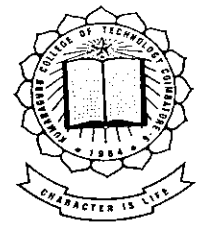

ELECTRONIC- DISTRIBUTOR NETWORK ADMINISTRATION AND RESELLER NETWORK ADMINISTRATION

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A PROJECT REPORT

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FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

In partial fulfillment of the requirements
for the award of the degree

of

MASTER OF COMPUTER APPLICATIONS

June, 2006

BONAFIDE CERTIFICATE

Certified that this project report titled **ELECTRONIC - DISTRIBUTOR NETWORK ADMINISTRATION AND RESELLER NETWORK ADMINISTRATION** is bonafide work of **Mr. N. K. NAVANEETHABALAN (Reg.No: 71203621031)** who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

16/6/06
Project Guide

Head of the Department

The Candidate with University Register No. 71203621031 was examined by us in the project Viva-Voce examination held on 30/06/2006

30/6
Internal Examiner

30/6/06
External Examiner

TRANSCOM SYSTEM

CERTIFICATE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the project titled "**Electronic-Distributor Network Administration and Reseller Network Administration**" is submitted to Transcom System in fulfillment of the requirement for the final semester degree of **MCA** to be awarded **Anna University**

The project is a bonafide record at work carried out by **Mr. N K Navaneethabalan** (Reg No:71203621031) under the supervision and guidance of **Mr.Preveen C** Project Engineer, Transcom System, Bangalore between a period of **January 2006 to June 2006.**

We are happy to recommend that **Mr. N K Navaneethabalan** who has completed the project successfully be an asset to any organization that he is going to serve in future.

Source code of the project developed by the trainee at Transcom System, Bangalore is not given to the trainee, as per the policy of the Company.

Thanking You
For Transcom System

Mr. Ram Mohan
(Technical Manager)

ABSTRACT

A decade ago, communication between the producer and the consumer was not in an organized way. Whatever communication there exists was time consuming. The main aim of this project is to reduce the communication time between the producer and the consumer. This project entitled "**Electronic–Distributor Network Administration and Reseller Network Administration**" somewhat has benefit than the E-Commerce.

The system supports the transaction of the goods according to the request of the network which has been further supported by a well developed logistics system with necessary inputs such as date, container details and other delivery information with concerned package number.

Distributor Network Administration is the heart of the overall system, which is the bridging system between the resellers and the company. To support such bridging functions, the proposed system has viewing and updating routines for the orders of the reseller network. In general, any ideal distributor will be having more number of resellers to increase their sales in their allotted region and handling the concurrent enquires from such reseller network is really a complicated routine.

Reseller Network Administration is the final stage of overall automation which is customer centered by nature. The defined RNA system only proves the existence of intermediate system by acting as a bridging component between the customers and the distributors. It also supports the online market of the company.

The system is designed and developed using J2EE technology. JSP as middleware and EJB for component technology. Oracle is supporting the entire

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

1.1 PROJECT OVERVIEW

The project entitled "**Electronic – Distributor Network Administration and Reseller Network Administration**" (E-DNA & RNA) is designed and developed using **J2EE** technology. The system has been designed by using JSP as middleware and EJB for Component technology. Oracle is supporting the entire system as a powerful back-end.

The existing system exists but is a simple e-Commerce application. It supports only online transactions like purchasing and selling the products. The process is tedious and time consuming and not fake proof. The proposed system is developed to bridge the gap between floor selling and E-Commerce. This system sky rockets the sales of the company as well as builds a healthy customer and channel network relation at all level.

The project is divided into six modules such as

- Administrator module.
- Distributor module.
- Reseller module.
- Customer module
- Mailing module.
- Searching module

1.1.1 Administrator Module

Administrator module covers the receiving and analyzing the total request of stock from the distributors, Distributor as well as Reseller Login Creation deletion and modification. The main task of admin module is to set the approval mode of the intent by confirming and fixing the logistic flow or keep it under pending mode. Apart from that, admin module controls various online and associated offline updates according to the daily flow on sales and production.

1.1.2 Distributor Module

This module handles various Distributor Level Routines on updating the regular reports, request for stock according to the cumulated intents of various resellers allotted under their network. Also they have facilities to see the status of their request, approval level of intent, and logistics information towards receiving the products from the company and mailing system control towards their reseller network.

Also they have facilities to send late alerts to the company in case of delay in receiving the products according to the commitment of the company.

1.1.3 Reseller Module

This module handles various Reseller Level Routines on updating the regular reports, request for stock according to various enquires for the list of products. Also they have facilities to see the status of their request, approval level of intent, logistics information towards receiving the products from the distributors and mailing system control towards their customer address book.

1.1.4 Customer Module

This module performs the various customer level routines. The customer places the order for the products to the reseller. The reseller and the customer communication is balanced one. The customer also search for the product and place the order to the reseller. Then the reseller issues the product in time. If any customer wants to become Reseller or Distributor then he has to register in the registration form.

1.1.5 Mailing System

This mailing system helps the entire network to maintain a streamlined communication in the automated system to provide the following.

- Updating the reseller requirements to the distributors
- Updating the distributor requirements to the company
- Updating the various approval level in delivering the products in the entire network
- Controlling the entire network through various updates in production, sales and logistics to provide service on time.

1.1.6 Search Engine

The search engine in the System provides the following.

- Allow the customer to choose the product category.
- Automate the selection of appropriate reseller while the customer enters the address.

The developed system covers the scope of the traditional system by means of taking online enquires to the company through the Reseller - Distributor Network without violating the channel policies wherein the online system adopted

1.2 ORGANIZATION PROFILE

Transcom System is a world-class provider of software services to the global Travel, Transportation and Logistics business domain. An SEI CMM Level - 5 assessed and ISO 9001 certified company, Transcom System employs 200 professionals worldwide. The company has a large offshore software production and competence development center in India.

Having earned the faith of customers around the globe, their solutions today, work across the Middle East. For them, how they do is as important as what they do. The company believes what makes them a cut above the rest is their excellence in IT process management and proficiency in managing multicultural sensitivities.

Transcom System has been growing, changing and adapting ever since they began their operations, but have never swerved from their mission to be the best in whatever they do. Made possible because of the creed close to their hearts –*they believe* - the belief in themselves to excel in everything that they do.

Transcom System's vision and its customer-focused delivery model are the cornerstones of what makes the company different and better than their competitors. Transcom System's vision is simple, "**to be the best business transformation solutions company, period**."

They realize this vision by employing sophisticated domestic resources managing client-side IT, Business Transformation initiatives executed by experienced off shore expertise and managed through industry best practices and standardized communication methodologies.

Services

They are aware of the importance of creativity and innovation in developing software solutions of exceptional quality. And the value addition that needs to be given for every service that we provide the client with. They undertake a software project as a fully integrated end-to-end service. In line with the corporate mission, they believe in delivering products and services within the schedules and budgets agreed on with the client.

- IT Staffing
- Quality Assurance
- Software Maintenance

Company's portfolio of prime products and superior services

- Software Development
- Professional Services
- Products
- Application Maintenance
- Business Process Outsourcing

CHAPTER 2

SYSTEM ANALYSIS

System analysis refers to taking known facts concerning a system, breaking these into their elements and establishing logical relationship between the elements, with the objective of producing a specification of requirements.

2.1 EXISTING SYSTEM

The various aspects of the existing system are thoroughly analyzed and the need for the proposed system is taken into account. In general, the existing system deals with e-Commerce. Using this system, customer can buy the products directly from the company without going through the existing channel network, which has already been developed by the company. In this case the selling base of the company might get increased. But, this would be violating the principles of the existing system, which has been followed in the company for a long time.

The existing System provides only the product information online. In developing countries like India, people are hesitant to buy the products by seeing such online information of the product. They want to test the piece in person and want to negotiate the price to the maximum extent so that they get the satisfaction of a purchase at low cost.

The existing system never ensures a demonstration process to the customer where they are forced to buy the product without full satisfaction.

The problems in the existing system are,

- Transactions are carried out only with credit card facility.
- Chance of fake transaction.
- Give fewer guarantees for customer order request.
- Disposal of existing distributor-reseller network
- Less secure
- Doesn't provide any assurance regarding product delivery.
- Less scope with fully offline system

2.2 PROPOSED SYSTEM

E-DNA & RNA is a variation of E-Commerce. The developed system is incorporated into company's website. The customer has to enter on to the website and the customer has to select the products and place the order in online directly via authorized resellers. The reseller will check the orders placed by customer and he can also place the order to the distributor to update his stocks. The distributor has similar functions like the reseller. The distributor has communication with both the administrator and the reseller.

The benefits of the proposed system are,

- The system provides both offline and online mode of transaction.
- The system shall be capable of transferring account details securely.
- Avoid fake transaction and guarantee customer's order request
- Retaining all of the existing chaining (Distributors- resellers).
- Customer can make a purchase with/without credit card facility.
- Online administration of distributors and resellers.
- Make assurance at each stage of product delivery.
- Data validation at the time of data entry

2.3 PROBLEM FORMULATION

2.3.1 Main Objective

The E-DNA & RNA system provides support for the automation of Customer – Reseller – Distributor - Company networking.

According to the functional flow of the system, any ideal customer might generate product orders through their reseller network and get the goods from the resellers. As a part of it, the reseller's request will added in the distributors account and such cumulative orders are getting forwarded to the company.

The system supports the further transaction of the goods according to the request of the network which has been supported by a well developed logistics system with necessary inputs such as date, container details and other delivery information with concerned package number.

Distributor Network Administration is the heart of the overall system, which bridges the system between the resellers and the company. To support such bridging functions, the proposed system has viewing and updating routines for the orders of the reseller network. In general, any ideal distributor will be having more number of resellers to increase their sales in their allotted region and handling the concurrent enquires from such reseller network is really a complicated routine.

Reseller Network Administration is the final stage of overall automation which is customer centered by nature. The defined RNA system only proves the existence of intermediate system by acting as a bridging component between the customers and the distributors. It also supports the online market of the company as it is being the receiving end of the mails sent by the customers and even it could be the demonstration end for the products as it is directly linked with the customer base.

2.3.2 Specific Objectives

The specific objectives of this system are:

Availability: Users can access this application 24*7*365 days all over the world.

Reliability: Ensure data consistency.

Maintainability: Support continuous updates to provide updated information and data.

Security: Support authentication, authorization and web-based security measure.

Portability: The system can be implemented in any platform.

Transactions: For order queuing, the pair of two or more actions that is performed together as a single action, the action succeeds or fails as a whole.

2.4 FEASIBILITY ANALYSIS

Feasibility analysis is the measure of how beneficial or practical the development of an Information System will be to the Organization. Once the problem is explained, information is gathered about the system to test whether the system is viable Technically, Financially and Operationally.

