

STUDENT INFORMATION SYSTEM

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**This report is submitted in partial fulfillment of requirements for Bachelor
Degree of Electronic Engineering (Computer Engineering) With
Honours**

**Faculty of Electronic and Computer Engineering
Universiti Teknikal Malaysia Melaka**

APRIL 2009



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**FAKULTI KEJURUTERAAN ELEKTRONIK DAN KEJURUTERAAN
KOMPUTER**

BORANG PENGESAHAN STATUS LAPORAN

PROJEK SARJANA MUDA II

Tajuk Projek : STUDENT INFORMATION SYSTEM

Sesi Pengajian : 2008 / 2009

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DEDICATION

Special dedicated to my beloved parents, family and fellow friends, who had strongly encouraged and supported me in my entire journey of learning.

ACKNOWLEDGMENT

I would like to extend my sincere thanks to all of the people who were involved direct or indirect in this project, encouraged and supported me all the time. I also would like to take this opportunity to thanks to my supervisor; Mr. Nik Mohd Zarifie Bin Hashim for his guidance and advisory in execution of my project. Finally yet importantly, thanks to fellow friends and all those who have in one way or another help to make this project possible.

ABSTRAK

Projek yang dibangunkan dikenali sebagai Student Information System dimana projek ini direka khas untuk kegunaan FKEKK dalam menguruskan maklumat pelajar. Sistem ini fokus kepada proses merekod, mengemaskini data dan mencetak data dari masa ke semasa. Didalam sistem ini juga tersedia laporan yang membolehkan pengguna menyemak status pelajar. Selain itu, system ini dibangunkan dengan menggunakan konsep pengkalan data untuk menyimpan maklumat. Buku laporan ini mengandungi pengenalan projek, kaedah, analisi dan keputusan serta rekabentuk projek yang di laksanakan. Kaedah yang digunakan dalam pembangunan sistem ini adalah kaedah RAD (Rapid Application Design). Masalah daripada sistem yang lama dapat diselesaikan menggunakan system ini. Sistem ini diharap dapat membantu FKEKK dalam menguruskan maklumat pelajar dengan lebih efektif dan sistematik.

ABSTRACT

The project that be develop is about student information that be use in FKEKK Student Information. The project develops known as the Student Information System. This system focused on recording and updating the data. It is also have report in the system which easier to check the status of the student. Besides, this system development based on forms oriented which used by the staffs before. This new system used database concept to store all the information, which related with land application processes. This report contains the introduction, methodology, analysis and design of the project that is going to be developed. The methodology, which be used to guide this project development, is RAD (Rapid Application Design) methodology. Problem of the current system of the student Information System be analyzed and from that, requirement analysis had been made. This system is hope can help the FKEKK in handling the Student Information.

TABLE OF CONTENTS

PROJECT TITLE	i
VERIFICATION STATUS OF REPORT	ii
DECLARATION	iii
VERIFICATION BY SUPERVISOR	iv
DEDICATION	v
ACKNOWLEDGMENT	9i
ABSTRACT	vii
ABSTRAK	viii
TABLE OF CONTENT	ix
LIST OF TABLES	xi
LIST OF FIGURES	xii
LIST OF APPENDIX	xiv
CHAPTER 1	1
1.1 INTRODUCTION	1
1.2 PROBLEM STATEMENT	2
1.3 OBJECTIVES	4
1.4 SCOPE	5
1.4.1. Hardware	5
1.4.2 Software Development	6
CHAPTER 2	7
2.1 BACKGROUND STUDY	7
2.2 INTERNET SURFING	8
2.3 BOOKS AND REFERENCES	8
2.4 INFORMAL INTERVIEW	9
2.5 DISCUSSION WITH SUPERVISOR	9
2.6 QUESTIONNAIRE	9

