UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

A GOAL PROGRAMMING APPROACH IN SOLVING SHIFT SCHEDULING PROBLEM AT FAST-FOOD RESTAURANT

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

Scheduling is important for all organizations and businesses as it helps manage and distribute workloads effectively. Currently, in fast-food restaurant located in Labuan, the manager using e-schedule to set up the worker's schedule. This e-schedule is a cloud-based worker scheduling software. This system is based on the manager's decision where the manager randomly pick a worker's name, department and shift. Due to the randomly pick, the selection of workers may cause to unbalanced schedule that unable to fulfill the staff's satisfaction such as the total shift assigned for each worker. The significance of this study is it can reduce the time consuming in making shift schedule and it also can be used in other organizations that apply three working shifts per day. The study consists of a few variables and constraints, including total workers, total shifts, maximum and minimum workers per shift, and operating hours. Hence, the objectives of this study are to propose a better schedule and minimize the unbalanced total working days and shift rotation among the workers by applying the Goal Programming (GP) method. As a result, a shift schedule pattern with balanced total working days and total shifts that fulfills the company's policies has been generated. In future study, the model can be modified by considering the other goals and other constraints such as to maximize the staff satisfaction and minimize total cost.