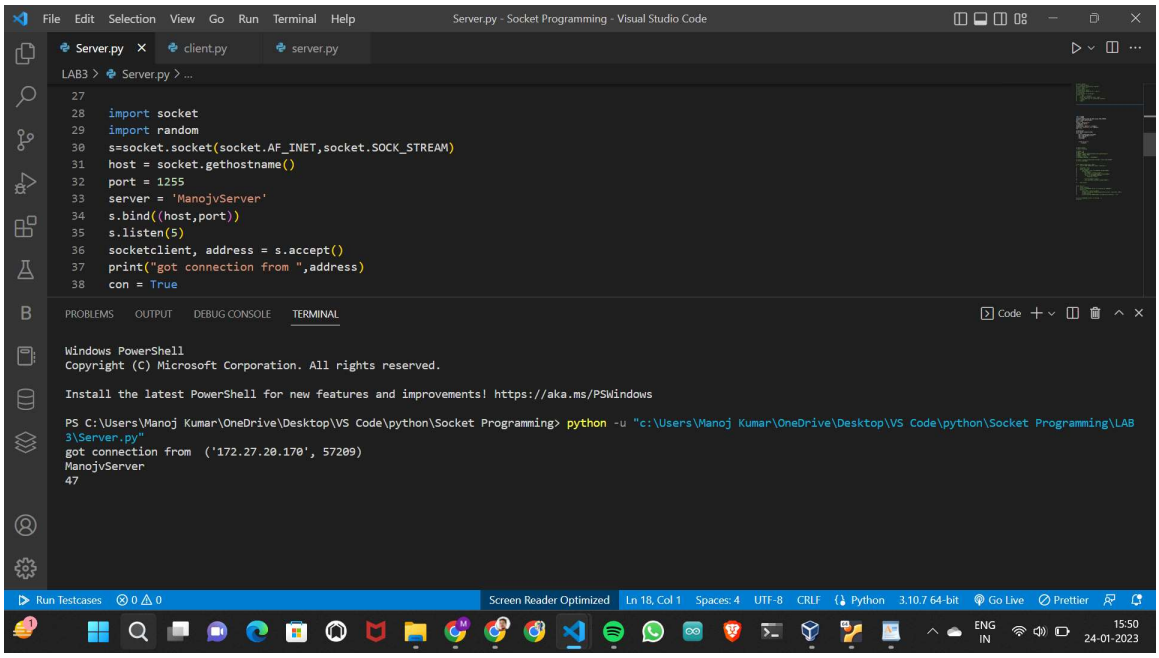
Server Code:

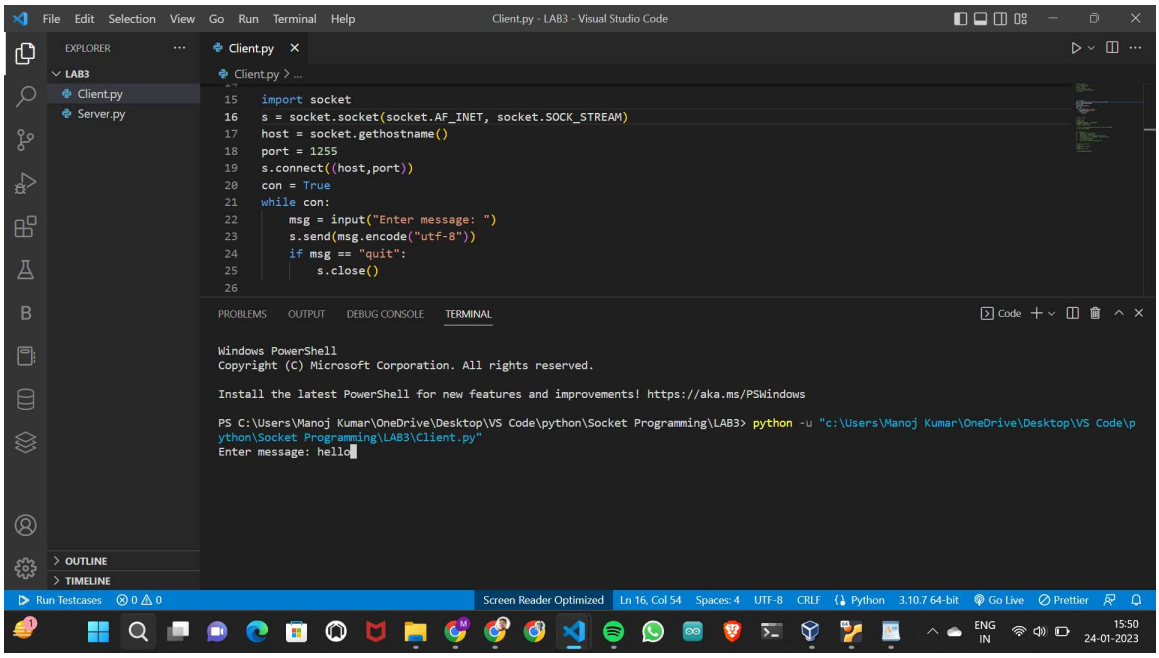
```
import socket
import random
s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)
host = socket.gethostname()
port = 1255
server = 'ManojvServer'
s.bind((host,port))
s.listen(5)
socketclient, address = s.accept()
print("got connection from ",address)
con = True

print(server)
print(random.randint(0,100))
while con:
   msg = socketclient.recv(1024)
   msg = msg.decode("utf-8")
   num = input()
   print(msg)



   if(con =="quit"):
      s.close()
```

