PYTHON MINI PROJECT CHAT-ROOM

USER MANUAL
REPORT

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A2 Batch

<u>INTRODUCTION</u>

We made a **server and client chat room** system using Socket Programming with Python and Python GUI toolkit tkinter.

The sockets are the endpoints of any communication channel. These are used to connect the server and client. Sockets are Bi-Directional. In this area, we will setup sockets for each end and setup the chat-room system among different clients through the server. The server side has some ports to connect with client sockets. When a client tries to connect with the same port, then the connection will be established for the chat room.

There are basically two parts. The server side and the client side. When the server side script is running, it waits for any active connection request. When one connection is established, a client can communicate with other clients.

In this instructional document we are using localhost and port 5431.

User needs to run server and then client python files.
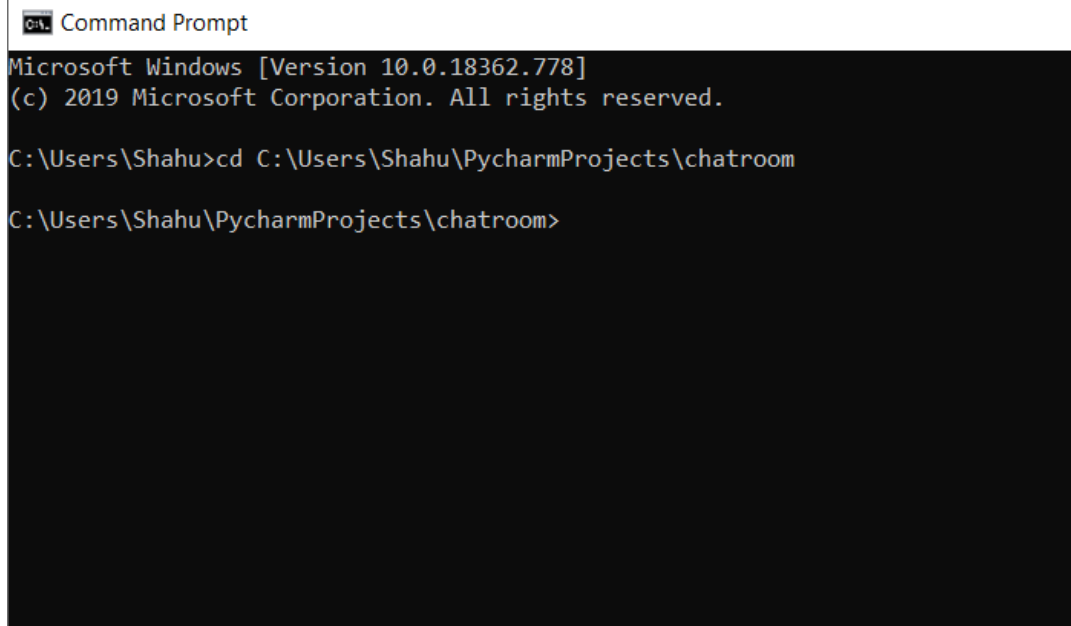User then needs to enter the hostname and port number.
When the Client first becomes connected to the Server. The user then inputs their name that will be displayed during the lifetime of the Server.
Other Clients can enter the chat-room to communicate .
Clients can press Logout button or type '{quit}' to leave the chat room.

Implementation Steps

1. Make sure your system has python installed .If not download from https://www.python.org/downloads/ according to your respective operating system.