2.4.1 Feasibility Considerations

The key considerations are involved in the feasibility analysis:

- Economic
- Technical

2.4.1.1 Economic feasibility

Economic Feasibility is the measure of the cost-effectiveness of the proposed system. The investment to be made in the proposed system must prove a good investment to the organization by returning benefits equal to or exceeding the costs incurred in developing the system.

The proposed benefits of the system outweighs the costs to be incurred during system developed since the system does not require procurement of additional hardware facilities it is economically feasible. In addition capability of the system to incorporate future enhancement will improve the performance to suit the future need of the user and the fact that a single system can be used for a standalone organization as well as a corporate improves its marketing prospect.

2.4.1.2 Technical feasibility

Technical Feasibility is the measure of practicality of a specific technical solution and the availability of technical resources and expertise. It centers on the existing computer system (hardware, software, etc.) and to what extent it can support the new addition.

The proposed system is developed using J2EE platform and Oracle as back-end. These resources are already available with the organization along with the hardware resources that might be needed for the proposed system. Hence technically the system is feasible.

2.4.1.3 Operational Feasibility

The resources that are required to implement are already with the organization. The personnel of the organization already have enough exposure to computers. So the project is operationally feasible.

The proposed system has found encouraging support from the management as it will be of great use to them. The employees of the organization are also committed to have the system operational as it will save time and reduce their workload.

CHAPTER 3

SYSTEM REQUIREMENT AND SPECIFICATION

The Software Requirements Specification is a technical specification of requirements for the software product. The goal of software requirements definition is to completely and consistently specify the technical requirements for the software products in a concise and unambiguous manner.

The Software Requirements Specification is based on the system definition high-level requirements specified during initial planning are elaborated and more specific in order to characterize the features that the software product will incorporate the requirement specification is primarily concerned with functional and a performance aspect of the software product and emphasis is placed on specifying product characteristics is placed on specifying product characteristics without implying how the product will provide those characteristics.

3.1 HARDWARE REQUIREMENTS

- Processor : Intel Pentium/AMD
- RAM : 256 MB
- Hard Disk : 40 GB
- Display : VGA
- Floppy disk : 1.44 MB

3.2 SOFTWARE REQUIREMENTS

- Operating System : Windows 2000 Server
- J2EE Framework : JSP, SERVLET, EJB, JDBC, HTML
- Database : Oracle 8i
- Web Server : Web logic 6.1

3.3 SOFTWARE SPECIFICATION

3.3.1 J2EE

J2EE is one of the most popular editions of Java in the market today. Sun Microsystems has positioned it to fit multiple purposes in development. The J2EE environment ranges from core java to the most advanced forms of enterprise Java technologies like Servlets, JSP's, EJB's, Beans, JMS, JDBC, JTA, and Web Services etc.

We can easily develop applications and enhance it using J2EE. J2EE ranges from lightweight JavaScript programming, to application-specific programming with J2EE for Applications, and finally, full-fledged enterprise development.

Features:

- Visual Platform
- Ease of Use
- Flexibility
- Ease of Enhancement
- Easy to Understand

When we consider from the developer part J2EE provides facility to develop object models, database integration, server components, and internet/intranet applications easily. Programming in J2EE has always been building Windows programs. Windows works in an event-driven environment, meaning the user is in control, and programs need to create and respond to events (such as a mouse click). J2EE became inevitable in providing an elegant interface for working in this environment. And of course, INTRANET or INTERNET adds to its ability to work in a different type of visual environment. J2EE has been popular for one other kind of development-Databases. J2EE gives us even more deployment tools and wizards in the IDE to work with databases.

J2EE made several leaps forward in its ability to build and deploy corporate applications. The addition of classes for object-oriented development, creation of controls, and EJB objects all made J2EE a powerhouse for client/server development. J2EE is used in creating applications of all types, including standard client applications, server applications, and Internet applications.

3.3.2 JAVA SERVER PAGES

JSP, the Java-based technology, is a powerful solution to meet and fulfill the demand for fast and dependable web applications. JSP is an extension of the Java Servlet technology. The features of JSP that have contributed to its acceptance as an attractive alternative to other scripting languages are:

- **Platform independence**: The use of JSP adds versatility to a Web application by enabling its execution on any computer.
- **Separation of logic from display:** The use of JSP permits the HTML-specific static content and a mixture of HTML, Java, and JSP-specific dynamic content to be placed in separate files.
- **Ease of administration:** The use of JSP eliminates the need for

designers, content creators, and content managers to work together and develop Java-based applications in less time and with less effort.

- **Ease of use:** All JSP applications are run on major Web servers, including Microsoft IIS, BEA Web Logic Server, Netscape Enterprise Server, iPlanet Web Server, and Apache Web server. These applications are also available on Windows NT, Windows 2000, and Solaris 7.

3.3.4 Oracle 8.0

Introduction

Oracle is the most widely used database in the world. It runs on virtually every kind of computer, from PC's and Macintoshes, to minicomputers and giant mainframes. It functions virtually on all these machines.

Development of Relational database started in the early 70's.By 1980; relational databases were the most spoken of RDBMS. Along with the development of relational databases, and SQL also gained wide popularity.

Benefits of Oracle

- **Large Databases:** Oracle can be support database ranging from few MB to hundreds of GB. The data files can reside either on hard disks or on CD-ROMs.
- **Many Users**: It can support from one to hundreds of users. All necessary locking and protection of data are done by the database management software.

- **Large range of Tools:** It supplies many tools that provide front-end access to Oracle databases in the form of screens, reports etc. These tools though used mostly with Oracle databases, can also be used with non-Oracle data sources.
- **Portable:** The Oracle RDBMS software runs on more than 100 different hardware and operating system platforms. If an Oracle application is developed on one machine, it becomes relatively simple to port the application to another machine and operating system.
- **Backup and Recovery:** If something goes wrong depending on the type of failure, the DBA often needs to do very little to recover the changes since the database was last running Oracle can also perform 'hot' backups of files, which means that backup can be performed while the files are in use.
- **Distributed Databases:** It enables data physically located in various databases, which may even mean different machines at scattered locations, to be treated as one logical database. The physical structure is hidden from the application programs.
- **Security:** Standard Oracle database software provides many security facilities, including controlling access to the database, determining the Commands that can be run, limiting the amount of resources that can be used by individual processes and defining level of access to data on the database.
- **Client/Server Support:** Oracle supports a wide range of client and server machines, offering at tremendous choice in platforms for the database engine (the server) and front-end programs (either Oracle front-ends or non-Oracle tools).

CHAPTER 4

SYSTEM DESIGN

System design refers to an abstract representation of the system. It concerned with making sure the system will meet the requirements of the product, as well as ensuing the future requirements can be addressed. It also addresses interface between the system and other products.

4.1 INPUT DESIGN

Input design is the process of converting user-originated inputs to a computer-based format. It is the interface between the user and the system. An interface implies a flow of information. The most exciting trend in interface design is windowing. The user manipulates windows with a mouse. Even though the windowing environment is often considered to be graphical, some applications include manipulation of windows through keyboard.

Input design in "**E-DNA and RNA**" ensures secured inflow of data in a user-friendly way by means of the input forms that are displayed in Browser. This project contains forms like Order making from distributors and resellers, customers, Setting Status, Setting logistics information, Feedback details and Payments details.

4.1.1 Admin module

The admin module consists of the input forms like activating the User, Editing the registration details, Adding new products and category, updating the offer details, Setting Status for distributor's cumulative order and Setting Logistics for the indent.

The Activating the User is the important input form of the admin module. The User is allowed to create the Username and Password during the process of registration. The Administrator will activate the user after verifying the registration details. User name and Password is validated using existing user registration table. New product introduction is done by the admin through **add new product** form. Product details like Category ID, Category Name, Product id, Product name, Quantity, and Retail price are entered by the admin.

The offer description about the product is entered by the admin through **update product** form. The offer description about the product like valid period, percentage of discount and relevant details. This form helps the admin to calculate total amount of particular product after processing the discounts offered.

Admin set the status for the distributor's order using **Setting Status**. The Setting Status form contains order details of particular distributor. The Status of particular product will be updated either under "**Accepted**" category or under "**On Process**". The above information will be forwarded to the Distributors and they can view the same through "**Viewing Status**".

4.1.2 Distributor Module

The Distributor module contains the input design forms like Make Order form, Setting status for Reseller order, Setting logistics and comments to Company and Comments to Reseller.

The **Order Details** contains details like indent number; indent date, which are automatically generated. The distributor has to select category and products to enter the quantity required for each product. The distributor can also remove those products, which are wrongly entered. Finally cumulative order will be forwarded to the company.

Setting Status for the Resellers will be based on ordered quantity. The Status of particular product will be updated either under "**Accepted**" category or under "**On Process**". The above information will be forwarded to the Resellers and they can view the same through "**Viewing Status**".

The distributor can pass their comments to company as well as resellers by using the input forms of "**Feedback to Company**" and "**Feedback to Reseller**" accordingly through the mailing system. In general, this facility will be used by the Distributors either to solve clarifications or to update any problem occurring in delivery process of the goods.

4.1.3 Reseller module

The Reseller module contains the input design forms like Order Details form, Setting Status, Setting Logistics, Sending Feedback and Payments Details.

The **Order Details** form contains details like Order ID, Order date, which are automatically generated. The reseller has to select category and products to enter quantity required for each product. The reseller can also remove those products, which are wrongly entered. Finally cumulative order will be forwarded to the distributor through this form.

Setting Status for the customers will be based on ordered quantity. The Status of particular product will be updated either under "**Accepted**" category or under "**On Process**". The above information will be forwarded to the customers

The orders from customers are received using **Customer's Order Details** Form, which will be having the provision to select products from various categories listed in the site.

All fields of input forms are checked with the concept of Validation Checking using Script coding.

4.2 OUTPUT DESIGN

Output design is the most important and direct source of information to the user. Efficient, intelligible output design should improve the system's relationship with the user and it helps to make the decision. The outputs may be the processed data or sometimes the retrieval of the stored data. The outputs that are generated should be accurate, reliable and free from errors. A major form of the output is the hard copy from the printer. Outputs should be designed according to the requirements of the user.

4.2.1 Admin module

The output design in admin module has the viewing facilities to view cumulative order and other feedback forms generated by the distributor network using the forms of **"Order Details"**, " **Viewing feedback**", and **"Payment Details".** The distributor order contains order ID, order date, product id, Quantity of each product. In Admin module, feedback from various distributors resellers and customers about the product delivery and relevant queries can be viewed. The payments made by the distributors, resellers as well as customers are viewed by the administrator.

4.2.2 Distributor Module

The output design of the Distributor module supports the distributors in the following day-to-day activities.

