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**Socket Programming Assignment 3 – Web Server**

Browsers: Firefox and Google Chrome

**Graphical user interface

Description automatically generated**

**Graphical user interface, application

Description automatically generated**

**Source code for webserver.py**

# import socket module

from socket import \*

import sys

# Create a (TCP) server socket

serverSocket = socket(AF\_INET, SOCK\_STREAM)

# Prepare a server socket

PORT = 9841

serverSocket.bind(("", PORT))

serverSocket.listen(1)

while True:

# Establish the connection

print('Ready to serve...')

connectionSocket, addr = serverSocket.accept()

try:

# Receive the HTTP request message from the client

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

filename = message.split()[1] # Get the requested file

# Open the requested file

f = open(filename[1:])

# Read the contents of the file

outputdata = f.readlines()

# Send the HTTP response header to the client

connectionSocket.send("HTTP/1.1 200 OK\r\n".encode())

connectionSocket.send("Content-Type: text/html\r\n".encode())

connectionSocket.send("\r\n".encode())

# 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())

# Close the connection

connectionSocket.close()

except IOError:

# Send a 404 Not Found response message to the client

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

connectionSocket.send("Content-Type: text/html\r\n")

connectionSocket.send("\r\n")

connectionSocket.send("<html><head></head><body><h1>404 Not Found</h1></body></html>\r\n")

# Close the connection

connectionSocket.close()

# Close the server socket

serverSocket.close()

sys.exit() # Terminate the program after sending the corresponding data

**Source code for index.html**

<html>

<head>

<title>Test Web Page</title>

</head>

<body>

<h1>SOCKET PROGRAMMING 3-WEB SERVER</h1>

<p>This is a test web page for Socket Programming 3-Web Server</p>

<p>Author: Jeremy Vuong</p>

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<p>Date: April 23, 2023</p>

</body>

</html>