**CSE 3461**

**Lab1: Concurrent Web Server Using BSD Sockets**

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**Compiling code:**

1. Open a terminal and change to the directory where webserver c file is.

2. Type “gcc webserver.c –o webserver” in the command line.

3. Type “./webserver 3000” (you can choose a port number greater than 1024).

4. Open a web browser.

5. Type “127.0.0.1:3000/<filename>” to test the code.(It is more convenient to put the test files into the same directory where c file is).

6. CRTL + C to terminate the process after finishing all the tests.

**Description:**

This design of webserver can show the HTTP requests from the web browser and the HTTP responses from the C code in the terminal. The webserver accepts .html, .jpg, .jpeg and .gif file and can display the test files on the web browser. When the client (web browser) requests other types of file or the file requested is not existed, the webserver will show error “404 not found” or “404 file not found”.

**Result:**

The code worked perfectly in Mac operating system for all tasks. It could display all the test files including .html, .jpg, .jpeg and .gif file.

**Difficulties:**

Debugging the code was a nightmare. At the beginning, when I compiled the code first, it always got a segment fault. Then I realized the filename I got had a “/” before the name. So, I added a “.” before filename to work the same as the real filename. After fixing that, I wrote the code that could only display the text part from picture.html. It was because the image part still needed to send as a HTTP response. Another thing is to close the newsockfd in the while loop. This confused me a lot because even you don’t close, it still works on google chrome, but not safari.