PRACTICAL 13

Expt: 13

Date: 6.10.25

AIM: Implement a ping program

PROGRAM:

client-side ping program

```
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()
```

UDP 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}:{port}")
        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()
```

Output:

```
UDP Server Running on 127.0.0.1:12345
Received message from ('127.0.0.1', 59234): Ping
Received Pong from ('127.0.0.1', 12345) in 0.01 seconds
```

RESULT:

The program is implemented and client-server communication was established using UDP sockets.