WAP BASED ONLINE TICKETING SYSTEM

Ву

Umayr Sahlan Masud





Supervised

By

Mr. Jahanzeb Ahmed

A Report Submitted to the department of Computer Science,

Bahria Institute of Management and Computer Sciences, Islamabad

In Partial Fulfillment of Requirements for the Degree of BCS (Honors)

Department of Computer Sciences

Bahria Institute of Management & Computer Sciences, Islamabad
University of Peshawar, Peshawar

WAP BASED ONLINE TICKETING SYSTEM

Ву

Umayr Sahlan Masud



Supervised

By

Mr. Jahanzeb Ahmed

A Report Submitted to the department of Computer Science,

Bahria Institute of Management and Computer Sciences, Islamabad

In Partial Fulfillment of Requirements for the Degree of BCS (Honors)

Department of Computer Sciences

Bahria Institute of Management & Computer Sciences, Islamabad
University of Peshawar, Peshawar

IN THE NAME OF ALLAH

THE MOST BENEFICENT

THE MOST MERCIFUL

IN THE NAME OF ALLAH

THE MOST BENEFICENT

THE MOST MERCIFUL

DEDICATION

Shine on you crazy diamond.....

A dedication.

DECLARATION

I, hereby, declare that this product neither as a whole nor part of, has been copied out from any source. It is further declared that I have developed this product-accompanied report entirely on the basis of my personal effort, made under the guidance of the books and Internet sites. If any part on this system proved to be copied out or found to be reproduction of some other, I shall stand by the consequences. No portion of work presented in this report has been submitted in support of an application for another degree or qualification of this or any other University or Institute learning.

Umayr Sahlan Masud

ACKNOWLEDGEMENT

Love you all ..

I would like to acknowledge the help Mr. Jahanzeb Ahmad for helping me out to get this project completed. Also I would like to acknowledge the help from people on the dal.net's #java channel at the weirdest of times I don't really remember when the actually helped me out but I'm sure they did. Imran Khan for eventually helping me out to get this project working while staying up all night for me. Fatimah Shah, for being there in the deep seas with me and helping me out of the troubles I cause and get myself in. Mahvish Shah, for being completely happy all the time and helping me out of my freaks. Maliha Hassan for always getting me to work and keeping the spirits high. The people at channel 7 for letting me complete my project, To my whole family for always being there to help in most of the things in life. Mom, Dad I love you. A special thanks for my brothers and Bhabi's I am sure you folks are the best around .Also I would like to acknowledge my nephews and my niece. Saad Faizan for being the most kiss able kid around. Taha Keyhan for being the most squeezable kid around and Arwa Nawal for being the most huggable one:) They have always kept my spirits high and always have somehow got me to work. And for all of those people whose names aren't here Thank you.

Project In Brief

Project Name:

Wap Based online ticketing system

Developed By:

Umayr Sahlan Masud

Supervised By:

Mr. Jahanzeb Ahmad

Start Date:

August 5th, 01

End Date:

January 6th, 01

Degree:

BCS (Hons)

Institute Name:

Bahria Institute of Management and Computer Sciences.

Certificate

We accept the work contained in this report as a confirming to the required standards for the partial fulfillments of the degree of BCS (Hons).

Head of Department

Supervisor (

Internal Examiner

External Examiner

ABSTRACT

The idea behind the project was to create a system that would let the Wireless device enabled user to buy tickets from the site. To use the service the user will have to be a member of the system. The members of the site will have the facility to choose the departure point and the destination point and the system will provide them with route. The user can then select either of the routes and buy a ticket and then pick it up from the departure lounge.

TABLE OF CONTENTS

TABLE OF CONTENTS	1
LIST OF FIGURES	6
NTRODUCTION	7
1.1 WIRELESS APPLICATION PROTOCOL	8
1.2 SCOPE OF THE PROJECT	11
1.3 MAIN FEATURES OF THE SYSTEM	13
1.4 THE SYSTEM ARCHITECTURE	13
1.5 WHAT IS WML	14
1.5.1 Text presentation and layout	14
1.5.2 Deck/card organizational metaphor	14
1.5.3 Inter-card navigation and linking	14
1.5.4 String parameterization and state management	14
1.6 WHAT IS JDBC	15
1.6.1 JDBC Security Model	16
1.6.2 JDBC Classes-Overview	16
1.7 STEPS INVOLVED IN THE APPLICATION INTERFACE	18
Step 1	18
Step 2	18
Step 3	18
Step 4	18
Step 5	18
LITRATURE SURVEY	20
2.1 ELECTRONIC COMMERCE	20
2.1.1 A TIME LINE OF THE INTERNET	20

