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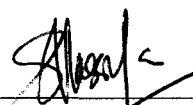
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UTEM INTERNAL GRANT SYSTEM

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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

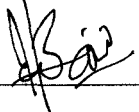
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DECLARATION

I hereby declare that this project report entitled

UTEM INTERNAL GRANT SYSTEM

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

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DEDICATION

I dedicated all my effort to this project especially to my family and my friends, who teach me that the best kind of gain knowledge with our own effort for the bright future. A special feeling of thank you to my loving parents and my sibling that was never stop to giving a moral support for me to accomplish this project when I face a obstruction to finish this project.

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Otherwise, I would like to gratitude to my family, that very understanding and always stays behind me. Not forgetting to all my friends who help me, and share any knowledge during the process for completing this project.

Through this Final Year Project (PSM), it was a preparation for me before going to another phase of life such as working environment. All the knowledge that I gained with this project will help me to easily adapt with the working criteria. Finally, I would like to gratitude thanks to all those involved directly or indirectly to the process of completing my project. Here I would like to apologize if there is any misstep in the process of preparing the report for the Final Year Project.

ABSTRACT

UTeM Internal Grant System (UIGS) is a system that will help staff of Center for Research and Innovation Management (CRiM), UTeM to handle the data of grants and researchers. The UIGS system will provide the platform for users to add, delete, update and search data. This system will help users to avoid data redundancy problems and centralized the data in a database. The system is used in controlling on how the data and information is stored and retrieved. By using this system, users can retrieve the required data in a short time. UIGS also is an effective system and easy to use since it is very user-friendly. Furthermore the UIGS system will provide a function where is in just one click the letter of appointment for researchers will automatically be produced. So that, the users does not need to do it manually each time the letter need to print out. This will help user by lessen their work and for sure will avoid the waste of time to fullfill that task. This system also provide notification on research progress report. The notification will be send via email. UIGS contain security measure to make sure the data about the grant is discrete from other party accept authorized personnel only.

ABSTRAK

Sistem Dalaman Geran UTeM (UIGS) adalah sistem yang akan membantu kakitangan Pusat Kajian dan Pengurusan Inovasi (CRiM), UTeM untuk mengurus maklumat geran dan kajian. Sistem ini juga akan menyediakan satu fungsi untuk pengguna menambah, membuang, dan mengemaskini serta mencari maklumat yang telah disimpan. Sistem ini juga akan mengelakkan pengguna daripada memasukkan maklumat yang sama lebih dari sekali dan sekali gus menyimpan maklumat yang dimasukkan ke dalam pangkalan data. Sistem ini juga digunakan untuk mengawal bagaimana maklumat dan informasi disimpan dan digunakan. Dengan menggunakan sistem ini, pengguna boleh memperolehi data dalam masa yang singkat. UIGS juga merupakan sistem yang efektif dan mudah untuk digunakan serta mesra pengguna. Tambahan pula, sistem UIGS akan menyediakan fungsi dimana dengan menekan satu butang klik sahaja, surat perlantikan untuk para pembantu penyelidik akan dicetak keluar, dengan itu pengguna tidak perlu lagi menaip surat secara manual setiap kali surat itu perlu untuk dicetak. Dengan cara ini akan mengurangkan tenaga kerja serta mengelakkan pembaziran masa melakukan tugas yang berulang. Sistem ini juga menyediakan notifikasi mengenai laporan kemajuan kajian yang sedang dijalankan oleh penyelidik. Notifikasi ini akan dihantar melalui emel. UIGS juga mengandungi ciri keselamatan yang tinggi untuk memastikan maklumat geran hanya boleh diakses oleh pengguna yang telah dibenarkan sahaja.

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CHAPTER 1

INTRODUCTION

1.1 Project Background

UTeM Internal Grant System (UIGS) is a system that will help staff of Center for Research and Innovation Management (CRiM), UTeM to handle the data of grants, researchers and researcher assistants. The UIGS system will provide the platform for users to add, delete, update and search data.