2. Add the path of folder where client and server side python codes are present to path environment variable.

3. Open command prompt, go to the folder where server side and client side python executable code is present . (cd path-to-folder).
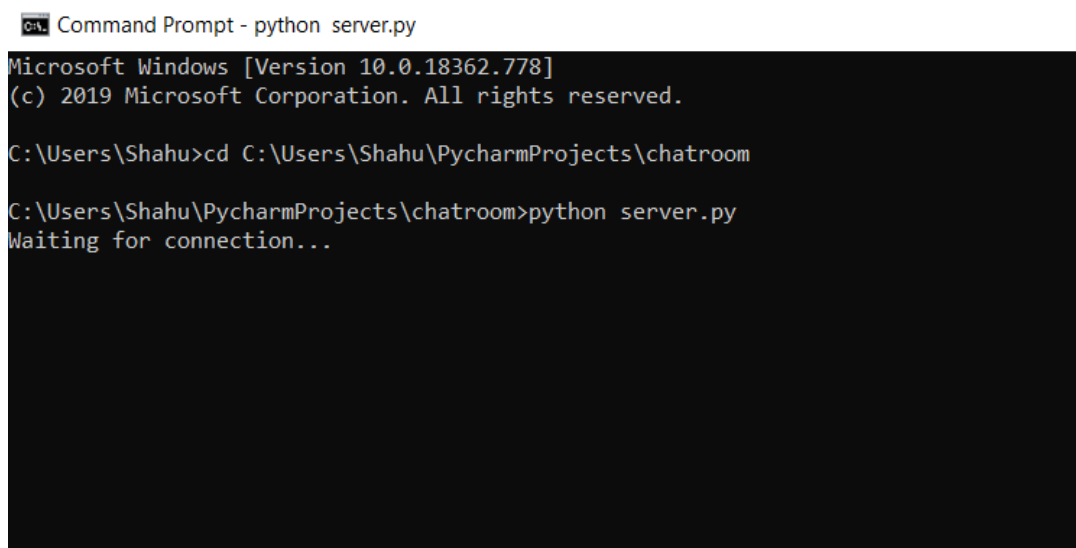

4. Run Server side code by typing 'python server.py'.
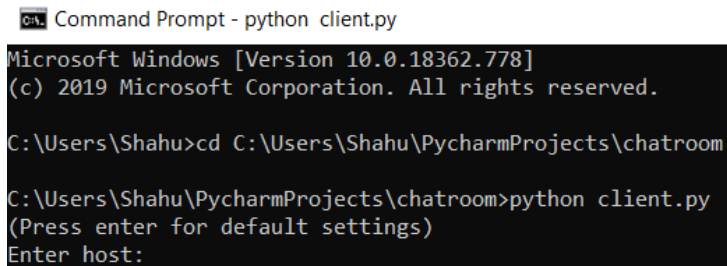
Server is now waiting for clients to be connected.
All updates of new messages clients entering and leaving chat room are also available on the server.

5.   Now open another command prompt window by repeating step 3.
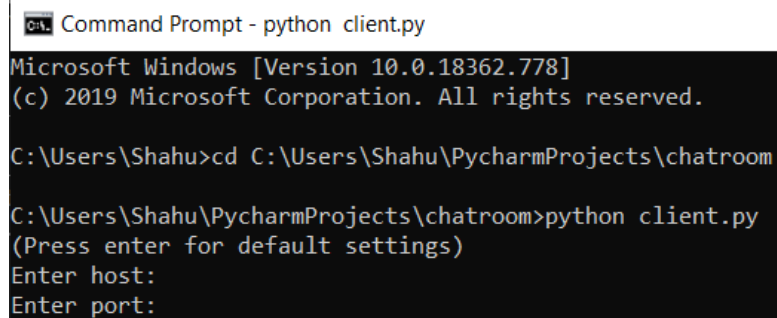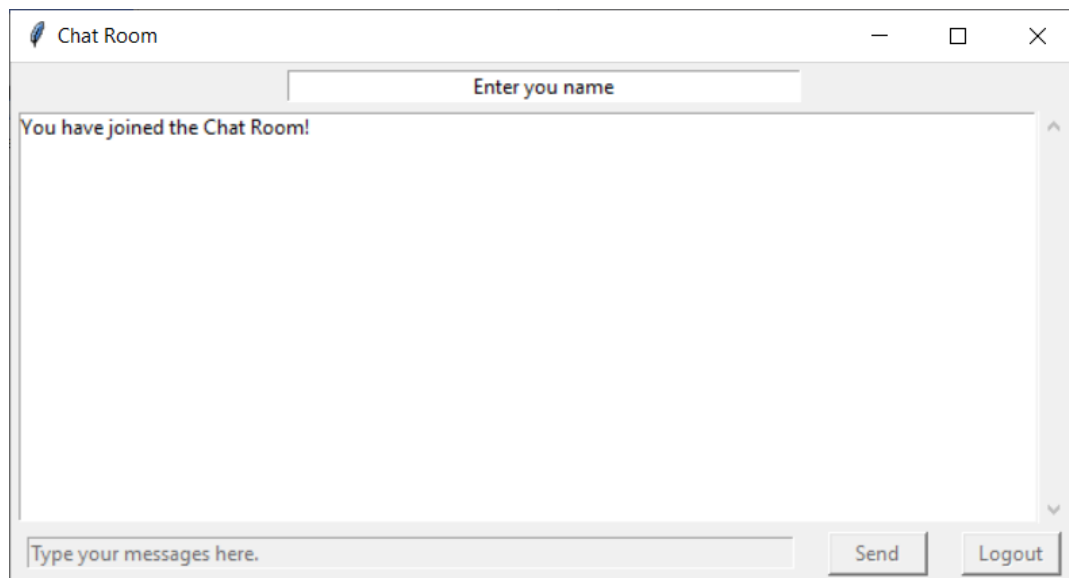   Run client side code by typing 'python client.py'.

```
Command Prompt - python client.py

Microsoft Windows [Version 10.0.18362.778]
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C:\Users\Shahu>cd C:\Users\Shahu\PycharmProjects\chatroom

C:\Users\Shahu\PycharmProjects\chatroom>python client.py
(Press enter for default settings)
Enter host:
```

