

ExNo:13

Ping program

Date: 6/10/25

Aim:

To implement our own ping program

a) Server

```
import socket
```

```
def start_server(host='127.0.0.1', port=12345):
```

```
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM)
```

```
        s.bind((host, port))
```

```
        print(f"UDP Ping server running on  
        {host}:{port}")
```

```
    while True:
```

```
        data, addr = s.recvfrom(1024)
```

```
        print(f"Received from {addr}:  
        {data.decode()}")
```

```
        s.sendto(b'Pong', addr)
```

```
start-server()
```

b) client

```
import socket
```

```
import time
```

```
def start_client(host='127.0.0.1', port=12345, count=5)
```

```
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
```

```
        s.settimeout(2)
```

```
        for i in range(count):
```

```

start = time.time()
s.sendto(b'ping', (host, port))

try:
    data, addr = s.recvfrom(1024)
    end = time.time()
    rtt = (end - start) * 1000
    print(f'Reply from {addr[0]}:{data.decode()}\n(RTT: {rtt:.2f}ms)')
except socket.timeout:
    print("Request timed out:")

```

Output

server:

```

UDP Ping server running on 127.0.0.1:12345
Received from ('127.0.0.1', 52735): Ping

```

client:

```

Reply from ('127.0.0.1', 12345): Pong, RTT=0.5ms
Reply from ('127.0.0.1', 12345): Pong, RTT=0.58ms
Reply from ('127.0.0.1', 12345): Pong, RTT=1.82ms
Reply from ('127.0.0.1', 12345): Pong, RTT=1.82ms

```

~~RTT=0.5ms~~

Result:

The program has been executed successfully.