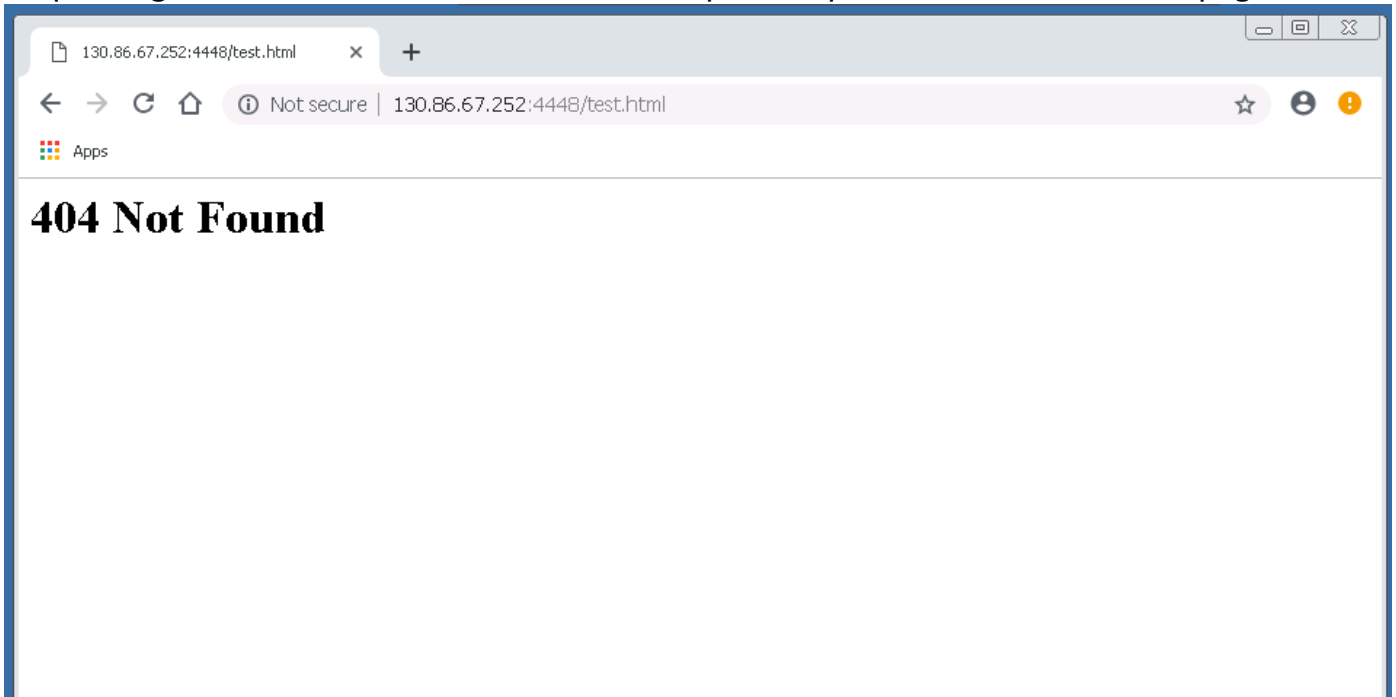# SOCKET PROGRAMMING 2 - RONGGUANG OU

Saturday, March 9, 2019   5:23 PM

Requesting a test.html which does not exists. Expect output is the 404 Not Found page.

