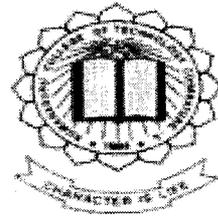


P-2701



Pharmacy Management System

By

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Register Number: 71206621012

Of

KUMARAGURU COLLEGE OF TECHNOLOGY

COIMBATORE

A PROJECT REPORT

Submitted to the



FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

In partial fulfillment of the requirements

for the award of the degree

Of

MASTER OF COMPUTER APPLICATIONS

ANNA UNIVERSITY

CHENNAI 600 025

July 2009

BONAFIDE CERTIFICATE

Certified that this project report titled “**Pharmacy Management System**” is the bonafide work of **Mr. S.Dhanasekaran** (Register Number: **71206621012**) 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.



SUPERVISOR



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Submitted to Project and Viva Examination held on 06-07-2009



INTERNAL EXAMINER



EXTERNAL EXAMINER

Date: 04.06.2009

CERTIFICATE

This is to certify that, **Mr. S.Dhanasekaran, III M.C.A, Reg No: 71206621012** Student of **Kumaraguru College of Technology, Coimbatore** has successfully completed his project work, titled **Pharmacy Management System** as part of his course curriculum.

He has done the project using **Struts2** during the period of **18-12-2008 to 03-06-2009**. He has completed the assigned project well within the time frame. He was sincere, hardworking and his conduct during the project was commendable.

We wish him all the best in his future endeavors.

For Bannari Amman Research Consultants



(Partner)

(V.Govindaraju)

ACKNOWLEDGEMENT

First and foremost I thank God for his good will and blessings showered on me throughout the project. The success of this project needs cooperation and encouragement from different quarters. Words are inadequate to express my profound and deep sense of gratitude to those who helped me in bringing out this project successfully.

I wish to express my deep unfathomable feeling of gratitude and indebtedness to professor **R. Annamalai** Vice Principal – Kumaraguru College of Technology, Coimbatore for the successful completion of the project work.

I am very gladly taking this opportunity to express a special word of thanks to **Dr. M. Gururajan** Head of the Department, Department of Computer Application Kumaraguru College of Technology, Coimbatore for encouraging me to do this work.

I am very much indebted to **Dr. A. Muthukumar** Assistant Professor and course coordinator Department of Computer Application Kumaraguru College of Technology, Coimbatore for his complete assistance, guidance and support given to me throughout my project.

I would express heartfelt thanks to our internal guide **Mr. Manikantan** Senior Lecturer Department of Computer Application, Kumaraguru College of Technology as without his best guidance it would not have been possible for me to successfully complete this project who also gave his innovative ideas at crucial times and tremendous encouragement.

It is my pleasure to express my profound gratitude to **BARC iNDiA** Coimbatore for admitting into this project.

ABSTRACT

Managing the pharmacy consists of management of Purchase, Sales, Product and Stock maintenance, inventory analysis and customer and online sales. It is important to keep detailed information of all the products which are sold or purchased along with their current stock.

The whole process of Inventory Control is fully automated. The inventory keeps track of good and damaged or expired stock separately. Also maintains Sales & Stock Statement, Sales Ledger, Products nearing expiry, Products to be reordered along with company wise Price List, Product List. All the reports can be printed and the columns to be printed can be selected.

All purchase functions including invoicing, maintaining ledger and producing various purchase reports. Maintain detailed information of all the cash or credit purchase invoices, supplier return memos etc. Purchase Expiry or Breakages Return Memo (returned to supplier) and supplier debit or credit notes are maintained separately.

Clearing and forwarding which is essentially a stock transfer is also handled separately. All the purchase transactions are shown in the Purchase Book which is made according to the type of the purchase transactions.

All the information about ledger balances and outstanding invoices centralized at one place. The reminder letters for outstanding invoices can be printed for all or selected suppliers. The buying habit of the supplier and transaction history is also prepared. List / address label of the customers can be printed.

Online customers details maintained separately, according to their purchase email alert will be sending to them. Once the customer orders all details regarding the purchase will be mailed to them and deliver the order goods in timely manner.

