SAN JOSE STATE UNIVERSITY

CMPE 148 - Computer Network I

LAB 2 REPORT

Web Server Lab

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Code

Below you will find the skeleton code for the Web server. You are to complete the skeleton code. The places where you need to fill in code are marked with **#Fill in start** and **#Fill in end**. Each place may require one or more lines of code.

Link for GitHub: https://github.com/nhutdh1103/HW2.git

HW2

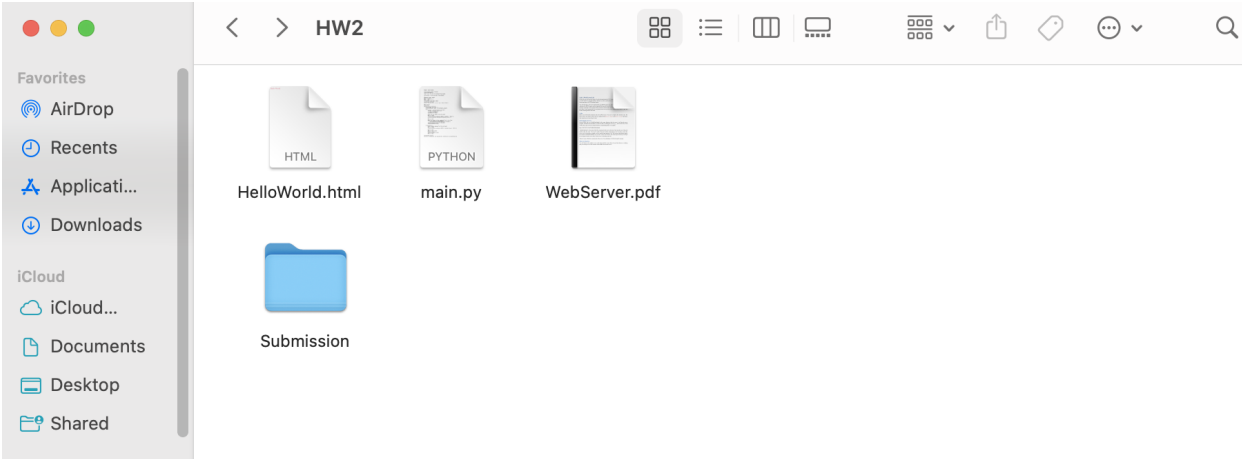
main.py | HelloWorld.html

main.py > ...

```python
#import socket module

from fileinput import filename
from socket import *
import sys # In order to terminate the program

serverSocket = socket(AF_INET, SOCK_STREAM)

#Prepare a sever socket
#Fill in start
HOST = '10.251.37.23'
PORT = 1103
serverSocket.bind((HOST, PORT))
serverSocket.listen(1)
print(f'the web server is up on port: {HOST}:{PORT}')

#Fill in end
while True:
#Establish the connection
    print('Ready to serve...')
    connectionSocket, addr = serverSocket.accept()
    try:
        message = connectionSocket.recv(1024)
        filename = message.split() [1]
        f = open(filename[1:])
        outputdata = f.read()

        #Send one HTTP header line into socket
        #Fill in start
        connectionSocket.send(bytes('HTTP/1.1 200 OK', 'UTF-8'))
        # connectionSocket.send(bytes(outputdata,'UTF-8'))

        #Fill in end
```

Running the Server

Put an HTML file (e.g., HelloWorld.html) in the same directory that the server is in. Run the server program. Determine the IP address of the host that is running the server (e.g., 128.238.251.26).



Running the server

```
nina@DoTran HW2 % /usr/bin/python3 "/Users/nina/Documents/CMPE 148/HW2/main.py"
the web server is up on port: 10.251.37.23:1103
Ready to serve...
```

Server receives the request for “HelloWorld.html” from client

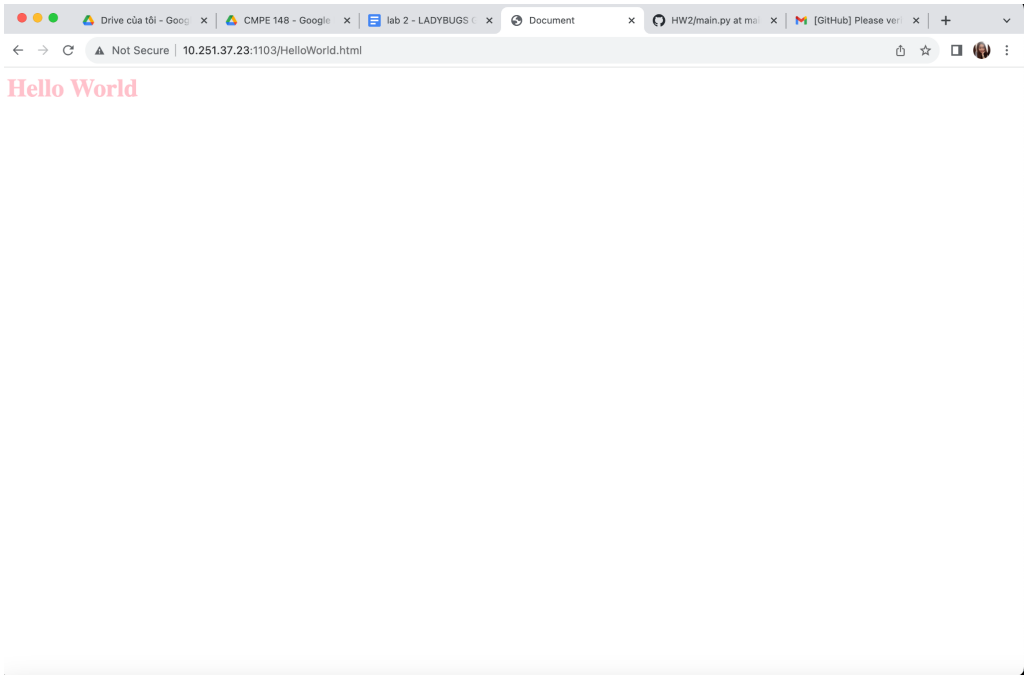
```
message = connectionSocket.recv(1024)
```