6.   Press enter to continue with default hostname and port number to connect
to server.

```
Command Prompt - python client.py

Microsoft Windows [Version 10.0.18362.778]
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C:\Users\Shahu>cd C:\Users\Shahu\PycharmProjects\chatroom

C:\Users\Shahu\PycharmProjects\chatroom>python client.py
(Press enter for default settings)
Enter host:
Enter port:
```
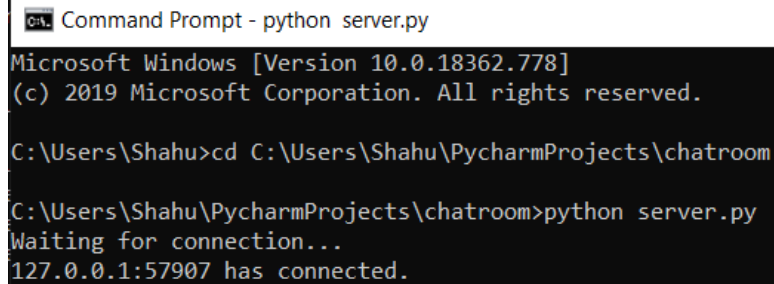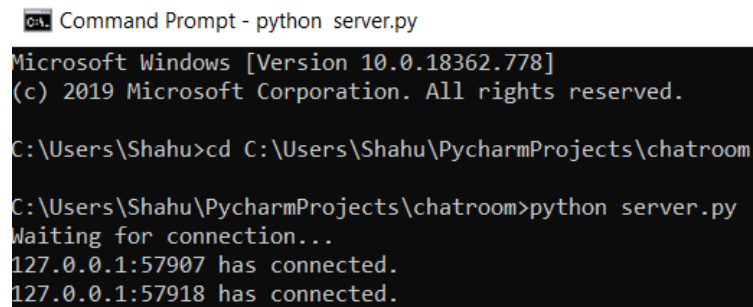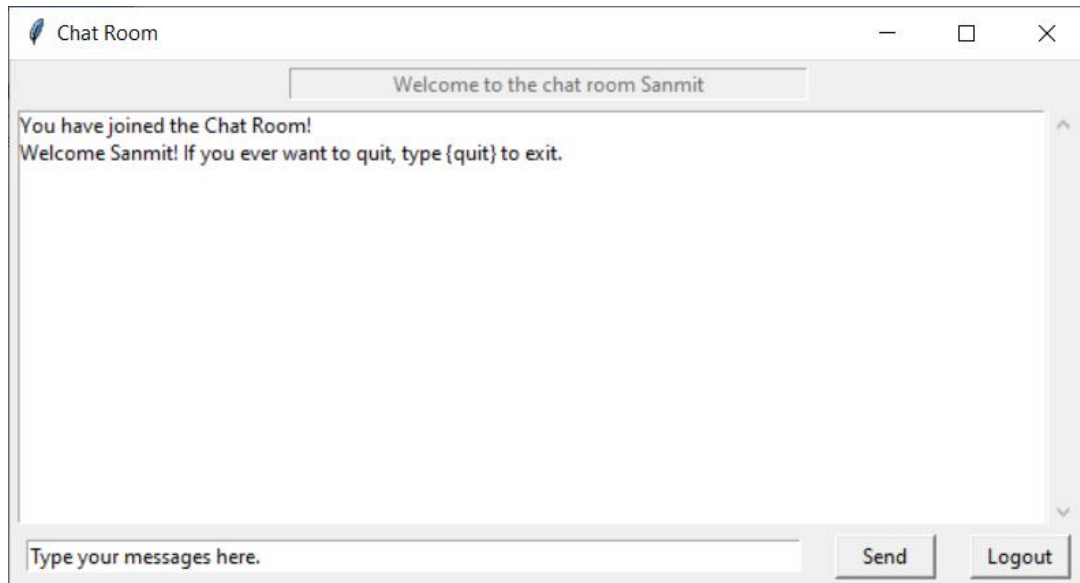
OR

Enter hostname and port number to connect to server.

