

INTAN COURSES APPLICATION SYSTEM VIA SMS

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Computer Science (Computer Networking)**

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DECLARATION

I hereby declare that this project report entitled

INTAN COURSE APPLICATION SYSTEM VIA SMS

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

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DEDICATION

**Specially dedicated to
My beloved family members who have
encouraged, guided and inspired me throughout my journey of education
my friends, and my colleagues.**

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ABSTRACT

Now days mobile phones available in the market provide many of advanced functions, among which possibilities of running mobile applications seems to be the most interesting feature. INTAN Courses Application System (ICAS) via SMS was developed to facilitate applicant apply course and get information which operate by Institut Tadbiran Awam Negara (INTAN) with only used Short Messaging System (SMS). It is applicable to all mobile phones. This application is using GSM modem connectivity. ICAS via SMS was one alternative new of present method namely apply course like manual form. This system divides users into three sections which are *Administrator*, the coordinator and the applicant. Applicant only needs to send SMS with syntax certain to GSM's number modem. If application fulfilling conditions set, system will send successful status to applicant. If this unqualified, unsuccessful status will in display. Applicant can submit an appeal by dispatching SMS if want continued to participate in course. System will send message to coordinator to confirmed status either eligible applicant or no to attend that course. ICAS via this SMS is developed by using PHP script language and MySQL as database.

ABSTRAK

Pada masa kini telefon bimbit yang terdapat di pasaran membekalkan banyak fungsi yang canggih yang mana kebolehan untuk melaksanakan aplikasi mudah-alih menjadi tumpuan utama. Sistem permohonan kursus INTAN (ICAS) melalui SMS dibangunkan bagi memudahkan pemohon memohon kursus dan mendapat informasi yang dijalankan oleh Institut Tadbiran Awam Negara (INTAN) dengan hanya menggunakan Sistem Pesanan Ringkas (SMS). Ia boleh diaplikasikan pada semua telefon bimbit. Aplikasi ini menggunakan modem GSM untuk membuat penyambungan. ICAS via SMS merupakan satu alternatif baru bagi kaedah yang sedia ada iaitu memohon kursus secara manual. Sistem ini di bahagikan kepada tiga pengguna iaitu pentadbir, penyelarar dan pemohon. Pemohon hanya perlu menghantar SMS dengan sintak yang tertentu ke nombor modem GSM. Jika permohonan memenuhi syarat yang ditetapkan, sistem akan menghantar status berjaya kepada pemohon. Jika ia tidak memenuhi syarat, status tidak berjaya akan di paparkan. Pemohon boleh membuat rayuan dengan menghantar SMS jika ingin terus menyertai kursus. Sistem akan menghantar mesej kepada penyelarar untuk mengesahkan status samada pemohon layak atau tidak untuk menghadiri kursus tersebut. ICAS via SMS ini dibangunkan dengan menggunakan bahasa pengaturcaraan PHP dan MySQL sebagai pangkalan data.

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CHAPTER I

INTRODUCTION

1.1 Project Background

Nowadays, people in the world always want a technology that can help their life to be easy and could make things fast especially in Information Technology and Communication. There is a lot of system being created by programmers in the market whether it is good or not. This technology has improved the quality of our lives immeasurably. In Malaysia, almost all our activities still use old fashion method to process and run a company. The National of Public Administration (INTAN) is the training arm of the Public Service Department in Malaysia currently still manual application form to apply the course application.

This project called INTAN Courses Application System (ICAS) via SMS and it will develop for INTAN. Therefore, ICAS via SMS was developed to help the applicants to apply the course easier that the INTAN offers and know the result of application faster with the SMS (Short Message Service). With this system all application will be manage and systematic. This system is better and faster than use the INTAN manual application form.

Currently, the applicants (first party) need to register the detail of profile by the online system. After register the detail, the system automatically detects the applicant by the hand phone number. For apply the course, the applicant just key in Apply and course code. Then send to server number. The application was send to the system by server and makes the process. After that, the system will send back the

status (successful or unsuccessful) to applicant automatically. If the application was unsuccessful, the appeal message will be send to applicant. The applicant can make appeal if they interested with the course. This message will be send to the coordinator (second party). The coordinator will decide to approve or reject the application. Then, the application status will send to the applicant.

