

# CSCI 5311/4311 - Computer Networks

## Programming Assignment #1

Due: Soft-copy, Monday, Oct 3<sup>rd</sup>, 2022, by 11:00 AM, via Moodle.

### Instructions:

- You are not to work in a group, therefore, work alone. The work must be your own except for the allowed text and code approved/provided by the instructors.

### Problem Statement:

- You will need to build up a file server and its corresponding client to test the server.
- The client will send a file name, and the server will search the file in the server's current directory.
- The file may or may not exist in the current director of the server.
  - If the file does not exist, the server will inform the client, and the client will print the message for the users, "The file <name-of-the-file> is not available."
  - If the file exists, then the server will send the full file {name, content, etc.} to the client, and the client will receive the full file and will save the file in the client's current directory. However, the file's name in the client directory will be <original\_name>+ "\_clt.<original extension>". For example, if the file name in the server is "mytest.txt," then in the client's directory, it will be saved as "mytest\_clt.txt."
    - Note that the user can run both the server and the client program from the same directory on the same computer; therefore, both client and server can share the same directory.
- Sample codes have been (discussed and) provided within this assignment folder (see Moodle).

### Submission:

- (a) In **Report\_PA1\_<YourID>.doc/x**, provide all different screen outputs generated by your program for all the problems given in the input.txt. It must also include a well-commented source code.
- (b) Provide the source code in the report (i.e., **Report\_PA1**). Submit source code and executable via Moodle. The executable must be easy to run. It must neither ask to install the programming package nor to compile to run your code. You can code in java (preferable) or C. However, there should be at most two code files.
- (c) Provide a **readme** file, which will describe how to run your code.
- (d) Compress everything in one folder except the report file and submit the compressed folder online as **PA1\_<YourID>.zip** and the report as **Report\_PA1\_<YourID>.doc/x**.

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