

To Compile, from the root folder, on the terminal write,

```
make
```

To Run the server,

```
java Server
```

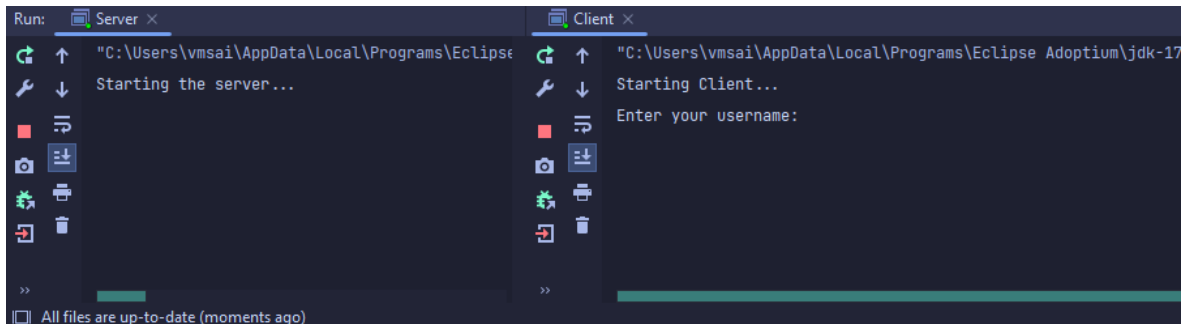
To Run the client,

```
java client
```

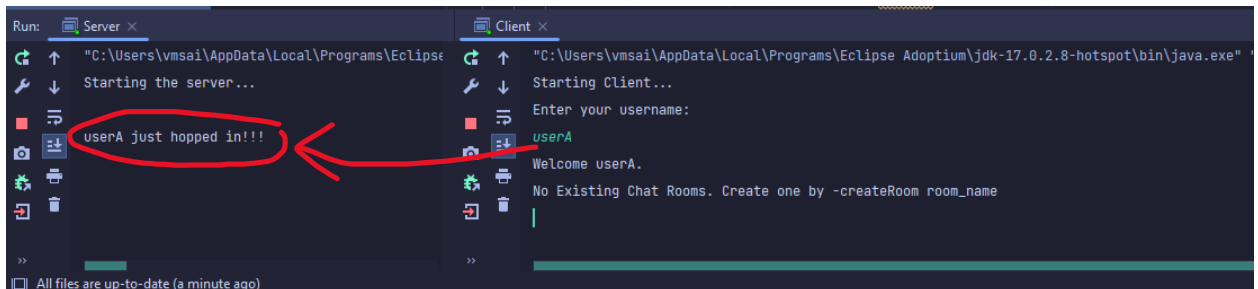
Functionality:

- TCP connection between client and server

Initial state:



After entering the username, the client gets connected to the server via TCP:



- View list of existing chat rooms

First a room has to be created in order to see the room list. Via `-createRoom room_Name`

```
Run: Server x Client x
C:\Users\vmasai\AppData\Local\Programs\Eclipse
Starting the server...
userA just hopped in!!!

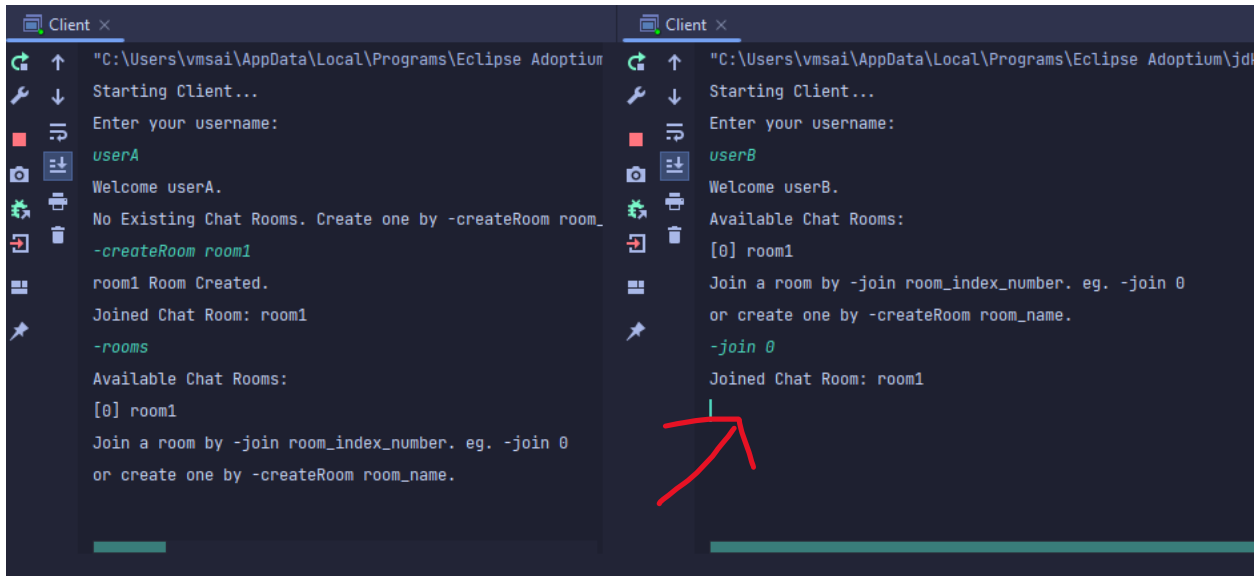
Enter your username:
userA
Welcome userA.
No Existing Chat Rooms. Create one by -createRoom room_name
-createRoom room1
room1 Room Created.
Joined Chat Room: room1
```

