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CPEG 597
Online Webshoppe
Submitted To : *Prof.* Ausif Mahmood

Submitted By :

Sharath Bobbili

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ABSTRACT

Shopping is among the oldest economic institutions. They have been used since antiquity to sell a wide variety of goods, and their basic form has remained unchanged. In this dissertation, we explore the efficiency of common shopping when values are interdependent- the value to a particular product may depend on shops available in the market and we need to search for different kind of products.

With the invention of E-commerce technologies over the Internet the opportunity to bid from the comfort of ones own home has seen a change like never seen before. Within the span of a few short years, what may have began as an experimental idea has grown to an immensely popular hobby, and in some cases, a means of livelihood, the online shopping gathers tremendous response everyday, all day. With the point and click of the mouse, one may buy an item they may need or just want, and in moments they find that is easy. The excitement of shopping all from the comfort of home is a completely different experience. The levels of comfort may rise in the near future but the rules to be followed remain the same.

Society cannot seem to escape the criminal element in the physical world, and so it is the same with online shopping. This is one area wherein a question can be raised as to how safe online shopping.

INTRODUCTION:

Online shopping basically deals with shopping through internet i.e. the traditional shopping where the customer has to reach different places for the wide range of products available. With this approach the customer, can buy a single product at each and every place because for each category of products he has to go to the particular places where the products are available for them and in this way time consumption is too high. To overcome this problem, we are using E-commerce with this concept we will be creating a web site which basically deals with the a wide range of products where in a customer can buy different kinds of categories of products at a single place i.e. by sitting on the internet he can buy all required products. This not only solves the problem of time consumption but also solves the multiple shopping at a single place.

OVERVIEW

The World Wide Web is an attractive target to many attackers. It has a lot of valuable information that can easily be accessed to a person with the right knowledge. With the increasing number of electronic commerce sites popping up everyday, we are very concerned with the security of transactions.

There are several different payment methods to use for online purchases. Some of these include; credit cards, micro payments, smart cards, and online billing. However, "the top three credit cards companies handle over 98% of all purchases made on the Web." We wanted to address some of the security issues that web developers should take to safeguard their sites. Specifically, we are interested in the protection of credit card numbers and data that users transmit over the Web.

PROPOSED SYSTEM

The opportunity to shop from the comfort of ones own home has seen a change like never seen before. Within the span of a few short years, what may have began as an experimental idea has grown to an immensely popular hobby, and in some cases, a means of livelihood, the online shopping gathers tremendous response everyday, all day. With the point and click of the mouse, one may buy an item they may need or just want, and in moments they find that either they are the excitement of a shopping all from the comfort of home. With this opportunity to buy sight unseen also comes the opportunity to be scammed sight unseen as well. There are over 30 million ‘hits’ each month on the online shopping sites, and that is opportunity waiting to be taken for those with the criminal intent of defrauding others.

However with a little care and caution, one can have a positive experience doing business on an online shopping, and each party can leave satisfied with their ‘deal’, they have the conveyance that brought it all together.

ONLINE SHOPPING

This means that users can buy an item and you are notified through email on the status of your order, which is when you place an order. To buy for an item, there is a order form through which you can buy an item. To buy on an item, enter your item code. While entering your item code, you need to consider the item details carefully and their item cost carefully.

To find more information about the product the description of that product has to be referred. A description of every item is put up on the item page. This way you can acquire more information about the item. If it is convenient for you and the seller, you can also arrange to personally inspect the item. Buying can be carried out automatically by enabling the automatic buying feature. Automatic Buy features buy on a particular item for you up to the amount that

you, the buyer, are willing to pay for an item. To activate the Automatic Buy, just enter your item code and amount in the "Enter Automatic Buy amount" box and click on the "Buy Now" button.

Automatic Buy is an optional facility. If you activate Automatic Buy, you need not be online to buy an item you desire. The system will buy for you if necessary by the specified amount to the limit of your amount. Please note that the Automatic Buy system will only buy for you when you have been meet to the reserve price of an item. You will receive an email notification every time the Automatic buy for you.

Transaction:

The transaction between the buyer and the web-site can be carried out manually if the buyer and seller are in a reachable distance. In other case the transaction is carried out over the net via E-commerce Secured transaction systems.

Society cannot seem to escape the criminal element in the physical world, and so it is the same with online shopping.

One of the concepts that the online shopping were started with was the idea that people could police themselves, but those with the intent to take advantage of others have found the means to bypass this mild safeguard as well. It was envisioned that with the opportunity to give 'feedback' on each other as buyers and sellers, honesty would remain intact. However some have found a way to inflate their ratings which makes them appear trustworthy to do business with.

There are steps to take to reduce the risk of being scammed by a less-than-honest individual in an online transaction, and the first step is to deal only with reputable establishments. At least if there is a problem with the transaction, whether as the buyer or the seller, one stands a better chance of resolving the problem satisfactorily for everyone. So do your homework as to where it is safe to do business. Establish the top price that you are willing to give, keeping in mind

how much more than the identity of whom you are dealing with. Have they been operating with this buying service for an acceptable length of time? Do they have any comments about them, either positive or negative? These things must be considered in an attempt to protect oneself from the risk of being scammed.

Another safeguard to consider is, “how will one pay for the goods?” There are payment services available such as PayPal or Billpoint. Many of these services offer some form of assurance and insurance against fraud. Or one may want to consider an Escrow service to handle the transaction. Many of the auction sites have an escrow service to offer their clients, however there is usually an extra fee associated with these services as well.

Whatever the means one chooses to minimize the risk of loss due to fraud, in the end it still comes down to the individual consumer and the choices they make. Until the goods are received and all parties satisfied, one should keep record of any and all transactions, whether they are the buyer or the seller. It may help provide proof of what took place, and help get ones money or goods back, if one has the misfortune of being the victim of online auction fraud.

MODULES

- Administration
- User Management
- Item Details
- Order

MODULE DESCRIPTION

Administration:

This module basically deals with the administration roles i.e.

- Uploading the item details
- Removing the item details
- Viewing the item details
- Report Generation
- Working options
 - Caching Feature
 - Content length for each Category

User Management:

This module basically deals with the user management ie registration and validating the user and allowing him to view the different kinds of item details and place a order for a product.

- User Information
- User Session Maintenance
- Updating User Information

Item Details:

These are the pages that are associated with the logic pages, and contain item specific details.

- Organizing the items according to the category
- Providing appropriate links to specified category

Order:

- Preparing the order according to the category
- Specifying level of order.
- Checking about the credit card validation.
- Credit Verification for the balance existence.

SYSTEM DESIGN

People tend to frequent seized property auctions because goods can be purchased at a low price relative to market value. This is good for the buyer, but not for the debtor whose budget and credit record are dependent on this money. A limited audience who will not pay the full value of the items up for bidding attends the shopping. The body appointed to seize and shop property operates it.

When debtors must liquidate their assets, they must first open an account with the Collection Authority. The Collection Authority is housed inside the sheriff's office or the organization responsible for public shopping of seized property and assets. It is a combination of customer service counters and an inventory/shipping warehouse. Seized goods and items brought in by a debtor are inventoried at the Collection Authority where daily shipments are made for the items sold. Once the item is sold, the buyer makes the payment to the Collection Authority, which then transfers the balance owed to the creditor, minus shipping costs and a percentage charged by the Collection Authority.

All items going through site , either seized or brought in by the debtor, use the Item Profiler to create a standard description page to buy items on the on-line shopping site. The page layout includes digital images representing the orthographic views of the item plus a text section detailing its make, model, year, history, etc. with an additional line worded by the debtor.

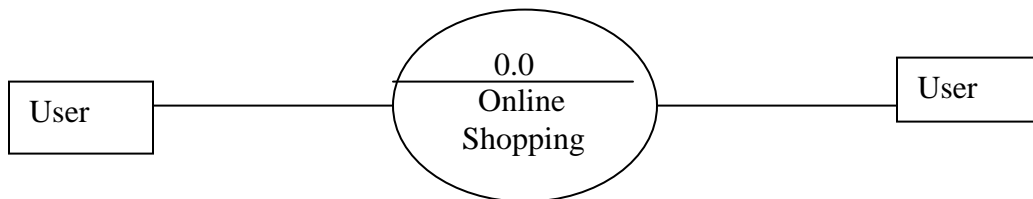
The item's description is logged under the appropriate category on the auction site. People shopping at this site can view items and bid on the goods similar to any other item listed on the site. The only discernible difference is the consistent layout between the posted items and a line attached by the Collection Authority stating that the item is being sold to resolve a debt.