- To view product order from the resellers.
- To view the accepted quantity of goods through "Accepted" category.
- To view the logistics information about the committed goods.
- To view the payments made by the Resellers.
- To view comments from company and reseller.

In "Setting Status form", the resellers' cumulative orders are received. Based on the order, the distributors will be processing the cumulative order to the company.

The distributor can view the status of the order from the company. The view status contains details like order ID, order date, quantity ordered, accepted quantity, on process quantity. The distributor can view the payment details of the resellers. The payments can be made through the Cheque, Demand Draft or Credit Card. The distributor can view the feedback comments from their reseller network through the mailing system.

4.2.3 Reseller Module

The output design of the Reseller module has been designed to support the reseller network through the following facilities

- To view the orders generated from the customers.
- To view the status of the order updated by distributors.
- To view the logistics of the order according to the delivery commitments.
- To view the payments made by the customer

REPORTS

Output design involves in preparing reports. The developed system supports the network to generate reports like daily, monthly and day to day reports based on frequently moving products, cumulative order of distributor, reseller who is involving in the order making process.

The **daily report** gives the particular day's report based on particular distributor or reseller's cumulative order. The orders generated by various distributors, reseller's can be viewed. For any product, the total ordered quantity can be calculated.

The **monthly report** gives the particular month's report based on that month's cumulative order and overall quantities delivered for the particular product is reported using this report.

4.3 DATABASE DESIGN

A database is a collection of inter-related data stored with minimum redundancy to serve many users quickly and efficiently. The general objective of database design is to make the data access easy, inexpensive and flexible to the user. An elegantly designed database can play a strong foundation for the whole system.

The tables are normalized up to 3rd Normal Form so that they can provide better response time, have data integrity, avoid redundancy and be secure.

4.4 TABLE STRUCTURE

The various tables used in the system are given from Table 4.4.1 to 4.4.10

LOGIN_DETAILS

This table holds information about the login data of the user in the project.

Field Name	Data Type	Size	Constraint	Description
Login_ID	Varchar2	15	Foreign Key	Login id of the person
User_Type	Varchar2	15	Not Null	Type of User
Login_Date	Date		Not Null	Date of Login
Login _Time	Date		Not Null	Time of login
Logout_Time	Date		Not Null	Time of logout

Table 4.4.1

PROD_CATEGORY

This table holds information about the product category in the project.

Field Name	Data Type	Size	Constraint	Description
Catg_ID	Varchar2	15	Primary Key	ID of the Category
Catg_Name	Varchar2	15	Not Null	Name of the Category

Table 4.4.2

OFFER_DETAILS

This table holds information about the offers offered to the consumers.

Field Name	Data Type	Size	Constraint	Description
Catg_ID	Varchar2	15	Foreign Key	ID of the Category
Prod_ID	Varchar2	15	Foreign Key	ID of the Product
Discount	Number	5		Discount to the Product
Start_date	Date			Start date of the offer
End _date	Date			End date of the offer

ADMIN_STOCK

This table holds information about the administrator stock in the project.

Field Name	Data Type	Size	Constraint	Description
Catg_ID	Varchar2	15	Foreign key	ID of the Category
Prod_ID	Varchar2	15	Primary Key	ID of the Product
Prod_Name	Varchar2	15	Not Null	Name of the Product
Price	Number	5	Not Null	Price of the Product
No_Of_Prod	Number	5	Not Null	Available Products

Table 4.4.4

DIST_REG

This table holds information about the distributor registration in the project.

Field Name	Data Type	Size	Constraint	Description
Reg_No	Number	8	Not Null	Registration Number
Reg_Date	Date		Not Null	Registration Date
Dist_ID	Varchar2	15	Primary Key	ID of the Distributor
Dist_Pwd	Varchar2	15	Not Null	Distributor Password
Dist_Name	Varchar2	25	Not Null	Name Of the Distributor
Res_Addr	Varchar2	60	Not Null	Distributor Resident Address
Office_Addr	Varchar2	60	Not Null	Distributor Office Address
Office_City	Varchar2	25	Not Null	Office City of the Distributor
Office_State	Varchar2	25	Not Null	Office State of the Distributor
Phone_No	Varchar2	15	Not Null	Distributor Phone number
Mobile_No	Number	11		Distributor Mobile number
EMail_ID	Varchar2	20	Not Null	EMail_ID of Distributor
Ref_ID	Varchar2	15		A person's reference ID.
Invest_Amt	Number	8	Not Null	Distributor Invest Amount
Pay_Mode	Varchar2	15	Not Null	Mode of Payment
Acti_Mode	Varchar2	15	Not Null	Mode of Activation

DIST_ORDER_MASTER

This table holds information about the distributor's master order in the project.

Field Name	Data Type	Size	Constraint	Description
Order_Date	Date		Not Null	Date of Order
Order_ID	Varchar2	15	Primary Key	Identification of the Order
Dist_ID	Varchar2	15	Foreign key	ID of the Distributor
Total_Amt	Number	8	Not Null	Total Amount to be paid
Pay_Mode	Varchar2	15	Not Null	Mode of Payment

Table 4.4.6

DIST_ORDER_CHILD

This table holds information about the distributor's child order in the project.

Field Name	Data Type	Size	Constraint	Description
Order_ID	Varchar2	15	Foreign Key	Identification of the Order
Prod_ID	Varchar2	15	Foreign Key	Identification of the Product
No_Of _Prod	Number	8	Not Null	Number of Products ordered
Discount	Number	8		Discount offered
Net Amount	Number	8	Not Null	Net Amount to be paid
Status	Varchar2	15	Not Null	Status of the Order

Table 4.4.7

CUST_CREDITCARD

This table holds information about the credit card of the customer in the project..

Field Name	Data Type	Size	Constraint	Description
Cust_ID	Varchar2	15	Foreign Key	Id of the Customer
Amount	Number	8	Not Null	Amount to be paid

Table 4.5.8

RES_LOGISTICS

This table holds information about the reseller's logistic in the project.

Field Name	Data Type	Size	Constraint	Description
Order_Date	Date		Not Null	Date of Order
Order_ID	Varchar2	15	Primary Key	Identification of the Order
Cust_ID	Varchar2	15	Not Null	Identification of the Customer
Pack_No	Number	8	Not Null	Package Number
Pack_Qty	Number	3	Not Null	Quantity of the Package
ParcelSName	Varchar2	25	Not Null	Name of the Parcel
Exodus_Date	Date		Not Null	Date of Exodus

Table 4.4.9

CUST_FEEDBACK

This table holds information about the feedback of the customer in the project.

Field Name	Data Type	Size	Constraint	Description
Date	Date		Not Null	Date of Feedback
Cust_ID	Varchar2	15	Primary Key	ID of the Customer
Sender_Type	Varchar2	15	Not Null	Type Of Sender
Sender_ID	Varchar2	15	Not Null	Identification of Sender
Comments	Varchar2	150	Not Null	Comment from Sender

Table 4.4.10

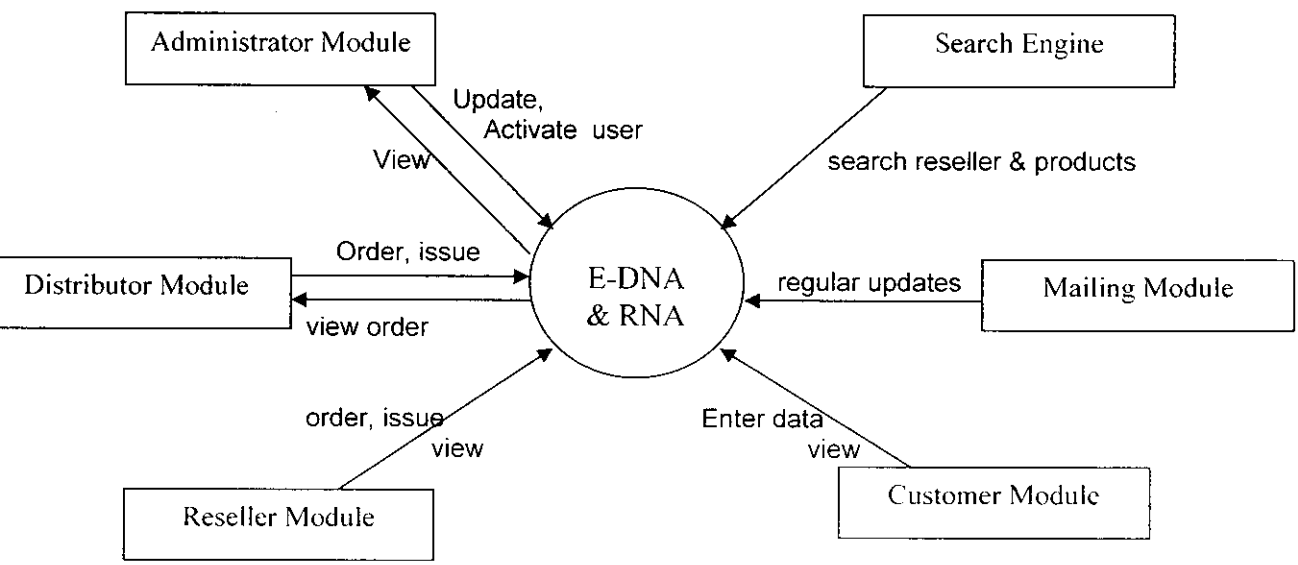
CHAPTER 5

SYSTEM FLOW DIAGRAMS

5.1 DATA FLOW DIAGRAM (DFD)

The dataflow diagram is a graphical representation, which depicts the information regarding the flow of control and the transformation of the data from the input to the output. The dataflow may be used to represent the system or software at any level of abstraction. In fact dataflow diagram may be partitioned into levels. A level 0 dataflow diagram is called as context model, which represents the entire software element as a single bubble with input and output arrows.

