BORANG PENGESAHAN STATUS TESIS*

JUDUL : ACADEMIC MARKING SYSTEM

SESI PENGAJIAN : 2012 / 2013

Saya MOHAMAD AZWAN BIN MOHAMED SAKRI

mengaku membenarkan tesis Projek Sarjana Muda ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.

Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.

Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.

** Sila tandakan (/)

	SULIT	(Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub di dalam AKTA RAHSIA RASMI 1972)
	TERHAD	(Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan)
	TIDAK TERHAD	

(TANDATANGAN PENULIS)   (TANDATANGAN PENYELIA)

Alamat tetap:

_____
_____ Nama Penyelia

Tarikh: _____   Tarikh: _____

CATATAN: * Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM).
          ** Jika tesis ini SULIT atau atau TERHAD, sila lampirkan surat
             daripada pihak berkuasa.

ACADEMIC MARKING SYSTEM

MOHAMAD AZWAN BIN MOHAMED SAKRI

This report is submitted in partial fulfilment of the requirements for the
Bachelor of Computer Science (Database Management)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2013

© Universiti Teknikal Malaysia Melaka

DECLARATION

I hereby declare that this project report entitled

ACADEMIC MARKING SYSTEM

is written by me and is my own effort and that no part has been plagiarized
without citations.

STUDENT   : _____ Date: __26-AUG-2013__

(MOHAMAD AZWAN BIN MOHAMED SAKRI)

SUPERVISOR   : _____ Date: __26-AUG-2013__

(YAHYA BIN IBRAHIM)

DEDICATION

Specially dedicated this report to my beloved parents, my lecturers and all my course mates for the help. I wish to thank you'll again for the invaluable support and guidance given throughout the completion of my Final Year Project.

ACKNOWLEDGEMENTS

First and foremost, Thanks to Almighty for giving me the chance to pursue this field of study, Bachelor in Computer Science (Database Management) With Honors and to complete this report. I would my deepest appreciation to all those who provide me with the possibility to complete this report. A special gratitude to my supervisor, En Yahya bin Ibrahim, with his constant monitoring, providing suggestion end encouragement, as well as helping me to coordinating the progress of the project until the completion of this report.

I am highly indebted to my friends and course mate, whose with their help and valuable assistance, helped me complete this task through various stages.

I also would like to express my deep gratitude to my family for their constant encouragement throughout the course of completing this project.

ABSTRACT

This Final Year Project (PSM) final report was written as to fulfil the requirement for completing the program of Bachelor of Computer Science (Database Management) with Honour in UTeM. It contains the compilation of activities done throughout one whole semester, including semester break. The project developed is called "Academic Marking System". The purpose of this project is to convert the manual marking procedure which use Microsoft excel into centralized web control. This project was proposed since the manual procedures are bulky in term of the amount of data yet it is not centralized. This problem can be solved by converting the method into web services to centralize the activity and enhance the performance of the system. Since the system was successfully developed, the marking procedure should be more flexible now.

ABSTRAK

Laporan akhir Projek Sarjana Muda (PSM) ini ditulis sebagai memenuhi keperluan untuk melengkapkan program Sarjana Muda Sains Komputer (Pengurusan pangkalan Data) dengan Kepujian di UTeM. Ia mengandungi kompilasi aktiviti-akiviti yang dilakukan sepanjang semester, termasuk semester khas. Projek yang dibangunkan dipanggil "Academic Marking System". Objektif utama projek ini adalah untuk mengubah process manual permakahan data yang menggunakan Microsoft Excel kepada skema kawalan web berpusat. Projek ini dicadangkan kerana bebanan proses manual dari segi jumlah data, dan ianya berpisah antara satu sama lain. Masalah ini boleh diselesaikan dengan mengubah methodology sekarang kepada khidmat web untuk kawalan pemarkahan berpusat dan untuk memajukan persembahan daripada system. Oleh sebab system ini telah Berjaya dibangunkan, process pemarkahan sepatutnya menjadi lebih mudah dan flexible.

