Programming Assignment 4

In this programming assignment, you will implement a simple chat program using Javanetworking libraries and JavaFx. This assignment will review the principles of object-orientedprogramming, JavaFx, and networking in Java.

Classes

ChatServer

This class will be an implementation of a server that serves all the clients. This does not need to be a JavaFx program, but you can make it one if you choose to.

The server should log the following to the terminal or JavaFx window:

●Server Start Date and Time

●Connection of each client (e.g. Connection from IP address {ipadress} at {date andtime})

ChatClient

This class will connect to the server and facilitate one client. They should receive all other messages from the server and be able to send their messages. This MUST be a JavaFx program.

The client should

●Capture the usernames

●Send messages to the server

●Receive messages from the server

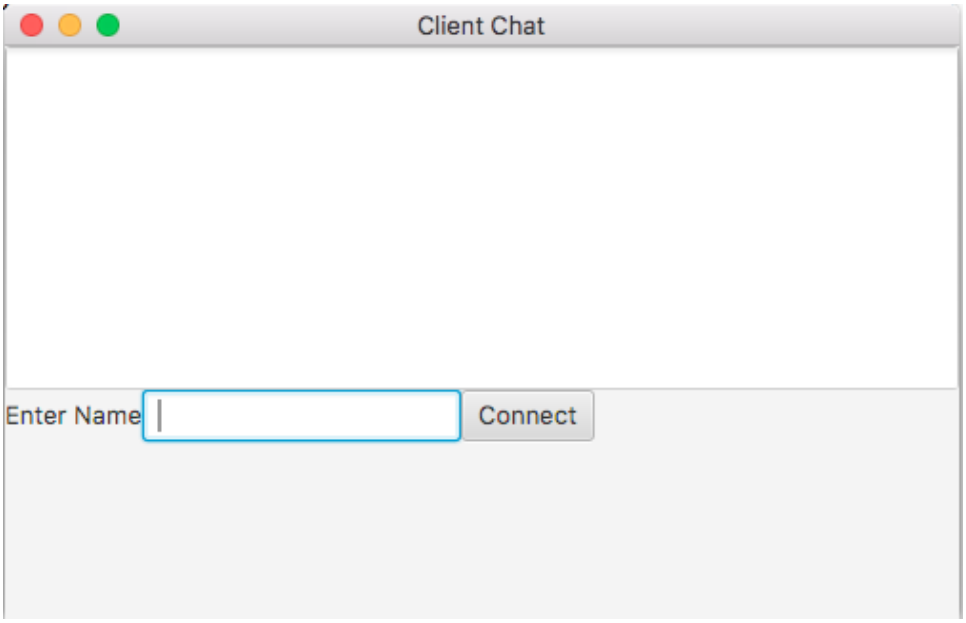
Samples:

Firstly, execute ChatServer.

```
(base) ➜ javachat java ChatServer
server starts port = 4444
Sun Nov 08 17:53:12 EST 2020
```

Execute ChatClient.

