Aim:-

To implement chat client server using the TCP and UDP sockets.

server Side Algorithm:-

```
import socket
server = socket : socket (socket . AF_INET,
            socket . Soc(s). STREAM)
Server. bind (('localhost", 12 34 6))
Server . listen (1)
Print ('server is waiting for connection...)
conn, addr = server : accept ()
print (f "connected to {addr}" );
while true:
    msg = conn. recv (1024).decode()
    if msg. lower () == 'bye'
        print ("client dis connected )
        break
    print(f" Client {img})
    reply: input {you:}
    conn. send (reply. encode ())
    if reply lower () == 'bye'
        break
    conn.close ().
```

Client side Algorithm:

```python
import socket
client = socket.Socket (socket.AF_
    socket.SOCK_STREAM)
client.connect(("localhost", 12346))
while true
    message = input("you: ")
    client.send(message.encode())
    if message.lower() == "bye":
        break.
    reply = client.recv(1024).decode()
    print(f"Server {reply}")
    if reply.lower() == "bye":
        break
client.close()
```

Sample Input and output:-

Server side:-

Server waiting for connection.
connected to ("127.0.0.1", 89010)
Client Hi server!

You: Hello client.

client : How are you?
you : I'm fine, thanks .
client : bye
client disconnected.
client side :-
you : The Server !
Server : Hello client
you : How are you?
Server : I'm fine, thanks!
you : bye :

Result :

Hence the experiment on implementing chat on client server using Tcp and udp sockets