TABLE OF CONTENTS

ACKNOWLEDGEMENT		iv
ABSTRACT		v
Table of Contents.....		vi
List of Tables.....		ix
List of Figures.....		ix
List of Abbreviations.....		ix
1. INTRODUCTION		1
1.1. Company Profile.....		1
1.2. Outline of Project.....		2
2. SYSTEM ANALYSIS		3
2.1. Existing System.....		3
2.1.1 Disadvantages of existing system.....		3
2.2. Proposed System.....		3
2.2.1 Advantages of proposed system.....		4
2.3 Feasibility Analysis.....		4
2.3.1 Technical Feasibility.....		5
2.3.2 Economic Feasibility.....		5
2.3.3 Operational Feasibility.....		6
3. DEVELOPMENT ENVIRONMENT		7
3.1. Hardware Requirements.....		7
3.2. Software Requirements.....		7
3.3. Programming Environment.....		8

3.3.1. Struts2 Framework	8
3.3.2. Hibernate.....	10
3.3.2. Jboss Server.....	10
3.3.2. MySql.....	10
3.3.2. MyEclipse.....	11
4. SYSTEM DESIGN.....	12
4.1. Data Model.....	12
4.1.1. Tables.....	12
4.2. Process Model.....	17
4.2.1. UseCase Diagram.....	17
4.2.2. Sequence Diagram.....	22
5. SYSTEM DEVELOPMENT.....	24
5.1. Module Description.....	24
5.1.1 Product and Stock Module.....	24
5.1.2 Purchase Module.....	26
5.1.3 Sales Module.....	26
5.1.4 Supplier Module.....	27
5.1.5 Customer andOnline Sales Module.....	27
6. SYSTEM IMPLEMENTATION.....	29
7. SYSTEM TESTING.....	30
7.1. Types of Testing.....	30
7.1.1 Unit Testing.....	30
7.1.2 Integration Testing.....	31

7.1.3 Validation Testing.....	31
7.1.4 System Testing.....	32
7.2. Test Cases.....	32
8. PERFORMANCE AND LIMITATIONS.....	34
8.1. Merits of the system.....	34
8.2. Limitation of the system.....	34
8.3. Future Enhancement.....	34
9. APPENDICES.....	35
9.1. Sample Screens.....	35
10. REFERENCES.....	40

List of Tables

Table No	Name of Table	Page No
4.1.1.1	Product	12
4.1.1.2	Supplier	13
4.1.1.3	Manufacturer	13
4.1.1.4	Sales Order	14
4.1.1.5	Sales Order items	14
4.1.1.6	Purchase Order	15
4.1.1.7	Purchase order items	15
4.1.1.8	Purchase return	16
4.1.1.9	Sales return	16
4.1.1.10	Login	16

List of Figures

S. No	Name of Figure	Page No
1	UseCase Diagram	17
2	Sequence Diagram	22

List of Abbreviations

Acronyms	Full Form
PMS	Pharmacy Management system
BARC	Bannari Amman Reserch Consultings
Pk	Primary Key
Fk	Foregin Key

CHAPTER 1

INTRODUCTION

1.1. COMPANY PROFILE

BARCiNDiA.NET

Bannariamman Research and Consultings (BARCiNDiA), based at Coimbatore, is a part of a group involved in software development & Technology Training. They have good experience in successfully executing projects for all type of customers. BARCiNDiA is a technology oriented company promoted by professionals with rich experience and expertise in the industry. The company is focusing on providing technical training and software development for various applications. BARCiNDiA also looks at providing the necessary business computing systems for optimizing the total system integration, with the help of its vast product range.

1.2. OUTLINE OF PROJECT

PHARMACY MANAGEMENT SYSTEM

Managing the pharmacy consists of management of Purchase, Sales, Product and Stock maintenance, inventory analysis and customer and online sales. It is important to keep detailed information of all the products which are sold or purchased along with their current stock.

The whole process of Inventory Control is fully automated. The inventory keeps track of good and damaged / expired stock separately. Also maintains Sales & Stock Statement, Sales Ledger, Products nearing expiry, Products to be reordered along with company wise Price List, Product List. All the reports can be printed and the columns to be printed can be selected.

