

A REQUIREMENT MODEL OF UUM ALUMNI ONLINE

JOB APPLICATION

Fathi Said E. Shaninah

UNIVERSITI UTARA MALAYSIA

2008

AF
5382.7
S 528r
S
2008



**KOLEJ SASTERA DAN SAINS
(College of Arts and Sciences)
Universiti Utara Malaysia**

**PERAKUAN KERJA KERTAS PROJEK
(Certificate of Project Paper)**

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

FATHI SAID E. SHANINAH
(89374)

calon untuk Ijazah
(candidate for the degree of) **MSc. (Information Technology)**

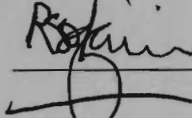
telah mengemukakan kertas projek yang bertajuk
(has presented his/her project paper of the following title)

A REQUIREMENT MODEL OF UUM ALUMNI ONLINE JOB APPLICATION

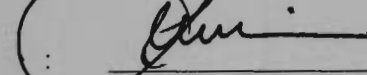
seperti yang tercatat di muka surat tajuk dan kulit kertas projek
(as it appears on the title page and front cover of project paper)

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 Utama
(Name of Main Supervisor): **ASSOC. PROF. DR. WAN ROZAINI SHEIK OSMAN**

Tandatangan
(Signature) :  Tarikh (Date) : 18/11/08

Nama Penyelia Kedua
(Name of 2nd Supervisor): **MDM. NUR FADZIANA FAISAL MOHAMED**

Tandatangan
(Signature) :  Tarikh (Date) : 25/11/08

PERMISSION TO USE

In presenting this thesis of the requirements for a Master of Science in Information Technology (MSc. IT) from Universiti Utara Malaysia, I agree that the University library may make 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 their absence, by the Dean of Graduate School. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

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

Dean of Graduate School

Universiti Utara Malaysia

06010 Sintok

Kedah Darul Aman

ABSTRACT

A web-based online job application has become the most useful tool to access the information about the applicant, and the applicant information is accessible at the press of a button immediately. Graduates need to work hard to get jobs that may require cost and time. Thus this study proposal to model requirement of UUM Alumni Online Jobs that provide a flexible way to access jobs. The requirement model for the alumni students would provides the alumni with the capability to input, search and receive information of jobs via the online services.

ACKNOWLEDGEMENTS

Praise and gratitude be given to Allah the Almighty for putting giving me a great strength, patience, courage, and ability to complete this project.

I am grateful to my supportive and helpful supervisors, Assoc Prof. Dr. Wan Rozaini bt Sheik Osman and Mdm. Nur Fadziana Faisal Mohamed for assisting and guiding me in the completion of this research. With all truthfulness, without them, the project would not have been a complete one. They have always been my source of motivation and guidance. I am truly grateful for their support and cooperation in assisting me all the way through the semester. I am grateful to Dr. Nor Laily Hashim for her help in making my project successful.

I would like to present my thanks to my father, my mother and all my family who have always been there for me. Finally, I would like to express my appreciations to all my friends, colleagues, Applied Science staff, and everyone who have helped me in this journey.

TABLE OF CONTENTS

PERMISSION TO USE	I
ABSTRACT (ENGLISH)	II
ACKNOWLEDEGMENTS	III
TABLE OF CONTENTS	IV
LIST OF TABLE	VIII
LIST OF FIGURES	IX
LIST OF ABBREVIATIONS	XI

CHAPTER ONE : INTRODUCTION

1.1	Introduction.....	1
1.2	Problem Statement.....	3
1.3	Research Question.....	4
1.4	Research Objective.....	4
1.5	Project Scope.....	4
1.6	Research Significance.....	5
1.7	Thesis Organization	5

CHAPTER TWO : LITERATURE REVIEW

2.1	Concept and Definition	7
	2.1.1 Overview of the Web.....	7
	2.1.2 Web Application.....	8
	2.1.3 Web Application Architecture	9

2.1.4	Tools Used to Build Web Application	10
2.2	Managing the Time Schedule	17
2.3	System Requirements.....	19
2.4	Online Job Applications	20
2.5	University of Bradford Union (UBU).....	21
2.6	University of London Union (ULU).....	21
2.7	Summary.....	22

