1. Starting the server:

```
File Edit Shell Debug Options Window Help

Python 3.11.0 (main, Oct 24 2022, 18:26:48) [MSC v.1933 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:\Users\nandi\Desktop\IP_Proj\final\testing\server_test.py =====
Server is active and listening...
```

2. Starting Client:

```
File Edit Shell Debug Options Window Help

Python 3.11.0 (main, Oct 24 2022, 18:26:48) [MSC v.1933 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

===== RESTART: C:\Users\nandi\Desktop\IP_Proj\final\testing\client_test.py =====
IRC is active, Enter your name:
```

3. Client Registration:

```
File Edit Shell Debug Options Window Help

Python 3.11.0 (main, Oct 24 2022, 18:26:48) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>> ===== RESTART: C:\Users\nandi\Desktop\IP_Proj\final\testing\client_test.py =====
IRC is active, Enter your name: Soham

Connected to the server!
```

4. List of Commands:

```
help

List of commands:

1.$listroom to list all the rooms

2.$listusers to list all the users

3.$quit to quit

4.$help to list all the commands

5.$leave to leave the room

6.$join roomname to join or create the room

7.$switch roomname to switch room

8.$personal name message to send personal message
```

5. Client can create a room:

```
$join room308
room308 created
```

6. Client can list all rooms:

```
[room1] Soham: $listrooms
List of available roomdetails:
room308   room1
```

7. Client can join a room:

```
IRC is active, Enter your name: Tejesh

Connected to the server!
help

List of commands:
1.$list to list all the rooms
2.$quit to quit
3.$help to list all the commands
4.$leave to leave the room
5.$join roomname to join or create the room
6.$switch roomname to switch room
7.$personal name message to send personal message
$join room308
[room308] Tejesh joined the room
```

```
IRC is active, Enter your name: Pratyusha

Connected to the server!

List of commands:
1.$1ist to list all the rooms
2.$quit to quit
3.$help to list all the commands
4.$leave to leave the room
5.$join roomname to join or create the room
6.$switch roomname to switch room
7.$personal name message to send personal message
Join $308

$join room308
[room308] Pratyusha joined the room
```

8. Clients can list members of a room:

```
$listusers

List of available pepople:
Soham Pratyusha Tejesh
```

9. Multiple Clients can connect to a server:

```
room308
['SOham', 'Pratyusha', 'Tejesh']
```

10. Client can send messages to a room:

```
[room308] Tejesh:
[room308] Tejesh: Hi guys!

[room308] Pratyusha:
[room308] Tejesh joined the room[room308] Tejesh: [room308] Tejesh: Hi guys![room308] Pratyusha:
```

11. Client can join multiple rooms:

```
[room308] Tejesh: $join room-106
[room-106] Tejesh joined the room
[room-106] Tejesh: $join room2
[room2] Tejesh joined the room
```

12. Client can send distinct messages to multiple rooms:

```
[room2] Tejesh: hello
[room2] Tejesh: hello
[room-106] Soham: [room2] Tejesh:
[room2] Tejesh: $switch room-106
Switched to room-106
[room-106] Tejesh: I've exam today
[room-106] Tejesh: I've exam today
[room-106] Tejesh: I've exam today
```

13. Client can disconnect from a server:

```
[room-106] Tejesh: $quit

Tejesh left the room[room-106]
```

14. Server can gracefully handle the client crashes:

```
IRC is active, Enter your name: Soham
The username already Exists
```

15. Client can gracefully handle the server clashes:

```
IRC is active, Enter your name: Soham Nandi
Username should not contain any spaces
IRC is active, Enter your name: NAGAVENKATASAITEJESH
Username cant have maximum length greter than 10 characters
```