All purchase functions including invoicing, maintaining ledger and producing various purchase reports. Maintain detailed information of all the cash / credit purchase invoices, supplier return memos etc. Purchase Expiry / Breakages Return Memo (returned to supplier) and supplier debit / credit notes are maintained separately.

Clearing and forwarding which is essentially a stock transfer is also handled separately. All the purchase transactions are shown in the Purchase Book which is made according to the type of the purchase transactions.

All the information about ledger balances and outstanding invoices centralized at one place. The reminder letters for outstanding invoices can be printed for all or selected suppliers. The buying habit of the supplier and transaction history is also prepared. List / address label of the customers can be printed.

Online customers details maintained separately, according to their purchase email alert will be sending to them. Once the customer orders all details regarding the purchase will be mailed to them and deliver the order goods in timely manner.

CHAPTER 2

SYSTEM ANALYSIS

2.1 EXISTING SYSTEM

It is Sales, Stock and Accounts Management Program is a very powerful tool for Invoicing, Inventory Control, Sales and Purchase Control and Accounting. The program has got powerful features to take care of all requirements of a Pharma Trading and Business House and serves as a complete Management Information system (MIS).

The program uses **Microsoft Access** databases powered by Microsoft Jet Database Engine for fast and efficient storage and retrieval of Data and the front end is designed using **Visual Basic**.

2.1.1 Disadvantages of proposed system

- Slow processing and takes time for billing
- Didn't maintain supplier details
- No way to order online for purchase and sales
- Less reports only generated and can't be printed

2.2 PROPOSED SYSTEM

The proposed system describes how all the operations of a Pharmacy can be automated using *PMS*. *PMS* provide features such as online order placement for customers, mailing facility, search facility, billing and printing documents etc.

PMS provides the facility to get feedback from customer and check the order status online. The database used is MySQL. With superior speed, reliability, and ease of use, MySQL has become the preferred choice of corporate IT Managers because it eliminates the major problems associated with downtime, maintenance, administration and support.

The front end used here is Struts 2. The framework is designed to streamline the full development cycle, from building, to deploying, to maintaining applications over time. *PMS* uses a middleware called Hibernate. Hibernate is an object-relational mapping (ORM) library for the Java language, providing a framework for mapping an object-oriented domain model to a traditional relational database.

2.2.1 Advantages of Proposed System

- To automate the project functionalities makes the management more flexible, easy, fast and efficient
 - S/W for billing and printing documents
 - Emailing facility for customers
 - High data security
 - Low utilization of disc space
 - Online Order Placement
 - Easy Navigations between screens and facility for fast searching
 - Security feature are adapted to the users according to the privileges
- Enable to access the required data whenever required in the form of detailed efficient and fast

2.3 FEASIBILITY ANALYSIS

A feasibility study is made to see if the project on completion will serve the purpose of the organization for the amount of work, time and effort spent on it. Feasibility study lets the developer to foresee the future of the project and its usefulness.

- Finding out whether a new system is required or not.
- Determining the potentials and drawbacks of the existing system.
- Identification of user requirements and the benefits expected by the user from the resulting system.
- Finding out the various alternatives available.
- Knowing what should be incorporated in the new system.

- Defining the ingredients and objectives involved in the project.
- Proving technical, economic, operational feasibility of the proposed system.

There are three aspects in the feasibility study portion of the preliminary investigation. The proposed system must be evaluated from the technical point of view first, and if technically feasible their impact on the organization must be assessed. If compatible, operational system can be devised. Then they must be tested for economic feasibility

2.3.1 Technical Feasibility

A detailed study and analysis of the Cross-platform Integration tool was conducted. The system must be evaluated from the technical viewpoint first. The assessment of this feasibility must be based on an outline design of the system requirement in the terms of input, output, programs, procedure and staff. Having identified an outline system, the investigation must go to suggest the type of the equipment, required method developing the system, method of running the system once it has been designed.

The project should be developed such that the necessary functions and performance are achieved within the constraints. Technical feasibility study deals with the hardware as well as software requirements. The scope was whether the work for the project is done with the current equipments and the existing software technology has to be examined in the feasibility study. The outcome was found to be positive.