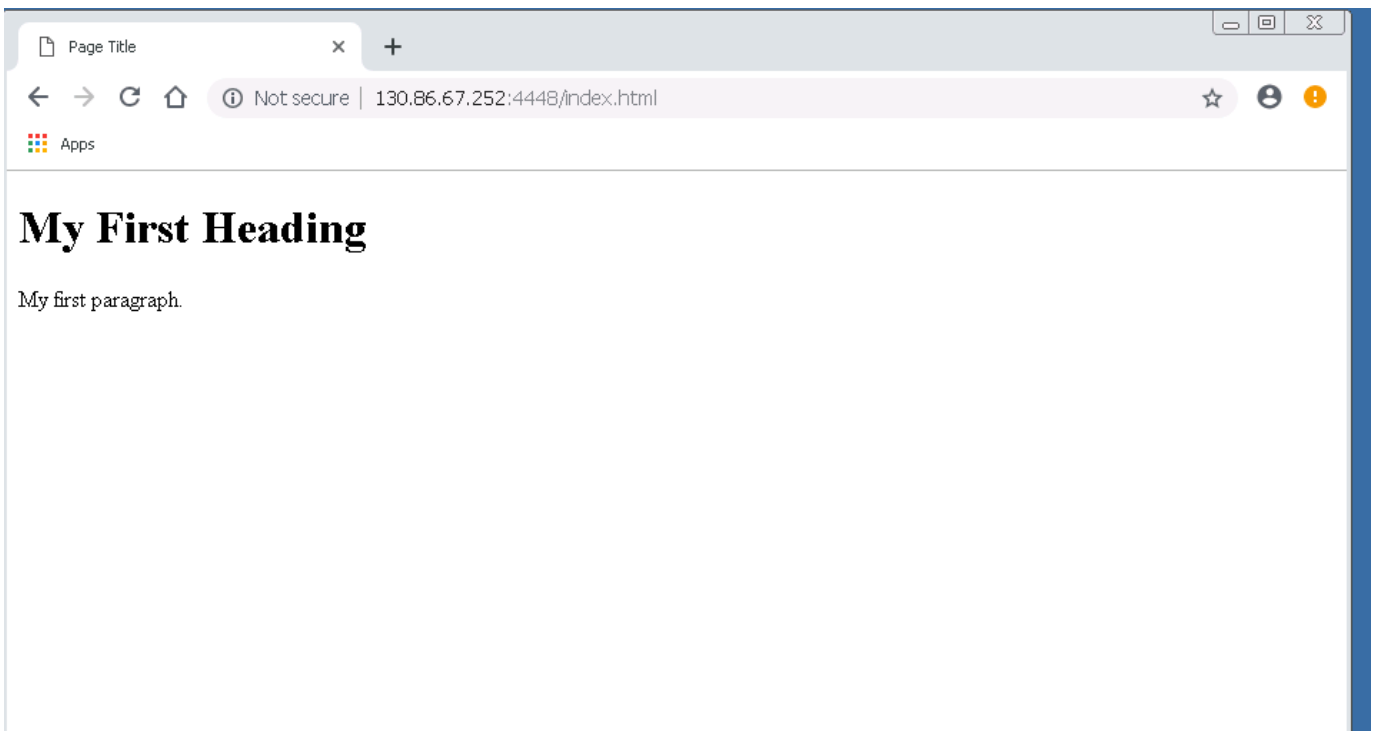Server program showing client's request is test.html.

Requesting the file index.html which does exist in current directory.

Server program shows client's request is index.html

```
[our@athena:28]> python server.py
('hostname is:', 'athena.ecs.csus.edu')
('host ip is:', '130.86.67.252')
('host port is', 4448)
Ready to serve...
Got request...
('Connected with: ', ('130.86.67.235', 53203))


GET /index.html HTTP/1.1
Host: 130.86.67.252:4448
Connection: keep-alive
Cache-Control: max-age=0
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Windows NT 6.1; Win64; x64) AppleWebKit/537.36 (KHTML, like Ge
cko) Chrome/72.0.3626.121 Safari/537.36
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*
;q=0.8
Accept-Encoding: gzip, deflate
Accept-Language: en-US,en;q=0.9



('File name is: ', '/index.html')


Connection with client has ended
Ready to serve...
```

Source code of server in python.

```python
from socket import *
import time


serverSocket = socket(AF_INET, SOCK_STREAM)
serverPort = 4448
serverSocket.bind(("", serverPort))
serverSocket.listen(1)

print ('hostname is:' , gethostname())
print ('host ip is:' , gethostbyname(gethostname()))
print ('host port is' , serverPort)


#always on server to listen for incoming requests
while True:
    print ('Ready to serve...')

    # Set up a new connection from the client
    connectionSocket, addr = serverSocket.accept()
    message =  connectionSocket.recv(1024)
    print ('Got request...')
    print ('Connected with: ',addr)
    print ('\n')
    print (message)
    print ("\n")

    try:
        filename = message.split()[1]
        print ("File name is: " , filename)
        print ('\n')
        f = open(filename[1:])
        outputdata = f.read()
        connectionSocket.send("HTTP/1.1 200 OK\r\n\r\n")

        for i in range(0, len(outputdata)):
            connectionSocket.send(outputdata[i])
        connectionSocket.send('\r\n')
        connectionSocket.close()
        print ('Connection with client has ended')
    except IOError:
        print ('IOError')
        connectionSocket.send('HTTP/1.1 404 Not Found\r\n\r\n')
        connectionSocket.send('<html><body><h1>404 Not Found</h1></body></html>\r\n')
        connectionSocket.close()
        print ('Connection with client has ended')

serverSocket.close()
```