## Overview

The **travelling salesman problem** (also called the **travelling salesperson problem** or **TSP**) asks the following question: "Given a list of cities and the distances between each pair of cities, what is the shortest possible route that visits each city exactly once and returns to the origin city?"
Our program aims to visualize the process of solving **travelling salesman problem** by genetic algorithm.

How to use

A genetic algorithm is **a metaheuristic that is inspired by Charles Darwin's theory of natural evolution**. This algorithm reflects the process of natural selection where the fittest individuals are selected for reproduction to produce offspring of the next generation.
So in first step, you must specify the number of cities (range from 1 to 500) and the number of generations to run the algorithm, after that you click the load button to see the initial problem. The screen will be like below:
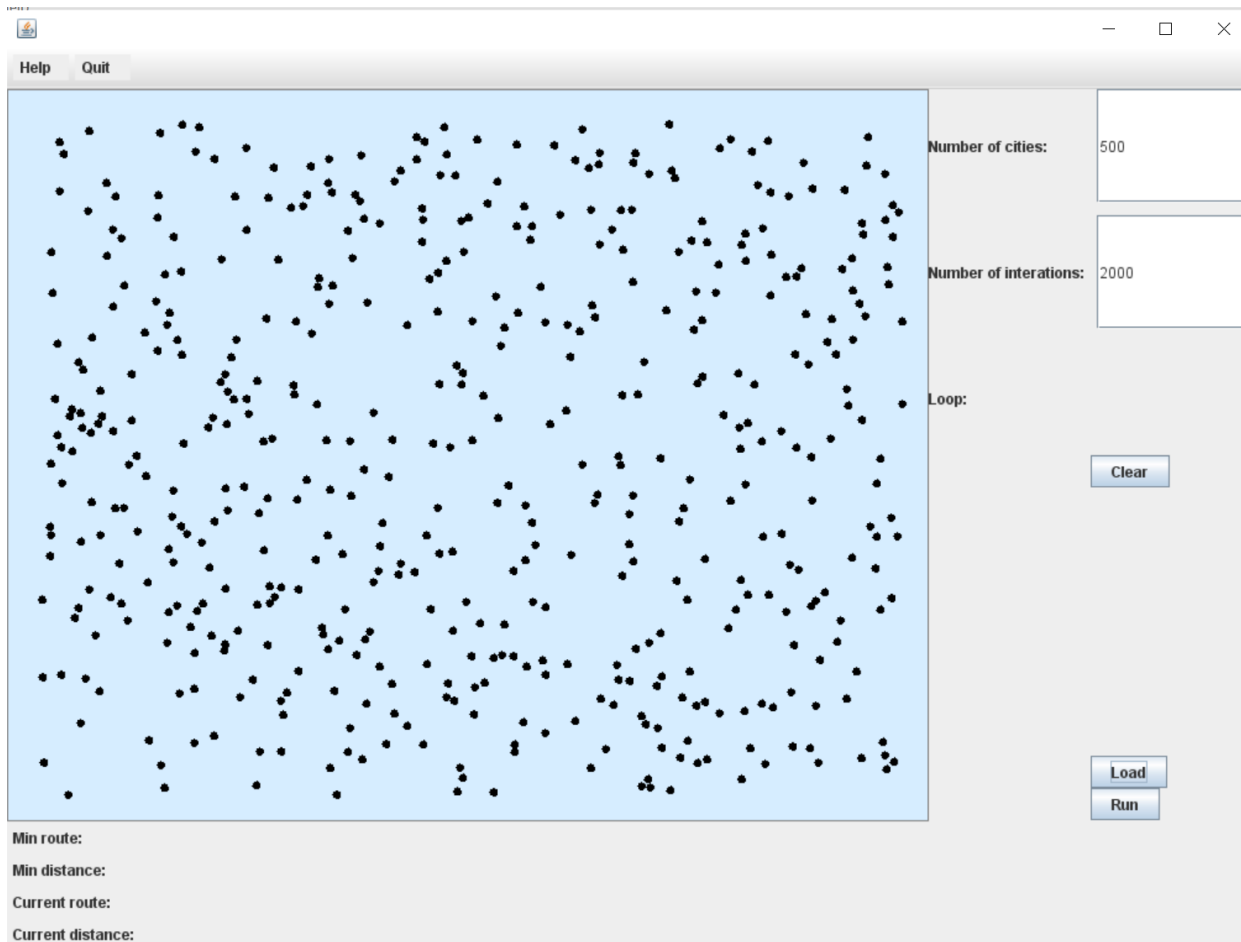
After that, you can start the visualization by clicking the run button.
While running the visualization, you can pause the algorithm by clicking the pause button and resume by clicking the continue button.
To initialize the new problem, you can either click the load button or clear button and redo the process again.