CA2: Programming Assignment

Instructions:

1. The homework is due on Friday, April 16, 2021 at the start of lecture.
2. You should submit your code electronically on LumiNUS in the folder CA2_submission. Use the guidelines under “Notes” below.

HTTP Server:

In this assignment, you need to implement two servers that serve requests for HTTP/1.1. The first server (S1) needs to use TCP as the transport protocol while the second server (S2) needs to use UDP instead. The servers need to satisfiy the following requirements:

1. Concurrency: Both the servers need to be concurrent, i.e., they should be able to serve multiple HTTP requests simultaneously.
2. For S1: The HTTP response should be a web-page having a form with one text input. After the text is entered, S1 needs to update the web-page by displaying the entered text.
3. For S2: The HTTP response needs to be a web-page displaying the text “EE-4210: Continuous assessment”.
4. Instead of using the standard port of HTTP, you need to use a non-standard port.
5. You are not allowed to use any API/libraries to construct the HTTP headers i.e. you are required to construct the HTTP headers as a string in your implementation.

Note:

1. You need to automate a way to create multiple HTTP clients to test and show that your servers are concurrent.
2. You can use C or Python to implement your servers and clients.
3. **Submission:** Your submission is expected to contain the following files zipped together. The zip file should be named as “MATRIC-ID NAME.zip”.
    a. One server file (source code).
    b. One readme file explaining how to run the program.