BORANG PENGESAHAN STATUS TESIS*

JUDUL : ONLINE FLOOD INFORMATION SYSTEM

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ONLINE FLOOD INFORMATION SYSTEM (OFIS)

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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
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2008

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DECLARATION

I hereby declaration this that this project report entitled

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STUDENT : _____ Date: _____
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SUPERVISOR : _____ Date: _____
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DEDICATION

Specially dedicated to

My parents who have supported me all the way since the beginning of my studies also be a great source of motivation and inspiration. Also to my lecturers, who have encourage, guided and inspired me throughout my journey of education and also to all my beloved friends who always by my side during my hard time.

Thank you for all your support.

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ABSTRACT

Online Flood Information System (OFIS) is a system that develops to provide an earlier warning to the residents or user who always face flood problem. Generally, this system is develop for user in Segamat area. User can view the current status of the flood thorough the Web and via SMS Service. The user who has register to the system will receive the SMS alert. The alert will be send to them according to their area that they select during the registration. The user will receive an alert if flood occur on their area. This system will distribute alert according to their area when that the user select when register to the system. The project methodology selected in develop this system is Waterfall Lifecycle and was design to make it user friendly. The system also was develop using Ozeki SMS server, and Macromedia Deamweaver. Beside that, this system also has been test in UTeM with a few users to test the functionality.

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ABSTRAK

Online Flood Information System (OFIS) adalah satu sistem yang dibangunkan untuk memberikan amaran awal kepada penduduk atau pengguna yang selalu menghadapi masalah banjir. Secara amnya, system ini dibangunkan untuk pengguna di kawasan Segamat.Pengguna boleh melihat status terkini melalui Web dan melaui perkhidmatan SMS. Pengguna yang telah berdaftar akan menerima amaran SMS. Amaran akan dihantar kepada pengguna mengikut kawasan yang telah dipilih ketika pendaftaran. Pengguna akan menerima amaran jika banjir berlaku di kawasan mereka. Sistem ini akan menghatar amaran mengikut kawasan yang telah di pilih semasa pendaftaran di system ini. Projek methodology yang dipilih untuk system ini adalah Waterfall Lifecycle dan telah di reka untuk menjadikannya mesra pengguna. Sistem ini juga telah dibangunkan menggunakan Ozeki message server dan Macromedia Dreamweaver. Selain daripada itu, system ini juga telah di uji di UTeM dengan beberapa pengguna untuk menguji kefungsiannya.

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TABLE OF CONTENTS

CHAPTER	SUBJECT		PAGE
	ADMISSION		i
	DEDICATION		ii
	ACKNOWLEDGEMENT		iii
	ABSTRACT		iv
	ABSTRAK		v
	TABLE OF CONTENT		vi
	LIST OF TABLE		xii
	LIST OF FIGURES		xiii
	LIST OF ABBREVIATIONS		xv
	LIST OF ATTACHMENT		xvi
CHAPTER I	INTRODUCTION		
	1.1	Project Background	1
	1.2	Problem Statement	2
	1.3	Objectives	2
	1.4	Scope	3
	1.5	Project Significant	3
	1.6	Expected Output	4
	1.7	Conclusion	4

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CHAPTER	SUBJECT			PAGE
CHAPTER II	**LITERATURE REVIEW AND PROJECT METHODOLOGY**			
	2.1	Introduction		5
	2.2	Literature Review		6
		2.2.1	Domain	6
		2.2.2	Keyword	6
			2.2.2.1 SMS	6
			2.2.2.2 World Wide Web Technology	7
			2.2.2.3 Flood	7
		2.2.3	Previous Research	8
			2.2.3.1 SMS Short Message Service (SMsBanjir) Flood Warning System	8
			2.2.3.2 Earlier Warning and Risk Navigation System	10
			2.2.3.3 Online Flood Information Website	11
		2.2.4	GSM Modem	14
			2.2.4.1 iTegno3000	14
			2.2.4.2 Wavecom Fastrack M1306B	14
			2.2.4.3 Siemens MC35i	15
		2.2.5	Scripting	16

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CHAPTER	SUBJECT		PAGE
		2.2.5.1 Active Server Pages (ASP)	16
		2.2.5.2 Personal Home Page (PHP)	16
		2.2.5.3 Practical Extraction and Report Language (Perl)	16
	2.2.6	Web Server	17
		2.2.6.1 Apache	17
		2.2.6.2 Internet Information Server (IIS)	18
	2.3	Proposed Solution	18
	2.3.1	Project Methodology	18
		2.3.1.1 Planning Phase	19
		2.3.1.2 Analysis Phase	20
		2.3.1.3 Design Phase	20
		2.3.1.4 Implementation Phase	20
		2.3.1.5 Testing Phase	20
	2.4	Project Schedule and Milestones	21
	2.5	Conclusion	23
CHAPTER III		**ANALYSIS**	
	3.1	Introduction	24
	3.2	Problem Analysis	25
	3.2.1	Analysis of Current System	25
	3.3	Requirement Analysis	26
	3.3.1	Data Requirement	26
	3.4	Functional Requirement	27