This system will help users to avoid data redundancy problems and centralized the data in a database. The system is used in controlling on how the data and information is stored and retrieved. By using this system, users can retrieve the required data in a short time. UIGS also is an effective system and easy to use since it is very user-friendly.

Furthermore the UIGS system will provide a function where is in just one click the letter of appointment for researcher assistants and the letter of approval for grants will automatically be produced. So that, the users does not need to do it manually each time the letter need to print out. This will help user by lessen their work and for sure will avoid the waste of time to fullfill that task.

This system also provide notification on research progress report. The notification will be send via email to the researchers. UIGS contain security measure to make sure the data about the event is discrete from other party accept authorized personnel only.

1.2 Problem Statement

1.2.1 Redundancy of data.

The data is not centralized and redundancy of data is happen since that the data is not well-managed.

1.2.2 Difficulties in producing a letter of appointment and approval.

User need to spend a lot of time to produce the letter of appointment for the new researcher assistants and approval letter for grant by do it manually.

1.2.3 Difficulties in searching the data.

User need to take longest time to find the required information since the data is not well managed.

1.2.4 Difficulties in sending notification on research progress report.

User need to send notification on research progress report email manually to every researchers and sometimes there are researcher missed out from the email.

1.3 Objectives

The main objective behind the project is to develop a web-based system for a better data managing process. The targeted user is the staff of the CRiM who will manage and retrieve the required data. It helps the staff not only to manage data, but also user-friendly. This projects also embarks the following objectives :

- To build an effective and efficient system that will help user to centralized the data and prevent redundancy of data.
- To develop system that will help user to produce automatically the letter of appointment for the new researchers and grants without they need to do manually.
- To improve the searching of data process.
- To provide notification on research progress report.

1.4 Scope

The scope of UTeM Internal Grant System is only one type of user.

1.4.1 Staff

Staff has full privilege over the data access without restrictions. They are responsible for managing the data such as add, update, delete and search the data. Staff is also responsible for sending notification email to the researchers to remind them about the submission of research progress report.

1.5 Project Significance

The project would be most likely to be used by office's staff. In this case, the system is developed for Center for Research and Innovation Management (CRiM), UTeM. The management department of CRiM will be the beneficiary of the system as the system will help to manage the data. The staff will manage the data record effortlessly and the user will experience easier retrieval data process. The system main function starts from staff add the data to the system and ended with staff send notification for research progress report to the researchers to remind them about the submission of progress report.

1.6 Expected Output

The expected output of this project is the system will be able to provide convenience way to user in handling grant and researcher management more efficiently and helps user to produce automatically the letter of appointment and approval for the Researchers and Grants easily without needs to do it manually. The system is also will help CRiM's staff to send notification for researchers to submit

their progress report in time given. Furthermore, the system can help user to overcome the problem of redundancy data and the system that will be produced is user-friendly.

1.7 Conclusion

Chapter one basically discusses about the surface of the project. This chapter covers the introduction, objectives, project's scope, project's significance, and expected result of the UTeM Internal Grant System (UIGS). Next chapter will focus on the research related to the project.

CHAPTER 2

LITERATURE REVIEW AND METHODOLOGY

2.1 Introduction

In order to complete the project, the study of literature review is included. Literature review is a process to collect, search, analyze and at the end to form a conclusion from the studies. There are many reading materials to study for. They are including journals, theses, online articles, studies existing system, observation, and also research materials that could be used as reference in this literature review.

Project methodology consists of a few steps and methods in successful project planning and delivery of the project itself. It refers to the theoretical analysis of the methods that is appropriate for the project and help developer to plan, structure and control the project development. Project methodology controls the whole management process to ensure the success for current technologies and business goals.

2.2 Facts and finding

2.2.1 Existing System

There is some existing system that its functions and business goals are closely similar and related to the project being developed which are :

2.2.1.1 URIS



1. Research Details
2. Research Payments
3. Research Assets
4. Research Output
5. Research Archives



Figure 2. 1 : URIS system interface

URIS is a portal that has been developed by UTeM Organization to help CRiM staff to manage the researcher and all type of grants. However, the system has a problem which is does not support function to keep the history of researcher or researcher assistant. For example, when a researcher assistant have to extend their duration in a same project, the previous duration date will be overwrite.

