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Project Report

on

Client to client chat system

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Introduction

Our project provides a platform for client to client chatting in a very efficient manner by using multithreading and socket programming. In this two clients can chat after authentication from server.

User have to register using a username and password. A unique port number will be assigned to it by the server which will be later used for creating a new connection for chatting. Username should be unique.

After registration client have to login. Once his username and password are verified by the server he can either wait for oter clients to connect or he can request other client who is waiting

To request other client to connect the client have to enter the username of the client to whome he wants to chat . Server will send the port of that client. Using this port a new socket can be created for both clients to chat. Both client have to send messege “bye” to end the chat connection.

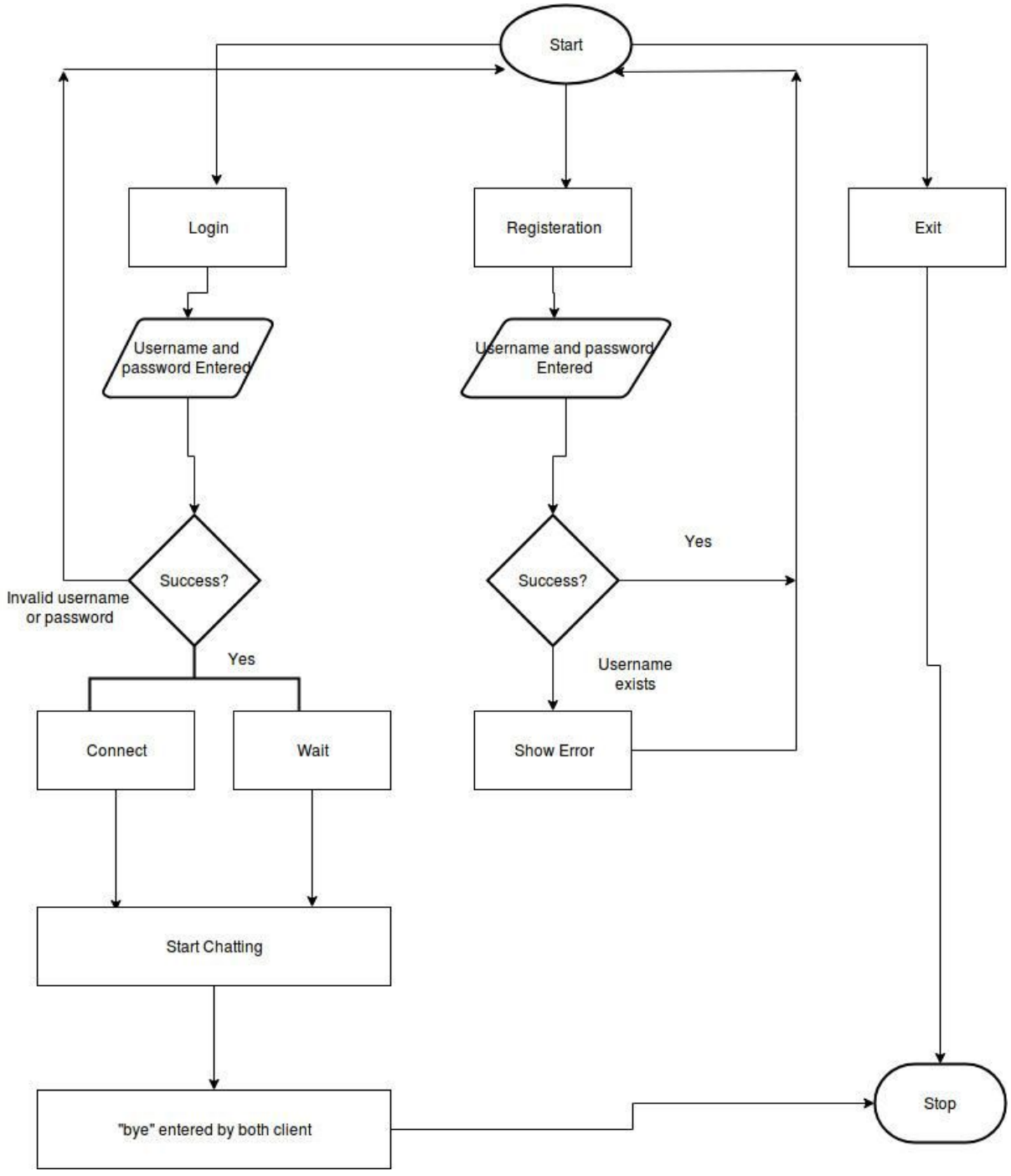
Project Components

1. Multiple clients

2. Server 1

3. MYSQL database

Brief description about the actual connection



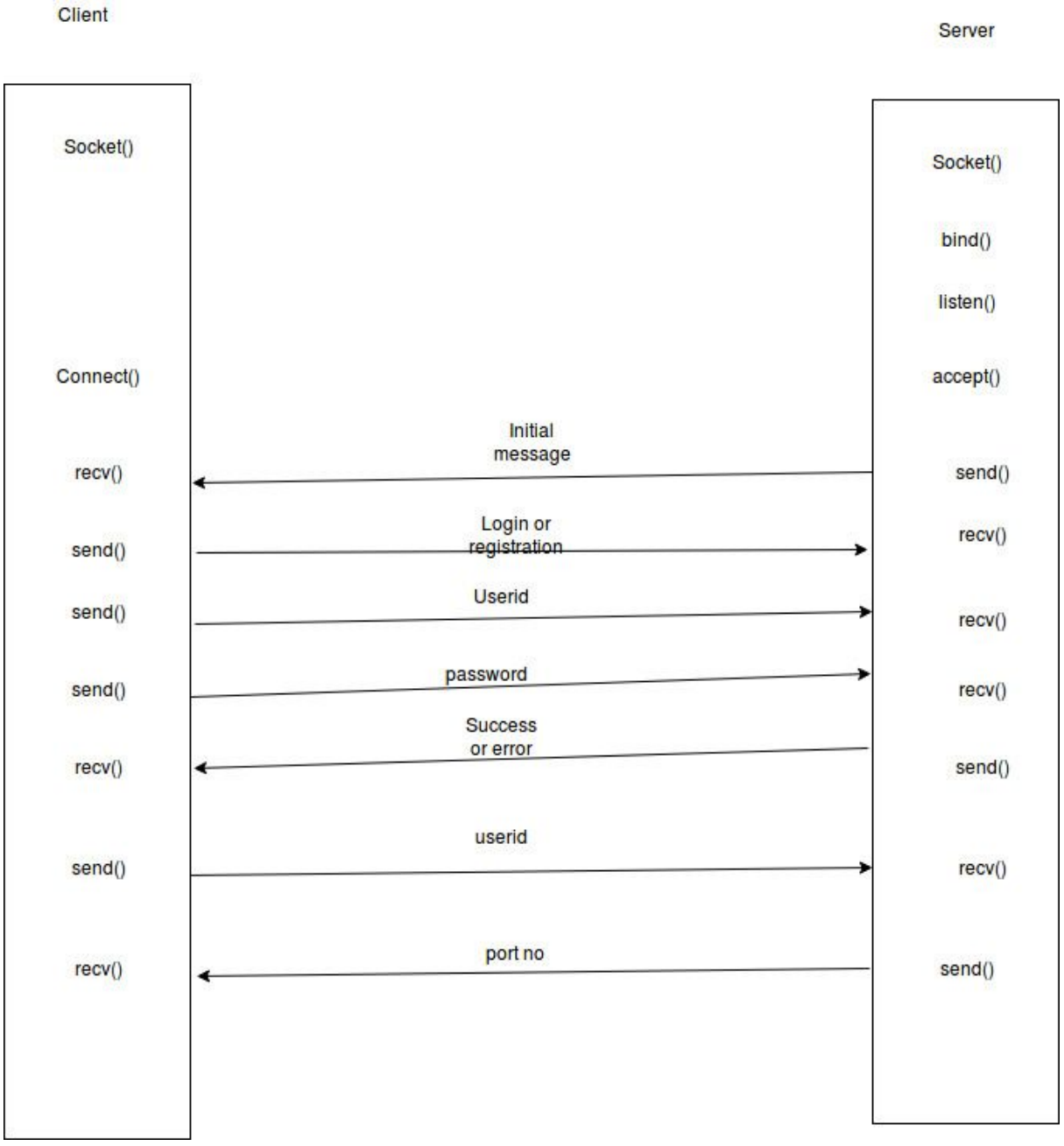
Server Socket will be created with it's static port number which known to all authenticated clients. Client Socket will be created with it's own port number which known to only that particular client and it is saved in database which interacts only with Server.

First server will get start and will wait for multiple clients request. Client will have to options 1) Login 2) registration

New user have to provide some basic information like client id and password. Then data will be sent to sever . server will store that data into Database

