BT20CSE112 Kaustubh Shivshankar Shejole

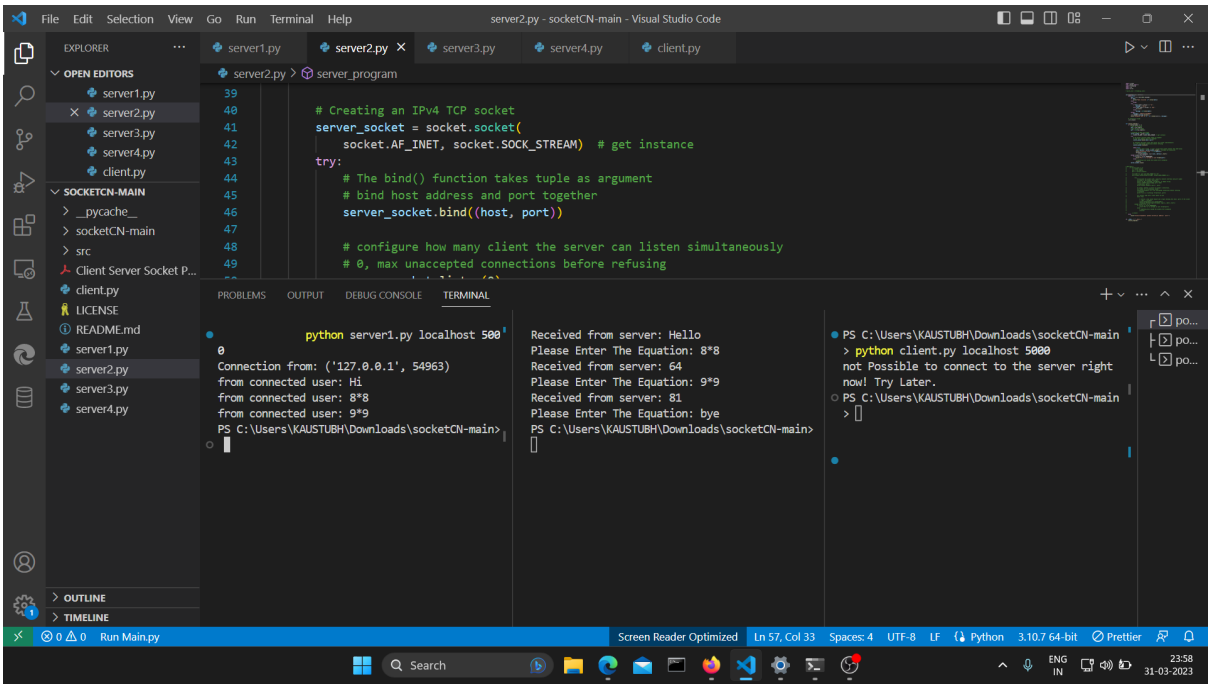
Computer Networks Assignment 2

Date : 31st March 2023

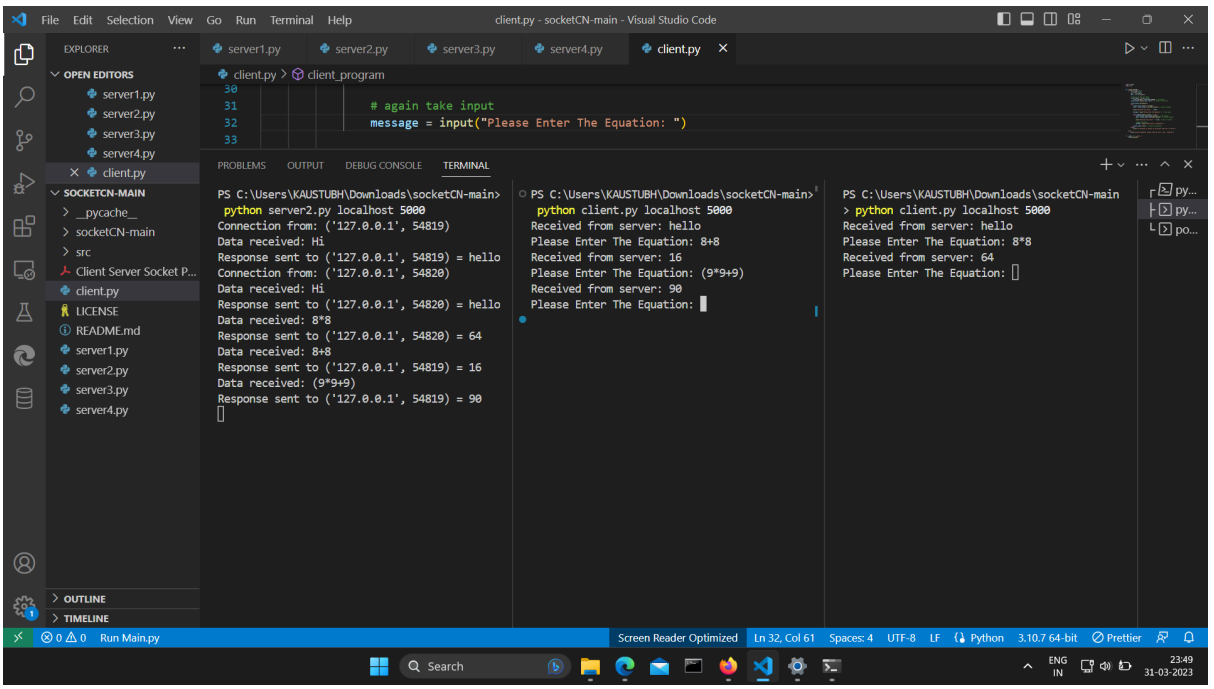
Client Server Socket Programming

(One Client Program and four Server Program)

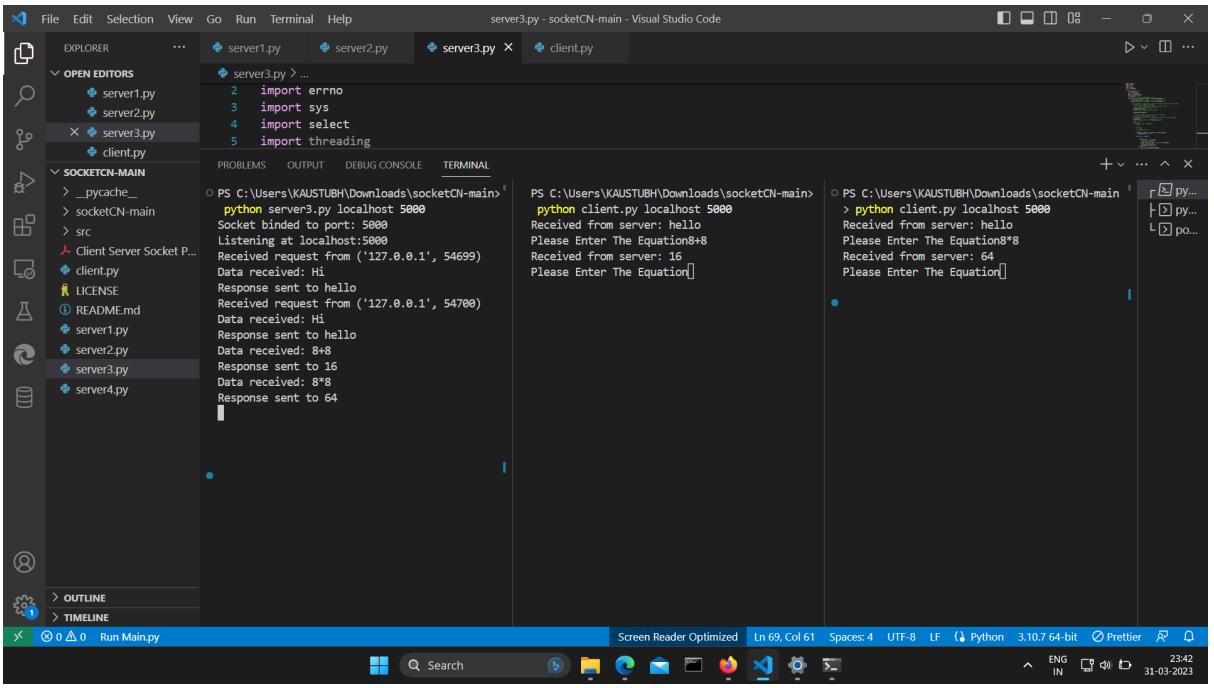
1. **server1.py** : Your server program "server1.py " will be a single process server that can handle only one client at a time. If a second client tries to chat with the server while some other client's session is already in progress, the second client's socket operations should see an error. After the first client closes the connection, the server should then accept connections from the other client.