Chat room appears.

You cannot type and send messages unless to enter your name first.

Server Showing Connected Client.

Two Clients have connected to Server.

7.   Enter your name and press enter.

Your name will now be visible throughout the chat.

Client name in server

Second client adding name.

Name of second client in server.

First Client being notified of arrival of second client.

Chat Room

Welcome to the chat room Sanmit

You have joined the Chat Room!
Welcome Sanmit! If you ever want to quit, type {quit} to exit.
Rahil has joined the chat!

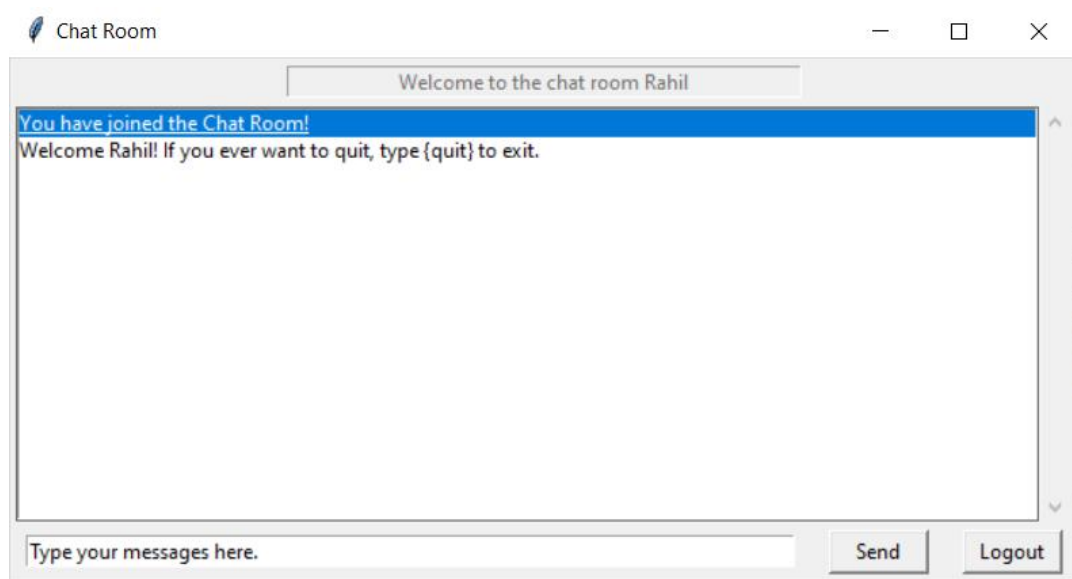Type your messages here.　　Send　　Logout

Server showing both connected clients.
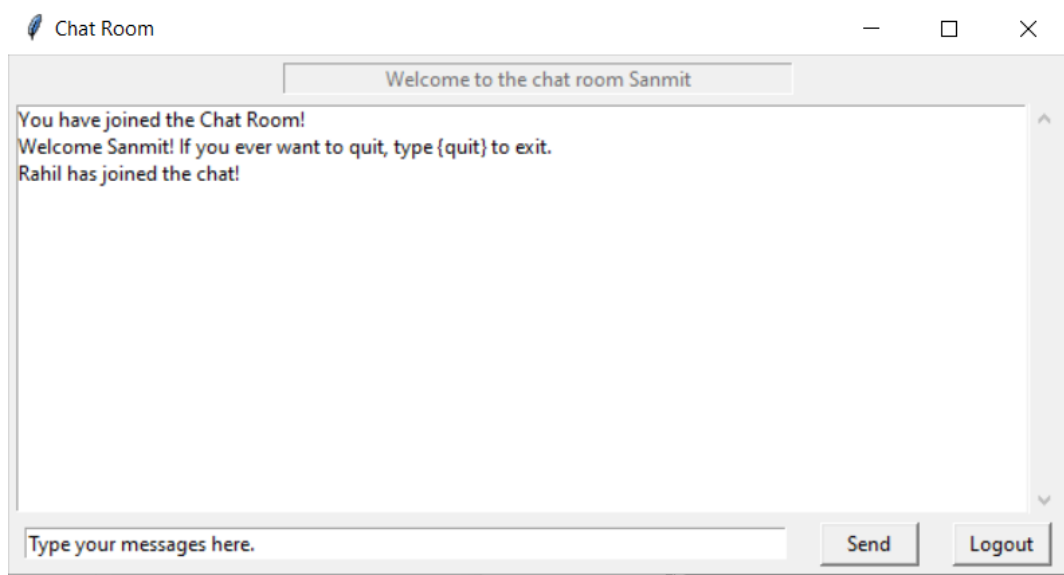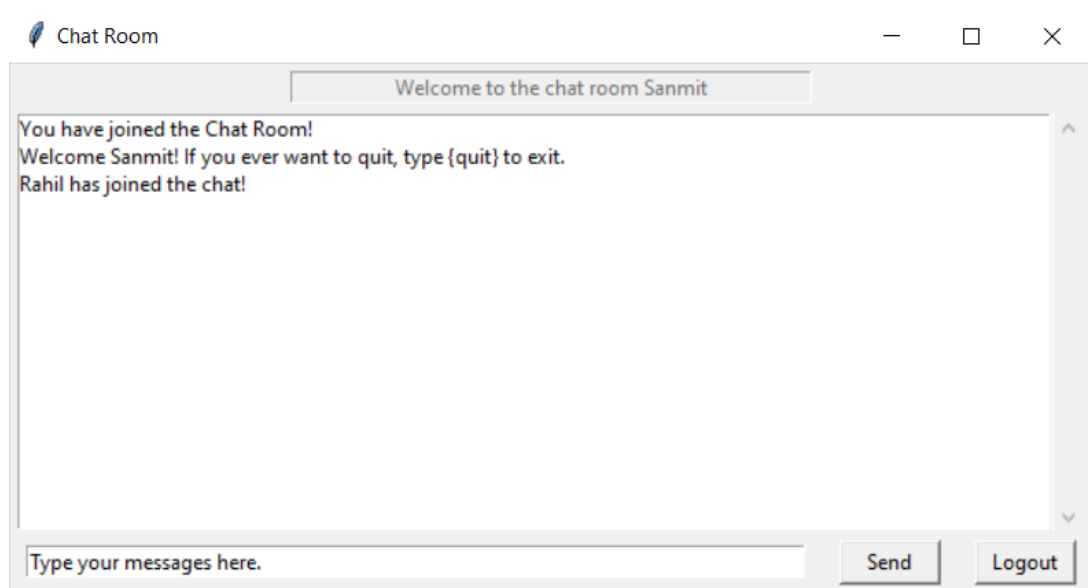


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Command Prompt - python server.py

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C:\Users\Shahu>cd C:\Users\Shahu\PycharmProjects\chatroom