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

PSM	-	Projek Sarjana Muda
AMS	-	Academic Marking System
JSP	-	Java Server Page
DFD	-	Data Flow Diagram
ERD	-	Entity Relationship Diagram
SQL	-	Structured Query Language

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

1.1 Project Background

The Academic Marking System, AMS is developed for the use of all lecturers from the Faculty of Information and Communication Technology, FTMK in UTeM. It is consisted of two main modules which act as the backbone of the system. The first one used to monitor student grade. In the other hand, the other one will act as dynamic subject evaluation control, as to serve the first module. Currently, there is still no system exists for this purpose as the lecturers still have to mark student performance manually. Next, all marks will be recorded in an excel file and kept in single repository. In order to make the process become centralized and easier, the proposed system will be built as a web based system. The system will record of the student and the subject. As the evaluation for subject changed according to the technological pace, there is a need to have different evaluation scheme for same subject in specific amount of time. By using the process that will be explained further in this report, the subject will be able to have dynamic evaluation control and student registered to the subject will be marked accordingly. The grade and student performance report will be generated based on how lecturers decide the student performance is. To minimize the error, interface control will be implemented to limit user entered text-liked input. In addition, lecturer with higher level access, which the system recognized as an admin, will be able to see subject evaluation control and overall student performance in graph.

1.2   Problem Statements

It takes a lot of time to mark manually. Yes, indeed the lecturer will have to enter the mark again in the excel document, but it came with a problem. Since single excel document will not contain mark for the entire student, it actually quite problematic to find the specific record in the folder, especially when the file number exceed a dozen in number.

Currently, evaluation performance details in excel document not only long, but also small letter. It is good to have details on every mark value to the system, but it was long enough that lecturer will skip to read it. In addition, for group work, the lecturer still to individually mark them, which is quite burden to ensure consistency of group mark.

The process of submitting the excel document to the responsible coordinator can lead to confusion. It is because the document may not be passed up by the lecturers in the same time. Last minute change in marking decision may lead to problem, such as inconsistent record between two sides, lecturer and coordinator. Due to hardware, software or human error, it's also possible for the coordinator to somehow accidentally skip or delete the needed record.

1.3　Objectives

I.　To accelerate the speed of marking process.

This system will allow the user to skip a lot of step used in manual marking process. Therefore, the speed of marking process will be accelerated.

II.　To automate the marking system.

This system will help the user to mark the students automatically based on his/her performance according to the subject marking scheme as set by the coordinator.

III.　To centralized to data to single data repository.

This system will store the data in single data repository. Using this system, which use centralized approach, it should help user to manage their student efficiently

1.4   Project Scopes

1.4.1   Subject

The project will cover the marking procedure for subject BITP 3973; final year project, BITP 2913; workshop 1 and BITP 2923, workshop 2. Unlike the other subject, these subject process different marking procedure. This is due the fact that more than one lecturer required to evaluate one student. Hence, this system developed.

1.4.2   Modules

I.   User Level Module

This module will let the admin of the system to change the user access level to specified lecturer, either admin or user level.

II.   Student Grade Module

This module will let the user to evaluate student performance based on subject marking scheme. The option to change supervisor and evaluator record is kept here. The responsible lecturer will also have the capability to print the record of his/her student

III. Subject Evaluation Control

This module will let the user to manipulate information related to subject. The main process involved is inserting, updating and deleting process. In this module, the evaluation and marking scheme control is recorded. The graph recording percentage on evaluation and student performance will also be recorded here.

IV.   Session Control

This module will let the user to manipulate information related to semester and bachelor sessions for UTeM calendar.

V.   Student Control

This module will let the user to manipulate information related to student in FTMK.

VI.   Course Control

This module will let the user to manipulate information related to course in FTMK.

VII.   Login Module

This module will control user access to the system, determined by his/her roles. If the user forgot his password, he may request new password from the system.

1.4.3   Target User

I.   Admin Scope

With the exception of login module, admin will have full control to every modules stated in modules in project scope, module section.

