

## Assignment-B8 (TCP Socket) – Output

### # Code

#### ## Client

```
import socket
import threading
host = '127.0.0.1' # server ip
port = 4444      # free/open port
print(f"[#] connecting to {host}:{port}")
nickname = input("[+] enter nickname:")
client = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
client.connect((host, port))
print(f"[+] connected to {host}:{port}")
def receive():
    while True:
        try:
            msg = client.recv(1024).decode('ascii')
            if msg == 'NICKNAME':
                client.send(nickname.encode('ascii'))
            else:
                print(msg)
        except:
            print("[!] error 404\n[#] terminating...")
            client.close()
            break
def write():
    while True:
        msg = f"{nickname}: {input('')}"
        client.send(msg.encode('ascii'))
receive_thread = threading.Thread(target=receive)
receive_thread.start()
write_thread = threading.Thread(target=write)
write_thread.start()
```

#### ## Server

```
import socket
import threading
host = '127.0.0.1' # server ip
server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
server.bind((host, port))
```

```

server.listen()
clients = []
nicknames = []
print(f"[+] Server is running on {host}:{port}")
def broadcast(msg):
    for client in clients:
        client.send(msg)
def handle(client):
    while True:
        try:
            msg = client.recv(1024)
            broadcast(msg)
        except:
            index = clients.index(client)
            try: clients.remove(index)
            except: pass
            client.close()
            nickname = nicknames.index(index)
            nicknames.remove(nickname)
            print(f"[-] '{nickname}' left")
            break
def receive():
    while True:
        client, addr = server.accept()
        print(f"[+] '{str(addr)}' connected")
        client.send('NICKNAME'.encode('ascii'))
        nickname = client.recv(1024).decode('ascii')
        clients.append(client)
        nicknames.append(nickname)
        print(f"[+] '{nickname}' connected")
        broadcast(f"[#] {nickname} connected to the
server\n".encode('ascii'))
        client_handler = threading.Thread(target=handle,
args=(client,))
        client_handler.start()
receive()

```

## # Output

### ## Server

```
$ python3 Code-B8\ \ (Server\).py
[+] Server is running on 127.0.0.1:4444
[+]>('127.0.0.1', 34664)' connected
[+] 'kshitij' connected
[+]>('127.0.0.1', 38974)' connected
[+] 'kalas' connected
[+]>('127.0.0.1', 43866)' connected
[+] 'mepa' connected
[+]>('127.0.0.1', 54102)' connected
[+] 'hp' connected
```

### ## Clients

```
$ python3 Code-B8\ \ (Client\).py
[#] connecting to 127.0.0.1:4444
[+] enter nickname:kshitij
[+] connected to 127.0.0.1:4444
[#] kshitij connected to the server

[#] kalas connected to the server

[#] mepa connected to the server

[#] hp connected to the server
```

```
$ python3 Code-B8\ \ (Client\).py
[#] connecting to 127.0.0.1:4444
[+] enter nickname:mepa
[+] connected to 127.0.0.1:4444
[#] mepa connected to the server

[#] hp connected to the server
```

```
$ python3 Code-B8\ \ (Client\).py
[#] connecting to 127.0.0.1:4444
[+] enter nickname:kalas
[+] connected to 127.0.0.1:4444
[#] kalas connected to the server

[#] mepa connected to the server

[#] hp connected to the server
```

```
$ python3 Code-B8\ \ (Client\).py
[#] connecting to 127.0.0.1:4444
[+] enter nickname:hp
[+] connected to 127.0.0.1:4444
[#] hp connected to the server
```