Client Server Socket Programming
(One Client Program and four Server Program)

MOHAMMAD SHOAIB ANSARI
BT21CSE063
COMPUTER NETWORKS

Usage:

Use the following command to run each server script:

```
python3 server1.py <SERVER_IP> <SERVER_PORT>
```

Replace <SERVER_IP> with the IP address on which you want the server to listen (e.g., 127.0.0.1), and <SERVER_PORT> with the port number you want to use for communication (e.g., 5000).

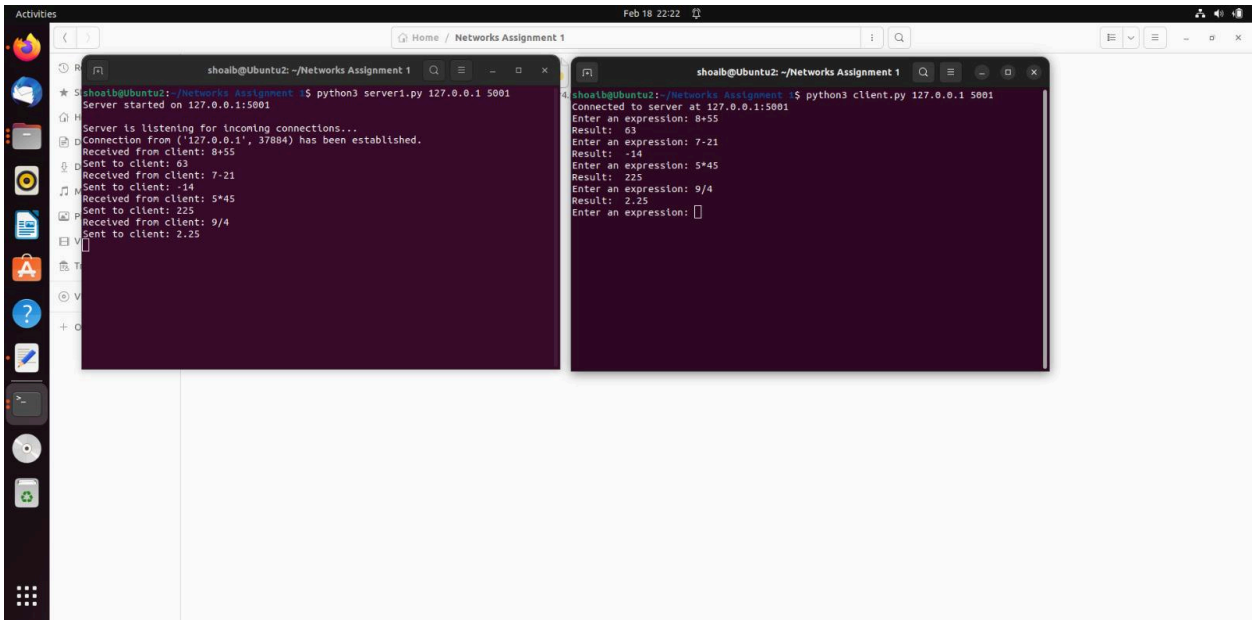
Use the following command to run the client script:

```
python3 client.py <SERVER_IP> <SERVER_PORT>
```

