

Derek Huang
20022672
April 9, 2021

CISC 335 Programming Assignment 2 – Report

a. Brief description of the code steps, operation, and considerations (if there are any considerations).

This piece of code is written in Java. There are 3 classes in total in my submission. They are respectively Server, Client, and ClientHandler.

Server is responsible for taking charge of the server side. The server keeps track of whatever clients that are coming in. The server keeps track of this using a map that stores the information of each client that comes in, as well as its port number.

Client is responsible for taking charge of the client side. As a client starts, the port number is assigned automatically to the client. The client has three operations that he is able to perform. The three operations or commands that the client can do are: reach, chat, and exit. The detailed explanation of usage will be printed out in the console. One client can connect with another client, and there's a timer that counts a specific time. The recipient client can either accept or reject that connection.

ClientHandler is responsible for taking charge of how a client is handling specific operations. It inherits from the Runnable class. We have an override method run() here. It handles the detailed operations such as what the client is doing or responding. For example, it handles inactive clients situations, or it handles requests of other clients' connections.

b. Difficulties you faced and how you handled them (if any)

One of the difficulties that I faced was figuring out how one client can chat with another client. I first couldn't figure out a way to do so, but I later found that it might be a good idea to use a way such that we send packets for the chatting feature. This takes up an abundance of my time because I needed to consider the sequence number in the chat message, as well as the target port number. Finally, I achieved the difficulties anyways, thankfully.

c. Possible improvements: If you had more time, what would you add or do differently?

If I had more time, I would actually try to handle more clients to see if our server's capacity can accommodate how many clients at most. From this end, I can see the throughput and availability of the server. This can help me evaluate or assess the performance of the software system overall.