

- 1) Instructions for running the program
  - To run the program, first you open a terminal window and navigate to the directory that the two programs PingServer and PingClient are located. `javac PingServer.java` in the command line. Next `java PingServer` (random port number, I used 6789). Now the java server is up and running. Open a new terminal window and navigate to the same directory. `javac PingClient.java` then run it with `java PingClient` (host name, I used `localhost`) (port number, I used 6788 because the ports of host and client couldn't be the same since one was already in use). The program will then run.
- 2) Write-up - brief of how you tested and developed the program
  - To test the program I just followed the instructions on how to run the program. Developing the program wasn't too difficult. I started by copying and pasting `PingServer.java`. Then I modified the command line arguments to take a second parameter `host` and assign that to an `InetAddress` object. Then in a while loop that runs 10 times, I built the string that will be displayed to the console that contains the ping number, the amount of time in ms after beginning the ping test that the current ping is being sent, and the delay which is the current time that the response came back subtracted by the time that it was sent out. Both of these numbers are subtracted from a constant `startTime` that was initialized right before the loop started so that the numbers are small enough to make meaningful, rather than 15 digits long. I also added in a short `thread.sleep` method in because the delay to send and receive was less than 1 ms and that made it no fun to find min, max, and avg since they were either 0 or 1 because I'm pinging my own machine. To find min, I had an if statement that would check if the current ping time delay was less than the previous ping time delay, which was held in a variable initialized to 100 before the loop began. The same for max was done, but opposite and initialed at 0 before the loop. The avg is found with `avg += current delay`, then in the `printMinMaxAvg` this avg is divided by 10 to find the average.