The context level diagram for the system is given below,



The DFD's for the system are given from Figure 5.1.2 to Figure 5.1.7

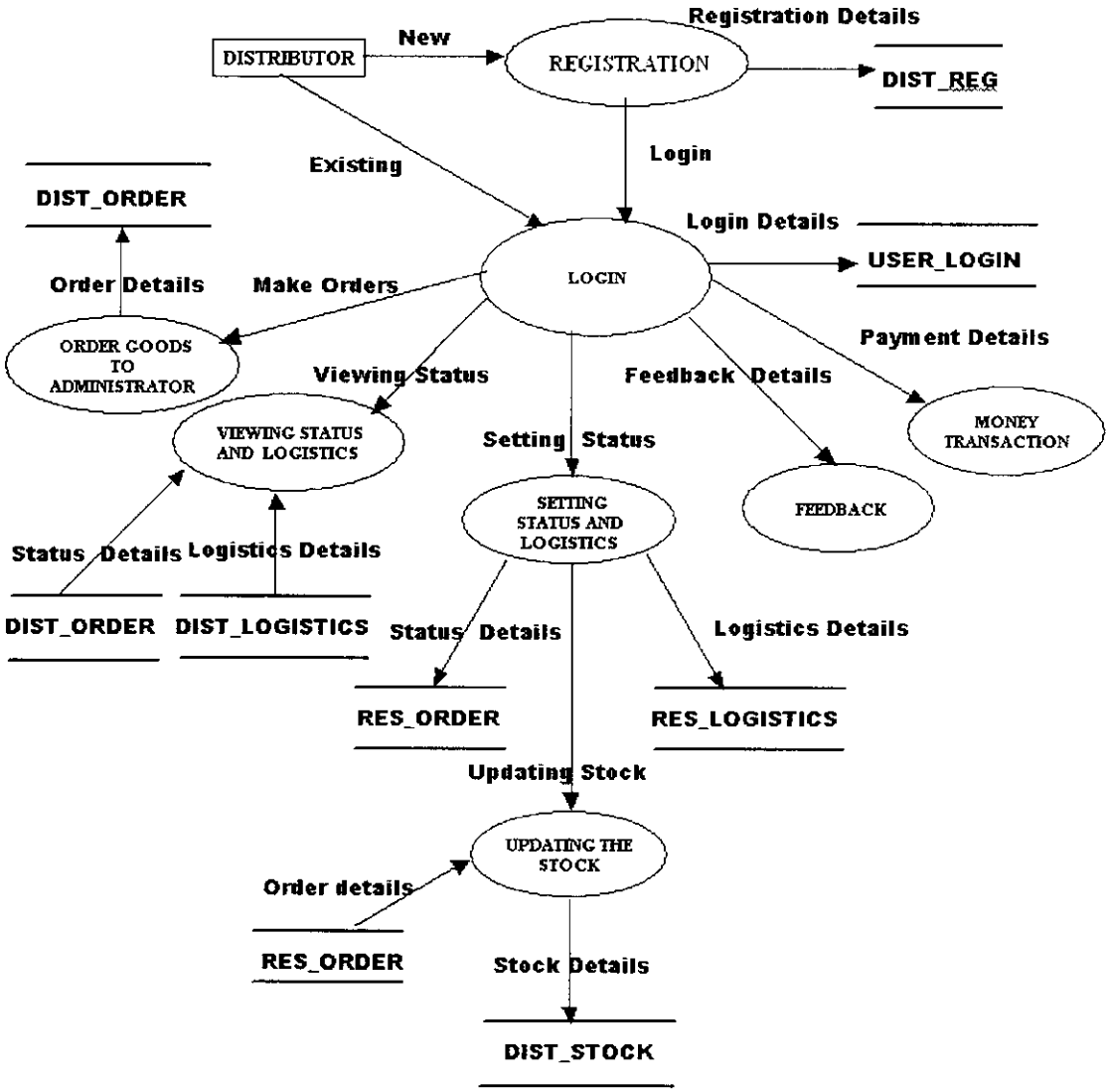


Figure 5.1.2 DFD Level 2 – Distributor Module

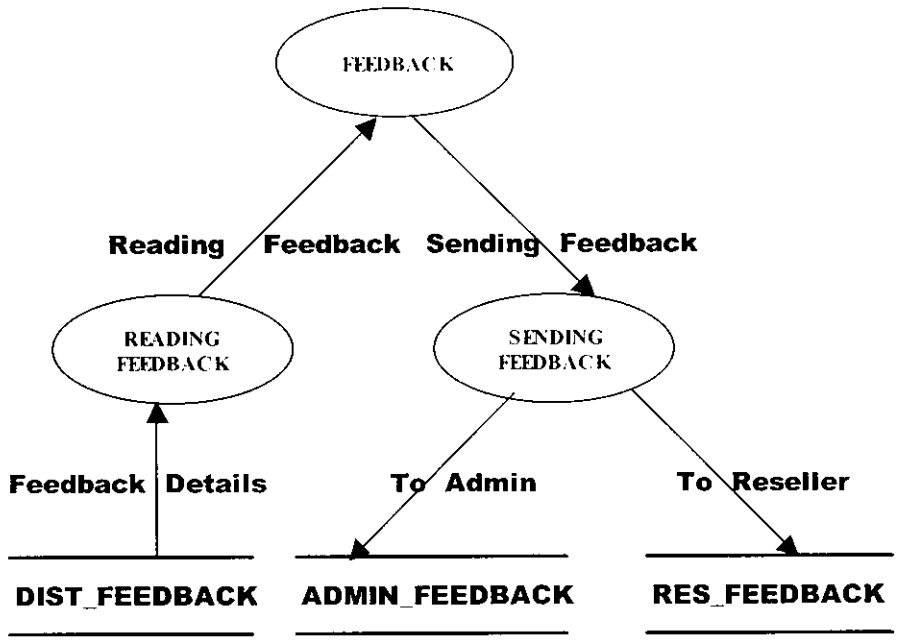
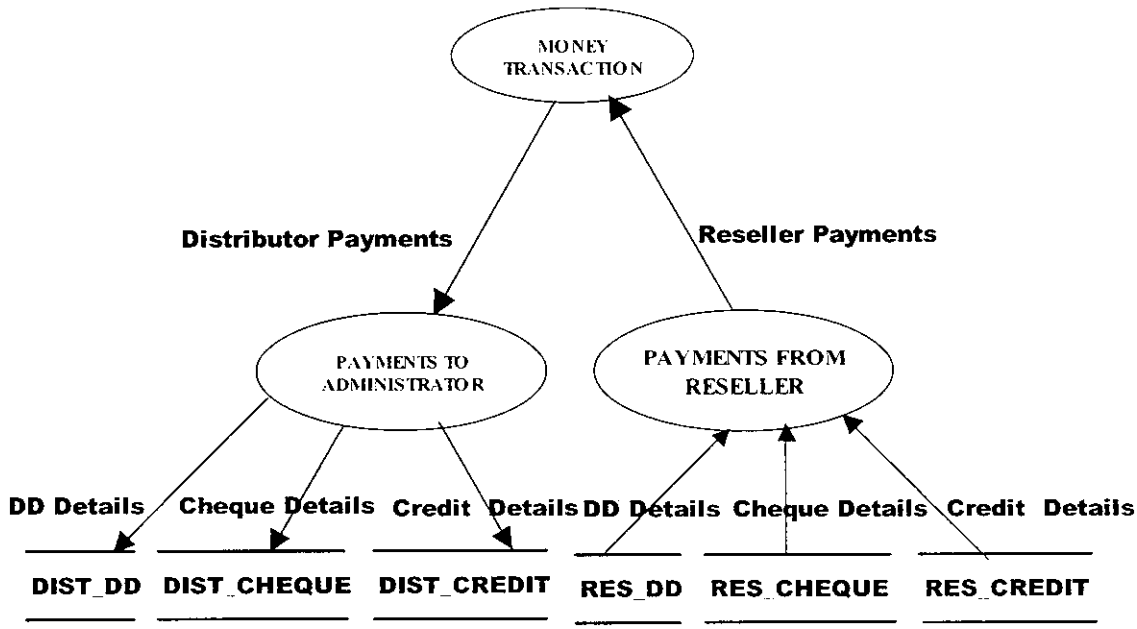


