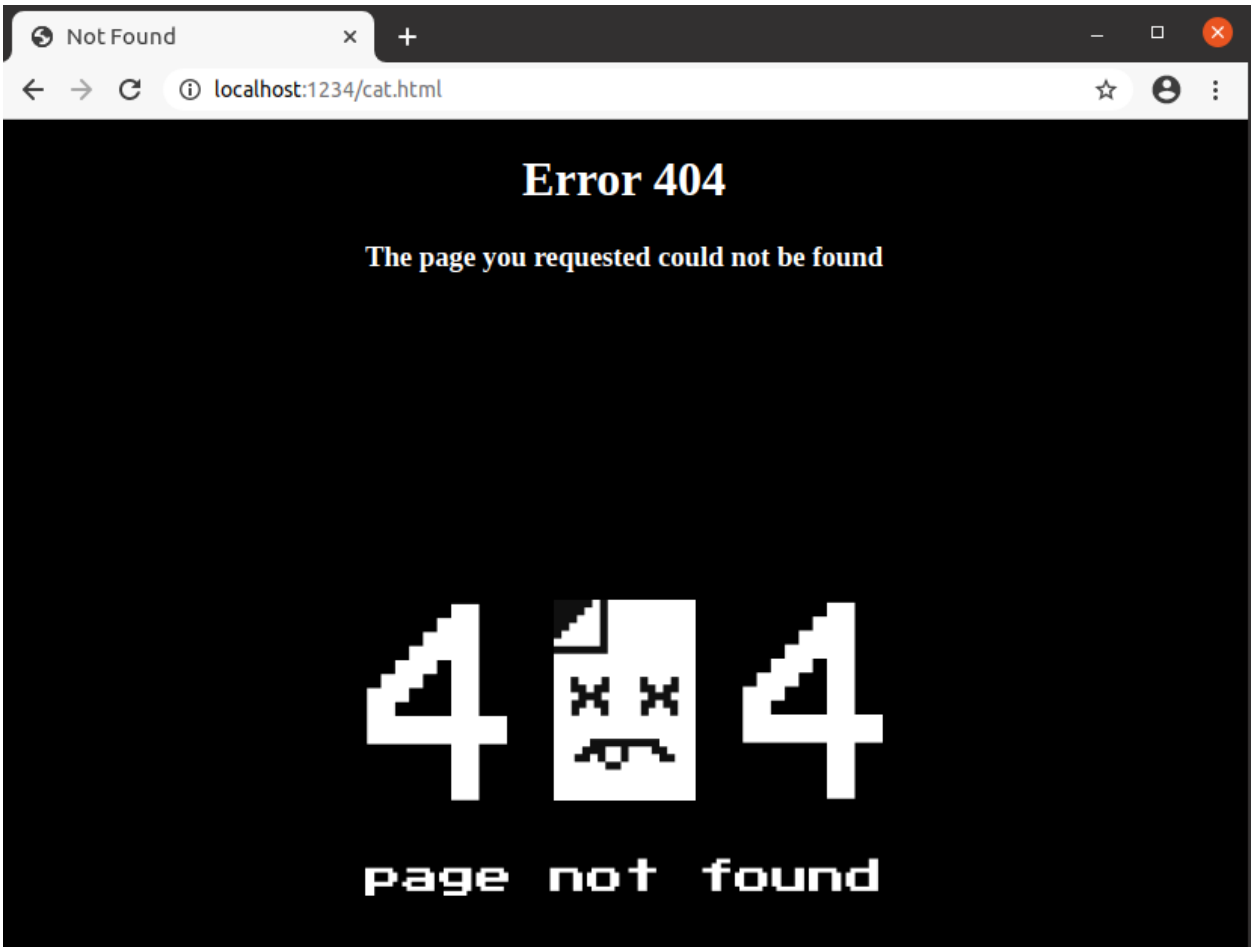
301 response from the server:



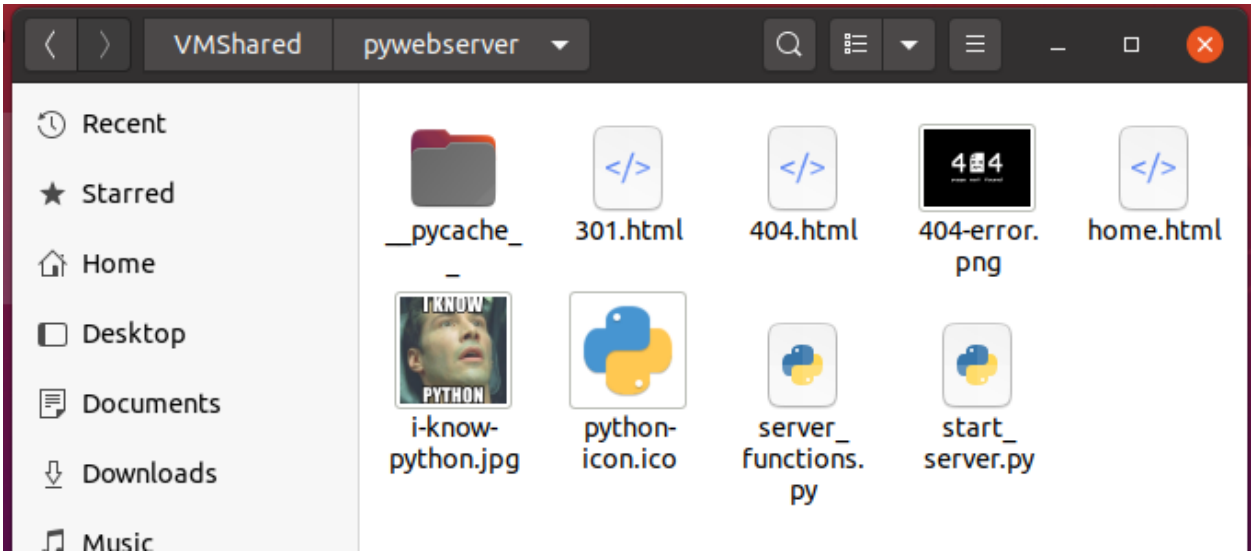
This redirects back to home.html as shown before.

404 Page Not Found

For the 404 response, I created an html file called 404.html. This file displays some text and an image to notify the user that the page they requested could not be found:

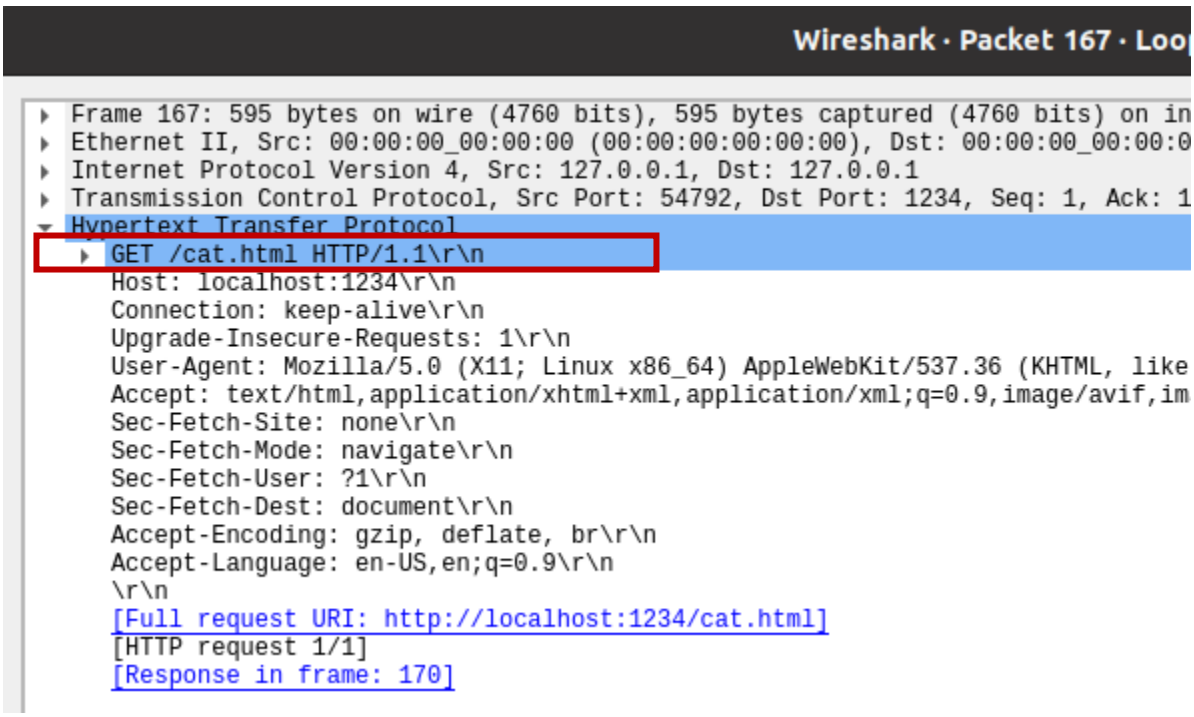


To demonstrate this, here are the current contents of the directory:

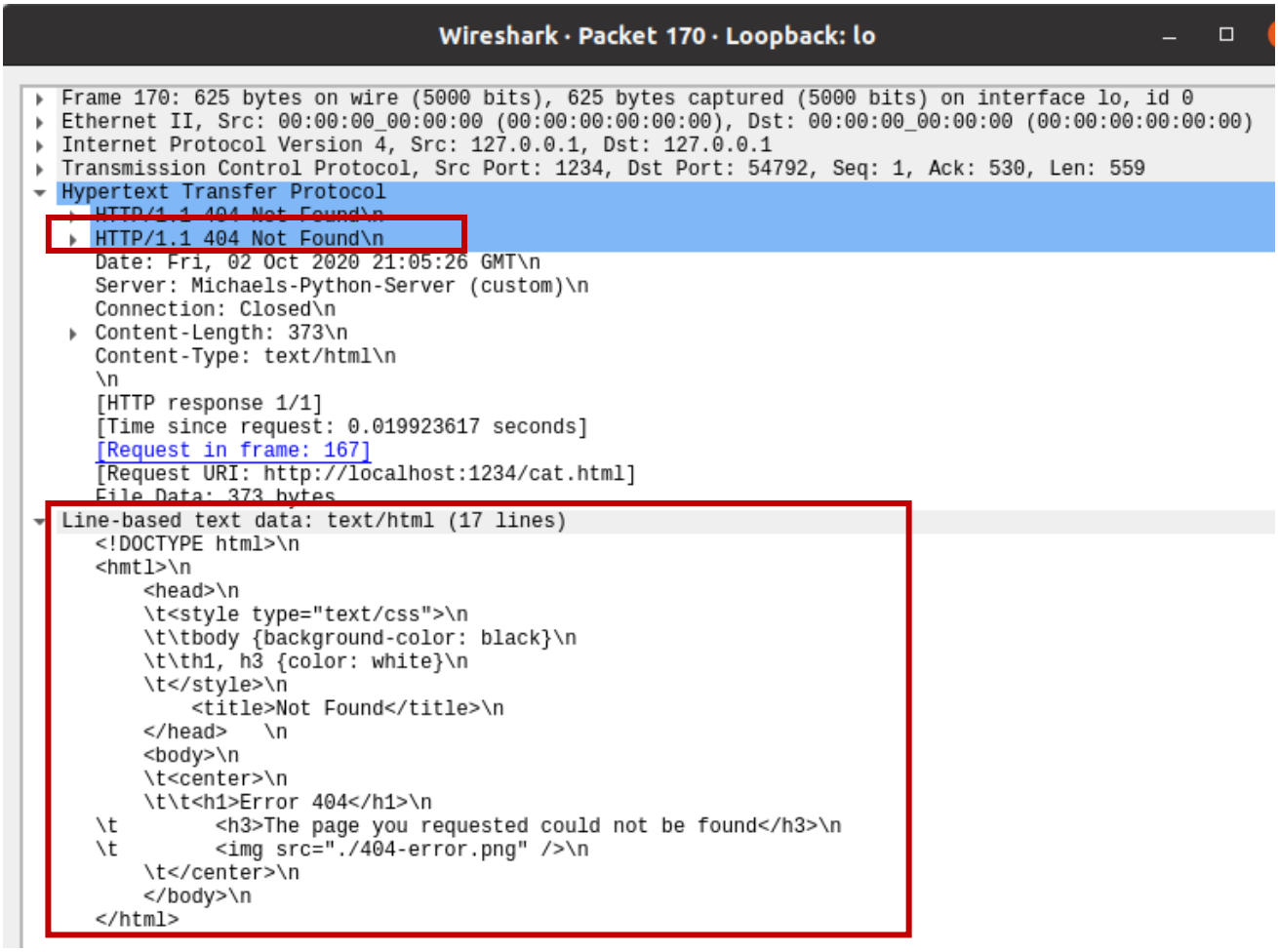


The webserver is running from this directory and I will request an html file in the browser called "**cat.html**". Since this file does not exists it should generate a 404 error.

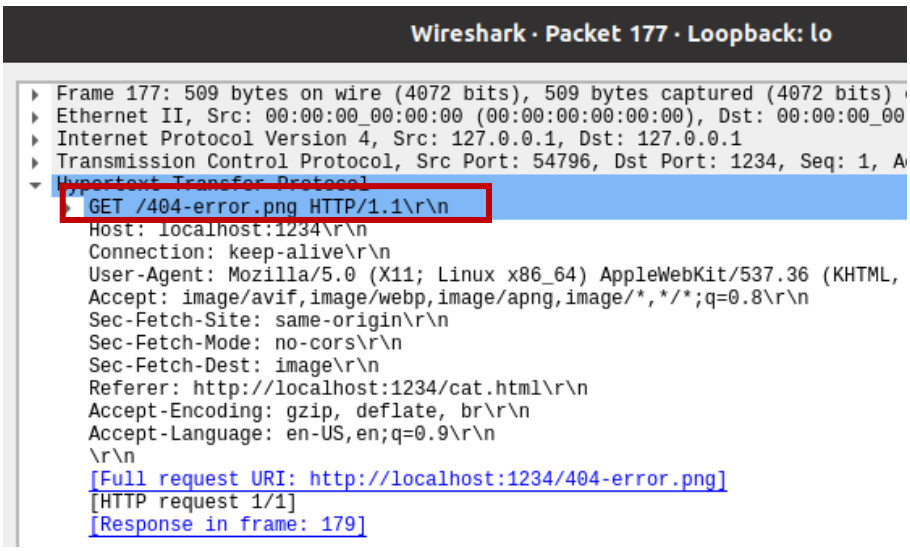
cat.html get request from the web browser:



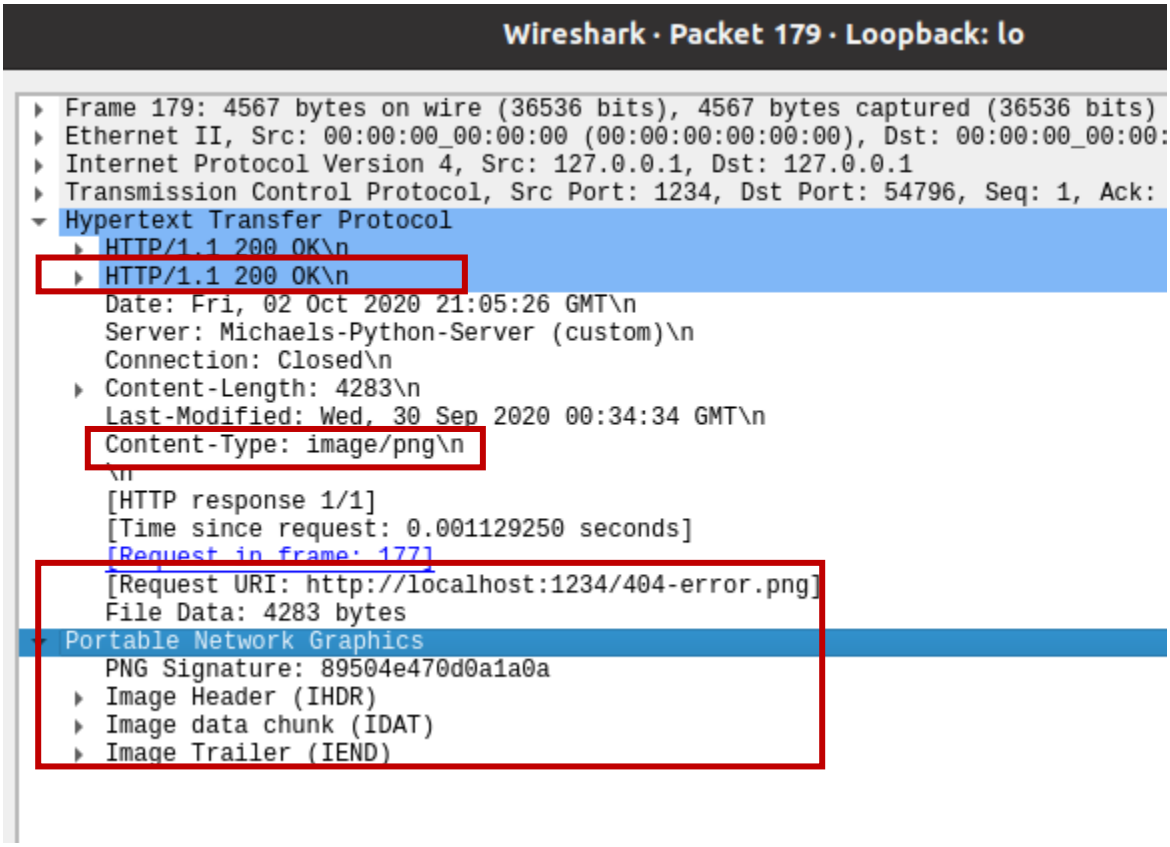
404 response from the server:



404-error.png get request from the web browser:



404-error.png response from server:



Known Bugs

The program runs fine and as far as I can tell there are no know bugs that crash the server by navigating to different pages. However, for some reason, some of the threads will run into an IndexError trying to read from the tokenized list of strings that are received when the server receives a request from the browser (this list is used to obtain the file requested) . The server will receive an a get request, but there will be no file requested from the browser in the response. This is a minor bug and will NOT crash the program.

References

https://realpython.com/python-sockets/

https://realpython.com/intro-to-python-threading/

https://docs.python.org/3/library/datetime.html