CHAPTER 3	10
3.1 PROJECT METHODOLOGY	10
3.2 FLOWCHART OF <i>STUDENT INFORMATION SYSTEM</i> DEVELOPMENT	11
3.3 METHODOLOGY	12
3.3.1 Literature review	12
3.3.2 Build the database	13
3.3.3 Create the suitable GUI complete with coding	13
3.3.4 Software testing	14
3.4 RAD METHODOLOGY	15
3.5 REQUIREMENT PLAN PHASE	17
3.6 REQUIREMENT SPECIFICATION ANALYSIS PHASE	18
3.7 DESIGN PHASE	19
3.8 DATA FLOW DIAGRAM (DFD)	22
3.9 IMPLEMENTATION AND TEST PHASE	28
3.10 INTEGRATING AND TESTING SYSTEM	28
3.11 MAINTENANCE AND RESULT PHASE	29
 CHAPTER 4	 30
4.1 PROTOTYPE RESULT	30
4.2 PROTOTYPE TESTING	31
4.3 SYSTEM TESTING	32
4.4 INPUT AND OUTPUT	34
 CHAPTER 5	 49
5.1 DISCUSSION	49
5.2 CONCLUSION	49
5.3 FUTURE WORKS	50
 REFERENCES	 51

LIST OF TABLES

Table 4.4.1: List of table in database	46
Table 4.4.2: Table for Student	46
Table 4.4.3: Table for activity	47
Table 4.4.4: Table for Position	47
Table 4.4.5: Table for Login	48

LIST OF FIGURES

Figure 3.2: Flow Chat of the Methodology	11
Figure 3.3: GUI of the Main Module of Student Information System	14
Figure 3.4: System Prototype Diagram	17
Figure 3.7.1: System Structure Diagram	21
Figure 3.7.2: Context Diagram	22
Figure 3.8.1: Flow Level 0 Diagram	22
Figure 3.8.2: Flow Level 1 Diagram	23
Figure 3.8.3: Flow Chart main Menu	24
Figure 3.8.4: Flow Chart Lecturer Module	25
Figure 3.8.5: Flow Chart Student Module	26
Figure 3.8.6: Flow Chart Report Module	27
Figure 3.8.7: Entity Relationship Diagram (ERD)	27
Figure 4.1: GUI of fully functional prototype	30
Figure 4.2.1: Interface of the prototype after data has been inserting	31
Figure 4.2.2: Output of the prototype after data has been inserting	32
Figure 4.3: System Testing Diagram	33
Figure 4.4.1: Login session	34
Figure 4.4.2: Main menu of the System	35
Figure 4.4.3: Drop-down Menu (Student)	36
Figure 4.4.4: Drop-down Menu (Update)	37
Figure 4.4.5: Student Interface	38
Figure 4.4.6: Student info for personal data (output)	38
Figure 4.4.7: Lecturer Interface	39
Figure 4.4.8: Lecture info for personal data (output)	39

Figure 4.4.9: Student Position Interface	40
Figure 4.4.10: Student info for adding position data	40
Figure 4.4.11: Student Activity Interface	41
Figure 4.4.12: Student info for adding activity data	41
Figure 4.4.13: Student List Interface	42
Figure 4.4.14: Student info list (output)	42
Figure 4.4.15: Student searching by IC	43
Figure 4.4.16: Student Searching By Name	43
Figure 4.4.17: Class info list	44
Figure 4.4.18: Change Password Interface	44
Figure 4.4.19: Minimum System Requirement Interface	45
Figure 4.4.20: System Information Interface	45

LIST OF APPENDIX

APPENDIX A	SOURCE CODE	51
APPENDIX B	SOURCE CODE	53
APPENDIX C	SOURCE CODE	66
APPENDIX D	SLIDE PRESENTATION	75
APPENDIX E	POSTER	80

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Faculty of Electronics and Computer Engineering (FKEKK) is one of the faculties established officially on 22 June 2001 and started its operation at a temporary campus in Taman Tasik Utama, Melaka.

