

Final Project Proposal - Fall 2021

Introduction to Java NYU CS9053

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My team wants to design a social network server platform where multiple clients can communicate with each other through this platform.

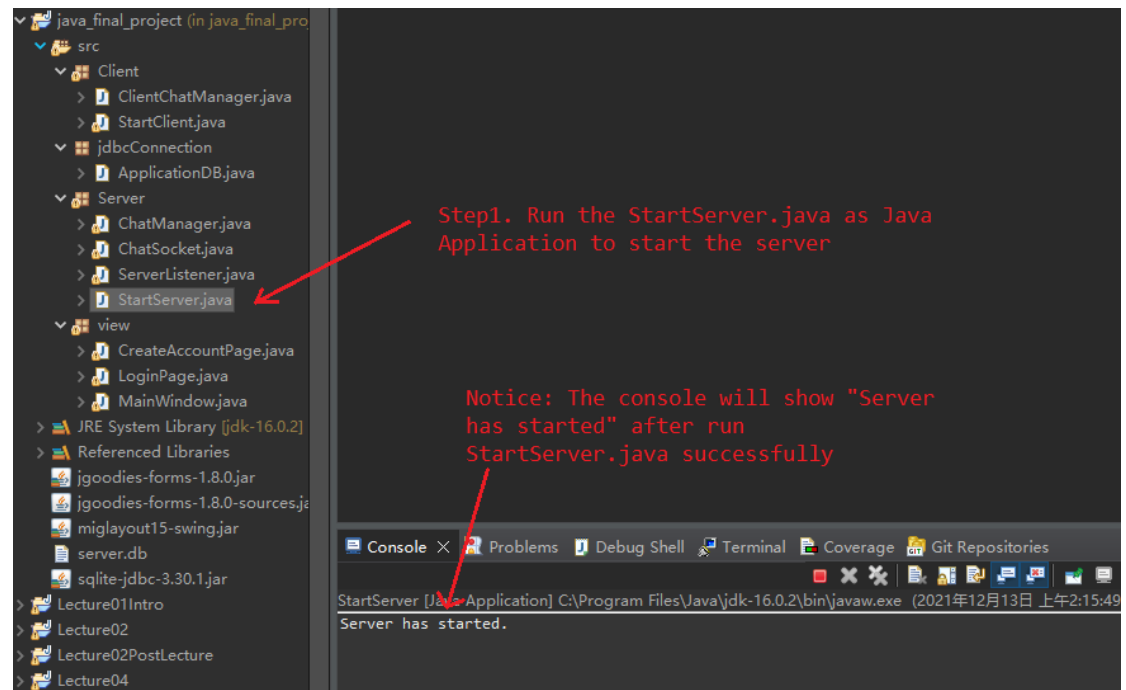
Advanced techniques: GUI, Multithread, Networking, Database(JDBC-SQLite)

Main functions:

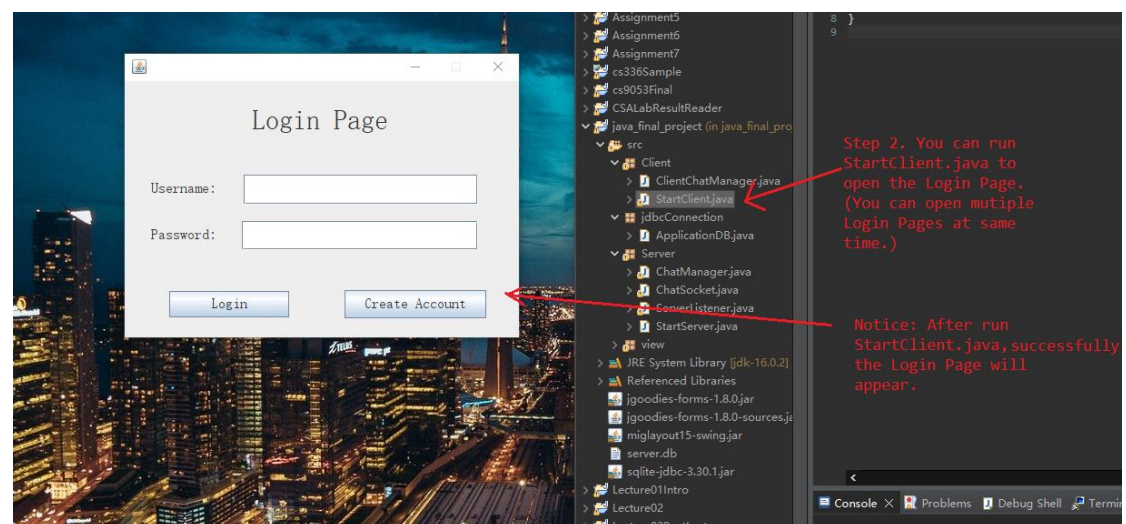
1. User
 - a) Login to chatroom
 - i. Support username and password check
 - b) Create a new account
 - i. Support duplicate username check
 - ii. Support no empty input of username and password check
 - c) Support multiple independent users to login
 - d) Logout
2. Chat
 - a) Online user can communicate with other online users or public channel. (by socket)
3. View Chat history
 - a) clients can view historical communications between themselves and any other client.
4. Database
 - a) Record the username and password of users.
 - b) Create a new Table for recording the history message of each user when a new account is created
 - c) Record all communications of all clients.
 - d) Insert the username and password of new users.
5. GUI
 - a) A user-friendly and practical GUI interface for Login, Create the Account, View History and Chat.
 - b) Pop the windows when the illegal action of users and success of creating account
6. Multithread
 - a) When user login successfully, the client will start a new thread for chatting and connecting to server.
 - b) When server notices the connection of client's thread, it will start a new thread for transmitting the message between clients.