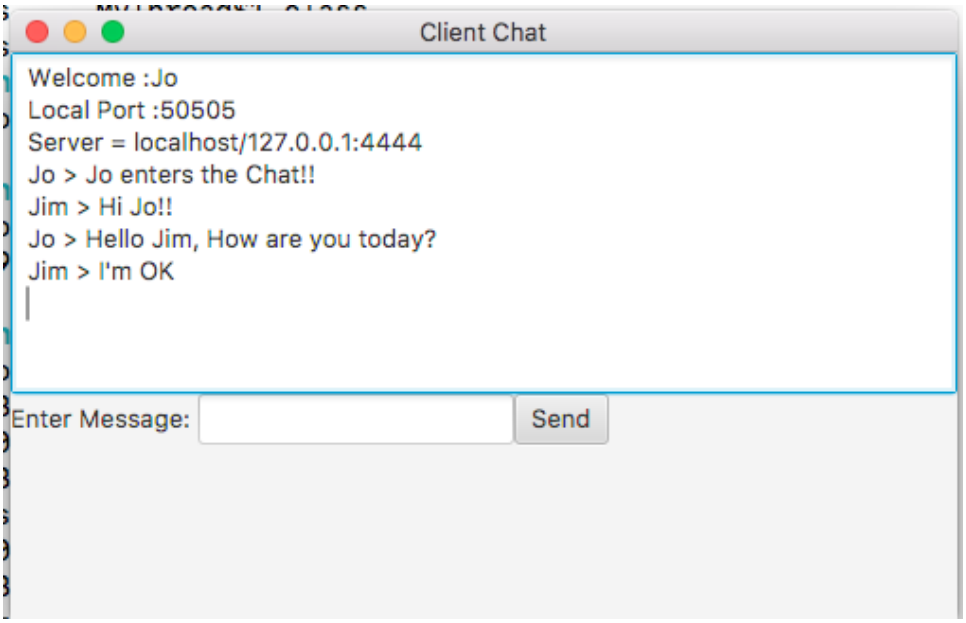
The username will entry user name, and click connect.



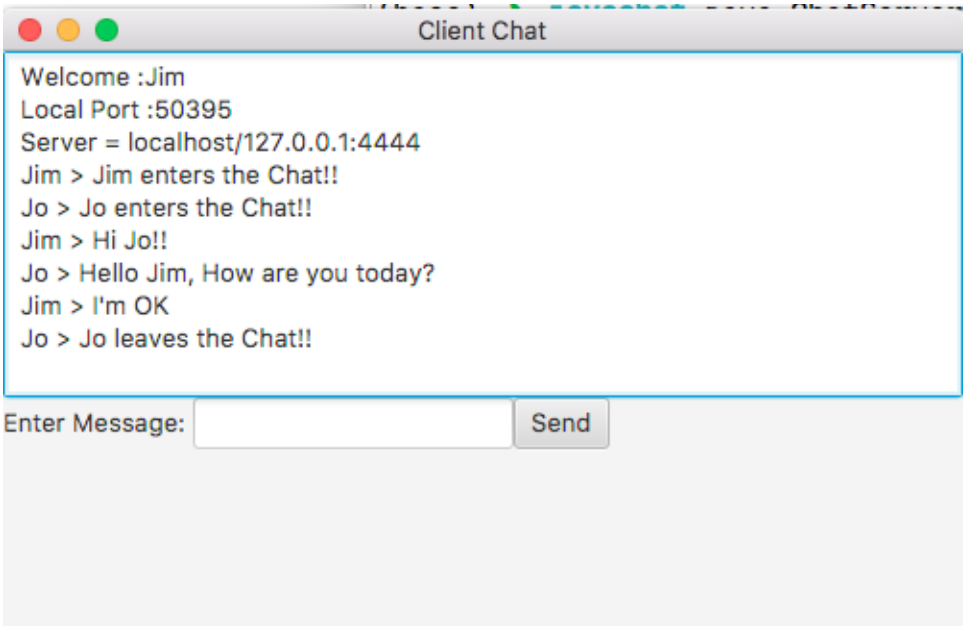
The server should show the users who enter the chat room.

```
accepts : /127.0.0.1:50395
Sun Nov 08 17:53:12 EST 2020
Jim > Jim enters the Chat!!
accepts : /127.0.0.1:50505
Sun Nov 08 17:53:12 EST 2020
Jo > Jo enters the Chat!!
```

Each client will send messages to sever and receive messages from server.



When the client leaves the chat room, the server should disconnect and show message to all clients.



You can design it anyway you want as to look as you capture the users name, and they can send a message and see who sent a message. Feel free to prettify the interfaces.

Submission

After completing this programming assignment, zip up all the classes and java in the name of the zip file MUST be COP3809_PROGRAM5_SYY_XXXX.zip, where YY is 01, 02, or 03 and XXXX is student id.

Note: If you use IntelliJ IDEA, the structure of folder and package will be changed.