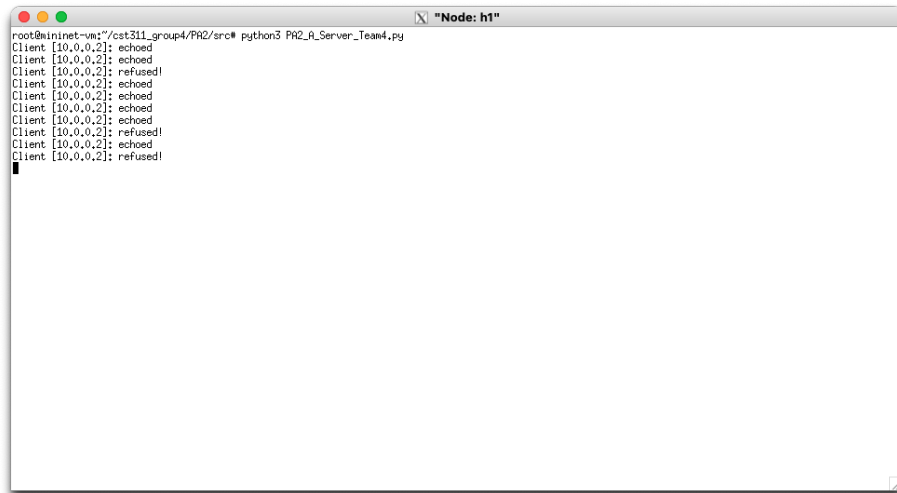# Project 2: Server and Client Output

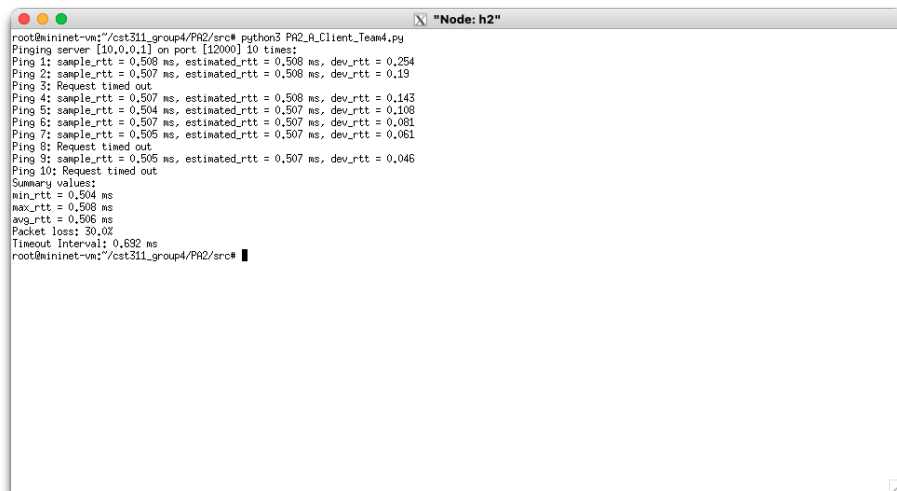**Server Output:**

```
                              X  "Node: h1"
root@mininet-vm:~/cst311_group4/PA2/src# python3 PA2_A_Server_Team4.py
Client [10.0.0.2]: echoed
Client [10.0.0.2]: echoed
Client [10.0.0.2]: refused!
Client [10.0.0.2]: echoed
Client [10.0.0.2]: echoed
Client [10.0.0.2]: echoed
Client [10.0.0.2]: echoed
Client [10.0.0.2]: refused!
Client [10.0.0.2]: echoed
Client [10.0.0.2]: refused!
```

The server is running on host h1 within Mininet. The server determines whether or not to echo back the message it receives from the client. If it chooses to do so, it prints out the client's IP address followed by either "echoed" or "refused!"

Client Output:

```
                              X  "Node: h2"
root@mininet-vm:~/cst311_group4/PA2/src# python3 PA2_A_Client_Team4.py
Pinging server [10.0.0.1] on port [12000] 10 times:
Ping 1: sample_rtt = 0.508 ms, estimated_rtt = 0.508 ms, dev_rtt = 0.254
Ping 2: sample_rtt = 0.507 ms, estimated_rtt = 0.508 ms, dev_rtt = 0.19
Ping 3: Request timed out
Ping 4: sample_rtt = 0.507 ms, estimated_rtt = 0.508 ms, dev_rtt = 0.143
Ping 5: sample_rtt = 0.504 ms, estimated_rtt = 0.507 ms, dev_rtt = 0.108
Ping 6: sample_rtt = 0.507 ms, estimated_rtt = 0.507 ms, dev_rtt = 0.081
Ping 7: sample_rtt = 0.505 ms, estimated_rtt = 0.507 ms, dev_rtt = 0.061
Ping 8: Request timed out
Ping 9: sample_rtt = 0.505 ms, estimated_rtt = 0.507 ms, dev_rtt = 0.046
Ping 10: Request timed out
Summary values:
min_rtt = 0.504 ms
max_rtt = 0.508 ms
avg_rtt = 0.506 ms
Packet loss: 30.0%
Timeout Interval: 0.692 ms
root@mininet-vm:~/cst311_group4/PA2/src#
```

The client is running on host h2 within Mininet. The client prints out the sample, estimate, and deviation of the round trip time after performing the

calculation for each in milliseconds. All calculations are rounded to three decimal points. When the client program finishes running, a summary result is generated, which includes the minimum, maximum, and average round trip times in milliseconds. Additionally, the packet loss is printed as a percentage, and the timeout interval is calculated and displayed in milliseconds.