Use Instruction

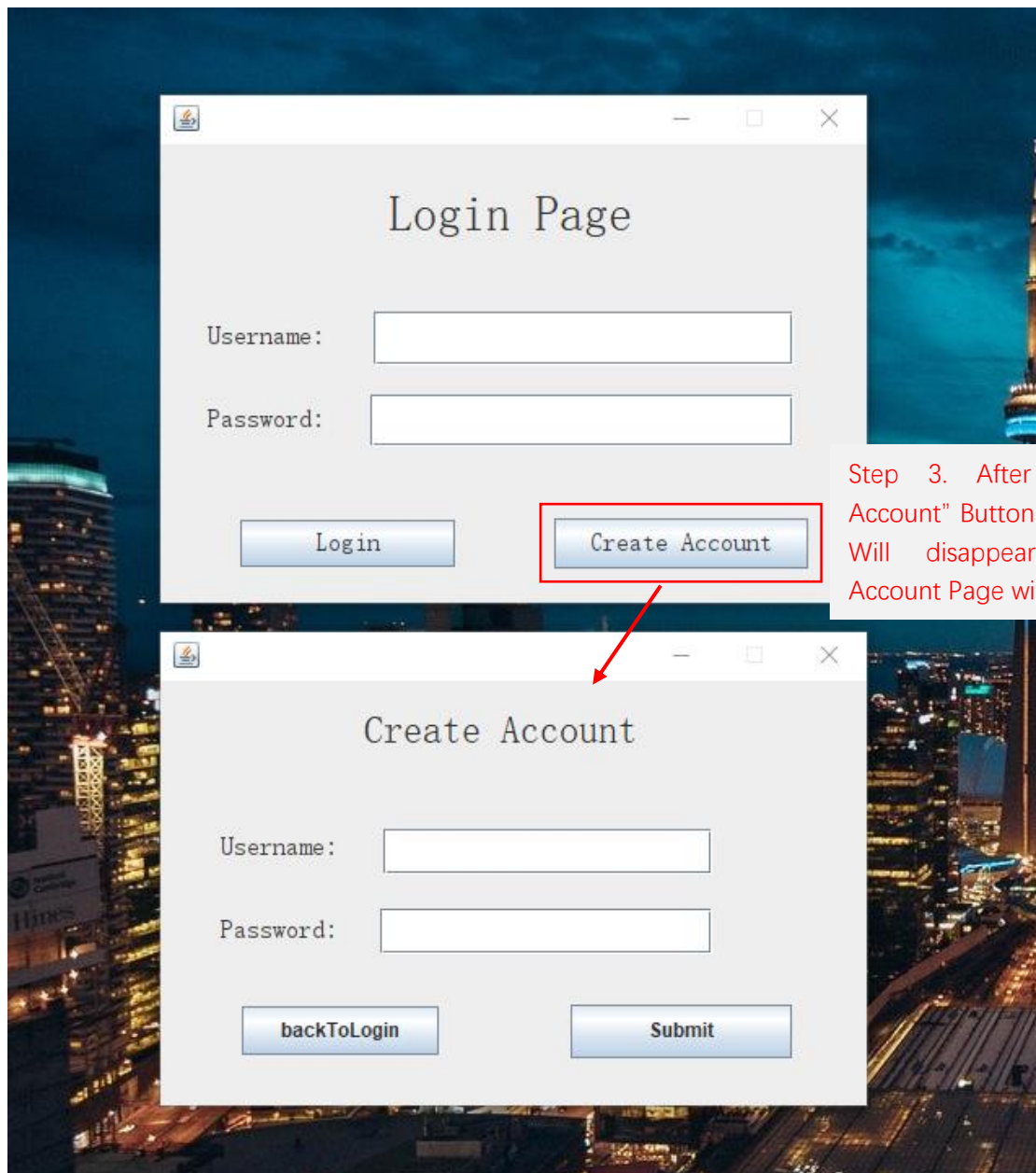
Step 1. Start Server



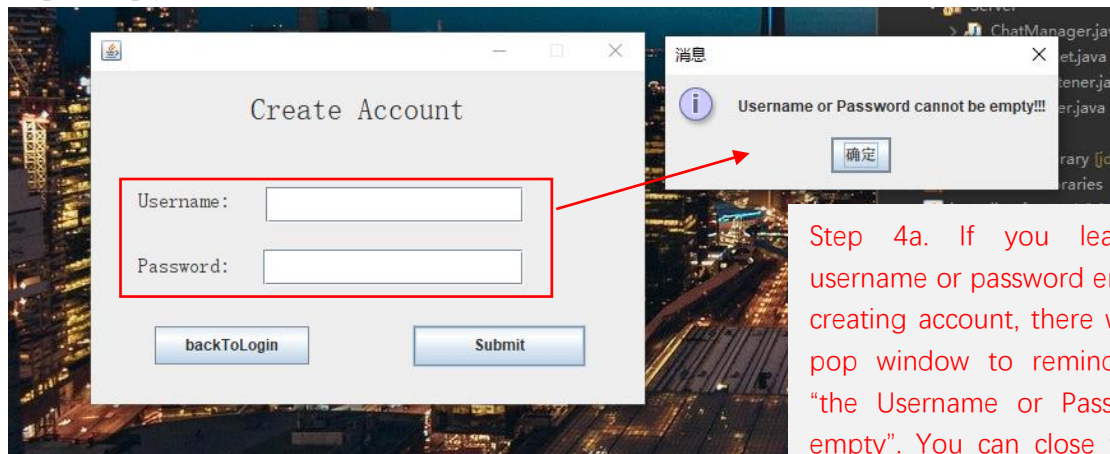
Step 2. Start Login Page



Step 3. Create Page



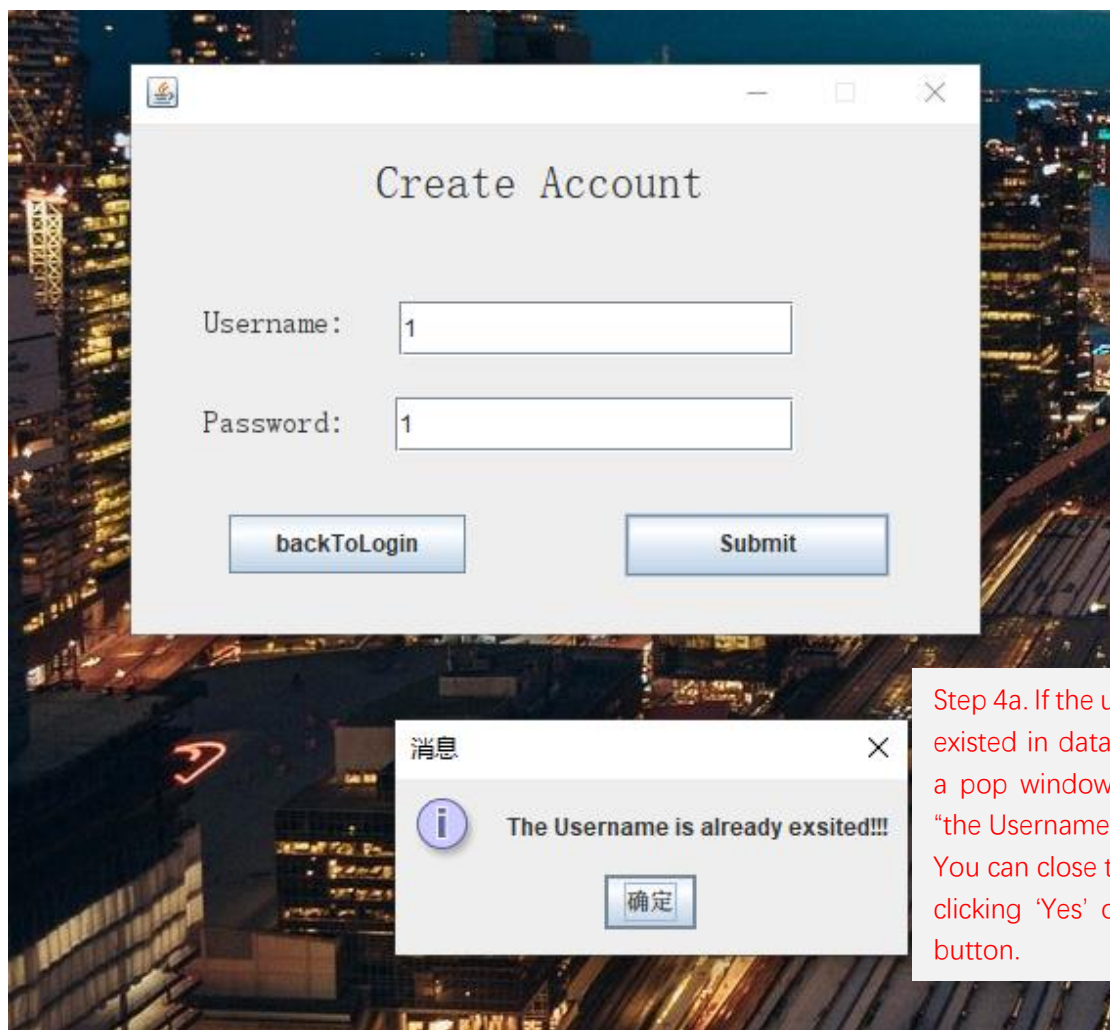
Step 4. Empty Username or Password



