

# MOBILE COMMERCE APPLICATION

## USING WAP

### PROJECT REPORT

*Submitted in partial fulfillment of the requirements  
for the award of the degree of*

### BACHELOR OF ENGINEERING IN INFORMATION TECHNOLOGY

OF THE BHARATHIAR UNIVERSITY, COIMBATORE

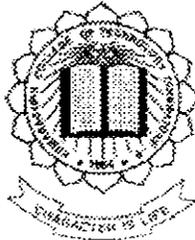
*Submitted by*

**P.SVANITHA.(0027S0712)**

*Under the valuable Guidance of*

**Ms.M.Lavanya , M.Tech.,**

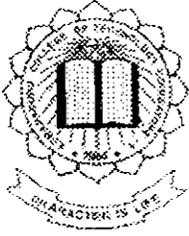
Lecturer, IT DEPARTMENT



**MARCH 2004**

Department of Information Technology

Kumaraguru College of Technology



**KUMARAGURU COLLEGE OF TECHNOLOGY**  
(Affiliated to Bharathiar University)  
**COIMBATORE – 641 006, TAMIL NADU, INDIA**



Approved by AICTE, New Delhi - Accredited by NBA

Department of Information Technology

## CERTIFICATE

*This is to certify that the project entitled*

**“MOBILE COMMERCE APPLICATION USING WAP”**

*has been submitted by*

**P.S.Vanitha (0027S0712)**

*in partial fulfillment of the requirements for the award of the degree of*

*Bachelor of Engineering in Information Technology of the*

*Bharathiar University, Coimbatore – 641 046 during the academic year 2003-2004*

Dr.S.Thangasamy Ph.D.,  
(Head of the Department)

Ms.M.Lavanya M.Tech.,  
(Project Guide)

Submitted for the university examination held on

24.03.04

Internal Examiner

External Examiner

## Declaration

I,

**P.S.Vanitha ( 0027S0712)**

Declare that the project entitled “**MOBILE COMMERCE APPLICATION USING WAP**”, is done by me and to the best of my knowledge, a similar work has not been submitted earlier to the Bharathiar University or any other institution, for fulfillment of the requirement of the course study.

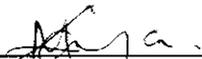
This project report is submitted on the partial fulfillment of the requirement for all awards of the degree of Bachelor Of Information Technology of Bharathiar University.

Place: Coimbatore.

**[ P.S.Vanitha ]**

Date: 24.02.04

**Project Guided by**



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**Ms.M.Lavanya M.Tech**  
**Lecturer, Department of Information Technology,**  
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## SYNOPSIS

The "MOBILE COMMERCE APPLICATION USING WAP" is a Wireless Application Protocol application that provide accessibility of the bank's service to the mobile customers through mobile web browser.

This m-commerce application is developed using server-side web technologies in WAP deployment. Using client device type detection technique it converts the data from the existing bank's system database into the required mobile client device.

This input is furnished with the required security feature and a user-friendly processing environment .

The input given in the form of the URL is resolved by the web server. The core idea of developing this system the, mobile users such as Cell Phone users, Personal Digital Assistant users, to name a few with the opportunity to avail the service now denied to them.

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*ACKNOWLEDGEMENT*

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## ACKNOWLEDGEMENT

The exhilaration achieved upon the successful completion of any task should be definitely shared with the people behind the venture. This project is an amalgam of study and experience of many people without whose help this project would not have taken shape.

At the onset, I take this opportunity to thank the management of our college for having provided me excellent facilities to work with. I express my deep gratitude to our Principal **Dr.K.K.Padmanabhan BSC .,M.Tech.,PhD.**, for ushering me in the path of triumph.

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I also thank my Project Coordinator **Mrs. S. Devaki M.S.**, and my beloved class advisor **Ms. P. Sudha B.E.**, for their invaluable assistance.

. I also feel elated in manifesting our deep sense of gratitude to all the staff and lab technicians in the Department of Information Technology.

I feel proud to pay my respectful thanks to my **Parents** for their enthusiasm and encouragement and also I thank our **friends** who have associated themselves to bring out this project successfully.

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# *INTRODUCTION*

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# 1. INTRODUCTION:

## 1.2 EXISTING SYSTEM AND ITS LIMITATIONS:

The existing application targets only static Internet users. That is, the application is available for access only for the customer via web browsers such as Internet Explorer, Netscape, etc. The limitation in the existing application is that it does not support mobile clients. Hence, the potential mobile user-base is left unexploited. Furthermore, the users are not provided with Location Information Service and news portal services. The crucial problem is that the Internet applications are not suited for the mobile users. It is typically too complex and takes up too much bandwidth and a web page would generally not fit onto the screen of an average mobile phone.

Typically, there is no keyboard on a mobile phone, so it is much harder to enter information. The screen is very small, and so cannot display much text at any one time and will struggle with complex graphics. They introduce far too many overheads, requiring many messages between client and server just to set up a connection. These overheads call for a high processing power on the client device, which sadly is not the reality. Furthemost, there is a limitation connected to the internal structure of wireless networks. This is the sustained waiting time, called latency.

Basically, the information coming from Internet and going to the mobile phone has to go through various elements in the mobile network. Each one introducing a little delay. Also the air interface used to transmit data to mobile telephones has a bandwidth that is very limited ,nowadays reaching 9600 bits per second in a GSM network, compared to a minimum of around 28 Or 56 kbps on a wired network.

## 1.2 PROPOSED SYSTEM AND ITS ADVANTAGES:

The proposed system strives to overcome the difficulties and disadvantages of the existing system. Mobility is achieved by extending enterprise application the mobile client .It provides Client-Platform independence- Whatever the user agent of the client the data is accessible. Processing is done in the server so that client-specific content alone is sent to the client for display by the user agent. It provides unique user personalization – Unique user ID can be is checked by looking up the ID in the database. Can be expanded to accommodate new device just by appending the new content. It provides good customer relation management hence enhancing customer service. This feature is ensured to by keeping the both the Mobile User Interface. Thus, the proposed system to eliminate of the existing system.

