PRACTICAL - 12

AIM :-

(a) Implement echo client server using TCP/UDP sockets.

ALGORITHM :-

```
import socket
import time

def ping_server (host = '127.0.0.1', port = 12345):
    with socket.socket (socket.AF_INET, socket.
                        SOCK_DIAGRAM) as s:
        s.settimeout (3)
        print ("UDP client started...")
        for i in range (5):
            message = f"Hello {i+1}"
            try:
                print (f"Sending message : {message}")
                s.sendto (message.encode (), (host, port))
                data, server = s.recvfrom (1024)
                print (f"Received reply from {server}:
{data.decode ()}")
            except socket.timeout:
                print ("Request timed out")
        time.sleep (1)
    print ("Client finished sending messages.")
ping_server ().
```

OUTPUT:-

UDP client started...
Sending message: Hello 1
Received reply from ('127.0.0.1', 12345): Message received: Hello 1

Sending message: Hello 2
Received reply from ('127.0.0.1', 12345): Message received: Hello 2

Sending message: Hello 3
Received reply from ('127.0.0.1', 12345): Message received: Hello 3

Sending message: Hello 4
Received reply from ('127.0.0.1', 12345): Message received: Hello 4

Sending message: Hello 5
Received reply from ('127.0.0.1', 12345): Message received: Hello 5

Client finished sending messages.

RESULT:-

Thus the above code is executed successfully.

PRACTICAL-12

AIM:-

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

ALGORITHM:-

```
import socket
def start_server(host = '127.0.0.1', port = 12345):
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
        s.bind((host, port))
        print(f"UDP Server running on {host}:{port}")

        while True:
            data, addr = s.recvfrom(1024)
            print(f"Received message from {addr}: {data.decode()}")
            reply = f"Message received: {data.decode()}"
            s.sendto(reply.encode(), addr)

start_server()
```

OUTPUT :-

UDP Server running on 127.0.0.1 : 12345
Received message from ('127.0.0.1', 56210) : Hello 1
Received message from ('127.0.0.1', 56210) : Hello 2
Received message from ('127.0.0.1', 56210) : Hello 3
Received message from ('127.0.0.1', 56210) : Hello 4
Received message from ('127.0.0.1', 56210) : Hello 5.

RESULT :-

Thus the above code is executed sucessfully