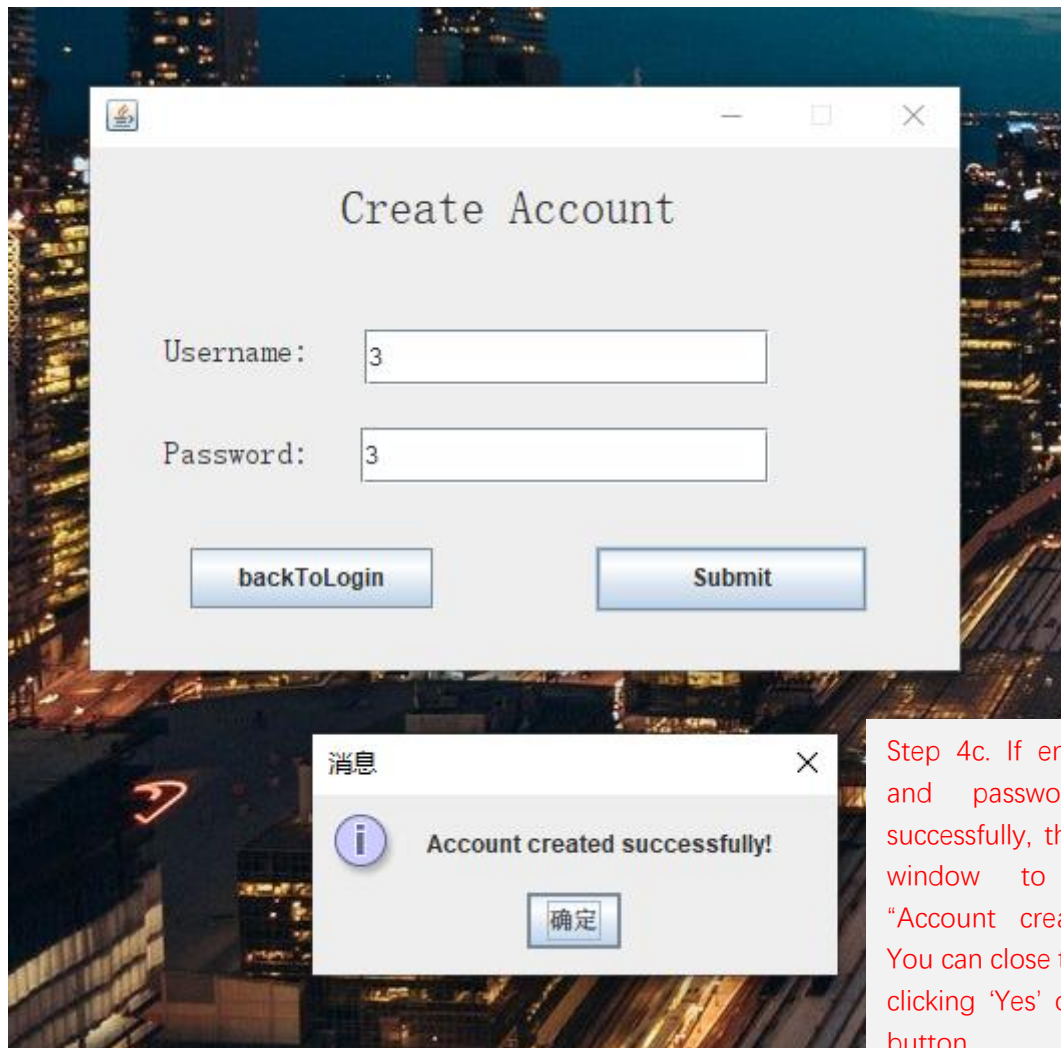
Step 4a. If you leave the username or password empty for creating account, there will be a pop window to remind you, "the Username or Password is empty". You can close the pop window by clicking 'Yes' or "X" of right top button.

