

# ONLINE INVENTORY SYSTEM

PROJECT WORK DONE AT  
SKYNETZ INFOWAY INDIA PVT. LTD  
TIRUPUR – 641 604

PROJECT REPORT *p. 82/1*

SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF  
**M.Sc [APPLIED SCIENCE] SOFTWARE ENGINEERING**  
OF BHARATHIAR UNIVERSITY, COIMBATORE.

SUBMITTED BY

**S.KARTHIKEYAN**  
REG NO. **9937S0078**

UNDER THE GUIDANCE OF

External Guide

**Mr.S.Gowri Prasad**  
SkynetZ Infoway India Pvt. Ltd  
Tirupur - 4

Internal guide

**Mrs. Devaki**  
Dept. Of CSE.,  
Coimbatore – 6



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
**KUMARAGURU COLLEGE OF TECHNOLOGY**  
COIMBATORE – 641 006  
MAY 2002 – AUG 2002

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
**KUMARAGURU COLLEGE OF TECHNOLOGY**

(Affiliated to Bharathiar University)

COIMBATORE – 641 002

SEPTEMBER – 2002

CERTIFICATE

This is to certify that the project entitled

**ONLINE INVENTORY SYSTEM**

DONE BY

**S.KARTHIKEYAN**

**REG NO. 9937S0078**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE AWARD OF THE DEGREE OF  
**M.Sc [Applied science] SOFTWARE ENGINEERING**  
OF BHARATHIYAR UNIVERSITY

  
Professor and HOD 26/9/02

  
Internal Guide

Submitted to University Examination held on 26/9/2002

  
Internal Examiner 26/9

  
External Examiner

# DECLARATION

S. KARTHIKEYAN  
M.Sc Software Engineering ( 4<sup>th</sup> year),  
Department of Computer Science and Engineering,  
Kumaraguru college of Technology,  
Coimbatore.

I hereby declare that the project titled "Online Inventory System" submitted in partial fulfillment for the award of M.Sc Software Engineering degree is my original work and that has not previously formed the basis for the award of my degree or any other similar title.

Coimbatore  
Date : 26/9/2002



S. Karthikeyan  
(Reg. No. 9937S0078)



## Skynet Infoway India (P) Ltd.,

Kumaran Road, Opp. Sabari Diamond, Tirupur - 641 602. Tel : 0421-706225 Mobile : 98422-21476, 70291  
E-mail : skynet@eth.net

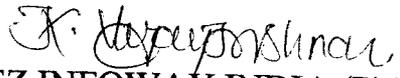
14.9.2002,  
TIRUPUR.

### **TO WHOM SO EVER IT MAY CONCERN**

THIS IS TO CERTIFY THAT **MR. S.KARTHIKEYAN, M.Sc** SOFTWARE ENGINEERING, KUMARAGURU COLLEGE OF TECHNOLOGY HAS COMPLETED THE PROJECT "**ONLINE INVENTORY SYSTEM**" DURING HIS 7<sup>th</sup> SEMESTER AND THE PROJECT WAS COMPLETED SUCCESSFULLY UNDER OUR GUIDANCE.

DURING THIS PERIOD (JUNE 2002 TO SEPTEMBER 2002) HIS PERFORMANCE AND CONDUCT WAS FOUND TO BE GOOD.

THANKING YOU

  
FOR SKYNETZ INFOWAY INDIA (P) LTD,

Tel : 0421 - 206225  
**Skynet Infoway India (P) Ltd.**  
Opp. Sabari Diamonds,  
Sabari Salai,  
Tirupur - 641 602.

# ***ACKNOWLEDGEMENT***

# **ACKNOWLEDGEMENT**

I extend my profound gratitude to **Dr.K.K.Padmanabhan B.Sc. (Eng.), M.Tech, Ph.D.**, Principal, Kumaraguru College of Technology, Coimbatore for providing me an opportunity to do the project work as part of the curriculum.

I am greatly thankful to Mr. Venkatesh Managing Director of Pentasoft, Tirupur and **Skynetx Infoway India (p) limited** for guiding me and permitting me to take up the project work.

I express my sincere thanks to **Prof.Dr.S.Thangasamy B.E. (Hons), Ph.D.**, Head of the Department, Computer Science and Engineering for his valuable suggestions and advice.

I am immensely thankful to **Mrs. Devaki B.E, M.S** my project guide and course coordinator. For the valuable guidance and support throughout my project.

I express my sincere thanks to Mr. S.Gowriprasad, **Skynetx Infoway India (p) limited** for the advice, suggestions and encouragement throughout the course of this project.

My gratitude is due to all staff members of Skynetx Infoway India (p) Limited, my parents and all my friends for their moral support and encouragement for successful completion of my project.

## ***SYNOPSIS***

## **II SYNOPSIS**

The task is to set an online store for selling and delivering information about the products that are available to its customers. The online store will enable the customer to browse all the products that are available in the store and can also purchase the products either by cheque DD, money order and credit card also. The products are dispatched to the customer by parcel mail.

### **THE PROCESS:**

The customer enters the home page of the online inventory store. This page has links for newly released products, existing product views and comparisons. The new product link will take the customer to the new product profile and existing product link will take the customer to the existing products list.

The customer selects either of the links and enters the main page of a particular product. This page has many sections and has links to them

On selecting the “BRAND NAME”, the customer is provided with the list of products that are available under that particular brand and with a check box for selecting them. The customer can click the check boxes for selecting the item and press the “ADD TO CART” button. This enables the user to add the selected products in to the cart.

The customer will also be provided with a “SHOW CART” button. This button enables the customer to view the items that are selected and placed in the cart.

The customer will also be provided with the billing provision of the selected products. The customer can also select the payment mode to buy the item.

# INDEX

<b>I</b>	<b>Acknowledgement</b>	2
<b>II</b>	<b>Synopsis</b>	4
<b>1.</b>	<b>Introduction</b>	6
1.1	Project overview	6
1.2	Online inventory system	8
1.3	Need for Online inventory system	8
1.4	Organization profile	8
<b>2.</b>	<b>Back ground study</b>	11
2.1	Existing system	11
2.2	Draw back of existing system	11
2.3	Proposed system	12
<b>3.</b>	<b>Problem formulation</b>	15
3.1	Main objectives	15
3.2	Specific objectives	15
3.3	Methodology	16
<b>4.</b>	<b>Platform selection</b>	18
4.1	Hardware environment	18
4.2	Software environment	19
4.3	Software features	20
<b>5.</b>	<b>System Analysis</b>	25
5.1	Analysis	25
5.2	Feasibility analysis	29

<b>6.</b>	<b>System Design</b>	32
6.1	Output design	33
6.2	Input design	34
<b>7.</b>	<b>System testing &amp; Implementation</b>	37
7.1	System testing	37
7.2	Implementation	39
<b>8.</b>	<b>Conclusion</b>	42
<b>9.</b>	<b>Scope for further development</b>	44
<b>10.</b>	<b>Appendix</b>	46
	Sample forms and reports	46
	Table structure	57
	Block diagram	63
	Control flow diagram	64
	Data flow diagram	65
	Customer and company relation	66
	References	67

# ***INTRODUCTION***

# **1. INTRODUCTION**

## **1.1 PROJECT OVERVIEW:**

Online inventory is exchange of goods and services for value on the Internet. Since connectivity over the Internet is cheap, increasingly secure and built in standards which makes communicating with any one a straightforward task.

Certain key factors driving the growth of online inventory system are:

- Lower purchasing costs
- Lower cycle time
- More efficient and effective customer service
- Lower marketing costs
- Improve sales opportunities
- Improve sales turn over

The adoption of the online inventory system by both company and as well as the customers provide too many opportunities for business.