Transact records all of the items posted for auction by item number and account number, and records the sales made on these items. Beyond the bookkeeping value of these records, summary and status statements can be provided for the debtor to present to the court if a question of compliance arises; an account number enables the system to summarize the debtor's Transaction to show remaining debt to the creditor as well as prove to the court that an effort is being made to pay the debt.

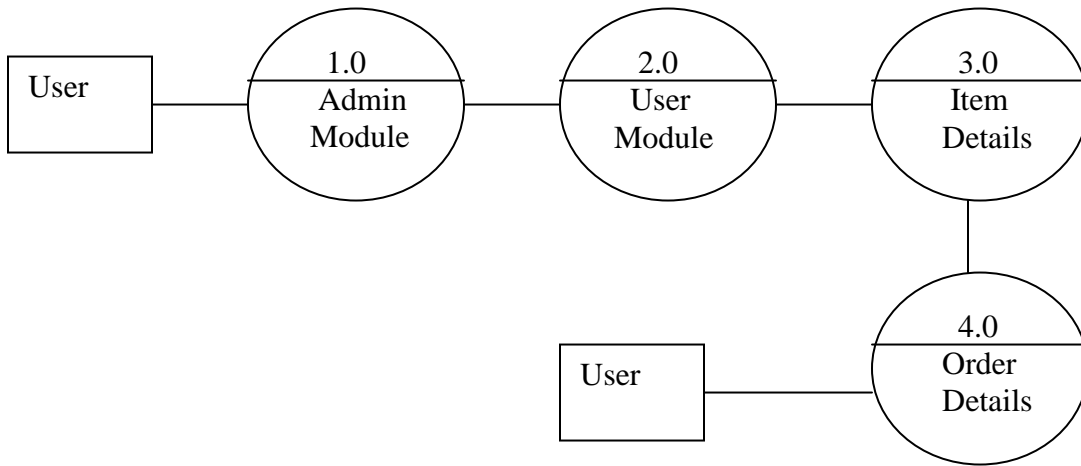
DATA FLOW DIAGRAMS

Data flow diagram is a structure analysis tool that is used for graphical representation of Data processes through any organization. The data flow approach emphasis on the logic underlying the system, by using combination of only 4 symbols. It follows a top down approach. A full description of a system actually consists of set of DFDs, which comprises of various levels. And initial over view model is exploded lower level diagrams that show additional feature of the system. Further each process can be broken down into a more detailed DFD. This occurs repeatedly until sufficient details are described.

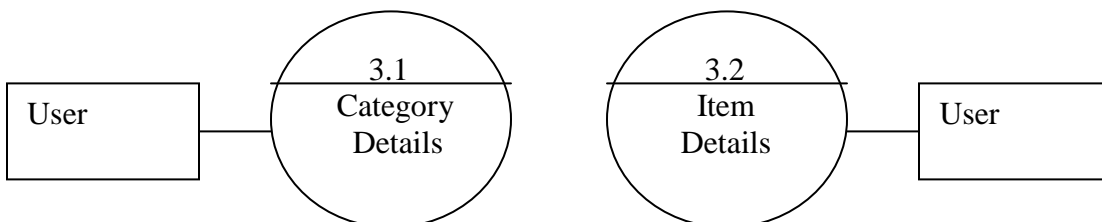
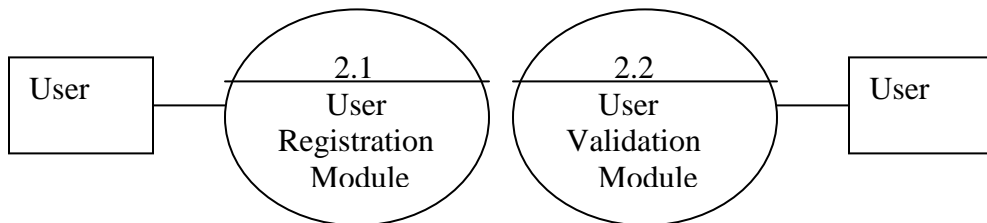
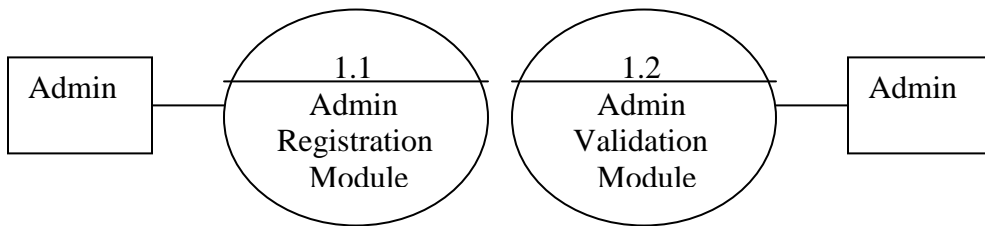
CONTEXT LEVEL DIAGRAM

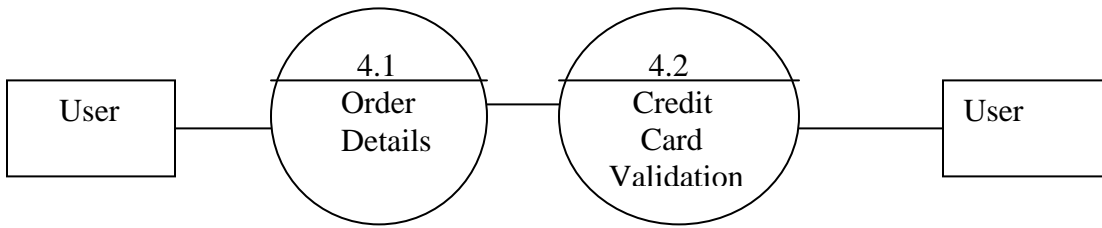


First Level:



Second Level:

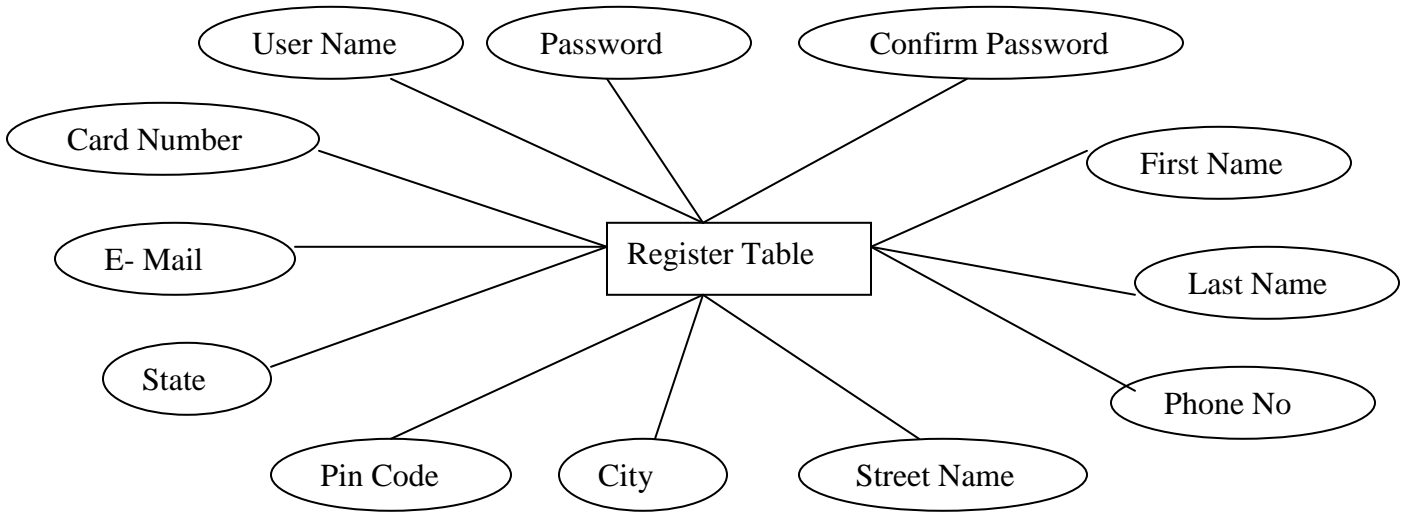




Database Design:

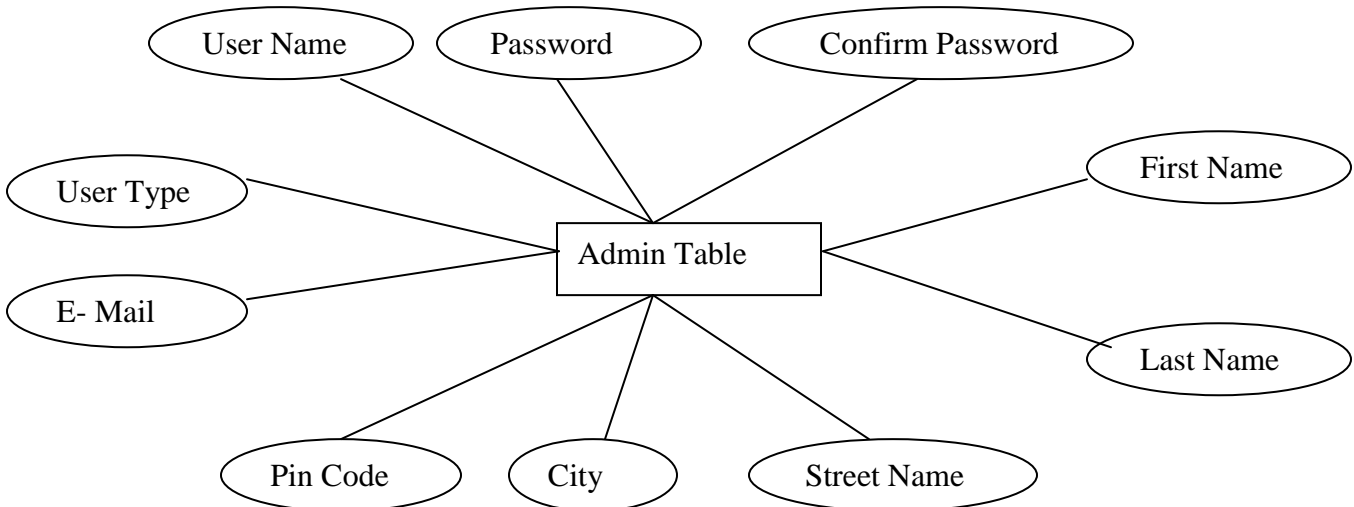
User Registration Table :

S No	Field Name	Data Type
1	User Name	Varchar
2	Password	Varchar
3	Confirm password	Varchar
4	First name	Varchar
5	Last name	Varchar
6	Phone No	Varchar
7	Street Name	Varchar
8	City	Varchar
8	Pin Code	Varchar
10	State	Varchar
11	E-Mail	Varchar
12	Card Number	Number



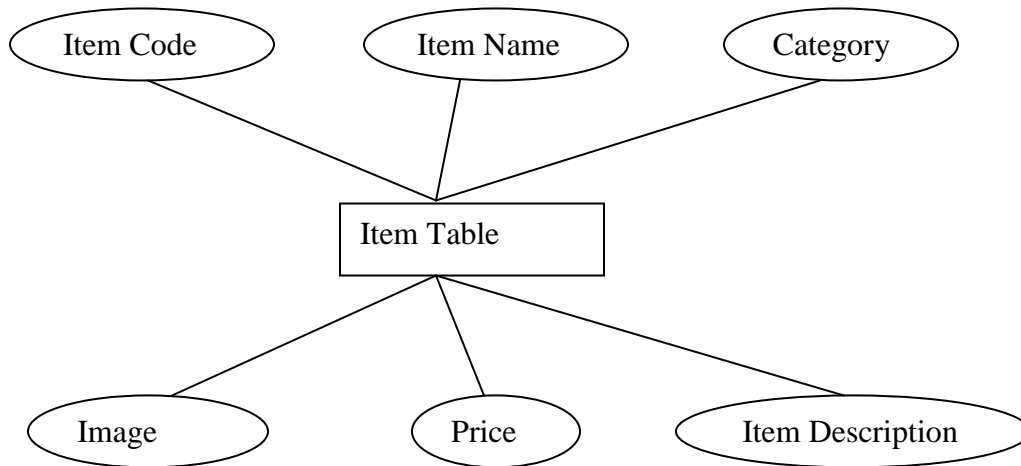
Admin Registration Table :

S No	Field Name	Data Type
1	User Name	Varchar
2	Password	Varchar
3	Confirm Password	Varchar
4	First Name	Varchar
5	Last Name	Varchar
6	Street Name	Varchar
7	City	Varchar
8	Pin Code	Varchar
9	E-Mail	Varchar
10	User Type	Varchar



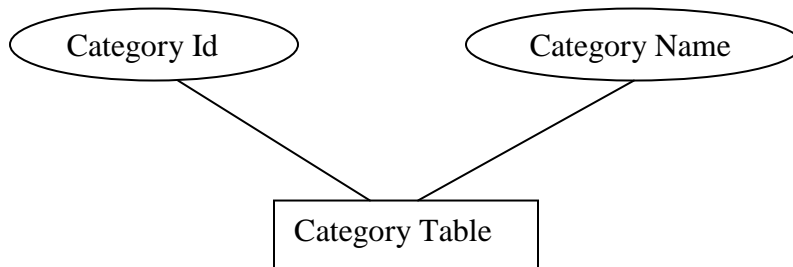
Item Details Table

S No	Field Name	Data Type
1	Item Code	Varchar
2	Item Name	Varchar
3	Category	Varchar
4	Item Description	Varchar
5	Price	Float
6	Item Picture	Image



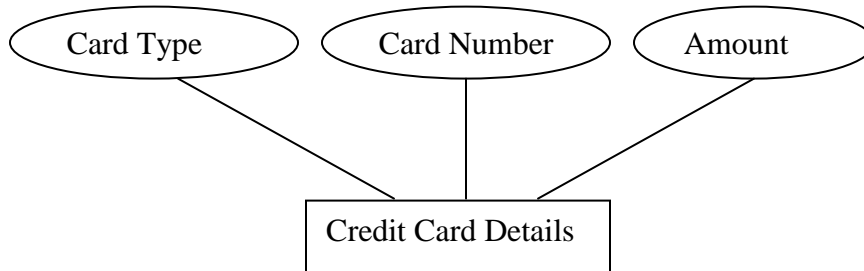
Category Table

S No	Field Name	Data Type
1	Category ID	Varchar
2	Category Name	Varchar



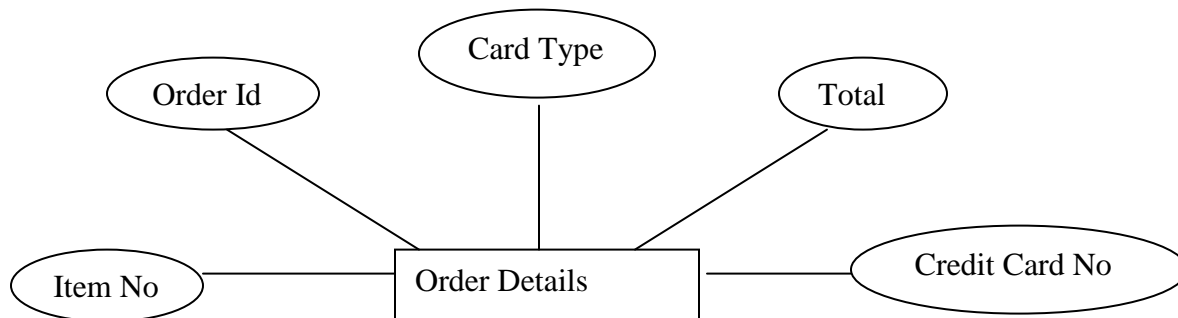
Credit Card Details

S No	Field Name	Data Type
1	Card type	Varchar
2	Card Nummer	Varchar
3	Amount	Float



Order Details Table

S NO	Field Name	Data Type
1	Item No	Varchar
2	Order Id	Varchar
3	Card Type	Varchar
4	Total	Float
5	Credit Card No	Varchar



TESTING

Testing is a process, which reveals errors in the program. It is the major quality measure employed during software development. During software development. During testing, the program is executed with a set of test cases and the output of the program for the test cases is evaluated to determine if the program is performing as it is expected to perform. In order to make sure that the system does not have errors, the different levels of testing strategies that are applied at differing phases of software development are:

1. Unit Testing

Unit Testing is done on individual modules as they are completed and become executable. It is confined only to the designer's requirements.

Each module can be tested using the following two strategies:

i) Black Box Testing:

In this strategy some test cases are generated as input conditions that fully execute all functional requirements for the program. This testing has been used to find errors in the following categories:

- a) Incorrect or missing functions
- b) Interface errors
- c) Errors in data structure or external database access
- d) Performance errors
- e) Initialization and termination errors.

In this testing only the output is checked for correctness. The logical flow of the data is not checked.

White Box testing

In this the test cases are generated on the logic of each module by drawing flow graphs of that module and logical decisions are tested on all the cases.

It has been uses to generate the test cases in the following cases:

- a) Guarantee that all independent paths have been executed.
- b) Execute all logical decisions on their true and false sides.
- c) Execute all loops at their boundaries and within their operational bounds.
- d) Execute internal data structures to ensure their validity.