P.S you have to press "submit" to create an account.

Step 4b. username is already used. (in Database)

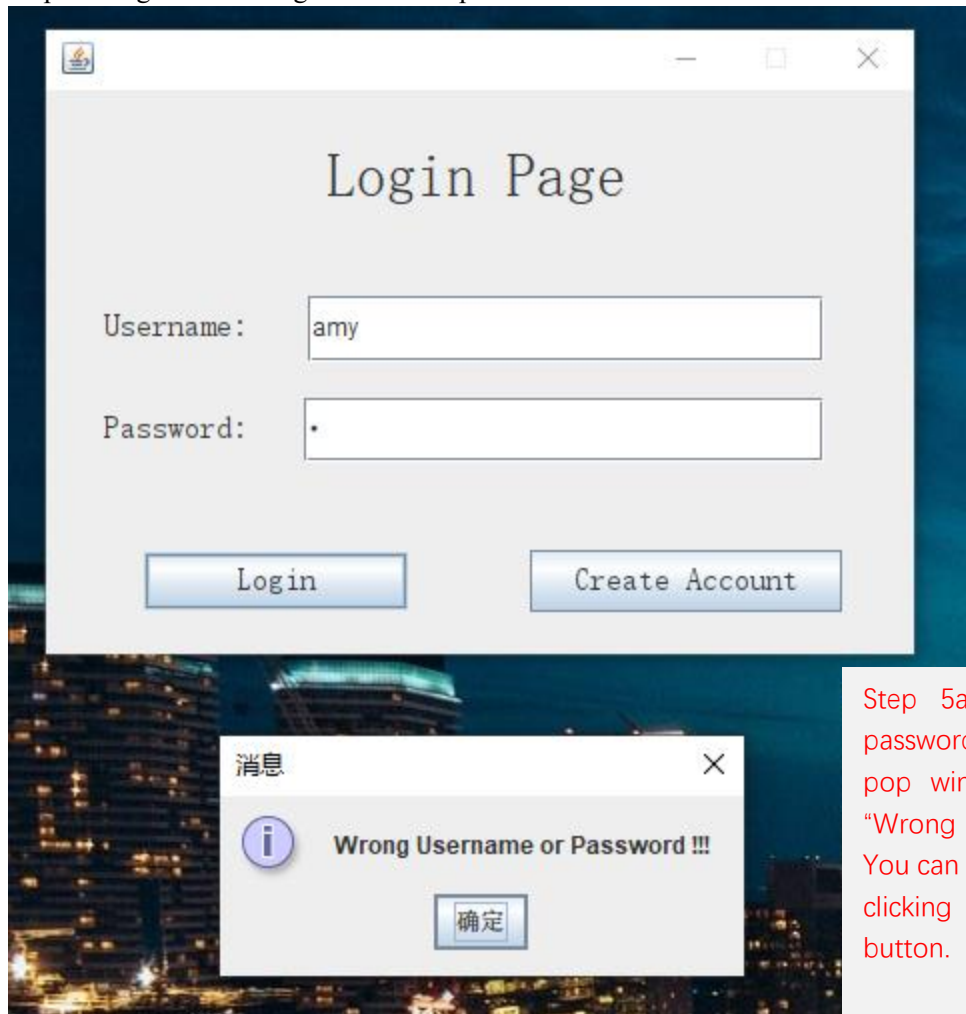


Step 4a. If the username is already existed in database, there will be a pop window to remind you, "the Username is already existed". You can close the pop window by clicking 'Yes' or "X" of right top button.



Step 4c. If enter the username and password legally and successfully, there will be a pop window to reminder you, "Account created successfully." You can close the pop window by clicking 'Yes' or "X" of right top button.

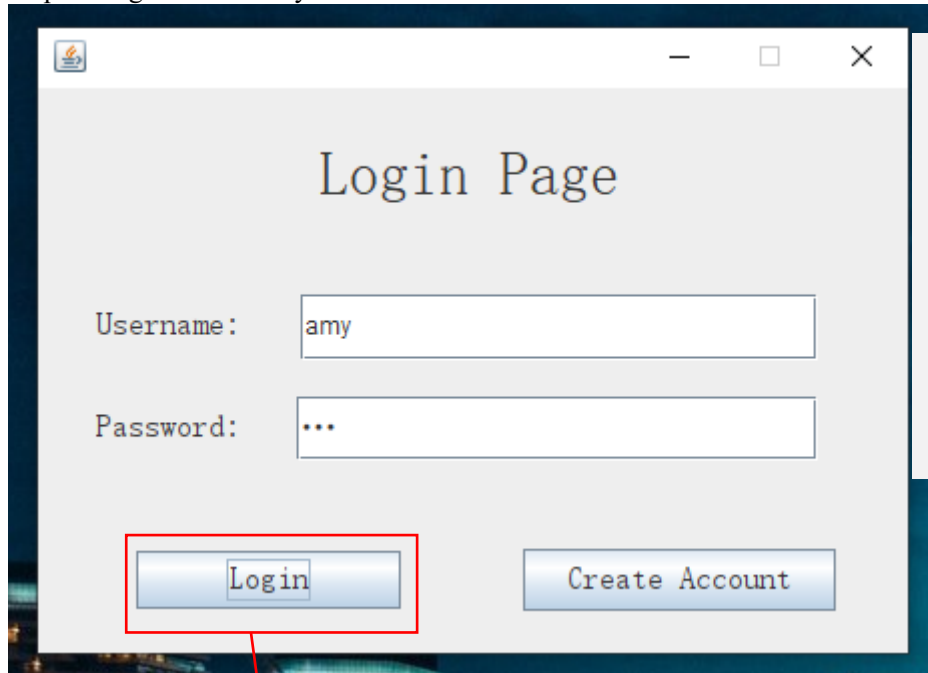
Step 5a. Login with wrong username or password



Step 5a. If the username or password is wrong, there will be a pop window to remind you, "Wrong username or password". You can close the pop window by clicking "Yes" or "X" of right top button.

