1.1 gig 0/0

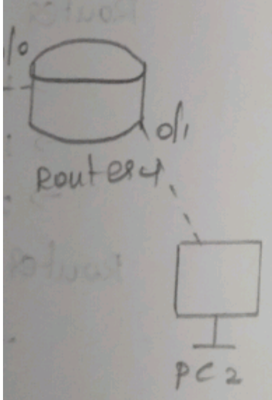
.1.1 gig 0/0

e connected 2

subnet 2mask

connected gig 0/1

connected gig 0/1



executed.

using

Exp No.12)a client /server

Aim:

To implement echo client server using TCP/UDP sockets.

Algorithm:

server.py:

-> create a UDP socket
-> Bind the socket to specific IP address (127.0.0.1) & port (12345)
-> continuous listen for incoming message
-> when message received - decode it
-> Display message along with sender address
-> Repeat infinetely

client.py:

-> create UDP socket
-> set a timeout for socket to avoid waiting
-> send a predefined message to allow to server IP address & port 12345.
-> If no response received in period, print timeout message
-> close socket after sending message.

Code:

server.py:

```
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}:
                              {port}")

    while True:
        data, addr = s.recvfrom(1024)
        print(f"Received message from {addr}:
                     {data.decode()}")

if _name_ == "__main__":
    start_server()
```

client.py:

```
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()
```

Output:

server.py:

Terminal

```
> python server.py
>> UDP server ru
```

client.py:

Terminal

```
> python client.
>> Message sent
```

server Terminal

```
Received messag
```

Result:

Thus, th
server using
implemented

```
1.0.0.1', port = 12345):
t. AF_INET,
ock_DGRAM) as s:
nning on {host}:
      {port}")

m(1024)
sage from {addr}:
de()}")

 port = 12345):
t. AF_INET,
RAM) as s:

ort))

 out")
```

output:

server.py:

```
Terminal
  > python server.py
>> UDP server running on 127.0.0.1:12345
```

client.py:

```
Terminal
  > python client.py
>> Message sent to server.
```

server Terminal:

```
Received message from ('127.0.0.1', 56003): Hello
```

Result:

Thus, the program of echo client server using UDP socket has been implemented & executed successfully.