2.3.2 Economic Feasibility

The developing system must be justified by cost and benefit. A criterion is to ensure that effort taken on the project give the best return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require. Since the system developed is part of a project work, there is no manual cost to spend

for the proposed system. Also all the resources are already available, giving an indication that the system is economically possible for development.

2.3.3 Operational Feasibility

The proposed project would be beneficial to BARC iNDiA satisfying the objectives when developed and installed. One of the main problems faced during development of a new system is getting the acceptance from the user. There is support from the management towards the development of the project. All the operational aspects are considered carefully. Thus the project is operationally feasible.

CHAPTER 3

DEVELOPMENT ENVIRONMENT

3.1 HARDWARE REQUIREMENTS

Processor	:	Intel Pentium Core2Duo 1.8 GHZ
Hard disk	:	160 GB
Main memory	:	1 GB
Keyboard	:	105 keys
Monitor	:	SVGA or VGA
Pointing device	:	optical mouse

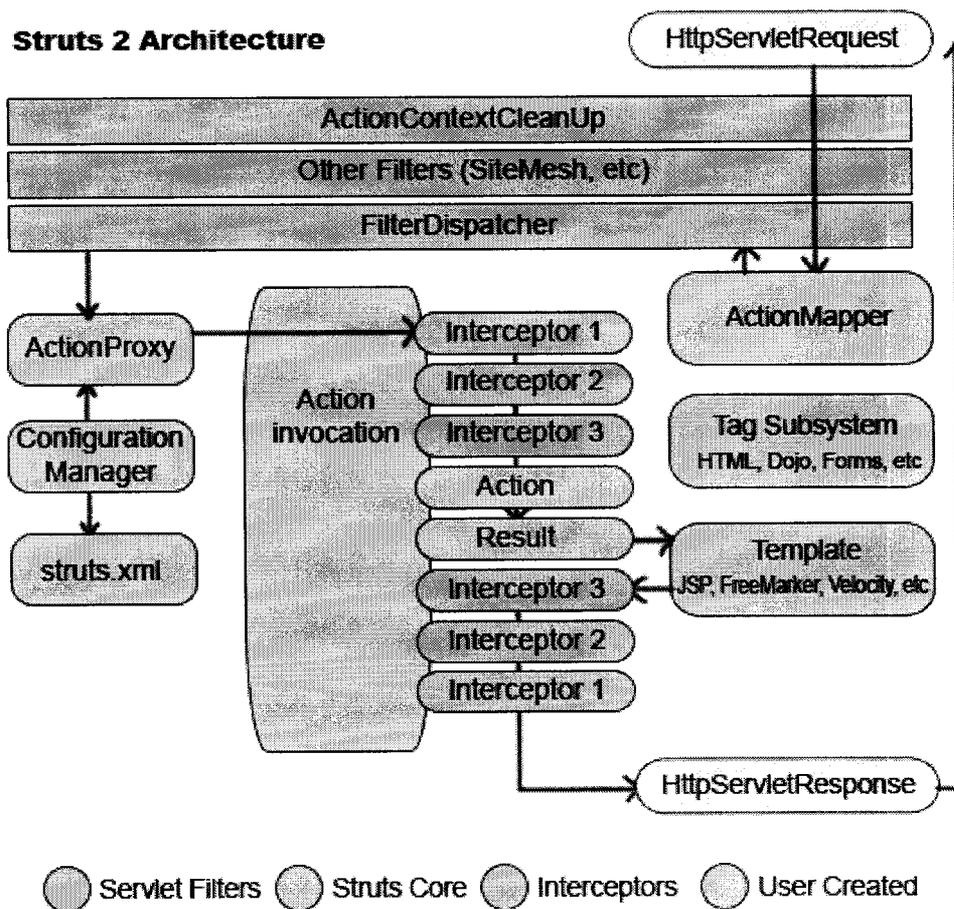
3.2 SOFTWARE REQUIREMENTS

IDE	:	MyEclipse
Frame Work	:	Struts 2
Technology	:	Java
ORM	:	Hibernate
Database	:	MySQL
Platform	:	Microsoft Windows

3.3 PROGRAMMING ENVIRONMENT

3.3.1 Struts2 Framework

Struts and webwork has joined together to develop the Struts 2 Framework. Struts 2 Framework is very extensible and elegant front controller framework based on many standard technologies like Java Filters, Java Beans, Resource Bundles and XML etc. The framework is designed to streamline the full development cycle, from building, to deploying, to maintaining applications over time. The framework can use any data access technologies like JDBC, EJB, Hibernate etc and for the View, the framework can be integrated with JSP, JTL, JSF, Jakarta Velocity Engine, Templates, PDF, XSLT etc.