And return HelloWorld.html to client

```
filename = message.split() [1]
f = open(filename[1:])
outputdata = f.read()

#Send one HTTP header line into socket
#Fill in start
connectionSocket.send(bytes('HTTP/1.1 200 OK', 'UTF-8'))
# connectionSocket.send(bytes(outputdata,'UTF-8'))

#Fill in end
#Send the content of the requested file to the client
for i in range(0, len(outputdata)):
connectionSocket.send(outputdata[i].encode())
connectionSocket.send("\r\n".encode())
connectionSocket.close()
```

From another host, open a browser and provide the corresponding URL.
http://10.251.37.23:1103/HelloWorld.html

Client gets the html file and Status code: 200 OK



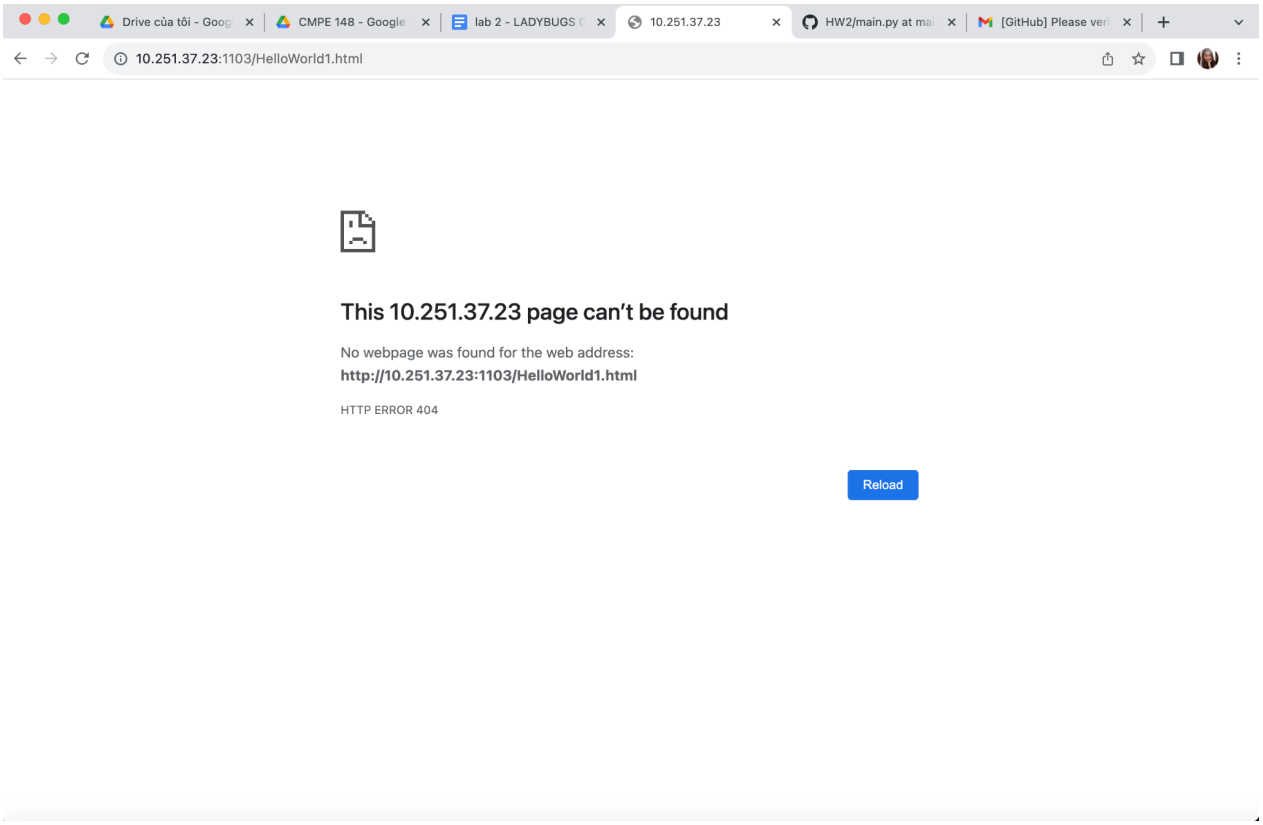
If we request the non-existing file, the server sends back 404 code. Status code: 404 Not found

http://10.251.37.23:1103/HelloWorld1.html

- Code

```
except IOError:

#Send response message for file not found

#Fill in start

connectionSocket.send(bytes('HTTP/1.1 404 Not Found', 'UTF-8'))

#Fill in end

#Close client socket

#Fill in start

connectionSocket.close()

#Fill in end
```

- Result:


Drive của tôi - Goog
CMPE 148 - Google
lab 2 - LADYBUGS
10.251.37.23
HW2/main.py at mai
[GitHub] Please ver
10.251.37.23:1103/HelloWorld1.html
This 10.251.37.23 page can't be found
No webpage was found for the web address:
http://10.251.37.23:1103/HelloWorld1.html
HTTP ERROR 404
Reload