2.1.2 The Beginning of E-Commerce	_23
2.2 MOBILE COMMERCE	_26
2.2.1 FUTURE OF WIRELESS TECHNOLOGY	_30
2.2.2 STATISTICAL OVERVIEW OF MOBILE COMMERCE	_31
Table 2 Top Markets For 2.5 and 3G Products in 2006	_32
Table 3 Users of Wireless Financial Services In World Regions, 2000-05	_33
Table 4 Global Mobile Commerce Revenues, 2000 - 2005 (USD millions)	_34
2.3 PROJECT ANALYSIS	_34
2.3.1 IDENTIFICATION OF NEED	_34
2.4 FACT FINDING	_35
2.4.1 WHEN TO PERFORM FACT FINDING	_36
2.4.2 TYPE OF FACTS	_36
2.4.3 FACT FINDING TECHNIQUES	_36
2.4.4 SAMPLING OF EXISTING DOCUMENTATION (forms, and databases)	_37
2.5 EXISTING SYSTEMS	_38
2.6 DISADVANTAGES OF THE CURRENT SYSTEM	_38
2.7 PURPOSE OF THE TICKETING SYSTEM	_39
3.1 THE IDEA	_41
3.2 THE DESIGN	_41
3.3 THE WORKING	_41
3.4 APPLICATION DESIGN CONSIDERATIONS	_42
3.5 SIMPLE USER INTERFACES	_42
3.6 LIMITED MEMORY	_42
3.7 FEASEBILITY STUDY	_43
3.7.1 Determine implementation alternatives	_44
3.7.2 Assessing economic feasibility	45

3.7.3 Assessing technical feasibility	45
3.7.4 Assessing operational feasibility	46
3.7.5 Choosing an alternative	46
3.7.6 Identify potential risks	46
3.8 Business Rules	47
Reservation	47
Account Information	47
Logout	47
3.9 GUI sequence	48
3.10 Database Design	49
4.1 TECHNOLOGY USED	51
4.1 UP.BROWSER	52
4.1.1 UP.Phone Features	54
4.2 NOKIA MOBILE INTERNET TOOLKIT	55
4.3 NOKIA ACTIVE SERVER (WAP GATEWAY)	56
4.4 WEBLOGIC WEB SERVER	57
4.4.1 Multitier Application Architecture	59
4.4.2 WebLogic Server Architecture	61
4.4.3 WebLogic Server and Sun's Java 2 Platform	62
4.4.4 J2EE services that support components include:	62
4.4.5 WebLogic Server Application Models	63
4.4.6 Web Services Application Model	64
4.4.7 Static HTML Pages and Applets	65
4.4.8 JSP Pages	65
4.4.9 Web-based Component Application Model	66
4.4.10 JDBC Connection Pools	67

	4.4.12 Java Client Application Model	68
4.	.5 THE JAVA SERVER PAGES (JSP)	70
	4.5.1 Developing Web-based Applications: A Background.	70
	4.5.2 The JavaServer Pages Technology Approach to Web	Application
	Development	72
	4.5.3 What Does a JSP Page Look Like?	74
	4.5.4 JSP Directives	75
	4.5.5 JSP Tags	76
	4.5.6 Scripting Elements	76
	4.5.7 Application Models for JSP Pages	77
	4.5.8 A Simple Application	77
	4.5.9 A Flexible Application with Java Servlets	78
	4.5.10 Scalable Processing with Enterprise JavaBeans Technology	79
	4.5.11 The Future for JSP Technology	79
4.	.6 UML AND PRESENT TRENDS	80
4.	.7 USE CASE DIAGRAM	85
4.	.8 EXPANDED USE CASES	86
	4.8.1 Use Case: Login	86
	4.8.2 Use Case: Maintain Website	87
	4.8.3 Use Case: Help	88
	4.8.4 Use Case: create Account	89
4.	.9 SYSTEM SEQUENCE DIAGRAM	91
4.	.10 COLLABORATION DIAGRAMS	92
	4.10.1 Ticket Reservation	92
	4.10.2 Check Route	
	4.10.3 LOGIN	94

4.11 CONTRACTS	95
5.1 What is Software Testing?	98
5.2 Software Specifications and Testing	99
5.3 Test Design Documentation	101
5.3.1 Test Strategy	102
5.3.2 Test Plans	102
5.3.3. Test Case Design	103
5.3.4 Test Procedures	105
5.4 Test Results Documentation	105
5.5. Further Results and Conclusion	106
6.1 PROBLEMS FACED	110
6.2 HARDWARE REQUIREMENTS	111
TO RUN SERVER:	111
TO RUN APPLICATION:	111
7.1 THE 3G TECHNOLOGY	113
7.1.1 3G concept phone.	113
7.1.2 Where We Have Been	113
7.1.3 Where We Are Now	115
7.1.4 Where We Are Going	117
7.2 THE TICKETING SYSTEM	118
BIBLOGRAPHY	119

LIST OF FIGURES

Figure 1 WAP network Protocol Structure	8
Figure 2 WAP And Internet Protocol Stacks	11
Figure 3 JDBC Class Hierarchy and API Flow	17
Figure 4 The justify stage process pattern	44
Figure 5 Up Browser Screen Shot	52
Figure 6 Overview of UP.Phone transaction	53
Figure 7 Nokia Mobile Internet Toolkit	56
Figure 8 Web services application model	64
Figure 9 Web-based component application model	67
Figure 11 Java client application model	69
Figure 12 Simple JSP Implementation	77
Figure 13 Flexible Applications with Java Servlets	78
Figure 14 JavaBeans Technology	79
Figure 15 Use Case Diagram	85
Figure 16 System Sequence Diagram	91
Figure 17 Collaboration Diagram Ticket Reservation	92
Figure 18 Collaboration Diagram Check Route	93
Figure 19 Collaboration Diagram Login	94