## **FIRST A GROWING STANDARD:**

It means business can communicate transactional information with other business more effectively (B 2 B). In B 2 B the goods and services are sold for another business on the web.

## **SECOND A GROWING CHANNEL:**

For efficient delivery of goods and services to customers is known as

B 2 c (Business to customer).

In business to consumers, the companies market the goods to their customers online in a more personalized dynamic environment. Customers will also look more frequently on the Internet for the delivery of services.

In short online inventory system will dramatically impact the way of goods and services that are managed bought and sold all the way from manufacturer to the customer.

## **1.2 ONLINE INVENTORY SYSTEM:**

Online inventory system is an E-commerce based system (Business to Consumer) that enables users to gather information about the products that are available. This Online inventory store enables the customers to browse the list of products that are available in the store.

When the user visits the website they are provided with the list of products that are available with the company. The category lists hyperlink links to the sub category of that category, which shows the list of products when clicked, the full details about the particular product including price, picture and several other details about the product. The customer can view the details, select the products and put them in to the cart. When the customer selects the products, clicking the order button for placing order can purchase it.

On completion of the product selection the customer has to confirm the purchase by clicking the "MAKE PURCHASE BUTTON". The shopping cart shows all the items that are selected for purchase. The customer can also press the "REMOVE" button to remove any product. On pressing the "PURCHASE" button the customer has to fill details such as contact information, billing information and payment information. If the mode of payment is credit card the customer is required to enter the details for credit card verification. The customer confirms the entry of details. If the credit card is invalid, a message informs the customer that transaction cannot be processed.

If the customer is valid, then sales bill is displayed to the customer. The system enables the administrator to update the details in the product table on the web and view the reports that are generated by the system. For this, the administrator should sign in with a password assigned. Other users will not be able to view the details or alter any details.

### **1.3 Need For Online Inventory:**

The Internet area has forced marketing strategies to a new dimension rather than customer going to shop and search for detailed information of products. Internet provides faster and economical way of marketing.

Products coming from many companies facing so much competition and marketing needs more strategies like extensive information about the product. Online inventory helps the customer in identifying the new products and the right products at the right time. Online inventory eliminate the following drawbacks that include the manual system.

- Time consuming process for selecting the products
- Time constraints and availability of the system.
- Time consuming order processing

Thus, online inventory system can over come the drawbacks of the manual system and provide the complete system with lot more features.

### **1.4 ORGANIZATION PROFILE:**

**SKYNETZ INFOWAY INDIA (P) LTD** since its inception in 1992 has been specializing in designing total business solutions for several markets such as Automative

Distribution, Manufacturing, Banking and Financial services industry. They invest resources up front to analyze and comprehend the business specific needs. Their process, which is a key factor behind any successful software development then we move to draw effective business processes for automated working program them as reusable components prototype them as modules and / or systems in multiple environments before eventually coming out with mature and rugged software products for the enterprise computing that are comprehensive yet economical.

At Skynetx infoway, they build powerful solutions and comprehensive software solutions to our clients who are keen on using technology to introduce an automated ambiance across their enterprise. Ambiance in which professional can excel to out perform themselves and the competition.



## ***BACKGROUND STUDY***

## **2 BACKGROUND STUDY:**

### **2.1 EXISTING SYSTEM:**

The existing system is very primitive in which the customer visits the shop physically visits the shop, searches and selects the products. Then the order is processed and bill is generated using an application package developed for that purpose and the mode of payment is also Manual.

The company has many dealers and the information is gathered on dealer – sales basis. Individual stock is maintained with each dealer. The total stock and total sales are obtained by adding the dealers stock and sales respectively.

### **2.2 DRAWBACKS OF THE EXISTING SYSTEM:**

The existing system involves time-consuming process, where the customer visits the shop and searches for necessary products under different categories, which is time consuming and tedious process. The mode of payment is manual.

The above-mentioned difficulties with existing system have made it unfriendly to customers. Most of the work has to done manually. Since individual stock is maintained with the dealers, it is time-consuming process to find the products availability, total stock and sales.

The above difficulties in the existing system enabled the development of fully customized system, which includes product selection product comparison, product shopping, money transaction over the internet in a single cycle with ordering products, billing payment and reports generation activities all bound together.

### **2.3 PROPOSED SYSTEM:**

The primary objective of the newly proposed system is to overcome the drawbacks of the existing system the features of the existing system are:

- Global marketing.
- Easy accessibility for the customer with the company.
- Competing with the current technologies.
- Centralized and automated order processing.
- Planning the future business strategy.

#### **Global marketing:**

The proposed system takes the products from local shop to global competition with the help of Internet. These customers anywhere in the world can place orders with the company at any time. The purchase cost of the customers is very much reduced.

#### **Easy accessibility for the customer and company :**

The proposed system enables the registered users to purchase products round the clock from any where in the world. Guest users (unregistered users) can view the product information only. The consumers can gain knowledge about the salient features of several particular items. The online inventory system provides an easy way for the company to update the products information and easy access to the inventory from any part of the world.

#### **Competing with the current technologies:**

The proposed system has the facility to search the products using ID, Category and price. This will help users find the required products from the group of products. The

users can pay the bill amount through various modes of payment like Credit Card, DD, and Cheque etc.

**Centralized and automated order processing:**

The proposed system reduces the time taken by manual order processing with fully automated order processing system.

Centralized control over the sales, improves the productivity of the company.

**Planning the future business strategy:**

The proposed system has a control of centralized purchase and sales. It will reduce the inventory cost also.

The future business strategy can be planned across to the requirements of the customers and according to the latest arrivals.

# ***PROBLEM FORMULATION***

### **3 PROBLEM FORMULATION:**

#### **3.1 MAIN OBJECTIVES:**

The main objective of this project is to design, develop and implement online inventory system for **M/S Skynetx Info Way India (p) ltd** to enable consumer to buy their products on the Internet. The developed system should be user friendly and the customers should feel easy in selecting and purchasing products. The system should provide various modes of payments both electronically and non -electronically.

The system should have searching facilities to search for a product if the code is known or search by category or by price. The system should have fewer options and simple design in order to make the files to download from the Internet quickly. The buying routine should be simple. The system should acknowledge the user after the order receipts. The system should also have a feed back mechanism for users they want.

#### **3.2 SPECIFIC OBJECTIVES:**

Specific objectives are to generate output such as

- Item wise sales report
- Date wise sales report
- Fast moving items sales report
- Items that are not in the reorder level
- Party wise sales report
- Stock wise report

### **3.3 Methodology:**

Structural approach has been used in the system. This approach begins with the system specification that identifies the inputs, outputs and final aspects of the system. The specifications are the used as the basics for graphical representation.

The next step is definitions of the modules and their relationship using structured tools such as DFD's. Logical design proceeds from top down. General features such as representing inputs are identified first. Then the structural design partitions a program in to small independent modules. Thus in a structural design we try to minimize the complexity of the problem & make it managed by sub-dividing in to smaller segments which is called modularity or decomposition.

Our proposed system sub divided in to following modules

- Home page design (HTML)
- User registration module
- Product view and comparison
- Billing
- Credit card validation
- Feed back updating

The above modules are integrated with home page by hyperlink. Database updating in corresponding modules are done using servlet side programming and ODBC controls.