P.S. you have to press "Login" to login.

Step 5b. login successfully

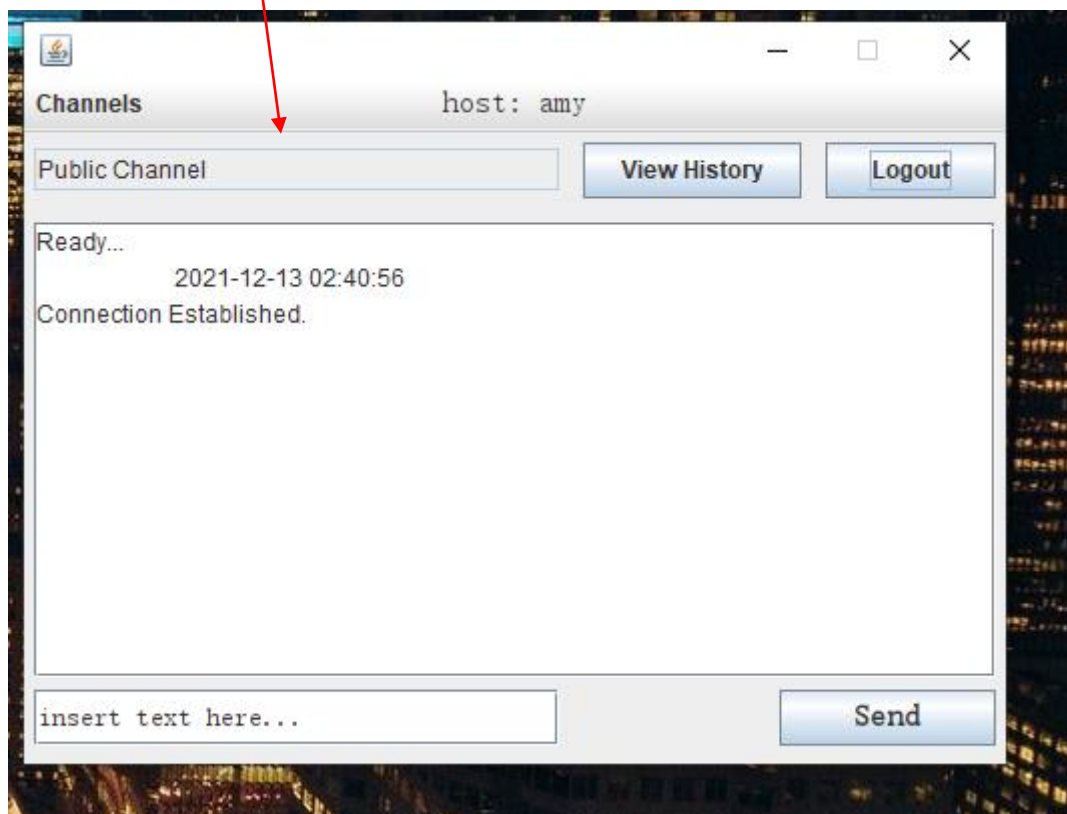


Username: amy

Password: ...

Login Create Account

Step 5b. After you enter the right username and password, you will login successfully and jump to Chat Window.



