

**Maintenance Staff Scheduling System using Heuristic –
Greedy Algorithm**

BY

NUR LIYANA BINTI SABLI

BACHELOR OF COMPUTER SCIENCE (HONS)

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ABSTRACT

This maintenance staff scheduling system was developed in order to overcome the problem that involved with managing staff. In this case, the system focused on scheduling staff for maintenance purpose. The objective of this system is to develop a system that that can automatically assign the staff to a task and to test the functionality of the prototype. The scheduling part will be developed using heuristic - greedy algorithm. The schedule part will start by checking the availability of staff at that day. If the staff is available and still does not have any task assigned, the system will automatically assign the task to the staff. Other situation happen if the staff already occupied with other task, where certain condition will be applied to check the availability of the staff. This prototype will help IT Unit to assign their staff to maintenance staff with more efficient.

Keywords: staff scheduling, heuristic algorithm, greedy algorithm

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CHAPTER 1

INTRODUCTION

1.1 Research Background

Faculty of Computer and Mathematical Sciences (FSKM) at UiTM is a faculty that focused on computer technology study. There are many IT equipments that need maintenance such as CPU, monitor and so on. The staff scheduling are done manually, so there are some problem regarding fair distribution of work where several staff being assigned little job while other being burden with many job. In order to overcome this problem, Maintenance Staff Scheduling system has been developed to ease the maintenance process and also as a guide to manage staff at IT Unit. The IT equipment does not only concern with computers, and printer, but it also includes mouse, CPU, monitor, keyboard, software installation and network that require a care.

System development actually is an area that involves with a set of activities which will result in developing new software products. In order to develop this prototype, some of these activities need to be considered which is research, new development, modification, reuse, re-engineering, maintenance, or any other activities that result in software products. From the view of Finkelsetin et al (1992) the development of most large and complex systems necessarily involves many people -each with their own perspective on