# ***PLAT FORM SELECTION***

## **4 PLAT FORM SELECTION**

### **4.1 HARDWARE ENVIRONMENT:**

#### **SERVER:**

Processor : Pentium III 1.2 Ghz

Ram : 128 MB

Hard disk : 40 GB

Cd-Rom :52 x

Floppy Drive : 1.44 MB

#### **CLIENT:**

Processor : Pentium III 1.2 Ghz

Ram : 64 MB

Hard disk : 20 GB

Cd-Rom : 52 x

Floppy Drive : 1.44 MB

## **4.2 SOFTWARE ENVIRONMENT:**

Operating System : Windows ME  
Software : visual basic script  
HTML  
ASP  
Connectivity : ODBC  
Back end : MS access  
Web server : Jrun 2.0  
Browsers : Internet Explorer 5.5  
Tools : Adobe Photo shop 5.0

### **4.3 SOFTWARE FEATURES:**

#### **ABOUT VB SCRIPT:**

VBScript Version 5.0 was released in 1999. The important feature of Version 5.0 is the ability to use the **Class** statement to create your own class objects. Other new features of interest include the **Timer** function

VBScript, or by its full name, the Microsoft Visual Basic Scripting Edition language, is a simplified version of the Visual Basic and Visual Basic for Applications family of programming languages.

VBScript is a scripting language, more precisely a "scripting environment", which can enhance HTML Web pages by making them active, as compared to a simple static display. Specifically, VBScript was created by Microsoft to use either as a client-side scripting language for the Microsoft Internet Explorer (versions 3.0 and later) or as a server-side scripting language with the Microsoft Internet Information Server (versions 3.0 and later). A primary advantage for using the server-side approach is that the server processes the VBScript before it is transmitted to the client. Therefore, the client only receives an HTML page and we do not have to concern ourselves as to whether the browser can interpret the VBScript. In contrast, by using the client-side approach, you purposely transfer the workload to the browser in order to reduce the workload of the server.

ASP is an exciting technology from Microsoft that is of significant value to developers. ASP extends standard HTML by adding built-in objects and server-side scripting, and by allowing access to databases and other server-side ActiveX components.

For many Web-application developers, VBScript may very well be the most important programming language.

## **ACTIVE SERVER PAGE (ASP):**

The active server page (ASP) has several built in objects they are listed as follows,

- APPLICATION
- ASP ERROR
- OBJECT CONTEXT
- REQUEST
- RESPONSE
- SERVER
- SESSION

In the good old days (a few years ago!), most Web sites were created with HTML and simply displayed static pages. A few of the more adventurous programmers would use C to design a dynamic Web site utilizing the CGI technology. However, these techniques were plagued with security concerns and did not scale well to large sites. So, in general, dynamic sites remained relatively few in number and were time consuming and expensive to create. The introduction of the scripting languages, which could be embedded inside HTML code, opened new doors for dynamic site development.

Active Server Pages (ASP), which managed to arrive just in time for the explosive growth of the World Wide Web, was a next logical step for Web-based application development. Introduced in 1996 by Microsoft, Active Server Pages proved to be an exciting, new technology that extended standard HTML by adding built-in objects, server-side scripts, access to databases, and ActiveX components.

Another important development by Microsoft was to make the ASP scripting environment compliant with the Component Object Model (COM). COM created a standard communication mechanism between components. This step is allowed for non-vendor components with other components in a process called OLE automation.

ASP employs a scripting environment and VB SCRIPT is the default scripting language of choice. However we can use other languages as long as they have a scripting engine that is compatible with the ActiveX scripting standard.

Fortunately, we are not limited to just using Active Server Pages with Microsoft's Internet Information Server (IIS) and this has enhanced the popularity of ASP. For example, Chili! Soft is a proven industry leader in providing ASP engines for use with Web servers from Fast Track, Lotus, Netscape, O'Reilly, and many others. And Halcyon Software offers a brilliant Java-based implementation of the Microsoft ASP framework, allowing developers to deploy ASP applications on any platform.

Meanwhile, ASP continues to evolve. With the arrival of the millennium came the arrival of ASP version 3.0. Version 3.0 was released along with Internet Information Server (IIS) version 5.0 as part of the highly anticipated Microsoft Windows 2000. By far, the most important new feature of version 3.0 is the addition of a seventh, intrinsic object called **ASPError**, which should greatly simplify error handling.

Other new features include the addition of three new methods to the **Server** object, and two new methods to both the **Application** object and the sessionobject.

Active Server Pages has ultimately proven to be of significant value to developers and fueled a revolution in the development of Web-based applications.

### **MS ACCESS:**

Ms-access is one of the simple and easy databases. It is a Microsoft product. We can easily store and retrieve the data's from it. In ms-access we can easily create the table and can the fields. There are many options for setting the type of data's to be entered in the particular field. If we want we can allow the fields to be empty and also we can also avoid null items in the field.

We can connect most of the front-end with the ms-access very easily. Particularly Visual basic can be easily connected with it. For our identification about the fields we can refer the description part and can get details very easily. We can copy the database from one area to another and it is very much flexible to the user

Though it is one of the best database it has some disadvantages also. It gives less security when compare to other databases. We can easily view the data's it the database. But it gives full flexibility for the user to store and retrieve the data's from it.

# ***SYSTEM ANALYSIS***

## **5 SYSTEM ANALYSIS:**

### **5.1 ANALYSIS:**

The proposed system is a fully automated order processing system, which includes purchasing, shopping, ordering, billing, payment and many other transactions like report generation activities can be made here.

In order to achieve the proposed system the initial requirements of the system is described as follows,

#### **➤ VIRTUAL SHOP**

It has product details of all the products present in the company. The customers can buy or view the products that are present in the company over the Internet.

#### **➤ REGISTRATION**

To have a control on the users they must register with the company for purchasing the products. Only registered users can buy the products and others can only view the products i.e. unregistered users.

#### **➤ SHOPPING CART**

The shopping cart is for pulling the selected products. The shopping cart serves as a holder for the items selected.

#### **➤ SEARCH ENGINE**

There should be a search engine to search the products either by product name, product code number, and product category.

➤ ***COMPARISON OF PRODUCTS***

There should be a comparison option to help the users to compare the salient features of two or more products in all aspects.

➤ ***GUEST USERS (UNREGISTERED USERS) ENQUIRIES***

The guest user enquiry module is made to collect the requirements of the unregistered users and to update the server database. It is designed in such a way that the requirements of the guest users will be fulfilled when ever necessary.

➤ ***BILLING***

The bill is produced to the user as an acknowledgement of his order receipts.

➤ ***CREDIT CARD VALIDATION***

If the payment is made through credit card, then credit card authorization is carried out here and the result is given whether the credit card is valid or not and the credit limit is also verified.

➤ ***SALES DETAIL ANALYSIS***

Sales detail is designed in such a way that the company can obtain individual reports of the customer and also the overall turnover of the company can be obtained in a report format.

Accordingly to the requirement the system can be divided in to five different modules such as

**USER REGISTRATION:**

Users can register in this module only. Only registered users are used to buy online. The users are provided with a registration form, which they have to fill and submit.

The form has several details such as user name, password, e-mail address, phone number, address1, address2 etc. The user name or the user id is the primary key using the user name and associated with a password. The user must log on with the user name and password before buying the products online.

### **PRODUCT SELECTION:**

The products are stored in the product master table, every product has an id or primary key. Each product has a field category, which is a foreign key for the product master table and the primary key in the category table. This category ID field is used for listing by category on clicking the category links in the main page, the products are listed accordingly. Then the products are displayed for selection by clicking the check boxes, the corresponding products can be selected. Quantity can be entered in the text box and after clicking the “**ADD TO CART**” button the products are added to the cart.

### **ORDER PROCESSING:**

Once the product selection is over the user can order by clicking the order button.

