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UNI IMPIAN SMS ALERT APPLICATION SYSTEM (UNISAAS)

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UNI IMPIAN SMS ALERT APPLICATION SYSTEM (UNISAAS)

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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2008

DECLARATION

I hereby declare that this project report entitled

UNI IMPIAN SMS ALERT APPLICATION SYSTEM
(UNISAAS)

is written by me and is my own effort and that no part has been plagiarized

without citations.

STUDENT : _____ Date: 24/06/2008
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ABSTRACT

Uni Impian SMS Alert Application System (UNISAAS) is developed specially for Pusat Tuisyen Uni Impian organization which is located at Taman Melati, Kuala Lumpur. This system is implemented to replace a manual system that is currently used in Pusat Tuisyen Uni Impian to spread the notice about the class cancellation to the student direct to their mobile phone. UNISAAS is a standalone system, which means that the system only can be used within a this organization and will not be able to access via the Internet. The user required an authorization or authentication from the Pusat Tuisyen Uni Impian Administrator before they can use this system. This system is developed according to the current situation and circumtances using information technology as an intermediate medium to send and distribute any information. Usually, any systems that will be developed have their own methodology used as implementation guidance. Same as any other system, UNISAAS uses a Rapid Application Development (RAD) methodology which is suitable for the implementation of a system that takes a short time to be completed. Moreover, this methodology is commonly used in the most industry of software development system. UNISAAS is a system that is simple and easy to use by anyone even though they have no experienced in conducting a computer-based system.

ABSTRAK

Uni Impian SMS Alert Application System (UNISAAS) telah dibangunkan khas untuk kegunaan Pusat Tuisyen Uni Impian yang terletak di Taman Melati, Kuala Lumpur. Sistem ini dibangunkan bagi menggantikan sistem manual yang kini sedang digunapakai di Pusat Tuisyen Uni Impian untuk menyebarkan notis mengenai pembatalan kelas. UNISAAS adalah sebuah sistem *'standalone'*, yang membawa maksud ia hanya boleh digunakan di dalam organisasi tertentu khususnya Pusat Tuisyen Uni Impian dan tidak dapat diakses melalui internet.Sebelum menggunakan sistem ini, pengguna harus mempunyai autoriti atau kebenaran seperti yang telah ditetapkan oleh pihak pentadbiran di Pusat Tuisyen Uni Impian. Sistem ini dibangunkan sesuai dengan keadaan dan persekitaran masa kini yang menggunakan teknologi maklumat sebagai medium perantaraan untuk menyampaikan dan menyebarkan sebarang maklumat. Kebiasaanya, setiap sistem yang ingin dibangunkan mempunyai methodologi yang digunakan sebagai panduan pelaksanaan. Seperti sistem- sistem lain yang telah dibangunkan, UNISAAS menggunakan *Rapid Application Developmet* (RAD) methodologi yang sesuai digunakan untuk melaksanakan sistem yang mengambil masa yang singkat untuk disiapkan. Tambahan pula, methodologi ini biasa digunakan dikebanyakan industri sistem pembangunan perisian. UNISAAS adalah sebuah sistem yang ringkas dan mudah untuk digunakan oleh sesiapa sahaja walaupun mereka tiada pengalaman dalam mengendalikan sistem berasaskan berkomputer.

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LIST OF ABBREVIATIONS

DBMS	Database Management System
GSM	Global System for Mobile Communications
PK	Primary Key
PC	Personal Computer
PSM	Projek Sarjana Muda
RAD	Rapid Application Development
RAM	Random Access Memory
RDBMS	Relational Database Management System
RUP	Rational Unified Process
SIM	Subscriber Identity Module
SQL	Structured Query Language
SMS	Short Messaging Service
UNISAAS	Uni Impian SMS Alert Application System

CHAPTER I

INTRODUCTION

1.1 Project Background

The project is to implement Uni Impian SMS Alert Application System (UNISAAS) for Pusat Tuisyen Uni Impian which is located at Taman Melati, Kuala Lumpur. Basically, UNISAAS is application system that will send an announcement about class cancellation and replacement to the students in the range of 13 – 17 years via the SMS. The SMS will be sent from Personal Computer (PC) to the student's mobile phone. Currently, they use a manual system by making a phone call for each student. In fact, the system is no longer reliable for any instant or urgent information that need to be carried out.

