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JUDUL: CAMPUS SMS INFORMATION SYSTEM

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^ Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

CAMPUS SMS INFORMATION SYSTEM

MD.HISHAMUDDIN BIN ABD RAZAK

This report is submitted in partial fulfillment of the requirements for the
Bachelor of Information and Communications Technology (Computer Network)

FACULTY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
2005

ADMISSION

I hereby declare that this project report entitled

SMS CAMPUS INFORMATION SYSTEM

is written by me and is my own effort and that no part has been plagiarized
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STUDENT   : _____ Date : 25/11/2005

              (MD. HISHAMUDDIN BIN ABD RAZAK)

SUPERVISOR : _____ Date : 25/11/05

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ABSTRAK

Dewasa ini, terlalu banyak kemudahan dah infrasturuktur yg moden serta canggih telah dibangunkan. Terlalu banyak syarikat-syarikat media dah telekomunikasi menawarkan perkhidmatan mereka. Perkhidmatan yang ditawarkan termasuklah perkhidmatan pesanan ringkas (SMS). Melalui khidmat pesanan ringkas, banyak aplikasi telah dibangunkan dengan tujuan memudahkan para pengguna. Contoh aplikasi yg dibangunkan ialah aplikasi undian, aduan, bank dan sebagainya.Projek yang bakal dibangunkan ini juga berteraskan sistem khidmat pesanan ringkas juga. Sasarn pengguna ialah paaraa pelajar KUTKM. Para pelajar boleh menggunakan sistem ini untuk mengetahui maklumat seperti keputusan peperiksaan , maklumat pensyarah dan maklumat mengenai majlis terbaru yang akan diadakan di KUTKM.Dengan menggunkan kemudahan ini, para pelajar dapat mengetahui maklumat dengan mudah dan cepat. Pengguna hanya perlu menggunakan telefon bimbit masing-masing untuk mendapatkan maklumat tersebut.

ABSTRACT

Projek Sarjana Muda is the final semester project for KUTKM student which is to implement all the knowledge being learned to this project. The project is named Campus SMS information services. Nowadays, many application based on Short Message System. Many companies develop and offer their product to public. For example of SMS product is mobile banking, mobile portal and also on. the project which will be develop is based on SMS technology too. Target user for this project is KUTKM's Student and staff. With this application or system, students and staff can get information quickly and easily just using their hand phone. Objective of this project is to give facility to students and staff.

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LIST OF ABBREVIATION

PSM	Projek Sarjana Muda
KUTKM	Kolej Universiti Teknikal Kebangsaan Malaysia
3G	Third Generation Telecommunication
WAP	Wireless Application Protocol
GPRS	General Packet Radio Service
SMS	Short Message System
GSM	Global Standard for Mobile
MMU	Multimedia University
SMSC	Short Message Services Centre
SDLC	System Development Life Cycle
MSDE	Microsoft SQL Desktop Engine
TDMA	Time Division Multiple Access
CDMA	Code Division Multiple Access
HSCSD	High-speed Circuit Switched Data
WCDMA	Wideband Code Division Multiple Access
EDGE	Enhanced Data rates for Global Evolution
PC	Personal Desktop
PDA	Personal Desktop Assistant
USB	Universal Serial Bus
SMPP	Short Message Peer to Peer Protocol
UCP/EMI	Universal Computer Protocol / External Machine Interface
HTTP	Hyper Text Transport Protocol
SIM	Subscriber Identification Module
MMS	Multimedia Messaging Service
SQL	Structured Query Language
HLR	Home Location Register
VLR	Visitor Location Register
MSC	Mobile Switching Center
GMSC	Gateway Mobile Switching Center

CHAPTER I

INTRODUCTION

Nowadays, in globalization era, there nothing is impossible. Now, in mobile technology, Malaysia achieves high level with 3G technologies besides another technology such as WAP service, GPRS service and also SMS information services. Mobile as a device which many application and cam make much service such as online game, information services, inquiry and more services. At Malaysia, many government department use SMS services to ease user get and information and inquiry. Example, Jabatan Pengangkutan Jalan (JPJ) use SMS system for blacklist inquiry. Other than that, some game application can be running properly just using SMS application. For example, Penalty Game which famous game during Euro 2004 session.

Therefore, when SMS information services publish at our campus, the student and lecturer can take advantages. Student and lecturer can receive any information just type on hand phone button

1.1 Project Background

Short Message System (SMS) appeared on the wireless since in 1991 in Europe where digital wireless technology took root. The Global Standard for Mobile (GSM) includes short messaging service from outset.

Today more applications can run from our hand phone via sms. It is like game application, information service and also on. There are a lot of application can develop from sms service. But not more college or university used this facility. So, the sms application for campus application must be develops. It gives advantages for student and lectures to get and give information. Some application is, staff search, campus event, result and also on. So. the student or lecturer just used their hand phone when want to get an information or inquiry. The students just request an inquiry and send to specific number

And then server replies the answer back to student. However, lecturer can send message or alert notice to their entire student. So, it is easy compare to manual notice at wall.

