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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**STAFF TRAINING NOTIFICATION SYSTEM via SMS**

**MUHAMMAD IMRAN BIN MD HATTA**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

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JUDUL: Staff Training Notification System via SMS

SESI PENGAJIAN: 2009/2010

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**STAFF TRAINING NOTIFICATION SYSTEM via SMS**

**MUHAMMAD IMRAN BIN MD HATTA**

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA**



## DEDICATION

*I would like to say a lot thank you to my family especially to my beloved mom and dad who always give me encouragement to finish this project.*

## ACKNOWLEDGEMENTS

Alhamdulillah, thanks to god because with grant from Allah I get finish my project. In finish these project many experiences I was learnt. Many of people were involve in this project. Without their auxiliary and supported, I think this system will no do with prosperously.

Firstly, I would like to express my sincere appreciation to my project supervisor, Dr. Abdul Samad Shibghatullah for providing the guidelines with continued advice and feedback throughout the duration of finishing this project. He had thought me everything that I should know and he also had given me moral supports to ensure that I complete this project succesfully.

Secondly, I would also like to thank to my entire friend with their helping, support morale or materials, valuable opinion and sharing ideas during the progress of this project. Their opinions and suggestions have helped realizing this project. Also not forget to any individual that have not mention here but has contributed to this project. To all of them, I only can say very much thank you for their help and support.

Finally, I would like to thank to my family for their understanding, encouragement and support, towards the completion of my project. May Allah bless all of you.



## ABSTRACT

Nowadays, mobile phones are a familiar feature of business life. The traditional telephony features of mobile phones, such as making calls, receiving voicemail, and call diversion, are important to business users. Mobile phones also offer data transmission services such as Short Message Service which also popular to be known as SMS. Short Message Service (SMS) is a communications protocol allowing the interchange of short text messages between mobile telephone devices. Many people in many sectors in business, industry and services use SMS to deliver any important information to others. However, Training Unit of Jabatan Tenaga Kerja Semenanjung Malaysia (JTKSM), Kementerian Sumber Manusia still using letters and email to send the information. A problem with the current system such as invitation letter through post mail was taking quite long time to arrive. Furthermore, invitation by email sometimes have problem sending the emails regarding the problem of email service in JTKSM. The problem with the email service of JTKSM is the email cannot be accessed from outside of the JTKSM network. It means that all staff of JTKSM can only open their email inbox in their office's computer. For future usage, Staff Training Notification System via SMS is suggested to solve that problem. The user of the system which is the admin will use the system in Web Based environment to find all information about staffs that need to be informed about the incoming course and send the invitation of the course by Short Message Service (SMS). This system follows by System Development Life Cycle and implemented using Hypertext Pre-Processor (PHP) language and MySQL database. The application chosen to connect PHP, MySQL and GSM Modem is Ozeki Message Server. It is formed by a few phases which are planning, analyzing, design and implementation and testing. Admin will send information about training or course that need to be attend by all staff in JTKSM while staff will answer back weather they want to attend the course or not by SMS. This system has been successfully tested to the target user and running smoothly.



## ABSTRAK

Di zaman ini, telefon bimbit merupakan satu alat perhubungan yang penting. Fungsi asas sebuah telefon bimbit adalah seperti membuat panggilan, menerima pesanan suara dan juga membuat panggilan semula. Telefon bimbit juga menyediakan perkhidmatan penghantaran pesanan ringkas atau lebih dikenali sebagai *Short Message Service (SMS)*. Perkhidmatan ini menjadi salah satu cara terpenting untuk berinteraksi dengan orang lain samada dalam sektor perniagaan, perindustrian mahu pun peribadi. Walaupun begitu bagi Jabatan Tenaga Kerja Semenanjung Malaysia (JTKSM), Kementerian Sumber Manusia mereka masih menggunakan surat dan email untuk menghantar maklumat. Cara ini boleh mengakibatkan banyak masalah sebagai contoh penghantaran maklumat melalui surat mengambil masa yang agak lama untuk sampai ke tangan penerima, manakala bagi penghantaran melalui email masalah terjadi apabila pengguna tidak dapat mengakses email mereka jika berada di luar rangkaian JTKSM. Ini bermakna mereka perlu mengakses email dalam kawasan pejabat untuk mengetahui maklumat terbaru mengenai JTKSM. Oleh itu, Sistem Pemberitahuan Latihan Kakitangan melalui SMS adalah merupakan sistem yang dicadangkan untuk menyelesaikan masalah-masalah yang dihadapi. Sistem ini dibangunkan menggunakan dengan menggunakan bahasa pengaturcaraan Hypertext Pre-Processor (PHP) dan pangkalan data MySQL. Aplikasi bagi menghubungkan PHP, MySQL dan GSM Modem adalah Ozeki Message Server. Metodologi yang telah digunakan dalam membangunkan sistem ini adalah Sistem Pembangunan Semula. Ia terdiri beberapa fasa iaitu Perancangan, Analisis, Reka Bentuk, Implementasi dan Pengujian. Di mana admin boleh menggunakan sistem berasaskan web ini untuk mendapatkan semua maklumat mengenai kakitangan yang perlu menghadiri latihan dan seterusnya menghantar pesanan berkaitan latihan kepada penerima melalui SMS. Kakitangan yang menerima pesanan tersebut akan menghantar maklum balas sama ada ingin menghadiri latihan atau tidak melalui SMS. Sistem ini telah diuji kepada pengguna sasaran dan berjalan dengan lancar.

