

# A Chat Room System

There are four files in the zip

1. Server.py
2. Client.py
3. log.txt

1 & 2 are to be opened in the IDE or right click and open in notepad to view the code.

Server.py is my server program. Client.py is my client. Server program is executed (RUN) once and client program is executed (RUN) 4 times to create 4 client.

In the client GUI, the user has to press log in button to connect to the server. First server asks to set up username for the user. User gives name as user wishes but the server reject any name that is longer than 8 character. When given a longer name (more than 8 character) the server asks for the user to give a smaller name. That is my 'Client correctly handles rejection of a bad name' feature that I have implement. After that the clients can communicate between each other. The time is also displayed as instructed in the requirement sheet. Example is given below. The user types the message in box and press 'send' button to send it to other clients. And any message from other client will be displayed automatically. To quit the chat room the user has to press 'Quit' button.

The clients active will receive notifications if you client enters or leaves the chat room.

[uthira]: 0:00:17:hi

In the above message 0:00:17 – it is hours:minutes:second.

In the server Console, the server asks the user if the user wants to retrieve the old messages. If the user types 'yes' and press enter, old messages are shown. If the user says no, the server proceeds to connect to client and waits to get connected. That is my 'server maintain a database of messages' for the bonus marks.

After getting connected to the client, the server displays the message 'Client (uthira) connected' and does this every time a client is connected. When the client sends a message the message is displayed in HTTP format that stated in the requirement sheet. The sample is as below.

```
GET/client.http
Host: 10.219.139.223
User-Agent : /pycharm
Content-Type : Text
Content-Length : 10
date : 2018-03-03 22:34:52.180845
0:00:17:hi
```

When the client leaves the chat room, the server console will display that the client has left the chat room. That is my 'Client & server handle logoff correctly' feature from the requirement sheet. The multithreading feature for the bonus marks is implemented in both server and client. To prove that every single client is working in different thread, thread number is printed after every message.

Exceptions are thrown on the server console when the client console is closed and this does not hinder any functions of the chat room.

The log.txt file has to be in the folder for it to read and retrieve the old conversation and write into it.

IDE used: PyCharm , Python 3

## References:

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