There are five steps involved in order processing they are

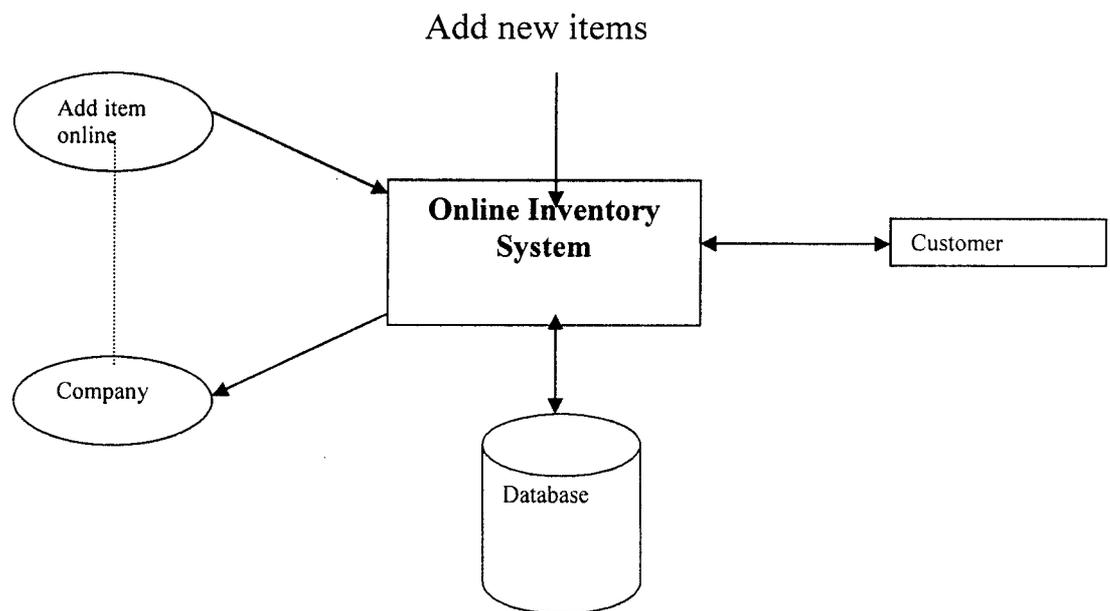
1. Check out whether the cart is empty or not and confirm the selected products. Selected products can also be removed from the cart during this step.
2. Check whether the user is a registered user or unregistered user. Registered user should sign in with the user name and password assigned.
3. Get the billing information, shipping address, contact details, payment details

4. If the payment mode is credit card, go for credit card authorization
5. After the payment is made produce the bill as an acknowledgement of the order receipt.

### **PRODUCT DETAILS UPDATING:**

Whenever there is a change in the existing product such as price, code number or any new product is supposed to be added it can be done only in this module. Only authorized users (the company) can only use this module.

The figure shows how the product updating is done



### **SALES ANALYSIS:**

The management can know the sales and stock, which can be viewed by the authorized persons only from anywhere in the world

In this module the reports are generated from the tables in the website. The reports generated are

- Stock status report
- Item wise sales report
- Date wise sales report
- Party wise report
- Fast moving items report
- Items that are in the re-order level

Reports are very useful for decision making and purchasing the items respectively.

## **5.2 FEASIBILITY ANALYSIS:**

### **TECHNICAL FEASIBILITY:**

A study of functions, performance and constraints that may affect the ability to achieve a proposed system is known as technical feasibility. Technical feasibility is frequently the most difficult area to access at the stage of system development process.

### **ECONOMICAL FEASIBILITY:**

Economical feasibility means an evaluation of development cost, weighed against the ultimate income or benefit derived from the proposed system. Economic feasibility justification is generally the bottom line consideration for most of the systems. The investment for the proposed system is less, compared to the turn over of the dealers. Since the coverage of the system is large, there can be increase in sales.

### **OPERATION FEASIBILITY:**

Operation feasibility is mainly related to human organizational and political aspects. The points to be considered are the changes developed with the proposed system. Already the users have knowledge and experience in the existing system. So it is easy to train them to work in the proposed system with more or less cost.

### **CONTROL AND SECURITY ANALYSIS:**

Since only the registered user can order in the proposed system. The users are controlled by authentication and data transmission is highly secure. All the data is transmitted through a secure socket layer.

# ***SYSTEM DESIGN***

## **6 SYSTEM DESIGN:**

The online inventory system is a three-layered architecture with online shop on the first layer, servlets on the second layer and the database is the third layer.

### **THREE LAYER ARCHITECTURE**

---

## **LAYER 1: ONLINE SHOP LAYER**

PRODUCT  
INFORMATION

PRODUCT 1

---

## **LAYER 2: SERVLET LAYER**

SERVLETS

---

## **LAYER 3: DATABASE LAYER**

PRODUCT MASTER

COMPANY

USER

INVOICE DETAILS

CREDIT CARD

BILL

---

### **6.1 OUTPUT DESIGN:**

During the output design phase the necessary outputs are planned and various reports are designed which provide the management to control the activities of the company.

Reports generated by the system are:

#### **SALES REPORT:**

This report shows the sales turnover for a company for the selected d period.

#### **PARTY WISE REPORT:**

This report shows the party wise sales figure for a particular period

#### **PAYMENT WISE REPORT:**

This report shows the payment wise sales analysis i.e. sales made by various modes of payments.

#### **FAST MOVING/TOP 10 ITEMS:**

Thus report shows the maximum sales of the top 10 items quantity wise.

#### **STOCK REPORTS:**

This report shows the inventory position of the company

#### **RE-ORDER LEVEL:**

This report shows the item, which has to be ordered.

## **6.2 INPUT DESIGN:**

The input needed for the program is determined by the output designed.

### **FUNCTIONAL SCREEN DESIGN:**

The screen layout was designed similar to the source documents according to which the terminal users enter the data. The screen title and field title are made self-explanatory.

### **DATA VALIDATION:**

The input data is validated to minimize the errors in the data entry. It is a time consuming process if the inputs are validated in the servlets in the server. The inputs are verified in the client side and then passed to the server for processing.

### **DATA BASE DESIGN:**

In this phase, the data base tables are designed using ms access database.

The various tables that are designed are

#### **1. USER TABLE:**

This table is used to store the detail of the user. User –id is the primary key in this table.

#### **2. PRODUCT MASTER:**

This table stores all the product details. The primary key field here is product-id.

#### **3. INVOICE TABLE:**

This table stores the sales details. Invoice id is the primary key in this field.

#### **4. INVOICE DETAILS:**

This table stores the details of each invoice in the invoice table. Invoice id is the primary key, which relates to invoice table.

**5. CREDIT CARD TABLE:**

This table stores the credit card details of the customers. Card id is the primary key. This table is used to check the program functions. In practical systems the corresponding credit card details are authorized from the corresponding bank web sites.

**SYSTEM DEVELOPMENT:**

Coding is a process of writing programs. Coding is done with high degree of readability and structured modular programming is done and simplicity is maintained for the easy system maintenance. Self explanatory variable is chosen for effective coding.

Documentation is necessary for system maintenance. Proper documentation is done while coding. The documentation includes procedure definition, purpose of the procedure. The arguments it takes and the proper documentation about the system is also done for further reference, modification, and expansion.

## ***SYSTEM TESTING AND IMPLEMENTATION***

## **7 SYSTEM TESTING AND IMPLEMENTATION:**

### **7.1 SYSTEM TESTING:**

Software testing is a very important and essential element in order to maintain the software quality. Software quality and assurance represents the ultimate review of specification design and coding. The increasing visibility of software as a system element and the cost associated with the software failure are motivating forces for a well planned testing.

The various phases involved under testing are as follows.

- 1) Unit testing.
- 2) Code testing.
- 3) Integration testing.
  - a) Top-down integration.
  - b) Bottom –up integration.
- 4) Validation testing.
- 5) Output testing.
- 6) User acceptance testing.

Thus the various types of testing are described briefly as follows,

#### **Unit testing:**

Unit testing mainly focuses on the smallest unit of the software. The unit testing is always a white box oriented and the step can be conducted in parallel for modules.