II.   Lecturer Scope

Lecturer will have access in student grade module, and only the current student with the current subject in the current semester will be viewable to him/her.

1.5   Project Significance

The Academic Marking System that will be developed for the Faculty of Information and Communication Technology (FTMK) of University Technical Malaysia Malacca (UTeM) will benefit the lecturer mainly. This system hold high potential as it helps the lecturer to save a lot of times which mark the student mark automatically. Then, every student's marks will be stored into the database and displayed to lecturer as they need. It also helps monitoring the student performance better, as the user view this from single data repository.

1.6   Expected Output

This system will calculate student grade based on mark entered by the lecturer. Grade will be automatically calculated and displayed on the screen to the lecturer. The data is stored in the single data repository.

1.7   Conclusion

As a conclusion, this Academic Marking System is hoped to bring the significance to both the user after it is being launched. The main objective of this system is to help the lecturer reduced the time used on marking and enable dynamic evaluation control on subject marking scheme. The data of student mark and subject evaluation control will be stored in database.

CHAPTER II

ANALYSIS

2.1   Introduction

Analysis phase is an important part where the project lifecycles begins. This chapter will define the requirements of the new system. Furthermore, this chapter will explains how the process and operations of the current practice of the current procedure. In order to model the analysis, there have several diagrams that will be used such as flowchart and Data Flow Diagram (DFD).

Generally, this phase is about gathering requirement and information. The methods used for gathering requirements are interview, questionnaires, observation and research. In order to develop AMS, observation and interview is necessary. This chapter focus on identifying the current practice of marking procedure. it include the basic   of interface design, process flow diagram and simple Data Flow Diagram(DFD).

2.2   Background of Current Practice

Currently, for every subject, there is one coordinator. The evaluation of this subject is discussed in lecturer's meeting and then the evaluation format is stored in softcopy. The softcopy is then distributed from coordinator to related lecturer. During evaluation, this softcopy will be printed. Supervisor will store the student mark based on these evaluation and then they will entered this information back to the software document.

This current practise is not efficient. As mention in above paragraph, the marking process is stored two times using the current procedure. This happened because the calculation method is stored in the custom excel document, which contains macro programming code to calculate the grade for student. For some subject with a lot of assessment required, this may lead to confusion.

Furthermore, for group task subject, the current procedure will have hard time to search for specific student, since their name is not mentioned in filename.

The sample of workflow of the current practice will be shown in a flow chart as follow.
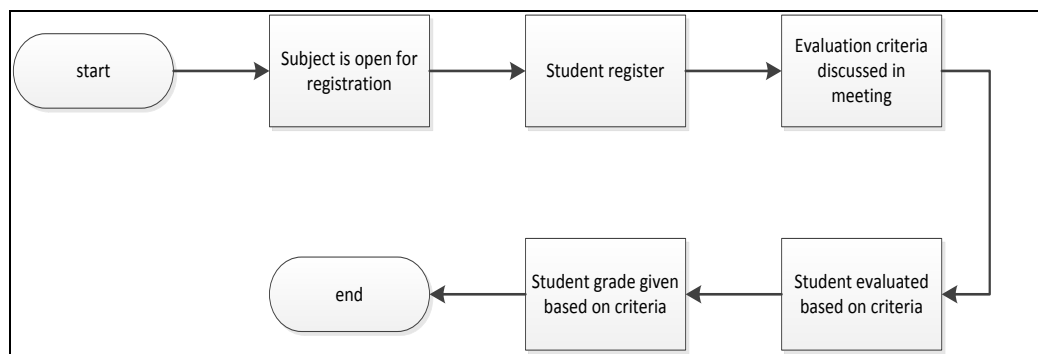

Figure 2.1: Flow chart for current practice for evaluate student

As you can see at Figure 2.1, there is the problem that this system want to tackle is in the last two process in current procedure. This is currently done in manual marking process. The system is developed to centralize and speed up the marking process.