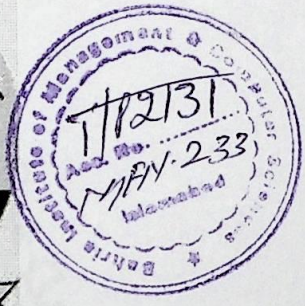
PAPERLESS UNIVERSITY

By

Muhammad Aamir



Supervised by

Mrs. Farzana Khan

A report is submitted to the department of Computer Sciences,
Bahria Institute of Management & Computer Sciences, Islamabad.
In partial fulfillment of requirement of the degree of
MCS Software Engineering

Department of Computer Sciences
Bahria Institute of Management and Computer Sciences, Islamabad
Bahria University Islamabad

بسم الله الرحمن الرحيم

DEDICATION

I dedicate

this project

to my

Loving Parents, Uncle and Aunt

whose prays

are

always with me

and

my success

is only due to them.

ACKNOWLEDGEMENTS

First of all I am grateful to **Almighty Allah**, Lord of Creations, of our lives and of everything in the Universe and His **Holy Prophet Mohammad (S.A.W)** Whose blessings enabled me to perceive and pursuit higher ideas of life, who has given me the courage insight and knowledge to complete this project.

I would like to acknowledge the help of persons who helped me lot in my project and in my educational career that is "Mrs. Farzana Khan" for supervising me in this project and her lots of encouragement, her devotions and her great advices during this project and as well as in my educational stay during MCS degree.

I would also like to thank "Mrs. Saima Jawad" for helping me much in the development of my programming skills. I would also like to mention the name of "Mr. Hassan Zia", whom guidance especially in documentation skills give me lot of knowledge and power in developing the professional documents in my professional as well as my student life.

Also "Mr. Farhan Kamal Chishty" for Software Quality Assurance, which I tried to use in my project, he gave us a strange sense of quality not only in our professional life, but in every aspect of life. Also "Mr. Ali Iqbal" whom taught us Object Oriented Software Engineering and also show us the way of using "UML" and methodologies used in Object Oriented Software Engineering. At last I would like to thank all the teachers of MCS for brightening and glooming my career towards this profession.

Finally, I would like to acknowledge Bahria University for giving a professional sense to me and forwarding me to the professional and practical life with full strength. I also acknowledge here that it is the university which has opened new horizons and universe for me to conquer and to seek knowledge, applying my abilities and skills.

ABSTRACT

With the passage of time, progress of science by leaps of bounds in the life of human being is shaping tuning and turning towards luxury. Human being is busy to mold the life towards the ease not only in his home but also in the offices. With the evolution of computer science the concept of office automation took birth. Now modern trend of office automation is setting towards the paperless ness of the office which means that no existence of a single paper in the office and each and every work should be done automatically with the help of computers. On the bases of the paperless ness, there is the concept lies about the education field, which proposed that each activity performed in the educational institutes should be automated i.e. every activity should be monitored, performed and processed by the computers. We try to work in this field and named this software as "Paperless University".

Although this is a very vast topic and need lot of research and work but here we tried to build our project wile considering some or few of its aspects.

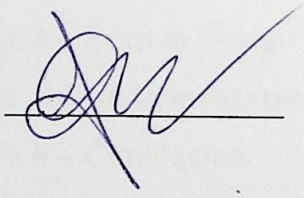
This system will facilitate the University administration to make and upload their records associated to different sections of the university very quickly and smoothly without wastage of time.

It will also facilitate the related teachers of the institute in accordance with the preparation of question papers, quiz etc.

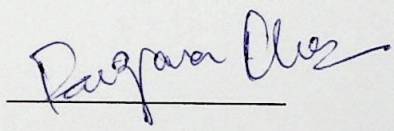
In this system, only the administrator has the right to perform changes i.e. addition or removal of any record. No further person has right to access the system. The system will display the online testing system as well as the representation of the whole programs offered by the university with different options.

APPROVALS

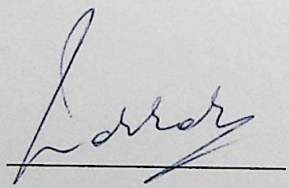
We accept the work contained in this report as a confirming to the required standard for the partial fulfillment of the degree of MCS degree with specialization in Software Engineering.



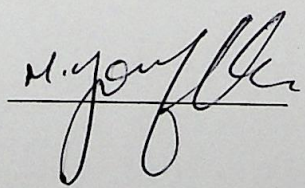
Head of Department



Supervisor



Internal Examiner



External Examiner

Table of Contents

Dedication	II
Acknowledgements	III
Preface	IV
Abstract	V
Approvals	VI
List of Figures	VII
Chapter 1 – Introduction	1
Chapter 2 – Literature Survey	7
Chapter 3 – Proposed System	13
Chapter 4 – System Design	22
Chapter 5 – Implementation & Testing	77
Chapter 6 – Conclusion	84
Chapter 7 – Future Development	88
Appendix A – UAS Technologies	93
Appendix B – User Guide	95
Appendix C– User Manual	98
Bibliography – Internet & Other resources	153

Table of Contents

Chapter 1 – Introduction

	Abstract	2
1.1	Introduction to Organization	3
1.2	Project Background	4
1.3	Project Overview	5

Chapter 2 – Literature Survey

	Abstract	8
2.1	Evolution of Computer based applications	9
2.2	Benefits	11
2.3	Significance	12

Chapter 3 – Proposed System

	Abstract	14
3.1	Scope	15
3.1.1	A Vague View	15
3.1.2	Formal View	15
3.2	Process Model	17
3.2.1	Phases of Spiral Model	18
3.3	Tools & Techniques	19
3.4	Planned Effort Metric	21

Chapter 4 – System Design

	Abstract	23
4.1	UML Modeling	24
4.1.1	Use Case Diagrams	25
4.1.2	Sequence Diagrams	60
4.1.3	Deployment Diagram	69
4.2	Database Design	70

4.2.1	Database Tables	70
4.2.2	Database relationship Schema	74
Chapter 5 – Implementation & Testing		
	Abstract	78
5.1	System Implementation	79
5.1.1	Modular Divisions	79
5.1.2	Effort Metric	80
5.2	Testing Evaluation	81
5.2.1	Tests Conducted	81
Chapter 6 – Conclusion		
	Abstract	85
6.1	Conclusion	86
6.1.1	Internet	86
6.1.2	Tools	86
6.1.3	Final Product	87
Chapter 7 – Future Development		
	Abstract	89
7.1	Future Development	90
7.1.1	Implementation on WAP	90
7.1.2	Database Design	90
7.1.3	Tools	90
7.1.4	Data Validation & Security	91
7.1.5	User Friendliness & Efficiency	91
7.1.6	Implementation of Virtual University Software	91
7.1.7	Integration of Previous created/related Applications	92
7.1.8	Creation/integration of Official(University) website	92
7.1.9	Approach	92
Appendix A – UAS Technologies		93
Appendix B – User Guide		95
Appendix C – User Manual		98
Bibliography – Internet & Other resources		153