Figure 5.1.3 DFD Level 2A – Distributor Module



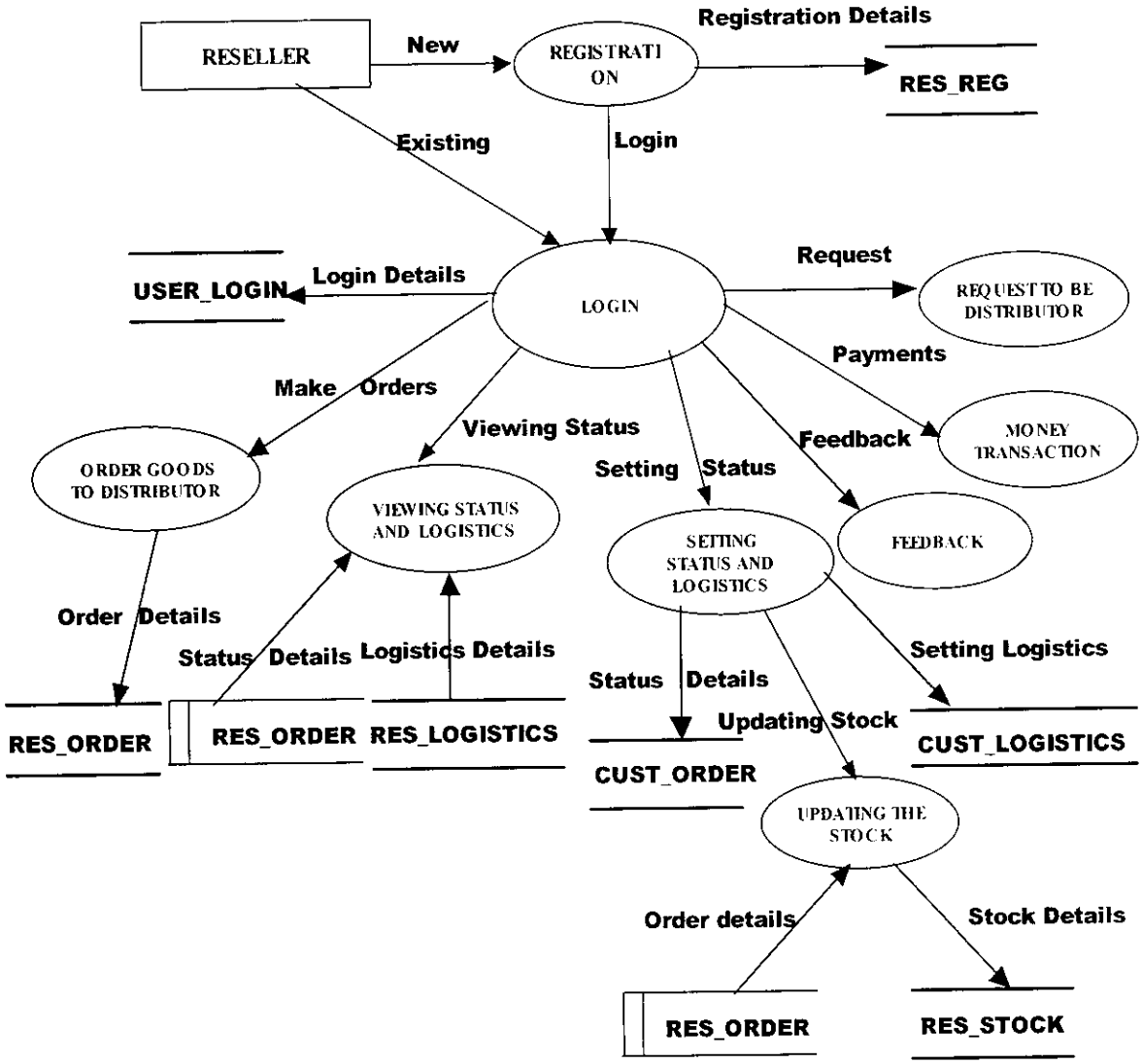


Figure 5.1.5 DFD Level 2 – Reseller Module

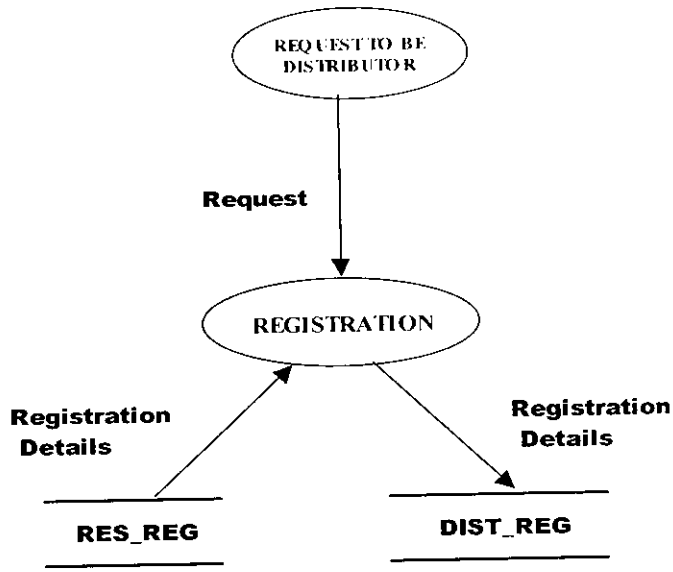
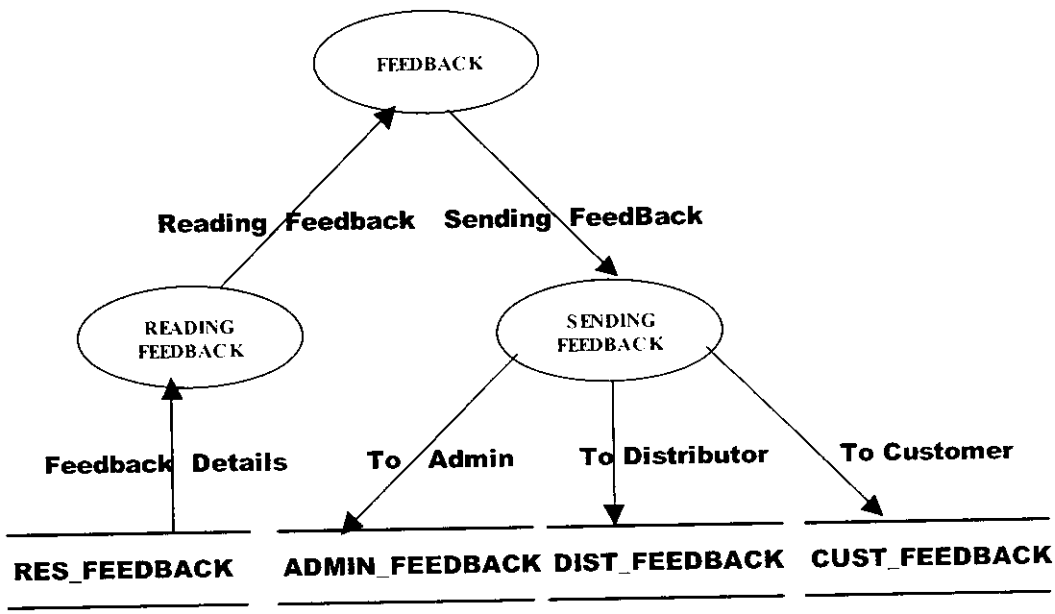


Figure 5.1.6 DFD Level 2A – Reseller Module



CHAPTER 6

SYSTEM TESTING AND IMPLEMENTATION

The system testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently before live operation commences. In principle, system proving in an on-going activity throughout the development of the system. In the system testing, careful planning and scheduling required to ensure that the modules are available for integration to evolving the software product when needed. The system testing will judge the system and the level of the achievement of the goal.

6.1 TESTING OBJECTIVES

The testing objectives are,

1. Testing is a process of executing a program with the intent of finding an error.
2. A successful test is one that uncovers an as yet undiscovered error.
3. A good test case is one that has a high probability of finding on as yet undiscovered error.

Testing demonstrates that software functions work according to specifications. In addition data collected from testing provides a good indication of software reliability and some indication of software quality as a whole.

6.2 TESTING METHODS

Testing Methods applied in E-DNA & RNA are:

1. Unit Testing
2. Integrated Testing
3. Validation Testing
4. Stress Testing

6.2.1 Unit Testing

In this testing, each module is tested individually. Unit testing focuses on the verification efforts of the smaller unit of software design in the module. This is also known as 'module' testing. The modules of the system are tested separately. The testing is carried out during programming stage itself. In this testing step each module is found to be working satisfactorily as regard to the expected output from the module. There are some validation checks for verifying the data input given by the user which both the formal and validity of the entered. It is very easy to find errors and debug the system.

In E-DNA & RNA, each page is tested separately as a unit. Initially the flow of control and data through that page is checked. When considering a module as a unit, the flow of data and control through the whole module is tested. The result is stored in the test plan. In a page, each control is further tested in unit testing. The process is done in all the pages of the system. Once the errors are rectified, the testing procedure is repeated with same test cases to ensure this hasn't produced new errors. Hence this is a continuous process.

6.2.2 Integrated Testing

Integration testing tests the process of integrating the various modules to form the completed system. It facilitates finding problem that occur at interface or communication between the individual parts.

E-DNA & RNA followed bottom-up integration testing. Modules from the bottom most level are taken up individually, tested, integrated, and again tested. This indicates proper flow of information in the project module. The same procedure is followed in other modules in the same level at first. Then the upper level is taken into action. The flow of data through the whole module in the upper level is taken and executed. A change of data made in one screen should have reflected in all other screens.

This process is continued from the page level to module level, finally to the system level. In the final stage, the whole system is taken together and tested for integration. A change in one place should be reflected through out the system. Regression testing is done after each change made into the software. This tests if the change has affected any part of E-DNA & RNA negatively after the change was made. The whole set of test cases need to be run again to do the regression testing.

6.2.3 Validation Testing

The requirements established as part of software requirements analysis are validated against the software that has been constructed; this is validation test. It provides final assurance that software meets all functional, behavioral, and performance requirements. Black box testing techniques are used exclusively during validation.

After Validation test has been conducted one of the two possible conditions exists.

1. The function or performance characteristics confirm to specification and are accepted.
2. A deviation from specification is uncovered and a deficiency list is created.

6.2.4 Stress Testing

The purpose of the stress testing is to prove that the candidate system does not malfunction under peak loads. We subject a high volume of data over a short period of time. This simulates an online environment where a high volume of activities occurs in spurts. E-DNA & RNA was stress tested by the use of LoadRunner tool. The system was tested by giving peak loads when it was running in LoadRunner tool.

6.3 IMPLEMENTATION

System Implementation is the stage of the project when the theoretical design is turned into a working system. At this stage the main workload, the greatest upheaval and the major impact on existing practices shifts to the user department. If implementation stage is not carefully planned and controlled, it can cause chaos. Thus it can be considered to be the most crucial stage in achieving a successful new system and in giving the users confidence that the new system will work and be effective.

6.3.1 User Training

In this phase, user training is critical for minimizing reluctance to change and giving new system a chance to prove its worth. The new system may be totally new replacing an existing system, or it may be the modifications to the existing system. In either case proper implementation is essential to provide a reliable system to meet organizational requirements.

In this step of implementation, training the user is the most important subtask of the developer. For this purpose the user/system manual are prepared and handed over to the user to operate the developed system.

6.3.2 Change over Plan

Change over is the process of changing from one system to another. The objective is to put the system into operation, while holding costs, risks and personal irritation to a minimum. Change over can take place only when,

- The system has been proved to the satisfaction of the system analysis and other implementation activities have been completed.
- To make the existing system a very efficient computerizing file-keeping system.

A critical aspect of change over is, not to disrupt the functioning of the organization. It is the process of changing from the old system to the new system with minimal disruptions.

CHAPTER 7

CONCLUSION AND FUTURE OUTLOOK

7.1 CONCLUSION

The "**E-DNA & RNA**" System has proved as a well-defined alternative for the existing system by overcoming its drawbacks and the system has been developed with ground realities. By adopting this concept, any company can increase their sales in an effective way without violating their existing channel network, also with their full co-operation. In all aspects, the system has been well packed with more advanced features for end-user satisfaction and altogether the overall system will ensure a complete satisfaction from the reseller and distributor network as well as the customers also which is only the success of any company.

