AKADEMI INFOTECH MARA (AIMAS)

INTRANET LEARNING PORTAL: A PROTOTYPE

MOHD TAUFIK ALIAS

UNIVERSITI UTARA MALAYSIA

2003

AKADEMI INFOTECH MARA (AIMAS)

INTRANET LEARNING PORTAL: A PROTOTYPE

A project submitted to the Graduate School in partial fulfillment of the requirements for the degree Master of Science (Information Technology), Universiti Utara Malaysia.

By

Mohd Taufik Alias

Copyright Mohd Taufik Alias, 2003. All rights reserved

Sekolah Siswazah
(Graduate School)
Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PROJEK
(Certification of Project Paper)

Saya, yang bertandatangan, memperakukan bahawa
(I, the undersigned, certify that)

MOHD TAUFIK BIN ALIAS

calon untuk Ijazah
(candidate for the degree of) Sarjana Sains (Teknologi Maklumat)

telah mengemukakan kertas projek yang bertajuk
(has presented his/her project paper of the following title)

AKADEMI INFOTECH MARA (AIMAS) INTRANET LEARNING PORTAL

seperti yang tercatat di muka surat tajuk dan kulit kertas projek
(as it appears on the title page and front cover of project paper)

bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan, dan meliputi bidang ilmu dengan memuaskan.
(that the project paper acceptable in form and content, and that a satisfactory knowledge of the field is covered by the project paper).

Nama Penyelia
(Name of Supervisor) : En. Ariffin bin Abd. Mutalib

Tandatangan
(Signature) :

Tarikh
(Date) : 3 Jun 2003

PERMISSION TO USE

In presenting this project in partial fulfillment of the requirements for a post-graduate degree from Universiti Utara Malayia, I agree that the University Library may takes it freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or, in absence, by Dean of the Graduate School. It is understood that any copying or publication or us of this project or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due to recognition shall b give to m and to Universiti Utara Malaysia for any scholarly use which may be made of any martial from my thesis.

Request for my permission to copy or to make other use of materials in this project, in whole or in part, should be addressed to:

Dean of Graduate School

Universiti Utara Malaysia

06010 Sintok

Kedah Darul Aman

ABSTRAK

Sistem pembelajaran secara elektronik (E-Learning) adalah salah satu teknik pembalajaran yang semakin diminati dan berkembang pesat di institusi-institusi pendidikan terutamanya di peringkat tinggi seperti universiti dan kolej. E-Learning dibangun dan dilaksanakan dalam bentuk aplikasi web kerana banyak faedah yang diperolehi dengan menggunakan aplikasi web.

Tujuan prototaip portal E-Learning ini dibangunkan adalah untuk mengurangkan penggunaan kertas, menjalinkan hubungan baik antara pensyarah, pentadbiran dan pelajar Akademi Infotech MARA, Alor Setar (AIMAS), mempermudahkan pembelajaran dan penyebaran maklumat daripada para pensyarah.

Metodologi yang digunakan untuk pembangunan prototaip system ini adalah Rapid Application Development (RAD) yang terdiri daripada empat fasa iaitu analisis, rekabentuk, pembangunan dan perlaksanaan. Pengkalan data yang digunakan untuk membina system ini adalah MySQL dan PHP sebagai bahasa pengaturcaraan. Pelayan (server) yang digunakan adalah Apache Server dan web ini boleh dicapai dengan menggunakan browser Internet Explorer 6.0. Faedah yang boleh diperolehi daripada portal ini adalah pengguna boleh menggunakannya di mana-mana sahaja di dalam bangunan AIMAS. Dengan wujudnya portal ini, pensyarah boleh menjimatkan masa dan kos untuk menyebarkan maklumat, nota, kuiz, tugasan dan projek kepada pelaj ar.

ABSTRACT

Electronic Learning (E-Learning) is one of the studying techniques, which is growing rapidly in the higher institution such as universities and colleges. E-Learning is developed and implemented through the web application form as it is beneficial while using it.

The progress of developing E-Learning portal. are to reduce paper consumption, develop good relationship and networking among lecturers, administration staff and students of Akademi Infotech MARA Alor Setar (AIMAS), simplify the learning and disseminating of knowledge/information by the lecturer.

Methodology used in developing the prototype system is Rapid Application Development (RAD), which comprises of 4 phases such as analysis, design, development and implementation. Database used to develop the system is MySQL with PHP programming language. Apache server is used as the server to run the system and Internet Explorer 6.0 as a web browser of the system. The benefit could be acquired by using this portal is users may apply it at anywhere in AIMA'S building. Through the creation of this portal, lecturer would be able to reduce cost and time consumption in providing notes, quizzes, information and project to students.

ACKNOWLEDGEMENT

Alhamdulillah, thanks to Allah SAW that finally this project was finally complete. I would like to acknowledge the following person whose support has been very significant in ensuring the successful completion of this project. First and foremost, I would like to express my appreciations to my supervisor Mr. Ariffin Abdul Mutalib for his supervision of the project. His ideas and guidance have been enormous help throughout the process of this project.

I also would like to thank my colleagues at Akademi Infotech Mara Alor Setar (AIMAS) especially Mr. Mohamed Mahatir Khairuzzaman, my friend Mr. Hazizul Zamrud and my friends around ASEAN who joint the Computer and Network Administration Training Center for their knowledge sharing in developing this project.

Finally I wish to thank my family especially my wife for their continuous support, understanding and encouragement until this project has finally finish. I am indeed very grateful to have all of you around me thus give me courage and energy to complete this project.

MOHD TAUFIK ALIAS

Graduate School

Universiti Utara Malaysia

May, 2003

TABLE OF CONTENT

PERMISSION TO USE i
ABSTRAK ii
ABSTRACT iii
ACKNOWLEDGEMENT iv
TABLE OF CONTENTS v
LIST OF TABLES viii
LIST OF FIGURES ix
LIST OF ABBREVIATION x

CHAPTER 1: PROJECT OVERVIEW 1
1.1 Introduction 1
1.2 Organization Overview 2
1.3 Problem Statement 3
1.4 Project Objective 4
1.5 Scope 4
1.6 Project Significance 5

CHAPTER 2: LITERATURE REVIEW 6
2.1 Portal Review 6
2.2 Portal Development Tools 8
2.2.1 Scripting Language 9
2.2.2 Database 10
2.2.3 Web Server 13
2.3 E-Learning Portal 14

CHAPTER 3: METHODOLOGY 17
3.1 Introduction 17
3.2 Analysis Phase 18
3.2.1 Current Teaching Mechanism 18
3.2.2 Analysis of New System (AIMAS Portal) 20
3.2.2.1 The Analyzing of the Portal Needs 21
3.3 Design Phase 21
3.3.1 Storyboard 21
3.3.2 Interface Design 22
3.3.3 Input Design 23
3.3.4 Output Design 27
3.4 Development Phase 33
3.4.1 The AIMAS Module Development 33
3.4.2 Database Development 35
3.4.3 Material Development 36
3.5 Implementation Phase 37
3.6 Documentation 38
3.6.1 Project Schedule 38
3.6.2 User Manual 38

CHAPTER FOUR: RESULT AND FINDINGS 39
4.1 Introduction 39
4.2 AIMAS Portal 40
4.3 On-line Collaborations 41
4.4 Search Engine 41
4.5 Materials 41

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION 43

5.1 Benefit of the Portal 44

5.2 Limitation 44

5.3 Recommendation 44

REFERENCES 45

APPENDICES

Appendix A : Organization Overview

Appendix B : Interview Questions

Appendix C : Context Diagram and Data Flow Diagram

Appendix D : Storyboard

Appendix E : List of Table in he .dbi

Appendix F : User Acceptance Form

Appendix G : Project Schedule

Appendix H : User Manual

LIST OF TABLES

Table 3.1: Login Input Field 24

Table 3.2: New User Input Field 25

Table 3.3: Message Input Field 26

Table 3.4: New Submission Input Field 26

Table 3.5: New User Registration Output 28

Table 3.6: Public Message Output 29

Table 3.7: View Message Output 30

Table 3.8: New Submission Output 31

Table 3.9: Notes Output 32

Table 3.10: Tables Description in Dbi 35

LIST OF FIGURES

Figures 1.1: Market Share for Top Servers Across All Domains August 1995 – May 2003 13

Figures 3.1: Interface Design of AIMAS Portal.....22

Figures 3.2: New User Registration Conformation Page.....28

Figures 3.3: Public Message Block 29

Figures 3.4: View Message Page..... 30

Figures 3.5: News Submission Block.....31

Figures 3.6: Notes Page.....32

Figures 4.1: The AIMAS E-Learning Portal Architecture.....40

LIST OF ABBREVIATIONS

AIM	Akademi Infotech MARA
AIMAS	Akademi Infotech MARA Alor Setar
ASP	Active Server Page
CD	Context Diagram
DBMS	Database Management System
DFD	Data Flow Diagram
DIT	Diploma in Information Technology
DSN	Diploma in System & Networking
HTTP	Hyper Text Transfer Protocol
HTML	Hyper Text Mark-Up Language
IT	Information Technology
ODBC	Open Database Connectivity
PDF	Portable Document Format
PERL	Practical Extraction End Report Language
PHP	Personal Home Page
ROI	Return On Investment
RAD	Rapid Application Development
UUM	Universiti Utara Malaysia

CHAPTER ONE

PROJECT OVERVIEW

This project is to fulfill upon the request of course Thesis/Project (TZ6996) as one of the graduation requirements for Master Science in Information Technology (MSc. IT) in Universiti Utara Malaysia. The purpose of this project is to generate a model or prototype of Akademi Infotech MARA Alor Setar (AIMAS) Intranet Learning Portal.

This chapter gives an overview of organization, problem statement, project objectives, scope and project significant.

1.1 Introduction

"*Everything I need is in one place. I can find what I need when I need it without having to wait on an email reply, walk around looking for someone, or search through gigabytes of information of the internet. Plus after working through difficult situations, I can post my lessons learned on the site so my colleague can learn from my experience*" say Mike Pusich Senior Service Manager for Boeing (LearningCircuit, 2002). This statement shows that now people are very welcoming easy access information that will make their job simpler due to time preciousness. The impact is obvious that over the last half year, portal technology has become very popular to the large and medium size organization for information exchange.

The portal technology is also playing a very essential role in the education fields. It is being used to ensure that the curriculum provided meets the educational

The contents of the thesis is for internal user only

REFERENCES

Allen, J & Hornberger, C. (2002). *Mastering PHP 4.1.* USA: Sybex

Whitten, J.L. Bentley, L.D. & Dittman K.C. (2001). System Analysis and Design Methods, 5Th Edittion. New yokk. McGraw-Hill Irwin

Suhimura, J & Uranon Y (2001). *The Design of the E-learning Environment – Study On Devlopment of E-learning Community for E-learning.* Proceeding: The 2nd Conference on information Technology in Asia: Advanced ICT for the New Millenium. 17 – 19th October 2001, Kucng Sarawak. UNIMAS

Husain H.M et all (2001). *EDUX: A Collaborative Learning Framework.* Proceeding: The 2nd Conference on information Technology in Asia: Advanced ICT for the New Millenium. 17 – 19th October 2001, Kucng Sarawak. UNIMAS

Hassan, R. et all (2002) E-Com: E- Pembelajaran untuk kursusu komunikasi Data. Prosiding Seminar ICT 2002.UUM

Sailin S.N. & Mat Ali A.B. (2002). *Publishing Educational Portal for Secondary School in Malaysia.* Prosiding Seminar ICT 2002.UUM

Zakaria, A.et all (2002). *Agen Pedagogi Sebagai tutor: Pemantapan Pemahaman Pelajar di dalam E- Pembelajaran.* Prosiding Seminar ICT 2002.UUM

Apache, (2003). http://www.apache.org/

Jez, (2003). http://news.netcraft.com/

Ricart M.A. (2000). http://docs.rinet.ru:8083/Apachu/asg01.htm#E67E3

McCormac, C., & Jones, D. (1998). *Building a web-based education system.* New York: John Wiley & Sons.

Rosenberg, M. J. (2001). *E-learning: Strategies for delivering knowledge in the digital age.* New York: McGraw Hill.

Collis, B., & Meeuwsen, E. (1999). Learning to learn in a WWW-based environment. In D. French, C. Hale, C. Johonson, & G. Farr (Ed.), *Internet-based learning – An introduction and framework for higher education and business.* (pp. 25-46). New York: Kogan.

Jain, K.K. & Lee, B.N. (2003). http://www.studentaffairs.com/ejournal/Winter_2003/e-learning.html

Adam Ng. (2003). http://www.purpletrain.com/news/

OUM. (2002):. http://www.OUM.edu.my

Unitar. (2000). http://www.unitar.edu.my

Utusan, (2003). http://www.portal.utusan.com.my

LearningCircuit, (2002). http://www.learningcircuits.org/2002/may/schneble.html

Nielsen. J, 1999. http://www.useit.com/alertbox/990404.html

Microsoft, 2003. http://www.microsoft.com/technet/treeview/default.asp

Macromedia,2002. http://www.macromedia.com / resources / business / sample_apps / intranets

DelphiGroup, 2003. http://www.delphigroup.com

Stylusinc, 2003. http://stylusinc.com/portal_development.htm