

## COEN 317: Programming Assignment 1

### High Level Description

For this assignment, I created a very simple http server using C. The server supports the http 1.0 protocol. It is capable of supporting txt, html, js, gif, png, jpg, and css file types. It supports the https codes 200, 400, 403, and 404. The program runs on an infinite loop where the server accepts client connections from a user supplied port. For every connection it accepts, it creates a thread to handle the request. In the request thread, the server parses the http request, and logs it. It checks if the request is well formed and sends an error otherwise. It then checks if the file exists and if permissions are set properly and returns an error otherwise. Afterwards, it then transmit the file and closes the connection

### List of Submitted Files

document\_root:

a folder containing html, css, and jpg files. It contains the html files necessary to load the scu home webpage

httpServer.c

The c source code for this program

Makefile

Makefile for this project

### How to Run the Program

1. Run the command make in the terminal to create the executable "httpServer"
2. Type the command ./httpServer -document\_root document\_root -port "valid port number" (i.e: ./httpServer -document\_root document\_root -port 1025)

### Snapshots

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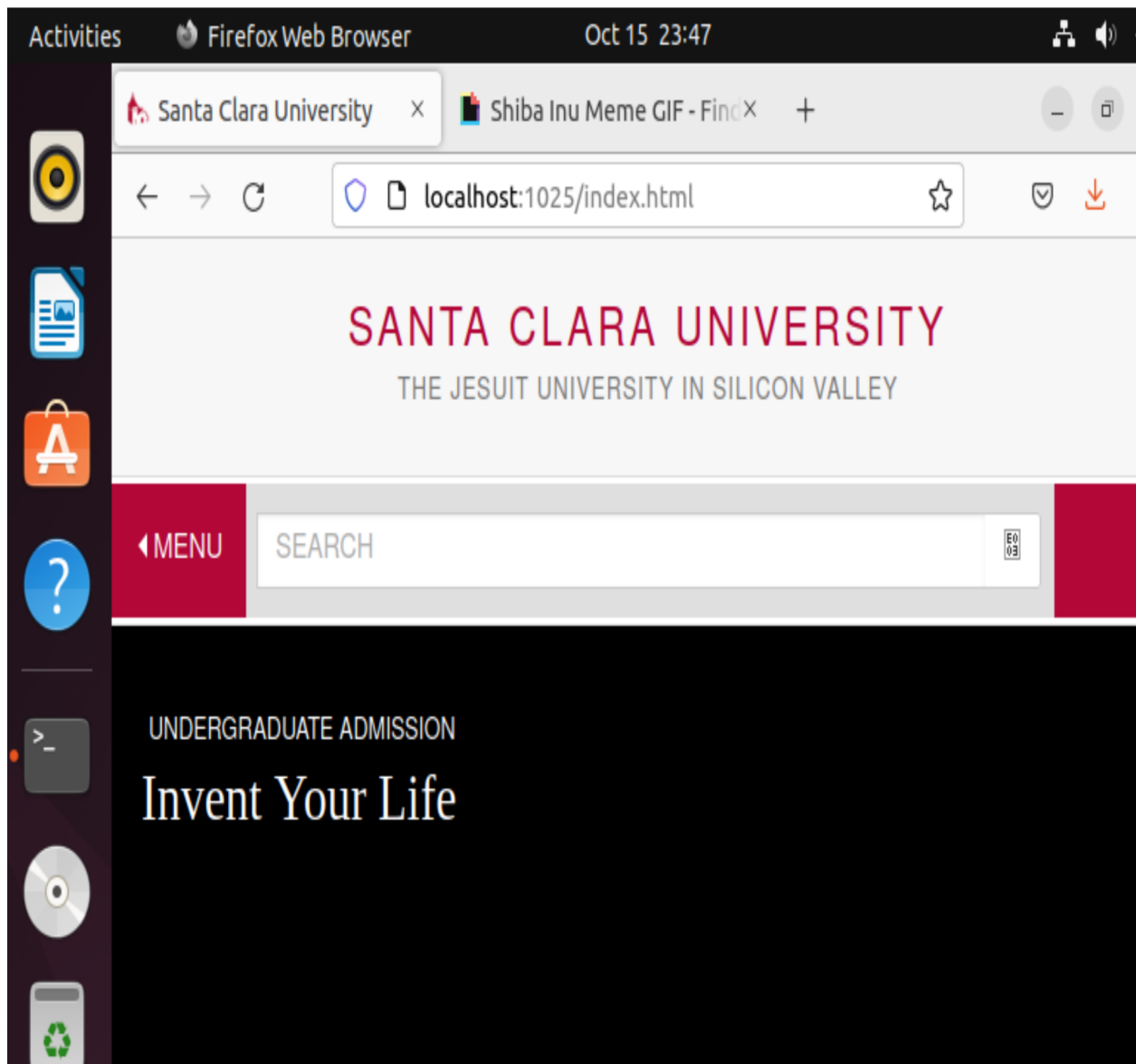
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UNDERGRADUATE ADMISSION