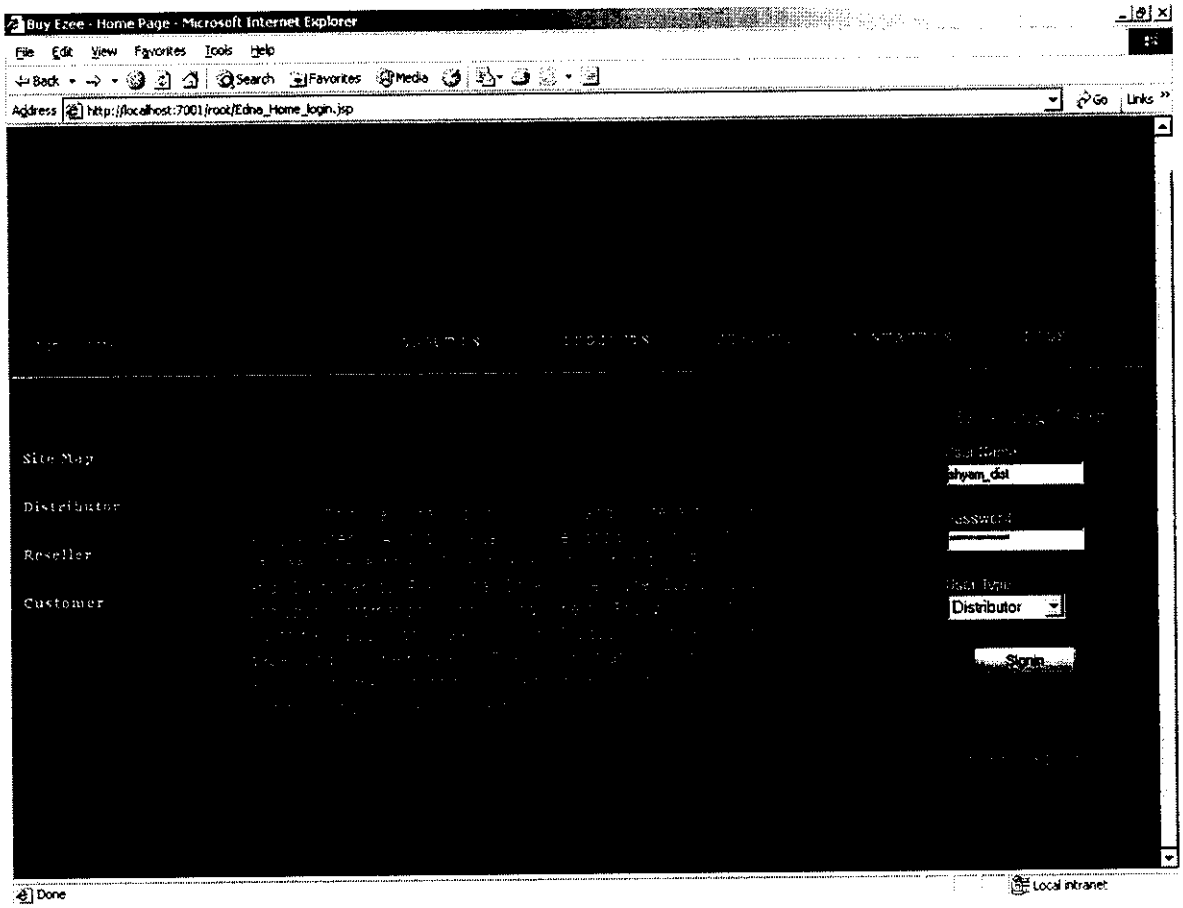
7.2 FUTURE OUTLOOK

The System has so many advanced features than the existing system by means of its user friendliness. Apart from the features given in the proposed system, further extension and redesign can be done according to the client requirements. But it can draw few possible extension modules as a part of initial level suggestions to give a general idea to the clients who are implementing the project and those suggestions can be consolidated as follows.

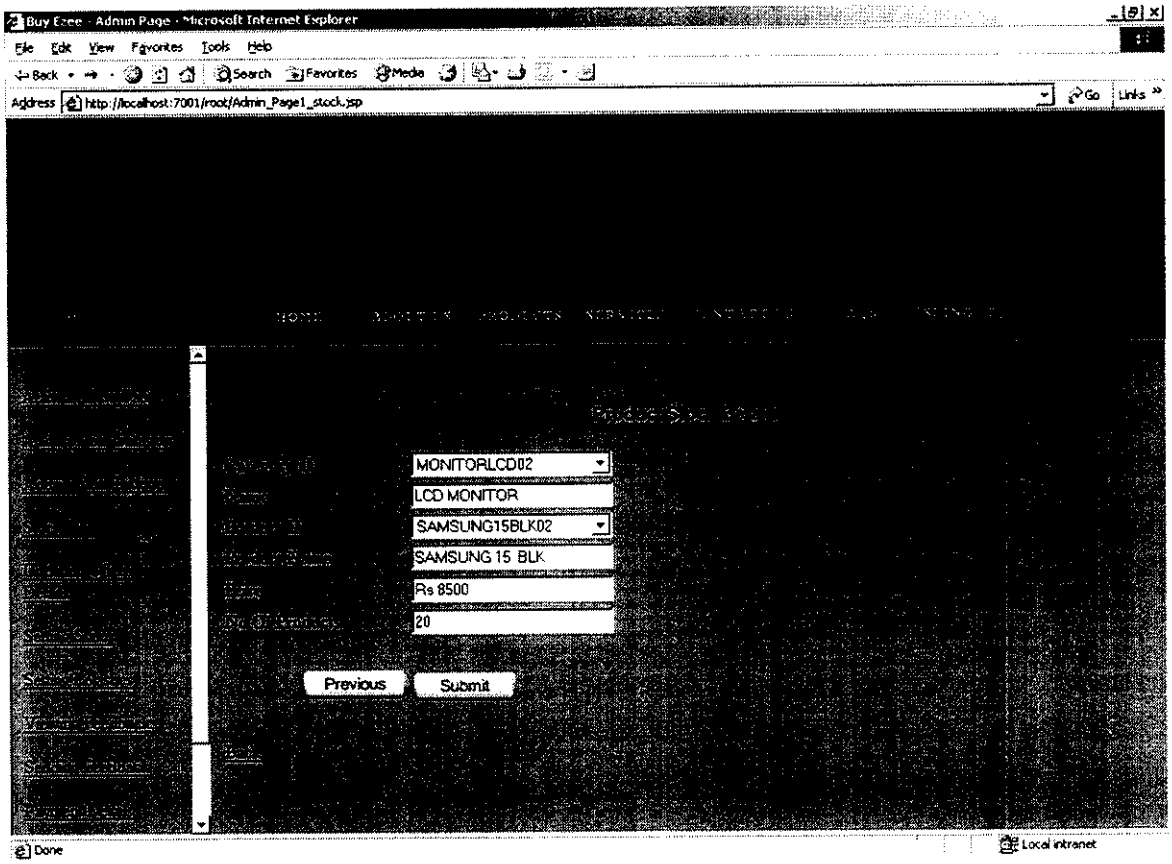
Extension can be done in the technology aspects by using Data warehousing and Mining tools to adopt online databases for the end-to-end process, which will help the entire network to function faster. The advanced

