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CSE 160

Design

The basic overview of this project is that one person wants to send a message to another person. So both people would log into to the chat room by saying hello, in this case. So person one would send person two a message but what happen is that the message would be sent to the server. Then the server will look in it queue for the user the message is meant for and send it to using that respective socket. That’s why the server keeps a queue of all the users. That’s why the list of users is shown in the server queue.

So for the connection establishment we use the part from project 3 that we used to establish a connection, setTestClient and setTestServer. The setup is in a way that the client will try a connection with the server using hello and then that connection will be bind to a socket reserve from a socket pool and will be called from there. The connection will be saved in a queue one on the server side and one on the client side.

There are two timer functions that do most of the checking and responses, one for the server side and one for the client side, client periodic timer and server periodic timer. So when the client tries a connection, it fires a periodic timer on the client side and when the server receives the connection request it fire a periodic timer from the sever side as well. The client connection being in use between the server and the client will be per a user but the server queue has the connections for everyone to be connected from the server and client queue.

The serverApp checks the payload for the command whether it be hello message or list. It will only check the first letter because it will know they won't change because based on the check it may alter the message and send it to the client periodic timer. Where the payload will be set and the write off will be checked. The clientApp checks and stores the username given so that it can bind to the correct socket address. The count also checks for the length of the username.