EX. NO: 12 DATE: 24/01/24

TCP/UDP SOCKETS

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(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:
    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()
```

OUTPUT : 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_serv.py

```
import socket
  def Sent():
      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, addl = s.recvfrom (1024)
        print ("client", {d.decode ()})
        a = input ("Enter reply");
        s.sendto (a.encoded (), addl)
        if (a == "end")
          break
          exit.
```

receive.py

```
import socket
import time
def recv2(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.recvfrom(1024)
print (f{d.decode()})
while (true):
    a = input ("enter message")
    if (a == "end"):
        recv2(a)
        break
    else
        recv2(a)
```

OUTPUT:

```
Python ./chat_serv.py
client {'hi'}
Enter reply hello
client {'how are you'}
Enter reply: I'm fine
```

```
Python ./recv.py
Enter message hi
        {'hello'}
Enter messages how are
you {'I'm fine'}
Enter message
```

RESULT:

Thus, the program is executed successfully & the output is verified.

19/11/24