APPENDIX

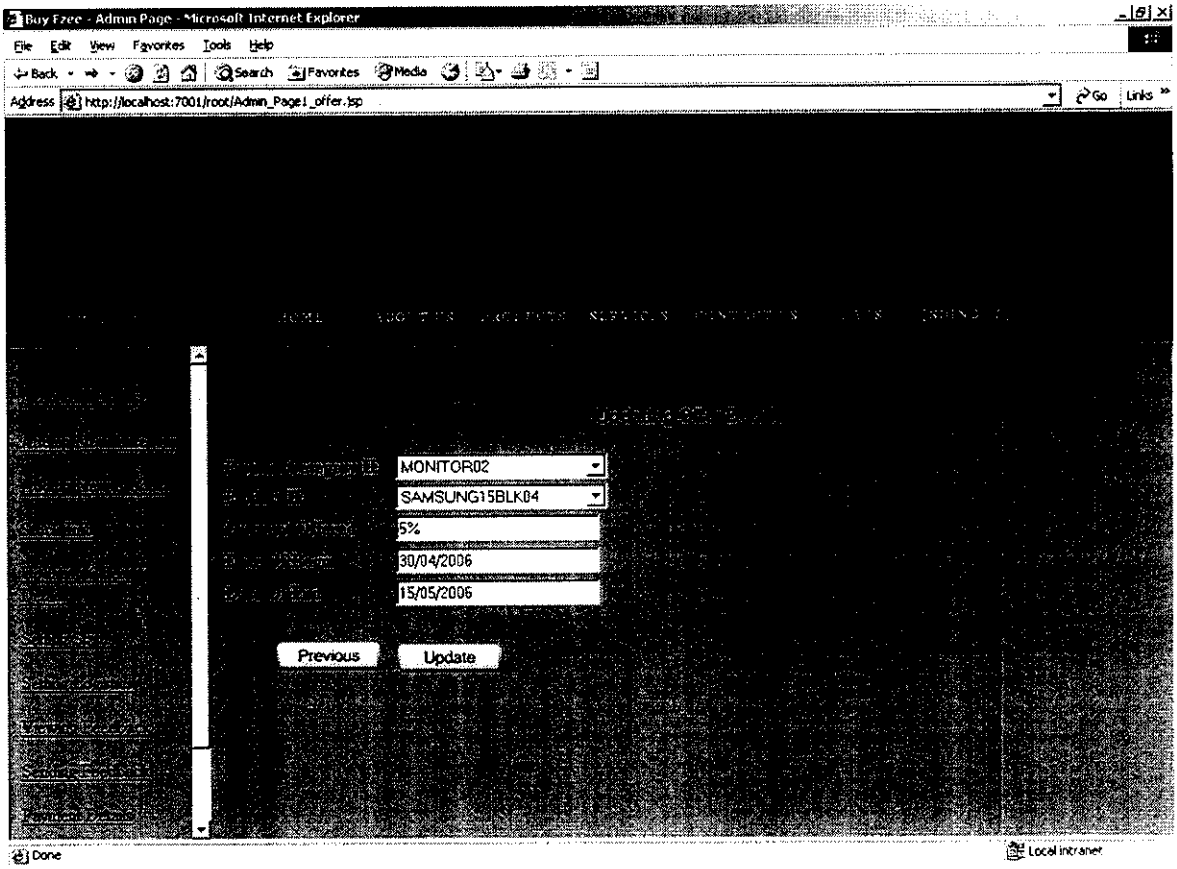
SCREEN LAYOUTS



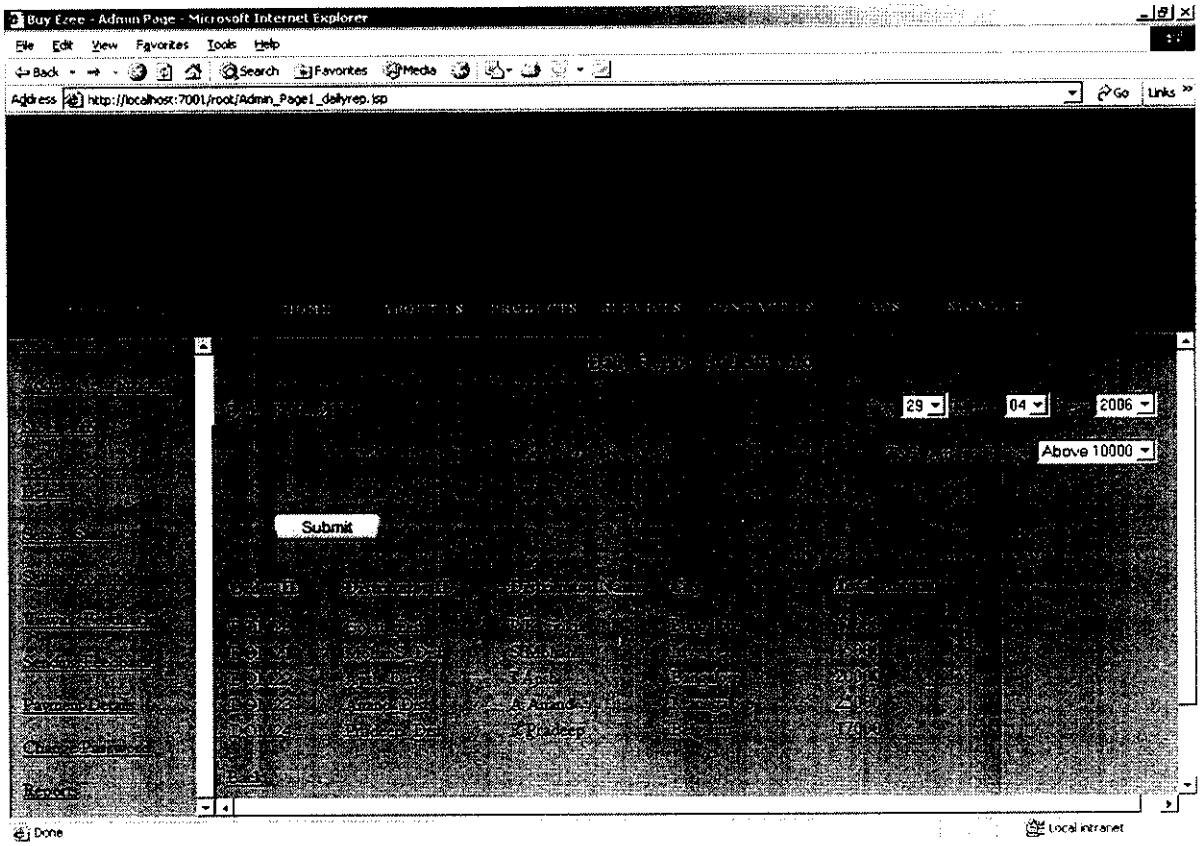
Home Page



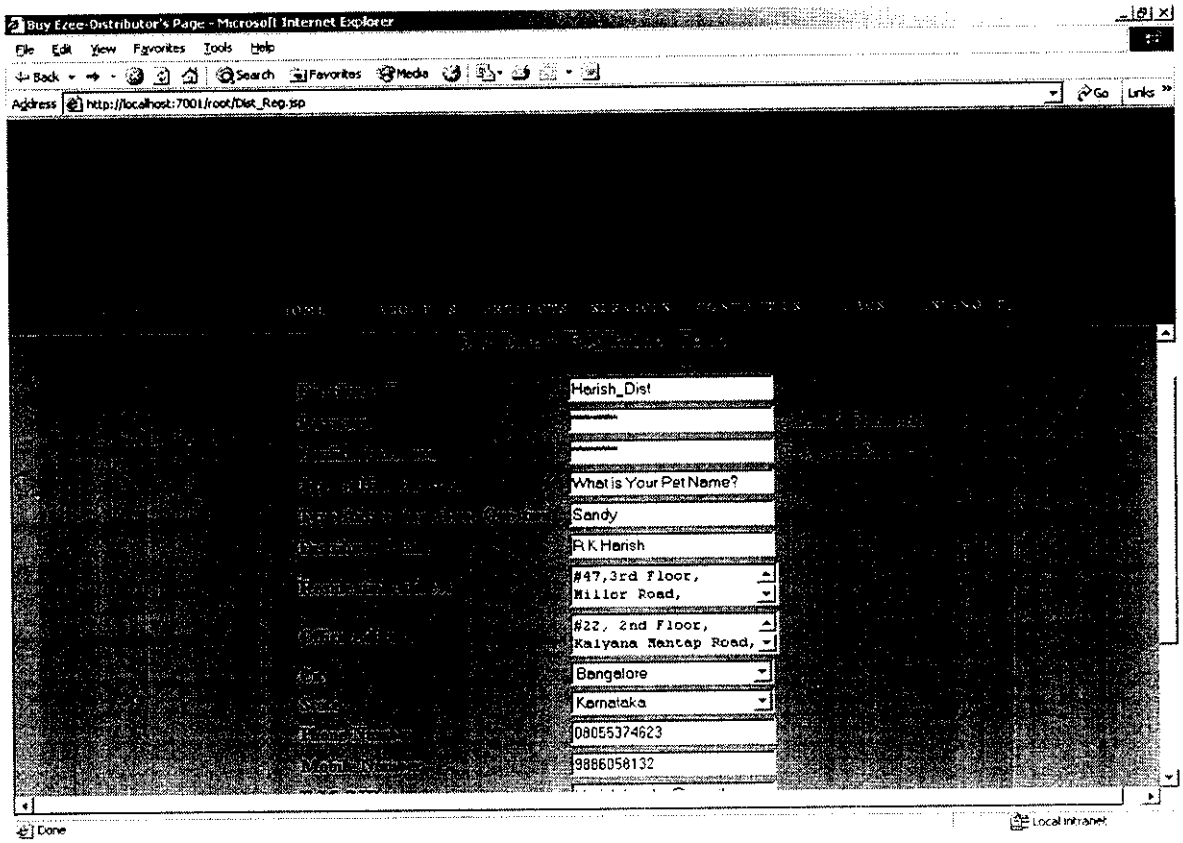
Admin Module - Product stock Details



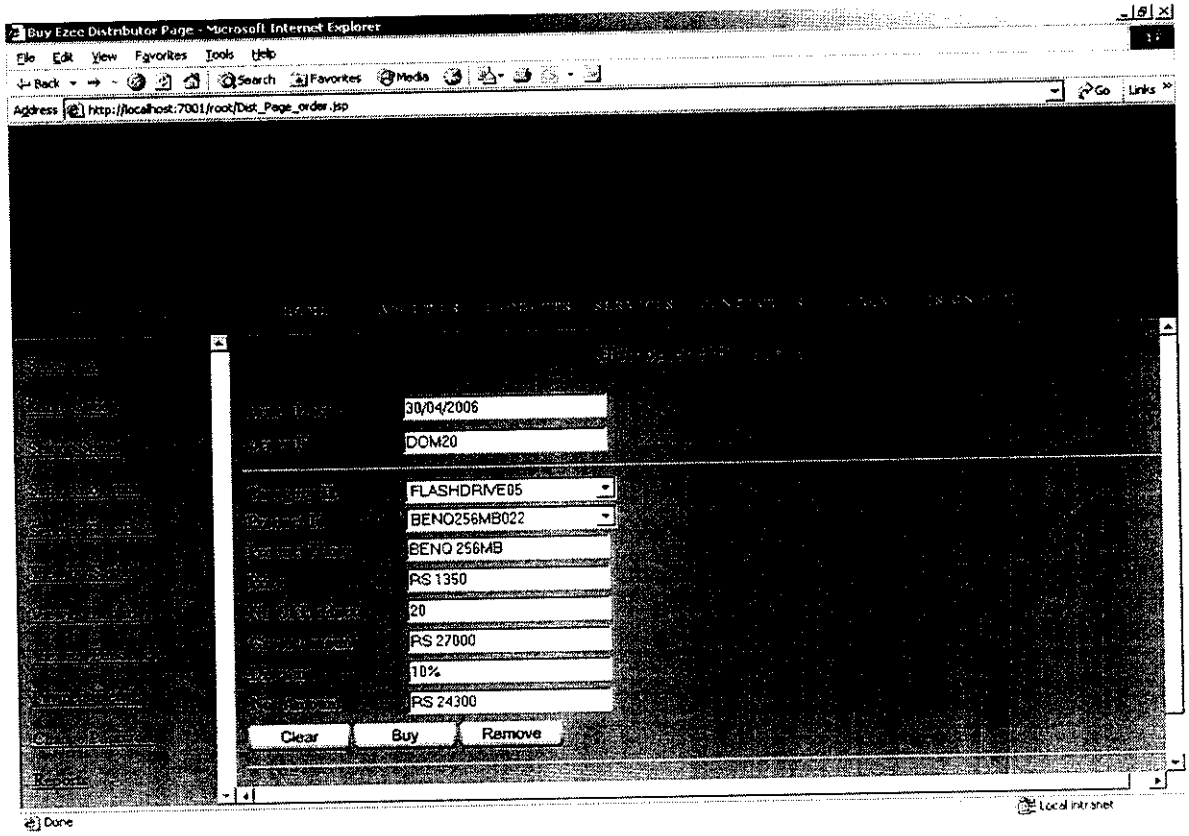
Admin Module - Updating Offer Details



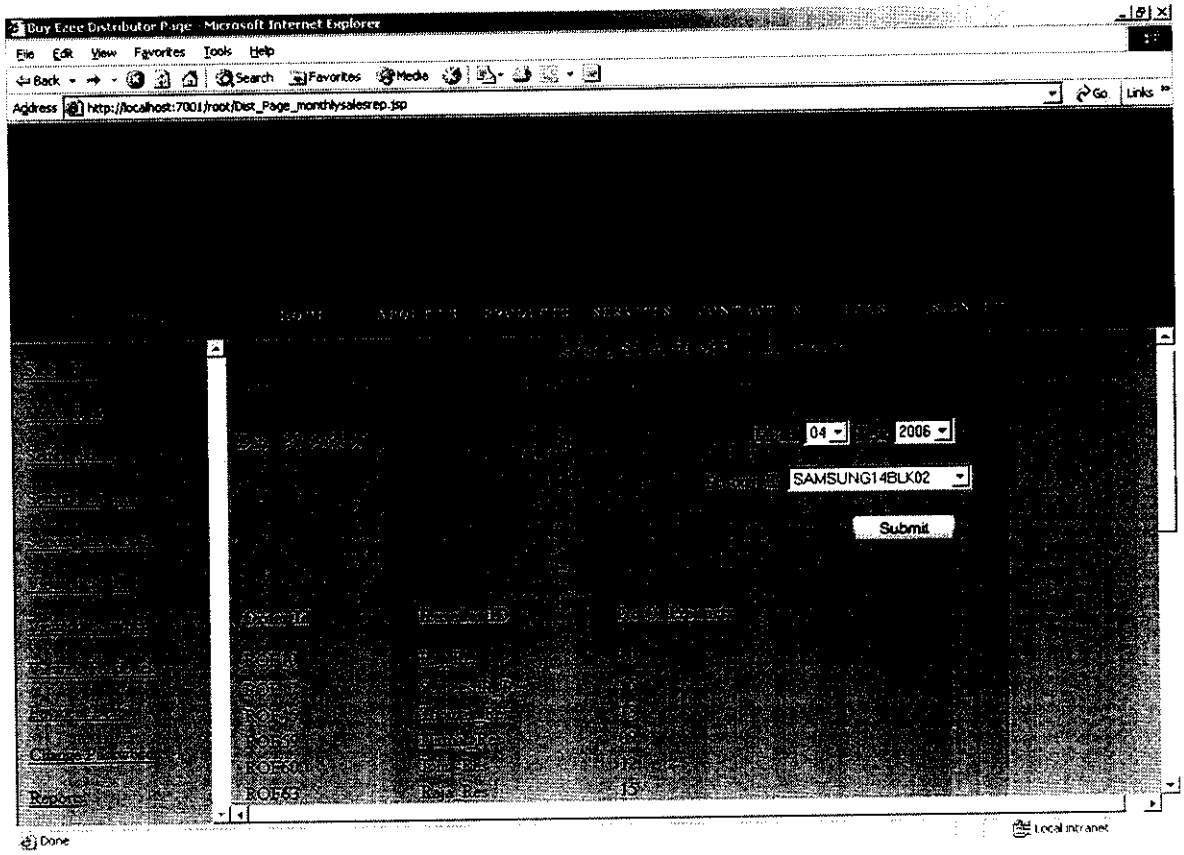
Admin Module - Daily Sales Report



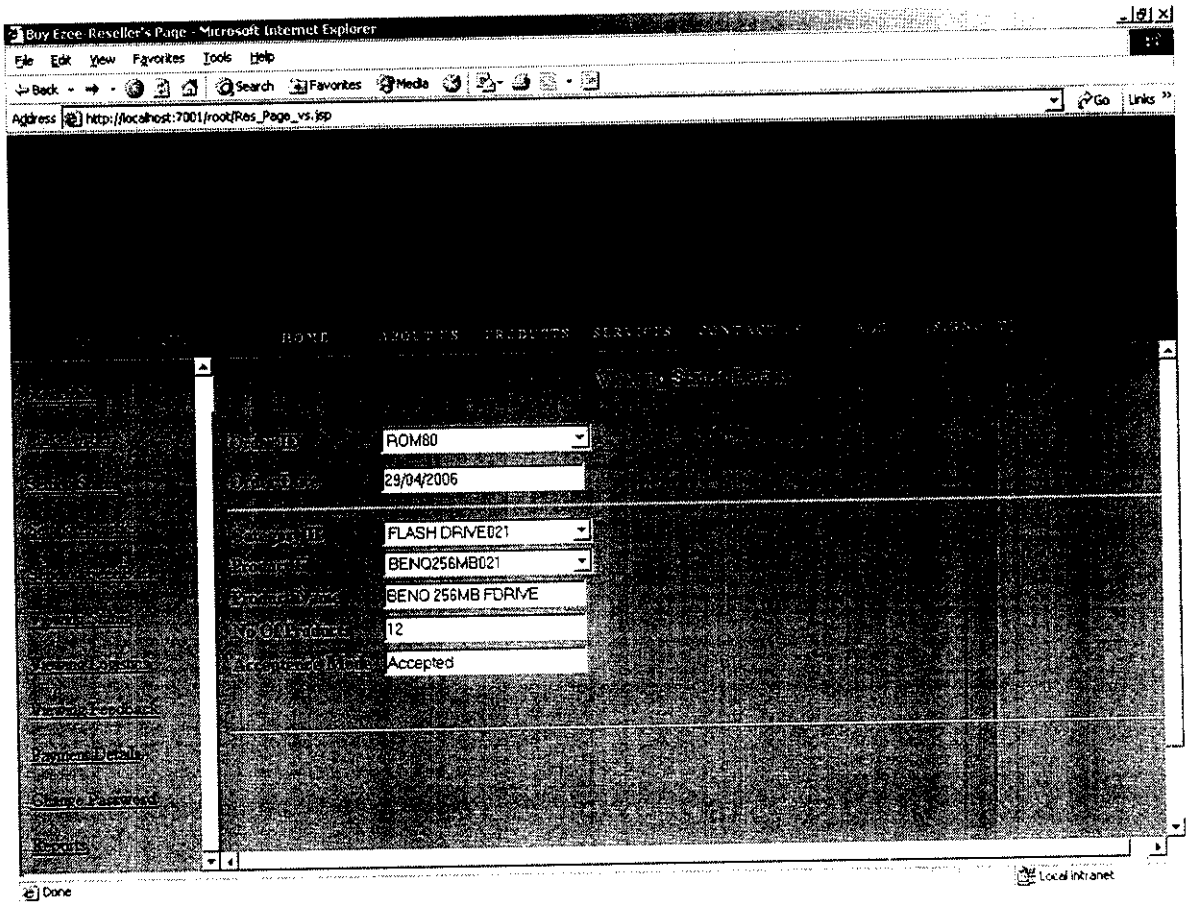