2.2.1.2 MyGrants

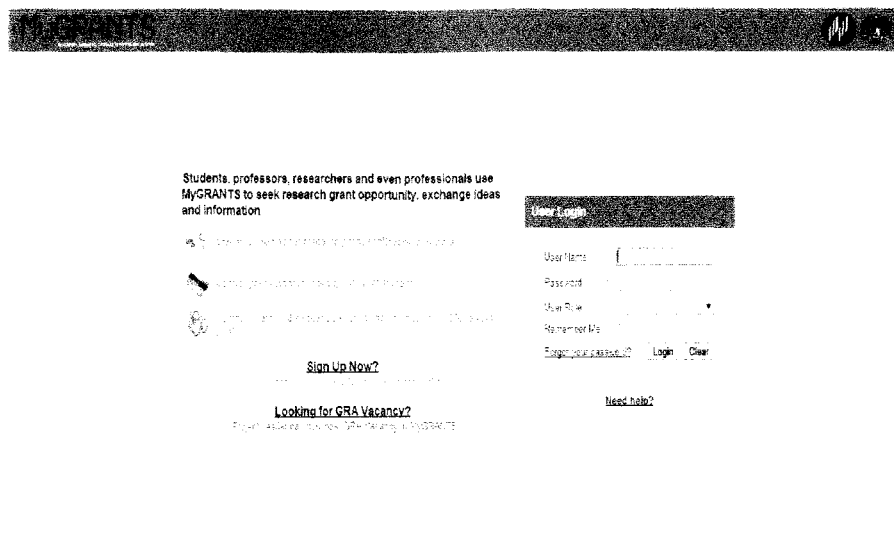


Figure 2. 2 : MyGrants system interface

MyGrants is a portal that has been created for all universities in around Malaysia. This system is also provide a platform for user to manage the data for grants and researchers. The system also allowed user to communicate with the researchers from other universities since that it provides the contacts of all the researchers around Malaysia. However, when the CRiM staff wants to search the required data about the grants or researchers just only in UTeM is does not help so much.

2.2.2 Technique

There are various kind of technique used in this project. It is either the technique proposed in the study of existing system and researchers or the disciplined of automated optimization. The purpose of gathering information, do research and study is a way that lead in finding relevant and useful

information for the project's requirement that is crucially needed, functionality and design which may work the best.

The information gathered will offer to help in identifying the impression and acceptance of people on the system and what functions should be implemented to the system. Furthermore, these information gathering techniques could also propose a problem solution.

2.3 Project Requirements

The project requirement consist of two parts, software and hardware requirement component.

2.3.1 Software requirement

- Microsoft Visual Studio 2010
- Microsoft Office Access 2007
- Microsoft Office Word 2007
- Microsoft Visio 2010
- StarUML.

2.3.2 Hardware Requirement

- Sony Vaio SVE151A11W Laptop *Windows 7 Home Basic

2.2.3 Other Requirements

- There is no other requirement, unless stated in above component list.

2.2.4 Project Schedule and Milestone

Project milestone is already considered before the project begins. It involves all the steps in the Rapid Application Development (RAD) Methodology. Planning project's milestone and time line is good practice to manage a project. Tables below describe the project timeline of the project.

Table 2. 1 : Milestone

Activities	Duration
Requirements Planning Phase : Problem statement and objectives. Project scope. Determine system requirements. Plan a project schedule. Research and review current system.	17 Feb – 1 Mac 2014
User Design Phase Design interface. Build model and prototype. Construct high-level design. Construct low-level design.	2 Mac – 8 Mac 2014 9 Mac – 18 Mac 2014 19 Mac – 24 Mac 2014 25 Mac – 31 Mac 2014
Construction Phase Coding.	1 Apr – 30 Apr 2014