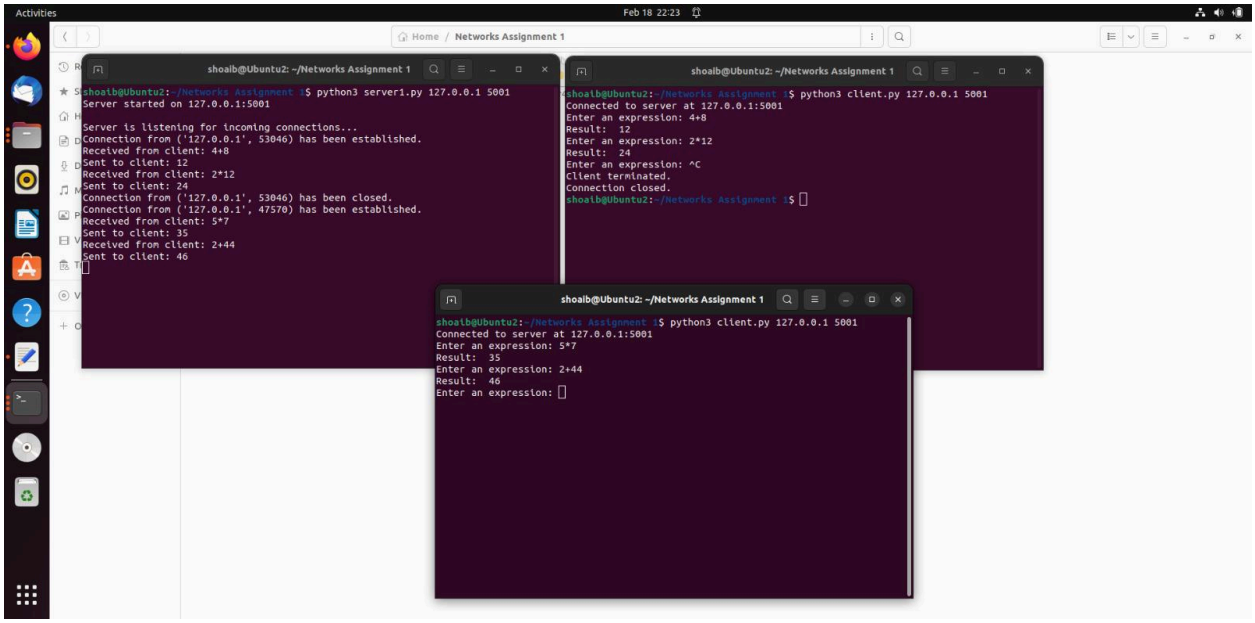
Replace <SERVER_IP> with the IP address of the server you want to connect to, and <SERVER_PORT> with the port number on which the server is listening.

Testing:

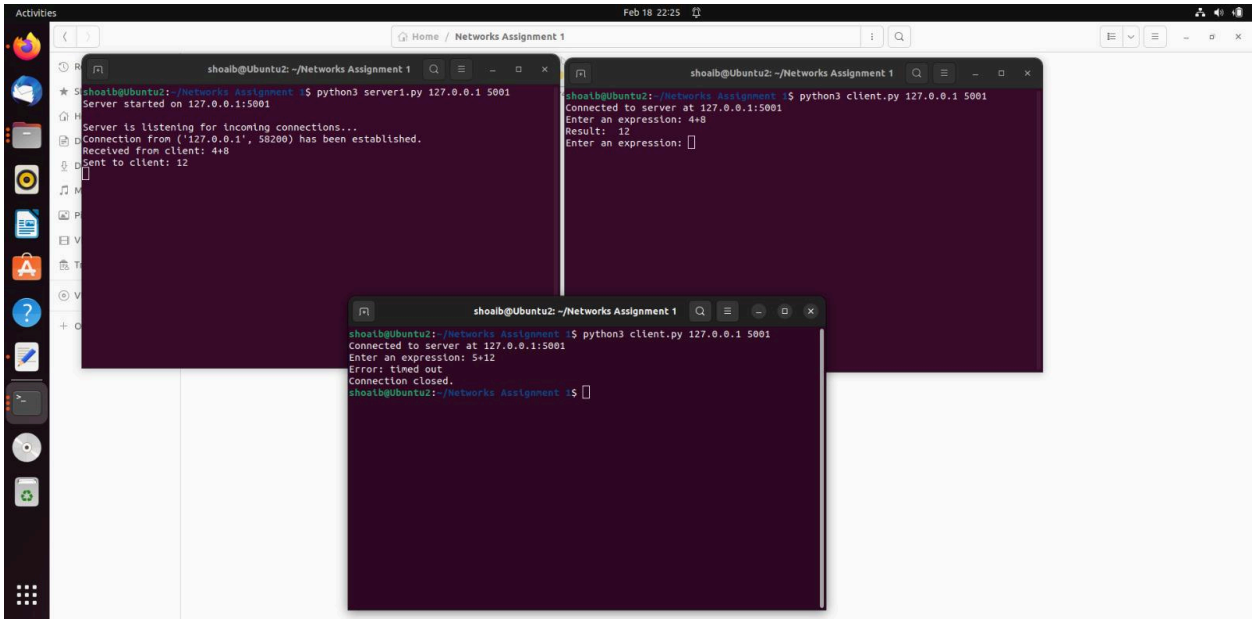
- [TEST1]: For server 1, we will start a single client, connect to server, and test all 4 arithmetic operations (+,-,*,/) with two operands each. We will check that the results returned by the server to the client are correct.



