For running code, server.py and client.py host and port are given through command line argument

For client.py after giving a message none then connection get's closed from client.py

Keep it in mind no spaces in input input should be integerOperatorinteger

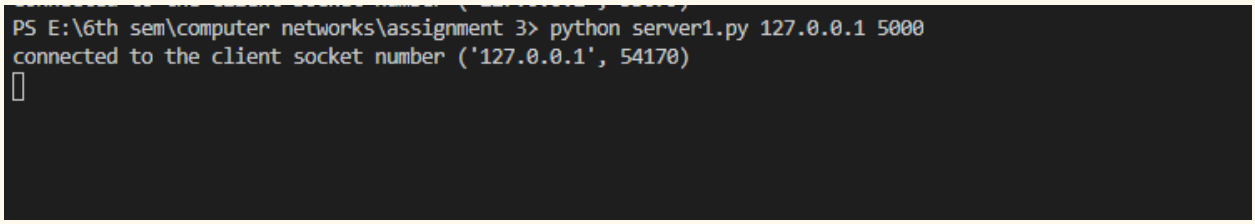
Like 78*78,89/89 no spaces between integer and operator only two integers

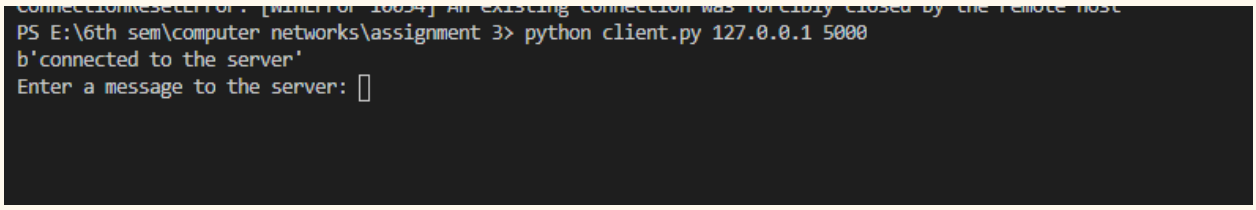
For server1.py

Ans: run server1.py and client.py

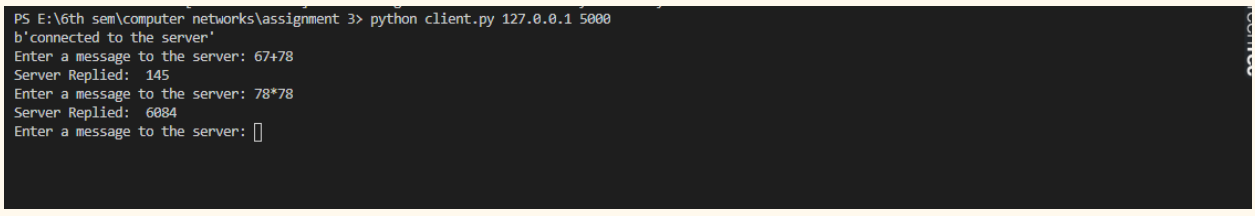
As there were no clients first it will accept request and rest of the clients will be in hang mode

Screenshots:



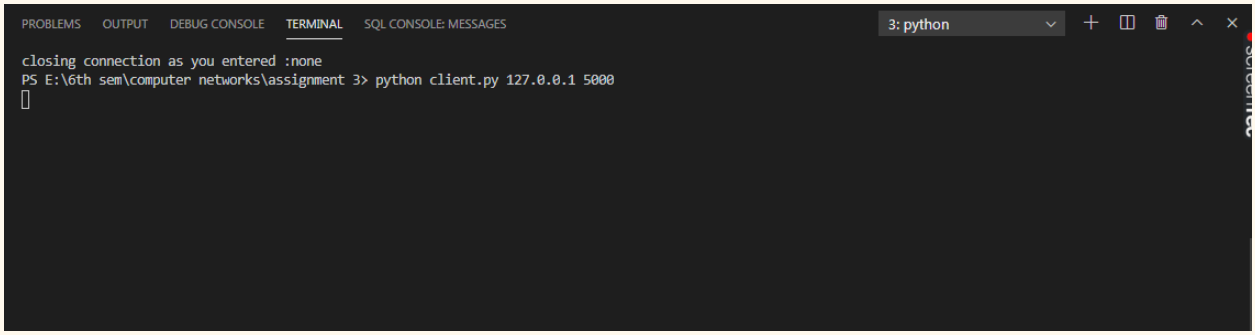


Inputs are given to server and responses got down screenshot is down

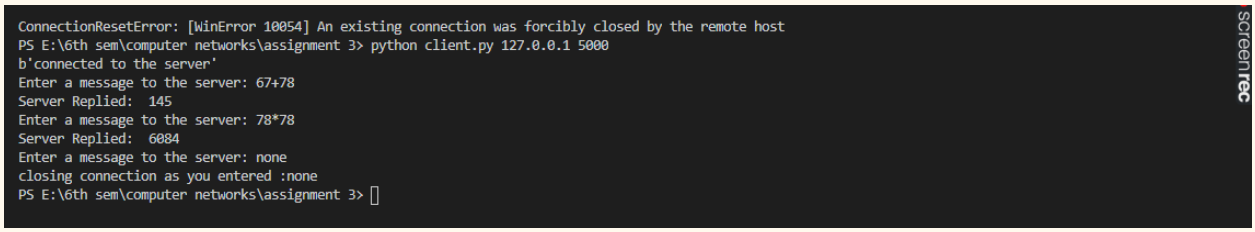


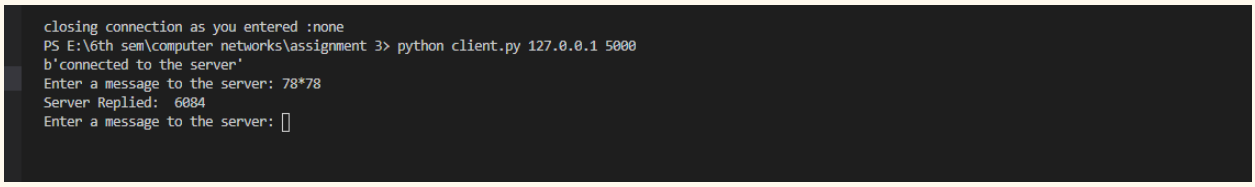
Now if 2nd client wants to join

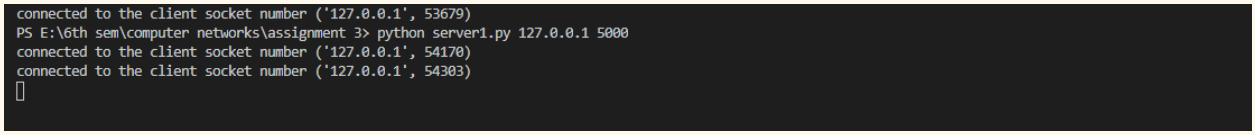
It will be in hang mode no message form server



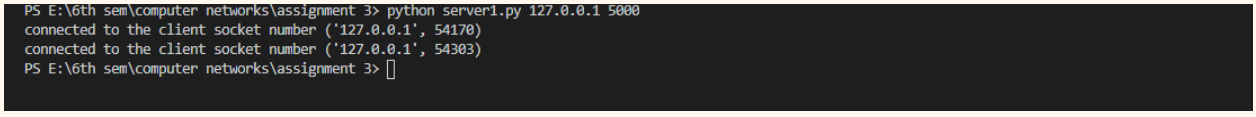
If i close 1st client 2nd will be able to join







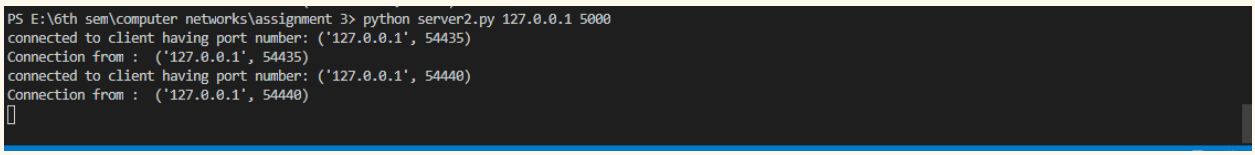
After ctrl-c interrupt occurs screenshot down below server ended



For Server2.py

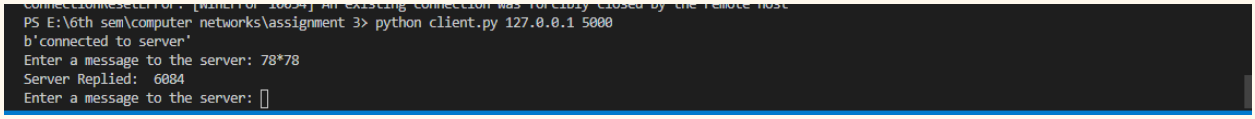
Run server2.py and clients through client.py and you can see results in the command line parallely ,multithreading