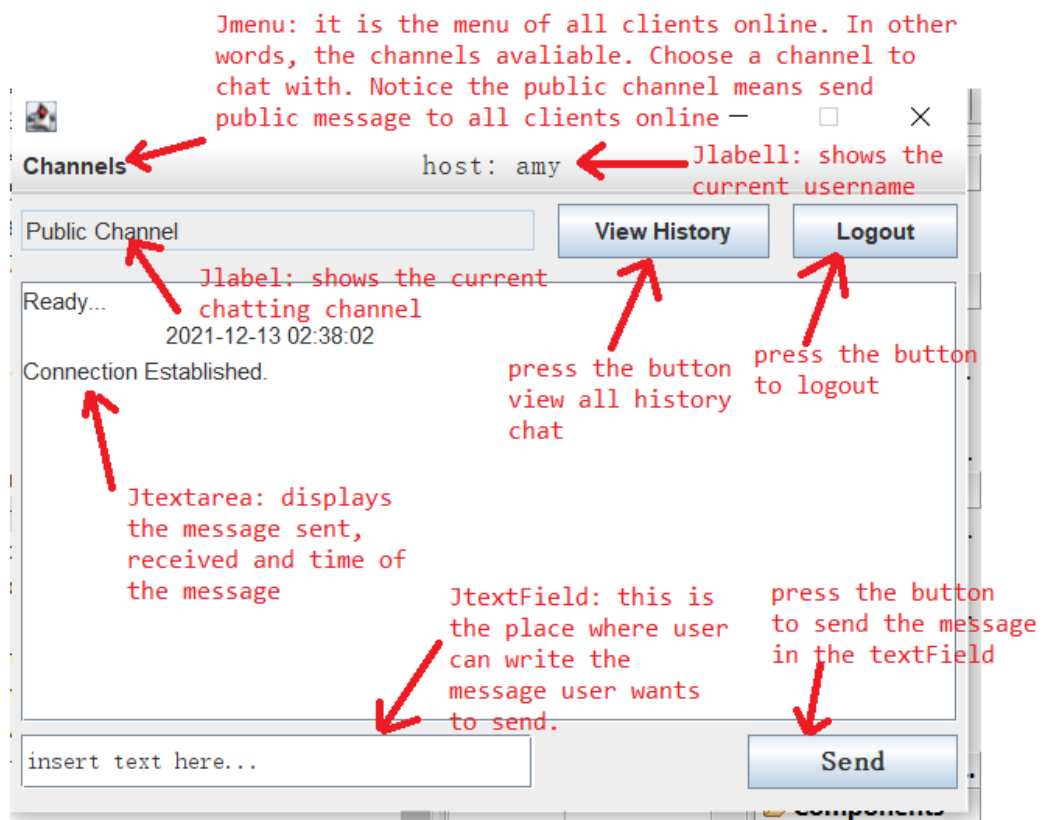
Channels host: amy

Public Channel View History Logout

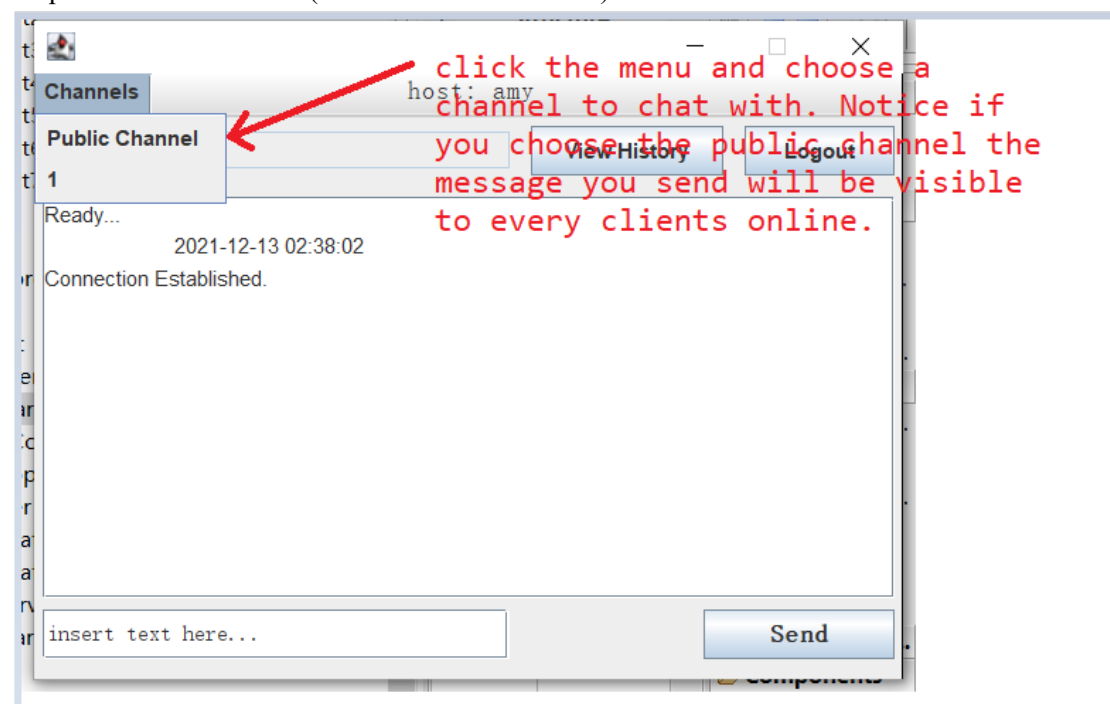
Ready...
2021-12-13 02:40:56
Connection Established.

