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Aim:

(a) Implement echo client Server using TCP/UDP Sockets.

Client:

```
import Socket
Import time
def ping_Server (host = '127.0.0.1', port = 12345):
    with Socket.Socket (Socket.AF_INET, Socket.
        Soc_dgram) as s:

    try:
        S. Sendto ("hello", (host, port))
    except S.timeout:
        print ("Request timed out")

if __name__ == "__main":
    ping_server()
```

Server:

```
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}")

while true:
    data, addr = s. recvfrom (1024)
    print (f"Received message from {addr}: {data.
            decode()}")
if __name__ == "__main__":
    Start_Server()
```

o/p: python server.py

UDP Server running on 127.0.0.1 : 12345
Received message from ('127.0.0.1', 59270), hello

Python client.py

Received reply from ('127.0.0.1', 59290)
Server: Hello, client

(b) Implement chat client Server using TCP / UDP Sockets:

Server:

```
import Socket
def receive():
    port = 12345
    host = '127.0.0.1'
    with Socket.Socket(Socket.AF_INET, Socket.SOCK_DGRAM)
        as s:
        s.bind((host, port))
        while (True):
            d, add = s.recvfrom(1024)
            print("client", d.decode())
            a = input("Enter reply")
            s.sendto(a.encode(), add)
            if (a == "end")
                break
                edit
```

>>>

Client:

```
Import Socket
import time
def srecv2(a):
    host = '127.0.0.1'
    port = 12345

    with Socket.Socket(Socket.AF_INET, Socket.SOCK_DGRAM)
            as s:
        s.sendto(a.encode(), (host, port))
        de.addr = s.recv from(1024)
        print("d. decode()")

    while(True):
        a = input("Enter Message")
        if (a == "end"):
            srecv2(a)
            break
        else:
            srecv2(a)
```

o/p: Server.py = client {'hi'}
Enter Reply: hello
client {"How are you"}
Enter Reply: Im fine

o/p: client.py = Enter Message: hi
{'hello'}
Enter Message: How are you
{'I'm Fine}

Result:

Thus the program is executed successfully and the output is verified.