Read Me

uOttawa

AI-Enabled Software Verification and Testing - CSI 5137[B]
Assignment 1

According to Assignment 1 pdf file, we need to provide a Read Me file to explain how our program can be compiled and executed.
I used Python to develop this project and it is designed to be executed from PowerShell so that there is no need to use any IDE to run the program.

My algorithm is Hill Climbing, however, I chose “tsp_solver.py” as my program’s name as instructed in the pdf file of Assignment 1

It can be executed from command line as below:

- python tsp_solver.py “dataset_name”

I applied my code on several datasets from the second link provided in the Assignment file to ensure it works properly on different datasets including: att48.tsp, berlin52.tsp, ch150.tsp, d493.tsp, kroD100.tsp, d2103.tsp, kroE100.tsp, nrw1379.tsp

According to the pdf file, all mentioned datasets are EDGE WEIGHT TYPE : EUC 2D

TYPE : TSP

After executing my program on any dataset, a “solution.csv” file will be created as indicated in pdf file which includes the traveled path of the best solution, and each row indicates number of each city.

Total number of rows are in compliance with the Dimension of each dataset.

In another word, number of rows is the same as number of cities in each dataset.

In addition, the best solution total distance path and its total traveled path will be printed in the command line after execution of the program.

More details are explained in the Report.pdf file as attached.