UNIVERSITI TEKNOLOGI MARA

REQUIREMENT MODEL FOR CAREER PLACEMENT UNIT INTERGRATED WITH SMS WEB-SERVICE AT CYBERNETICS INTERNATIONAL COLLEGE OF TECHNOLOGY

MOHAMMAD FARIS BIN JAAFAR

Report submitted in partial fulfillment of the requirements for the degree of

Master of Science (Information Technology)

Faculty of Computer and Mathematical Sciences

JULY 2014

ABSTRACT

Web application development is one of the important areas in the fastest growing industries in the world. Many projects and studies has been conducted toward a deeper come across at the issues of web development. This research presenting one of the management strategies of a small college to administrator their students graduated data. This project aim to demonstrate the application prototype called Career Placement Unit (CPU) which utilizing the full functionality of alumni portal into something helpful such as Job Advertisement. This study also incorporate the Short Message Service (SMS) web service engine developed by the researcher to communicate along with the CPU applications. This project scope focused only on Cybernetics International College of Technology (CICT) in Kuala Lumpur. This study introduces the features of Incremental model and how this model gives an impact of progress in web development. In addition, this project focuses on ideas, values and process practice rules of incremental method in order to implement a system development. In incremental model the whole requirement is divided into various builds. Multiple development cycles take place and building the life cycle a "multi-waterfall" cycle. Cycles are divided up into smaller, more easily managed modules. Each module passes through the requirements, design, implementation and testing phases. A working version of software is formed during the first module, so can encompass working software early on during the software life cycle. Each subsequent release of the module adds purpose to the preceding release. The development continues till the whole system is achieved. Furthermore, integrating the SMS web service for making the application becomes more efficient in terms of notification behavior to the students itself. As a result, all the objectives of this CPU system project are achieved and as a result this project research not only intended for CICT but also for the other education industry. On behalf, this research can be recommended to explore the utmost potential of Alumni Portal and SMS web service engine adoption in any organization particularly in an education field.

ACKNOWLEDGEMENT

Foremost, I would like to express my sincere gratitude to my supervisor Madam Nalini Dharmarajan for the continuous support of my Master study and research, for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better advisor for my Master project.

Besides my supervisor, I would like to show gratitude to the rest of my friends in Cybernetics International College of Technology (CICT) for their encouragement, insightful comments, and friendship. Last but not the least; I would like to thank my family especially fiancee , my parents and for giving birth to me at the first place and supporting me spiritually throughout my life.

TABLE OF CONTENTS

	Page
ST	UDENT DECLARATION i
ΑB	STRACTii
AC	KNOWLEDGEMENT iii
TA	BLE OF CONTENTS iv
LI	ST OF TABLESvii
LI	ST OF FIGURE viii
СН	APTER 1 : INTRODUCTION
1.1	Introduction
1.2	Research Background 1
1.3	Problem Statement. 4
1.4	Research Questions 5
1.5	Research Objective
1.6	Scope and Limitation
1.7	Significance of the Research 6
1.8	Research Design
1.9	Summary
СН	APTER 2 : Literature Review
2.1	Introduction 8
2.2	Requirement Model 8
2.3	Incremental Development Technology9
2.4	Development of Web-Based Diabetic Patient Management System using
	Short Message Service (SMS)

2.5	Short Message Service (SMS)	11
2.6	SMS System Architecture	12
2.7	Efficient Asynchronous web service Framework	13
2.8	GSM Modems to Support the Development of SMS-Based Applications	15
2.9	<u>CreatingWebServicesusingASP.NET</u>	16
2.10	Service-Oriented Architecture: A Field Guide to Integrating XML and W Services.	
2.11	Using SMS and Web Technology in Mobile Government Information Services Platform.	
2.12	Summary	21
CHA	APTER 3: RESEARCH METHODOLOGY	
3.1	Introduction	22
3.2	Research Design	23
3.	2.1 Description / Planning Requirement	24
3.	2.2 Analysis / Specification	25
3.	2.3 Design / Development	27
3.	2.4 Validation / Implementation.	28
3.3	Why Incremental Model?	29
3.4	Development tools.	30
3.	4.1 Hardware Tools	30
3.	4.2 Software Tools	31
3.5	Summary	33
CH	APTER 4 : ANALYSIS AND FINDINGS	
4.1	Introduction	34
4.2	Findings from Accomplished of Objective I: To determine Syste Requirements for the CPU System Portal	
	Transfer to the Cr C System I Stution	· ·