- **Exception Handlers**

Exception handlers allow us to define the exception handling procedure on global and local basis. Framework catches the exception and then displays the page of our choice with appropriate message and exception details.

- **Interceptors**

The Interceptors are used to specify the "request-processing lifecycle" for an action. Interceptors are configured to apply the common functionalities like workflow, validation etc. to the request.

- **Log4j**

Log4j is an open source project based on the work of many authors. It allows the developer to control which log statements are output with arbitrary granularity. It is fully configurable at runtime using external configuration files. Log4j has been ported to the C, C++, C#, Perl, Python, Ruby, and Eiffel languages. Experience indicates that logging was an important component of the development cycle. It offers several advantages.

It provides precise context about a run of the application. Once inserted into the code, the generation of logging output requires no human intervention. Moreover, log output can be saved in persistent medium to be studied at a later time. In addition to its use in the development cycle, a sufficiently rich logging package can also be viewed as an auditing tool.

- **Apache James**

JAMES Server is an advanced fully functioned integrated mail server. It is a mailet container and delegate's mail processing to mailets (independent processing agents). Most of these mailets are available through products in the mailets subproject.

3.3.2 Hibernate

Hibernate core is the most popular Java ORM persistence tool. It provides automatic and transparent object/relational mapping allowing java objects to persist in a database after the java program exits.

Hibernate is an object-relational mapping (ORM) library for the Java language, providing a framework for mapping an object-oriented domain model to a traditional relational database. Hibernate solves Object-Relational impedance mismatch problems by replacing direct persistence-related database accesses with high-level object handling functions. In this project, Hibernate is used as middleware by which the database is not accessed directly. The database is handled by objects.

3.3.3 Jboss Server

Jboss Application Server (or JBoss AS) is a free software / open source Java EE-based application server. Because it is Java-based, the JBoss application server is cross-platform, usable on any operating system that Java supports.

In this project, jboss-4.2.2.GA is used as deployment server. Before deploying the project the server should be configured and necessary jars should be added. JBOSS uses the port number 8081. After deploying, the project can be run using any web browser by specifying the following address in url area.

<http://localhost:8081/pms>

3.3.4 MySQL

MySQL is the world's most popular open source database software, with over 100 million copies of its software downloaded or distributed throughout its history. With superior speed, reliability, and ease of use, MySQL has become the preferred choice of corporate IT Managers because it eliminates the major problems associated with downtime, maintenance, administration and support.

In this project, MySQL server 5.0 is used. It contains MySQL system tray monitor, MySQL migration tool kit, MySQL Administrator, MySQL Query browser. The user name is **root** and schema name is **pms**. This should be specified in the config.cfg file.

3.3.5 MyEclipse

MyEclipse is a commercially available Java EE and AJAX IDE created and maintained by the company Genuitec, a founding member of the Eclipse Foundation. MyEclipse is built upon the Eclipse platform, and integrates both proprietary and open source solutions into the development environment.

In this project MyEclipse is used as a web development tool required for designing and coding the project. It contains many perspectives and this project is developed in java perspective. Jar files and server are added to this project and run using MyEclipse interface.