C:\Users\Shahu\PycharmProjects\chatroom>python server.py
Waiting for connection...
127.0.0.1:57907 has connected.
127.0.0.1:57918 has connected.
['Sanmit']
['Sanmit', 'Rahil']
```
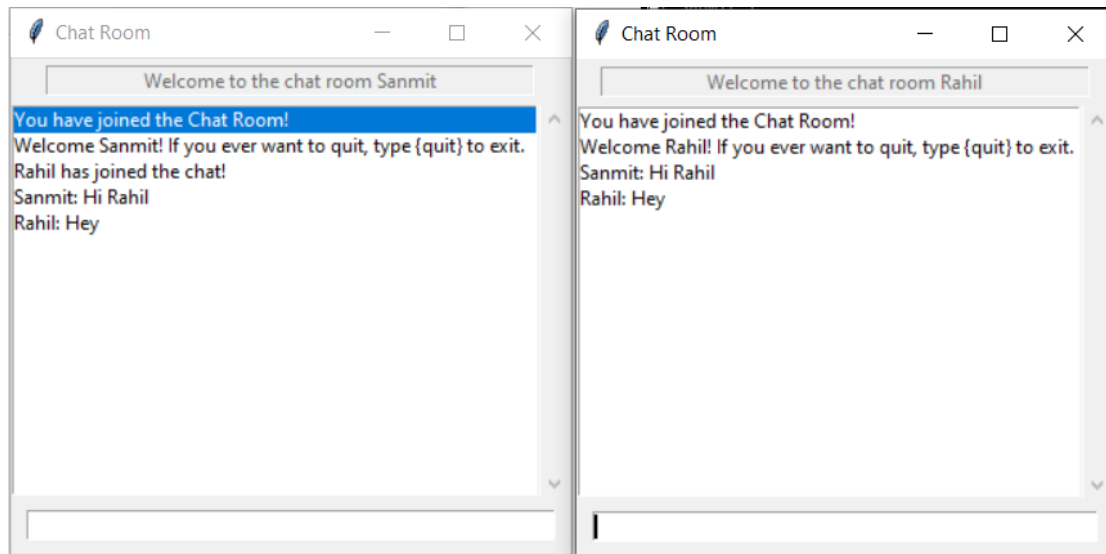
8.　　Any new client's arrival in chat-room is notified to other clients.

Chat Room

Welcome to the chat room Sanmit

You have joined the Chat Room!
Welcome Sanmit! If you ever want to quit, type {quit} to exit.
Rahil has joined the chat!

Type your messages here.　　Send　　Logout

