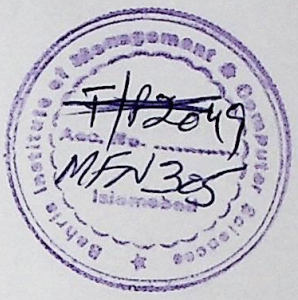
Online Adaptive Testing System

Client Side Development

By

Zubair Aziz



Supervised by

Mr. Jehanzeb Ahmed

A report is submitted to the Department of Computer Science,

Bahria University

Islamabad

In partial fulfillment of requirement of degree of BCS

Department of Computer Science

Bahria Institute of Management & Computer Sciences

Islamabad

Dedication

I want to dedicate this to my family and friends and most of all to my mother who always exhibited unflinching faith in me, through all the high and lows of my life.

Zubair Aziz

Acknowledgements

I would like to thank Almighty Allah whose blessing are always with me and without His blessings this work would not have been completed. Furthermore a very special note of thanks goes to our parents whose heart-felt prayers, appreciation, and support has always been a valuable asset and a great source of inspiration for us.

We owe a special thanks to our supervisor Mr. Jehanzeb Ahmed whose valuable suggestions helped us working on this project. We are indebted to our project coordinator and all teachers for their co-operation and encouragement to attain our goal.

The acknowledgement will remain incomplete without special thanks to my friends for their excellent cooperation and their nice companionship. I am thankful to all of my class fellows for their love and good feelings about me.

Zubair Aziz

Abstract

As we slowly but steadily drift out of the natural era, with the advent of internet capabilities, we need to expand those primitive capabilities and integrate them with the power of the Internet. Users still have to deal with today's realities of online testing i.e., online examination, online shopping store, etc., which will require a higher level of flexible control to manage both accessibility and the cross-modal interfaces. Therefore, it is time to move forward, and we do not mean just consolidating online examination testing; we mean consolidating personalized user information and control functions for dynamic use across all forms of access to and from an individual user for conversational connections and messaging exchanges.

This effort was made possible by complex user level controls provided by tools like ASP, JavaScript, ODBC, and HTML.

These tools allowed us to formulate a fool proof adaptive testing environment to benchmark the test takers' abilities to their best.

Certificate

We accept the work contained in this report as confirming to the required standard for the partial fulfillment of degree of BCS in the subject of Sales and Inventory based Software.

Head of Department
(Mr. Fazal Wahab)

Supervisor
(Mr. Jehanzeb Ahmed)

Internal Examiner

External Examiner

Project in Brief

Project Name:	Online Adaptive Testing System
Developed by:	Zubair Aziz
Supervised by:	Mr. Jehanzeb Ahmed
Start Date:	July 01, 2003
End Date:	September 07, 2003
Degree:	BCS (Hons)
Institute Name:	Bahria Institute of Management & Computer Sciences

Table of Contents

1 Introduction 2
1.1 Background 2
1.2 Need and Purpose 2
1.3 Computerized Testing 3
1.4 What is Online Adaptive Testing? 4
1.5 Project Scope 5
1.6 Goals and Objective 5
2 Phases of a Project 7
2.1 System Analysis 7
2.2 Requirement Analysis 7
2.3 System Specification 7
2.4 System Design 7
2.5 System Development 8
2.6 System Testing 8
2.7 System Implementation 8
3 Literature Survey 10
3.1 Computer Adaptive Testing 10
3.2 Client Server Relationship 11
3.3 Static Pages Vs Dynamic Pages 13
3.3.1 Dynamic Web Pages 13
3.3.2 Dynamic Web Pages and ASP 14
3.4 How ASP Pages look like? 14
3.5 ASP Code – Browser Independent 15
3.6 Advantages of using a server side technology 15
3.7 Microsoft Certifications 15
3.7.1 MCP Exam 16
3.7.2 MCAD Exam 16
3.7.3 MCSD Exam 17
3.7.4 MCSE Exam 18
3.7.5 MCDBA Exam 18
3.7.6 MOUS Certification 19
3.8 CISCO Certifications 19
4 Proposed System 24
4.1 Introduction 24
4.1.1 System Overview 24
4.1.2 Objectives of Proposed System 24
4.2 System Design 24
4.2.1 Interface Design Phase 25
4.2.2 Logical Database/Interface Design 25
4.3 Plan and Elaborate 27
4.4 Features of Proposed System 27
4.5 Functions 27
4.5.1 Student Registration 28
4.5.2 Exam Time 28

4.5.3 Exam Conduction 29
4.5.4 Store History 29
4.6 Data Flow Diagrams 29
4.7 System Requirements 33
4.8 Development Tools and Techniques 34
5 Implementation 36
5.1.1 Training Personnel 36
5.1.2 Conversion 36
5.2 Proposed System Conversion 37
5.3 Post Implementation 37
5.4 Signing in to Online Adaptive Testing 38
5.5 Candidate Access 38
5.6 Online Administrator Access 39
6 Testing 41
6.1 Testing Levels 41
6.1.1 Unit Testing 41
6.1.2 Integration Testing 42
6.1.3 System Testing 42
6.2 Special Testing 42
6.2.1 Peak Load Testing 42
6.2.2 Performance Time Testing 42
6.2.3 Recovery Testing 42
6.3 White-Box Testing 43
6.4 Black-Box Testing 43
6.5 System Evaluation 43
7 Conclusions 46
7.1 Merits of the System 46
7.2 Efficiency 46
7.3 Reduced Errors 46
7.4 Query System 46
7.5 List of Values 47
7.6 Better Response Time 47
7.7 System Security 47
7.8 Modular Approach 47
8 Future Prospects 49
8.1 Current Environment 49
8.2 Performance Development 49
8.3 Simulation Development 50
8.4 Solution-Based Development 50
8.5 Cross-Vendor Development 50
8.6 Online Entry Test 51
8.7 Road Traffic Authority 51
9 Screen Shots 53
9.1 Main Page 53
9.2 Login Page 54
9.3 User Area 55

9.4 Test Page 56
9.5 Hot Links 57
9.6 About Us 58
9.7 Admin Area 59
9.8 Manage User Profile 60
9.9 Edit Test 61
9.10 Report 62
10 Bibliography 64