Prosjektrapport for obligatorisk oppgave 1 i DA-OPT 3900

Amer Sisic, Thor-Stian Follstad og Martin Gran

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Abstract

This project report describes the implementation of together four different algorithms of the "Travelling salesman problem" (TSP). First a symetrical complete graph is implemented with random lengths of 1-10 between a random number of cities. Then a route is chosen on random and the cost is calculated. The next solution is to choose routes at random and updating the best route by the lowest cost. Third a greedy method is implemented. In the implementation the next city in the route is chosen by selecting the path with the lowest value. Fourth a greedy itterative method is chosen. The method works on a complete route, then switches cities at random and updates the route if the total cost is improved. The fourth method works on routes generated by the previous methods. Last the different solutions are run 100 times at the same graph. The best result and the mean result of the methods are then compared.

Chapter 1

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