

**Name: Rachana Naganagouda Patil**

**Student Id: 1001644227**

# **CSE 5306**

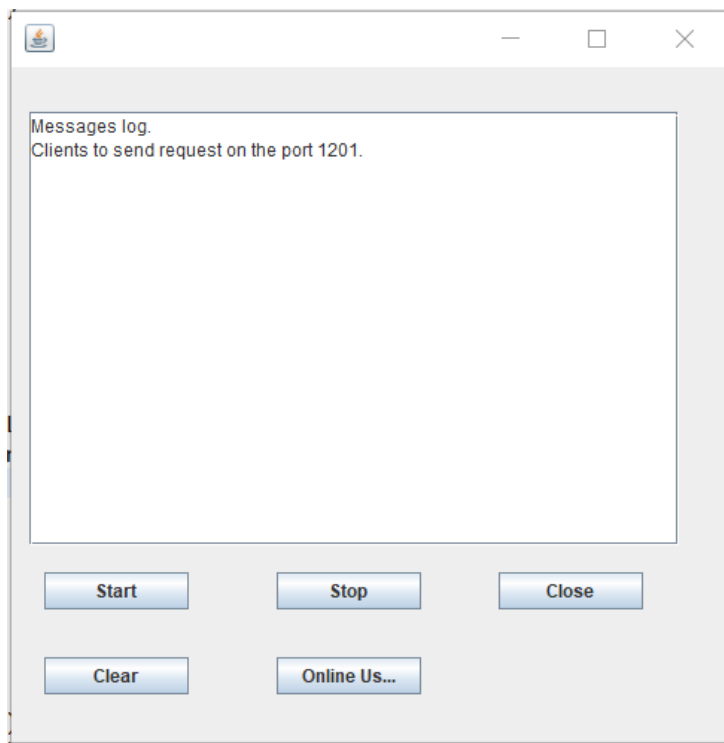
## **Distributed Systems**

### **Lab 1-Message Server**

Instructions:

To run a Server:

1. Run the MS\_ServerGUI.java file
2. The Window will pop up and at the 'Start' button, the server will start running on 1201 port number in localhost.



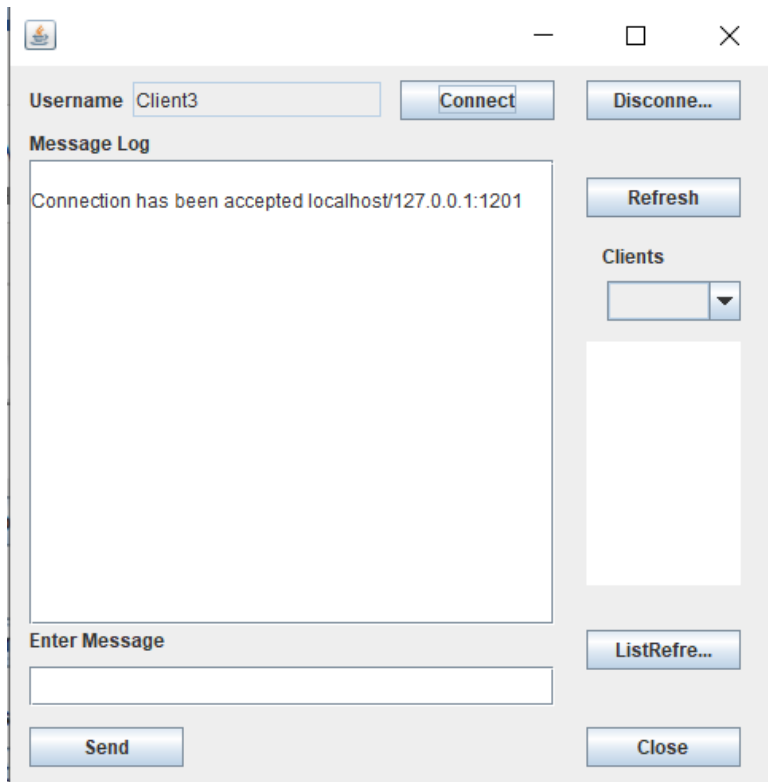
To run the Client:

1. Run the MS\_ClientGUI.java file.
2. Enter the username for example Client1 and click 'Send' to connect it to the server.
3. Similarly do it for two other clients.
4. Click 'Refresh' button to get active online users to the each client window.

