



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**DEVELOPMENT OF PROJEK SARJANA MUDA
MANAGEMENT SYSTEM**

This report is submitted in accordance with the requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor of Mechanical Engineering Technology (Computer System) with Honours.

by

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ABSTRAK

Sistem Pengurusan projek tahun akhir FTKEE dijalankan secara manual oleh jawatankuasa PSM dan tiada aplikasi yang berasaskan web yang digunakan untuk mengendalikan keseluruhan proses PSM termasuk proses pemilihan penyelia, tugas pelajar dan pengguna maklumat admin. Jawatankuasa PSM bertanggungjawab untuk mengendalikan semua proses dengan jumlah pelajar yang tinggi setiap semester. Bagi mengatasi masalah yang dihadapi oleh jawatankuasa PSM untuk mengendalikan kadar dokumentasi pelajar yang tinggi, Sistem Pengurusan Projek Sarjana Muda dicipta bagi membolehkan penyelia menilai prestasi pelajar sepanjang projek tahun akhir di jalankan. Sistem ini telah dicipta menggunakan Waterfall Software Development Model. Tujuan sistem ini adalah untuk memendekkan penggunaan masa bagi ahli jawatankuasa PSM untuk melengkapkan semua dokumentasi dalam satu system. Selain itu, semua pengguna boleh mengakses sistem ini pada bila-bila masa dan penilaian oleh pihak yang terlibat boleh dilaksanakan dengan berkesan.

ABSTRACT

The management system of final year project in FTKEE is conducted manually by the PSM committee and there is no web-based application tools used for handling entire process of PSM which includes the process of supervisor selection, student progress and admin update users. The PSM committees are responsible to handle all the processes with large number of students every semester. To overcome the problem faced by PSM committee which to handle large number of student documentation, Projek Sarjana Muda Management System was developed to allow the supervisors evaluate the student progress throughout the final year project session. The system was developed using Waterfall Software Development Model. The purpose of this system is to shorten the time spends for PSM committee members to complete all the documentation and all the users enable to access the system at any moment. In addition, assessment by several parties can be carried out effectively.

DEDICATION

This dedication is for my parents, Mohd Shaari Bin Suliman and Jamilah Binti A Rahim who are always giving me strength and support throughout my studies. I also dedicate this report to my supervisor and co- supervisor who always guide and encourage along my PSM journey. Last but not least, my ‘JAUHARI’, Wan Nur Amalina, Nur Aliah, Nur Aqilah Syazwina and Syafiq Yusaini who always give me positive vibes and make me feel motivated to finish my project.

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LIST OF ABBREVIATIONS

PSM	Projek Sarjana Muda
FYP	Final Year Project
FTKKE	Fakulti Teknologi Kejuruteraan Elektrik dan Elektronik
SDLC	Software development Life Cycle
ASDM	Agile Software Development Method
RAD	Rapid Application Development
IS	Information System
MIS	Management Information System
TPS	Transaction Processing System
DSS	Decision Support System

CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter describes about the background of the study and the main purpose of the project. Besides, it discuss about the current problem that exist and indicate to do this research, objectives and scope of the study.

1.1 Background Study

Nowadays, the development of Web-based application is very fast and it gives a big impact on our daily lives. The web-based application is efficient way for user to share and exchange information (Bakar et al. 2015). Besides, the web-based system also used for handling hundreds of data and backup all the data. This will make the administrator easy to conduct all the parties such as supervisor and student. Currently, there is no centralized unit are used for management process of final year project in Faculty of Electrical and Electronic Engineering Technology (FTKKEE), UTeM. The web-based system is an online platform is used to improve communication between supervisor and student during final year project. For example, the supervisor is able to share ideas and comment regarding

student progress. Besides, log book is used for student to update all the project progress and as a manual method to discuss the project. Therefore, the traditional way should be improved to a web-based system. This web-based system can save time for all committee that related with final year project (FYP).

1.2 Problem Statement

Currently, the management of final year project is conducted manually. There is no web-based application tools are used by the FYP committee. The management process such as project selection supervisor, weekly performance monitoring, submissions performance and also evaluation the project. Students are required to complete and submit project title forms which include the supervisor selection and the approval from supervisor. The approval depends on the supervisor either to choose the title that have been proposed by the student or rejected it. If the student title is rejected, the supervisor will propose an idea or title to the student or the students have to find another supervisor.

Next, the problem is the FYP committees do not have enough time to manage and handle large number student documentation. On the other hands, the supervisors have commitment such as lecture and meetings to attend while students schedule is occupied with class, lab session and co-curricular club. Hence, there is no medium communication interaction between the supervisor and students if there's no weekly meeting session. This project will solve the problem faced by FYP committee where it will ease large documentation process and more efficient of the management system. Besides, it also creates faster and better communication between the supervisor and students. This project also improves the way of project progress and student evaluation and to ensure that all the student data such as report and details is secured and backup in the system. In addition, this

system allows the supervisor to give any feedbacks and ideas to the student progress and student can make it as reference and guideline in future.

1.3 Objectives

The objectives of this project are:

- i. To study the management process between supervisor and student for final year project.
- ii. To design and develop management system for all committee members which related with final year project.
- iii. To evaluate the usability and functionality of the management system.

1.4 Scope of Project

1.4.1 User Scope

The user scope consists of administrator, supervisor and students that will use the system.

- i. Administrator
 - Have authority to add, delete, view and update users such as supervisor and students
 - Have authority to generate report
 - Responsible to maintain the system

ii. Supervisor

- Have authority to view students and supervisor details
- Have authority to update feedback selection supervisor
- Have authority to view student performance details
- Have authority to update evaluation result of student

iii. Student

- Have authority to view own details and profile
- Have authority to add supervisor selection
- Have authority to update progress and project performance weekly
- Have authority to view own results

1.4.2 System Scope

The users will enter the username and password to login the system. For students, the students have to make a selection of supervisor and proposed the title with explanation. After the supervisor confirmation, the student can update the project progress every week in the system and can view the supervisor comment and feedback. The student also can check the evaluation marks given by the supervisor. Next, the supervisors have to make decision whether to approve the student title or reject it. Besides, the supervisor also can propose the title to the student as a reply. Additionally, the supervisor also need to evaluate and gives some

comments or feedback about the student progress every week. Moreover, for administrator, the admin can access and view all student and supervisor data. The admin can add and update data through this system.

1.5 Project Significance

The signification of the study is the official selection of supervisor and management system for final year project. All the data needed such as student details, supervisor details, weekly student progress and evaluation result is available in this system for all committee FYP. This system useful for admin, supervisor and student secure the data and information details compared to current system which is in documentation form.

1.6 Project Framework

The proposed system that will be developed is used system development life cycle (SDLC) that consists of six phases which are planning, analysis, design, development, implementation and documentation. Project framework is a guideline of how project should be executed based on the requirement needed to develop the proposed system.

Project framework for this system began with the first phase which is planning. From this phase, the activities are required to identifying the topic and identify existing problem regarding current traditional method. Next, the second phase is analysis phase. The system is used to research the literature review from the articles and to analyze data gathering for the proposed system.

The third phase is design process. The development related diagram which are contact diagram, data flow diagram, flow decomposition diagram and entity relationship