

CS3800 Multi Client Chat Application Using Java Socket

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Project Outline:

```
▼ > cs3800_final_project [Socket-Chat-App final_version]
  > JRE System Library [jdk-16]
  ▼ > src
    ▼ > client
      > App.java
    ▼ > server
      > Client.java
      > Server.java
```

To get started:

1. Download this project and unzip the folder.
2. Run the `Server.java` in server package on the console.
(Change current directory to `/bin` in the Java project, and start the server by typing:
`java server.Server`)

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java server.Server
Server: PORT 60000 started.
Waiting for clients...
```

3. Open another console, and run the App. (Change current directory to `/bin`, and start the server by typing: `java client.App`)

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: _
```

The app will show a welcome message and command instructions.

4. Enter the screen name. If the screen name is in used, server will send a rejection message and prompt user to enter the name again.

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: Ariel
Rejected
Enter to set your user name: Elaine
Accepted
You can now start typing
_
```

5. Start chatting! Once a message is sent to the server, it will broadcast the message to all connected users.

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: Ariel
Accepted
You can now start typing
Hello
> Ariel: Hello
Can you all see this?
> Ariel: Can you all see this?
```

The console will echo what client him or herself types, following a ">" indicating the message is from the server.

// Elaine

```
----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to
    <bye>: leave chat.

Enter to set your user name: Ariel
Rejected
Enter to set your user name: Elaine
Accepted
You can now start typing
> Ariel: Hello
> Ariel: Can you all see this?
```

//Adhitya

```
----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to
    <bye>: leave chat.

Enter to set your user name: Adhitya
Accepted
You can now start typing
> Ariel: Hello
> Ariel: Can you all see this?
```

6. Some useful commands:

<user>: show current connected users.

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall12021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: Ariel
Accepted
You can now start typing
Hello
> Ariel: Hello
Can you all see this?
> Ariel: Can you all see this?
<user>
> [Ariel, Elaine, Adhitya]
```

<private|user> message: talk to a user privately.

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: Ariel
Accepted
You can now start typing
Hello
> Ariel: Hello
Can you all see this?
> Ariel: Can you all see this?
<user>
> [Ariel, Elaine, Adhitya]
<private|Elaine> How's life?
> Ariel to Elaine: How's life?
> <Private> Elaine: It's alright
```

// private message is only visible for specified users

```
----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to
    <bye>: leave chat.

Enter to set your user name: Ariel
Rejected
Enter to set your user name: Elaine
Accepted
You can now start typing
> Ariel: Hello
> Ariel: Can you all see this?
> <Private> Ariel: How's life?
<private|Ariel> It's alright
> Elaine to Ariel: It's alright
```

```
----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to
    <bye>: leave chat.

Enter to set your user name: Adhitya
Accepted
You can now start typing
> Ariel: Hello
> Ariel: Can you all see this?
```

<bye>: leave the chat. The client socket will close gracefully, and the server will show who left.

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: Adhitya
Accepted
You can now start typing
> Ariel: Hello
> Ariel: Can you all see this?
<bye>
> bye

Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$
```

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java server.Server
Server: PORT 60000 started.
Waiting for clients...
Ariel connected.
Reject the screen name.
Elaine connected.
Adhitya connected.
Adhitya left the chat.
```

When checking the current users, the name will be removed from the list.

```
Ariel@LAPTOP-305KSVMG MINGW64 ~/Documents/cpp_fall2021/CS3800/Socket-Chat-App/bin
$ java client.App

----- Welcome to the Group Chat App -----

> Command instruction:
    <user>: print list of current connected users.
    <private|user> message: send 'message' only to the user specified.
    <bye>: leave chat.

Enter to set your user name: Ariel
Rejected
Enter to set your user name: Elaine
Accepted
You can now start typing
> Ariel: Hello
> Ariel: Can you all see this?
> <Private> Ariel: How's life?
<private|Ariel> It's alright
> Elaine to Ariel: It's alright
<user>
> [Ariel, Elaine]
```