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# *SYSTEM REQUIREMENTS*

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## 2. SYSTEM REQUIREMENT ANALYSIS

### 2.1 PRODUCT DEFINITION

The WAP compliant m-banking application that would make the existing system accessible to the mobile users. The application is designed to incorporate personalization in such a way that it can recognize the user who request the server for the bank's service and thus provide a customized interface according to the user's performances. It also aims to provide the users with a Location Information Service. It also provides a news-portal platform. After the type of the response-content of the server is established, the content transformation takes place. The specific objectives are to support multiple device types. It allows access to various types of mobiles user agents (WINWAP, Nokia, Ericsson, UP. browser, etc) and the system provides Location Information Service to the customer of the bank. Based on the user request the nearest ATM branches are displayed to the user. The system provides a news-portal. It provides links to the interesting sites, grouped by the category. It connects the user with various news sites grouped by various categories thus making it to easier to navigate different news-sites.

## 2.2 PROJECT PLAN

The current application targets only static users. This is, the application is available for access only the customers via web browsers such as Internet Explorer, Netscape Navigator etc. The customers via their cell phone cannot access the application. Hence, the potential mobile user-base is left unexploited. Furthermore, the users are not provided with Location Information Services and news portal service provides good customer relation management hence enhancing customer service. This feature is ensured to by keeping the Mobile User to access the details in the banking system. The application also servers a cut down version of a WAP portal. A WAP portal is a feature offered by network operators and content providers that is similar to a web portal. It is a page containing links to interesting applications, grouped by category. The application developed acts a news portal that connects the users with various news sites grouped by various categories thus making it easier to navigate to different news-sites.

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*SOFTWARE REQUIREMENTS  
SPECIFICATION*

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## **3. SOFTWARE REQUIREMENT ANALYSIS**

### **3.1 Purpose**

System analysis is the process of understanding both problem domain and requirements so that the result is a designer-product that is customized to server the needs of the users. From the developer's aspects, the problem domain for this project is the Internet and the Wireless environment and the corresponding mobile users requirements for developing the WAP application system. System analysis is conducted to identify the customer's need, to evaluate the system concept for feasibility, to perform economic and technical analysis, to establish cost and schedule constraints and to create a system definition that server as the foundation for all subsequent engineering work.

### **3.2 General Description**

The intent of this phase of study is to understand the WAP application objectives and overall goals have been identified, the supplementary information are evaluated to ensure that the resources needed for the development of the system such as technology infrastructure, special developmental and manufacturing resources are available. Special developmental resource-needs such as the WAP software to implement the WAP stack were met by using simulator sponsored by WINWAP Technologies.

### 3.3 System Functions

The application developed will be useful to access the content to the mobile users. It provides Client – Platform independent – Whatever the user agent of the client the data is accessible. It provides unique user personalization, unique user account number can be got from the gateway and is checked by looking up the User account number in the Database. This way we will be able to get the user's personalized data.

### 3.4 Performance Requirement

The mobile user request are handled by the server. The efficiency with which the web server and the WAP Server manages the users connected to its network is verified. All the probability considerations are foreseen so that the client are served efficiently.

### 3.5 Design Constraints

The only constraint is that the mobile user should enter the valid user account number and then only the mobile user will be allowed to view or update the information in the database.

## 3.5 SPECIFIC REQUIREMENTS

### 3.5.1 Functional Requirements:

The basic use of this application is for accessing the data from banking system and hence updating the content in the database is also possible. The security is provided to access the data for the mobile user.

## List of Inputs

- 1) The user account number
- 2) The banking information to be stored in the database

The application is designed to incorporate personalization in such a way it can recognize the users who request the server for the bank's service and thus provide a customized interface according to the user performances. It also aims to provide the users with a location Information Service.

The user account number provides unique user personalization and is checked by looking up the banking system for authentication.

### 3.5.2 PERFORMANCE REQUIREMENTS

#### **Security:**

From the developer's aspects, the problem domain for this project is Wireless environment and the corresponding mobile service requirements for developing the WAP application system. This m-commerce application is developed using existing server-side web technologies in WAP deployment. The system is furnished with the required security features and a user-friendly processing environment.

### 3.5.3 DESIGN CONSTRAINTS

#### **Hardware Configuration:**

During the selection of the hardware, the factors that play a pivot role are the configuration widely used and the minimum configuration of the system compatible to the widely used configurations. Additionally the requisite software were also taken into the consideration to finalize on the hardware configuration of the system.

## Hardware Limitations:

Minimal requirements are:

### Mobile Client:

CPU :Pentium  
Main Memory :128 MD SDRAM  
WAP Device :Mobile phone/PDA/Handheld computer

### Server:

CPU :Pentium III  
Main Memory :128 MB DDR SDRAM  
Secondary Memory :6 GB Fixed Disk.

## 3.5.4 SOFTWARE REQUIREMENTS:

Factors that determine the selection of the software are the nature of the programs to be built. This was ascertained on the basis of the problem domain namely Wireless domain- micro browser as user agent. Since the wireless domain required an additional WAP server to implement the WAP architecture.

### Mobile Client:

Server :  
User Agent : WINWAP 3.0  
Operating System : Microsoft Windows NT/Windows 9x  
Web Server : IIS/PWS  
Databases : Oracle 8i / MS Access

### 3.5.5 OTHER REQUIREMENTS

Operations required by the user:

User Account number should be unique for every Customer  
in order to maintain integrity.

---

*SYSTEM DESIGN*

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## 4. SYSTEM DESIGN

### 4.1 INPUT DESIGN

The input design has to be done very carefully , as it is responsible for the activity of the system. The system is designed in such a way that it receives the information accurately from clients. It has to be such that it makes data entry easy and prevents unintentional errors as much as possible. Inaccurate data is the most common cause of error in data processing. Each time the user accesses the system, the user authentication is performed.

### 4.2 PROCESS

The user password is validated and the required content is transfer to the mobile user. The user can also make changes in the existing information and this is once again updated in the database.