9. Now you can communicate with other clients.

Type your message and press send or enter .

Messages displayed in server.

10. Press logout button to leave the chat-room.

Client leaving chat

Client leaving chat showed in server.

Other clients are notified when you leave the chat room.

You will no longer will receive new messages after leaving the chat room.
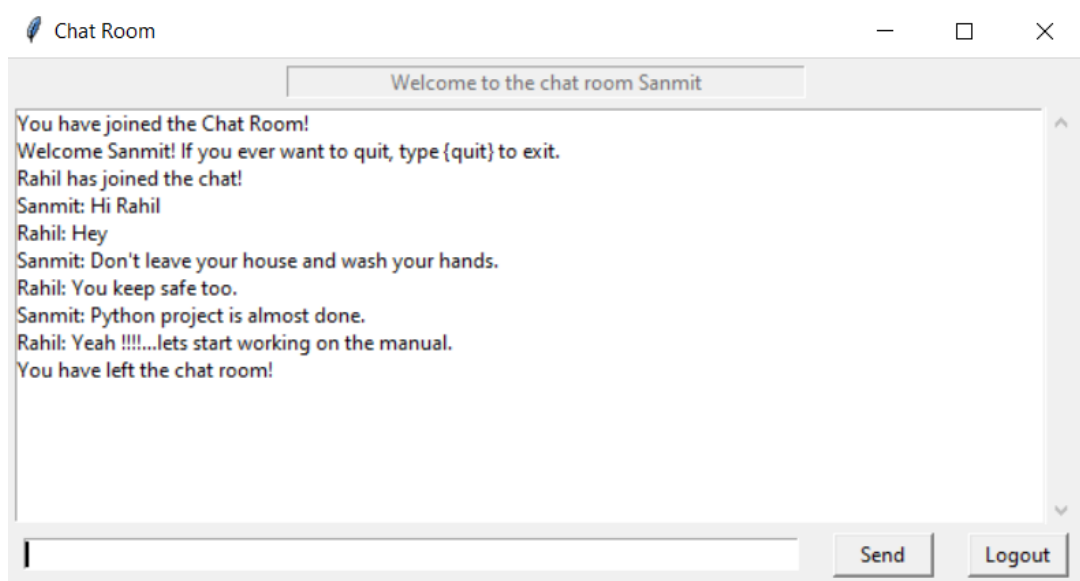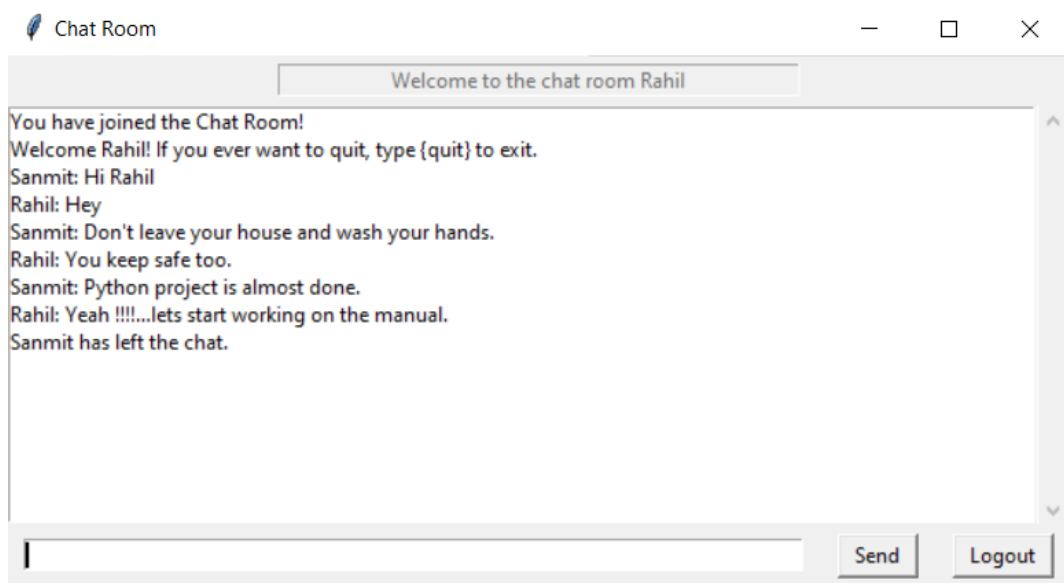
Client leaving shown in server.