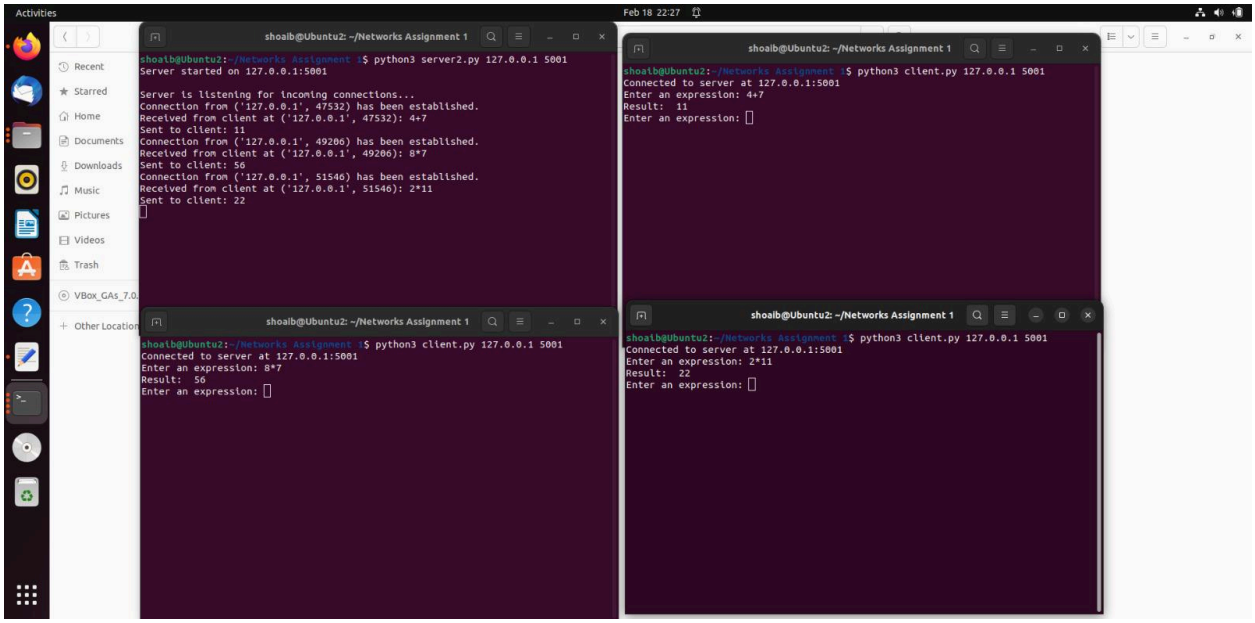
- [TEST2]: For server1, we will start a client, do some math operations (like TEST1), then terminate the client, start a second client, and check that the second client can chat with the server as well.



