Programming Assignment 2:

General Instructions:

- The submission of this assignment will be on **Gradescope**
- This assignment needs to be completed in Python3, as the Autograder is configured for that, however if you feel that you want to code in a different language, you are allowed to do that, however, you will not be able to verify the output with the autograder.
- When you want to run your code against the autograder, run :
    python collect_submission.py
  This will generate a zip file: **pa2_submission.zip** which you can then upload on Gradescope.
- You are allowed to use the autograder as many times as you want until the last due date.

Coding Instructions:
- We are testing all possible scenarios with 4 clients and a bootstrapper.
- Please complete the code snippets in these files:
  p2pclient.py, p2pbootstrapper.py, bootstrapper.py, client_1.py, client_2.py, client_3.py and client_4.py
- If you want to test your work locally, you can run :
  On Linux:
      ./runner.sh
  On Windows:
      open separate command prompts and run bootstrapper.py, client_1.py, client_2.py, client_3.py and client_4.py, with the bootstrapper coming up first.

Ensure that you are logging your actions (appending to self.log in p2pclient class). At the end of your actions, "export" self.log to a file: client_x.json, this is what the autograder is looking for.

Python's json package should come handy.

Helpful Resources:
- https://docs.python.org/3/howto/sockets.html
- https://docs.python.org/3/library/threading.html
- https://www.programiz.com/python-programming/json