The module interface is tested to ensure that the information properly flows in to and out of the program unit under test. The local data structures are examined to ensure that data stored temporarily maintains its integrity during all steps in an algorithm execution. Boundary conditions are tested to ensure that the module operates properly at

boundaries established to limit or restrict processing. All independent paths through the control structures are exercised to ensure that all statements in a module have been executed atleast once. Finally all error-handling paths are tested.

Unit testing is considered as an equivalent to the coding step. After the source level code has been developed, reviewed and verified for correct syntax, unit test case design begins. Since a module is not a stand – alone Program.

Driver or stub software is developed for each unit test. The driver is mostly a main program that accepts test data. Such data are passed to the module and tested and the relevant results are received.

### **CODE TESTING:**

All the logical codes used in the sub-system are tested individually. All combination of code testing is performed and the results are compared with the original data. Thus, the code the code testing is done for all the codes of the system.

### **INTEGRATION TESTING:**

Integration technique is a systematic view for constructing the program structure. While at the same time conducting tests to uncover errors associated with interfacing. The objective is to take unit test modules and build a program structure that has been dictated by design. There are two methods of integration. They are,

- a) Top- down integration.
- b) Bottom –up integration.

## **VALIDATION TESTING:**

After the integration testing, software is completely assembled as a package, interfacing errors have been uncovered, and correction testing begins. Software testing and validation is achieved through a series of black box tests that demonstrates the conformity with the requirements. A test plan outlines the classes of tests to be conducted and a test procedure defines the specific test cases that will be used to demonstrate the conformity with the requirements. Both, the plan and the procedure are designed to ensure that all functional requirements are achieved, documentation is correct and other requirements are met, after each validation test has been conducted

## **OUTPUT TESTING:**

Output testing is done to test whether the software provides the desired output.

The output testing involves the checking of the output from the software from various dummy inputs. If the output provided is as expected, then the software can be considered to be giving the desired output for the inputs given.

## **7.2 IMPLEMENTATION:**

Implementation is the stage of the project in which the developed system is implemented in the real time environment. Thus it can be considered to be the most crucial stage in achieving a successful online inventory system.

The implementation plan consists of the following steps.

- Testing and developed system with sample data
- Detection and correction of errors
- Making necessary changes in the system

- Checking the reports with that of the existing reports
- Training and involvement of the user.

The system developed can be implemented in any system, which meets the basic requirements.

Online inventory system has been successfully implemented in the windows platform with jrun web server.

## ***CONCLUSION***

## **8 CONCLUSION:**

Online inventory system has been developed and has fulfilled the necessary conditions and basic requirements of the company. This system was tested and several errors were found and were corrected.

This system provides automated order processing and able the customer to purchase products round the clock from anywhere in the world. Thus the limitations of the existing system have been overcome thus making a local competitor as a global competitor.

***SCOPE FOR FURTHER DEVELOPMENT***

## **9 SCOPE FOR FURTHER DEVELOPMENT:**

The system is developed in such a way to incorporate all the current requirements of the customer. In future the system can be enhanced to provide more functionality such as mail services to the registered customer and also to enhance the facility of net banking.

The dynamic advertisement on the web page will be included in the system for future.

# ***APPENDIX***



# COMPANY REGISTRATION FORM

The image shows a screenshot of a web browser window titled "Company Registration Form - Microsoft Internet Explorer". The browser's address bar contains the URL "http://www.3m.com/.../company/registration.html". The browser's menu bar includes "File", "Edit", "View", "Tools", "Window", and "Help". The toolbar contains buttons for "Back", "Forward", "Stop", "Home", "Search", "Print", "Mail", "Print", and "Exit". The browser's status bar at the bottom shows "Date" and "Local Internet".

The main content area of the browser displays a registration form with the following text and fields:

Please Enter Your Company Details To Serve you Better. Thanks!

Company Name:

Address 1:

Address 2:

Address 3:

City:

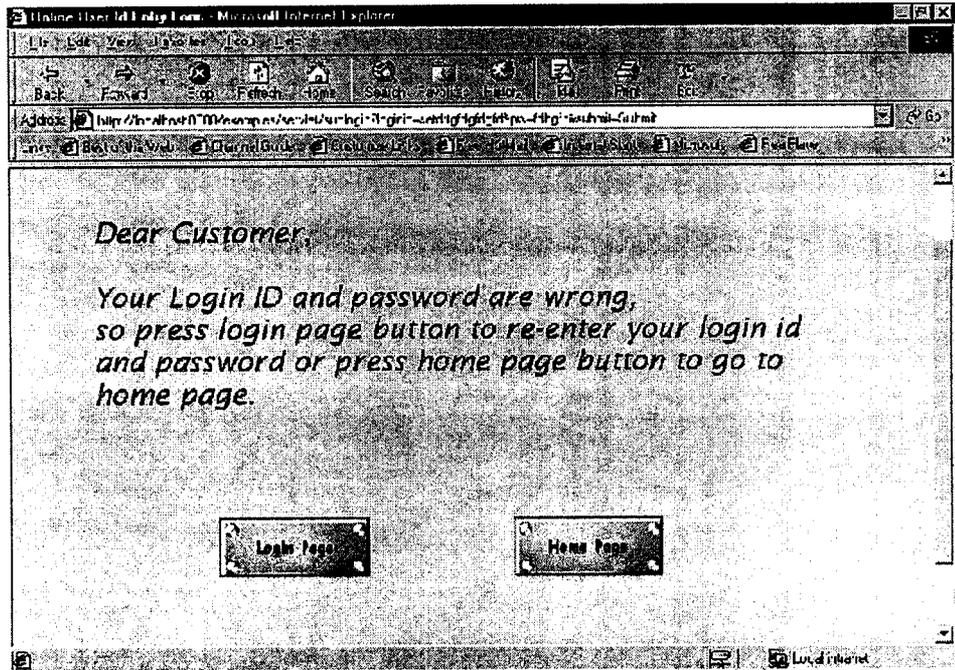
Zip/Postal Code:

State:

Country:

Phone Number 1:

## INVALID PASSWORD SCREEN



## SALES BILL

SRI SARAVANA DISTRIBUTORS  
121 EASWARAN KOIL STREET  
TIRUPUR-4

**Sales Bill**

Invoice No : 27		Date : 08/04/2001	
S.No	Description	Unit Price (in Rs)	Quantity
1	Zoom Shot Camera	8900.00	1
2	Pocket Power P.V. 100	5500.00	1
Net Amount 49600.00 (4%)		Service Charges 8200.00 (16%)	
			<b>Total : 13515.00</b>

Delivery Address:


Payment Mode :

Credit Card

Cheque

D/D

Cash

Approval No : K20AB0. Reference number for correspondence:

## SEARCH FORM

The screenshot shows a web browser window with the title 'Search results - Microsoft Internet Explorer'. The address bar contains the URL 'http://www.alphastore.com/asp/serch/serchPH.asp?cid=114'. The browser's menu bar includes File, Edit, View, Favorites, and Tools. The toolbar contains icons for Back, Forward, Stop, Refresh, Home, Search, Print, Mail, Print, and Exit. The browser's status bar shows the address 'http://www.alphastore.com/asp/serch/serchPH.asp?cid=114' and the page title 'SRI SARAVANA DISTRIBUTORS'. The main content area displays the search results for 'CASIO' with the search term 'scientific calculator'. The results are presented in a table with three rows, each containing a checkbox, a product ID, a product name, and a price. Below the table, there is an 'Add to Cart' button and an 'Order' button.

