Ex.no: 12.
16/10/2024

TCP/UDP sockets

AIM:

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 (1, "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.recvform (1024).
    print (f "Received message from {addr}
               {data . decode {}}").

 if . name == "_main_" :
  start _ server ()
```

O/P. Python server . py .

```
DP server running   on 127 : 0 . 0 . 1 : 12595
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 server ():
 port = 12345
 host = "127 . 0 . 0 . 1"
 with socket . socket (socket . AF_INET, socket .
                    sock . DIAGRAM) as s :

 S. bind ((host_ port)).
 while (True).
```

```
d; add = s. recv from (1024):
print ("client; {d. decode ()}")
    a = input ("Enter reply")
  s. send to (a . encode (), add)
    if (a == "end"):
      break
      exit
  reciver ().
```

recur 2 . py::

```
import socket
  import time
  def recv (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 ({d. decode ()})
      while (True):
        a = input ("Enter Message")
        if (a == "end"):
```

```
    recur2(a).
    break.
else.
    recur2(a).
```

O/P

```
Python .\chat_serv.py
client {'hi'}.
 Enter reply hello.
 client {"How are you"?}.
 Enter reply Im fine.

Python .\recur.py.
Enter message hi
 {'hello'}.
 Enter Message How are you.
 {'I'm fine'}
 Enter Message.
```

RESULT

The program is succenfully executed & the output is verified.

19/11/24