EXERCISE 4

DEVELOP A CUSTOMIZED PING COMMAND TO TEST THE SERVER CONNECTIVITY

AIM:

To develop a customized ping command using Python sockets that checks the connectivity of a server, measures the Round Trip Time(RTT) for multiple connection attempts, and computes the min, max, and average RTT values.

ALGORITHM:

1. Set host, port, and number of pings.
2. Create an empty list for RTT values.
3. For each ping attempt:
   - Start timer, connect to host, stop timer.
   - Calculate RTT and store it, else print timeout.
4. After all attempts, display min, max, and avg RTT.

CODE:

DEVELOP A CUSTOMIZED PING COMMAND TO TEST THE SERVER

```
import socket

import time

host = "google.com"   # you can change this

port = 80          # HTTP port

count = 4          # number of pings

for i in range(count):

    try:

        s = socket.socket()

        start = time.time()

        s.connect((host, port))

        end = time.time()

        s.close()

        print(f"Reply from {host}: time={(end-start)*1000:.2f} ms")

    except Exception:
```

```
        print("Request timed out")
```

CUSTOMIZED PING PROGRAM TO MEASURE MIN, MAX, AND AVERAGE RTT

```python
import socket, time

host = "google.com"

port = 80

count = 4

times = []

for i in range(count):

    try:

        s = socket.socket()

        start = time.time()

        s.connect((host, port))

        end = time.time()

        s.close()

        rtt = (end - start) * 1000

        times.append(rtt)

        print(f"Reply from {host}: time={rtt:.2f} ms")

    except:

        print("Request timed out")

if times:

    print("\nMin RTT =", min(times), "ms")

    print("Max RTT =", max(times), "ms")

    print("Avg RTT =", sum(times)/len(times), "ms")
```
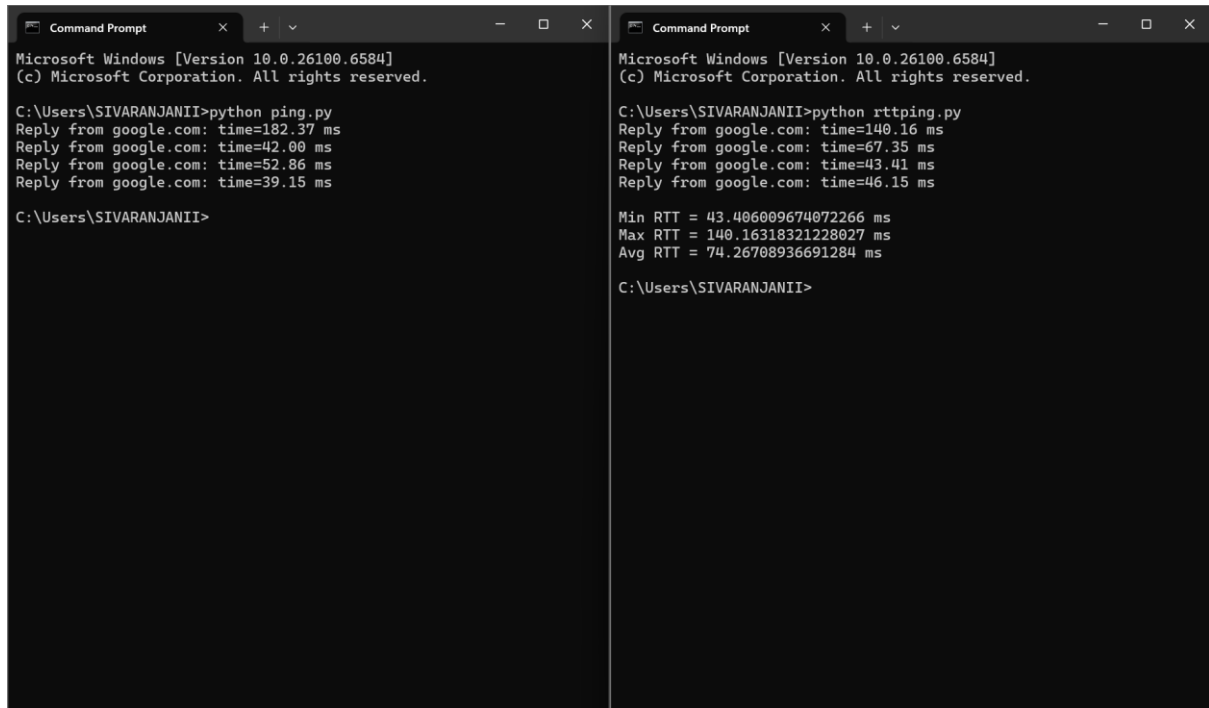
OUTPUT:

RESULT:

The program successfully checks server connectivity and displays min, max, and avg RTT values.