

**E-OFFICE WEB COMMUNITY VIA SMS**

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## DECLARATION

I hereby declare that this project report entitled  
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is written by me and is my effort and that no part has been plagiarized  
without citations.

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## DEDICATION

Specially dedicated to my beloved family  
Who have provided me with a lot support emotionally, moral and financially throughout  
my journey of education

This dedication also goes to  
En Ariff Idris  
act as my dedicated Supervisor.  
Thanks for the priceless advice, information, education, time and opinion.

Not forgotten to my friend,  
Muhammad Fakhrol Naim, Mohd Zulfadli Khamis and Muhammad Zulfadli Zakaria  
and all my classmate BITC.

Thanks for all supports and motivations in order to complete this PSM project

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## ABSTRACT

e-Office Web Community system is a system that develops to help user to communicate each other and make easier for staff to get information with efficiency method. Generally, this system is target for user that is work at the JKR (Public Work Department). As a simple research that have done, web community system can improve productivity and also social level for the user. And at the same time it can improve the confidentiality staff in their daily life.

The most important thing concept, this system is making staff easier to get information or notification from the management. All notification not sends to the system email but also to the mobile via SMS. It can make staff easier to get information. The project methodology selected in develop this system is Iterative Waterfall model and was design to make it user friendly.

## ABSTRAK

e-Office Web Community sistem adalah sebuah sistem yang dibangunkan untuk membantu pekerja berkomunikasi secara mudah dan memastikan pekerja mudah untuk mendapatkan segala informasi yang berguna dengan menggunakan cara yang lebih efektif. Secara umumnya, sistem memberi tumpuan kepada pekerja-pekerja di Jabatan Kerja Raya. Berdasarkan kajian yang dilakukan, web komuniti ini boleh menambah baikkan produktiviti dan tahap sosial seseorang. Pada yang sama ia akan menambah tahap keyakinan seseorang pekerja dalam kehidupan seharian mereka.

Apa yang paling penting mengenai konsep sistem ini, sistem ini akan memudahkan kehidupan seharian pekerja dan juga pihak pengurusan dalam memastikan pekerja mudah untuk mendapat maklumat terkini. Segala mesej bukan sahaja di hantar ke dalam email sistem tetapi juga ia dihantar kepada pesanan ringkas SMS. Bagi system ini, ia dibangunkan dengan menggunakan methodologi *Iterative Waterfall model* yang mana lebih sesuai dan lebih mudah.

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## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

Nowadays, social networking is one of the most popular website in this world. Facebook is one of the examples that currently popular among all level of community. Currently, the most visited website in this world is Google and second, social networking website that is Facebook. This is shown that people are more preferred to the internet connection to communicate between each other. It is because by communicate using internet connection there are no limitation and every can communicate.

In the real work, staffs or workers also need the same thing of application to communicated to each other. The application that needed is social networking for an organization in order to improve their productivity. Staff cannot use global social networking to communicate each other to make discussion because certain issue need to discuss private in order that information about the organization from the irresponsible.

Because of this situation, the application that will be developed is Office Web Community for Public Works Department Malaysia (JKR). It is specifically usable for Human Resources Department as administrator and all level staff in JKR. With this Office Web Community, all staff can communicate each other by using the special

website. They can freely communicate each other without worrying about the irresponsible person.

This Office Web Community are is a web-based system that is design and develop to make JKR staff works more easier and allow them to discuss with other. Staff also can communicate with management. These applications are not a one way communication but two way communication via SMS. These community website also allow staff to upload paper, minute meeting and template that can be used as reference to other staff. Not only that, these is one of the way staff can deliver all the information and share the information that they get with the other staff.

## **1.2 Problem Statement**

Based on the observation and previous experience, most of the community's website for an organization is not implement the networking element such as Short Message System (SMS). The organization only depends on the email application without notify their staffs by using SMS. When the important messages are sent by email application, not all staff can read it after office hour this is because not all people have internet connection at home.

