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LAB 2 B

Source code: client.py

```
from socket import *
import sys

serverPort = 6788

serverSocket = socket(AF_INET, SOCK_STREAM)
serverSocket.bind(('',serverPort))
serverSocket.listen(1)

print("web server on port: ",serverPort)

while True:
    print("The server is ready to receive")
    connectionSocket, addr = serverSocket.accept()
    try:
        message = connectionSocket.recv(1024)
        print (message,'::',message.split()[0],'::',message.split()[1])
        filename = message.split()[1]
        print (filename,'||',filename[1:])
        f = open(filename[1:])
        outputdata = f.read()
        print (outputdata)
        f.close()
        connectionSocket.send("HTTP/1.1 200 OK\r\n\r\n".encode())
        for i in range(0, len(outputdata)):
            connectionSocket.send(outputdata[i].encode())
        connectionSocket.send("\r\n".encode())
        connectionSocket.close()
```

```

except IOError:

    #print ("404 Not Found")

    connectionSocket.send('\nHTTP/1.1 404 Not Found\n\n'.encode())

    connectionSocket.send('<html><head></head><body><p>404 NOT FOUND </p></body></html>\r\n'.encode())

    connectionSocket.close()

serverSocket.close()

sys.exit()

```

HelloWorld.html

```

<html>

    <head>

        <title>Test Python webserver</title>

    </head>

    <body>

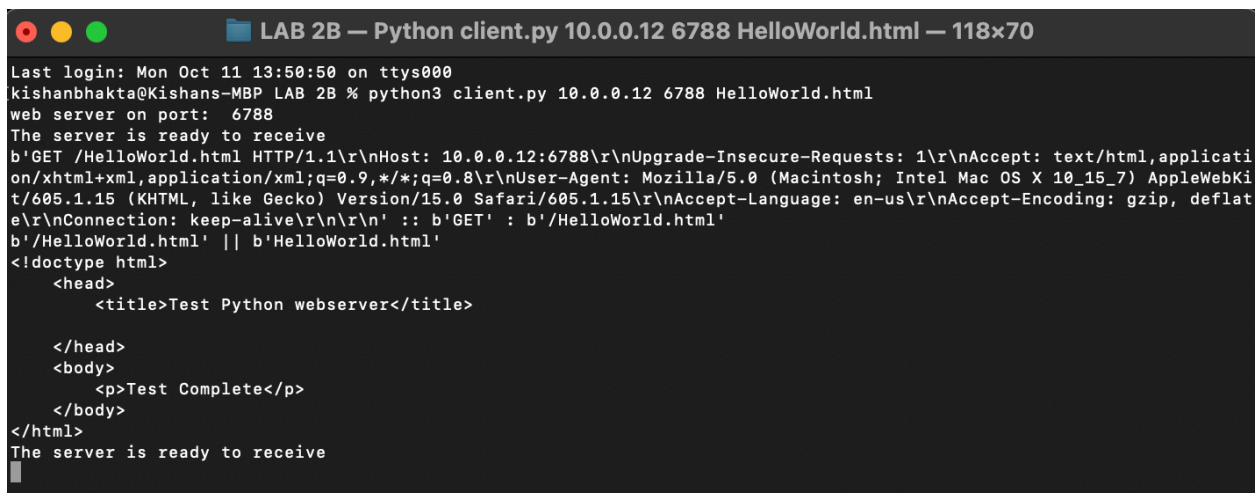
        <p>Test Complete</p>

    </body>

</html>

```

The output in the terminal with available file:



```

Last login: Mon Oct 11 13:50:50 on ttys000
kishanbhakta@Kishans-MBP LAB 2B % python3 client.py 10.0.0.12 6788 HelloWorld.html
web server on port: 6788
The server is ready to receive
b'GET /HelloWorld.html HTTP/1.1\r\nHost: 10.0.0.12:6788\r\nUpgrade-Insecure-Requests: 1\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\nUser-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/605.1.15 (KHTML, like Gecko) Version/15.0 Safari/605.1.15\r\nAccept-Language: en-us\r\nAccept-Encoding: gzip, deflate\r\nConnection: keep-alive\r\n\r\n' :: b'GET' : b'/HelloWorld.html'
b'/HelloWorld.html' || b'HelloWorld.html'
<!doctype html>
    <head>
        <title>Test Python webserver</title>

    </head>
    <body>
        <p>Test Complete</p>
    </body>
</html>
The server is ready to receive

```

The output in the terminal with file not available in the server directory:

```
The server is ready to receive
b'GET /HellWorld.html HTTP/1.1\r\nHost: 10.0.0.12:6788\r\nConnection: keep-alive\r\nUpgrade-Insecure-Requests: 1\r\nUser-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/94.0.4606.71 Safari/537.36\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\nAccept-Encoding: gzip, deflate\r\nAccept-Language: en-US,en;q=0.9\r\n\r\n' :: b'GET' : b'/HellWorld.html'
b'/HellWorld.html' || b'/HellWorld.html'
404 Not Found
The server is ready to receive
b'GET /favicon.ico HTTP/1.1\r\nHost: 10.0.0.12:6788\r\nConnection: keep-alive\r\nUser-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/94.0.4606.71 Safari/537.36\r\nAccept: image/avif,image/webp,image/apng,image/svg+xml,image/*,*/*;q=0.8\r\nReferer: http://10.0.0.12:6788/HellWorld.html\r\nAccept-Encoding: gzip, deflate\r\nAccept-Language: en-US,en;q=0.9\r\n\r\n' :: b'GET' : b'/favicon.ico'
b'/favicon.ico' || b'/favicon.ico'
404 Not Found
The server is ready to receive
```

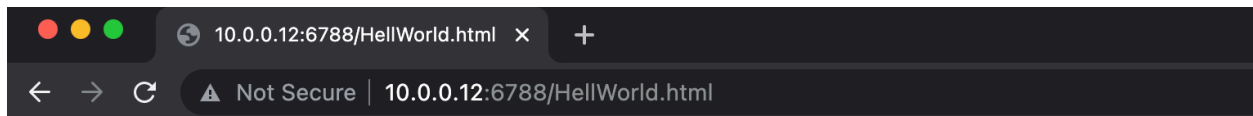
We can see above that we are getting the 404 File Not Found in the terminal.

Testing on another host:



Test Complete

Now trying any unavailable file, we can see it show 404 error:



404 NOT FOUND