

מטלה 3 תקשורת ומחשוב



מגשים

ספיר בוחבוט: 316416429

בר גולדנברג: 209894286

Code:

```
# import socket module
from socket import *
import sys # In order to terminate the program

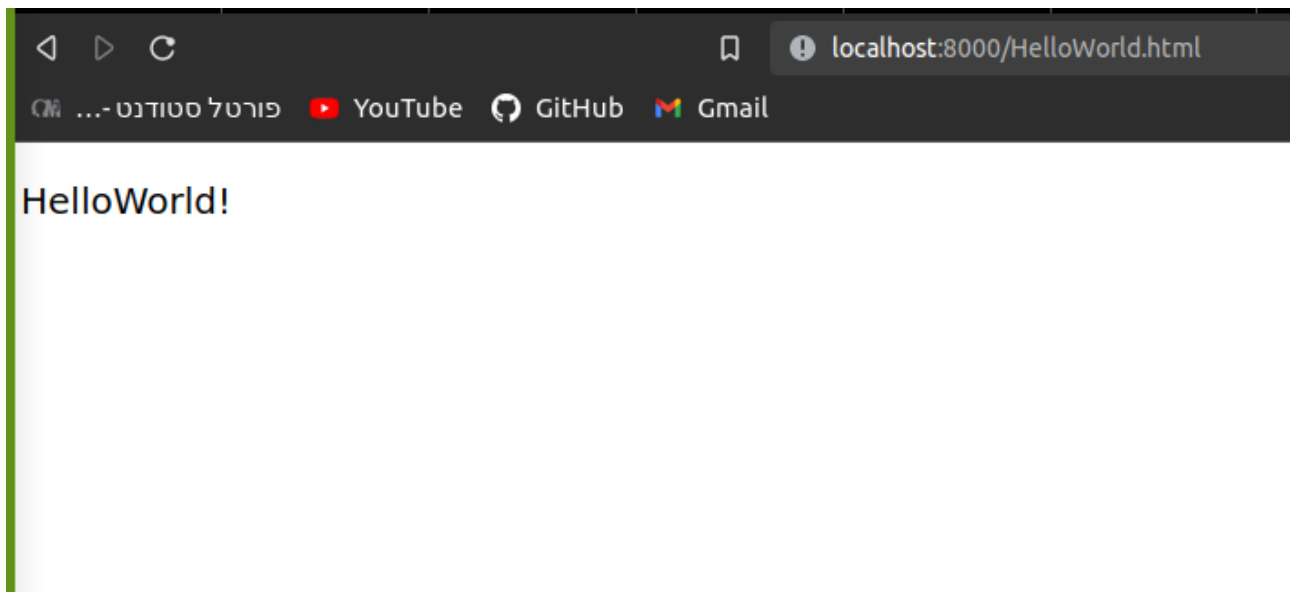
serverSocket = socket(AF_INET, SOCK_STREAM)
# Prepare a sever socket
# Fill in start
SERVER_ADRESS = ('0.0.0.0',8000) #Set ip as localhost and port 8000
serverSocket.bind(SERVER_ADRESS) #connect socket to port
serverSocket.listen(1) #Server can listen to one client at a time
# Fill in end
while True:
    # Establish the connection
    print('Ready to serve...')
    connectionSocket, addr = serverSocket.accept() # Fill in start
#Fill in end
    try:
        message = connectionSocket.recv(1024).decode() # Fill in start
#receive HTML request #Fill in end
        filename = message.split()[1]
        f = open(filename[1:])
        outputdata = f.read() # Fill in start #Fill in end # set HTML file
as outputdata
        # Send one HTTP header line into socket
        # Fill in start
        connectionSocket.send('HTTP/1.0 200 OK\n\n'.encode()) # send
OK response
        # 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()
    except IOError:
        # Send response message for file not found
        # Fill in start
        response = 'HTTP/1.0 404 NOT FOUND\n\nFile Not Found'
        connectionSocket.send(response.encode()) # send 404 File Not
Found error
        # Fill in end
        # Close client socket
        # Fill in start
```

```
        connectionSocket.close()
# Fill in end
serverSocket.close()
sys.exit() # Terminate the program after sending the corresponding
data
```

Comments are in code.

HelloWorld! Browser screenshot



GET request in wireshark:

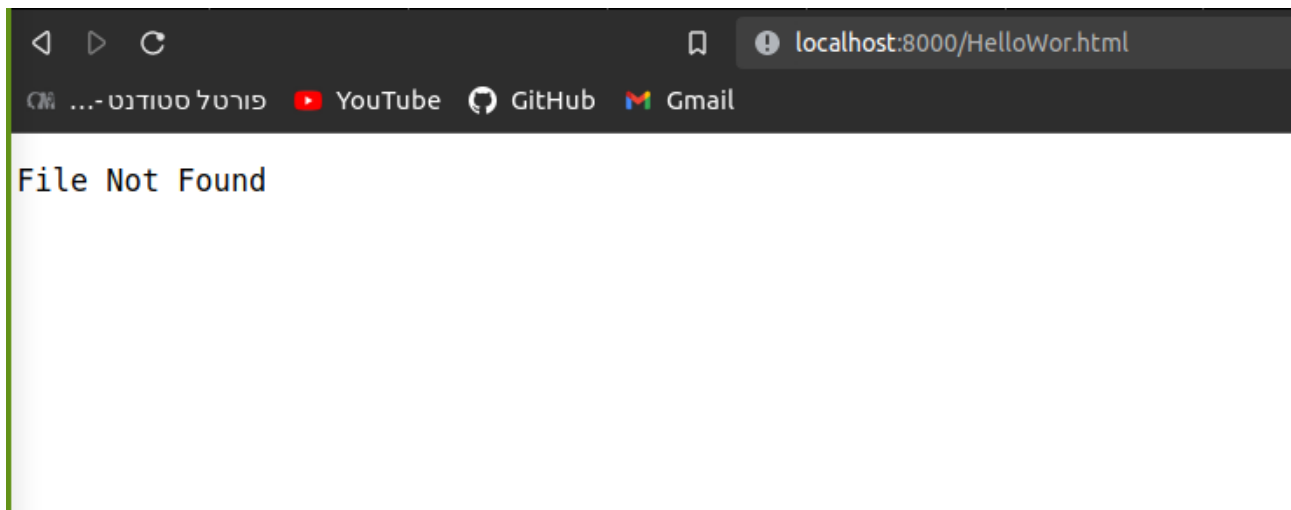
```
for payload (1000 bytes)
Hypertext Transfer Protocol
  GET /HelloWorld.html HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): GET /HelloWorld.html HTTP/1.1\r\n]
    Request Method: GET
    Request URI: /HelloWorld.html
    Request Version: HTTP/1.1
    ..
```

OK HTTP response

```
Hypertext Transfer Protocol
  HTTP/1.0 200 OK\r\n
    [Expert Info (Chat/Sequence): HTTP/1.0 200 OK\r\n]
    Response Version: HTTP/1.0
    Status Code: 200
    [Status Code Description: OK]
    Response Phrase: OK
    \n
```

Now we enter the wrong url to test the Error 404 file not found

Browser screenshot:



as you can see we changed "HelloWorld.html" to "HelloWor.html"

WireShark 404 HTTP response