Distributor Module - Registration Form



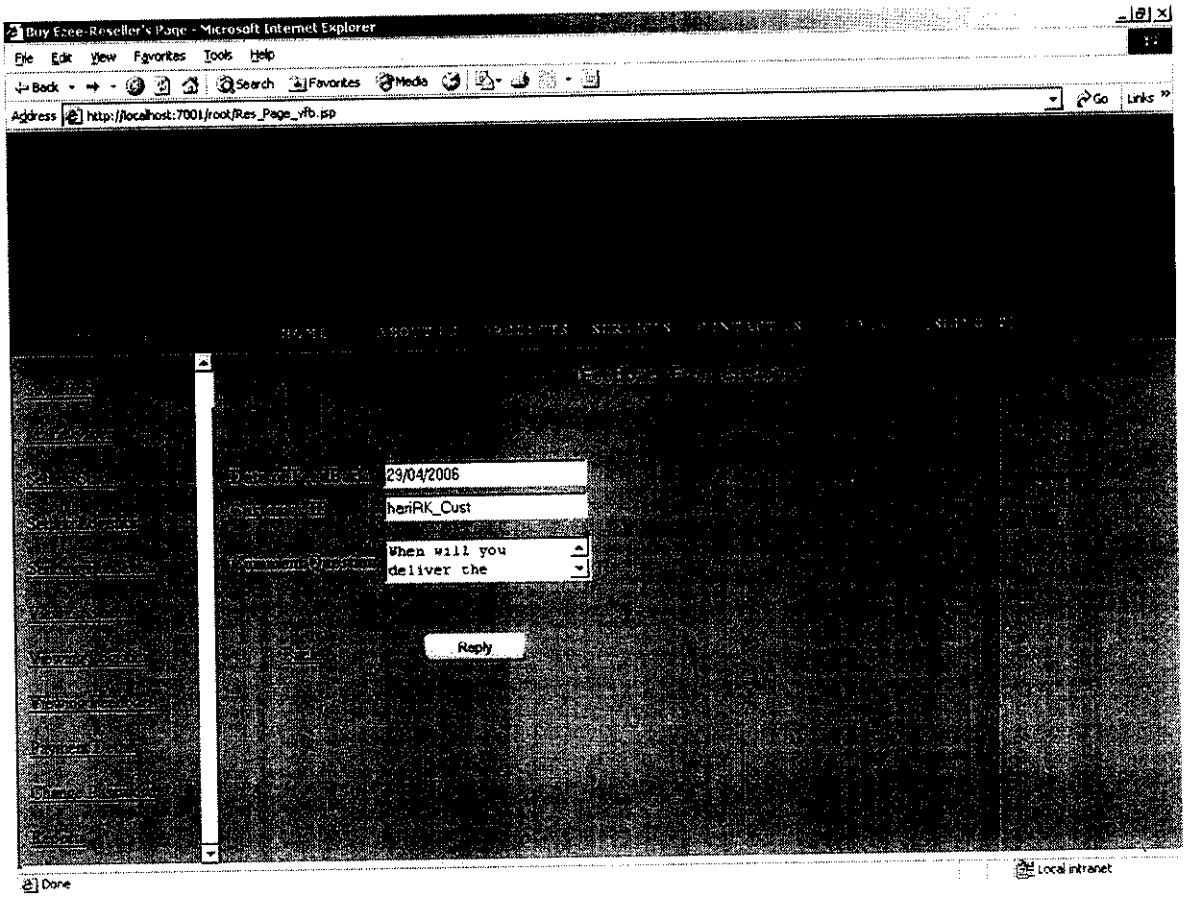
Distributor Module - Order Details



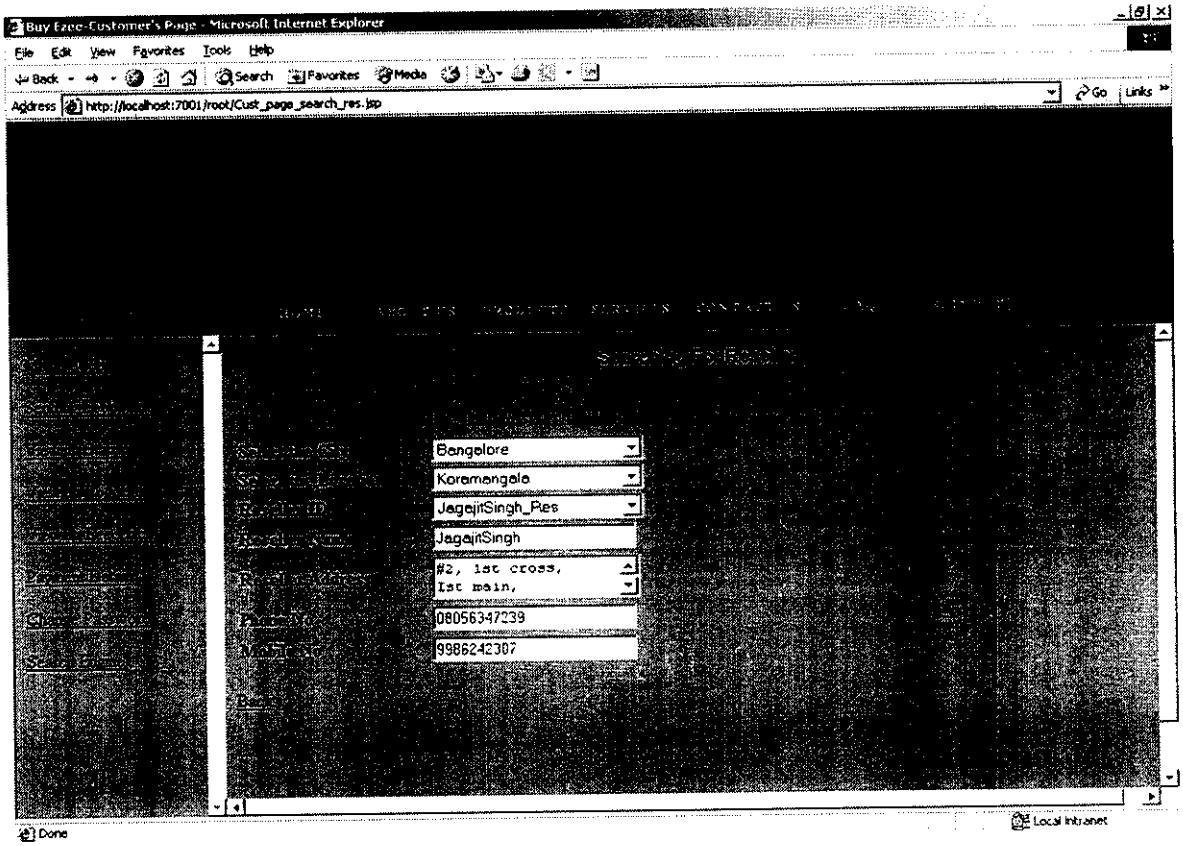
Distributor Module - Monthly Sales Report



Reseller Module - Viewing Status Details



Reseller Module - Viewing Customer Feedback



Search Engine - Searching For Reseller

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