Ping Program

Exp No.: 13

Aim:

To implement your own ping program

Algorithm:

UDP server:

→ create UDP socket & bind it to a specific address & port

→ wait for message

→ print message & client address

→ send back ping to client

UDP client:

→ create UDP socket & set a 2 sec timeout.

→ send ping to server

→ if a response (pong received -print response & calculate RTT

→ if no response within 2 sec print request time out

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 Tru
    data,
    print (

    s.send
if __name__ = "__m
    start_server()

client.py:

```
import socket
import time
def ping_server(
    with socket
        soc
        try:
            s.sett
            start
            s.send
            data,
            end =
            print
            {addr}
        except so
            pr
if __name__ == "
    ping_server
```

```python
while True:
    data, addr = s.recvfrom(1024)
    print(f"Received message from
                {addr} {data.decode()}")
    s.sendto(b'Pong', addr)
if __name__ == "__main__":
    start_server()
```

client.py:

```python
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.settimeout(2)
            start = time.time()
            s.sendto(b'Ping', (host, port))
            data, addr = s.recvfrom(1024)
            end = time.time()
            print(f"Received {data.decode()} from
            {addr} in {end - start:.2f} seconds")
        except socket.timeout:
            print("Request timed out")
if __name__ == "__main__":
    ping_server()
```

output:
=

Terminal

>python server.py

UDP server running

on 127.0.0.1 :12345

Received message

from ('127.0.0.1', 5006l:
ping)

Terminal

>python client.py

Received ping from

('127.0.0.1',12345)"
0.00 seconds

Result:
=

Thus, the program for ping program
was successfully executed and the output
is verified.

Exp No:: 14

Aim:
=
To write a

to implement

Source code:
=

from scapy. all

from scapy. lays

def packet-call

if IP in po
ip-layer

protocol

src-ip =

dst-ip

Deter
protoc
if pr

elif

elif

else

Pr
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