**CS 4850/7850 Computer Networks I Project Instructions**

**Compiling and Running Server and Client**

These programs were written in C++ using the IDE Visual Studio 2019. Both programs were developed using the provided C skeleton programs as a starting point, and so the instructions for compilation will be nearly identical to the instructions provided for those programs.

**Compilation and Running Instructions**

1. To compile these programs, a Windows PC with Microsoft Visual C++ will need to be used.

2. Download and unzip the files folder containing the programs you wish to compile.

3. Start with one of two folders: either *client* for the client, or *server* for the server.

4. Go to the folder. Open (double-click) the *sln* file (either *client.sln* or *server.sln*).

5. Use menu *Build->Build Solution* in Visual Studio to compile and build the program.

6. In case you don’t see any error in compiling go to step # 7. In case you see some errors in the window down below after the Build has finished: click on *Project* and then *Properties* and you will see a new window for Project Settings. Open the link *Configuration Properties -> Linker -> Input* and in the box for *Additional Dependencies* add WS2\_32.lib and then repeat step # 5.

7. Repeat steps 4-6 with the other program as well.

8. After successfully finishing the Build, you will be able to see a folder called

*Debug* inside both *client* and *server* folders which contain the executable codes. Note: in the *server* folder, ensure that the file *users.txt* is in the parent folder of the *Debug* folder.

9. Go to Start menu and click on Run then type ***cmd*** and hit ok. Repeat this one more time and then you will have two shells running.

10. In the shell for executing the server, navigate to the *Debug* folder in the server folder. For example: *cd <disk>:\<parentfolder>\server\server\debug* would take you to the server folder after substituting the locations on your PC. You should find *server.exe*.

11. Type the command ./*server* and hit enter. You will be able to see "My chat room server. Version One.” This means the server has started and is waiting for a client to connect.

12. In another shell for executing the client, navigate to the *Debug* folder in the client folder. For example: *cd <disk>:\<parentfolder>\client\client\debug* would take you to the client folder after substituting the locations on your PC. You should find *client.exe*.

13. Type the command ./*client 127.0.0.1* (the local loopback IP address). You should be able to see the message “My chat room client. Version One.” This means the client and server are connected and that the client is ready to receive commands.

14 .When you are done, use the logout command to exit the client, then go to the window with the server running and use **ctrl C** to exit from the server.

Note: The file users.txt should be in the correct folder after following these directions. However, if an error is received indicating that the file is in the wrong folder, move users.txt to the parent folder of the folder containing server.exe.

**Demonstration Screenshot**