### 4.3 OUTPUT DESIGN

The output design is the only interface available to the user and hence plays a crucial role in the customer-friendliness of the system. The user interface is designed in such a way that is simple but at the same time extended efficient service to the users, the personalized information to be presented based on the user's preferences and arrangement of the information based on the client device type.

## 4.4 DATABASE DESIGN

The database is defined as an integral collection of data.

The overall objective in the development of database technology has been to treat data as an organizational resource and as an integrated whole.

The database for the banking system contains:

1. Customer Account Number
2. Customer Name
3. Password
4. Total Amount
5. Balance

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*DESCRIPTION OF  
SOFTWARE AND TOOLS*

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## 5. DESCRIPTION OF SOFTWARE AND TOOLS

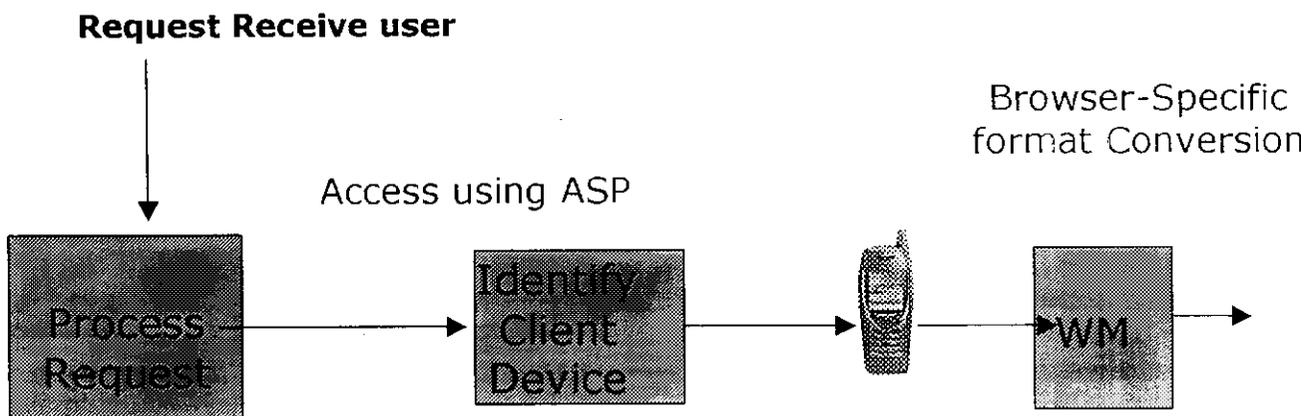
### 5.1 IMPLEMENTATION:

#### Mobile User:

The mobile user is the application user who uses the micro browser that comes inbuilt within the mobile device such as mobile phone to access the internet and through the web server goes through the WAP server to avail himself of the bank's services .

The mobile user request the URL as the input to the web browser. When the web browser request the server ,the user agent string and a URL indicates where a content profile for the web browser can be found. According to the mobile user request the matching document profile exists in the content-specific transformation module. During content transformation , the WML file content is written as output to the disk.

# System Architecture



## 5.2 VALIDATION CHECK:

The validation check implemented in the system are necessary for the application to function with valid and consistent data. All the validation checks are that have been incorporated in the system are: Field are checked for null, option button whether they are selected or not.

In the system, the variable chosen for the processing of data are meaning full to the content in which it is used by any person can understand the use of variable by their names.

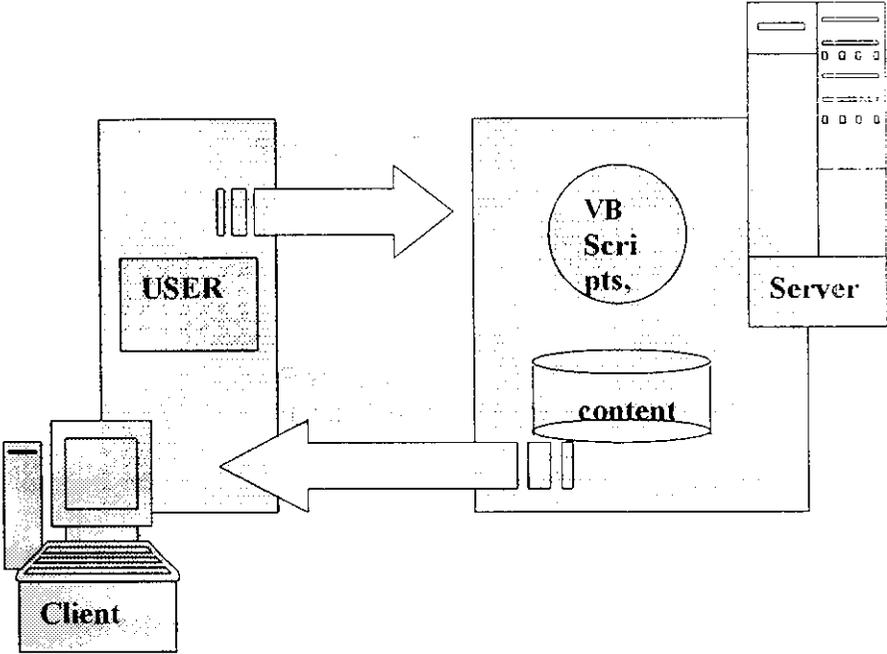
The programming for this project was done in simulated WINWAP web browser in Windows platforms. The ASP files are given a '.asp' extension .The variable are cohesively with existing network. The code is designed on the underlying WAP protocol.

The database used is MDB.,however, this is optional and the system can be compliant with any other database such as SQLServer .