1.1 Problem statement(s)

There are many problem why must to publish this service at our college. The problems that directly influence the motives of the project is so hard to get new information from our lecture or from faculty administrative. This problem cause not many student concerns over the banner around the college. So, the new information cannot be achieved by student. Another problem, not much student has an internet at their home, and then they all also cannot get information from kutkm website and with this service also can reach their result from kutkm portal. Another problem is lecturer also difficult to give information to their student. Normally They always use manually such as locate a memo at wall, just tell one from their student and also on. With used this skill not entire their student get information.

1.3 Objective

The objective from this service, the information can receive by student or KUTKM staff quickly via hand phone. All KUTKM staff and their student can use this application when it complete publish at our campus. So, if have new event or new announcement, they do not need to publish an announcement at wall or banner. Then, the students just use their hand phone to get any new event or staff information like lecturer's room, phone extension and also on. Then, student also can get a result from portal kutkm just used their hand phone. Main objective from this system is to give facility for students and also to KUTKM's staff

1.4 Scopes

Scope for this project just get and request information from this system. Information which can request by student or staff is information about lecturer's room and also student's result. Student request information about theirs results to system and system searching in database about information which student request and then reply back to student just using Short Message System. All information about user is saving in our database and only user in our database only can used this information. The primary key for the user is their hand phone number. So, the user which their hand phone number is saved in our database can used this service.

1.5 Project significance

Nowadays, our campus has many students and will be moved to our permanent campus at Durian Tunggal. There has wide area for our campus. Then, not all students live in our campus. Most of them rent house out from our campus. So, when notice or banner in campus, they not have a chance to read or see it. Most of them just go to lecture and then straightway go to their home. They cannot get a new event or information about our campus. So, with this system or service, student can check new information from their lecturer or faculty and also from university administrative daily or weekly just using their hand phone. We believe that, most or all students have personal hand phone. So, they can get new information just type a message to server. Other than that, lecturer also can use this service to give an emergency message or information such as cancellation class, reminder assignment and also on. With this system, they can send a message to their entire student and all students can receive that information quickly. This service gives an advantage to student and also to our lecturer.

1.6   Conclusion

Short message system (SMS) is they fast ways to us get information. Although sometimes have a delay time, but this service also perform that the user can receive an information quickly than others media. With this information, the user can make an action quickly and never get information at last minute.. With this service or "campus SMS information service" the student and our lecture can get information quickly just used their hand phone via short massage system which include in Global Standard for Mobile (GSM) outset. It is one way to get fast information which updated in our server.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

A literature review is a glossary or abstract from past research or case study. Literature review can be a research, journal, thesis or a bibliographic essay that is published separately in a scholarly journal. In this chapter, the literature review is focus on the research of the current system or past system and the system will be develops.

A literature review important in action to develop new project or system. Thus action must be taken during analysis past project or system. It important to analysis their requirement, project progress, user requirement and also on. Based on past project, new project must be more efficient and more quality from past project. In this chapter, project methodology is mentioned. Project methodology is project prototype or overall process of developing information systems project.

2.2 Fact and finding

Case 1:

2.2.1 MMU SMS service

Multimedia University is now providing SMS services to the Multimedia University community. The purpose of providing these services is to allow students and Multimedia University community an effective means of getting information from MMU at their fingertips. Some example of their services is mentioned below:

- **MMU Administrative Directory**

  Users can retrieve the Administrative directory by typing *MMU8X* and send it to 32322. See the details at MMU SMS Menu. Each returned result is charged RM0.50.

- **MMU Faculty Directory**

  You can retrieve the faculty directory by typing *MMU9X* and send it to 32322. See details at MMU SMS Menu. Each returned result is charged RM0.50.

- **Examination Results Retrieval**

  Users are able to retrieve examination results via SMS. It is convenient for students who wish to get theirs results instantaneously on their mobile phones.

Just type "MMU1 <studentid> <password> <last/current>" and send it to 32322. Each returned result is charged RM0.50.

- **Notification of Class Schedules**

Users are able to retrieve their class schedules as and when needed via their mobile phones. The students are able to check their class schedules by day or course. Just type "MMU21 < studentid > < password > <mon/tue/wed/thu/fri/sat/sun>" and send it to 32322 for class schedule by day. Type "MMU22 <studentid> <password> <courseid>" and send it to 32322 for class schedule by course. Each returned result is charged RM0.50.

- **Registered Course Detail**

Users can check the courses they have successfully registered for via SMS. Just type "MMU3 <studentid> <password>" and send it to 32322. Each returned result is charged RM0.50.

- **Application Status**

Aspiring students can check their application status via SMS. Just type "MMU4 <ICnumber> <omr/online>" and send it to 32322. Each returned result is charged RM0.50.

- **MMU Radio SMS**

Students and MMU community can communicate with or send their comments and dedications to MMU Radio station via SMS.
Just type "MMU6 <comments/dedication>" and send it to 32322. Each message sent to 32322 is charged RM0.30.