CHAPTER 4

SYSTEM DESIGN

4.1 DATA MODEL

4.1.1 Tables

4.1.1.1 Product

Detail about all the products in the stock ,no of items in the stock, price of the product and the minimum level for each product to be maintained for the safety stock		
Column Name	Data Type	Description
Pkid	Long	Primarykey
Name	String	Name for the Product
Form	String	Form of the product(liquid,tablet,syrub,powder)
Packaging	String	No of products per pack
Strength	String	Strength of the tablet(250 mg,400 mg,500 mg)
expiry_date	Date	Date of Expiry
Quantity	Long	No of item in stock
Price	Double	Price of the Supplier
Sprice	Double	Sales price of the product
reorder_level	Int	Level maintained for safety stock
vat_code	String	Value added tax code
Vat_percent	Int	Vat Percentage
supplier_id_fk	Long	Unique for the supplier(Foreign key)
manufacturer_id_fk	Long	Unique for manufacturer(foreign key)

4.1.1.2 Supplier

Detail about the list of suppliers ,their contact details and various balance,credit limit and due days for each supplier

Column Name	Data Type	Description
supplier_id	Long	Primarykey
Name	String	Name of the supplier
Email	String	Email Id of supplier
phone_no	String	Phone no of supplier
fax_no	String	Fax No
address1	String	Address of supplier
City	String	City where the stockiest available
State	String	State the supplier belongs
c_balance	Double	Current balance for the Supplier
a_balance	Double	Aged balance for the Supplier
c_limit	Double	Credit limit for the Supplier
d_days	Int	Due days given by the supplier for the payment

4.1.1.3 Manufacturer

Detail about the list of Manufacturer ,their contact details

Column Name	Data Type	Description
manufacturer_id	Long	Primarykey
Name	String	Name of the Manufacturer
Website	String	Website of supplier
State	String	State which the manufacturer belongs belongs
Country	String	Country the manufacturer belongs

4.1.1.4 Sales Order Table

Detail about the list of sales order ,the transaction and various total amount paid ,discount and tax		
Column Name	Data Type	Description
order_id	Long	Primarykey
c_name	String	Name of the customer
taken_by	String	Person who takes medicine for this order
prescribed_by	String	Doctor who prescribed
Discount	Double	Discount given for the customer
Tax	Double	Tax paid by the customer
amount_payable	Double	Total amount payable without tax
Date	Date	Date the sales made

4.1.1.5 Sales order items

Contains the products that are order for a particular order and their quantity		
Column Name	Data Type	Description
product_id	Long	Unique identifier for the product
Order_id	Long	Order id for which the purchase is made
Name	String	Name of product
Packaging	String	No of products per pack
Strength	Int	Address of supplier
Quantity	String	City where the stockiest available
vat_code	String	Value added tax code
Vat_percent	Double	Percentage of tax

4.1.1.6 Purchase Order Table

Detail about the list of purchase order ,the transcation and various total amount paid ,discount and tax for a supplier		
Column Name	Data Type	Description
order_id	Long	Primarykey
supplier_id	Long	Supplier to whom the order is given
Status	String	Status of the given orderr
ordered_by	String	Doctor who prescribed
Discount	Double	Discount given for the customer
Tax	Double	Tax paid by the customer
amount_payable	Double	Total amount payable without tax
Date	Date	Date the sales made

4.1.1.7 Purchase_order_items

Contains the products that are order for a particular order and their quantity with the order id		
Column Name	Data Type	Description
product_id	Long	Unique identifier for the product
Order_id	Long	Order id for which the purchase is made
Name	String	Name of product
Packaging	String	No of products per pack
Strength	Int	Address of supplier
Quantity	String	City where the stockiest available
vat_code	String	Value added tax code
Vat_percent	Double	Percentage of tax

4.1.1.8 Purchase return Table

Detail about the list of product to be returned to the supplier		
Column Name	Data Type	Description
Pkid	Long	Primary key
order_id	Long	Primarykey
supplier_id	Long	Supplier to whom the order is given
product_id	Long	Id of the product returned
Reason	String	Doctor who prescribed
Date	Date	Date the sales made
Status	String	Status wheathe it is returned or not

4.1.1.9 Sales return Table

Detail about the list of product to be returned to the supplier		
Column Name	Data Type	Description
Pkid	Long	Primary key
order_id	Long	Primarykey
product_id	Long	Id of the product returned
Reason	String	Doctor who prescribed
Date	Date	Date the sales made

4.1.1.10 login Table

Detail about the list of product to be returned to the supplier		
Column Name	Data Type	Description
Pkid	Long	Primary key
Username	String	Name of user
Password	String	Desired password for user(default is 1234)
Type	String	Role given to the user