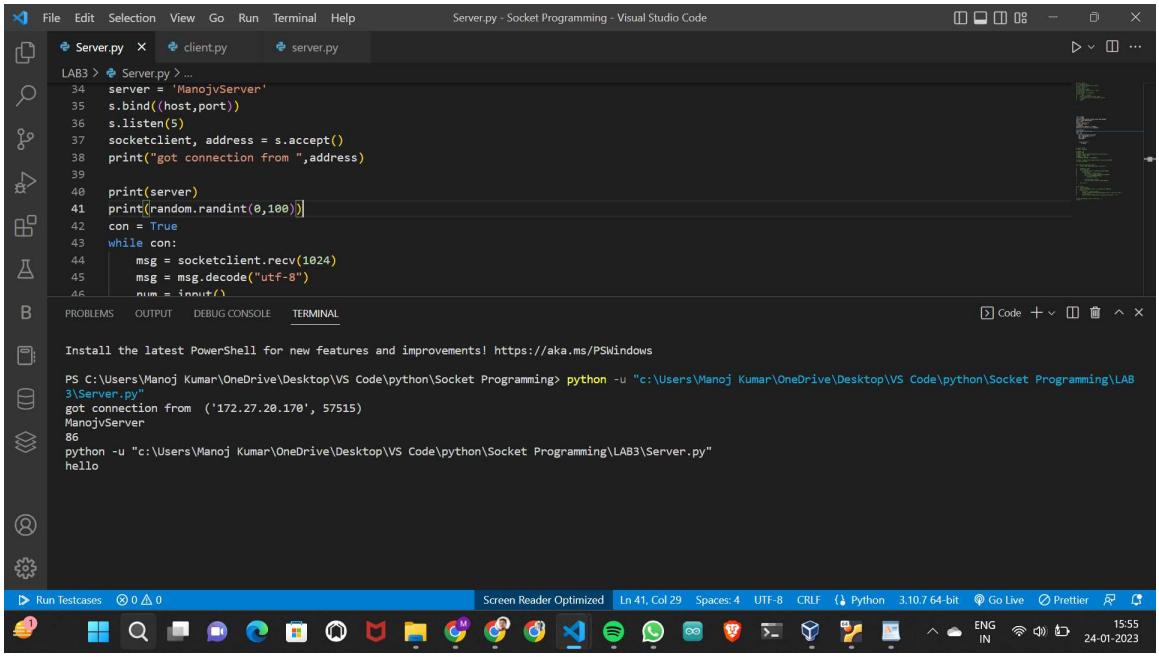


Client Code :

```
import socket

import random

s=socket.socket(socket.AF_INET,socket.SOCK_STREAM)

host = socket.gethostname()

port = 1255

server = 'ManojvServer'

s.bind((host,port))

s.listen(5)

socketclient, address = s.accept()
```

```
print("got connection from ",address)
con = True


print(server)
print(random.randint(0,100))
while con:
    msg = socketclient.recv(1024)
    msg = msg.decode("utf-8")
    num = input()
    print(msg)



    if(con =="quit"):
        s.close()
```