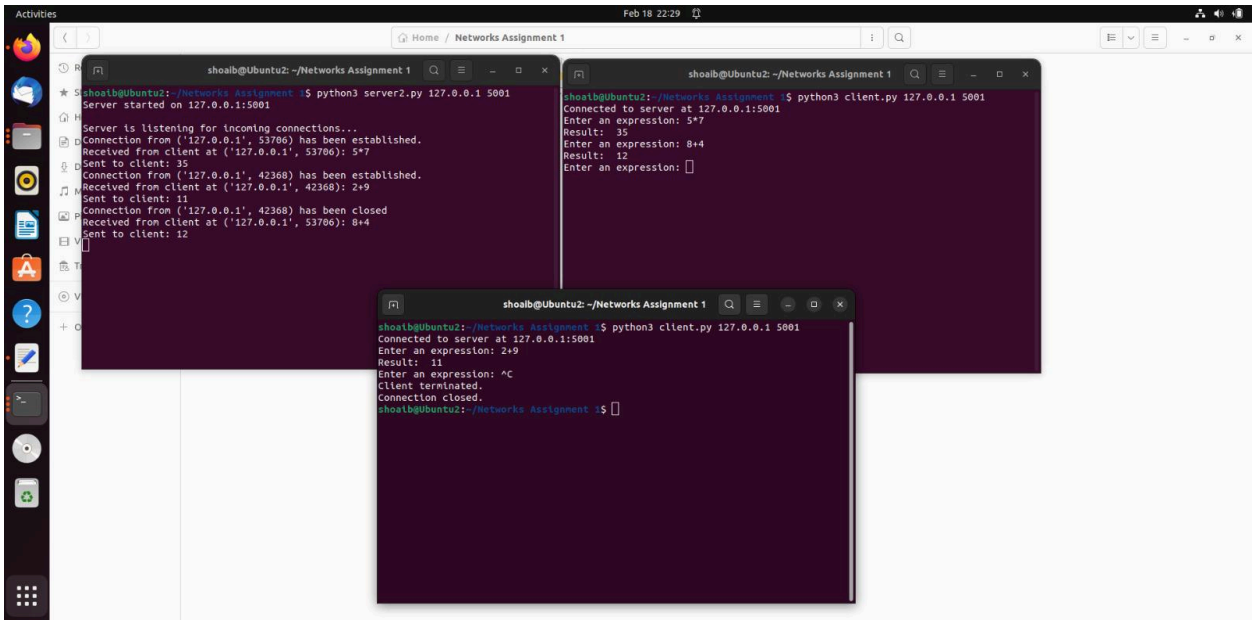
- [TEST3]: For server 1, we will try to connect a second client when the first one is still connected, and check that its socket operations fail.



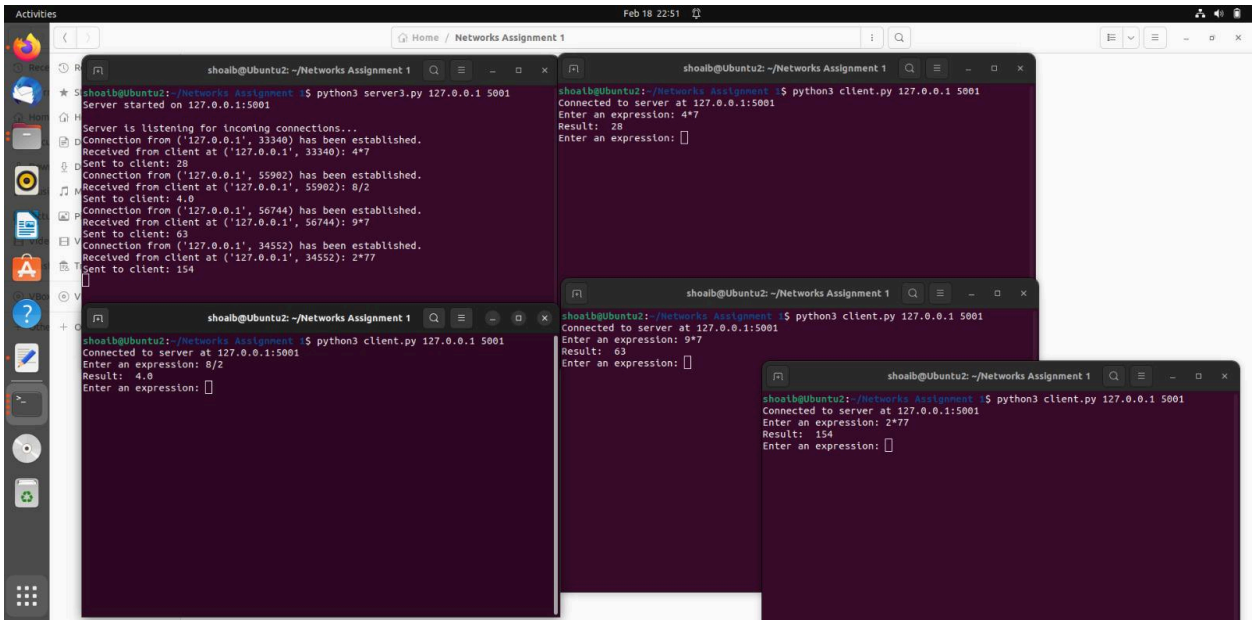
- [TEST4]: For server2, we will test that multiple clients can simultaneously connect and chat with the server correctly.



