

Congratulations on completing the initial telephone interviews. Now we would like to ask you to take the following python programming challenge.

Ping the IP address ranges 192.168.1.0/24 and 192.168.2.0/24 and report all IP addresses that are pingable on one range, but not on the other. For example, if we find that 192.168.1.34 is pingable, but 192.168.2.34 is not pingable, then that is a case we want to know about. Similarly, if 192.168.2.34 is pingable, but 192.168.1.34 is not pingable, we also need to know about that.

- Use python3.6 or higher
- Your code needs to run quickly, so some kind of multi-threading, multi-tasking, whatever you want to call it, is needed.
- You will need to retry IP addresses that fail the first ping. The number of retry attempts is up to you.
- Your code must pass PEP8 and include comments and docstrings where appropriate.
- Include mock-tests, unit-tests, any kind of tests that you write to help prove that your code behaves as expected.
- For bonus points, allow specific IP addresses to be skipped based on their last octet, so for example we could exclude 192.168.1.56 and 192.168.2.56 by specifying '56' to some function in your code,

This is not a 'trick' question. We have given you all the information you need, nothing has been deliberately left out. There is a real-world use-case for this script at Joby, it is not a pointless programming exercise!