2. Integrating Testing

Integration testing ensures that software and subsystems work together as a whole. It tests the interface of all the modules to make sure that the modules behave properly when integrated together.

3. System Testing

Involves in-house testing of the entire system before delivery to the user. Its aim is to satisfy the user the system meets all requirements of the client's specifications.

4. Acceptance Testing

It is a pre-delivery testing in which entire system is tested at client's site on real world data to find errors.

Validation

The system has been tested and implemented successfully and thus ensured that all the requirements as listed in the software requirements specification are completely fulfilled. In case of erroneous input corresponding error messages are displayed.

Microsoft.NET Framework

The .NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet. The .NET Framework is designed to fulfill the following objectives:

- To provide a consistent object-oriented programming environment whether object code is stored and executed locally, executed locally but Internet-distributed, or executed remotely.
- To provide a code-execution environment that minimizes software deployment and versioning conflicts.
- To provide a code-execution environment that guarantees safe execution of code, including code created by an unknown or semi-trusted third party.
- To provide a code-execution environment that eliminates the performance problems of scripted or interpreted environments.
- To make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications.
- To build all communication on industry standards to ensure that code based on the .NET Framework can integrate with any other code.

The .NET Framework has two main components: the common language runtime and the .NET Framework class library. The common language runtime is the foundation of the .NET Framework. You can think of the runtime as an agent that manages code at execution time, providing core services such as memory management, thread management, and remoting, while also enforcing strict type safety and other forms of code accuracy that ensure security and robustness. In fact, the concept of code management is a fundamental principle of the runtime. Code that targets the runtime is known as managed code, while code that does not target the runtime is known as unmanaged code. The class library, the other main

component of the .NET Framework, is a comprehensive, object-oriented collection of reusable types that you can use to develop applications ranging from traditional command-line or graphical user interface (GUI) applications to applications based on the latest innovations provided by ASP.NET, such as Web Forms and XML Web services.

Server Application Development

Server-side applications in the managed world are implemented through runtime hosts. Unmanaged applications host the common language runtime, which allows your custom managed code to control the behavior of the server. This model provides you with all the features of the common language runtime and class library while gaining the performance and scalability of the host server.

The following illustration shows a basic network schema with managed code running in different server environments. Servers such as IIS and SQL Server can perform standard operations while your application logic executes through the managed code.

Server-side managed code

ASP.NET is the hosting environment that enables developers to use the .NET Framework to target Web-based applications. However, ASP.NET is more than just a runtime host; it is a complete architecture for developing Web sites and Internet-distributed objects using managed code. Both Web Forms and XML Web services use IIS and ASP.NET as the publishing mechanism for applications, and both have a collection of supporting classes in the .NET Framework.

XML Web services, an important evolution in Web-based technology, are distributed, server-side application components similar to common Web sites. However, unlike Web-based applications, XML Web services components have

no UI and are not targeted for browsers such as Internet Explorer and Netscape Navigator. Instead, XML Web services consist of reusable software components designed to be consumed by other applications, such as traditional client applications, Web-based applications, or even other XML Web services. As a result, XML Web services technology is rapidly moving application development and deployment into the highly distributed environment of the Internet.

If you have used earlier versions of ASP technology, you will immediately notice the improvements that ASP.NET and Web Forms offers. For example, you can develop Web Forms pages in any language that supports the .NET Framework. In addition, your code no longer needs to share the same file with your HTTP text (although it can continue to do so if you prefer). Web Forms pages execute in native machine language because, like any other managed application, they take full advantage of the runtime. In contrast, unmanaged ASP pages are always scripted and interpreted. ASP.NET pages are faster, more functional, and easier to develop than unmanaged ASP pages because they interact with the runtime like any managed application.

The .NET Framework also provides a collection of classes and tools to aid in development and consumption of XML Web services applications. XML Web services are built on standards such as SOAP (a remote procedure-call protocol), XML (an extensible data format), and WSDL (the Web Services Description Language). The .NET Framework is built on these standards to promote interoperability with non-Microsoft solutions.

For example, the Web Services Description Language tool included with the .NET Framework SDK can query an XML Web service published on the Web, parse its WSDL description, and produce C# or Visual Basic source code that your application can use to become a client of the XML Web service. The source code can create classes derived from classes in the class library that handle all the

underlying communication using SOAP and XML parsing. Although you can use the class library to consume XML Web services directly, the Web Services Description Language tool and the other tools contained in the SDK facilitate your development efforts with the .NET Framework.

If you develop and publish your own XML Web service, the .NET Framework provides a set of classes that conform to all the underlying communication standards, such as SOAP, WSDL, and XML. Using those classes enables you to focus on the logic of your service, without concerning yourself with the communications infrastructure required by distributed software development.

Finally, like Web Forms pages in the managed environment, your XML Web service will run with the speed of native machine language using the scalable communication of IIS.

Visual Basic.NET

Introduction to Windows Forms (Visual Basic.NET)

Windows Forms is the new platform for Microsoft Windows application development, based on the .NET Framework. This framework provides a clear, object-oriented, extensible set of classes that enable you to develop rich Windows applications. Additionally, Windows Forms can act as the local user interface in a multi-tier distributed solution. Windows Forms is a framework for building Windows client applications that utilize the common language runtime. Windows Forms applications can be written in any language that the common language runtime supports.

Why use ADO?

Consistently accessing data within the enterprise is a challenge for today's business applications. ODBC provides the first step toward overcoming this challenge by enabling applications to access relational databases. However, as developers and system architects want to include no relational data sources and to work in environments such as the Internet, they encounter the dilemma of either developing their own data-access paradigms or working with application program interfaces (APIs) that are incompatible in the new environments. Microsoft® ActiveX® Data Objects (ADO) along with OLEDB solves this dilemma by providing a single model that works with all data sources in a variety of environments.

ADO provides consistent, high-performance access to data, whether you're creating a front-end database client or middle-tier business object using an application, tool, language, or even an Internet browser. ADO is the single data interface you need for developing 1- to *n*-tier client/server and Web-based, data-driven solutions.

This paper introduces ADO and the ADO programming model for application developers who are targeting Microsoft SQL Server™. Particular attention is given to taking advantage of SQL Server features with ADO, such as stored procedures and server cursors. The concepts presented in the sections titled "The ADO Object Model" and "Using ADO with Visual Basic, VBScript, Visual C++, and Java" are applicable to all ADO programmers.

OLEDB Overview

OLEDB is an open specification designed to build on the success of ODBC by providing an open standard for accessing all kinds of data throughout the enterprise. OLEDB is a core technology supporting universal data access. Whereas ODBC was created to access relational databases, OLEDB is designed for the relational and nonrelational information sources, such as mail stores, text and graphical data for the Web, directory services, and IMS and VSAM data stored in the mainframe. OLEDB components consist of data providers, which expose data; data consumers, which use data; and service components, which process and transport data (for example, query processors and cursor engines). These components are designed to integrate smoothly to help OLEDB component vendors quickly bring high-quality OLEDB components to market. OLEDB includes a bridge to ODBC to enable continued support for the broad range of ODBC relational database drivers available today.

FEATURES

- Rapid – application development
- Database features to create fast, high performance applications and components
- Team development and scalability features with Microsoft visual Modeler, Visual Database Tools, Visual Source safe and SQL server.
- The ability to create reusable Active X components for traditional Client/server Architecture, Internet, and Microsoft Transaction Server.
- Native code compiles that can be optimized for speed, size and even for Pentium preprocessor's.
- A common programming language for all Microsoft Office applications. Visual basic is providing to be most powerful and flexible way of

developing for GUI's as a window-programming tool Database Management as a front-end tool Internet as web programming tool.

Error Finding Methods

The debugging facility in the Visual Basic is also quite advanced. I have the immediate window where in at runtime I apply break and change the values in the variables. I can set break points and thus I come to know the flow and locations of errors in the code. Even as I type the code I have a runtime list that lists out the syntax and prevents us from making syntactical errors. I have used a lot of debugging methods in finding errors, there are different methods which exists but the one I frequently used was the line by line tracing of the program at runtime this is done by pressing F8 key, I also used the immediate window which shows the results of the expressions at the run time. Watch windows also helped me little. These facilities also helped Visual Basic 6.0 tool to be good.