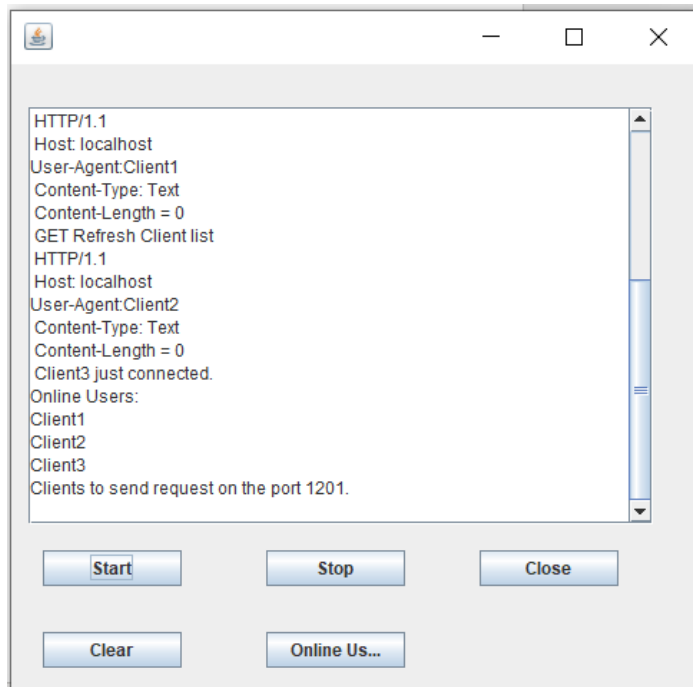
A screenshot of a client application window. The window has a title bar with a minimize button, a maximize button, and a close button. The main area contains a 'Username' field with the text 'Client1', a 'Connect' button, and a 'Disconne...' button. Below the username field is a 'Message Log' section with a text area containing the message 'Connection has been accepted localhost/127.0.0.1:1201'. To the right of the message log is a 'Refresh' button. Below the message log is an 'Enter Message' text field and a 'Send' button. To the right of the 'Enter Message' field is a 'ListRefre...' button. At the bottom right is a 'Close' button. On the right side of the window, there is a 'Clients' label, a dropdown menu showing 'Client1', and a list area.

Similarly Client2 and Client3

A screenshot of a client application window, similar to the one above but for 'Client2'. The 'Username' field contains 'Client2'. The 'Message Log' section contains the same message: 'Connection has been accepted localhost/127.0.0.1:1201'. The 'Clients' dropdown menu on the right now shows 'Client1' instead of 'Client2'. The 'ListRefre...' button is visible below the dropdown menu. The 'Send' and 'Close' buttons are at the bottom.



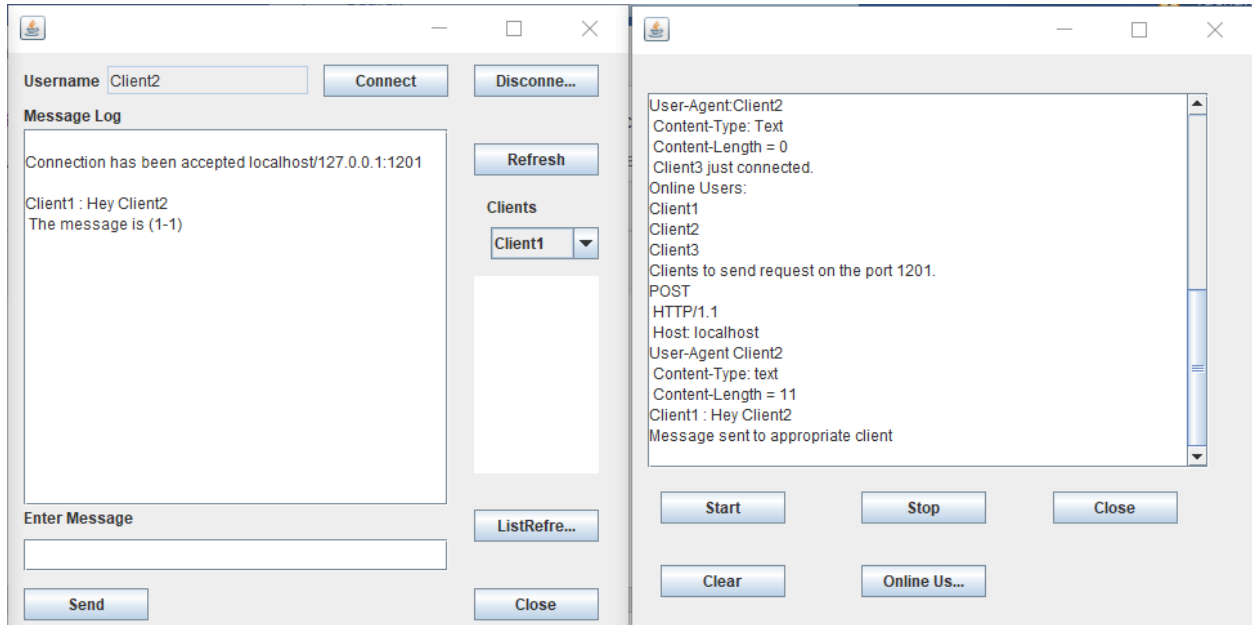
Server Window:



To send message:

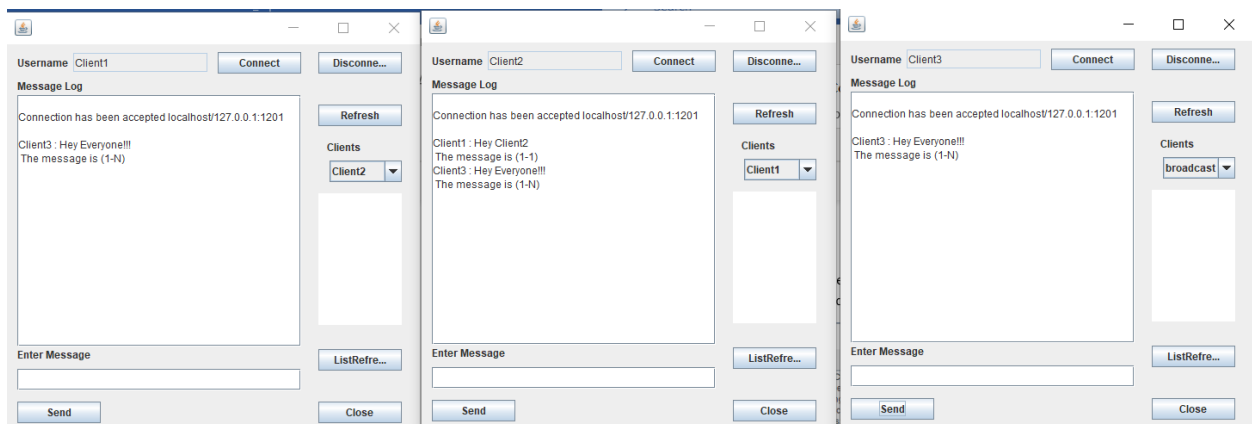
1. Send Message to Specific Username(1-1):

- On refreshing we will get active client list. Select the client to which message should be send. For example, client1 sends message to client2.

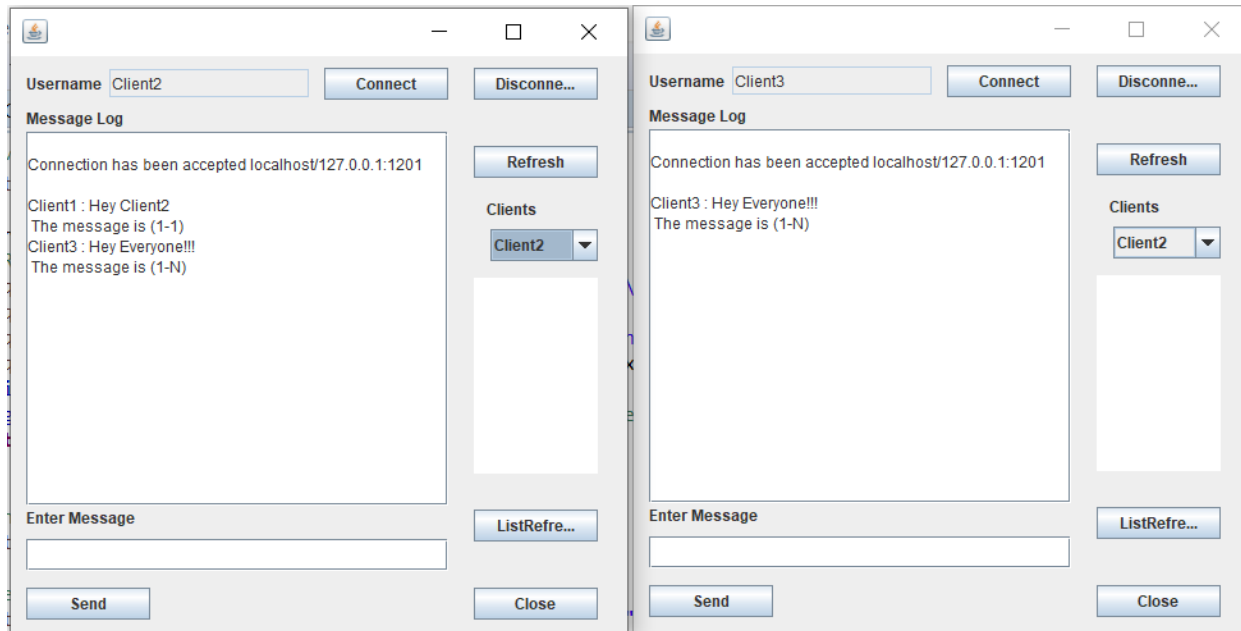


2. Send Message to all usernames(1-N):

- On refreshing, we will get active client list. Select the 'broadcast' item from dropdown box to send messages to all users. For example, client3 sends broadcast message to all active clients.



To disconnect from the session click on 'Disconnect' button and on refreshing the other active clients, deactivated clients wont be present. For example, Client1 is disconnected.



Other Buttons on the Server Window:

Stop: Server will be stopped.

Clear: The messages on server text area is cleared to make space for incoming messages.

Online Users: The list of clients which were connected to the server.

References:

- <https://www.dreamincode.net/forums/topic/259777-a-simple-chat-program-with-clientserver-gui-optional/>
- <https://stackoverflow.com/questions/2307291/getting-raw-http-response-headers>
- <https://www.jmarshall.com/easy/http/#othermethods>
- <https://stackoverflow.com/questions/4747020/how-to-update-jcombobox-content-from-arraylist>
- <https://www.geeksforgeeks.org/multi-threaded-chat-application-set-1/>
- <https://www.geeksforgeeks.org/multi-threaded-chat-application-set-2/>
- <https://www.w3.org/Protocols/>