Already existing client will provide clientID and password for login . server will authenticate the client.then client will have two options either wait for other client request or enter clientID with whom client wants communicate . after providing clientID server will establish the connection between both client and chatting window will be prompt for message transfer. Conversation will end when both client will send each other “bye ”message

Client Server Communication



Socket will be created between client and server.On successful creation of socket server will send a initialization messege.
Client will get a menu and it will send its preference i.e. login , register or exit.
On selecting Login , it have to send its username and password to server.
Server will authenticate and send success or errer messege to clernt.
Client will send username of the client to whome it wants to connect.
Server will send the port no corresponding to that client.

Client to Client Communication

Client 1 and Client 2 will close the connection with its server.
Client 2 will get its own port no from server.
Client 1 will get client 2's port no from server.
A socket will be created between client 1 and client 2 uensing port no.
They then can send and recieve messege usin sender and reciever thread functions.

Threads Used:-

At Client:-

After connecting two clients

Thread1- sender()

Thread2- reciever()

At Server:-

After creating socket for each accept

Thread1- clientInterface() for client1

Thread2- clientInterface() for client2
.
.
Thread n- clientInterface() for client n

Conclusion

With the implementation of threading and socket programming multiple clients can be handled by the server efficiently and authentication and request of each client can be served efficiently and uniquely.