```
Command Prompt - python server.py

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C:\Users\Shahu>cd C:\Users\Shahu\PycharmProjects\chatroom

C:\Users\Shahu\PycharmProjects\chatroom>python server.py
Waiting for connection...
127.0.0.1:57907 has connected.
127.0.0.1:57918 has connected.
['Sanmit']
['Sanmit', 'Rahil']
Hi Rahil
Hey
Don't leave your house and wash your hands.
You keep safe too.
Python project is almost done.
Yeah !!!!...lets start working on the manual.
{quit}
127.0.0.1:57907 has disconnected.
Why did he leave now hw will not be notified of all the new messages
{quit}
127.0.0.1:57918 has disconnected.
```
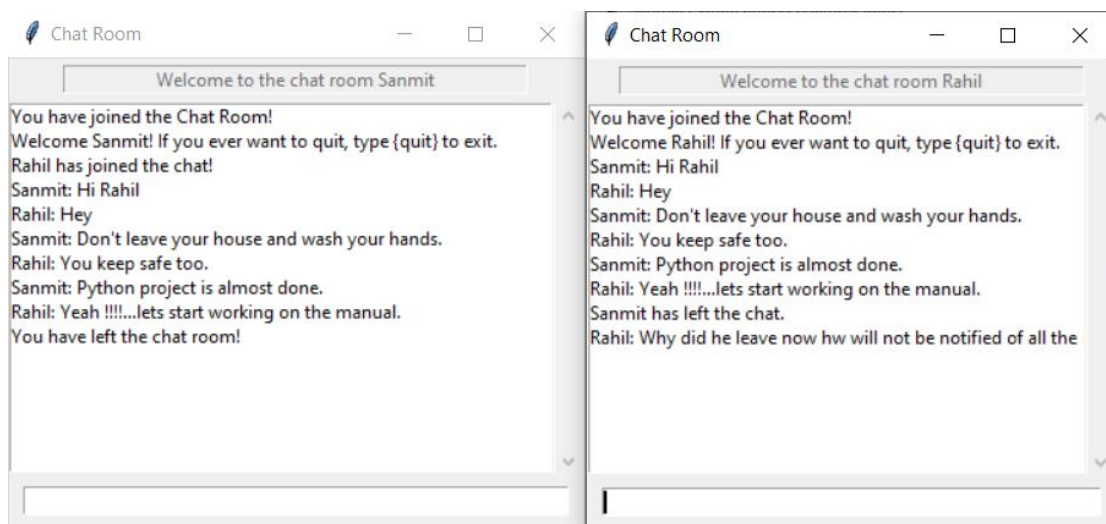
New client entering Chat Room.


```
Command Prompt - python server.py

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C:\Users\Shahu\PycharmProjects\chatroom>python server.py
Waiting for connection...
127.0.0.1:57907 has connected.
127.0.0.1:57918 has connected.
['Sanmit']
['Sanmit', 'Rahil']
Hi Rahil
Hey
Don't leave your house and wash your hands.
You keep safe too.
Python project is almost done.
Yeah !!!!...lets start working on the manual.
{quit}
127.0.0.1:57907 has disconnected.
Why did he leave now hw will not be notified of all the new messages
{quit}
127.0.0.1:57918 has disconnected.
127.0.0.1:58016 has connected.
```

---- END ----