UTeM EDUCATION NOTIFICATION SYSTEM (UTeM-ENS)

NURUL NADIA MAT NAYAN

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

© Universiti Teknikal Malaysia Melaka

BORANG PENGESAHAN STATUS TESIS*

JUDUL: _____

SESI PENGAJIAN: _____

Saya _____
(HURUF BESAR)

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** 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 Akhir Projek Sarjana Muda (PSM)
** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak berkuasa.

© Universiti Teknikal Malaysia Melaka

UTeM EDUCATION NOTIFICATION SYSTEM (UTeM-ENS)

NURUL NADIA MAT NAYAN

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

© Universiti Teknikal Malaysia Melaka

DECLARATION

I hereby declare that this project report entitled

UTeM EDUCATION NOTIFICATION SYSTEM (UTeM-ENS)

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

STUDENT : _____ Date :

(NURUL NADIA MAT NAYAN)

SUPERVISOR : _____ Date :

(MISS INTAN ERMAHANI A.JALIL)

© Universiti Teknikal Malaysia Melaka

DEDICATION

I would like to dedicate this thesis project to my beloved parents Mat Nayan bin Ramli and Salmah binti Kunjimon who always support everything i did for this thesis and also provide me enough money for all the cost needed to fulfil this thesis. Second, to my family and siblings who continuously give a moral support for me to finish this thesis. Last, to all dear friend that are always by my side through the development of this thesis.

© Universiti Teknikal Malaysia Melaka

ACKNOWLEGMENT

Bismillahirrahmanirrahim...

First, I want to say Alhamdulillah to Allah for giving me a lot of strength to complete this tough thesis project. At first I felt despair, but with little hope to Allah I managed to complete the project.

I want to thank my beloved father, Mat Nayan bin Ramli and my mother, Salmah binti Kunjimon who have always been a mentor and become the most supportive people while I'm doing this project. I would also like to thank my supervisor Miss Intan Ermahani, who always gives me a lot of advice for me to prepare my thesis and without her I probably would not have managed to complete my project. Do not forget also to friends who are always with me and love to give brilliant ideas and moral support.

Lastly, thanks to all those who helped me either help directly or indirectly. I will always remember their support throughout my life as I knew I would never be able to repay all their kindness. Thanks to all.

© Universiti Teknikal Malaysia Melaka

ABSTRACT

Nowadays, our life is full of the usage of technology , no more using papers and mouth-passing . This is because, paper usage and mouth-passing in delivering message may lead to many mistakes and also misinformation. So, by using this concept I have decided to build a system that can ease the way in delivering message. I design an application for utem to ease the lecturer in delivering message or notify things to student. This system is a one way communication which the student can only receive the message send by their lecturer.

© Universiti Teknikal Malaysia Melaka

ABSTRAK

Pada masa kini, kehidupan kita penuh dengan kegunaan teknologi , tidak lagi memerlukan kertas dan penyampaian maklumat dari mulut ke mulut. Hal ini kerana , penggunaan kertas dan penyampaian maklumat dari mulut ke mulut membawa kepada pelbagai kesalahan maklumat. Jadi, Dengan menggunakan konsep ini, saya telah memutuskan untuk membina sebuah sistem yang boleh memudahkan penyamapain mesej. Saya telah mereka aplikasi untuk UTeM untuk memudahkan pensyarah menyampaikan maklumat atau memperingatkan sesuatu kepada pelajar. System ini berteraskan hubungan komunikasi satu hala di mana pelajar hanya boleh menerima mesej yang dihantar oleh pensyarah sahaja.

© Universiti Teknikal Malaysia Melaka

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	DECLARATION	i
	DEDICATION	ii
	ACKNOWLEGMENT	iii
	ABSTRACT	iiv
	ABSTRAK	**Error! Bookmark not defined.**
	TABLE OF CONTENTS	vii
	LIST OF TABLES	ix
	LIST OF FIGURES	xi
	LIST OF ABBREVIATIONS	xiiii
	LIST OF APPENDICES	xiv
CHAPTER 1	INTRODUCTION	**Error! Bookmark not defined.**
	1.1Introduction	**Error! Bookmark not defined.**
	1.2Problem statement(s)	1
	1.3Objective	**Error! Bookmark not defined.**

