A Genetic Algorithm for the Multi-Pickup and Delivery Problem with Time Windows

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Abstract: In This paper we present a genetic algorithm for the multi-pickup and delivery problem with time windows (m-PDPTW). The m-PDPTW is an optimization vehicles routing problem which must meet requests for transport between suppliers and customers satisfying precedence, capacity and time constraints. This paper purposes a brief literature review of the PDPTW, present our approach based on genetic algorithms to minimizing the total travel distance and thereafter the total travel cost, by showing that an encoding represents the parameters of each individual.

Keywords: vehicles routing, pickup and delivery problem, time windows, optimization, genetic algorithm.