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## **DEVELOP A CUSTOMIZED PING COMMAND TO TEST THE SERVER CONNECTIVITY**

### **AIM:**

To perform ping to a remote host,extract,RTT values from ping response and compute the minimum,maximum and average Round-Trip Time.

### **ALGORITHM:**

- 1.Run the ping command using python's subprocess module.
- 2.capture the output of each ping replay.
- 3.extract RTT value using regex or string passing.
- 4.store all RTTs in a list.
- 5.calculate and display:
  - i)Minimum RTT
  - ii)Maximum RTT
  - iii)Average RTT

### **CODE:**

#### **PING COMMAND TO TEST SERVER CONNECTIVITY**

```
import socket
import time
```

```

        s.close()
        print(f"Reply from {host}: time={{(end-start)*1000:.2f}
ms")
    except Exception:
        print("Request timed out")

```

## PING PROGRAM TO MEASURE MIN,MAX,AVG 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")

```

## OUTPUT:

```
Microsoft Windows [Version 10.0.22631.5335]
(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>cd..

C:\Users>cd..

C:\>D:

D:\>python client.py
Reply from google.com: time=3.20 ms
Reply from google.com: time=0.75 ms
Reply from google.com: time=0.62 ms
Reply from google.com: time=0.86 ms
Reply from google.com: time=0.72 ms
Reply from google.com: time=0.60 ms
Reply from google.com: time=0.64 ms
Reply from google.com: time=0.67 ms

Min RTT = 0.6046295166015625 ms
Max RTT = 0.7224082946777344 ms
Avg RTT = 0.6601214408874512 ms
```

## RESULT:

The program has successfully performed ping operation to google.com, extracted RTT values from the response and computed the minimum, maximum and average RTT.