Ex. No. 04 **Customized ping**

Date: 19-08-2025

Aim:

To develop a costomized ping command to test the server connectivity

Algorithm:

1. Start
2. Initialize host, port, count, and an empty list times.
3. Repeat count tumes.

   → Create a socke

   → Record start time.

   → Try to connect to chest port.

   → Record end time.

   → Close the socket

   → Compute RTT - (end-Start) * 1000ms and store it in times

   → If connection fails --> print " Request times out"
4. After loop, if times is not empty:

   → calculate min RTT, max RTT, average RTT
5. Print the results.
6. End

****

```
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

```
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")
```

****

Sample Output

Basic ping:

Reply grom google.com: time = 0.83ms

Reply grom google.com: time = 0.03ms

Reply grom google.com: time = 1.38ms

customized ping command

Reply grom google.com: time = 3.11ms

Reply grom google.com: time = 0.99ms

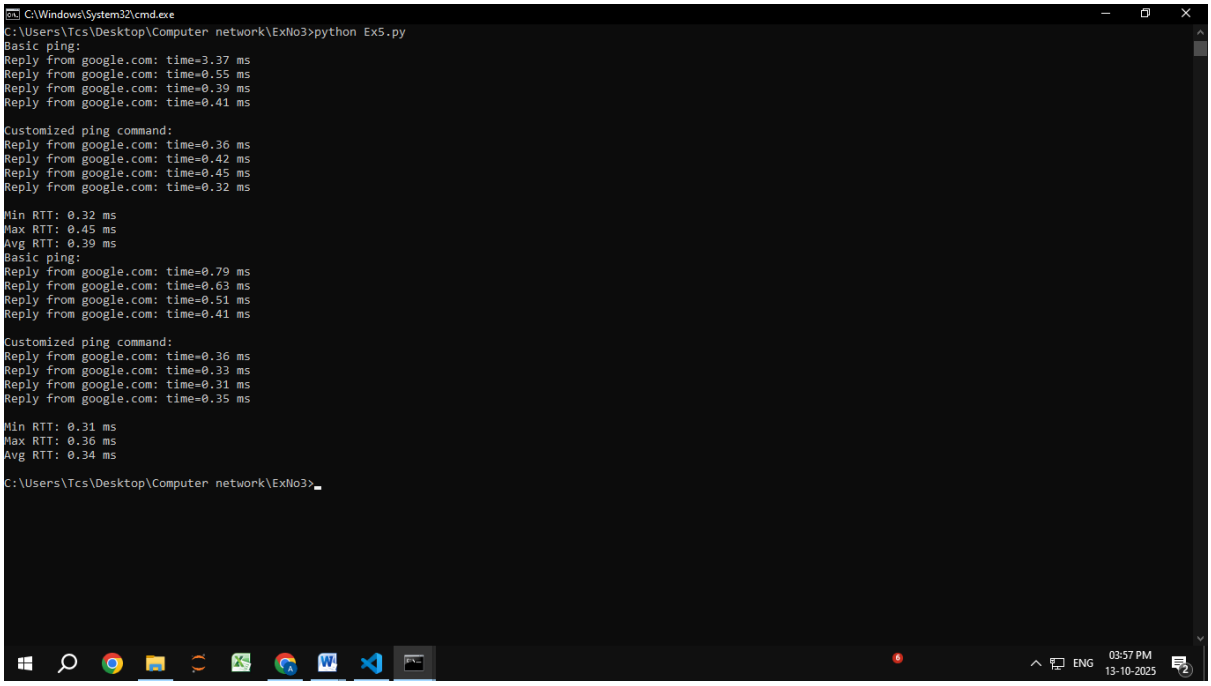
Reply grom google.com: time = 1.35ms

min RTT : 0.11ms

max RTT : 3.11ms

avg RTT : 1.09ms

Output



Result:

Thus the developed a costomized pind program using python socket programming to test server connectivity and measure round-trip time (RTT).