CHAPTER THREE : RESEARCH METHODOLOGY

3.1	Overview of Object-Oriented Software Development Method (OOSD...)	23
3.1.1	Selection and Planning.....	25
3.1.2	Requirement Analysis	25
3.1.3	Design	26
3.1.3.1	Logical Design	27
3.1.3.2	Physical Design	27
3.1.4	Implementation	28
3.1.4.1	Coding	29
3.1.4.2	Testing.....	30
3.1.5	Documentation.....	30
3.2	Summary.....	31

CHAPTER FOUR : RESULT

4.1	Functional Requirements.....	32
4.2	Non - Functional Requirements.....	33
4.3	Use Case Diagram.....	34

4.4	Use Case Specification.....	36
4.5	Sequence Diagram.....	50
4.5.1	Login.....	50
4.5.2	Search.....	51
4.5.3	Manage Company Profile.....	52
4.5.4	Post Job.....	53
4.5.5	Post Resume.....	54
4.5.6	Register.....	55
4.5.7	Change Password.....	56
4.6	Collaboration Diagram.....	57
4.6.1	Login.....	57
4.6.2	Search.....	58
4.6.3	Manage Company Profile.....	69
4.6.4	Post Job.....	60
4.6.5	Post Resume.....	61
4.6.6	Registration.....	62
4.6.7	Change Password.....	63
4.7	Class Diagram for Online Job UUM Alumni.....	64
4.8	System Development.....	65
4.8.1	ASP.NET.....	65
4.8.2	SQL SERVER.....	66
 CHAPTER FIVE : DISCUSSION OF RESULT		
5.1	Use Case Testing.....	67

CHAPTER SIX : CONCLUSIONS AND FUTURE WORKS

6.1	Problems and Limitations.....	73
6.2	Recommendations.....	74
6.3	Future Work.....	74
6.4	Conclusion.....	75
	References.....	76

LIST OF TABLE

Table 3.1: H/W.S/W Specifications..... 27

Table 3.2: Software Specifications..... 29

LIST OF FIGURES

Figure 2.1: A Canonical Web Architecture source: Conallen, (2000).....	9
Figure 3.1: Object-Oriented Approach.....	24
Figure 4.1: Use Case for Online Job Alumni	35
Figure 4.2: Sequence Diagram for Login	50
Figure 4.3: Sequence Diagram for Search	51
Figure 4.4: Sequence Diagram for Manage company profile	52
Figure 4.5: Sequence Diagram for Post Job	53
Figure 4.6: Sequence Diagram for Post Resume	54
Figure 4.7: Sequence Diagram for Register	55
Figure 4.8: Sequence Diagram for Change password	56
Figure 4.9: Collaboration Diagram for the Login	57
Figure 4.10: Collaboration Diagram for Search	58
Figure 4.11:- Collaboration Diagram for Manage Company Profile	59
Figure 4.12: Collaboration Diagram for Post Job	60
Figure 4.13: Collaboration Diagram for Post Resume	61
Figure 4.14: Collaboration Diagram for Register	62
Figure 4.15: Collaboration Diagram for Change Password	63
Figure 4.16: Class Diagram for the Online Job UUM Alumni	64
Figure 5.1: UUM Alumni Online Job (Login Page)	68
Figure 5.2: Post Resume Page	69
Figure 5.3: Search Resume Page	70

Figure 5.4: Employee Post Job	71
Figure 5.5: Company Profile Page	72

LIST OF ABBREVIATIONS

UUM.....	University Utara Malaysia
HTTP	Hypertext Terminal Protocol
HTML.....	Hypertext Markup Language
OOSD.....	Object-Oriented Software Development Method
OOSAD	Object-Oriented System Analysis and Design
UML	Unified Modeling Language
OO	Object-Oriented
H/W.S/W.....	Hard Ware and Soft Ware
SQL.....	Structured Query Language
RDBMS.....	Relation Database Management System
ISS.....	Internet Information Server

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Most students look for jobs via the web, although some students still search and investigate in the newspaper advertisement to find the job they need. Searching for jobs is often challenging to graduate students. Today's tight economy has forced, job seekers from all disciplines to put in extra effort to land a job. Graduate students can find jobs even in the tough times, since organizations are constantly starting up, expanding, or replacing workers. There is no magic formula for finding a job. A variety of techniques and strategies may be employed, and success varies with the individual (Nonacademic Job Search for Graduates Students, 2006).