By using the UNISAAS; the staffs or administrator who are in charge for the student registration will collect and save the student's data and their guardian's contact number in the database. In the other side, when there is any information or an announcement about the class cancellation or replacement, the staff or a tutor itself can send the SMS alert directly through the student's and their guardian's mobile phone. For example, if a tutor is unable to conduct a class at a specific time and date according to the schedule, they will send the class cancellation notice for the students. Other than that, the staff also can send a SMS from their mobile to cancel the class directly to the

system. As a result, the system has been set automatically to broadcast an appropriate notice to the selected phone numbers. In this case, assume that all staff knows how to send the message codes that enable the system recognize the codes and all mobile phone is active. The system also provides staff recognition based on the phone number registered in the database. So there is no unauthorized sender issues will arise to manipulate the uses of this system.

Basically, Microsoft Visual Studio.NET 2003 software, Adobe Photoshop 7.0, iTegno 3000 GSM modem, cell phone, server (PC), SIM card and the Microsoft SQL Server 2000 database will be used in order to build the system. Any announcement will be send to the student directly to their active mobile. There are a lot of advantages of implementing the SMS alert application system in this tuition center because this will expose them to the current technology and initiate the use of the information technology.

The implementation of UNISAAS from PC to mobile is a solution for the current problem faced by the tuition center because this application will provide a utility for the tuition center's management to send a SMS by group. This application system will be used by the staff of the tuition center as well as the tutors. The term staff uses in this documentation also can be referred as a clerk. The implementation this kind of project will bring the new resolution for the user, which means Pusat Tuisyen Uni Impian organization and the system developer because it will increase the ability and experience in Information Technology field and make use of all the knowledge gained from the previous lessons and applies it into the real environment.

1.2 Problem Statement

From the observations and information given by staffs of the Pusat Tuisyen Uni Impian , there are approximately 150 numbers of student that needs to be informed about any notice and announcements regularly but the quality of information management needs a rapid improvement. It is believed that they still lack of some important functions and need a solution for the current problem faced by the organization. For an instant, they still use a manual system in order to spread and distribute the notice to the student through their parents.

In addition, they also will make a phone call to every student for an urgent announcement. This will takes time and yet, it is complicated. In term of budget, the previous method will raise the organization phone billing cost because the cost of phone call is higher then the SMS cost. This is the obstacles need to be solved by introducing the UNISAAS. Due to this problem, a proper planning need to be developed and implement to ensure the better quality of information management for the tuition center can be achieved. This will come out with Uni Impian SMS Alert Application System as mentioned previously.

In order to achieve the objectives and make the project successful and valuable, there are some obstacles need to be faced by the developer. The target place for this project is located at Kuala Lumpur. It will take some time to collect information and achieve the goals and the contribution from the student and staff is highly needed as well.

1.3 Objectives

There are some goals and target to be achieved through the implementation of the project. This includes:-

i) To develop a system that can be used to send and receive a SMS alert from the PC direct to the mobile phone and vice versa.

ii) To initiate and expose the staffs and students to the usage of a computer- based system by replacing the manual system currently used by the Uni Impian organization.

iii) To provide an event log that can trace certain activity occur in the system as a reference for the management of Pusat Tuisyen Uni Impian.

1.4 Scopes

Originally, this system will apply only for staffs within the organization, which is Pusat Tuisyen Uni Impian itself. This is a stand-alone application that provides service locally, not a web-based application since it does not apply for external used or accessible via the Internet. This section will explains more detail about the scopes based on the objectives as mentioned previously. The scopes for this system are:

i. The developed system will send the SMS alert from personal computer to the mobile phone for the selected recipient by assuming all the numbers and selected mobile phone is active.

ii. This computer-based system can be used only by the staffs that have the authorization to access the system. The staff with no experience in conducting a computer- based system can gain the experience to use this application because the system provides simple and understandable interface together with the guidelines.

iii. The staff can send a short SMS code from their mobile phone to the system if they are not around for an urgent announcement about the class cancellation only. As a result, the system has been set automatically to recognize the code and will broadcast an appropriate notice to the selected phone numbers in the form of short text SMS.

iv. The class cancellation and replacement notice that created from the user interface in the system can be used for any date or time forward whilst the class cancellation notice that send from the tutors mobile only effective on that particular week only.