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CHAPTER	SUBJECT			PAGE
	3.4.1 Overview of functional requirement			28
	3.4.2 Non-functional Requirement			30
	3.4.3 Performance Requirement			30
	3.4.4 Other Requirement			30
	3.4.4.1 Software Requirement			30
		3.4.4.1.1	Tools	31
		3.4.4.1.2	OS/Server	31
		3.4.4.1.3	Database	32
		3.4.4.1.4	Macromedia Dreamweaver	32
	3.4.5 Hardware Requirement			32
	3.4.6 Network Requirement			33
3.5	Conclusion			33
CHAPTER IV	**DESIGN**			
4.1	Introduction			34
4.2	High-Level Design			35
	4.2.1 System Architecture			35
	4.2.2 User Interface Design			36
	4.2.2.1 Interface			37
		4.2.2.1.1	Login	37
		4.2.2.1.2	Register User	38
		4.2.2.1.3	Check Status	38
		4.2.2.1.4	Outbox	39
		4.2.2.1.5	Send Message	40

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CHAPTER	SUBJECT			PAGE
		4.2.2.1.6	Insert Data	41
		4.2.2.2 Navigation Design		41
		4.2.2.3 Input Design		43
		4.2.2.4 Output Design		44
	4.2.3	Database Design		45
		4.2.3.1 Conceptual and Logical		
		Database Design		45
		4.2.3.1.1	ERD	46
		4.2.3.1..2	Business	
			Rule	47
		4.2.3.1.3	Normalization	47
		4.2.3.1.4	Data	
			Dictionary	48
	4.3	Detailed Design		49
	4.3.1	Software Design		49
		4.3.1.1 Login		49
		4.3.1.2 Register		50
		4.3.1.3 Update Data		50
	4.3.2	Physical Database Design		51
	4.4	Conclusion		52
CHAPTER V	IMPLEMENTATION			
	5.1	Introduction		53
	5.2	Software Development Environment setup		54
	5.3	Software Configuration Management		54
	5.3.1	Configuration environment setup		53

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5.3.2 Version Control Procedure 57
5.3.3 Implementation Status 57
5.4 Conclusion 58

CHAPTER VI TESTING

6.1 Introduction 59
6.2 Test Plan 60
6.2.1 Test Organization 60
6.2.2 Test Environment 60
6.2.3 Test Schedule 61
6.3 Test Strategy 62
6.3.1 Classes of test 62
6.3.1.1 Black-box Testing 62
6.3.1.2 White-box Testing 63
6.4 Test Design 63
6.4.1 Test Description 63
6.4.2 Test Data 65
6.5 Test Result and Analysis 65
6.6 Conclusion 67

CHAPTER VII Conclusion

7.1 Observation on Weakness and Strengths 68
7.2 Propositions for Improvement 69
7.3 Contribution 70
7.4 Conclusion 70

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LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Comparison of the system	13
2.2	Comparison of GSM Modem	15
2.3	Comparison of Scripting Language	17
2.4	Comparison of web server	18
2.5	Project schedule and milestone	21
2.6	Project schedule for PSM 1	21
2.7	Project schedule for PSM 2	22
3.1	Data model of Login's table	27
3.2	Data model of User table	27
3.3	Data model of Data table	27
4.1	Login	43
4.2	User Registration	43
4.3	Outbox	43
4.4	Data	44
4.5	Data Dictionary of OFIS	48
5.1	Implementation Status of Modules	57
6.1	Test Environment	60
6.2	Test Schedule	61
6.3	Test Description	64
6.4	OFIS Interface Unit Testing	64
6.5	OFIS User Acceptance Unit Testing	64

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LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Comparison of the system	13
2.2	Comparison of GSM Modem	15
2.3	Comparison of Scripting Language	17
2.4	Comparison of web server	18
2.5	Project schedule and milestone	21
2.6	Project schedule for PSM 1	21
2.7	Project schedule for PSM 2	22
3.1	Data model of Login's table	27
3.2	Data model of User table	27
3.3	Data model of Data table	27
4.1	Login	43
4.2	User Registration	43
4.3	Outbox	43
4.4	Data	44
4.5	Data Dictionary of OFIS	48
5.1	Implementation Status of Modules	57
6.1	Test Environment	60
6.2	Test Schedule	61
6.3	Test Description	64
6.4	OFIS Interface Unit Testing	64
6.5	OFIS User Acceptance Unit Testing	64

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TABLE	TITLE	PAGE
6.6	Module 1 Test Case Result	65
6.7	Module 2 Test Case Result	66
6.8	Module 3 Test Case Result	66