## Invent Your Life

## Experience

I learn what you love. Be who you want to be.

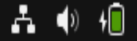


## Requests

Activities

Terminal

Oct 15 23:49



kylemondina@kylemondina-VirtualBox: ~/Desktop/rcookie...



```
kylemondina@kylemondina-VirtualBox:~/Desktop/rcookie/COEN317-ProgramingAssignment-1/phase12$ ./httpServer -document_root document_root -port 1025
server tcp socket successfully opened
server tcp socket sucessfully binded to port: 1025
server now listening to tcp socket 3
```



kylemondina@kylemondina-VirtualBox: ~/Desktop/rcookie...



```
Accept: application/font-woff2;q=1.0,application/font-woff;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
```



```
Referer: http://localhost:1025/scu_index_files/scu.2017.min.css
Cookie: _gcl_au=1.1.726505913.1665807144; _ga_KPFG4EBS18=GS1.1.1665900804.2.1.1665901154.0.0.0; _ga=GA1.1.1484711884.1665807145; _fbp=fb.0.1665807145050.1067980334; _gid=GA1.1.1014972803.1665900357; _gat_UA-246576-1=1
Sec-Fetch-Dest: font
Sec-Fetch-Mode: cors
Sec-Fetch-Site: same-origin
```



```
Server time: Sun, 16 Oct 2022 06:49:20 GMT
requested file is: document_root/assets/fonts/6618d500-1727-4334-878e-1c4b95192f42.ttf
unable to open file
: No such file or directory
```



```
Server Error, file requested resulted in: 404 Not Found
server succesfully opened requested file:45
Server accepted client 4
Server recieved client request
```



```
Client Request Header:
GET /assets/fonts/fontello/fontello.ttf?88632057 HTTP/1.1
Host: localhost:1025
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:103.0) Gecko/20100101 Firefox/103.0
```



```
Accept: application/font-woff2;q=1.0,application/font-woff;q=0.9,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Referer: http://localhost:1025/scu_index_files/scu.2017.min.css
Cookie: _gcl_au=1.1.726505913.1665807144; _ga_KPFG4EBS18=GS1.1.1665900804.2.1.1665901154.0.0.0; _ga=GA1.1.1484711884.1665807145; _fbp=fb.0.1665807145050.1067980334; _gid=GA1.1.1014972803.1665900357; _gat_UA-246576-1=1
Sec-Fetch-Dest: font
Sec-Fetch-Mode: cors
Sec-Fetch-Site: same-origin
```



```
Server time: Sun, 16 Oct 2022 06:49:20 GMT
requested file is: document_root/assets/fonts/fontello/fontello.ttf?88632057
unable to open file
: No such file or directory
```



```
Server Error, file requested resulted in: 404 Not Found
server succesfully opened requested file:45
Server accepted client 5
Server recieved client request
```



```
Client Request Header:
GET /assets/fonts/124dc47b-32a0-4543-a60e-d8aad32782b4.ttf HTTP/1.1
Host: localhost:1025
```



```
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:103.0) Gecko/20100101 Firefox/103.0
```