BORANG PENGESAHAN STATUS TESIS

JUDUL: Monitoring Attendance School through SMS

SESI PENGAJIAN: 2005

Saya HASNIEZA BT MOKHTAR
(HURUF BESAR)

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Alamat tetap : NO 43, BAREK HOSPITAL

HOSPITAL SULTANAH AMINAH 80100 JOHOR BAHRU

Tarikh : 28/11/2005

(TANDATANGAN PENYELIA)

EN YAHAYA ABD RAHIM

Nama Penyelia

Tarikh : 28/11/2005

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MONITORING ATTENDANCE SCHOOL THROUGH SMS

HASNIEZA BT MOKHTAR

This report is submitted in partial fulfillment of the requirements for the Bachelor of Information and Computer Science (Software Engineering)

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

DECLARATION

I hereby declare that this project report entitled

MONITORING ATTENDANCE SCHOOL THROUGH SMS

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

STUDENT : HASNIEZA BT MOKHTAR Date : 28/11/2005

SUPERVISOR : EN. YAHAYA ABD RAHIM Date : 28/11/2005

ACKNOWLEDGEMENT

First of all I would like to thank Allah S.W.T for giving me the permission to complete my Projek Sarjana Muda (PSM) for this semester which was started on 4 April 2005 until 27 October 2005, as to fulfill the requirement to get a Bachelor in Computer and Technology Communication majoring in Software Engineering.

Projek Sarjana Muda (PSM) is compulsory for a KUTKM student before being awarded the degree. Through this project, PSM will enhance the students' ability and skills in literature research, ability to analyze problems in various views and able to propose alternative solutions or models, ability to manage and utilize available resources in accomplishing the project and present the output effectively.

Then, I would like to thank En Yahaya Abd Rahim, my PSM Supervisor, who has give me such many helpful tips and guide in order for me to complete this course. He was very helpful throughout the process in completing this PSM project.

My sincere gratitude is extends to FTMK lecturers and friends for their guidance and support. They have been a helpful hand in during the PSM. Big thanks also to my loving family members and my house mate for their support, care, patience and understanding. With the experience gained in PSM project, I will use them, and as the guidance for my future work environment and also motivate me in my career.

ABSTRACT

The proposed software system called Monitoring Attendance School through SMS as the final project for PSM. Monitoring Attendance School is a system that has been proposed to be developed and implemented for management team in school. The gain for this system is to monitor the daily student attendance and to acknowledge parents about this. This system will be fully computerized and also apply a new communication technology SMS. When the system detects an empty attendance, the system will automatically generate a message that will be send to the hand phone via SMS. The methodology applied in develòping this system is OOAD. So with all chapter that will do, such as introduction, literature review, design and analysis, all the problem can be identify and this problem can be solved. The system that will be develop will help all users especially the management team in school to do their task.

ABSTRAK

Sistem Pemantauan Kehadiran Sekolah melalui SMS ini adalah merupakan projek yang akan dibangunkan untuk memenuhi keperluan Projek PSM ini. Sistem ini dibangunkan adalah bertujuan untuk membantu dan digunapakai oleh pihak pengurusan di sekolah-sekolah. Matlamat utama system ini adalah untuk memantau mengenai kehadiran para pelajar kesekolah dan secara tidak langsung ia melibatkan para ibu bapa sebagai penjaga pelajar mengetahui mengenai sistem sekolah. Sistem ini akan dikawal sepenuhnya oleh sistem yang berkomputer dan juga menggunakan technologi terkini iaitu mesej secara SMS, dimana jika sistem dapat mengesan nama pelajar yang tidak hadir, maka system akan secara automatik menghantar mesej ke telefon pihak penjaga. Metodologi yang diguna kan untuk membangunkan sistem ini ialah dengan menggunakan konsep OOAD iaitu melalui program UML. Oleh itu diharapkan dengan ada nya dokumen yang mengandungi maklumat sperti pengenalan, kajian literature, rekabentuk dan analisis ini dapat membantu dan mengatasi senua keperluan. Diharapkan sistem yang dibangunkan ini dapat membantu pihak pentadbiran sekolah dalam melaksanakan tugas mereka.

TABLE OF CONTENT

CHAPTER	SUBJECT		PAGE
	ACKNOWLEDGMENT		i
	ABSCRACT		ii
	ABSTRAK		iii
	TABLE OF CONTENT		iv
	LIST OF TABLES		viii
	LIST OF FIGURE		x
	LIST OF ABBREVIATIONS		xii
CHAPTER 1	INTRODUCTION		1
	1.1	Overview	1
	1.2	Project Background	2
	1.3	Problem Statement	3
	1.4	Objectives	4
	1.5	Scopes	5
	1.6	Project Significance	6
	1.7	Expected Output	6
	1.8	Conclusion	7
CHAPTER II	LITERATURE REVIEW AND PROJECT METHODOLOGY		8
	2.1	Introduction	8
	2.2	Fact And Findings	9
	2.3	Project Methodology	18

	2.4	High Level Project Requirement	24
		2.4.1 Software Requirements	24
		2.4.2 Hardware Requirements	25
		2.4.3 Others Requirements	25
	2.5	Project Schedule and Milestones	25
	2.6	Conclusion	28
CHAPTER III		ANALYSIS	30
	3.1	Introduction	30
	3.2	Problem Analysis	31
		3.2.1 Background of Current system	31
		3.2.2 Problem Statement	33
	3.3	Requirements Analysis	34
		3.3.1 Functional Requirement	34
		3.3.1.1 Scope	34
		3.3.2 Business Flow	35
		3.3.3 Use Case View	37
		3.3.4 Actors	37
		3.3.5 Use Case Description	38
		3.3.6 Interaction Diagram	43
	3.4	Software Requirements	50
	3.5	Hardware Requirements	51
	3.6	Other Requirement	52
	3.7	Network Requirements	52
	3.8	Conclusion	53
CHAPTER IV		DESIGN	54
	4.1	Introduction	54
	4.2	High-Level Data	55
		4.2.1 Raw Data	55
		4.2.2 System Architecture	57
		4.2.2.1 Static Organization	59
		4.2.2.2 High Level Class Diagram	61

	4.2.3 User Interface Design	66
	4.2.3.1 Navigation Design	70
	4.2.3.2 Input Design	71
	4.2.3.3 Output Design	73
	4.2.4 Database Design	74
	4.2.4.1 Logical DB Design	74
	4.2.5 Deployment View	75
	4.3 Detail Design	77
	4.3.1 Software specification	77
	4.3.2 Physical Database Design	77
	4.1 Conclusion	90
CHAPTER V	IMPLEMENTATION	91
	5.1 Introduction	91
	5.2 Software Development Environment Setup	92
	5.2.1 Preparation of development Environment	92
	5.2.2 Software Development Environment Setup	94
	5.3 Software Configuration Management	95
	5.3.1 Configuration Environment Setup	95
	5.3.2 Version Control Procedure	99
	5.4 Implementation	101
	5.5 Conclusion	102
CHAPTER VI	**TESTING**	103
	6.1 Introduction	103
	6.2 Test Plan	104
	6.2.1 Test Organization	104
	6.2.2 Test Environment	106
	6.2.3 Test Schedule	108
	6.3 Test Strategy	108
	6.3.1 Class of test	110

	6.4 Test Design	112
	6.4.1 Test Description	112
	6.4.2 Test Data	116
	6.5 Test Result Analysis	117
	6.6 Conclusion	124
CHAPTER VII	**PROJECT CONCLUSION**	125
	7.1 Introduction	125
	7.2 Strength	126
	7.3 Weaknesses	126
	7.4 Preparation for Improvement	127
	7.5 Conclusion	127
	REFERENCES	xiii
	BIBLIOGRAPHY	xiv
APPENDIX	A. GANTT CHART	xv
	B USER MANUAL	
	C. SAMPLE OF ATTENDANCE SHEET	

LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Comparison between existing and proposed system	16
2.2	UML Diagram modelling Tools	23
2.3	Software Requirement	24
2.4	Hardware Requirement	24
2.5	Project Schedule and Milestone	25
3.1	Authentication Use Case	39
3.2	Monitor Attendance Status Use Case	40
3.3	Generate SMS Use Case	41
3.4	Software Requirements	50
3.5	Hardware Requirements	51
3.6	Other Requirements	52
4.1	Raw Data of the current system	56
4.2	Monitor Attendance School Package Description	60
4.3	Input Design for User Authentication	71
4.4	Input Design for Menu Registration	71
4.5	Input Design for Attendance Menu	72
4.6	Input Design for Calculation of Percentage Menu	72
4.7	Input Design for Calculation of Percentage Menu	73
4.3.1.1	Class Specification for Login Menu	78
4.3.1.2	Class Specification for Registration Menu	80
4.3.1.3	Class Specification for Staff Info Menu	82
4.3.1.4	Class Specification for Attendance Menu	84
4.3.1.5	Class Specification for Percentage Calculation Menu	86
4.3.1.6	Data Dictionary	87

5.4	MAS system Implementation Status	101
6.2.1	Role, Responsibilities, and Skill Needed	106
6.2.2 (a)	MAS Component and subcomponent	107
6.2.2 (b)	System Configuration and Specification	107
6.2.3	Test Schedule	108
6.4.1.1	Test Cases for module user Authentication (login)	112
6.4.1.2	Test Cases for module Main Menu	112
6.4.1.3	Test Cases for module user Authorization (login)	113
6.4.1.4	Test Cases for module Registration Management	113
6.4.1.5	Test Cases for module New System User	113
6.4.1.6	Test Cases for module Attendance	114
6.4.1.7	Test Cases for module View Data	115

LIST OF FIGURE

DIAGRAM	TITLE	PAGE
2.1	AVI Technology Demonstrations	21
3.1	Is System Modeling for Attendance School System	32
3.2	Overview of Monitoring Attendance School through SMS	35
3.3	Overview of Flow Chart for Monitoring Attendance School through SMS System	36
3.4	Global view of use case model	37
3.5	Interaction diagram for Authentication (Basic Flow)	43
3.6	Interaction diagram for Authentication (Alternative Flow)	44
3.7	Interaction diagram for Authentication (Exception Flow)	44
3.8	Interaction diagram for Keyin Student Attendance (Basic Flow)	45
3.9	Interaction diagram for Keyin Student Attendance (Alternative Flow)	46
3.10	Interaction diagram for Keyin Student Attendance (Exception Flow)	47
3.11	Interaction diagram for Monitor Attendance status (Basic Flow)	48
3.12	Interaction diagram for Monitor Attendance status (Alternative Flow)	49
3.13	Interaction diagram for Monitor Attendance status (Exception Flow)	50
4.1	System software architecture overview based on 3-tier architecture	58

4.2	The Monitoring Attendance School system packages	59
4.3	Class Diagram for User Authentication	61
4.4	Class Diagram for Registration	62
4.5	Class Diagram for Marking Attendance	63
4.6	Class Diagram for Generate SMS	64
4.7	Class Diagram for Attendance Statistic	65
4.8	Sample screen of Login Menu	66
4.9	Sample screen of Staff Registration	67
4.10	Sample screen of Staff Info	67
4.11	Sample screen of Attendance Form	68
4.12	Sample screen of Percentage Calculation	69
4.13	Sample screen of SMS report	69
4.14	Overview of Navigation Design of MAS System	70
4.15	Input Design for Calculation of Percentage Menu	73
4.16	ERD Model for Monitoring Attendance School through SMS System	75
4.17	Deployment View of MAS System	76
5.2.1.1	Software and hardware acquisition	93
5.2.2	MAS Development Environment	94
5.3.1	Datasets used a version library	96
5.3.1.1	SQL Server Setup	99
5.3.2.1	Version and Procedure	99

LIST OF ABBREVIATIONS

PSM	Projek Sarjana Muda
SMS	Short Message Services
OOAD	Object Oriented Analysis Design
UML	Unified Model Language
OO	Object Oriented
OS	Operating System
LAN	Local Area Network
ID	Identity
MAS	Monitoring Attendance School through SMS
ERD	Entity Relationship Diagram

CHAPTER I

INTRODUCTION

1.1 Overview

In the *Project Sarjana Muda (PSM)*, the system that will be developed called Monitoring Attendance School through SMS. PSM is one of the subjects for the course of Bachelor of Information and Communication Technology (Software Engineering). In this chapter, the report will describes about the purposes of the project and also give the overview about a current system. This chapter wills starts with project background which is describes about current system and also the overview about the project that have been proposed. After that, it will continue with problem statements and objectives for this project. The detail project will be explained in scopes section. This chapter will continue with project significance, expected output and conclusion.

1.2 Project Background

Management team in school whether primary and secondary school using less computerized system in their management. Most of the schools in Malaysia are using a manual system to monitor the student's attendance. In a manual system, teachers will be taking and write the student daily attendance in the record book, then end of the month teacher is responsible to update the record by calculating the percentage of student's attendance. This showed that the manual system is not strict and the student does not pay much attention to the attendance. Parents also do not know either their children come to school or not. They only know when the report card is given to them, twice a year.

Nowadays, Information and Communication Technology (ICT) brings a tremendous new technology to change and ease the management for get the information that will more systematic and efficient.

Because of that, a computerized system that will be named Monitoring Attendance School through SMS (Short Messaging System) system has been proposed to be developed and implemented for management team in school. The target for this system is to monitor the daily student attendance and to get parents knows about this.

This system will be fully computerized and also apply a new communication technology SMS. All the daily students' attendance will be saved in a specific database. When the system detects an empty attendance, the system will automatically generate a message that will be send to the hand phone via SMS.

Hopefully with this system, the student discipline problems will be zero defect in attendance context and the parents will be inform if the student escape

the school. This system also will make the school management system to be more systematic, efficient and smoothly process.

1.3 Problem Statement

Mostly, school management are using less computerized system and still using manual system in their management. Our system is mainly to help a management school parties in order to organize the students' attendance systematically and more effectively.

The problems that bring to the developing of the Monitoring Attendance School through SMS are as stated below:

1. **Existing system to monitor student attendance does not exist**
   School management still doesn't have a computerized system in their management. This computerized system can make easier management team to manage the student attendance problem and more systematic.

2. **Information about student presence is not view clearly by their parent**
   Mostly, parents do not know about student performance in school especially about daily attendance. Certain parents just know when they receive a warning letter from school to mention that their children are escape from class.

3. **More space required**
   The manual system used a lot of paper and book to record the daily data about student attendance. This will cause more space will be used to keep the papers and books. Using this system, the data management is more systematic.

4. **Save time and keep data more secured**

   The manual system takes more time because all the process such as the attendance calculation and the warning letter has to be done manually. The point here is to reduce time and ensure that the data is kept systematically and free from damage.

5. **Create a systematic and effective attendance management system**

   The management for the student attendance process is not systematic because when using the manual system, there are a lot of disadvantages and problems. The administration authority should replace the manual system to a computerized system to manage all the process properly and systematically.

1.4 Objective

This project is carried out with the following objectives. There are five fundamental objectives of this project:

- To provide a computerized system with high efficiency, error free and high quality services to the users concerning the students' daily attendance record, and to give maximum advantage to the whole management in school.

- To monitor the attendance of the students and to simplify the usage of school management.

- To report on the student attendance status and to improve students attitude.

- To build a system that can reduce the number of damage data.

- To build one system that provides convenience communication for both students' parent and school management.

1.5 Scopes

The scope of the project will be described the system more specific and the scopes are as following:

1. **Attendance module**

   This module will be control by one system to manage the process while attendance will be record. All the data will be saved in a specific database. Using this module, users will saved and monitor the data clearly and easy. Users only can key in data, search and calculate and view a percentage of daily attendance by month. When the system detects an empty attendance, the system will automatically generate a message that will be send to the hand phone via SMS. While parents get this SMS, they can refer directly to school management and take an action to exceed this matter.

2. **Monitoring status module**

   This module is under system functionality. This module will calculate the percentage of student attendance and generate the statistic for the percentage.

1.6 Project Significance

The system that has been proposed may a benefit to both parties which are the team in school management and parents. This system will monitor and ease the process by using a new method that is more systematic and efficient. Each module that is proposed is important in order to overcome the problem that occurred in the manual system. This system will be help the management does not have to spend more time just to record a student attendance, calculate the percentage of attendance and any mistakes. All these works can be done using this system without worrying about any mistakes occurs. All the data that have been entered in the system will be save in a specific database.

The main objectives of this system will be achieved if the approaches can function smoothly. The school management team does not have to spend much time for handling this matter and users can spend their time to do others related job. This system also can increase a discipline level among the students especially about their daily attendance.

This system is more effective because the management team can manage a daily student attendance by fully computerized system and lets the parents know about student performance too.

1.7 Expected Output

In this system, each module will come out with their expected output. The aim of this system is to simplify all process that is occurred in manual system and create a computerized system. After this system is fully developed, it will enable the school management and parents to use one computerized system and also can increase a

discipline level among the students and the parents will be well inform about their children attendance in schools. Parents will receive message in a form of SMS through their hand phone. Times usage can be save when the management use a computerized system, less space are required and system will be more systematic and more user friendly.

1.8 Conclusion

As a conclusion, when the new system is fully implemented it will definitely helps reducing time of process, increase working efficiency, and understanding of students attendance as well as their performance. Hopefully, the expected output of this system will avoid all the problems that the manual system faced before the management use a computerized system for manage the daily attendance student process record, secure and integrated the data in the database, reduce the manual calculation of percentage problems and this system come out with new approaches such as SMS application.

This system is useful if both parties take the advantage by using new technology in their management. It's because the systematic and effectives services can be provided.

After this, the next chapter that will be provided is Literature Review and Project Methodology. This part will review the previous project and make a comparison with project that has been proposed. Besides that, this chapter also explains about the methodology that will be used in this project.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In this chapter 2, it will be focuses on literature review and project methodology. The literature review is focused on the research of the current system and the new system that will be developed. The purpose of a literature review is to convey the reader about the knowledge and also can established the ideas have been on a topic and what are the strengths and weaknesses.

This section is started by fact and finding. It will discuss and review about approach and related research, reference about this system. Besides that, it also states other approaches that will be used in this project after comparison with previous approaches. In project methodology section, selected approach or methodology will be described the activities that may do in every stage. All the requirements in this system will be explained in high level project requirements and followed with project schedule and milestones. This chapter will be continued with conclusion whereby it will conclude about this chapter and also gives an overview about the next chapter 3, Analysis Requirement.

2.2 Fact and Finding

Management team in school whether primary and secondary school using less computerized system in their management. The idea to develop this system come after some research has been made about school management. School is a place where the students can get knowledge and learn a new thing. From research, mostly in school management still used a manual system to manage all the process flow. This process is such as student registration, student information, information and record about teacher and staff and duty roster for prefect and others. Now, for daily student attendance will be change from a manual system to computerized system.

After doing a research at Sekolah Menengah Kebangsaan Air Keroh, all the information that achieves is prove that no computerized system they use in their management. All the process is done manually and not systematic.

2.2.1 Case Study to review of Existing system

Case Study 1: **Houston TranStar AVI Traffic Monitoring System**
(http://traffic.houstontranstar.org/aviinfo/avi-tech.html)

History:

The Houston TranStar Automatic Vehicle Identification (AVI) traffic monitoring system is used to collect real-time information showing current travel conditions on Houston area freeways and high occupancy vehicle (HOV) lanes. This information is provided to personnel within the Houston TranStar Center for use in detecting freeway congestion. This travel information is also provided to the public through media reports,