insert text here... Send

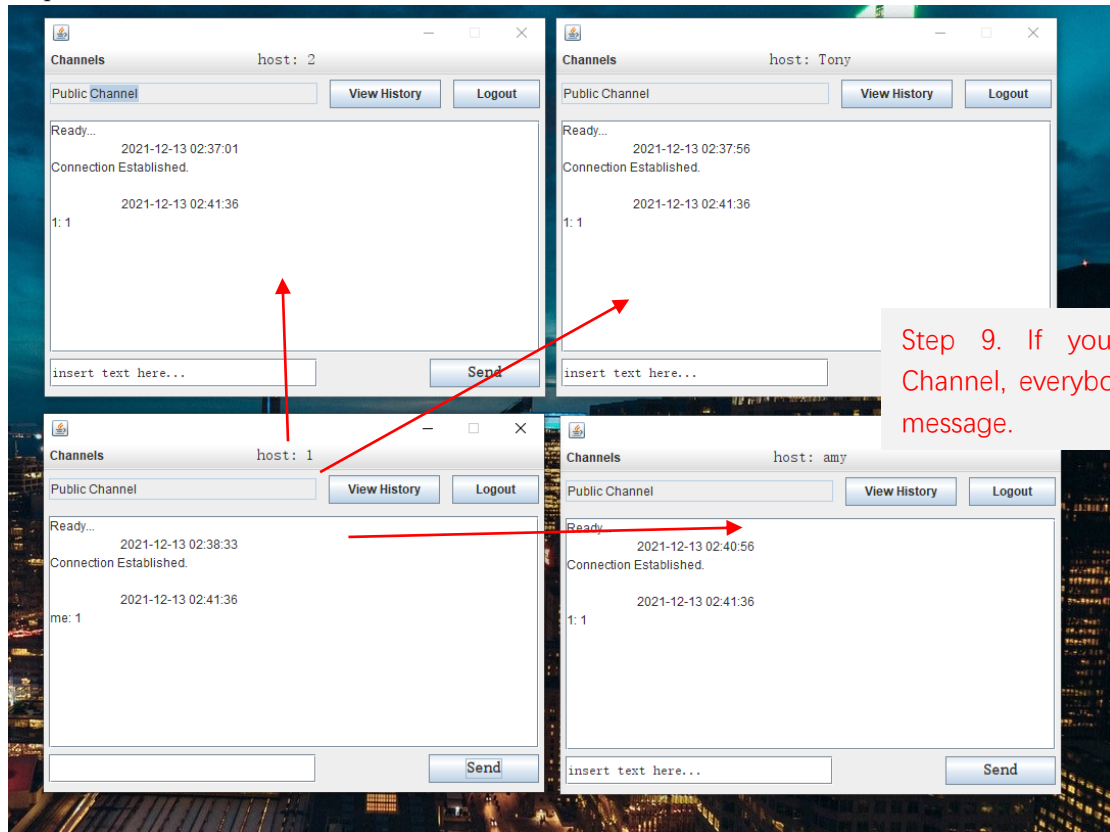
Step 7. Chat Page – Functions



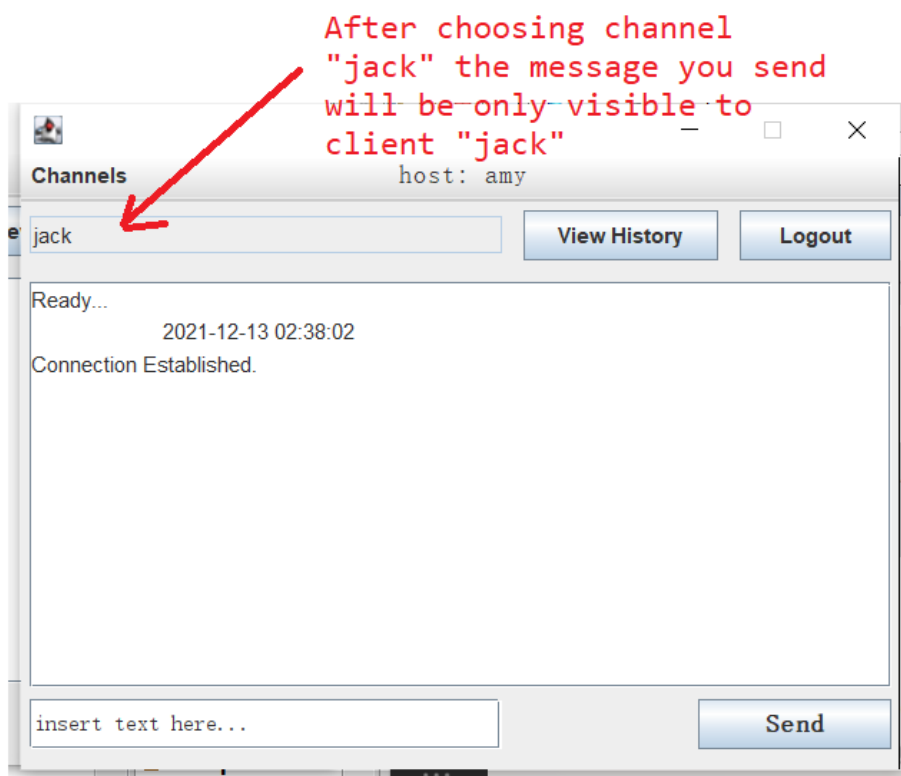
Step 8. Choose a Channel (Public Channel is default)