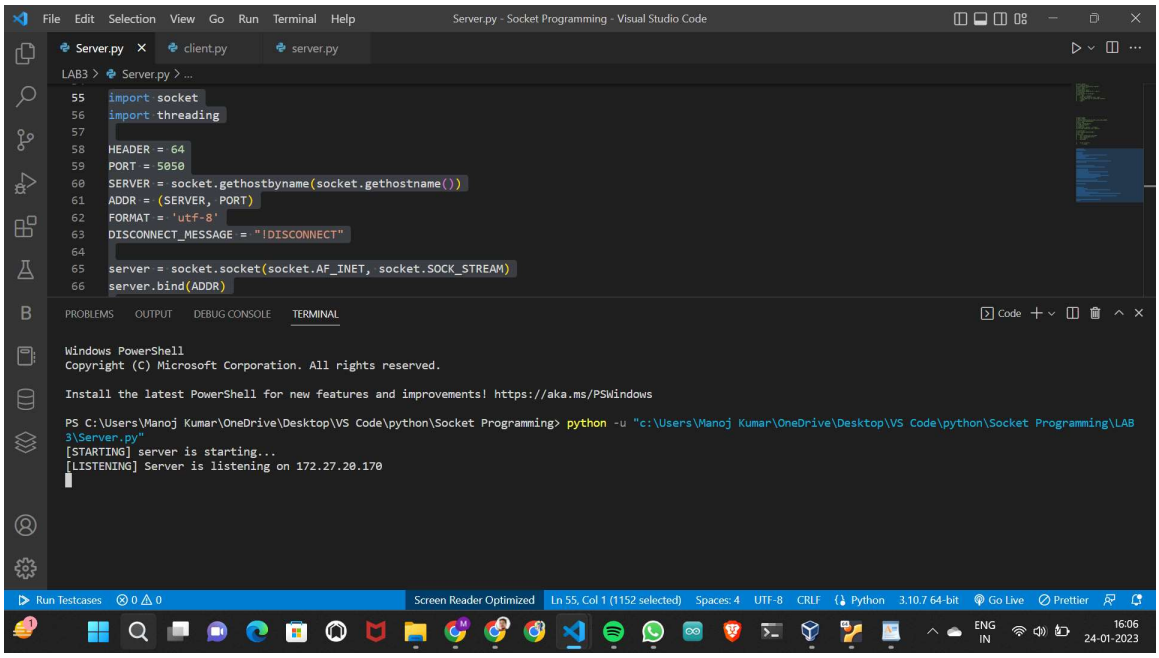

File Edit Selection View Go Run Terminal Help
Client.py - LAB3 - Visual Studio Code
EXPLORER
LAB3
Client.py
Server.py
import socket
s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
host = socket.gethostname()
port = 1255
s.connect((host,port))
con = True
while con:
msg = input("Enter message: ")
s.send(msg.encode("utf-8"))
if msg == "quit":
s.close()
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3> python -u "c:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3\Client.py"
Enter message: hello
OUTLINE
TIMELINE
Run Testcases
Screen Reader Optimized
Ln 16, Col 54
Spaces: 4
UTF-8
CRLF
Python
3.10.7 64-bit
Go Live
Prettier
ENG
IN
15:50
24-01-2023


File Edit Selection View Go Run Terminal Help
Server.py - Socket Programming - Visual Studio Code
Server.py
client.py
server.py
LAB3 > Server.py > ...
server = 'ManojvServer'
s.bind((host,port))
s.listen(5)
socketclient, address = s.accept()
print("got connection from ",address)
print(server)
print(random.randint(0,100))
con = True
while con:
msg = socketclient.recv(1024)
msg = msg.decode("utf-8")
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming> python -u "c:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3\Server.py"
got connection from ('172.27.20.170', 57515)
ManojvServer
86
python -u "c:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3\Server.py"
hello
Run Testcases
Screen Reader Optimized
Ln 41, Col 29
Spaces: 4
UTF-8
CRLF
Python
3.10.7 64-bit
Go Live
Prettier
ENG
IN
15:55
24-01-2023

Question 2

```
import socket
import threading

HEADER = 64
PORT = 5050
SERVER = socket.gethostbyname(socket.gethostname())
ADDR = (SERVER, PORT)
FORMAT = 'utf-8'
DISCONNECT_MESSAGE = "!DISCONNECT"

server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
server.bind(ADDR)


def handle_client(conn, addr):
    print(f"[NEW CONNECTION] {addr} connected.")

    connected = True
    while connected:
        msg_length = conn.recv(HEADER).decode(FORMAT)
        if msg_length:
            msg_length = int(msg_length)
            msg = conn.recv(msg_length).decode(FORMAT)
            if msg == DISCONNECT_MESSAGE:
```

```
            connected = False


        print(f"[{addr}] {msg}")
        conn.send("Msg received".encode(FORMAT))


    conn.close()



def start():
    server.listen()
    print(f"[LISTENING] Server is listening on {SERVER}")
    while True:
        conn, addr = server.accept()
        thread = threading.Thread(target=handle_client, args=(conn, addr))
        thread.start()
        print(f"[ACTIVE CONNECTIONS] {threading.activeCount() - 1}")



print("[STARTING] server is starting...")
start()
```