Now list rooms by `-rooms`

```
Client x
room1 Room Created.
Joined Chat Room: room1
-rooms
Available Chat Rooms:
[0] room1
Join a room by -join room_index_number. eg. -join 0
or create one by -createRoom room_name.
```

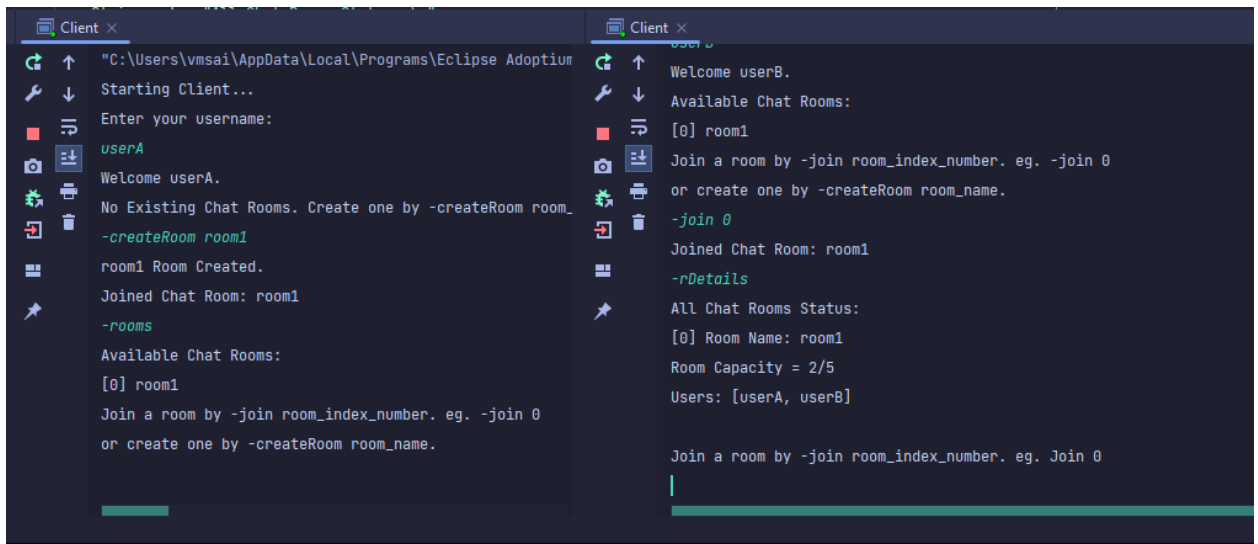
- Join existing chat rooms

Now creating another client, then joining the room by the index number beside the rooms list.



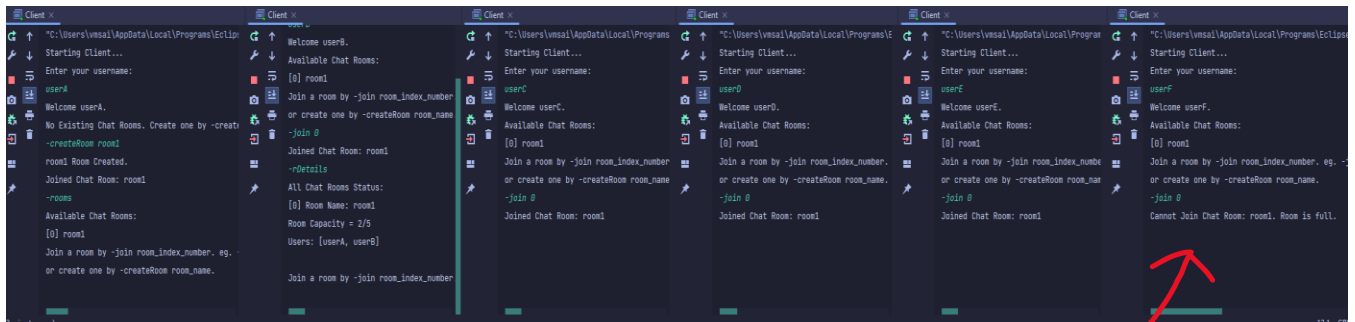
- View the number and list of connected users for each room