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# CHAPTER I

## INTRODUCTION

### 1.1 Project Background

Nowadays, mobile phones are a familiar feature of business life. The traditional telephony features of mobile phones, such as making calls, receiving voicemail, and call diversion, are important to business users. Mobile phones also offer data transmission services such as Short Message Service which also popular to be known as SMS. Short Message Service (SMS) is a communications protocol allowing the interchange of short text messages between mobile telephone devices. Many people in many sectors in business, industry and services use SMS to deliver any important information to others.

The project that will be developed is entitled as “Staff Training Notification System via SMS”. The title has a keyword ‘notification’ means that the system is developed to notify the particular staffs with information of course and training that have been scheduled for them via Short Message Service (SMS). The user of the system which is the admin will use the system in Web Based environment to find all information about staffs that need to be informed about the incoming course and training and send the invitation of the course by Short Message Service (SMS). The staffs (course participants) will receive the information by SMS and then, they can reply back to the admin either they want



to attend the course or not. After they have confirmed to attend the course, the system will send the full details about the course and training via Short Message Service (SMS).

## **1.2 Problem Statements**

This system is developed for staffs in Training Unit of Jabatan Tenaga Kerja Semenanjung Malaysia (JTKSM), Kementerian Sumber Manusia. There are several departments in JTKSM and each department has several units. One of the departments is Department of Management Services that has five units under it. One of the units is the Training Unit which has been identified to be the appropriate unit to apply this system.

The current systems they are using now to send the information are by letters and emails. They are few problems with the current system such as invitation letter through post mail was taking quite long time to arrive. Furthermore, invitation by email sometimes have problem sending the emails regarding the problem of email service in JTKSM. The problem with the email service of JTKSM is the email cannot be accessed from outside of the JTKSM network. It means that all staff of JTKSM can only open their email inbox in their office's computer.

Therefore, this project is identified to be an alternative to the staffs of Training Unit in JTKSM to inform the staffs of JTKSM about incoming course and training. With this system, the admin will send information about training or course that need to be attend by all staff in JTKSM using Web Based system and the recipients which are the general staffs of JTKSM will receive the information by Short Message Service (SMS).

### 1.3 Objective

- To develop system using Pre-Hypertext Processor (PHP) code and send the message using GSM modem.
  - To make more accessible and constantly updated dynamic training information to the general staffs of JTKSM.
  
- To develop SMS application system that could be used by general staffs of JTKSM to be notify about incoming courses and confirm their attendance by SMS.
  - To offer a mobile information service which can assist staffs to eliminate the waiting time for the arrival of the information sent by letters.
  - To deliver all details and information about courses, training, service circular (Pekeliling Perkhidmatan) and memo about JTKSM.
  
- To enables the system to send/receive SMS message to mobile devices from the computer using Ozeki Messaging Server.

### 1.4 Scope

- They are two category of users :
  - i) Training Unit Staff
    - The staff in Training Unit will be the Admin of the system that will be develop in PHP. They are responsible to handle the registration of any new course and training.
    - The Admin will also manage the delivery of invitation of courses that need to be attending by the general staffs of JTKSM.



## ii) General Staff

- The second category of the user is the general staffs of JTKSM which include all level from clerks, drivers, officers and directors. This type of users will have to register their mobile numbers in the web site and after that they will be notify about any courses that need to be attend.
- The testing only involved the general staffs in Jabatan Tenaga Kerja Semenanjung Malaysia (JTKSM) at all level in every state.
  - The general staffs that have been selected to attend a particular course or training will be alert by SMS and they will answer weather they want to attend or not through Short Message Service (SMS).
  - The general staffs will have a convenience way to answer any question regarding Training Unit and also provide new information from JTKSM via SMS.
  - All new information will only be given to the general staffs of JTKSM upon request via SMS.

## 1.5 Project Significance

This project will give an opportunity to the staff of Training Unit to use the new approach to deliver all information about training and course to all general staffs. The Admin of the system will have a convenience way to do their daily task in Training Unit. They can do their work and complete their task in a very systematic and efficient way. This project will offer more accessible and constantly updated dynamic training information to the staffs of JTKSM. The staffs in JTKSM will have benefits from this project in term of planning their job and time.

The Admin of the system will have a convenience way to send invitation of the courses and after that receive the answer from the course participants via SMS. This will help them because they will not have to wait for the answer too long after sending the invitation.

This project intends to provide a service that will pass the information in quicker time to ensure that all staffs are able to receive any alert about incoming course via SMS in anytime and anywhere. This is because nowadays mobile phone has become a very important medium to communicate with anyone. It is believed that any information send through Short Message Service (SMS) will be an easy way to confirmed that the information is delivered to the recipients.

## **1.6 Expected Output**

From this project, the system should produce modules that give user a convenience way to register the mobile number of all staffs in JTKSM and to send invitation about incoming courses and training via Short Message Service (SMS). After that, the course participant will answer back weather they want to attend the course or not. Their answer should be sending back to the system and saved in the database and the user will also receive the answer through their mobile as well. If the staffs have answered and agree to attend the course, the system should reply back to them all the details and information about the course via Short Message Service (SMS).