

## Practical 12

### AIM:

b) Implement chat client server using TCP/UDP sockets.

### ALGORITHM:

#### **Chat Server**

##### **1. Start the Server:**

- Create a socket (like a phone line).
- Bind it to a specific address and port (set your phone number).
- Listen for incoming connections (wait for calls).

##### **2. Accept Connections:**

- When a new client connects:
  - Add the client to a list of connected clients.
  - Start a new process to talk to this client (like talking on a different line).

##### **3. Receive Messages:**

- For each connected client:
  - Keep checking for new messages.
  - When a message is received, show it on the server screen.
  - Send this message to all other clients (share the message with everyone).

##### **4. Handle Disconnections:**

- If a client disconnects:
  - Remove that client from the list.
  - Stop talking to that client.

##### **5. Keep Running:**

- Repeat the process until you stop the server.

## Chat Client

### 1. Connect to the Server:

- Create a socket (your phone).
- Connect it to the server's address and port (call the server).

### 2. Receive Messages:

- Start a process to listen for messages from the server:
  - Whenever a message arrives, show it on your screen.

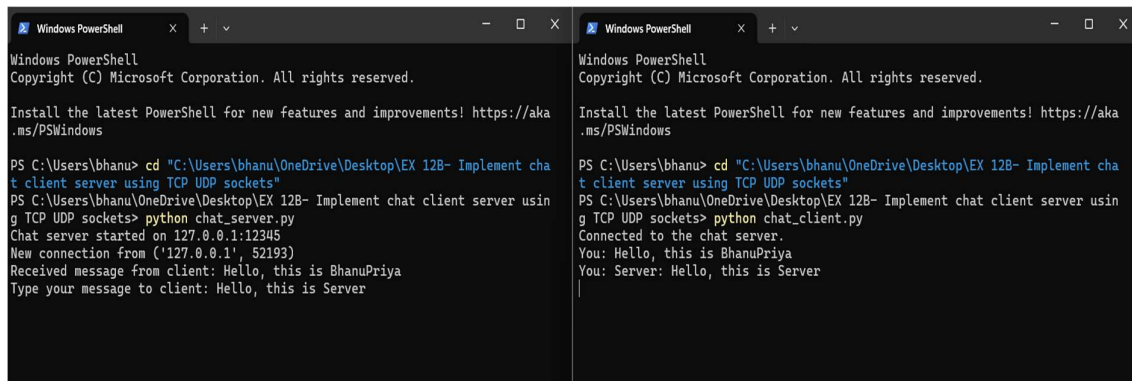
### 3. Send Messages:

- Keep asking the user for new messages:
  - If the user types a message, send it to the server.
  - If the user types 'exit', disconnect from the server and close the client.

### 4. Keep Running:

- Repeat the process until the user decides to exit.

## OUTPUT:



```
Windows PowerShell
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PS C:\Users\bhanu> cd "C:\Users\bhanu\OneDrive\Desktop\EX 12B- Implement chat client server using TCP UDP sockets"
PS C:\Users\bhanu\OneDrive\Desktop\EX 12B- Implement chat client server using TCP UDP sockets> python chat_server.py
Chat server started on 127.0.0.1:12345
New connection from ('127.0.0.1', 52193)
Received message from client: Hello, this is BhanuPriya
Type your message to client: Hello, this is Server

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PS C:\Users\bhanu> cd "C:\Users\bhanu\OneDrive\Desktop\EX 12B- Implement chat client server using TCP UDP sockets"
PS C:\Users\bhanu\OneDrive\Desktop\EX 12B- Implement chat client server using TCP UDP sockets> python chat_client.py
Connected to the chat server.
You: Hello, this is BhanuPriya
You: Server: Hello, this is Server
```