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LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	Diagram of SMSBanjir	9
2.2	EWARNS System	11
2.3	Online Flood Information Website	12
2.4	GSM Modem – iTegno 3000	14
2.5	Wavecom Fastrack M1306B	14
2.6	Siemens MC35i	15
3.1	Flowchart of current system	26
3.2	Use case of the system	28
3.3	Flowchart of the system	29
4.1	System Architecture	35
4.2	Login page	37
4.3	Register page	38
4.4	Check Status	38
4.5	Outbox	39
4.6	Send Message	40
4.7	Insert Data	41
4.5	Navigation Design for OFIS	42
4.7	Successful login	44
4.8	Unsuccessful login	45
4.9	ERD for OFIS	46
4.10	Login Table	51
4.11	Table Register	51
4.12	Table View	52

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FIGURE	TITLE	PAGE
5.1	Software Development Environment	54
5.2	Database connection configuration	55
5.3	Database connection configuration in Ozeki	56
5.4	GSM modem configuration	56

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CHAPTER I

INTRODUCTION

1.1 Project Background

Nowadays, floods always occur badly in certain states in Malaysia especially in northern Johor. This situation always leads to serious damage and many loss of life. Many steps have been taken in order to prevent this situation, but it seems like it went unsolved. Due to this circumstances, Online Flood Information System (OFIS) is developing to provide crucial information to the public about the flood in their nearby and residential area. This system is aimed to provide earlier information for those who want to pass through the area via land transport which has the potential and possibility of flooding.

Online Flood Alert System is a web-based system that is design and develop to monitor flood. It enable the user to get information about the flood from any computer with an internet connection. With this system, the user can know the condition of the affected areas with the information that will be send via the Short Messaging Service (SMS) and through the Web. This system will develop to provide three categories of flood warning to the affected residents which are the alert, warning and danger category. All these warning will be send the person who has register and make them to take the appropriate safety precaution in order to save their life and minimize damage property.

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1.2 Problem Statement

Based on the observation and previous experience, there are no effective system that provide flood alert information to the residents especially in the Segamat district. Currently, public will only figure it out themselves to know the flooding condition manually and also to obtain information about the water level in their area. This will bring harm to them because probably they will be stranded with the flood and yet, it is wasting their time. In addition, this situation will impose difficulty to them.

Due to this problem, proper planning needs to be develop and implement to ensure the public safety of a particular area. This will come out with Online Flood Information System as stated previously. In order to achieve the objective and make the project successful, there are obstacles such as the difficulties to get the proper information from the public regarding the flood.

1.3 Objective

The purposes of developing this Online Flood Alert System are as follows:

i. To develop system using open source which is PHP and send the message using GSM modem.

ii. To be able to send the message over the network. This system must be able to send the message to the user.

iii. To develop program that synchronize the flood status and send alert message to user by Short Messaging Service (SMS).

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iv. This system is develop for admin and public. Admin can access the system to manage the service and update the water level while user can receive the service.

1.4 Scope

The scope for this SMS System are as follows:

i. This system is develop for Segamat residents to access info about the flood condition targetted area which is undergo badly flood every year.

ii. Provide the earlier information to those who want to pass through the affected area.

iii. Avoid other people to pass through the affected area.

1.5 Project Significant

The significance of this project is that, it is important to assist public in the affected flood area to take early action if flood occur in their place. Thus, to avoid risk of flood imposed to their life and properties. For people that will pass through the affected area by land transport, it also assists them to get the earlier information. This system also provides the fast alert to the public.

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1.6 Expected Output

The expected output of this system is:

i. Assist the people with the easiest way to access flood info in ICT era with distribute information online and SMS to the people.

ii. Build a system that is user friendly and easier to use.

iii. With this system the risk of loss of life and property will be reduced.

iv. Administrator can manage the service by sending the alert to the public according to their area.

v. User can view the current water level status according to their area.

1.7 Conclusion

This project is basically about developing a system that can inform the people about flood in their area via SMS and Web. This system can be used by everyone who has access to internet and hand phone. With this system hopefully, it can help the public to carry out flood problem efficiently and effectively.

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

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHOLOGY

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 method 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 bibliographic 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 weaknesses of 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 methodologies will help to describe the activities in every stage.

The next process that need to be focused after defining methodology is project requirements in term of software and hardware requirement and other requirements if applicable. Then, it will proceed to the next section which is project schedule and

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milestones. It acts as a guideline that will help the developer to complete the project on time.

2.2 Literature Review

2.2.1 Domain

Early warning is very important aspect in any condition in order to safe life, property and others. In this ICT era, many ways can be used to get or spread information. Some of the ways are by mobile and via the internet.

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 GSM as a means of sending messages 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 (SMSC). The SMSC then try to send the message to its recipient. If the recipient is not reachable, the SMSC queues the message for later retry. This mechanism is characterized as a store and forward delivery message.

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