	ADEO2 Training work : The taboo search	
	<i>EISTI</i>	
	<i>Subject : Metaheuristics</i>	<i>Due date : December 3, 2017</i>
		<i>Number of pages : ??</i>

1 The problem of the traveling salesman

Problem 1.

The TABOOTSP.py file proposes a resolution of the TSP. It is used in the same way as simulated annealing. Copy it to the same folder to run it with the test files.

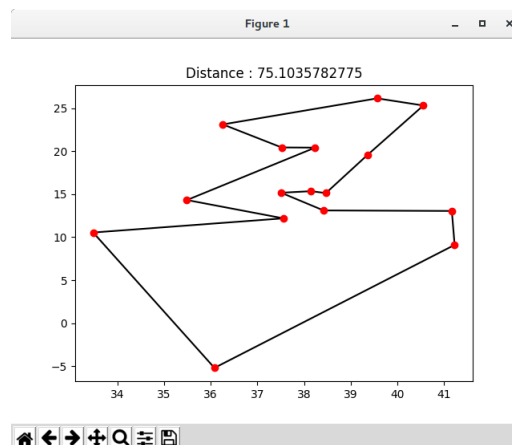


Figure 1: Display of TSP resolution.

2 Understand the impact of the size parameter

We will run the algorithm by varying the size of the taboo list in order to study the behavior of this parameter.

Exercise 1.

- Set a size to 1, interpret the behavior.
- Set a size to 100, interpret the behavior.

3 taboo list

As a first step, storing in the taboo list solutions can be expensive. We will modify the algorithm to include in the taboo list, not solutions, but the applied permutations.

Exercise 2.

- a. Use the permutation 2-opt created in the previous work.
- b. Set a size to 1, interpret the behavior.
- c. Set a size to 100, interpret the behavior.
- d. Modify the algorithm to include the aspiration criterion. We will arbitrarily take the "magic" size of 7.

4 Comparison

Exercise 3.

- a. Compare the simulated annealing and the taboo search (the quality of the solution and the number of evaluations).