There are hundreds of sites where the alumni can post their CV online and complete an online job application. Some sites let those alumni upload existing resumes, example of (FTM UOB and etc.). The simple definition for the alumni that could to be satisfied with

The contents of
the thesis is for
internal user
only

REFERENCE

- Anita, D. Carleton. Robert E. Park, and Wolfhart B. (1994). *The SEI Core Measures: Background Information and Recommendations for Use and Implementation* retrieved on 9-8-2008.
- Acunetix. (2008). Web Applications: What are they? What of them? Retrieved Jun 28, 2008 from <http://www.acunetix.com/websitesecurity/web-applications.htm>.
- Athula Ginige and San Murugesan. (2001). *Guest Editors' Introduction: Web Engineering An Introduction IEEE MultiMedia*, Volume 8 Issue 1 Publisher: IEEE Computer Society Press.
- Albany. (1998). *Models for Action Project: Developing Practical Approaches to Electronic Records Management and Preservation, A Survey of System Development Process Models*.
- Barker, D. (2000). *Requirements Modeling Technology: A Vision for Better, Faster, and Cheaper Systems*. Computer Society. Retrieved: July 23, 2008. From: <http://www.ittc.ku.edu/Projects/rosetta/downloads/barker-viuf00.pdf> .IEEE
- Bahrami, A. (1999). *Object Oriented System Development*, McGraw-Hill, United States of America.
- Bennet, J. Beneventano, S., and Bergamaschi, A. (2002, 2007). *Object Oriented Approach methodology*, accessed on 22 Oct 2008.
- Bennett, S., McRobb, S., and Farmer, R. (2002). *Object-oriented System Analysis and Design 2nd Edition*. UK, McGraw Hill.
- Baxly, B. (2003). *What is a Web Application?*. Boxes and Arrows. Retrieved 26

- January, 2008 from http://www.boxesandarrows.com/archives/what_is_a_web_application.php.
- Benetti, D. Beneventano, S. Bergamaschi, A. Corni, Guerra, F., & G. Malvezzi, (2001). designer: *a tool for intelligent integration of information*," from: <http://dictionary.zdnet.com/definition/e-commerce.html>.
- COMET - *Requirements model*, (2007). Retrieved on 2008 - 09 - 08 from http://www.modelbased.net/comet/requirements_modelling/3b_Requirements_model_html.html.
- Casal, D.P. (2005). *Advanced Software Development for Web Applications*, retrieved on 15 Oct 2008, from http://www.jisc.ac.uk/uploaded_documents/jisctsw_05_05pdf.pdf.
- Conallen, J. (2000). Building web applications with UML. *The Addison-Wesley Object Technology Series*.
- Chin, J.P., Norman, K.L., & Shneiderman, B. (1997). *Subjective user evaluation of CF PASCAL programming tools*. Technical Report (CAR-TR-304). College Park, MD: Human-Computer Interaction, Center for Automation Research, University of Maryland.
- Collard, R. (1999). *Test Design*. *Stqemagazine: Software Testing & Quality Engineering*. Retrieved sep 29, 2007 from www.softtest.org/s/material/rosscollard1.pdf.
- Craig, A., John, D. (2004). *Creating Web Services Using Asp.Net*, CCSC: Rocky Mountain Conference, 2004.
- Demong, R. (2003). *UUM web-based computer laboratory reservation system: A Prototype*.

- D. L. Hoffman & T. P. Novak (1996). Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations, *Journal of Marketing*, vol. 3, pp. 50-68, 1996.
- Dhann, S. (2001). Referencing: *The Harvard referencing system* Stockholm: School of Information and Communication, Department of Media Technology and Graphics Arts
- Dennis, A., Wixom, B.H., & Tegarden, D. (2005). *System analysis and design with UML version 2.0: an object-oriented approach with UML*, 2nd edition. Hoboken, NJ: John Wiley and Sons, Inc.
- Eriksson, H., & Penker, M. (1998). UML Toolkit. USA, John Wiley & Sons, Inc.
- Giancarlo, Types of e-commerce: B2B, B2C, C2C, C2B. Accessed February 4; 2008, from: <http://gandalf.it/offline/off26-en.htm>.
- Farooq, (2006). Public Job Application, assessed. (2008). From: [www.publicjobs.ie /downloads/e-Recruitment%20report.pdf](http://www.publicjobs.ie/downloads/e-Recruitment%20report.pdf) -).
- Foster (2005). Online Job Application, assessed, (2008). from (www.get.hobsons.co.uk/advice/job-applications-online).
- Governance Action Plan* (2004-2005). Jaipur: Department of Information Technology & Communication.
- Hoffer, J. A., George, J. F & Valacich, J. S. (2002). *Modern Systems Analysis and Design* (3rd Edition). Upper Saddle River, New Jersey: Prentice Hall.
- Hoffer, J. A., George, J. F & Valacich, J. S. (1999). *Modern Systems Analysis and*

Design (2nd Edition). United Kingdom : Addison Wesley Longman.