In term of the hardware, software and the supported material, this application will run in Windows 2000 and above for the better performance. The interface of the application will be created on Microsoft Visual Studio.NET 2003, integrated with SQL Server 2000 databases and Adobe Photoshop 7.0. Microsoft Project 2003 will be used for personal time management and schedule to achieve the milestone within the time given. Meanwhile Microsoft Word will be used for documentations and reports.

In addition, there are some supporting device need to be included, namely mobile phone, Personal Computer (PC), Global System Mobile (GSM) modem and the SIM card. The integration of all the software, hardware and other tools will ensure the successful of the project.

1.5 Project Significant

The implementation of this project will bring a lot of advantages for both tuition center organization and the system developer. Staffs of Pusat Tuisyen Uni Impian will be able to use the system that emerges from latest technology available to make the communication more effective in their daily life using computer-based system. They can fully utilize the current technology that has been discovered recently.

Furthermore, the application system can reduce the billing cost for the organization because the cost of phone call is a higher than SMS, as mentioned before. This is an alternative way to provide the tools and method to send a SMS in a group instead of making a call for each and every student in the tuition center. This project also will become a medium to introduce the user-friendly application system that can be used by the organization's staff even though they have no experiences in information and communication fields. Thus, the method used for communication in the organization will become much better than the previous method.

1.6 Expected Output

By the end of the project which is the project completion, some of the expected outputs that will be gain are listed below:

i) The deliverables and product for this project is the SMS Alert Application System (UNISAAS) which is a computer-based system, used to replace the manual system for communication within the organization.

ii) The knowledge, skills and experience gained by the user when using this application system to send a SMS from the PC direct to the mobile phone.

iii) The skills apply from the previous lesson by the system developer and use it into the real life.

1.7 Conclusion

Basically, this chapter explained about the project background that is the implementation of SMS Alert System for Student and Staff in Pusat Tuisyen Uni Impian which is located in Taman Melati Kuala Lumpur, the problem statement, the objectives of the project, scope about the projects including the software, hardware and the supporting tools that will be used to ensure the successful of the project. In addition, the project significant and the expected output from the project also included in this chapter.

For the next chapter, that is Chapter II will cover about the literature review and the project methodology that will be used. This chapter is important to define and discuss about the methodology used in the other research that is related to the Uni Impian SMS Alert Application System and the comparison between the other systems that is similar with the system that will be developed. This will include the project schedule and milestone to manage the time so that the project will be completed on time.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

One of the important things that need to be considered in implementation of any project is the documentation on Literature Review and Project Methodology. Literature review will provide a background of the project, to justify the choice of project and to identify the important of the project that will be developed. According to Cooper (1988), "A literature review uses as its database reports of primary or original scholarship and does not report new primary scholarship itself. The primary reports used in the literature may be verbal, but in the vast majority of cases reports are written in the documents. The types of scholarship may be empirical, theoretical, critical/analytic, or methodological in nature. Second literature review seeks to describe, summarize, evaluate clarify and integrates the content of primary reports".

So, it is believed that the literature review is an important element in all research to place in every project in term of its benefits and contribution to understand the project effectively. This chapter also will discuss about the selection of the appropriate project methodology. According to Cockburn (2000), "Different methodologies are inevitable, stemming directly from the questions of what constitutes a methodology and what are a methodology's underlying principles. Projects differ according to size, composition,

priorities, and criticality. The people on a project have different biases based on their experiences, principles, and fears."

Base on the statements above, there are many types of project methodologies can be used depending on the type of project itself. Most common methodologies used are System Development Life Cycle (SDLC), Top Down design approach, Rational Unified Process (RUP) and Rapid Application Development (RAD). This section will explain the detail activities in the project, software requirements, hardware requirements, and project schedule and the milestone.

2.2 Literature Review

2.2.1 Domain

The main keyword for this project is SMS broadcasting. SMS broadcasting is a way to send the same bulk message to multiple mobiles number in groups. This is a solution to send SMS alert and announcement at a time to many recipients. The function is similar to the Uni Impian SMS Alert Application System (UNISAAS) that will be developed for Pusat Tuisyen Uni Impian.

2.2.2 Keywords

In this literature review and project methodology, there are some common keywords and terms that will frequently use in the development of UNISAAS. Therefore, the explanation for each keyword will be given in order to ensure the clarity of the documentation. Listed below are the keywords and terms used and the explanation for each term: