NETWORK BASED E-LEARNING SYSTEM FOR SECONDARY SCHOOL (NELSSS)

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ABSTRACT

Most of the secondary school in Malaysia is still using traditional data storing in terms of hardcopy (Paper) then store those record in a special record keeping store room. Sometime this traditional data storing can cause a lots of problems, e.g. damage, data/record lost, and longer time to retrieve when we want to get an older record. Traditional teaching method in secondary school also causes some problems to student. Students have to bring a lot of textbooks to school every day and sometime the weight goes up to 10Kg to carry every day. With the growing of Information and Communication Technology (ICT) in Malaysia, this situation should be changed. The E-learning system can provide the solution for the above situation. There are four targeted user groups in this system which is admin, teacher, student and parent. For admin/staff, users are able to manage student's record. They are able to create a new student profile, update information and create login account for student and teacher also. For student, students are able to view their profile, request update on their profile and view their result mark or study performance. They are also able to download extra notes, quiz, home work, class activity etc from the system uploaded by their teachers. For teacher, teachers are able to upload and view their student result and give comment according to their performance. Besides that, they are also able to upload extra notes, questions, activities etc to the system according to their own subject. For parent, parents are able to view their child result performance and able to ask the teacher about their child situation in school.

All the user groups are able to take part in the interactive online discussion through Forum, specially, student to student and student to teacher. Software Development Life Cycle (SDLC) has been chosen as the methodology to develop this system which is planning, analysis, design & development, testing and implementation. Adobe Dreamweaver CS5 will be use to develop this system. Security features like session registration will be implement in this system to make the system more secure.

I believe at the end, this system could be suitable to implement in secondary school if the secondary schools are equipped with enough and suitable computers and network system to run the system in order to increase the competitiveness of the school.

ABSTRAK

Kebanyakan sekolah menengah di Malaysia masih menggunakan cara tradisional untuk menyimpan data iaitu menyimpan data dalam bentuk hardcopy (kertas) dan kemudian menyimpan data tersebut dalam bilik khas. Kadang-kala cara ini boleh menyebabkan banyak masalah, misalnya kerosakan/kehilangan data dan mengambil masa yang lama untuk mencari rekod yang lama. Kaedah pengajaran tradisional di sekolah menengah juga menyebabkan beberapa masalah kepada pelajar. Setiap hari, pelajar perlu membawa banyak buku ke sekolah dan kadang-kala berat buku boleh mencapai 10kg. Dengan adanya perkembangan bidang IT di Malaysia, keadaan ini haruslah berubah. Sistem E-Learning boleh menyelesaikan masalah tersebut. Sistem ini menpunyai empat pengguna iaitu, pentadbir, guru, pelajar dan ibu bapa. Untuk pentadbir, mereka boleh membuat profil pelajar baru, update maklumat dan menbuat akaun log masuk untuk pelajar dan guru. Untuk pelajar, pelajar boleh melihat profil mereka, mengemas kini profil mereka dan prestasi pembelajaran mereka. Mereka juga boleh muat turun nota tambahan, kuis, kerja rumah melalui sistem ini. Untuk guru, guru boleh masukkan markah ujian dan memberikan komen yang sesuai dengan prestasi pejalar. Selain itu, mereka juga boleh upload nota tambahan, soalan untuk dimuat turun oleh pejalar. Untuk ibu bapa, mereka dapat melihat prestasi pembelajaran anak mereka dan mampu bertanya kepada guru tentang keadaan anak mereka di sekolah.

Software Development Life Cycle (SDLC) telah dipilih sebagai metodologi untuk membangunkan sistem ini, langkah-langkah dalam SDLC ini termasuk

perancangan, analisis, reka bentuk dan pembangunan, ujian dan pelaksanaan. Adobe Dreamweaver CS5 akan digunakan untuk membangunkan sistem ini. Ciri-ciri keselamatan seperti pendaftaran sesi akan diterapkan dalam sistem ini untuk membuat sistem ini lebih selamat.

Akhirnya, saya percaya sistem ini boleh dilaksanakan di sekolah menengah sekiranya sekolah menengah tersebut dilengkapi dengan komputer dan sistem rangkaian yang cukup dan sesuai untuk meningkatkan daya persaingan sekolah tersebut.

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	TITLE PAGE	i
	DECLARATION	ii
	SUPERVISOR'S DECLARATION	iii
	ACKNOWLEDGEMENT	iv
	ABSTRACT	v
	ABSTRAK	vii
	TABLE OF CONTENTS	ix
	LIST OF TABLES	xiii
	LIST OF FIGURES	xv
	LIST OF APPENDICES	xvii
1	**INTRODUCTION**	**1**
	1.1 Background	1
	1.2 Problem Statement & Motivation	2
	1.3 Aim & Objectives	3
	1.4 Scope	4
	1.5 Thesis Organization	4

2	**LITERATURE REVIEW**		**6**
	2.1	Introduction	6
	2.2	Similar Available System	8
		2.2.1 Web Based Learning Environment @ UTAR	8
		2.2.2 Multimedia Learning System (MMLS)	11
		2.2.3 E-Learn @ USM	13
		2.2.4 Comparison of Existing System	16
	2.3	Development Tools	17
		2.3.1 Programming Languages	17
		2.3.1.1 PHP	17
		2.3.1.2 ASP	18
		2.3.1.3 JSP	19
		2.3.2 Database	20
		2.3.2.1 My SQL	20
		2.3.2.2 Microsoft Window Server 2008 R2	21
		2.3.2.3 Oracle	22
		2.3.3 Web Server	23
		2.3.3.1 Apache	23
		2.3.3.2 Microsoft IIS	25
	2.4	Comparison and Discussion	26
		2.4.1 Programming Languages	26
		2.4.2 Database	27
		2.4.3 Web Server	27
	2.5	Summary	28
3	**METHODOLOGY**		**29**
	3.1	Introduction	29
	3.2	Planning	32
	3.3	Analysis	32
		3.3.1 Software Requirement	33
		3.3.2 Hardware Requirement	33

	3.4	Design & Development	34
		3.4.1 Flow Chart of the System	36
		3.4.2 Data Flow Diagram	37
		3.4.3 Development	39
	3.5	Testing	43
	3.6	Implementation	45
	3.7	Summary	45
4	**IMPLEMENTATION**		**46**
	4.1	Database Implementation	46
		4.1.1 Database and Server Connection	48
	4.2	System Interface and Implementation	48
		4.2.1 System Home Page	49
		4.2.2 Login Module	50
		4.2.3 Manage Student Record Module	50
		4.2.4 Update and View Result Module	52
		4.2.5 Upload and Download Notes module	54
		4.2.6 Message Module	55
		4.2.7 Student Forum Module	57
5	**RESULT AND DISCUSSION**		**61**
	5.1	Test Result	62
		5.1.1 Manage Student Record Module	63
		5.1.2 Message Module	65
	5.2	Advantages and Disadvantages	66
		5.2.1 Advantages	66
		5.2.2 Disadvantages	66
	5.3	Constraint	67
	5.4	Enhancement and Further research	67
6	**CONCLUSION**		**68**

REFERENCES 70

APPENDIX 72

LIST OF TABLES

TABLE NO.	TITLE	PAGE
2.1	Advantages and Disadvantages of Web Based Learning Environment @ UTAR	9
2.2	Advantages and Disadvantages of MMLS	11
2.3	Advantages and Disadvantages of E-learn @ USM	14
2.4	Comparison of Existing System	16
2.5	Advantages and Disadvantages of PHP	17
2.6	Advantages and Disadvantages of ASP	18
2.7	Advantages and Disadvantages of JSP	19
2.8	Advantages and Disadvantages of My SQL	20
2.9	Advantages and Disadvantages of Microsoft SQL Server R2	21
2.10	Advantages and Disadvantages of Oracle	22
2.11	Advantages and Disadvantages of Apache	24
2.12	Advantages and Disadvantages of Microsoft IIS	25
2.13	Comparison between Programming Languages	26
2.14	Comparison between Database	27
2.15	Comparison between Web Server	27
3.1	Software Requirement	33
3.2	Hardware Requirement	33
5.1	Test Result	62

5.2	Create New Student Record Test Case	63
5.3	Send Message Test Case	65

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
2.1	System Data Flow	8
2.2	Student User Home Page of Web Based Learning Environment @ UTAR	10
2.3	View Page for view news and download study materials page	10
2.4	Student Home Page of MMLS	12
2.5	View Course and Access to Study Materials page	12
2.6	Student Home page of E-learn @ USM	15
2.7	Student Profile page of E-learn @ USM	15
3.1	System Development Life Cycle (SDLC)	30
3.2	The work flow of the whole project	31
3.3	Block diagram for E-learning system	35
3.4	Flow chart of the system	36
3.5	Data Flow Diagram	37
3.6	Level 1 Data Flow Diagram	38
3.7	Administrator Pages, Create New Account	39
3.8	Teacher Home page	40
3.9	View Student's Result Page	40
3.10	Student Home Page	41
3.11	Student View Result Page	41

3.12	Parent Home Page	42
3.13	ERD of the E-learning system	42
3.14	Test procedure	44
4.1	Table of database e-learn	47
4.2	Table of database upload file	47
4.3	Database and Server Connection for e-learn	48
4.4	Database and Server Connection for uploadfile	48
4.5	System Home Page	49
4.6	Login Interface	50
4.7	Create Student Record Interface	51
4.8	View and Manage Student Record Interface	51
4.9	Edit Student Record Interface	52
4.10	Student and Parent View Exam Result Interface	53
4.11	Teacher View and Update Student Exam Result Interface	53
4.12	Teacher Upload Study Materials Interface	54
4.13	Teacher Manage Study Materials Interface	54
4.14	Student View and Download Study Materials Interface	55
4.15	Inbox Message Interface	55
4.16	Outbox Message Interface	56
4.17	Message Trash Interface	56
4.18	Search User for Send Message Interface	56
4.19	Send Message Interface	57
4.20	Main Page of forum interface	58
4.21	Sub topic of forum interface	58
4.22	Create Sub Topic inside forum interface	59
4.23	Comment Inside the Subtopic interface	59
4.24	Reply Comment Interface	60

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	Gantt Chart	73

CHAPTER 1

INTRODUCTION

1.1 Background

Nowadays, internet has become an important communication medium for users to communicate with each other and also sharing file or information more easily and faster.

Learning Management System is a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content. In this project, a web base learning management system also known as e-learning management system will be develop for the secondary school. Purpose of this system is to enable teachers and students access the study materials at anytime and anywhere. Teachers can monitor student's

performance easily through the test/tutorial results analysis done by the system and the system will provide some advice to the students based on their results.

In the secondary school, mostly their network is not well design and sometime they may have problem to access the internet. This will make the teacher and staff hard to access the internet to get the information they want. E-learning system may help them to manage the student's record so that it will be easier to become a reference for future use and provide a new teaching method so that it may help to improve student study performance.

1.2 Problem Statement & Motivation

In secondary school, mostly all the student record and school business are recorded on paper only. Sometime if want to find certain student record, it may take time to search the record and sometime the record may be lost due to some unwanted reason. Besides of waste time to search the record, there is another problem which is waste space to store all the record. In order to store all the record, another special room is need to put all the record.

Besides that, student of secondary school always need to bring a lot of books to classes every day. This has burden the bag weight that student need to carry to school every day.

In order to solve this problem, an IMS system should be developing to keep all the record and also provide sharing file service between the teacher and student. Staff or admin can key in all the record into this system. This will help to prevent data lost and also save time and space for finding data and store data by using paper. Teacher also may upload extra notes by using this system and share it to their student so they may reduce the weight of their bag.

Student also may always download the extra at anytime anyway they want as long as there is internet provided. They also may view their result and performance so that they may always improve themselves according to their teacher comment on their result.

1.3 Aim & Objective

The aim of this project is to improve teaching method in secondary school and student record storage problem.

i. To develop an IMS system to keep all the record and file sharing between student and teacher.
ii. To provide a medium for discussion and communication between student and student or student and teacher.

1.4 Scope

Targeted user of this project output is teacher, staff and Form 6 student of selected secondary school initially in order to improve the overall school performance. Adobe Dreamweaver CS5 will be use as main tool to develop this IMS system for the selected secondary school.

1.5 Thesis Organization

This thesis is divided into six chapters and each chapter is devoted to discuss different issue in the project. Below is a summary of the content for each chapter:

i. Chapter 1

Introduction to the project is presented along with the project's problem statement, objectives of the project and the scopes of the project.

ii. Chapter 2

Research and literature review related to the project is presented.

iii. Chapter 3

Project analysis, design and methodology are presented.

iv. Chapter 4

Implementation of the system is presented.

v. Chapter 5

The testing result of the system and discussion on the result are presented.

vi. Chapter 6

Conclusion with summary of the project is presented.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Record management is the practice of maintaining the records of an organization from the time they are created up to their eventual disposal [1]. This may include classifying, storing, securing, and destruction (or in some cases, archival preservation) of records. In this system, student and staff's record of secondary school may be manage through this system, there will be no longer needed extra room to store all the record which may bring risk of losing record and problém of retrieve data when needed.

Learning Management System is a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content [2]. In this project, a web base learning management system also known as e-learning management system will be develop for

the secondary school. Purpose of this system is to enable teachers and students access the study materials at anytime and anywhere [3]. Teachers can monitor student's performance easily through the test/tutorial results analysis done by the system and the system will provide some advice to the students based on their results.

In this E-Learning and Record Management system, it is divided in to 2 parts which is e-learning and record management. In the e-learning part, it has been divided into two domains which is teacher and student domain. In teacher domain, teacher may upload notes and tutorial regarding to the subject he/she teach, make announcement, check for the student performance and also answering the question which may ask by the student. In the student domain, student may view or change their profile, view on their study performance and also send question regarding to their homework or study to their teacher.

For the record management part, it is design for staff of secondary school to manage the entire student and staff's record. This may help to keep all the record safely and save the space to keep all the record in a room. Besides that, it also make the progress of finding record become more easy by just using search function which provided in this web based system.

In this chapter, the existing similar system will be describe and compare. Programming languages, database and web server which available in the market also will be choose to describe and compare.

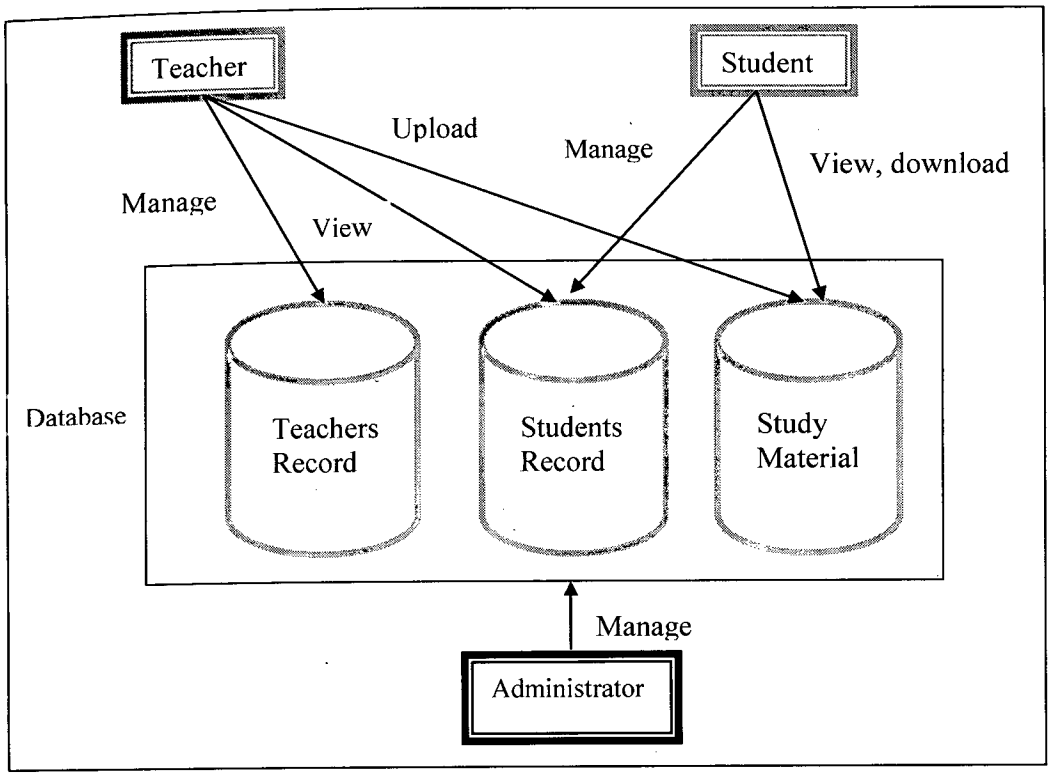

Figure 2.1: System Data Flow

2.2 Similar Available System

2.2.1 Web Based Learning Environment @ UTAR [4]

Web Based Learning Environment @ UTAR is one of the e-learning system which also powered by Moodle platform. Purpose of the system is to simplify and enhance the teaching process between lecturer and student. Lecturer may upload notes and make announcement regarding to the course that he/she teach. Student may straight

take notes or tutorial from this system and make discussion with the lecturer or student inside the forum which provided in this system. This may save time and energy to make face to face discussion with other student and lecturer.

Table 2.1: Advantages and Disadvantages of Web Based Learning Environment @ UTAR

Advantage	Disadvantage
User friendly: the user interface is simple and students are easy to download notes or tutorial from the course they have chosen.	File size: the maximum size of uploaded file in this system is only 10MB. Sometime if the teaching slide is more than 10MB, the lecturer will have to divide the slide in to two parts.
Reminder: in this system, it will automatic remind the user for upcoming event in the next few days so that student will not forget what they should do in the next few days.	File corruption: sometime the uploaded file will have to face the corrupting risk if the server down.
File Submission: Student may submit their assignment or project through this system. This may save time and energy by straight away pass the homework to their lecturer. Is also reducing the risk of file missing during the process of homework submission.	
Teaching scheduling: lecturer is allowed to put their teaching schedule inside the system. They may organize their teaching schedule week by week and upload the related notes and tutorial according to the schedule which they have planned.	

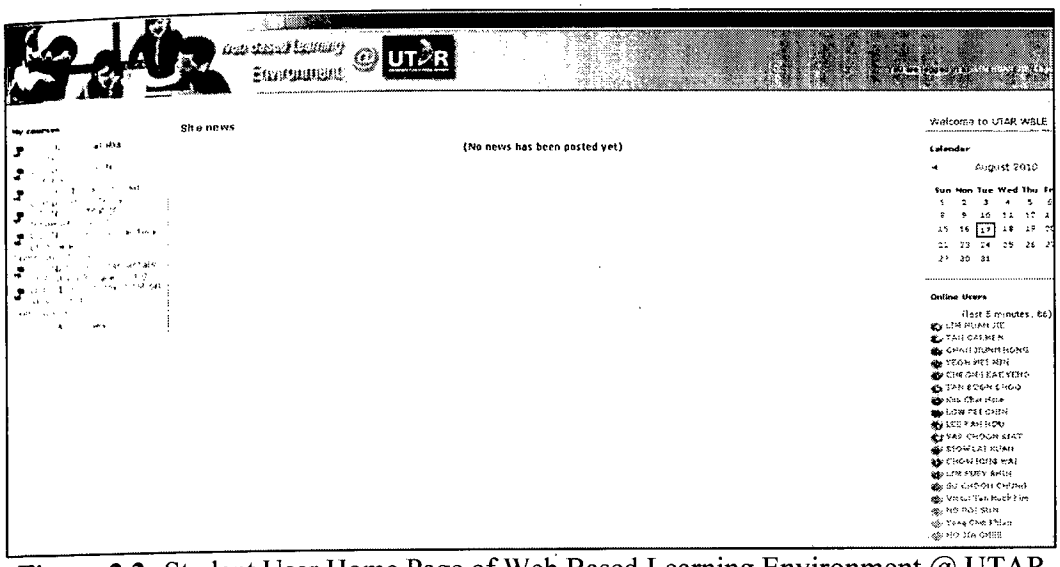

Figure 2.2: Student User Home Page of Web Based Learning Environment @ UTAR

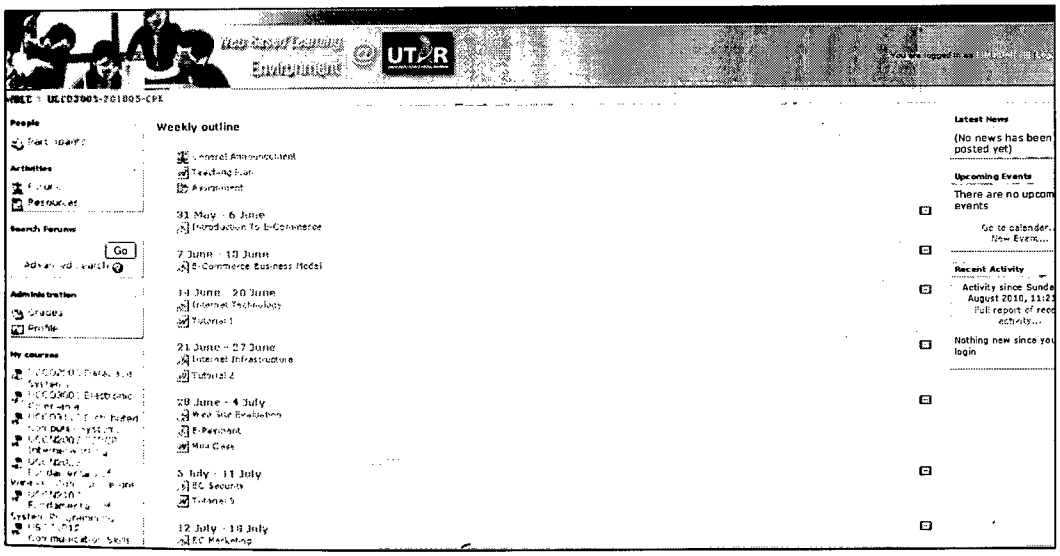

Figure 2.3: Course View Page for view news and download study materials page