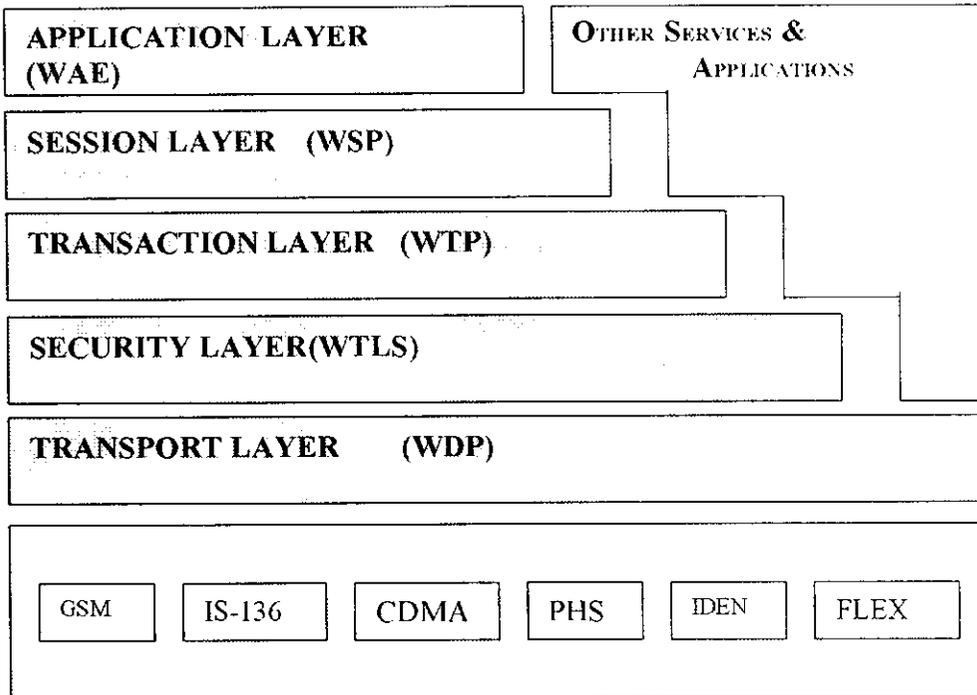
### ASP Document:

ASP Document type Active Server Page allows us so server-side processing. It has the default scripting language as the VB Script but other scripting language such as JavaScript can also be used. It is also ideal for providing platform independent server-side processing and its extension is '.asp'. It is used to check authentication in bank's system.

WWW LOGICAL MODEL

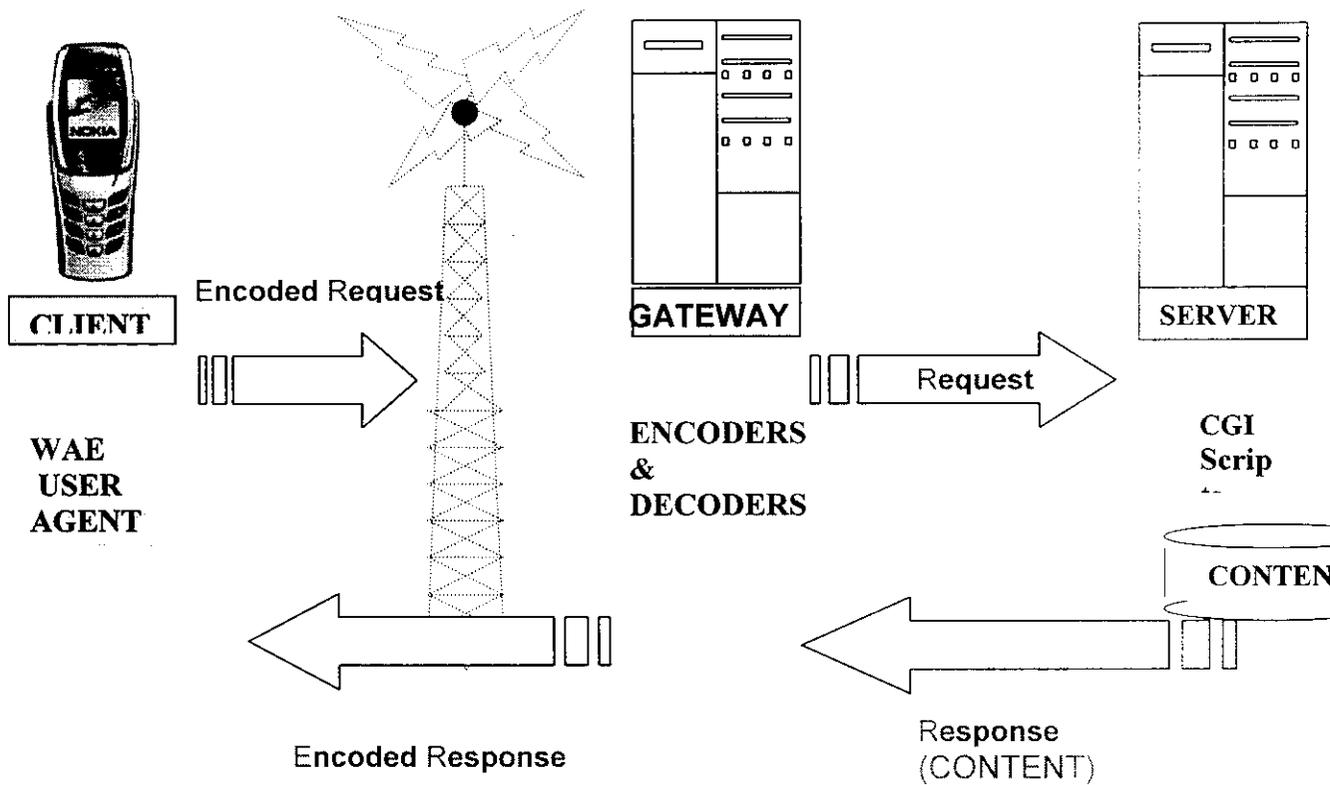


# WAP Architecture



The security layer in the WAP architecture needs to enable services to be extended over mobile networks while preventing the integrity of the user data. The WTLS provides end-to-end security between the Wireless Application Protocol points. The safest way is for the service providers to place a WAP gateway in their own network.

# System Environment Design



The system environment design consists of mobile client agent who wants to retrieve some content from the server content. The request is ( URL) send to the gateway for authentication and it is redirected to the web server.

