Abstract

Genetic algorithm is an evolutionary algorithm that use crossover and mutation in order to solve optimization problems. Genetic algorithm has been used in a many different problems, including Travelling Salesman Problem.

There are many different crossover and mutation operators that have been implemented on Genetic Algorithm. In this final project, crossover operator that's implemented on genetic algorithm is Sequential Constructive Crossover Operator. To determine the performance of system, the system is compared with standard Genetic Algorithm.

The results obtained after doing testing, the accuracy of system reached 90% for number of cities limits to 48 cities. And performance time of system is less than 4 seconds.

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Keywords: *Genetic Algorithm, Sequential Constructive Crossover, Travelling Salesman Problem.*