Assignment - 3

```python
import socket
import threading

clients = []
usernames = []

s = socket. socket (socket.AF_INET, socket.SOCK_STREAM)
Host = socket.gethostname ()
Port = 1235
s.bind((Host , Port))
s.listen (5)

def broadcast (msg):
    for client_socket in clients :
        client_socket.send(msg)

def handle (client_socket) :
    while True:
        try:
            message = client_socket.recv(1824)
            broadcast (message)
        except:
            index = clients.index(client_socket)
            clients.remove(client_socket)
            unused_username = usernames[index]
```

```python
    while True:
        try:
            message = client_socket.recv(1824)
            broadcast (message)
        except:
            index = clients.index(client_socket)
            clients.remove(client_socket)
            unused_username = usernames[index]
            print(f'{unused_username} left the Chatroom')
            usernames.remove(unused_username)
            break
def receive():
    while True:
        client_socket, address = s.accept()
        print(f"Connection to {address} established")
        message = client_socket.send('connected'.encode('utf-8'))
        username = client_socket.recv(1024).decode('utf-8')
        usernames.append(username)
        clients.append(client_socket)
        print(f" {username} joined the chatroom ")
        broadcast(f'{username} joined the chatroom successfully'.encode('utf-8'))
        t1 = threading.Thread(target=handle, args=(client_socket,))
        t1.start()

receive()
```

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```python
import socket
import threading

client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
Host = socket.gethostname()
Port = 1235
client.connect((Host, Port))
username = input("u joined the chat roem,plz enter ur username: \n")


def receive() :
    while True:
        message = client.recv(1024).decode('utf-8')
        if message == "connected":
            client.send(username.encode('utf-8'))
        else:
            print(message)

def typing () :
    while True:
        msg = f'{username} : {input("")}'
        client.send(msg.encode('utf-8'))


t_rec = threading.Thread (target = receive)
```

Server terminal:

```
PS D:\College\Sems\Semester 8\Network Programming\Network Programming Secti
on\Sec3> py server.py
Connection to ('192.168.16.2', 61854) established
 User1 joined the chatroom
Connection to ('192.168.16.2', 61865) established
 User2 joined the chatroom
```

Client 1 terminal:

```
PS D:\College\Sems\Semester 8\Network Programming\Network Programming Secti
on\Sec3> py client.py
u joined the chat roem,plz enter ur username:
User1
User1 joined the chatroom successfully
User2 joined the chatroom successfully
User2 : Helllllllllllllllo
How u doin
User1 : How u doin
```

Client 2 terminal:

```
PS D:\College\Sems\Semester 8\Network Programming\Network Programming Secti
on\Sec3> py client.py
u joined the chat roem,plz enter ur username:
User2
User2 joined the chatroom successfully
Helllllllllllllllo
User2 : Helllllllllllllllo
User1 : How u doin
```

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