From any client, write -rDetails



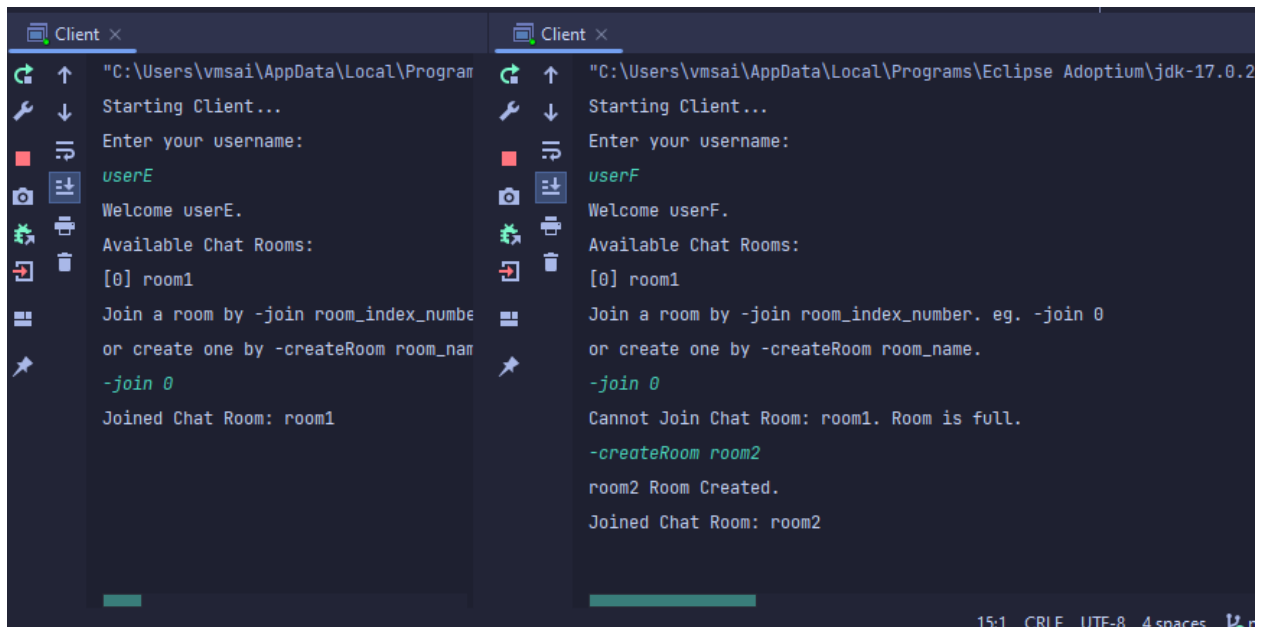
- Check room capacity and restrict access to full capacity rooms

Now creating 6 clients in total, 5 will be joining in one room, the 6th client won't be able to join on that room



- Create chat rooms

Write `-createRoom room_name` to create a room



- Leave a chat room

Write -leave to leave the room

```

Client x
Welcome userA.
No Existing Chat Rooms. Create one by -createRoom room_name.
-createRoom room1
room1 Room Created.
Joined Chat Room: room1
-rDetai
Available Chat Rooms:
[0] room1
Join a room by -join room_index_number. eg. -join 0
or create one by -createRoom room_name.
userC: hello
userC: leave-
userC Left the Chat Room
userB Left the Chat Room

Client x
Join a room by -join room_index_number. eg. -join 0
or create one by -createRoom room_name.
-join 0
Joined Chat Room: room1
-rDetai
All Chat Rooms Status:
[0] Room Name: room1
Room Capacity = 2/5
Users: [userA, userB]
Join a room by -join room_index_number. eg. -join 0
userC: hello
userC: leave-
userC Left the Chat Room
-leave
  
```

- Send messages to chat rooms

```

Client x
Join a room by -join room_index_number. eg. -join 0
or create one by -createRoom room_name.
-join 0
Joined Chat Room: room1
userC: hello
userC: leave-
userC Left the Chat Room
userB Left the Chat Room
userB Left the Chat Room
-leave
-join 1
Joined Chat Room: room2
hi
userD: hi
userF: hello

Client x
Welcome userF.
Available Chat Rooms:
[0] room1
Join a room by -join room_index_number. eg. -join 0
or create one by -createRoom room_name.
-join 0
Cannot Join Chat Room: room1. Room is full.
-leave
-join 1
Joined Chat Room: room2
userE Left the Chat Room
userD: hi
hello
userF: hello
  
```