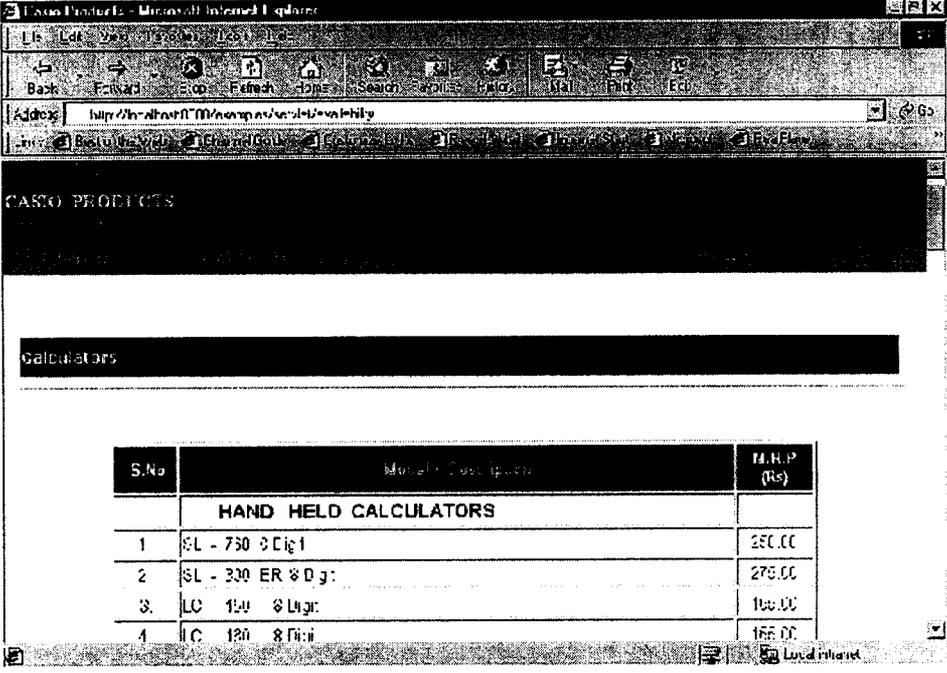
**SRI SARAVANA DISTRIBUTORS**

Search for

**CASIO** . Search results for Calculator

SCIENTIFIC CALCULATORS			
<input type="checkbox"/>	23	FX 82 T	1596.00
<input type="checkbox"/>	24	FX 6500 G	2900.00
<input type="checkbox"/>	25	FX 99 Vv	2445.00

## PRODUCT LIST



The screenshot shows a web browser window with the title "Local Internet Explorer". The address bar contains the URL "http://himalaya.com.np/...". The page content includes a header "CASIO PRODUCTS" and a sub-section "Calculators". Below this is a table listing four models of hand-held calculators with their respective M.R.P. (Rs).

S.No	Model / Description	M.R.P (Rs)
<b>HAND HELD CALCULATORS</b>		
1	SL - 750 8 Digit	250.00
2	SL - 300 ER 8 D g:	275.00
3	LC 150 8 Digit	150.00
4	LC 120 8 Digit	155.00

**PRODUCT SELECTION FORM**

**SRI SARAVANA DISTRIBUTORS**

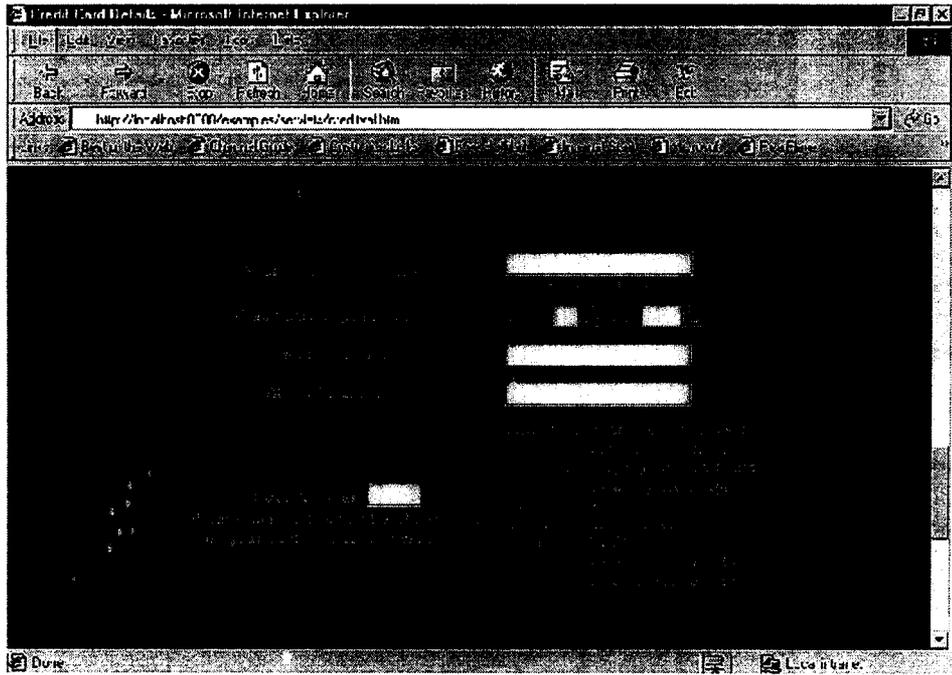
Search for

**CASIO** - Select Products and Add to Cart

Check	Picture	Product Name	Description	Price
<input type="checkbox"/>		DS-300	Ordinary Casual camera.	Rs.2225
<input type="checkbox"/>		SLR EOS	Digital Camera	Rs.18500

**Add to Cart**

## CREDIT CARD FORM



## FEED BACK FORM

Feedback Microsoft Internet Explorer

File Edit View Favorites Tools Help

http://www.hcl.com/Feedback/FeedbackForm.html

Feedback Form ( \* Indicates Required Field )

Feedback information

Name\*

Company Name\*

Address - Line 1\*

Address - Line 2

City\*

Country\*

Pincode\*

Phone Number

Fax Number

E-Mail Address\*

Your Suggestions \*

© 1999 HCL Corp. All rights reserved.

## CLOSING STOCK FORM

**SRI SARAVANA DISTRIBUTORS**  
**121 EASWARAN KOIL STREET**  
**TIRUPUR**

Closing Stock as on 10/04/2001

S.No	Item Name	Quantity	Amount
1	Calculator-S22000	10	4200.00
2	Watch-F50-55	5	4500.00
3	DX 2 II Camera	4	6000.00
4	DX- L (QD) Camera	1	2000.00
5	AF-8 Camera	1	4000.00
6	BF-8C Camera	1	3000.00
7	BF-9C Camera	4	16000.00
8	Room Shot Camera	3	18000.00
9	Room 3D Camera	10	75000.00
10	Super-05 Camera	1	12,500.00
11	EOS-8C Kit	1	17,500.00
12	EOS-500-Digital	1	25,000.00
13	Tris MP3	1	500.00

## PARTY WISE SALES REPORT

**SRI SARAVANA DISTRIBUTORS  
121 EASWARAN KOIL STREET  
TIRUPUR-4**

Party Name : Mahalingam & Co.,

S.No	Item Name	Quantity	Amount
1	Q-35MMV-1MW Watch	2	3750.00
2	MQ 27 STEEL Watch	1	6715.00
3	MTP-1091Q Watch	4	10300.00
4	EX-II CC Camera	-	2500.00
5	AF-3 Camera	1	4500.00
6	3F-20 Camera	-	3500.00
7	SP 90 Camera	1	16300.00
8	Zoom-SLo. camera	2	14300.00
9	Zoom-85 Camera	10	75300.00
10	Super-105 Camera	-	12,500.00
11	EOS-20 Kii	-	17500.00
12	EOS 20 Digital	-	2500.00
13	Thru-1/134	-	2500.00

## TABLE STRUCTURE

### COMPANY TABLE:

<u>Field Name</u>	Type	size
Company_id	Text	10 (primary key)
Company_name	Text	30
Company_add	Text	30
Company_add1	Text	30
Place	Text	30
City	Text	30
State	Text	30
E-mail	Text	30
Phone	Numeric	10
Sales_amt	Double	10,2
Discount	Double	10,2
History	Text	100

This table is used to login to the company and to up date the product details and to take reports. This table provides administrator id and password.