Client code:

import socket

HEADER = 64

PORT = 5050

DISCONNECT_MESSAGE = "!DISCONNECT"

SERVER = "192.168.1.26"

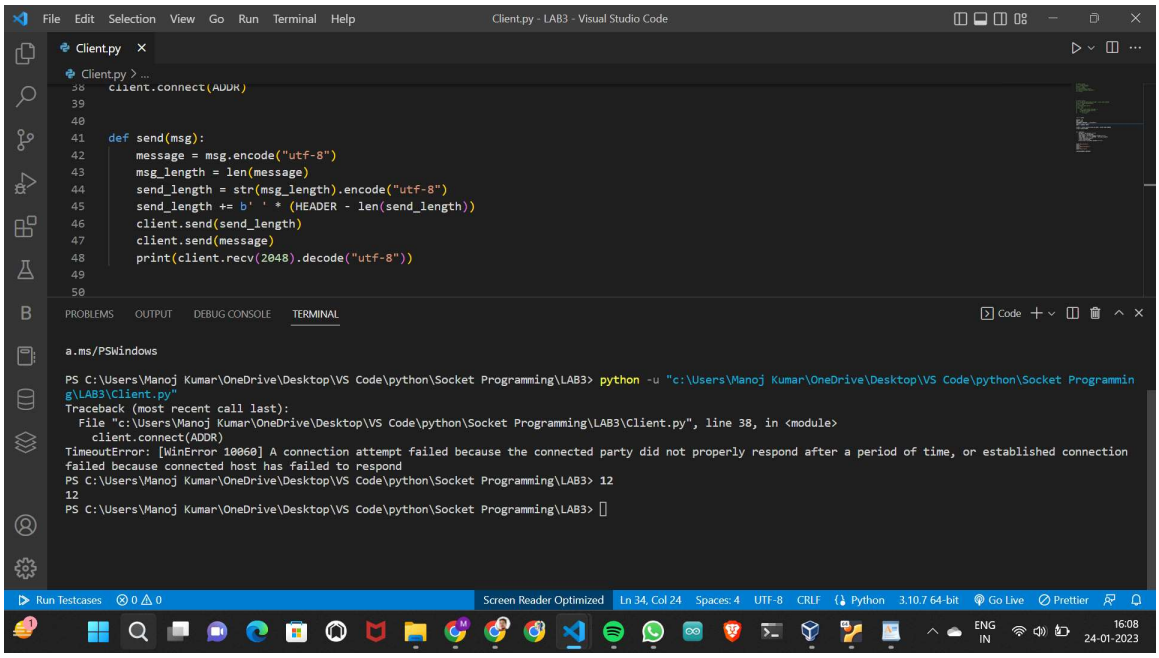
ADDR = (SERVER, PORT)

client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

client.connect(ADDR)

def send(msg):

```
    message = msg.encode("utf-8")
    msg_length = len(message)
    send_length = str(msg_length).encode("utf-8")
    send_length += b' ' * (HEADER - len(send_length))
    client.send(send_length)
    client.send(message)
    print(client.recv(2048).decode("utf-8"))



send("Hello World!")
input()
send("Hello Everyone!")
input()
send("Hello Tim!")

send(DISCONNECT_MESSAGE)
```


File Edit Selection View Go Run Terminal Help
Client.py - LAB3 - Visual Studio Code
Client.py
client.connect(ADDR)
def send(msg):
message = msg.encode("utf-8")
msg_length = len(message)
send_length = str(msg_length).encode("utf-8")
send_length += b' ' * (HEADER - len(send_length))
client.send(send_length)
client.send(message)
print(client.recv(2048).decode("utf-8"))
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
a.ms/PSWindows
PS C:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3> python -u "c:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3\Client.py"
Traceback (most recent call last):
File "c:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3\Client.py", line 38, in <module>
client.connect(ADDR)
TimeoutError: [WinError 10060] A connection attempt failed because the connected party did not properly respond after a period of time, or established connection failed because connected host has failed to respond
PS C:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3> 12
12
PS C:\Users\Manoj Kumar\OneDrive\Desktop\VS Code\python\Socket Programming\LAB3>
Run Testcases
Screen Reader Optimized
Ln 34, Col 24
Spaces: 4
UTF-8
CRLF
Python
3.10.7 64-bit
Go Live
Prettier
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16:08
24-01-2023