The system will be developing using PHP language, Ozeki message server, Microsoft Windows XP Professional, Apache Server and MySQL Database. Laptop or PC with standard specification and hand phone (to send SMS) is also used.

1.2 Problem Statement

The following problems in the existing manual course application procedures are identified:

1. The applicants need to fill the form every time when they need the apply the coarse.
 - Fill in the information on the form for each apply the course.

- ii. The application form undelivered to program coordinator.
 - Sometimes the application letter not received to program coordinator. Program coordinators are people which manage the course. Then they cannot precede the application.

- iii. The users don't know that the application course status approve or reject.
 - When the participants send the application letter, they don't know the status of application until they receive the feedback letter.

- iv. The user takes a long time to know the application status.
 - o Sometimes participant received late feedback letter than dateline of the course.

- v. Program coordinator does not have enough time to choose the application form.
 - o Program coordinator has a lot of job to resolve in one time either teaching or real work.

1.3 Objective

The main objectives of this system are to:

- i. To study how to develop the Application course at INTAN system via SMS.
 - o Now using system is one of part in our life and growing, there is a need to study how develops the system. This is to know all the latest hardware, software and solution on develop the system via SMS and how the System can be implement. As everyone knows that there is different kind of method and approach can be done to the project like this one.

- ii. To ease the applicant to apply for the INTAN course.
 - o The applicants just send the SMS to apply the courses. It better than used the application form.

- iii. To get faster the status of the course application.
 - o When the participants apply the course using SMS, the Program Coordinator can verify the status of application. The status will send to applicant faster.

- iv. **Reduce paper and document usage**
 - This system was developed base on computer technologies which reduce paper and document usage. All data are stored digitally on database.
- v. **To improve how to apply the INTAN application course**
 - Make an efficient and systematic system via SMS.
 - With this system, a lot of work can be smooth.
- vi. **Give the information about courses in such a short duration.**
 - The applicant can get the information about the course via SMS.

1.4 Scope

The scope of the system can be divided to user scope and system scope.

The scope is:

i. Target User:

- The Applicant, Administrator and Program/Project Coordinator involved in the system.

ii. System

There a few functions in this system such as:

- System is for applying the course application
- System will be integrated with a PHP Language with MySQL database.
- System also use the Ozeki Message Server to manage the sequence of the SMS
- The applicant must register for identify the application course

- Provide security login for user. User must required user id and matching password before gain access in this system for view attended the course.

iii. Mobile

- This system must have the GSM modem connection to access the ICAS for apply the course.

iv. Module.

- **Administrator**
 - Update and save all data and information about the courses catalogue and schedule detail (code, course, duration).
 - Update the user manual, how to make the application.
- **Interface**
 - Allowed the users and Program/Project Coordinator to communicate with each other like the verification of the course application.
- **Database**
 - It is used to store the details information about courses (catalogue and schedule)
- **Information about Courses**
 - List down the detail of courses.(code, name, category, duration(start and end date)).

1.5 Project Significance

In this project, the applicant and the coordinator will get the most of the benefit. This is because all the course application can manage using SMS and automatically. It is better and faster than use the manual application. The applicant can apply the course anywhere at anytime and get the status faster as long user has a mobile phone without would have to wait along time get the feedback letter.

1.6 Expected Output

The expected output in this project is to have the System via SMS been made. The main function of this System is to make the applicants apply the course and get the application status provides by INTAN uses SMS. It makes easier and faster without fill in the application form occurs again.

