# **Python Lab 1: Web Server Lab**

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To begin this lab, I opened VS Code on my computer to create a repository for the server and HTML file. I named the Web Server (webserver.py). Within that repository, I created a Hello World HTML file as well.

A screenshot of a computer program

Description automatically generated

From there, I copied the skeleton code into the webserver.py file and began to get started. I made the changes below to the skeleton code.

|  |  |
| --- | --- |
| Skeleton Placeholder | Provided Implementation |
| # Fill in start and # Fill in end (socket setup) | Set up the server socket: bind and listen. |
| connectionSocket, addr = # Fill in start | connectionSocket, addr = serverSocket.accept() |
| message = # Fill in start | message = connectionSocket.recv(1024).decode() |
| filename = message.split()[1] | Matches the exact skeleton requirement. |
| outputdata = # Fill in start | outputdata = f.read() (Reads the requested file content). |
| Sending HTTP header lines | connectionSocket.send(\"HTTP/1.1 200 OK\\r\\n\\r\\n\".encode()) |
| Loop to send file content | Directly sends the file content using connectionSocket.send(). |
| File not found error | Sends a 404 Not Found response and an HTML message. |

After some final tweaks to the web server code, the result can be found below.

A screenshot of a computer program

Description automatically generated

Now that the web server code was ready, I needed to work on the HTML portion of this lab. For that, I had already created an HTML file in the same directory as the web server. I just needed to fill this portion out. It took a bit to remember HTML format, but after looking up how to format it, I implemented the below.

A screen shot of a computer program

Description automatically generated

Now that everything was complete, it was time to save my work. I then ran the webserver.py file so that it began listening. The lab instructions say to use our own IP address. To collect mine, I opened the command prompt and entered ipconfig to obtain this. After doing so, I had what I needed to run the web server. In Google Chrome, I entered the following in a new tab: <http://192.168.12.219:6789/HelloWorld.html>. This displayed the result below.

**A screenshot of a computer

Description automatically generated**

And now I am feeling pretty good about having my own web server. 😊 I have added this project to my personal GitHub account as well: <https://github.com/jakejeffers/Python-Lab-1>.