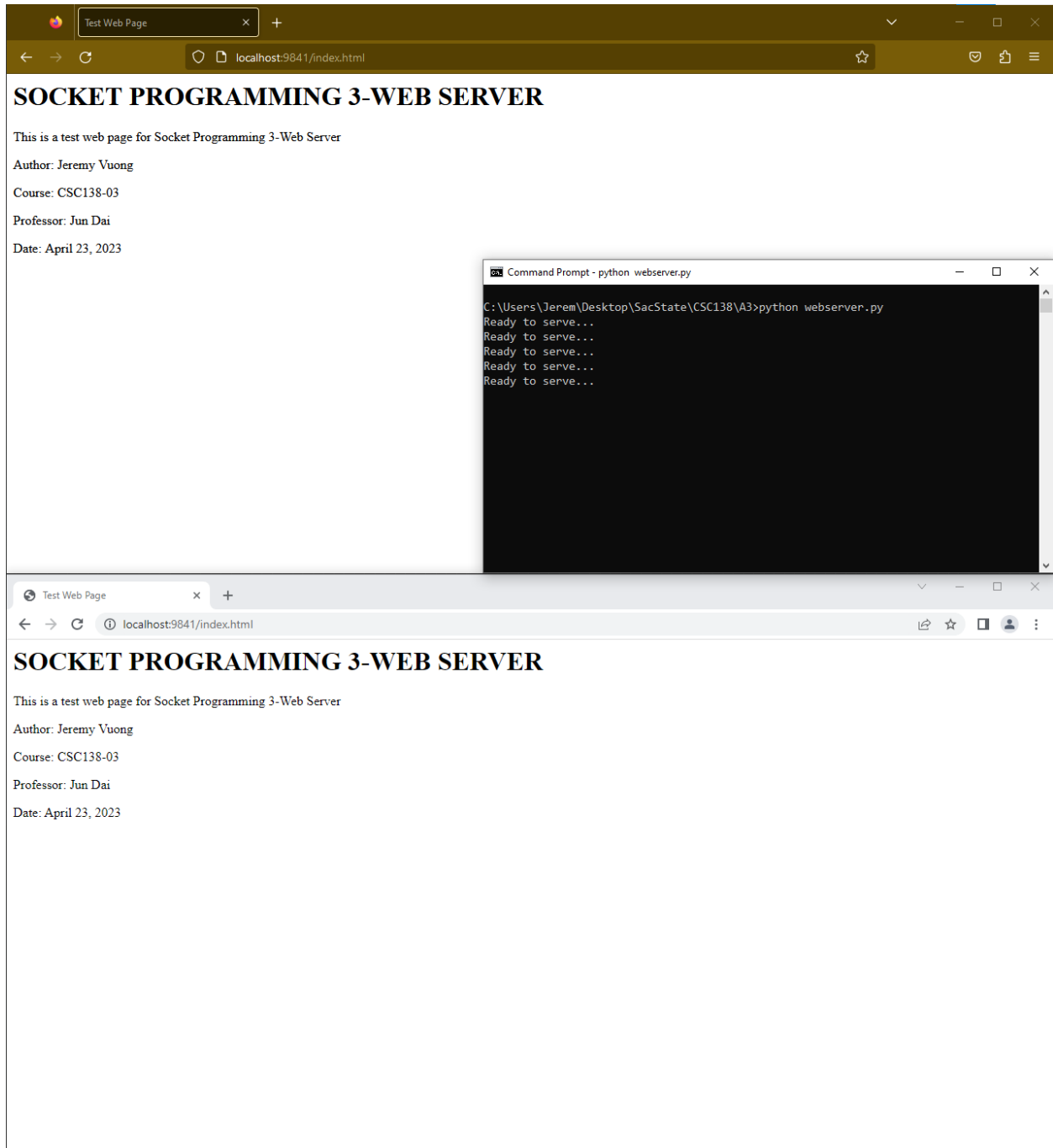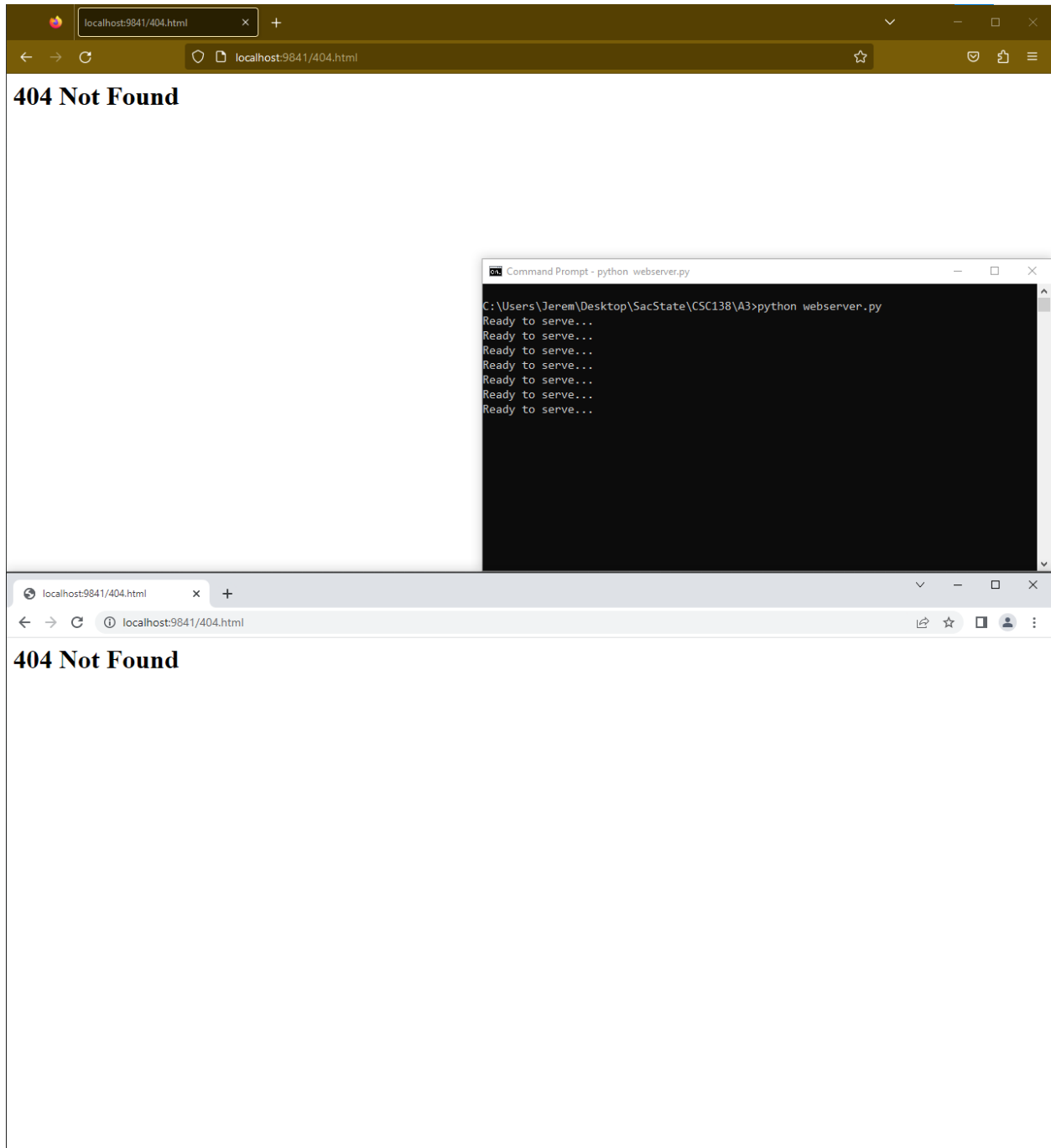**Author**:   Jeremy Vuong
Course: CSC 138-03
Professor: Jun Dai
Date: 04/23/2023

Socket Programming Assignment 3 – Web Server

Browsers: Firefox and Google Chrome

404 Not Found

Command Prompt - python webserver.py

```
C:\Users\Jerem\Desktop\SacState\CSC138\A3>python webserver.py
Ready to serve...
Ready to serve...
Ready to serve...
Ready to serve...
Ready to serve...
Ready to serve...
Ready to serve...
```

404 Not Found

Source code for webserver.py

```python
# 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())
```

```python
        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
<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>
        <p>Course:     CSC138-03</p>
        <p>Professor: Jun Dai</p>
        <p>Date:       April 23, 2023</p>

</body>
</html>
```