Aim:

    To implement echo client server using TCP/UDP sockets.

Algorithm:

a) client

```
import socket
def ping-server (host = '127. 0. 0. 1', port
                                       = 12345):
    with socket.socket (socket . AF-INET,
                socket. SOCK-DGRAM) as s:

        s. settimeout (2)

        message = input ("Enter message to
            send : "). encode()

        s. sendto (message, (host, port))

        try :

        data. addr = s. recvfrom (1024)
        print ("Echo from server:", data.decod

        except socket.timeout:
        print ("Request timed out")

if __name__ == "__main__":

    ping - server ()
```

b) server

```python
import socket
def start_server(host='127.0.0.1', Port=12345)

    with socket.socket(socket.AF_INET, sock.
                SOCK_DGRAM) as s:

        s.bind((host, port))
        print("UDP server running on {host}:
                        {port}")

        while TRUE:

            data-addr = s.recvfrom(1024)

            print("Recieved message from {addr}:
                    {data.decode()}")

            s.sendto(data, addr)

    if __name__ == "__main__":

        start_server
```

Input/output

client:

    Enter message to send : Hello

    Echo from server : Hello

server:
    UDP server running on 127.0.0.1:12345

    Received message from ('127.0.0.1', 54321):
                                Hello

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```
UDP Server running on 127.0.0.1:12345
Received message from ('127.0.0.1', 63852): Hello
```

client.py

```
Enter message to send: Hello
Echo from server: Hello
```

Result:

The program has been executed successfully.