SOFTWARE REQUIREMENTS

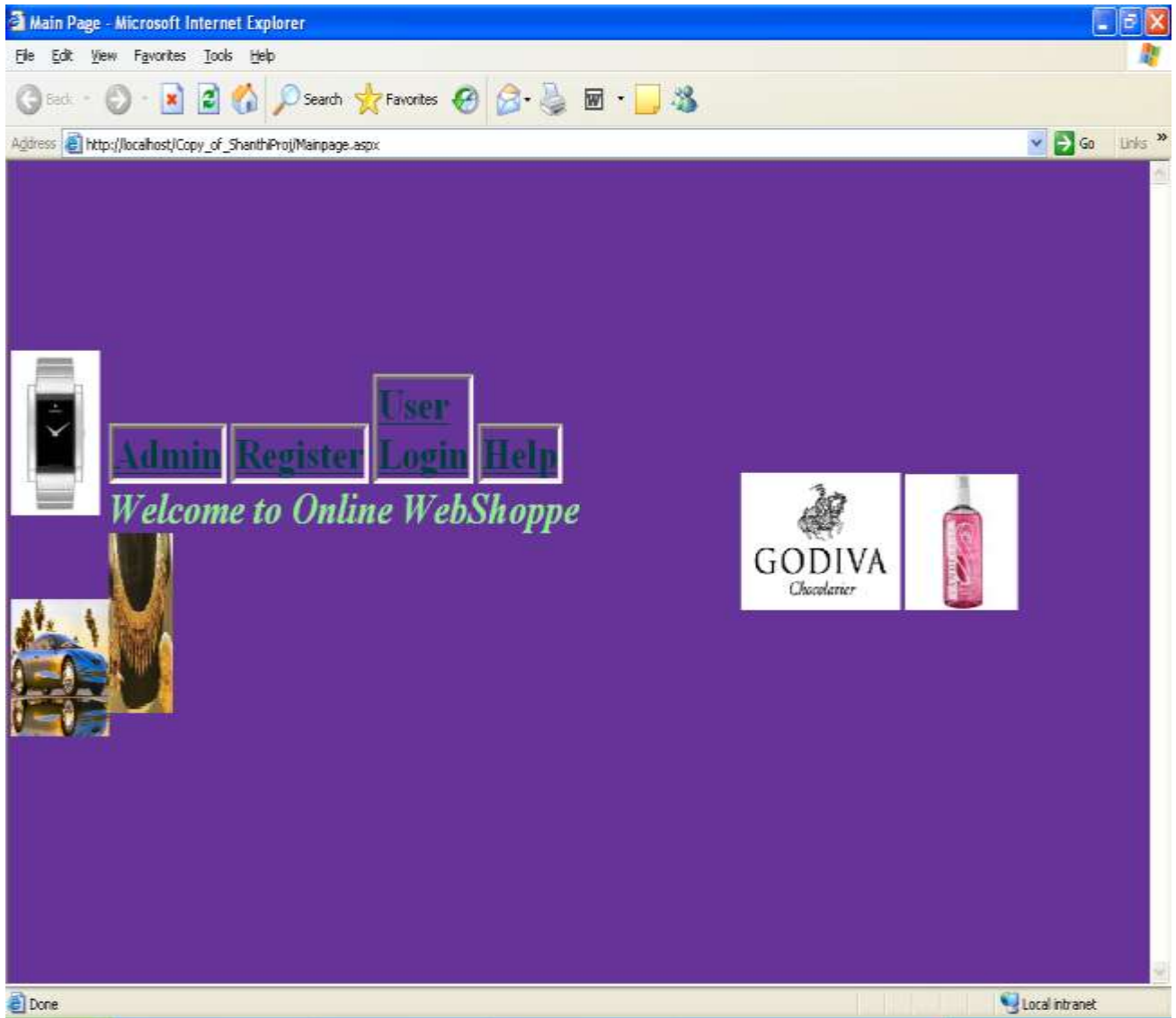
1. VB.NET
2. ODBC Drivers installed
3. JDBC Drivers installed
4. Fully Functional Html Editor
5. Java Web Server 2.0 or higher
6. Database (oracle or SQL server)

HARDWARE REQUIREMENTS

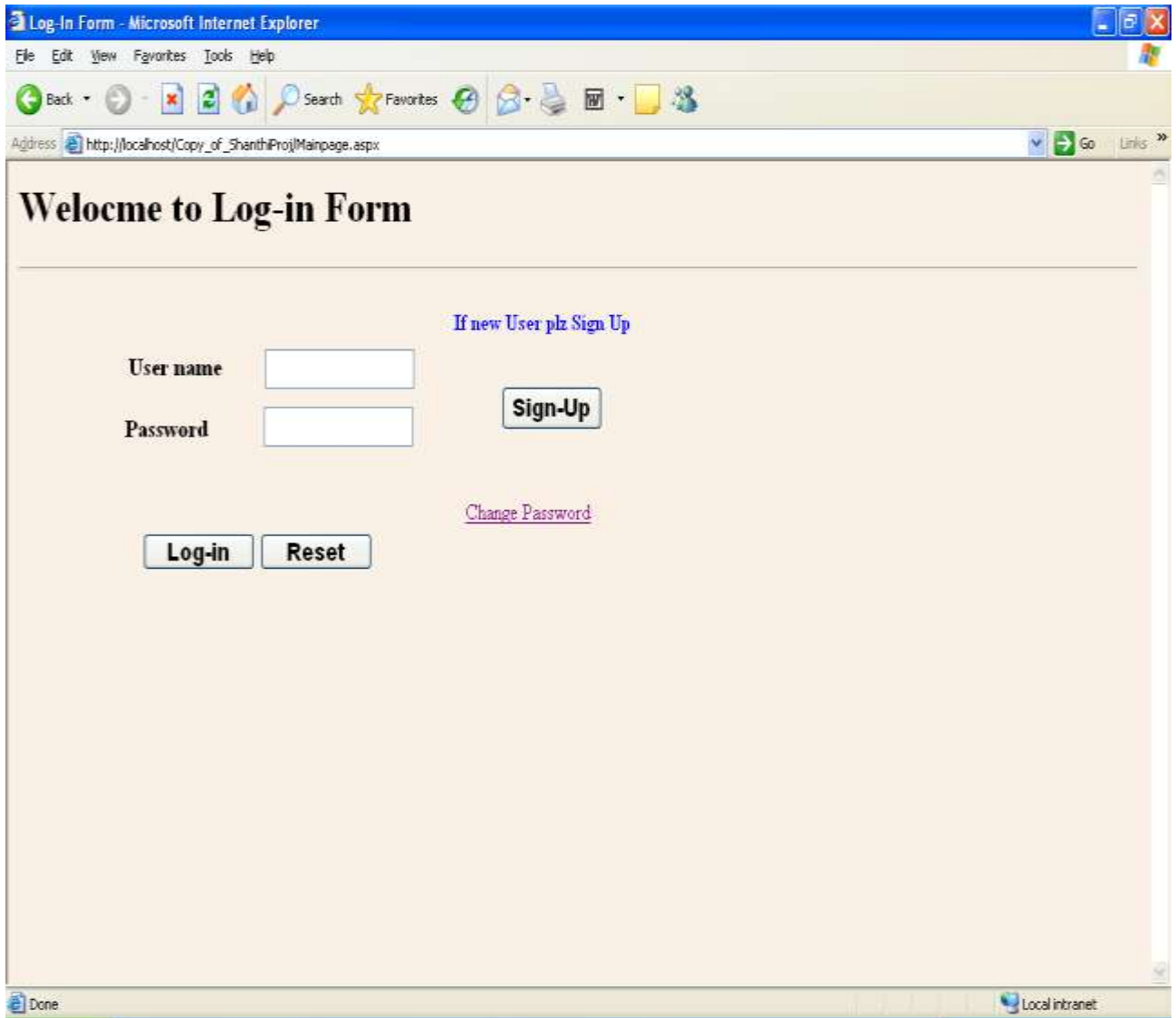
1. Personal computer with 80486 or higher processor
2. 2.1 GB hard disk space
3. 64 MB RAM

OUT PUT SCREENS:

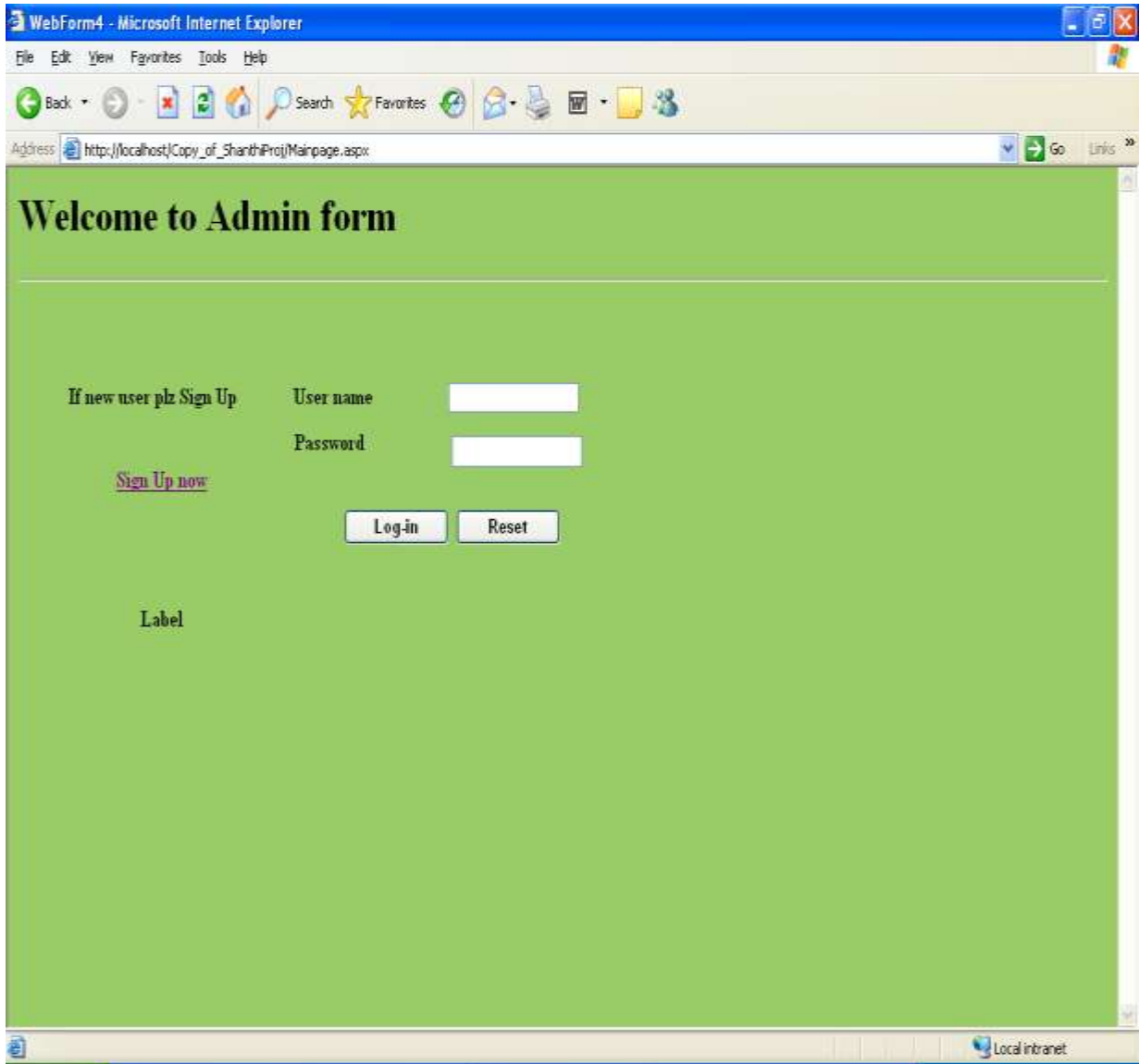
The screen below shows the main page



This screen shot shows the user login of the user:



The screen shows the Administration login of the administrator



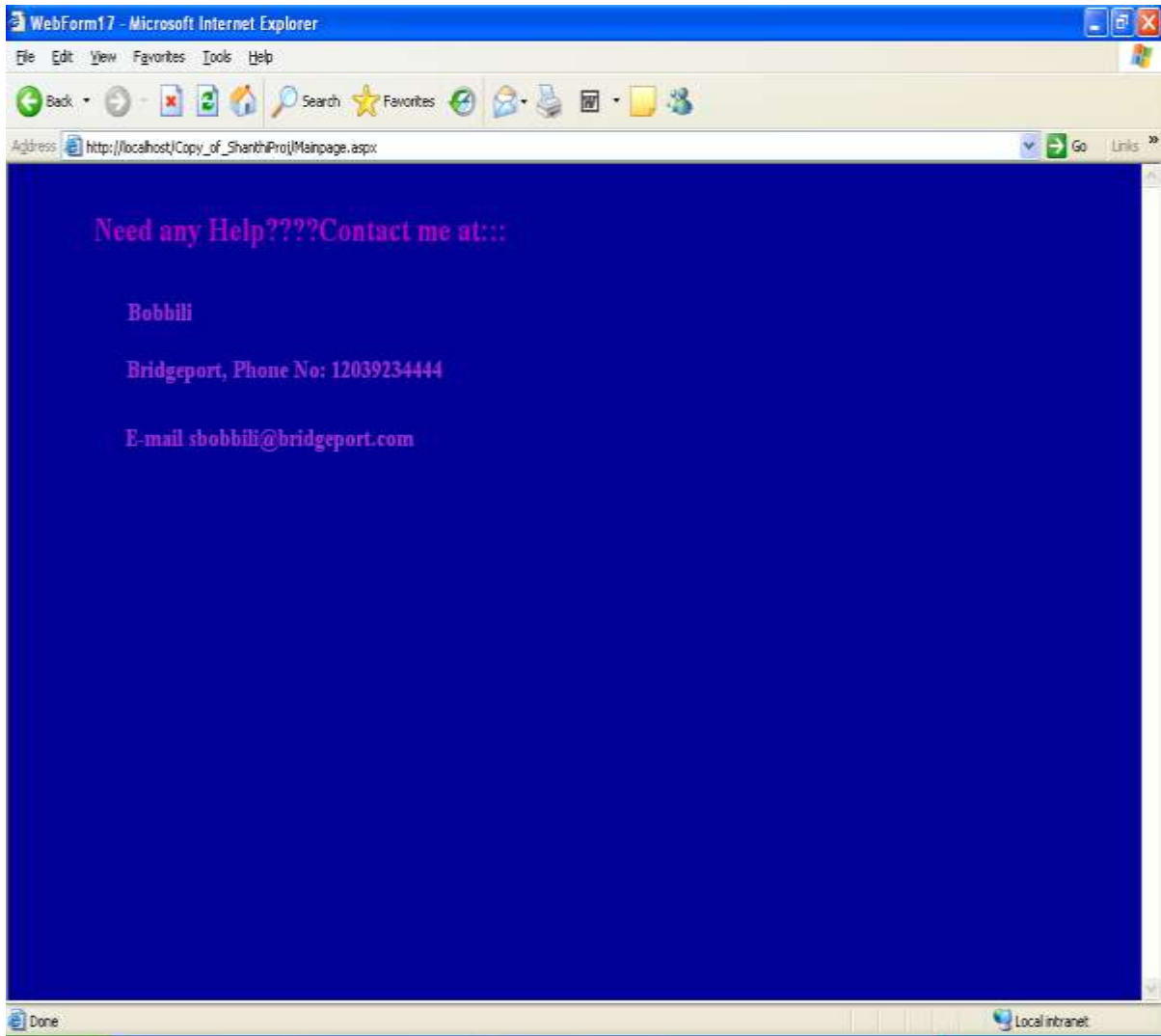
The window shows the registration form of the new user

The image shows a screenshot of a Microsoft Internet Explorer browser window. The title bar reads "User Registration - Microsoft Internet Explorer". The address bar shows the URL "http://localhost/Copy_of_ShankhProj/Mainpage.aspx". The main content area displays a "New Registration Form" with the following fields and buttons:

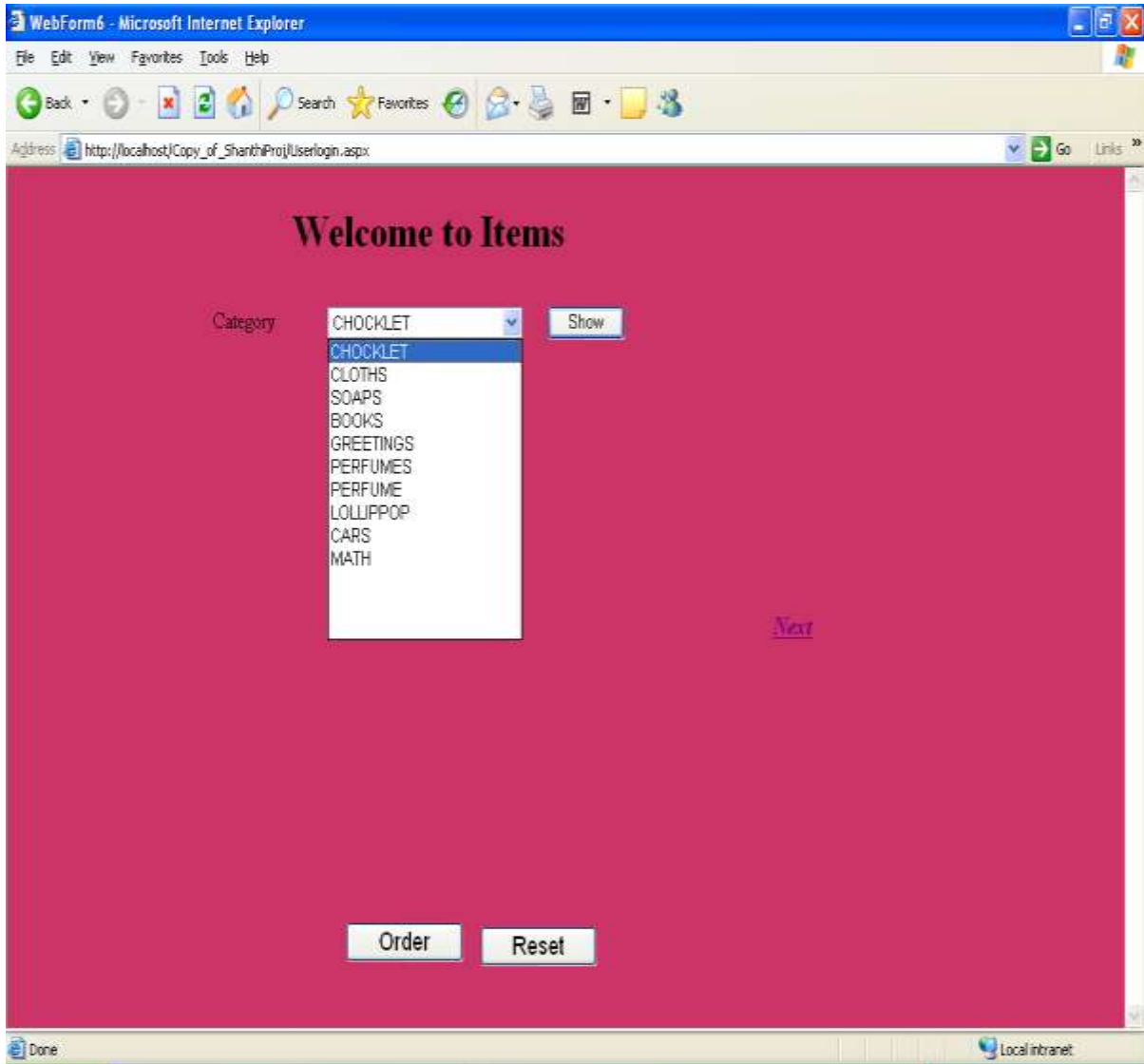
User Name	<input type="text"/>
Password	<input type="text"/>
Confirm password	<input type="text"/>
First name	<input type="text"/>
Last name	<input type="text"/>
Phone no	<input type="text"/>
Street name	<input type="text"/>
City	<input type="text"/>
Pin code	<input type="text"/>
State	<input type="text"/>
E-Mail	<input type="text"/>
Card no	<input type="text"/>

At the bottom of the form, there are two buttons: "Submit" and "Reset". The browser's status bar at the bottom shows "Done" and "Local intranet".

The window shows the Help menu of the site



The window shows the items menu of the site



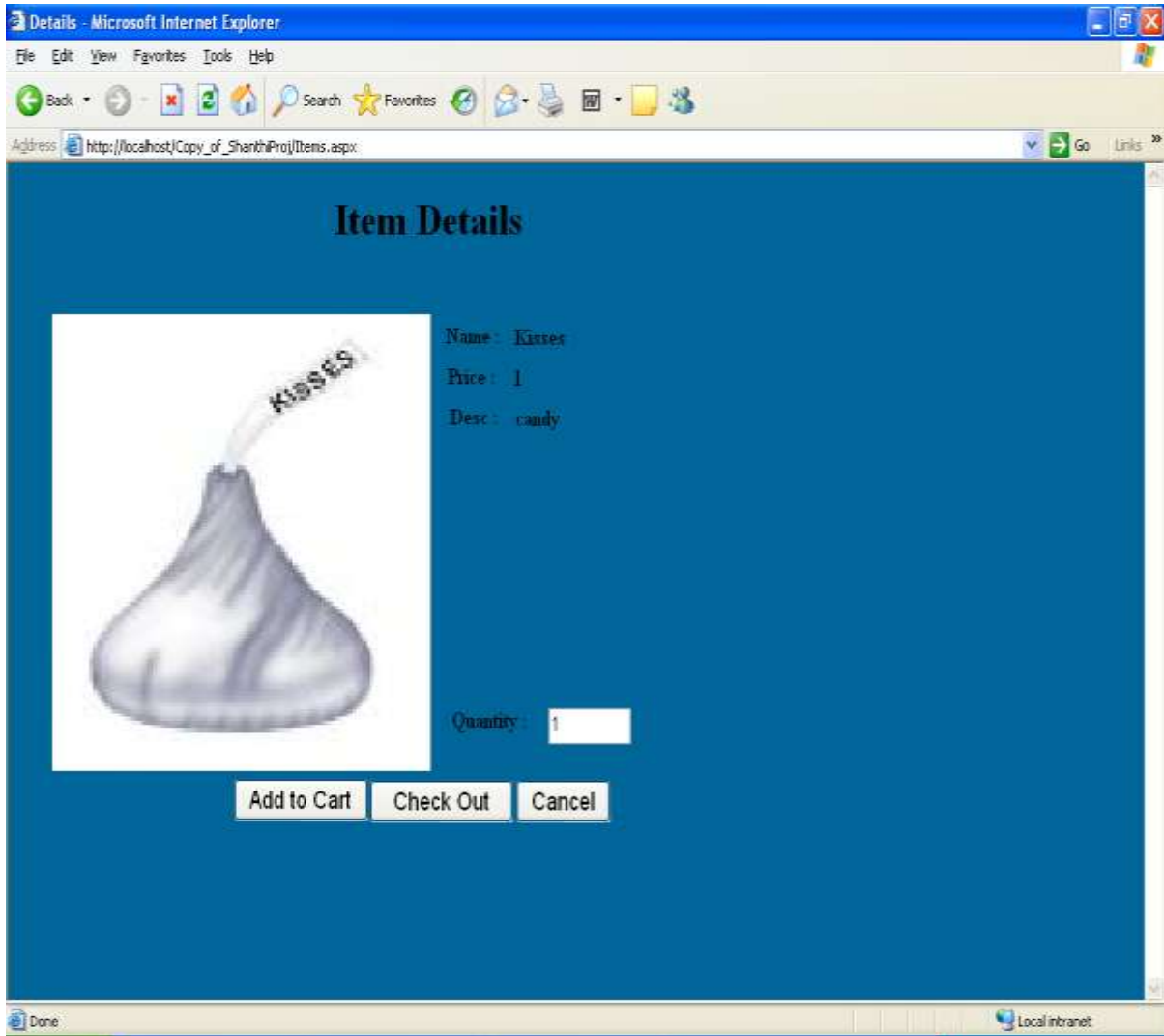
The screen shows the items in the candy menu

The screenshot shows a Microsoft Internet Explorer browser window titled "WebForm6 - Microsoft Internet Explorer". The address bar displays "http://localhost/Copy_of_ShanthiProj/Items.aspx". The main content area has a pink background and features the heading "Welcome to Items". Below the heading is a "Category" dropdown menu set to "CHOCKLET" and a "Show" button. The menu displays four items:

- Item 1:** A pile of colorful M&M's candies. Below the image is a "Large" button, a price of "\$1", and a "Details" link.
- Item 2:** A Hershey's Kiss. Below the image is a "Large" button, a price of "\$1", and a "Details" link.
- Item 3:** A KitKat candy bar. Below the image is a "Details" link and a price of "\$2".
- Item 4:** A Snickers candy bar. Below the image is a "Details" link and a price of "\$2".

At the bottom of the menu are "Order" and "Reset" buttons. A "Next" link is also visible on the right side. The browser's status bar at the bottom shows "Done" and "Local intranet".