The content will be transformed to the mobile client as a response from the web server (Internet Information Server). The content is displayed as deck content in the mobile browser.

---

*TESTING*

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## 6. TESTING

Product testing is the stage of implementation which is aimed at ensuring that the system works accurately and efficiently before the live operations commences, thus the system test in implementation should be a confirmation that all is correct and an opportunity to show the users that the system works.

### 6.1 BLACK BOX TESTING:

The testing is done knowing beforehand the specified function that the system has been designed to perform, and the tests conducted demonstrate whether each been designed to performed, and the tests conducted demonstrate whether each function is fully operation, and at the same time searches for errors in each function. Black-box testing was done to ensure that the input of the relative URL was properly accepted and the output of content-specific file were correctly produced. The integrity of the external information such as data was maintained. Thus the fundamental aspects of the system was tested.

### 6.2 WHITE BOX TESTING:

The testing is done knowing beforehand the internal working of the systems, and the tests conducted demonstrate whether the separate function mesh when grouped into a collage. The typographical errors are also eliminated through white-box testing.

In our project "Mobile Commerce Application Using WAP", the password entered by the customer is checked for it's validity. If the password entered is valid then requested URL is viewed by the mobile user. The user can access any information of bank's system that is available on the IIS Server.

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*FUTURE ENHANCEMENT*

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## 7. FUTURE ENHANCEMENT

The future holds a lot to offer to the development and refinement of this project. The product can be modified to include still other device types such as palm device, etc... Provisions for this inclusion have been provided for such an add-on in the current version itself. This will make the product even more versatile by increasing the client-based even more. The portal includes in the application that caters only to the news sector can be expanded to include myriad categories so that if implemented real-time, it would provide an additional source of income.

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*CONCLUSION*

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## 8. CONCLUSION

The need for the mobile extension of the commerce application was fulfilled with the system design satisfying the basic needs of mobile user. The system was implemented in the organization and running as planned and effectively fulfilled the process of establishing gateway/server connection for the mobile client device. The application would for sure take the company one step ahead in the competitive business world by providing a truly mobile experience as compared to the existing system and the new user interface also helps in fast and easy use of the system.

---

*BIBLIOGRAPHY*

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### REFERENCES

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Richard Anderson et al, "Professional ASP 3.0", Wrox Brother Inc., ISBN 1861002610

Richard Anderson et al, "Professional XHTML", Wrox Brother Inc., ISBN 1861003439

Richard Anderson et al, "Professional XML", Wrox Brother Inc., ISBN 1861003110

#### SITES:

<http://wapforum.com>

[www.mobilethink.com](http://www.mobilethink.com)

[www.thewapgroup.com](http://www.thewapgroup.com)

[www.ericsson.com/developerzone](http://www.ericsson.com/developerzone)

---

*ANNEXURE*

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## 10. ANNEXURE

### 10.1 SOURCE CODE

#### Main Screen

About SBI

```
<?xml version ="1.0"?>
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
"http://www.wapforum.org/DTD/wml_1.1.xml">
<wml>
<head>
<meta http-equiv="Cache_Control" content="max-age=0"/>
</head>
<card id ="card1" title="maincard">
<p align="center">
<b>SBI</b>
</p>
<p align="center">
<p> <card id ="one" title ="sbi">
<a href=" sbi.wml " >About Us</a>
</p><p> <card id="two" title="Centers">
<a href=" new.wml " >ATM Centres</a>
</p><card id="three" title="Branches">
<p align="center"> </card>
```

```
<card id="four" title= "Customer">
<a href=" display6.asp ">Customer service
</a></card>
```

```
</p> <card id="five" title="Result">
</p><p align="center"></card>
```

```
<a href=" vanitha.asp ">Result
</a></card>
```

```
</p>
```

```
</card>
```

```
</wml>
```

```
<?xml version ="1.0"?)
```

```
<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"
```

```
"http://www.wapforum.org/DTD/wml_1.1.xml">
```

```
<wml>
```

```
<head>
```

```
<meta http-equiv="Cache_Control" content="max-age=0"/>
```

```
</head>
```

```
<card id="card2">
```

```
<p align="center">
```

```
<b>SBI</b>
```

```
</p>
```

```
<card id="sbi" title="Services Available">
```

```
<p align="center">
```

```
The nation banks on us.
```

</br></br>

Whatever you need - an investment for your funds.

</p>

</card>

</card>

</wml>

<?xml version ="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"

"http://www.wapforum.org/DTD/wml\_1.1.xml">

<wml>

<head>

<meta http-equiv="Cache\_Control" content="max-age=0"/>

</head>

<card id="card1" title="center">

<p align="center">

<b>SBI</b>

</p> To view the nearest Atm Center</br>

<a href="fruit.wml"> Click</a>

</p>

</card>

</wml>

<?xml version ="1.0"?>

<!DOCTYPE wml PUBLIC "-//WAPFORUM//DTD WML 1.1//EN"

"http://www.wapforum.org/DTD/wml\_1.1.xml">

```
<wml>
```

```
<p>Select the city
```

```
</br>
```

```
<p align="center"><b>SBI</br></br>
```

```
<p align="center">Nearest ATM center in</br>
```

```
var city=coimbatore card id="card1">
```

```
<select name="city" value="city:">
```

```
<p align="center"> We provide ATM services in Salem at
```

```
<option value="one"> 2.Big street </option>
```

```
<option value="two">2. opp. Railwaystation </option>
```

```
<option value="three">3. 234,Crosscut road </option>
```

```
<option value="four">4.25/b vathavalli road</option>
```

```
<option value="five">3.4th avenue Suraj nagar </option>
```

```
</select><br/>
```

```
var city1=salem card id="card2">
```

```
<select name="city" value="city:">
```

```
<option value="new ">Salem </option>
```

```
<p align="center"> We provide ATM services in Salem at
```

```
<option value="one"> 1.Ramanatha puram </option>
```

```
<option value="two">2. JaiNagar </option>
```

```
<option value="three">3. Sankagiri </option>
```

```
<option value="four">4.RajivNagar</option>
```

```
<option value="five">5.Near Vidhyavikashini </option>
```

```
</select><br/>
```