1.7 Conclusion

As conclusion on this chapter, before the real implementation, the purpose of this project is to do an analysis of the existing system, to develop the system and check any problem probability that can occur and the creating of the planning to make the system also the implementation of the INTAN course application system via GSM. This system will be benefit to the INTAN Program Coordinator and government servant. On this chapter also define the objective and scope of the project, project significant and the expected output that will have when the project finish. The next activity that needs to be developed is chapter 2. Chapter 2 consist of literature review, fact and finding, project requirement, milestone and methodology that will be used on this project. The project step, technology and many more will be describe in chapter 2.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

A literature review is a body of text that aims to review the current knowledge on a particular topic like provides a background to the project, a summary and an evaluation of previous research on a topic. Its ultimate goal is to bring the reader up to date with current literature on a topic. Most of the literature reviews are collected from books, journal or article.

Methodology is defined as a body of methods or procedures of inquiry in a particular topic. Generally, project methodology is the method and technique used to describe the project that will done. In this section, selected approach or methodology will help to describe the detail activities in each stage.

After finished with project methodology, the next section will focus on project requirements in term of software requirement, hardware requirement and other requirement if applicable. Then, it will move to next section which is project schedule and milestones. It is a proper guideline that will help the developer to complete the project.

2.2 Literature Review

This section will be discussing about the domain of this project, the existing system and finally the other techniques that applicable used in to develop this project.

2.2.1 Domain

Every project has it own domain. ICAS via SMS is domain is an application of ICT in Wireless Technology. The projects focus on Wireless Network and Mobile Computing as a subject of study. The system is being developed for the Government servants (participant), administrator and program/project coordinator based on user's requirements.

2.2.2 Keyword

There are several term that being used in the project such as SMS, World Wide Web (WWW), GSM Modem and Application Courses System

2.2.2.1 Short Message Service (SMS)

SMS stands for Short Message Service originally part of the GSM (Global System for Mobile Communications) system (Baron, Patterson, and Harris, 2006). It is a technology that enables the sending and receiving of messages between mobile phone and has over one billion users worldwide. Text messaging was first developed in 1991 for GSM digital mobile phones, almost by accident (Baron, Patterson, and Harris, 2006). SMS was the triumph of the consumer. Every generation needs a technology that it can adopt as its own to communicate with the text generation took up SMS.

The fact that the entry barriers to learning the SMS service were so high were an advantage because it meant that parents and teachers and other adult authority figures were unlikely, unable and unwilling to use the service. SMS is one of the few services in consumer history that has grown very fast without corresponding

decreases in pricing . Although SMS suffers a limitation from the 160 character text-only format, innovations such as the ability to send barcodes improve opportunities for coupons, point-of-sale redemption, and ticket purchases (Trappey III & Woodside, 2005) have opened opportunities for marketing via mobile phone.

2.2.2.2 World Wide Web (WWW)

The World Wide Web (commonly shortened to the Web) is a system of interlinked, hypertext documents accessed via the Internet. With a Web browser, a user can views Web pages that may contain text, images, videos, and other multimedia and navigates between them using hyperlinks. (Chris Diehl, 2007)

To visit the Web Page, the users need to obtain data from web server. Web server is a piece of computer software that can respond to a browser's request for a page and deliver the page to the Web browser through the Internet. Web server helps people to create both static and dynamic pages. All HTML pages (with or without client-side scripts) are static, means the html files will be sent to the browser without any intervention of the web server. (Robert Cailliau, 1990)

2.2.2.3 GSM Modem

A GSM modem is a wireless modem that works with a GSM wireless network. A wireless modem behaves like a dial-up modem. The main difference between them is that a dial-up modem sends and receives data through a fixed telephone line while a wireless modem sends and receives data through radio waves (850 MHz, 900 MHz, 1800 MHz and 1900 MHz). (<http://www.developershome.com/sms/howToSendSMSFromPC.asp>, 2008).

A GSM modem can be an external device or a PC Card / PCMCIA Card. PC Card / PCMCIA Card is the form factor of a peripheral interface designed for laptop computers. The PC Card standard (as well as its successor Express Card) was defined and developed by a group of industry-leading companies called the Personal Computer Memory Card International Association (PCMCIA) (Clark, Scott H.; Norton, Peter (2002)). Typically, an external GSM modem is connected to a computer through a serial cable or a USB cable. A GSM modem in the form of a PC