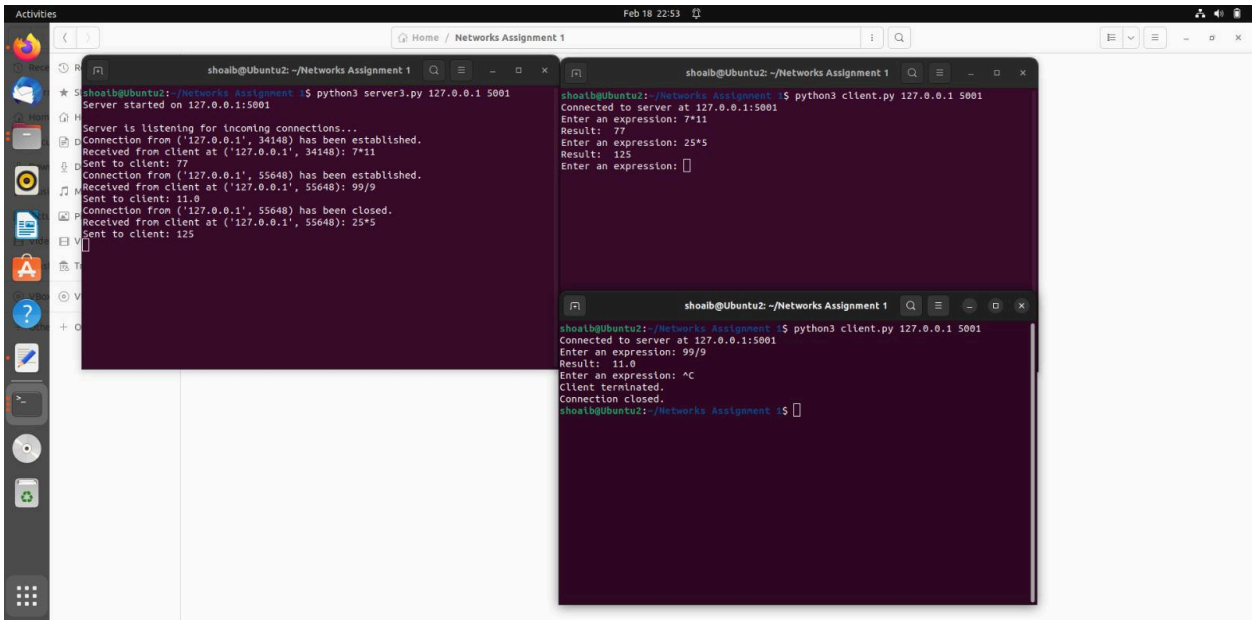
- [TEST6]: For server2, we will connect a client, then connect and disconnect a second client. The first client should continue to function correctly.



- [TEST7] For server3, we will test that multiple clients can simultaneously connect and chat with the server correctly.



- [TEST8] For server3, we will connect a client, then connect and disconnect a second client. The first client should continue to function correctly.



- [TEST9] For server 4, we will test that multiple clients can simultaneously connect and chat with the server correctly.