Due to this problem, a proper planning needs to develop and implement to ensure that this problem can be overcome. This will come out with Office Web Community as stated previously. In order to achieve the objective and make the project successful, these are obstacles such as the difficulties to get the proper information from the management.



### **1.3 Objective**

The main objectives of developing this Office Web Community are as follows:

- i. To develop system by using PHP and sends the message using GSM modern.
- ii. To be able to send the message over the network. This system must able to send and receive from the user.
- iii. This system is developing for Human Resources department as department and staff in Public Works Department.
- iv. To make life better for staff to communicate with each other and to get information easier from management via SMS.

### **1.4 Scope**

The scope of the project is to develop community website that can communicate via SMS. The target user for this project is all staff in Public Works Department Malaysia. The system level is suitable for beginner and intermediate level. This project consist a few modules which are:

- i. Receiving information from management by website or mobile (SMS).
- ii. Can request any service to management via SMS.
- iii. Allow other staff send message from website to their project team via SMS

### **1.5 Project Significant**

The signification of this project is it enable for the management to send alert and notification effectively by using the function of grouping sending message. With this application, it can improve the productivity and can reduce cost of management. Not only that, the welfare of the employee can be look-up properly. With this system, employee can gather the some complaint or notification from the staff.

### **1.6 Expected Output**

The expected output of this system is:

- i. Build a system that is user friendly and easier to use.
- ii. Administrator can send message or notification through mail application or SMS.
- iii. Assist JKR staffs with the easiest way to communicate and discuss within office hours or after office hour.
- iv. Can make life much better the get current information and news from the management.

## **1.7 Conclusion**

This project is basically about developing a system that allow people (staff JKR) to communicate each other easily whether via SMS or online application. This application can be use by anyone in Public Works Department who access to internet or hand phone. With this system hopefully, it can help staff work become easier.

Henceforth, in the next chapter, literature review and project methodology will be discussed. Literature review will review about previous system and make a comparison with this system. It will also discuss the technique used, project methodology and project requirement for this project.

## CHAPTER II

### LITERATURE REVIEW AND PROJECT METHODOLOGY

#### 2.1 Introduction

A literature review is very important in order to develop new project or system. It is a glossary or abstract from past researches or case studies and it represents the methods of searching, collecting, analyzing and drawing conclusion from book writers or other open sources about certain topics. Literature review can be based on research, journal, thesis or a bibliography essay. This chapter will focus on the research of the current, past and new system that will be developed. It also will show the strength and weakness for the system.

Project methodology is a project prototype or overall process of developing information system project. It also represents method and technique used to describe the project that will be done. The project methodology that will be use in order to develop this system is the waterfall life cycle method. In this section, selected approaches or methodology will help to describe the activities in every stage.

The next process that needs to be focused after defining methodology is project requirement in term of software and hardware requirement and other requirement if applicable. Then, it will proceed to the next section which is project schedule and milestone. It acts as a guideline that will help the developer to complete the project on time.

## **2.2 Literature Review**

### **2.2.1 Domain**

The domain of this project is to develop a web application that can use application that can communicate with the mobile via SMS. Nowadays, the rapid development technologies have brought a new trend to people especially the young user. According simple research that has done, community website can bring a lot of benefit and can improve productivity. But not all company that implement web community in the building site and they only relay on portal for them to get any information. That one of the problem that we should to overcame. Mobile application and website need to combine to make people easier in their daily life.

### **2.2.2 Keyword**

#### **2.2.2.1 SMS**

SMS is the abbreviation for Short Message Service. SMS is a communication protocol allowing the interchange of short text message between mobile telephony devices. SMS as used for modern handsets was originally defined as part of the SMS as a means of sending message of up to 160 characters to and from GSM mobile handsets. Most SMS messages are mobile-to-mobile text messages, through the standard supports other types of broadcast messaging as well.