FKEKK created its own history by being the first faculty to move completely to the permanent main campus in Durian Tunggal, Melaka on 22 December 2004. With the move, FKEKK is confident in providing students with the best and conducive study environment. New campus is equipped with various facilities such as lecture rooms, tutorial rooms and labs.

FKEKK plays a crucial role in producing professional engineers who are not only possessing strong fundamental knowledge in Electronic Engineering, but also armed with the practical skills obtained from practice and application oriented learning concept in FKEKK. Hence, enable to the graduates to contribute effectively to the industries in Malaysia.

This system will be developed using Microsoft Visual Basic 6.0 software linking with database that using Microsoft Access 2003 and 'sql' as the language or instruction of the system. It is also stand-alone system.

This system focused on recording and updating the data. It is also have report in the system which easier to check the status of the student. Besides, this system development based on forms oriented which used by the staffs before. This new system used database concept to store all the information, which related with land application processes.

Information Technologies evolution make many change in whatever field and we didn't want to left behind and need to follow the evolution of technologies. Some organization, sophisticated in information management need an easy system to manage the organization.

After survey, system named student information system is developing for FKEKK UTeM. Focus is to make easier to student and lecturer to manage the information. Therefore, it has to help lecturer to search and update information. Therefore, this student information developed.

Student information system is one of group database that include lecturer information, student information, student list, activity information, and report. Lecturer in FKEKK can choose any information that they want and update in Student information system.

1.2 PROBLEM STATEMENT

The old systems, no much information can be saved computerize and surf by lecturers. Because of this, much information is saving as manual. This procedures make delay in surfing process when information are requires. The old system also makes repeating of information saved and the old information cannot update.

This system will solve the problem that frequently occur during old system. For example, student hard to find the information that he need and the updated process by lecturer also had to do time by time.

From the previous system, all data recorded in the system. The system it looks not too reliable. A file will opened for each application. By using this previous system, there are some problems occur such as:

1.2.1 Data loss and damage

By using this previous system, the probability for data loss and damage are very high. If the files loss, so the data also will be lost. If these situations happen, so it will bring some problems to get the data. In some cases, some files going to damage after certain period especially for the files, which opened for a few last years.

1.2.2 Difficult to view list of files

When the administration wanted to see listed of files, the staffs need to check the files first and then preparing the list. Certainly, it will take some time.

1.2.3 Difficult to check student status

When the administration wants to check their student status, the staffs needed to check their files first. Therefore, the administration needed to wait for the staffs until they found the right file. Since, there are many files there and the staffs will take time to find it.

1.3 OBJECTIVES

There are several objectives need to be achieved for Student Information System. The objectives such as:

1.3.1 Improvement Data Security

This system based on database concept, which is more reliable. Therefore, all data about students such as student's record will kept in a database. By using this database concept, some problems such as data loss and damage can avoided.

1.3.2 Easier in checking student's status

By using this system, staffs can check the student's status faster. Therefore, the staff no needs to wait for a long time to check it in files like before.

1.3.3 Searching and updating

Staffs can search and update the data systematically. This system already provided some functions such as searching, updating, and helping the staffs in controlling the data applications.

1.4 SCOPES

This Student Information System developing for the staffs at administration belongs to Student Information System. This system focused on recording and updating the data about student's data. Generally, the scope of this project for the user to used it.

The scopes of works in this project are:

- i) Study literature and the entire information about the project.
 - a) 5 courses involved which is
 - BENC, Bachelor of Electronic Engineering with honours (Computer Engineering)
 - BENE, Bachelor of Electronic Engineering with honours (Industrial Electronic)
 - BENT, Bachelor of Electronic Engineering with honours 69 lecturers including tutors, 24 of them have further their study.
- ii) Recognize needs for this project.
- iii) Design the database system.
- iv) Design the GUI that fulfills the needs of this project.
- v) Create the suitable prototype, which has database limitation.
- vi) Create the full system that covers the entire needs of this project.

