

CMPT 371
Summer 2017
Lab 2 Exercise

Program the **Web Server** with the following characteristics:

i) create a connection socket when contacted by a client (browser), having in mind that up to 5 connections can be allowed to wait in a queue; (ii) receive the HTTP request from this connection; (iii) parse the request to determine the specific file being requested; (iv) get the requested file from the server's file system; (v) create an HTTP response message consisting of the requested file preceded by header lines; and (vi) send the response over the TCP connection to the requesting browser. Further, "tell" your server to close the TCP connection after sending the message. Make your server ready if the client (browser) uses a non-compatible version of HTTP, so your server should send the "505 HTTP Version Not Supported" error message to a client. Also, if a browser requests a file that is not present in your server, your server should return a "404 Not Found" error message.

Notes:

1. You can use Python, Java or C++ (or whatever programming language you prefer, and we can execute and test your code)
 - if you use Python, please clearly specify version as a comment at the top of your code
2. You do not need to explicitly program the **web client**, since you can use your web browser for that purpose when testing your **web server**.
3. For this programming problem, you do not need to hand in a hard copy. Instead, you upload your program (e.g., .py file type..., **NOT .pdf**) with extended comments into the CourSys.
4. You must explain your answers/code and show all of your work for full marks. No explanation=no marks.
5. You must do your own work. Copied assignments will get a mark of zero and be reported. Remember that you must work on the problems yourself. Group discussion is highly encouraged but copying is not. Ask the Teaching Assistant if you have difficulties or want some clarifications.
6. All cases of plagiarism are taken very seriously and will be reported to the Director of our School. If you find something interesting in the Internet, quote the detailed web site location and add your own comments, but NEVER just "cut and paste" the materials.

Good luck!