<a href="#card2"></a>

var city2="Thiruchy" card id="card3">

We provide ATM services in at Thiruchy

<option value="one ">.25,Gandhinagar </option>

<option value="two ">2.Big street </option>

<option value="three">3. Cheran colony</option>

<option value="four ">4. Baba street</option>

<option value="Salem">3.Vinoba street </option>

</select><br/>

<a href="#card3"></a> We provide ATM services in Chennai at

var city2="Chennai" card id="card4">

<option value="one ">1.T-nagar</option>

var city2="Chennai" card id="two">

<option value="two ">2.Mandavali </option>

<option value="three">3.opp LIC </option>

<option value="four ">4.Anna salai </option>

<option value="new">5.Thambaram </option>

</select><br/>

<a href="#card4"></a> We provide ATM services in Kanayakumari at

var city2="Kanyakumari" card id="card4">

<option value="one ">1.Ramnagar</option>

<option value="two "> 2.Mount road</option>

<option value="three">3. 63\2 vinonagar-Erode </option>

<option value="four ">4 kumaran road </option>

<option value="van">5.Vivekananda nagar </option>

```
</select><br/>
```

```
<a href="#card4" title="display"></a>
```

```
</p>
```

```
<p align="center">
```

```
<card id="card2">
```

```
You select $(city)
```

```
</p>
```

```
</card>
```

```
<wml>
```

```
<% @LANGUAGE=VBSCRIPT %>
```

```
<% Response.ContentType="text/vnd.wap.WML"%>
```

```
Dim con,SQLquery,username,password,rsuser,ba1,q1
```

```
Username=Request("User")
```

```
Password=Lcase(Request("Pwr"))
```

```
set con= Server.CreateObject("ADODB.Connection")
```

```
con.open "Provider=Microsoft.Jet.OLEDB.4.0;Data Source=" &
```

```
Server.MapPath("van.mdb")
```

```
'q1=" select Pwr from bank where UserId = " & username
```

```
'Set rsuser= con.Execute(q1)
```

```
SQLquery ="select UserName,Balance from bank where UserId = " & Username
```

```
Set rsuser= con.Execute(SQLquery)
```

```
If rsuser.EOF then
```

```
username=" "
```

```
Else
```

```
username=rsuser("UserName")
```

```
bal=rsuser("Balance")
```

```
%>
```

```
<br/>Welcome <%= rsuser("UserName")%>!</p>
```

```
<p>You are now logged in.</p>
```

```
<% Response.Write(username)
```

```
%><p><%
```

```
Response.Write "Balance:"
```

```
Response.Write(bal)
```

```
end if
```

```
rsuser.close
```

```
%>
```

```
<head>
```

```
<meta http-equiv="Cache_Control" content="max-age=0"/>
```

```
</head>
```

```
<card>
```

```
<do type="accept" label="Login">
```

```
<go href="http://ccs68/vanitha1.asp?User=$(User)&Pwr=$(Pwrd)">
```

```
</do>
```

```
<p align="center">
```

```
<b>SBI</b>
```

```
</p> <p>
```

```
<br/>User Ac no:
```

```
input name = "User" maxlength="10" type="text" emptyok="false"/><br/>
```

```
</p><p>
```

```
<br/>Password :
```

```
<input name="Pwr" type="password" maxlength="10" type="text"
emptyok="false"/><br/>
```

```
<p>
```

```
</card>
```

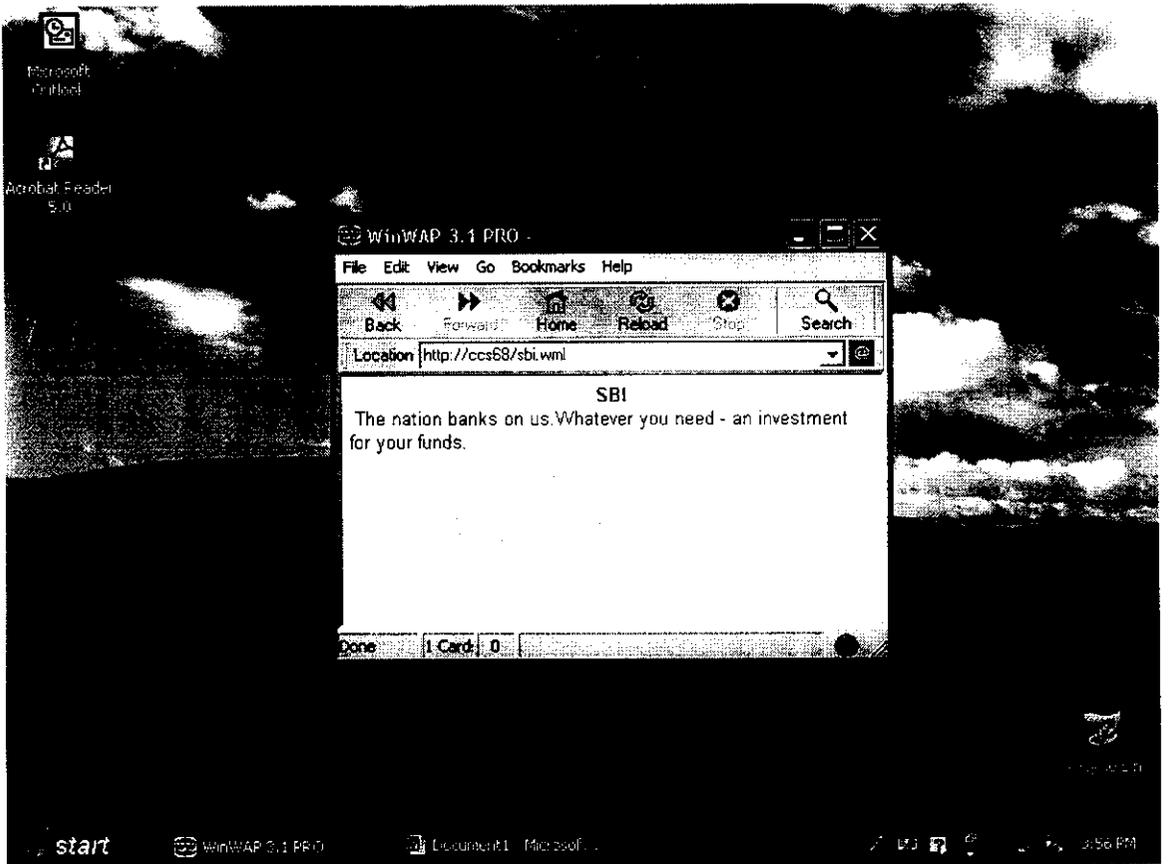
```
</wml>
```

## 10.2 SAMPLE OUTPUT

Main Screen:

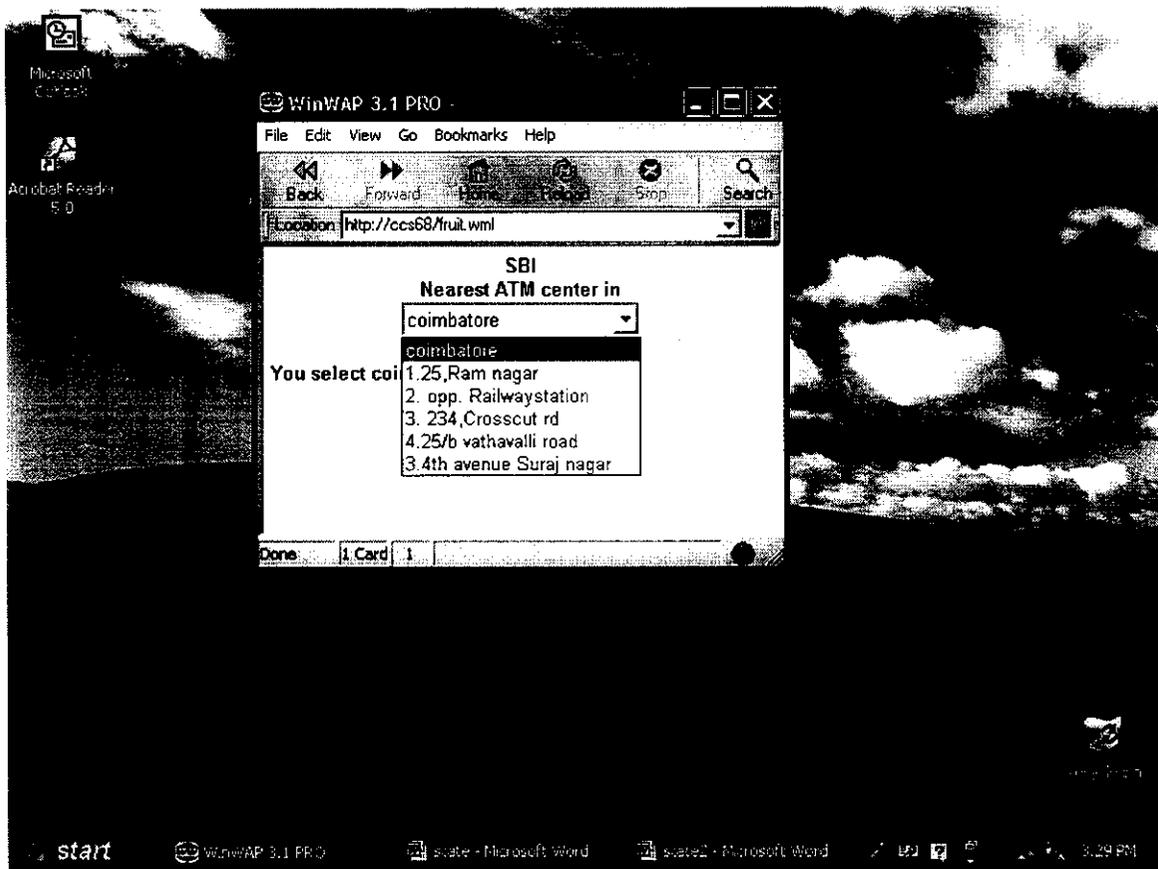


## ABOUT US:

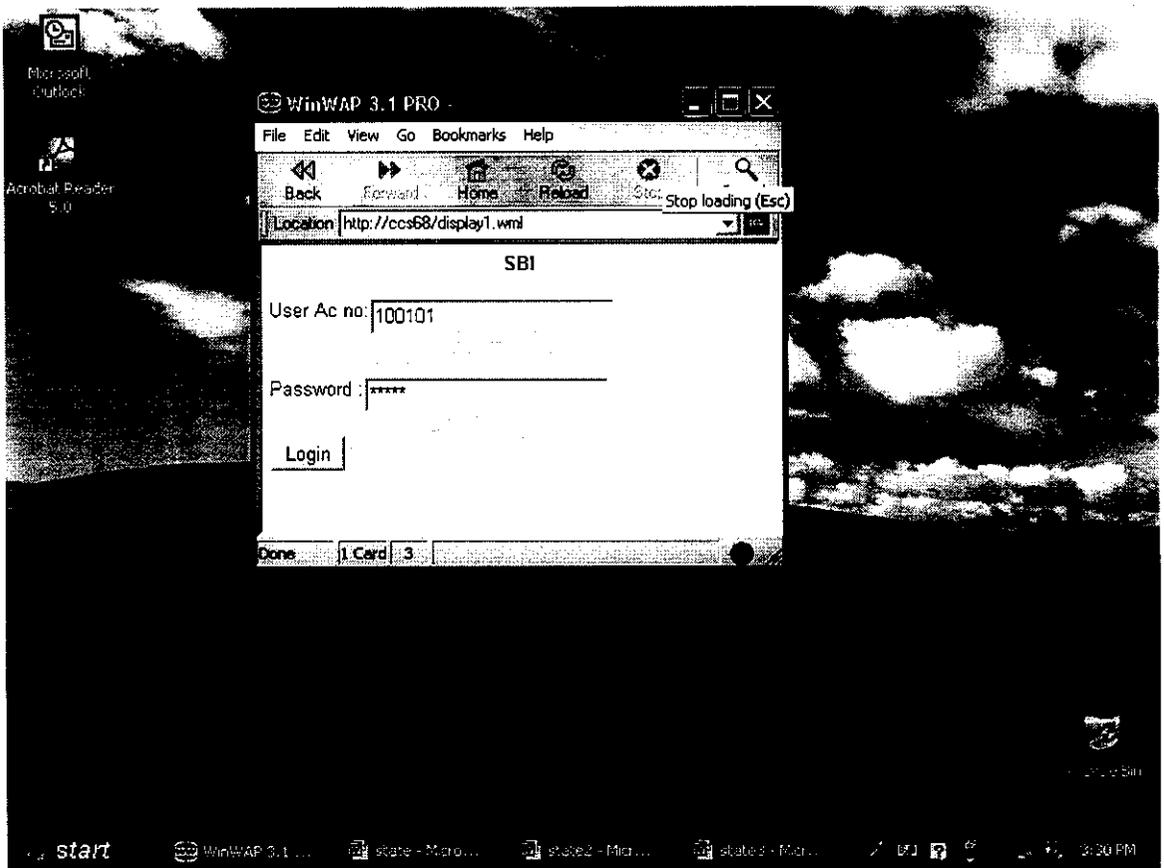


# NEAREST ATM CENTER

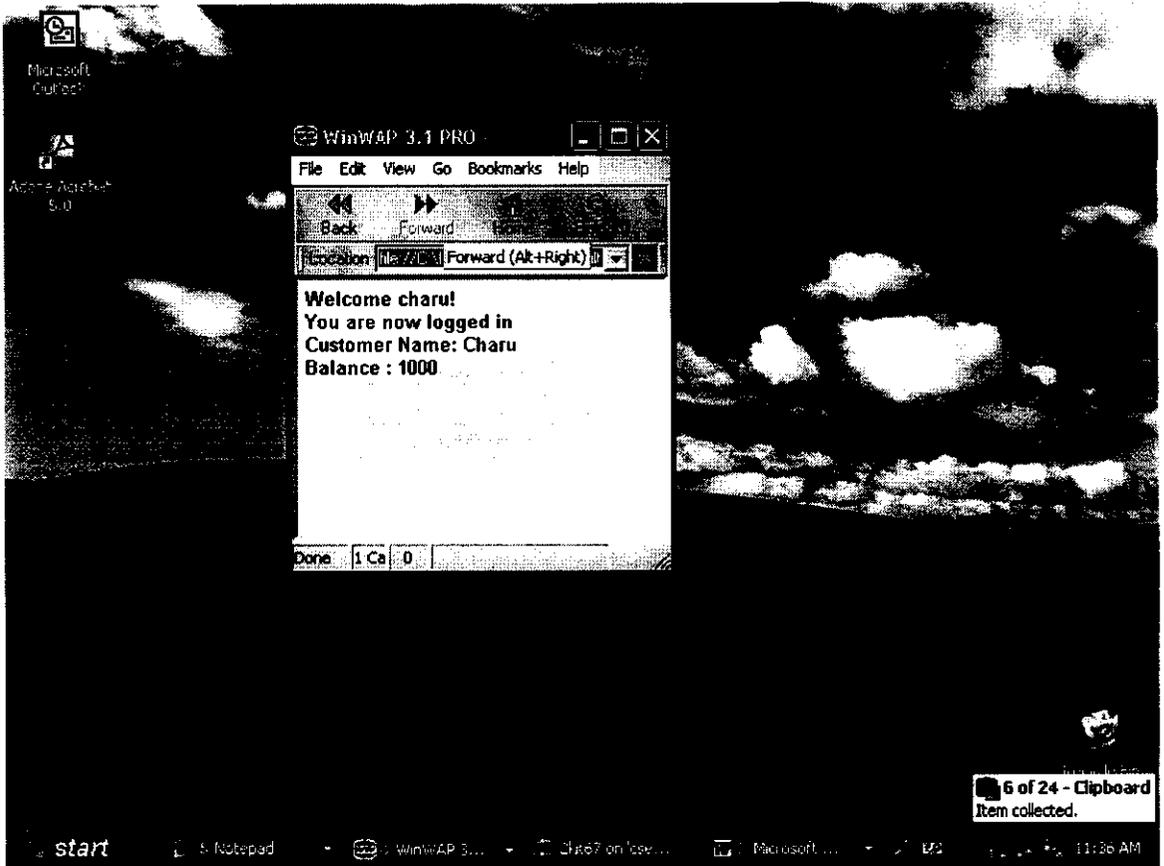




## CUSTOMER SERVICE:



# VIEW BALANCE



## 10.3 DEFINITIONS, ACRONYMS, ABBREVIATIONS

### Definition

#### WAP DEVICE:

This term indicates the physical device that is used to access WAP application and server content. It is every WAP compliant device.

#### WAP CLIENT:

In a network environment, a client is typically the logical entity that is operated by the user and communicates with 'server entity'. In World Wide Web client is the entity receives the content from Internet via gateway. Commonly, 'WAP Client' and 'WAP browser' are often interchangeable.

#### WAP BROWSER:

This is the software running on the WAP device that interest the WAP content arriving from the Internet and decides how to display on the screen of the WAP device.

### ACRONYMS AND ABBREVIATIONS:

- IIS : Internet Information Server
- PWS : Personal Web Server
- URL : Uniform Resource Locator
- WAP : Wireless Application Protocol.
- WINWAP : Window's Wireleß Application Protocol.
- WML : Wireless Markup Language
- WDP : Wireless Datagram Protocol

- WSP : Wireless Session Protocol
- WTLS : Wireless Transport Layer Security
- WTP : Wireless Transaction Protocol
- WTP : Wireless Transaction Protocol