© Universiti Teknikal Malaysia Melaka

1.4 Scope 2

1.5 Project significance 3

1.6 Conclusion 4

CHAPTER 2 LITERATURE REVIEW AND PROJECT METHODOLOGY 5

2.1Introduction 5

2.2Facts and findings (based on topic) 7

2.2.1Domain 7

2.2.2Existing System 7

2.2.3 Technique 8

2.3Project methodology 9

2.4Project requirements 10

2.4.1 Software Requirement 10

2.4.2 Hardware Requirement 10

2.5 Project Schedule and Milestones 11

2.6 Conclusion 11

CHAPTER 3 ANALYSIS 12

3.1Introduction 12

3.2Problem analysis 13

3.3Requirement Analysis 16

3.3.1Data Requirement 16

3.3.2Functional Requirement 22

3.3.3Non-Functional Requirement 22

3.3.4Others Requirement 23

© Universiti Teknikal Malaysia Melaka

3.4Conclusion 24

CHAPTER 4 DESIGN 25

4.1Introduction 25

4.2High-Level Design 25

4.2.1System Architecture 26

4.2.2User Interface Design 27

4.2.3Database Design 42

4.3Detailed Design 46

4.4Conclusion 46

CHAPTER 5 IMPLEMENTATION 48

5.1Introduction 48

5.2Software Development Environment Setup 49

5.3Database Implementation 51

5.5Conclusion 54

CHAPTER 6 TESTING 55

6.1 Introduction 55

6.2 Test Plan 56

6.2.1 Test Organization 56

6.2.2 Test Environment 57

6.2.3 Test Schedule 58

6.3Test Strategy 59

6.3.1 Classes of tests 59

6.4Test Design 60

© Universiti Teknikal Malaysia Melaka

6.4.1 Test Description 60

6.5Test Results and Analysis 62

6.6Conclusion 65

CHAPTER 7 CONCLUSION 66

7.1 Introduction 66

7.2 Observation on Weaknesses and Strengths 66

7.3Propositions for Improvement 67

7.4Project Contribution 67

7.5Conclusion 68

APPENDIX 69

REFERENCES 95

© Universiti Teknikal Malaysia Melaka

LIST OF TABLES

TABLE	TITLE	PAGES
Table 4.1	Input Login design	55
Table 4.2	Register New Lecturer Input Designe	55
Table 4.3	Edit Lecturer Input Design	33
Table 4.4	Delete Lecturer Input Design	49
Table 4.5	Add Subject Input Form Design	50
Table 4.6	Assign Subject To Lecturer Input Design	54
Table 4.7	Register Stusent Input Design	67
Table 4.8	Post Feed Input Design	72
Table 4.9	Comparison between conceptual, physical and logical	87

© Universiti Teknikal Malaysia Melaka

LIST OF FIGURES

FIGURE	TITLE	PAGES
Figure 2.1	Project Methodology	7
Figure 2.2	Gantt Chart	8
Figure 2.3	Steps Project Management Process	9
Figure 2.4	Sequence Diagram for registration	10
Figure 2.5	Sequence Diagram for view	23
Figure 2.6	Sequence Diagram for send a message	24
Figure 3.1	Usecase Diagram	24
Figure 3.2	Push Notification	25
Figure 3.3	Google Cloud Messagingr	25
Figure 3.4	Navigation Design	26
Figure 3.5	Logical Database Design	26
Figure 3.6	Conceptual Database Design	27
Figure 4.1	Activity Diagram for Implementation	27

© Universiti Teknikal Malaysia Melaka

Figure 6.1	Quality of Respondent	28
Figure 6.2	Quantity of Student	2

© Universiti Teknikal Malaysia Melaka

LIST OF ABBREVIATIONS

OOAD	- Object-oriented analysis and design
PSM	- Projek Sarjana Muda
UTeM	- UniversitiTeknikal Malaysia Melaka
GCM	-Google Cloud Messaging
ENS	- Education Notification System
Apps	- Application

© Universiti Teknikal Malaysia Melaka

LIST OF APPENDICES

APPENDICES	TITLE	PAGE
Appendix 1	Questionnaire Form	92
Appendix 2	User Manual	93

© Universiti Teknikal Malaysia Melaka

CHAPTER 1

INTRODUCTION OF PROJECT

1.1 Introduction

This notification application that is officially design for UTeM is an application that developed on purpose that it will ease the lecturer or staff to notify or tell anything to student. So basically to use this application, it needs the registration of student. Student will register by using their email address to an UTeM-ens.com.

Once they registered, this notification application will generate a registration key and send it to php system admin side and provide a link for student to download the application in their own mobile phone. For lecturer and staff, they need to login to see the registered student and there will also have the message textbox for lecturer or staff to insert their message or any notification.

So, once the message send, student will get the message in their handphone. This application can be opened at desktop by staff or lecturer and manage anything about student or timetable. For non android user , this system also could send an sms direct to the registered number.

1.2 Problem Statement

© Universiti Teknikal Malaysia Melaka

Lecturers are very busy nowadays, they are not only responsible for teaching student but also need to attend meeting and much more. So, when there is an emergency or things that need to be tell to all the student that the class need to be cancel, delayed or want the student to submit anything quickly it will gives trouble to the lecturer.