1.4.1 Hardware

The hardware required were:

- i) Computer with minimum of 1GHz processor
- ii) 1 Gigabytes of RAM
- iii) 80 Gigabytes of hard disk
- iv) Windows compatible mouse
- v) Windows compatible keyboard

The hardware required was important in the smooth development of the program. Without the proper hardware, the software will take longer to develop. For example, when using a 500 MHz processor it takes about 2 minutes to compile the Microsoft Access function so it can use in Microsoft Visual Basic 2005. While using a 1 GHz processor, it will take only about 5 seconds to compile.

1.4.2 Software Development

The software required was:

- i) Microsoft Windows XP
 - The newest operating system from Microsoft that will deliver up to date technology and plus more stability for developing software.
- ii) Microsoft Visual Studio 2005
 - Microsoft most popular computer programming software for easy integration in Microsoft based operating system.
- iii) Microsoft Access 2007
 - Microsoft Access required in creating database for the system to virtual connects to Visual Basic 2005.
- iv) Adobe Photoshop 7.0
 - Photo editor software that using to edit picture that use in this project.

CHAPTER 2

LITERATURE REVIEW

2.1 BACKGROUND STUDY

Literature review or background research is a one purpose for explained the perspective and method using in review research. We can look the relationship with the project will be developed from the research and theory. In that case, for develop Student Information System; literature is doing with collecting the information for journal, book, internet and application note. From literature review, I am able to understand about software development.

Literature review is an extensive of the information available on topic. Literature review is results in a list of references to books, periodicals and other materials on the topic. The review of the existing literature is important to have a better understanding on the requirements of the project. Assessing current existing systems or website allows identification of the weakness that is to overcome in this project. Meanwhile the strengths of existing application were studies so that it can be adapted into this project.

In this research, the observation is doing on the student problem, what are the problem and the role played by the parent to curve this problem. Case study that has been done also reviewed. It is purpose to ensure that the function implement all arising matter into the system.

As for this project, the main information sources for the system analysis were reference books, internet surfing, interview and discussion with supervisor.

2.2 INTERNET SURFING

Through the internet site visit, some idea collected from the similar system. To gather the system information, a survey conducted with a complete site of existing Student Information System and Student Management System website. Computer journals and reference books are also good sources of information.

By surfing UTeM and PRESS portal website, the functions are analyzing and will be comparing with this proposed system. It is to identify the weakness of the system. Surfing into another universities website was doing to see if they implement Student Management System or not. Based on the finding, so far no other website performs this kind of system. This leads towards building the proposed system in order to help student to manage them.

Electronic journals read in order to provide current information on very specific topics.

2.3 BOOKS AND REFERENCES

Books and references used to get the information that needed to complete the project documentation such as project methodology. Other than that, it serves as a guide to understand more on the concept and the behavior of the to-be built in system. Book concerning with psychology aspect is also reviewed to understand the student psychological needs and behaviors.

2.4 INFORMAL INTERVIEW

The personal interview is generally recognized the most important and most often used fact-finding technique. To collect the information and identify system requirements, an informal interview been conducted with UTeM Community such as students, staffs and lecturers as the end user. This helps in find facts, verify facts, clarify facts and solicit ideas and options.

2.5 DISCUSSION WITH SUPERVISOR

Discussion with supervisor been practiced from time to time in order to get helps and advices during the writing report. Supervisor is lecturer, and their teaching environment makes them to understand a lot on student life. He was also once a student, so they know on the system requirement that should function in the system.

2.6 QUESTIONNAIRE

The questionnaire was distributed to learners of the current system. 15 respondents have spared their time to give their feedback to the current system and new system. According to the studies, there is 97% of respondents were agree to have Student Information System to improve the effectiveness of student learning environment.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 PROJECT METHODOLOGY

This chapter will explain about the project's methodology that is used in developing the software. The methodology of a project is a guideline that will explain about the project path from the beginning until it is completed. Every selection and action that must be done while implementing the project must be explained in stages. This methodology is needed to make sure the project that consists of software development will be developed systematically, smoothly and successfully in order to obtain better results.