EXP NO: 12A

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Implementation of echo client server using TCP/UDP sockets.

AIM:

To implement an echo client server by using TCP/UDP sockets.

Server - side Algorithm :

```
Import Socket :
    Server - socket = Socket . Socket ( socket . AF_
                                INET, Socket - SOCK - STREAM)
    Server - socket . listen (1)
    print ("Server is waiting for connections")
    Conn, addr = server - socket . accept ()
    printf ("f" Connected to {addr}")
while true :
    data = Conn . recv (1024) . decode ()
    if not data or data . lower () == 'Bye' :
    print ("Connection closed")
    break
    print (f"Received from client : {data}")
Conn . send (data . encode ());
Conn . closed ()
```

Client - side Algorithm:

```
import socket = socket.socket(socket.
                AF_INET, socket.SOCK_STREAM)

Client_socket.connect(('local host',
                12345))

while true:
    message = input("Enter message:")
    Client_socket.send(message.encode())
    if message.lower() = 'bye':
    break
    data = Client_socket.recv(1025).
           decode()
    print(f"Echo from server: {data}")
Client_socket.close()
```

Sample inputs and outputs:

Client side:

Enter message : Hello server.

Echo from server: Hello server.

Enter message : How are you?

Echo from server : How are you?

Enter Message: Bye.

Server side :

server is waiting for connection

Connected to ('127.0.0.1', 58944)

Received from client : Hello server

Received from client : How are you?

Connection closed

10/10/25

RESULT:

the implementation of echo client server using TCP / UDP sockets is executed successfully