Exp.No: 12

Date:

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.SOCK_DGRAM) as s:
        try:
            s.sendto(b"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:
    c.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__":
```

O/P:- python server.py

UDP Server running on 127.0.0.1:12345

Received message from ('127.0.0.1', 59290). : Hello.

Python client.py

Received reply from server: Hello, Client

b) Implement chat client server using TCP/UDP Sockets:

Chat server.py

```
import socket
def recvr1():
    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
```

recvr2.py:

```
import socket
import time
def recvr2(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))
```

```
d, addr = s.recv from (1024)
Print (d.decode())

while (true):
    a = input ("Enter Message")
    if (a == "end"):
        recv2(a)
        break
    else:
        recv2(a)
```

O/P:

```
Python .\ Chat_serv.py
Client 'hi'
Enter Reply hello
client "How are you"
Enter Reply : Im fine

Python .\ recv.py
Enter message hi
'hello'
Enter Messages How are you
'Im fine'
Enter Message.
```

Result:

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