**CUSTOMER TABLE:**

Field Name	Type	Size
Company_id	Text	10 (primary key)
Company_name	Text	30
Company_add	Text	30
Company_add1	Text	30
Place	Text	30
City	Text	30
State	Text	30
E-mail	Text	30
Phone	Numeric	10
Income	Double	10,2
Purchase_amt	Double	10,2
History	Double	10,2

The above table is used to store the registered user id and password details.

**PRODUCT TABLE:**

FIELD NAME	SIZE	TYPE
Product_code	Text	10 (primary key)
Group	Text	10
Subgroup	Text	10
Product_name	Text	30
Product_img	Image	-
Product_stock	Double	10
Product_unit	Double	5
Product_rate	Double	10,2
Prod_discount	Double	10,2
Company_Rf	Text	30
Product_sp	Text	100
Tax	Single	5,2
Warranty	Single	4
Batch_No	Single	7
Batch_Date	Date	8

This table is used to store the product information and current inventory levels.

**SHOPPING CART FIELDS:**

FIELD NAME	TYPE	SIZE
Customer_Id	Text	5
Product_code	Text	5
Product_Name	Text	30
Qty	Numeric	6
Rate	Numeric	10,2
Tax	Numeric	10,2
Delivery_charge	Numeric	10,2
Discount	Numeric	10,2

The above details are stored in the table for customer reference, the company to identify the guest user requirement.

**SALES TABLE:**

FIELD NAME	TYPE	SIZE
InvoiceNo	Text	5
InvoiceDate	Date	8
PartyName	Text	30
Unit_Descrip	Text	10
Rate	Numeric	7,2
Netamt	Numeric	12,2
Sales_amt	Numeric	12,2
Discount	Numeric	10,2
Packing	Numeric	10,2
Tax_amt	Numeric	10,2
Misc	Numeric	10,2
Delivery_Add	Text	30
Delivery_Add1	Text	30
Delivery_Add2	Text	30
Delivery_Info	Text	30

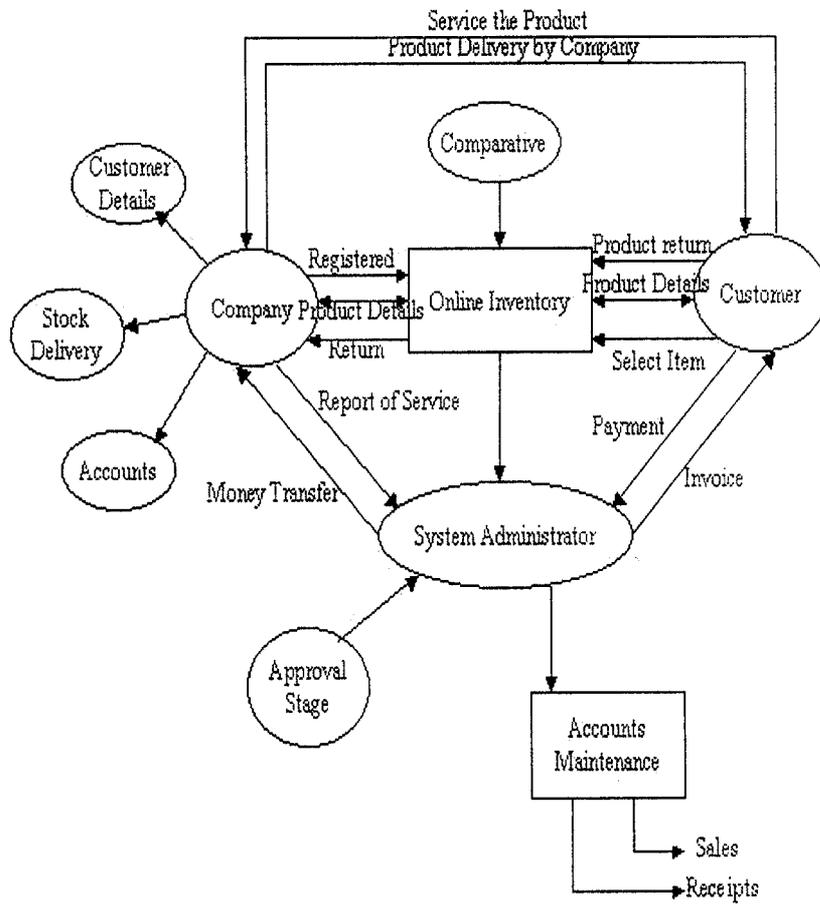
The above table is used to store the billing information and delivery information. This is only for company view and also for the generation of reports.

**CREDIT CARD TABLE:**

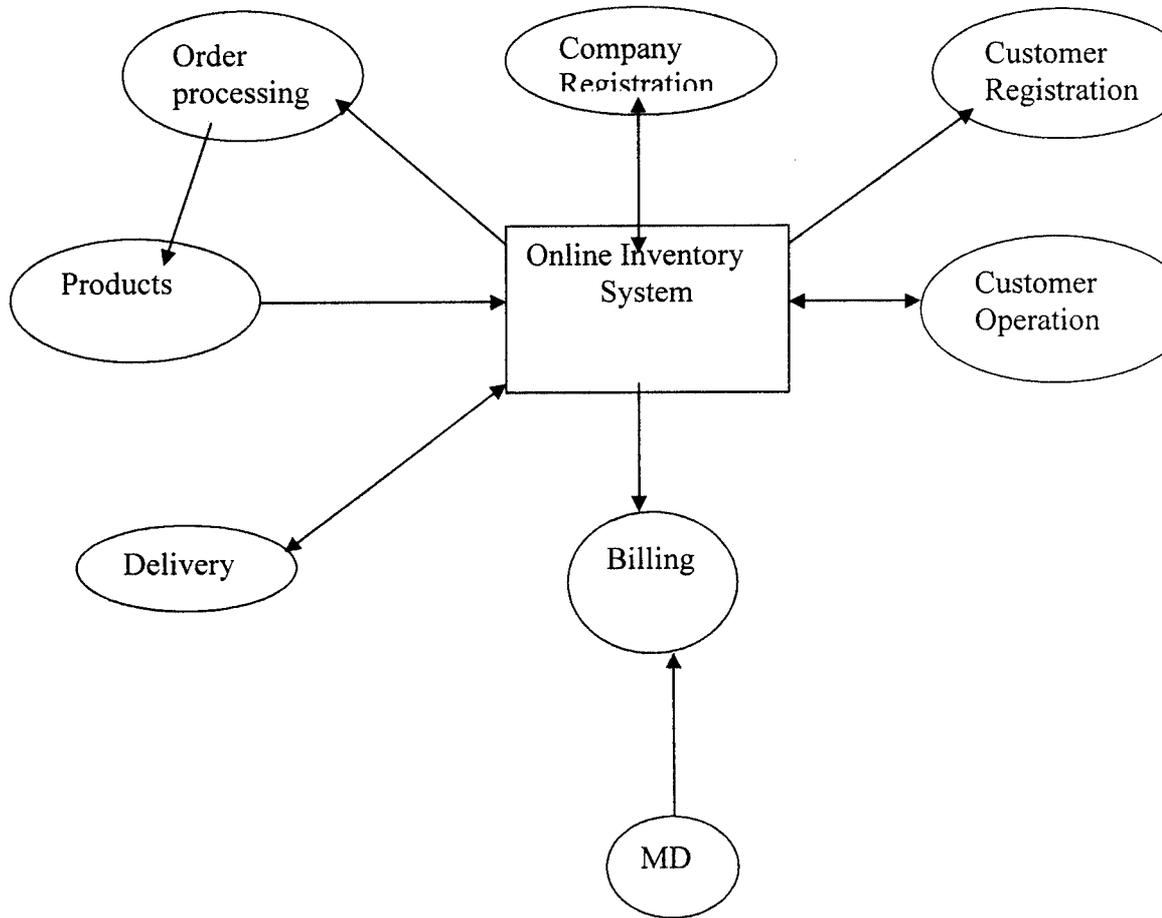
<u>FIELD</u>	<u>TYPE</u>	<u>SIZE</u>
Card_No	Numeric	16
Card_Name	Text	30
Card_type	Text	5
Card_exp	Date	8
Credit_limit	Numeric	12,2
pinno	Numeric	10

The table is tested using the credit card details and the same is used at the time of testing. After billing the credit card validation is done at the corresponding bank web sites.