The detailed description of the item is shown below



The screen shows the final order of the user

The screenshot shows a Microsoft Internet Explorer browser window displaying a web page titled "Order Details". The browser's address bar shows the URL "http://localhost/Copy_of_ShantiProj/Benc.aspx". The page content includes a table with the following data:

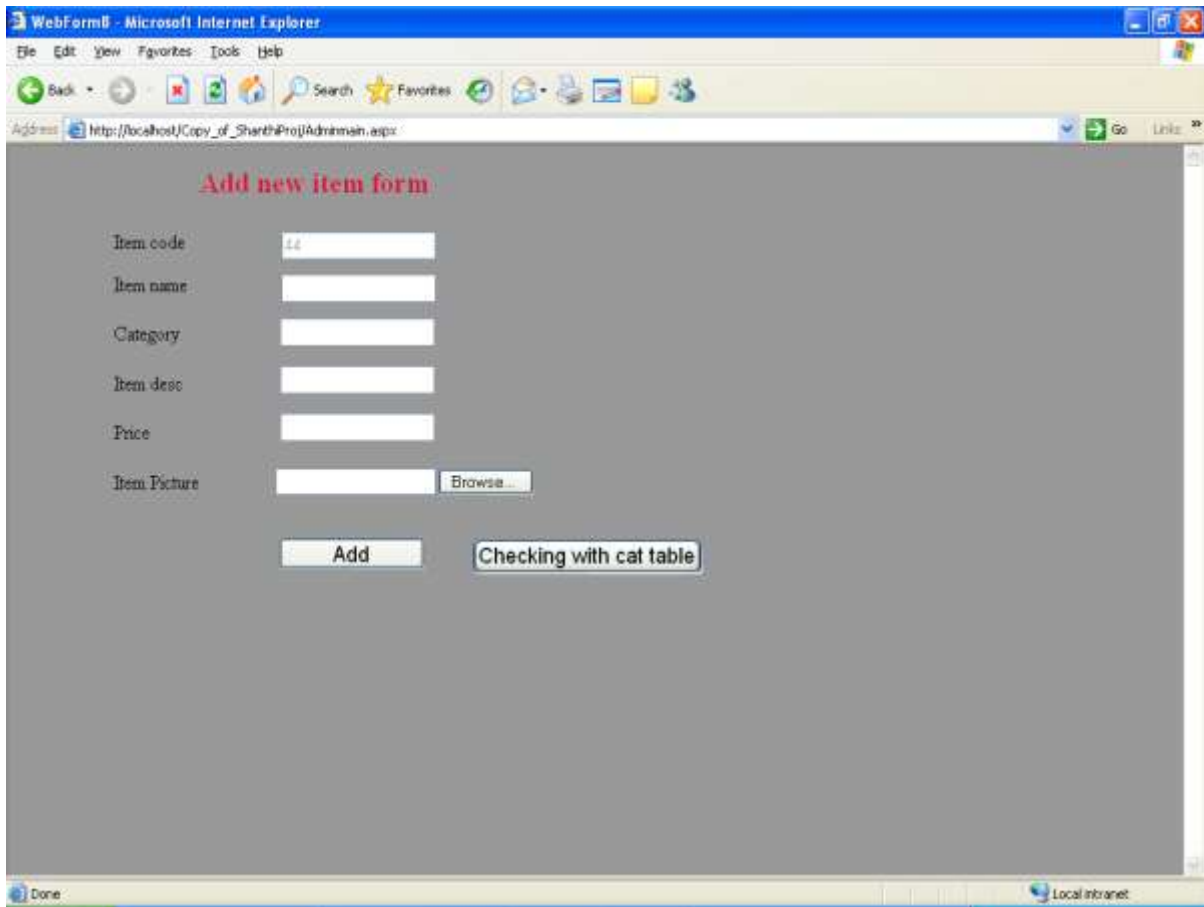
Item_code	Item_name	Price	Qty	Total	User_name	Order_Id	C_Date
15	Kisses	1	1	1	sharath	16	12/16/2005 9:12:00 PM
29	C#	32	1	32	sharath	16	12/16/2005 9:13:00 PM

Below the table, there is a summary section with the following details:

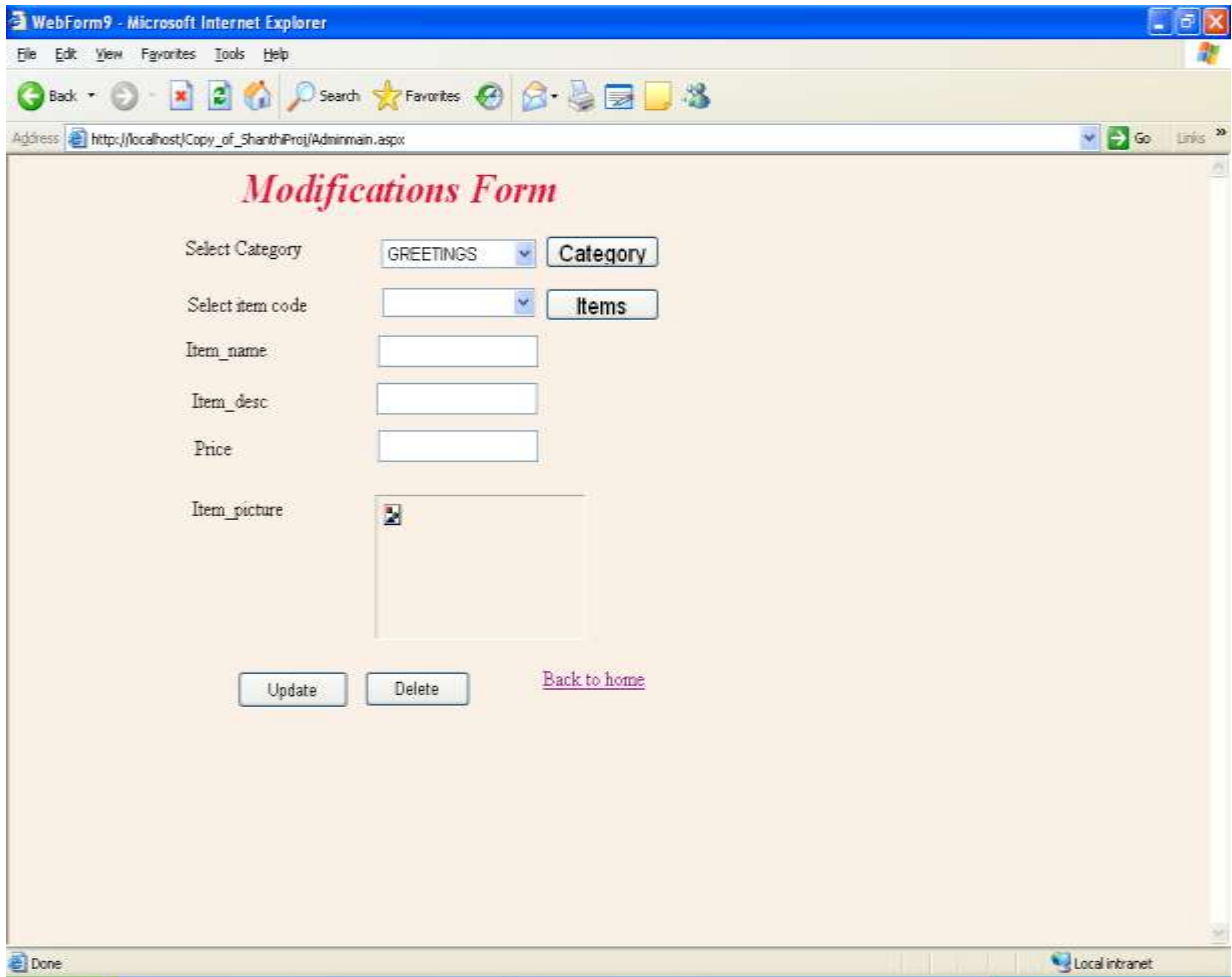
- Order ID: 16
- User Name: sharath
- Total Ammount: 33
- Card Type: Visa Credit Card (selected from a dropdown menu)
- Card No: (empty text input field)

At the bottom of the summary section, there are two buttons: "Submit" and "Cancel". The browser's taskbar at the bottom shows the Start button, several open applications, and the system clock indicating 9:12 PM on 12/16/2005.

The window shows the adding new item for administration:



The window shows the modifying items for administration:



CONCLUSION

The efficiency of any system designed to suit an organization depends on cooperation during the implementation stage and also flexibility of the system to adopt itself to the organization. “Online Shopping” has been developed to overcome the problems with traditional Online Shopping systems.

As evidence of the success of this mission, there are millions of items listed each day in thousands of different categories. There are items for almost any interest that one could imagine, from music to automobiles to hand tools to real estate. And the variety doesn't stop there. Need a computer? One may find it listed in the proper category, in any configuration from very old and obsolete to the latest greatest machine available. What about antiques? One can find an antique quilt that is up for highest buying, or maybe an old violin, whose beautiful tones have enchanted many though its years. Maybe a ticket to the next concert of ones favorite artist or play production. One can even find that special bottle of wine, some aged, exotic cheese, and the perfect ‘mood’ music for that special occasion.

Reliability

For a business of this nature, the need to be available is all-important. After all, when the only means of access is via ‘online’, it is of utmost importance to have and maintain an accessible web presence.

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