3200 TSP Project Program Running Guide

Using PyPy to run the project is 4 or 5 time faster (you need to install PyPy first, further description for PyPy is included in the project report)

Go to the **Code** file use the pypy command:
pypy Main_with_GUI.py

Then, the program will run and automatically create the data file for the GUI. If you want to open the GUI and check for the result, just click GraphingGUI.html.
In the **Main_with_GUI.py**, after setting up the parameters of the algorithm, the user only needs to set two parameters for graphing. They're instance_name and evolution_all, which refer to the source data you are using and how many trials you want to do.

If you want to run the program with no data collected, you can type the command:
pypy Main.py

The program run in this way will have no data collected and only run for one trial, there will be nothing in the GUI unless you have run **Main_with_GUI.py** first.

If you prefer to run the program in normal way with python, just type:

python Main_with_GUI.py or **python Main.py**
(this will be relatively slower compare with PyPy, strongly recommend using PyPy)

You can type:
pypy stat_calculation.py or **python stat_calculation.py**
which will give you the descriptive statistic for the run

GuideLine of GUI:

4-layer experiment model
1. experiment
2. trials(evolutions)
3. generations
4. individuals

An experiment consists of trial_n trials.
A trial contains generation_n generations.
A generation contains population_size individuals.
An individual stores the essential information of an individual.

As the trials are very similar to each other, we mainly study the best one trial in an experiment.