Floyd’s algorithm is used to find the shortest path in a matrix. The matrix indicates distance between the positions in the matrix. These positions can represent real life entities such as Train Stations or Cities. Typically, Floyd’s algorithm is written iteratively with three nested loops. Floyd Warshall Algorithm provides a detailed description of Floyd’s algorithm.

This exercise requires you to rewrite Floyd’s algorithm recursively. Recursion does not allow use of loops. You must write the solution as a single function that calls itself.

Please download this zip file and expand it on your system.

Please complete the tasks in:

src/recursion/recursive\_floyd.py

src/tests/performance\_test.py

Complete the files in:

src/tests/unittests.py

README.md

requirements.txt

You will need to write a 500 word report that describes your solution, and the design solutions that you made. You will need to discuss the differences between the performance of the iterative and recursive version.