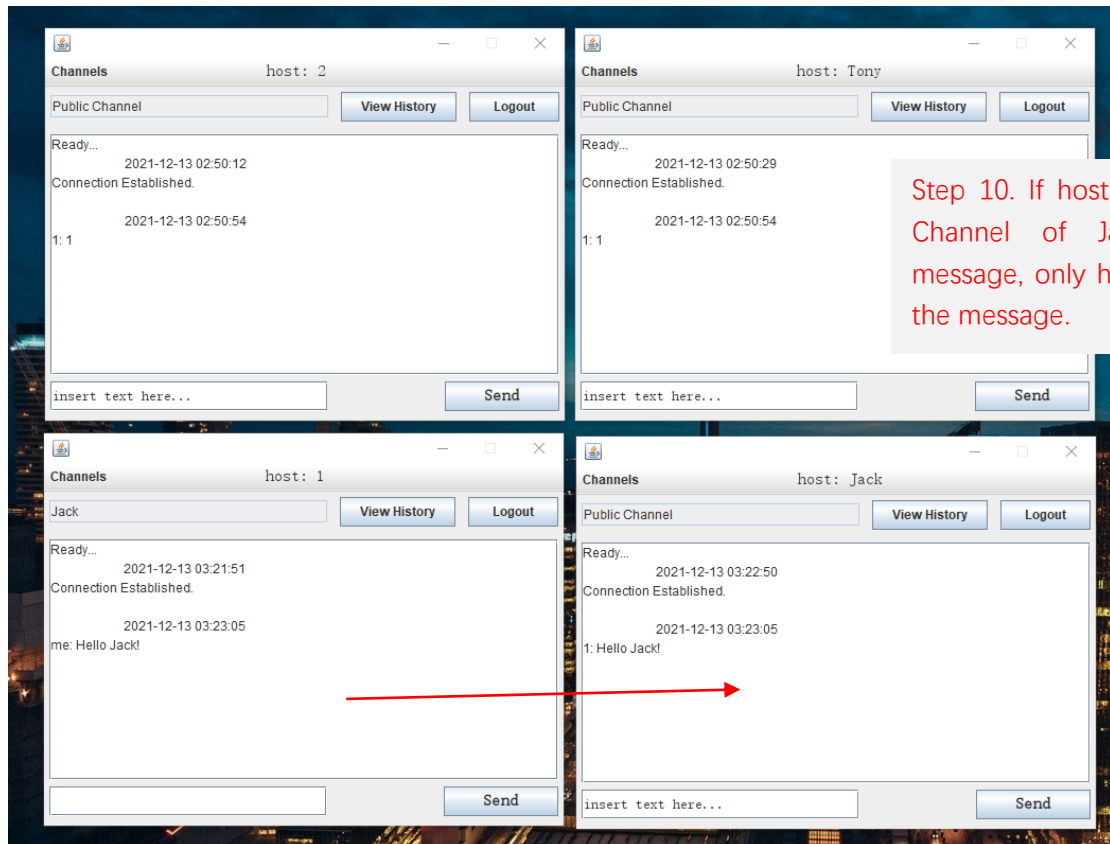


Step 9. Chat in Public Channel

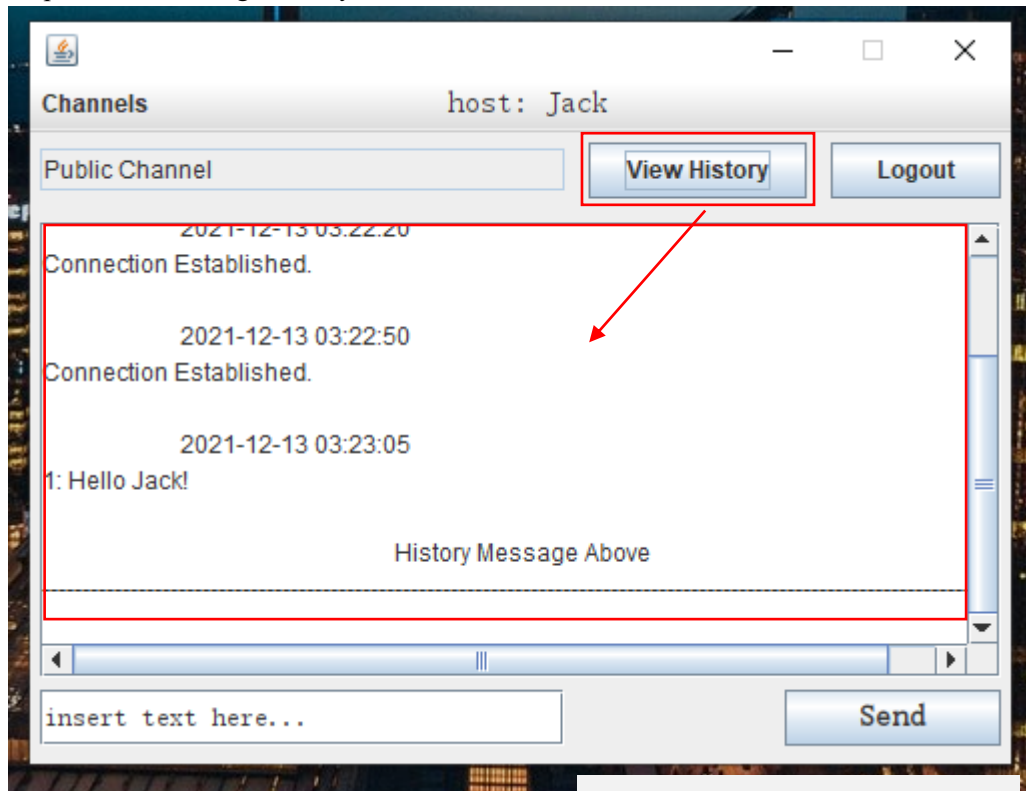


Step 10. Chat in Private Channel



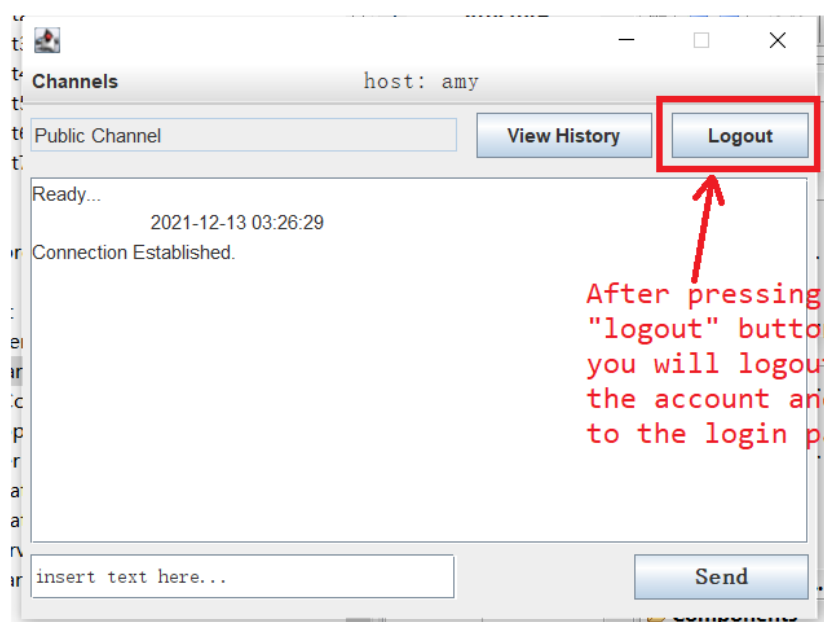


Step11. View Message History



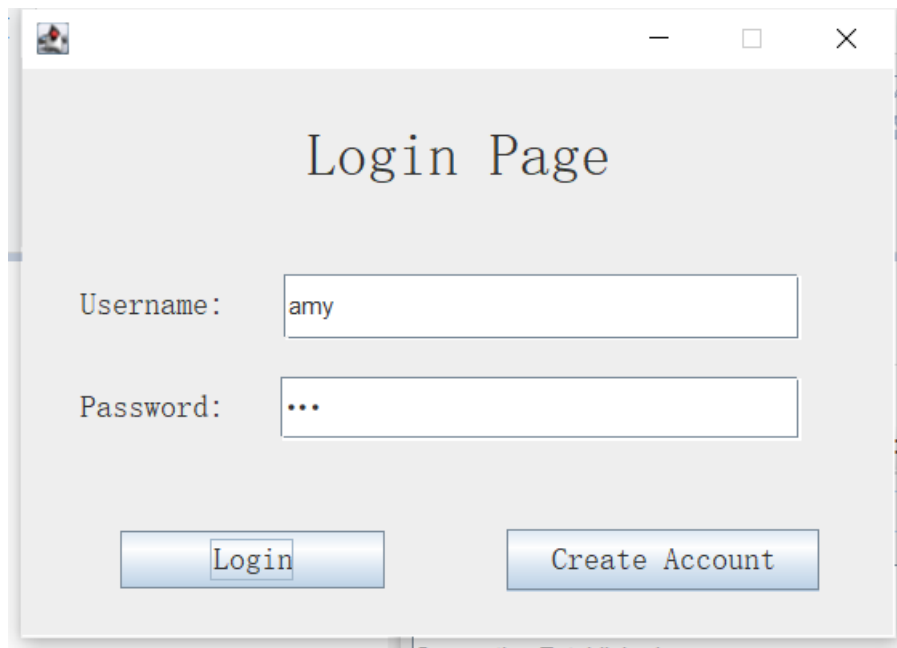
Step 11. If use click "view history" button, the message history will print in chat window. And you can continually chat in Chat Page.

Step 12. Logout



After pressing "logout" button, and you will logout of the account and jump to the login page

And it will go back to login page.



A screenshot of a web application window titled "Login Page". The window has a standard OS-style title bar with minimize, maximize, and close buttons. Inside, the title "Login Page" is centered at the top. Below it, there are two input fields: "Username:" with the text "amy" entered, and "Password:" with three dots indicating a masked password. At the bottom, there are two buttons: "Login" and "Create Account".

Structure

