

Abstract

Vehicle Routing Problem (VRP) is a route optimization that starts from the depot, traverses a subset of customers in a certain order and returned to the depot using vehicles with certain capacities. Heterogeneous Fleet Vehicle Routing Problem with Time Windows (HFVRPTW) is a variant of the VRP that have additional criteria, differences in the capacity of the vehicle and has time windows or time interval delivery in both the customers and depot.

In this final project, to find optimal route in case HFVRPTW will be solved using the Tabu Search (TS). TS is used to avoid trapped in locally optimal solutions.

Tests conducted to find the best parameters to obtain an optimal solution. From the test results, it is known that the number of iterations affects the resulting solution. The greater the iterations, the optimal results obtained.

Key words: Heterogeneous Fleet Vehicle Routing Problem with Time Windows (HFVRPTW), Tabu Search, route searching.