Refer to MMU sms services there are so many service an application can retrieve using hand phone via SMS such as MMU Faculty Directory, Examination Results Retrieval, Notification of Class Schedules and also on. Based on this reference, we find it that SMS services can make student easily access the information without using internet connection, laptop or desktop. However they all just using their hand phone keypad to archive information. However, MMU SMS services are very detailed and powerful services because in their SMS system service include Radio SMS which it want media server as their based.

MMU sms services using SMSC or SMS gateway, it is because student or user send to five digit number such as 32332 and then this SMS communicate with server which a system or data center published in that server. Using specific format such as <login name><space><password>, server can response with this format and reply for the sender. Sender or user must used specific format of typing message to the SMSC. It is because the server can understand with the typing format in their knowledge and programming. The figure below showed their network diagram of that service.

Figure 2.1: Network infrastructure
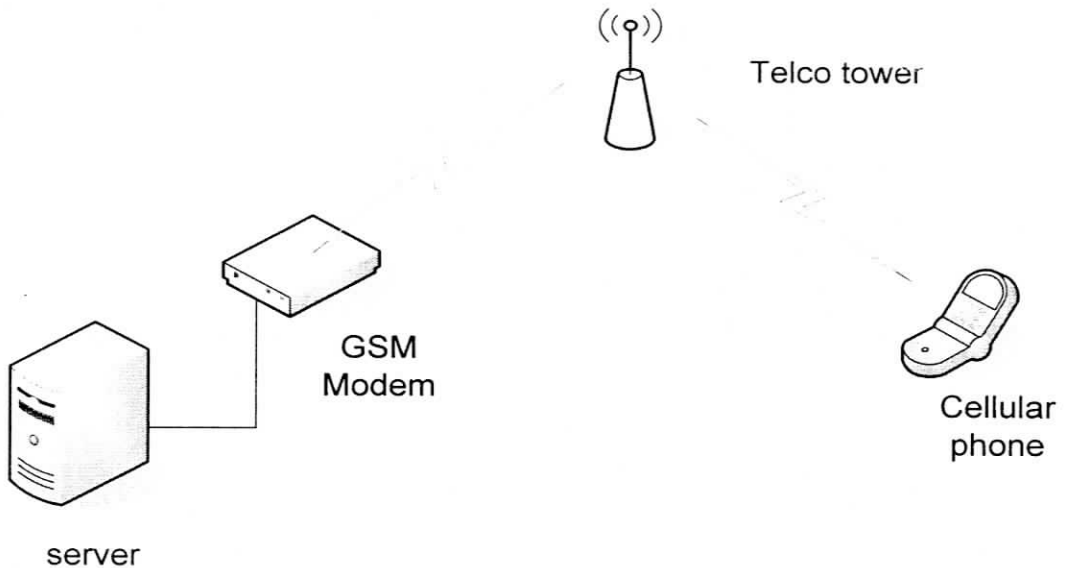
Many local universities have used Short Message System services to give advantages to their student get information. The project in PSM also has one aim or targets same with other university to give advantages or facilities to their student. However, in this project just using Global Standard of Mobile (GSM) modem to connect server to telecommunication link.

2.3 Project Methodology

There are many different models and methodologies, but each generally consists of a series of defined steps or stages. To manage this, a number of system development life cycle (SDLC) models have been created: waterfall, fountain, and spiral build and

fix, rapid prototyping, incremental, and synchronize and stabilize. The oldest of these, and the best known, is the waterfall: a sequence of stages in which the output of each stage becomes the input for the next. These stages can be characterized and divided up in different ways, including the following:

- **Project planning, feasibility study:** Establishes a high-level view of the intended project and determines its goals.

- **Systems analysis, requirements definition:** Refines project goals into defined functions and operation of the intended application. Analyzes end-user information needs.

- **Systems design:** Describes desired features and operations in detail, including screen layouts, business rules, process diagrams, pseudo code and other documentation.

- **Implementation:** The real code is written here.

- **Integration and testing:** Brings all the pieces together into a special testing environment, then checks for errors, bugs and interoperability.

- **Acceptance, installation, deployment:** The final stage of initial development, where the software is put into production and runs actual business.

- **Maintenance:** What happens during the rest of the software's life: changes, correction, additions, and moves to a different computing platform and more. This, the least glamorous and perhaps most important step of all, goes on seemingly forever.

2.4 Project Requirements

2.4.1 Software Requirement

Software development tools or software tools to be used for system development is MS Visual Basic Professional v.6.0 and MS Project 2000 for project management. MS Visual basic is suitable use for development system because it I can communicate with other devises such as server and also with GSM modem which used in this project. Then Microsoft Project used for managed project and follows their project milestone. Other than that, SQL Server 2000 or SQL Desktop Engine (MSDE) need o save student information and also on.

2.4.2 Hardware Requirement

Hardware requirement to be used in this project is servers for develops and run system. Other then that, this project needs GSM modem to communicate with Telco link.