Harris, R., Bala, P., Songan, P., Khoo E., (2001). *Challenges and Opportunities In Introducing Information and Communication Technologies To The Kelabit Community of North Central Borneo*, *New Media and Society*, Vol. 3, No. 3, September 2001.

Introduction to Microsoft .Net Platform (2008). Microsoft Internet Explorer, Accessed on 22 April 2008, (<http://www.asp101.com/articles/nakul/intronet/default.asp>).

Ibm. com. (2007). Paper Prototype. Retrieved 25th November, 2007 from http://www.ibm.com/paper_prototype.html.

Introduction to Project Management Principles (2003). Office of Learning Technologies Human Resources Development Canada (HRDC), Retrieved on 2008-09-18 from <http://www.pmi.org/Pages/default.aspx>.

Jessett.com. Design principles. Retrieved on 5th March 2008, from http://www.jessett.com/web_sites/design/index.html

Jacobson, I., M., Johnsson, P. & Overgaars, G. (2004). *Object – oriented Software Engineering: A Use Case Driven Approach* (revised). Harlow, England: Addison-Wesley.

Kendall, P. A. (1996). *Introduction to Systems Analysis and Design: A Structured Approach*, Irwin, Times Mirror Higher Education Group, USA.

Kwok, T., Nguyen, T., Lam, L., & Roy, K. (2004). *An Efficient and Systematic Method to Generate XSLT Stylesheets for different Wireless Pervasive Devices*, ACM 1-58113-912-8/04/0005, New York, USA.

Lee, (2002). *HTML and HTTP*. Prentice Hall, USA.

Lublin, U., Feitelson, D. (2003). *The Workload on Parallel Supercomputers: Modeling the Characteristics of Rigid Jobs*, in *Journal of Parallel and Distributed Computing*.

Nielsen, J. Landauer, T. (2001). *A Mathematical Model of The Finding Of Usability problems*. Netherlands: Amsterdam.

Nunes, N. J. Cunha J.F.E. *Towards a UML profile for Interaction Design: the Wisdom Approach Retrieved*.

Nijaz. (2000). *Dynamic web-based application development*. New York: Prentice Hall.

Nonacademic Job Search for Graduate Students, (2006). Graduate College Career Services Office University of Illinois at urbana-Champaign.

Paul, D. (2006). *Fundamentals VB.NET* retrieved 13 Sep 2007 from http://pdsa.com/Download/eBook/Preview_57.pdf).

Pssuk.com. *Advantages of Web Applications*. Retrieved on 4th March 2008, from <http://www.pssuk.com/advantageswebapplications.htm>

Stella Y., Michael J., and Chandrasekar S. (2008). *Implementing Web-based E-commerce System at a Multinational Enterprise-A Field Study on IT Adoption*, Accessed. February 5; 2008, from: http://citebm.business.uiuc.edu/IT_cases/IT%20adoption%20field%20study_B.pdf

Sethgodin.typepad.com. *Web4.0*. Retrieved on 6th March 2008, from http://sethgodin.typepad.com/seths_blog/2007/01/web4.html

Tim, B. (1990). *Information Management: A proposal*. <http://www.w3.org/history/1989/proposal.html>.

ULU, (2008). University of London Union, *Online Job Application for Graduate Students*. Accessed on 1 Nov 2008.

Utpal M., Dholakia, L., & Rego, L. (2000). *What makes commercial web pages popular: An empirical investigation of web page effectiveness*. *European journal of marketing*, 13 (7), 724-736.

Web development knowledge (2008). What Are Active Server Pages (ASP). Retrieved on 4th Sep, 2008 from: [http:// www.webwizguide.com/kb/asp_tutorials/what_is_asp.asp](http://www.webwizguide.com/kb/asp_tutorials/what_is_asp.asp).

Plugins.com , Browser, Retrieved on 9th Sep, 2008 from <http://plugins.com/browser>.

Webopedia. (2008). CERN. Retrieved June 15, 2008 from <http://www.webopedia.com/TERM/C/CERN.htm>