

Abstract

Travelling Salesman Problem is a combinatorial problem that consists of several cities where each city had a different distance between one city to another. The purpose of Travelling Salesman Problem is to find the shortest distance in which all cities can be passed without going through the same city twice.

Genetic algorithm with direct mutation is one method that can be used to build systems that can overcome the problems of Traveling Salesman Problem. Directed Mutation can guarantee the fitness values that mutates chromosomes tend to be better and will never deteriorate

Dataset used is a tsplib dataset, obtained and downloaded from the website <http://www.tsp.gatech.edu/world/countries.html> was tested with several parameters such as Crossover Probability, Chromosome Number, and Generation Number. Based on the observations that have been made can be seen that the magnitude of the probability that the crossover makes the accuracy worse. The greater the number of chromosomes makes the accuracy better. So is the number of generation where if the greater value of the number of generations, the better accuracy is obtained.

Keywords : Travelling Salesman Problem, Genetic Algorithms, Direct Mutation, Chromosome Number, Generation Number, Accuracy.