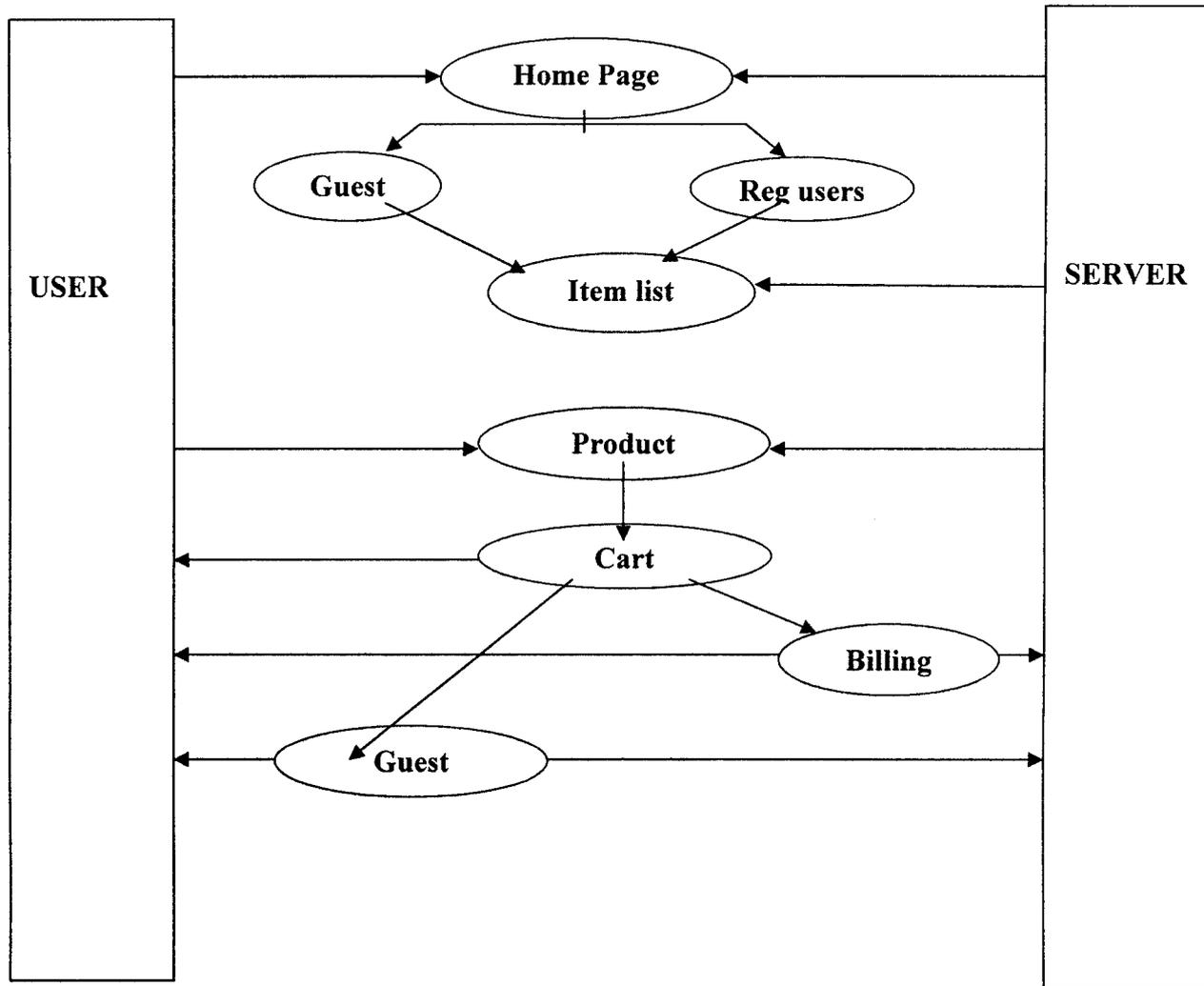
**BLOCK DIAGRAM OF ONLINE INVENTORY SYSTEM:**



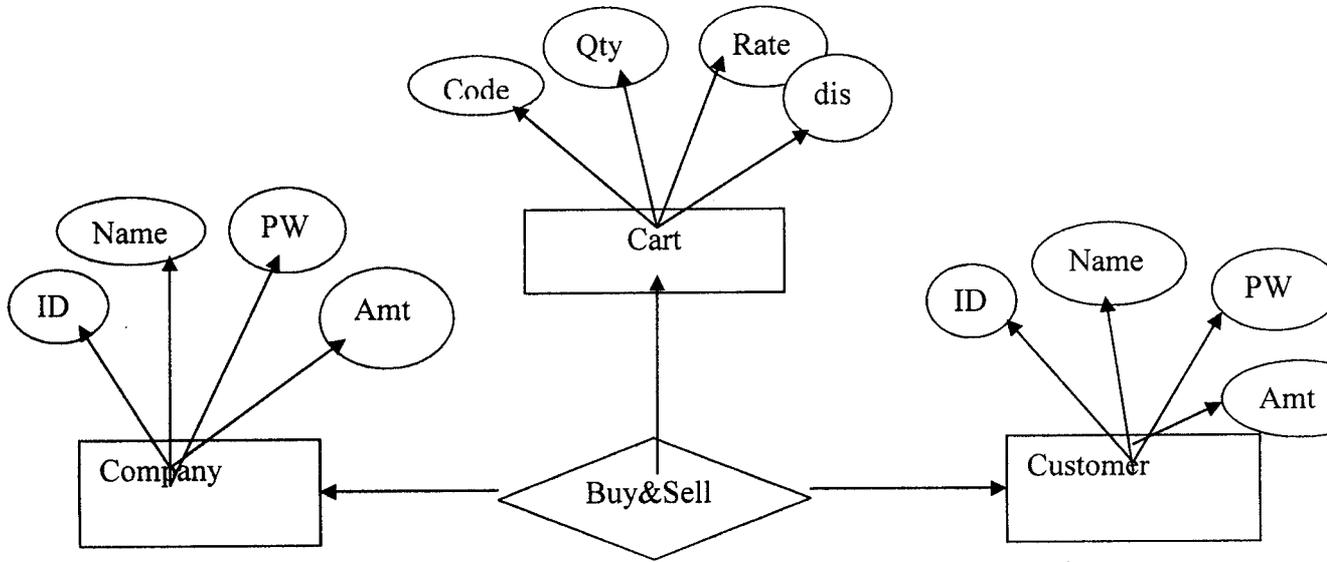
**CONTROL FLOW DIAGRAM**



**DATA FLOW DIAGRAM:**



Customer and company relation:



**References:**

Visual basic 6/0 Black book  
- Steven holzner

Visual Basic Interactive Course  
- Tech Media

Visual Basic 6.0 Bible  
-Tata Mc Graw Hill

Software Engineering Concepts  
- Roger S Pressman

**[www.vbsourcecodes.com](http://www.vbsourcecodes.com)**