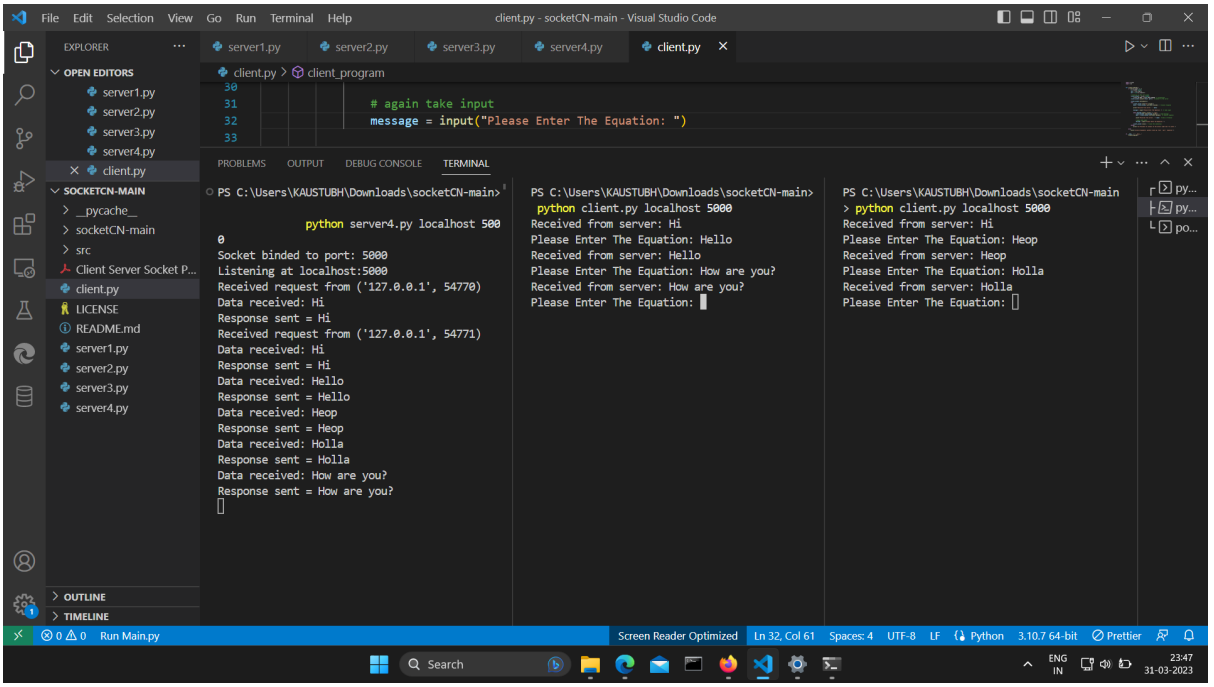
2. **server2.py** : Your server program "server2.py " will be a multi-threaded server that will create a new thread for every new client request it receives. Multiple clients should be able to simultaneously chat with the server.



3. **server3.py** : Your server program "server3.py " will be a single process server that uses the "*select*" method to handle multiple clients concurrently.



4. **server4.py** : Your server program "server4.py" will be an echo server (that replies the same message to the client that was received from the same client); it will be a single process server that uses the "*select*" method to handle multiple clients concurrently.



Instructions to run the codes:

1. python serverx.py localhost <portnumber>
2. python client.py localhost <portnumber>

   x = 1,2,3,4

Additional or special features that I have implemented/incorporated:

1. I used the fashion that client first says 'Hi' to the server then server says 'Hello' to client (except in server4.py (echo server) where the server also says 'Hi' to the client) then the actual code starts.
2. Various try except statements are used to get to know if some exceptions occur as well and safely run the code.
3. Various explanation with brief comments is given.
4. When the client writes 'bye' the connection is closed.