Basically, a text message start at a handset is sent to a Short Message Service Center (SMCS). The SMCS then try to send the message to its recipient. If the recipient is not reachable, the SMCS queues the messages for later try. This mechanism is characterized as a store and forward delivery message.

### **2.2.2.2 World Wide World Technology**

The WWW is a system of interlinked, hypertext document accessed via internet. With the web browser, a user can view a web page that contains text, image, audios and other multimedia and navigates between them by using hyperlinks.

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. The script that writes in server side-script can make the site dynamic.

### **2.2.2.3 GSM Modem**

GSM modem also known as Global System for Mobile Communications, which is a wireless modem that works with GSM wireless network where it sends and receives data through radio waves. GSM modem is a specialized type of modem which accepts a SIM card and operates like regular mobile phone. It also can be dedicated modem devices came with serial, USB or Bluetooth connection, to perform these tasks, a GSM modem must support an "extended AT command set" for sending/receiving SMS messages, as defined in the ETSI GSM 07.05 and 3GPP TS 27.005 specifications. Due to some compatibility issues that can exist with mobile phones, using a dedicated GSM modem is usually preferable to a GSM mobile phone.

## **2.3 Previous Research**

### **2.3.1 Public Works Department of Malaysia website**

Public Works Department Malaysia is a web-based system. This website only focused on communication between people (client) and the management. Generally, these website are aimed for headquarters Public Works Department of Malaysia that are located at Jalan Sultan Salahuddin, Kuala Lumpur.

This website has been developed to make people easier to make any complaint or to get any project from the management. JKR webpage has three sub-website that can give service for the client/people in Malaysia such as RAKAN, RAKANNET and GROUPWISE. Those entire intranet website only give advantages to the user but for the staff. How JKR staffs communicate each other?? All these things are still not exist in government sector. According researches that have done, community website can make staffs more motivate in doing their work and can improve the productivity and generally, JKR website are more between management and client only.

Methodology used in this website is a waterfall model and the structure that has been used to build this website is using web structure. In this structure the goal is often to mimic associative thought and the free flow of ideas, allowing users to follow their interests in a unique, heuristic, idiosyncratic pattern. This is because headquarters can link with the other 14 branches website and 3 JKR's intranet website.

For the staff, they have their own site but not a community website. Their current systems are split and too simple. They doesn't have website that can be communication by using SMS. JKR website only refers to online system and cannot communicate using mobile. For this system, the web server that JKR most prefer to use XAMPP and use Personal Home Page (PHP) language.

### 2.3.2 Student Employee Web Portal

This website is act as one stop shop web site or portal for ISU's Technical Support team member from Idaho State University. Due to the size of ISU's Technical Support team and the geographic distances between team members, they simply needed a one stop shop web site or portal for their team members. The primary objectives include of this portal are to increase communication amongst all team members, especially between the teams. It is quick and easy access to all knowledge sources and can integrated access to all support tools. Administrative functions such as scheduling, timesheets, and coverage requests from this website

This web site was developed using an Apache web server, PHP and MySQL. The web server, database and all scripting is running on one of Computer Center's enterprise HPUX N-Class server. All development was done in-house by student employees, lead by Drew Gushwa.

The strength of this web site is it has variety of features that allow user to share contain from the web site. For example, contact information. The "Contact" component allows team members to search their personnel directory and send e-mail messages, cell phone messages or view telephone and other contact information. In this web site also have features to share a document with the others it call "Forms". The "Forms" component contains all the links for various forms such as schedules, timesheets, coverage requests, availability, etc.

This web site has multiple features that will be useful for the user but it still deficiency with the current facilities or current demand. Actually, people want to make life better. According to this situation, ISU's Technical Support team member want to get latest update from the management with the easily method. But how? With implementing Student Employee Web Portal with the network element such as SMS, project team can easily can get update from the management without get access into that