Server result

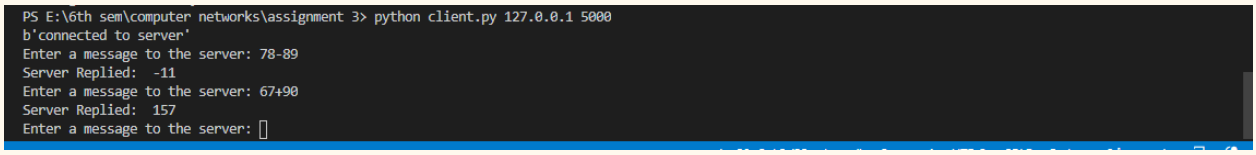


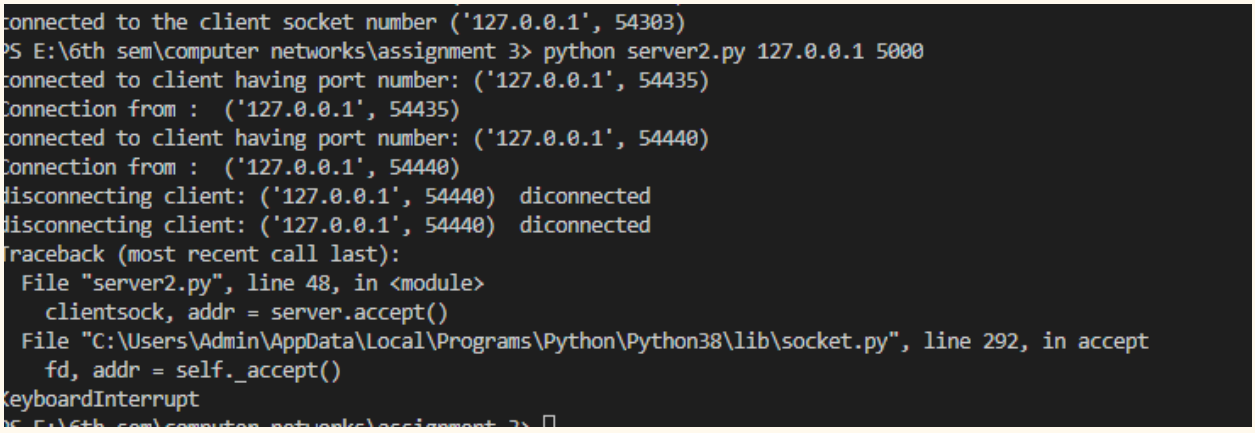
Clients result

1st



2nd





For server3.py

Now the same result as server2.py with the help of select

Server result:2 connetions running parallely

```
PS E:\6th sem\computer networks\assignment 3> python server3.py 127.0.0.1 5000
Connection accepted for: ('127.0.0.1', 54940)
Connection accepted for: ('127.0.0.1', 54950)
connection closed: <socket.socket fd=184, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('127.0.0.1', 5000), raddr=('127.0.0.1', 54950)>
connection closed: <socket.socket fd=140, family=AddressFamily.AF_INET, type=SocketKind.SOCK_STREAM, proto=0, laddr=('127.0.0.1', 5000), raddr=('127.0.0.1', 54940)>
```

Clients results: running parallely

1st client

```
PS E:\6th sem\computer networks\assignment 3> python client.py 127.0.0.1 5000
b'you are connected to network'
Enter a message to the server: 89*98
Server Replied:  8722
Enter a message to the server: 45+89
Server Replied:  134
Enter a message to the server: 45/87
Server Replied:  0.5172413793103449
Enter a message to the server: none
closing connection as you entered :none
PS E:\6th sem\computer networks\assignment 3>
```

2nd client

```
PS E:\6th sem\computer networks\assignment 3> python client.py 127.0.0.1 5000
b'you are connected to network'
Enter a message to the server: 34+98
Server Replied:  132
Enter a message to the server: 43+98
Server Replied:  141
Enter a message to the server: 34*67
Server Replied:  2278
Enter a message to the server: 34/89
Server Replied:  0.38202247191011235
Enter a message to the server: none
closing connection as you entered :none
PS E:\6th sem\computer networks\assignment 3>
```

For server4.py

Same message sending back echoing back parallely running clients

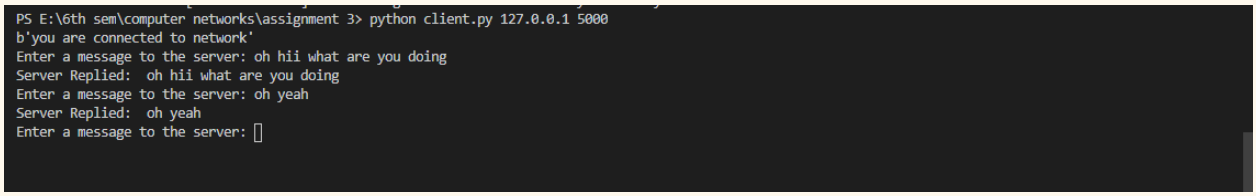
Run server4.py and client.py any number of times

Server Result:

```
PS E:\6th sem\computer networks\assignment 3> python server4.py 127.0.0.1 5000
Connection accepted for: ('127.0.0.1', 55101)
Connection accepted for: ('127.0.0.1', 55113)
```

Clients Result:

1st



2nd