Although there are many messaging application nowadays, there are several cases of misinformation still happen in notifying student. There are always a case when student have come to class , they have to wait until they be informed that class is cancel or the location of class is changing. This application prevent these kind of cases to happen as it waste much time for lecturer and students.

1.3 Objective

The objective that carried out by this project is listed by following:

1. To make ease the lecturer on deliver message to their student.

2. To develop an official UTeM notification application.

3. To make improvement in ways of delivering message between lecturer and student.

1.4 Scope

1.4.1 System scope

1. The Notification Application that only send the message from lecturer to the student.
2. The message can be in notification form, sms and also an image.

© Universiti Teknikal Malaysia Melaka

1.4.2 User Scope

1. Admin
2. Staff/Lecturer
3. Student

1.5 Project Significant

This project should be able to make the lecturer easier in way of delivering messages or notifying anything to student. Besides that, any images also can be send through this system to all the student registered in the website. It also makes our university way formal and exclusive as we have our own messaging application among UTeMians only.

The lecturer can view, edit, update and delete the student in their desktop. The student is the passive user, they can only receive the message from the lecturer once they have registered in the UTeM-ens website and download the android version from the website in their mobile phones.

© Universiti Teknikal Malaysia Melaka

1.6 Conclusion

For the conclusion, by acknowledge the problems within the UTeM student and lecturer, we can collect the required requirement for the UTeM organization and develop a system that called notification system. Of course the development of this project will based on problems that have been addressed which will definitely meets the needs of the user.

Besides the analysis of problems and research of requirement, the objectives and project scope also was set to give a more clear function to ensure the system developed running smoothly.

Overall, this chapter described the early stage that has been carry out to study more about the system to develop it. Lastly, this chapter also has discussed all the information that should be recorded and also the process flow for the development of the systems.

© Universiti Teknikal Malaysia Melaka

Chapter 2

LITERATURE REVIEW AND PROJECT

2.1. Introduction

Notification application is a short free-form messages that can send a message or any notification from receiver to sender by using an application that connected them together. This kind of application provide people with the most effective ways to communicate to each other, to notify something about an important events, to make invitation between friends. The user only can use the notifications application to send messages to the user that have download the application only. Only resgistration needed , there are no special permission is needed.

Literature Review

By missionmode.com, When there is an incident, problems, emergency and crisis occurs, where will someone be? Is it in front of a computer? Is it on the go? Many of your incident responders will be very near to their mobile, so you need a way to communicate and coordinate actions using mobile devices.

© Universiti Teknikal Malaysia Melaka

Their missionmode emergency notification and incident management mobile apps enable their team to drive an incident response to a successful conclusion, no matter where they are located.

MissionMode’s full Situation Center Suite is available via mobile app. Whether you need to send or receive emergency notifications or need a launching a new Situation Room for an event that’s unfolding, our mobile incident management applications will allow it to access our full feature set on the go.

So, it means that they have develop an mobile application for emergency notification and im doing a mobile application for notification or messaging between lecturer and student. Same concept but different funtion**.**

We can take facebook as an example of notification application which are very famous nowadays. When a notification is delivered, it highlights the notifications jewel on Facebook and appears in the drop down.

The notifications appear with the application icon to the left of the page, interspersed with other notifications based on chronological sorting. Notifications themselves are short which up to 180 characters in strings of custom text. You can also reference the UIDs of any other people authorized on your application. UIDs will be expanded to show people's actual names, but they won't be clickable.When people click the notification, they will be taken to a URL you specify with the notification.

© Universiti Teknikal Malaysia Melaka

2.2 Facts and findings

2.2.1. Domain

There are several domain related to my project such as push notification, whatsapp , wechat and other messager. Each of them has their unique and special features. Same as my project that are specially design for only UTeM-ians which shows how unique our university as we have our own notification application that can connect all the people that related to UTeM.

2.2.2. Existing System

One of the famous existing system that are nearly similar as my project is whatsapp. My ENS and whatsapp carry same function which can send and deliver message to people.

WhatsApp Messenger are very useful nowadays, it is a cross-platform mobile messaging application that will allows their user to exchange messages between the user, and notify without having to pay or use your credit for SMS like an example. WhatsApp Messenger is available for all types of mobile phones such as iPhone, BlackBerry, Android, Windows Phone and Nokia and others.

All of the mobiles can message each other unlimitedly because WhatsApp Messenger uses the same internet data plan that were use for email and web browsing, it is compatible and it cost you free to message and stay in touch with your friends. In whatsapp, images, videos, sounds also can be send and exchange between the user.

© Universiti Teknikal Malaysia Melaka