4.2 PROCESS MODEL

4.2.1 Usecase Diagram

Product and Stock Operation

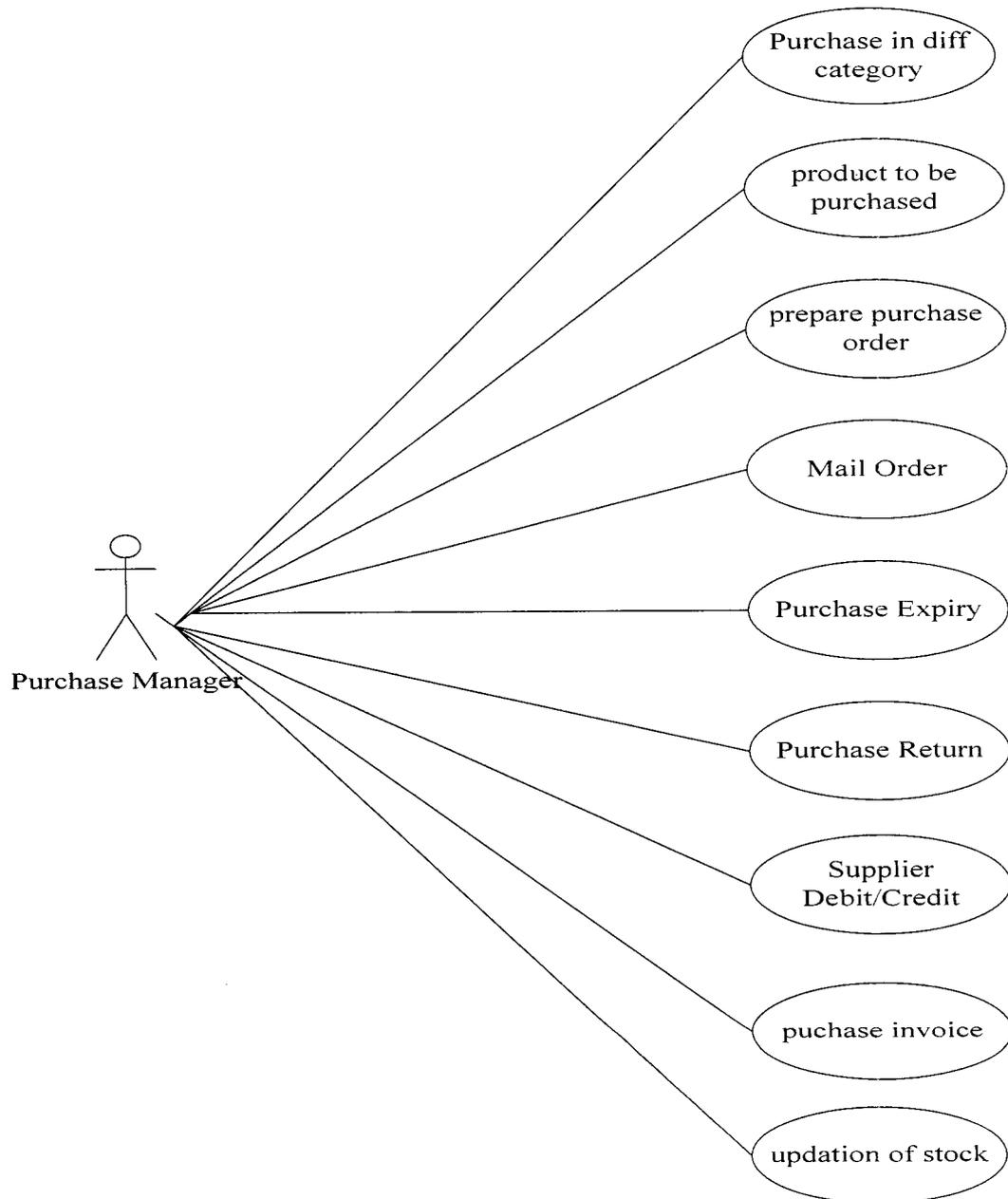


Figure 4.2.1.1 Product and Stock Operation

Supplier Module

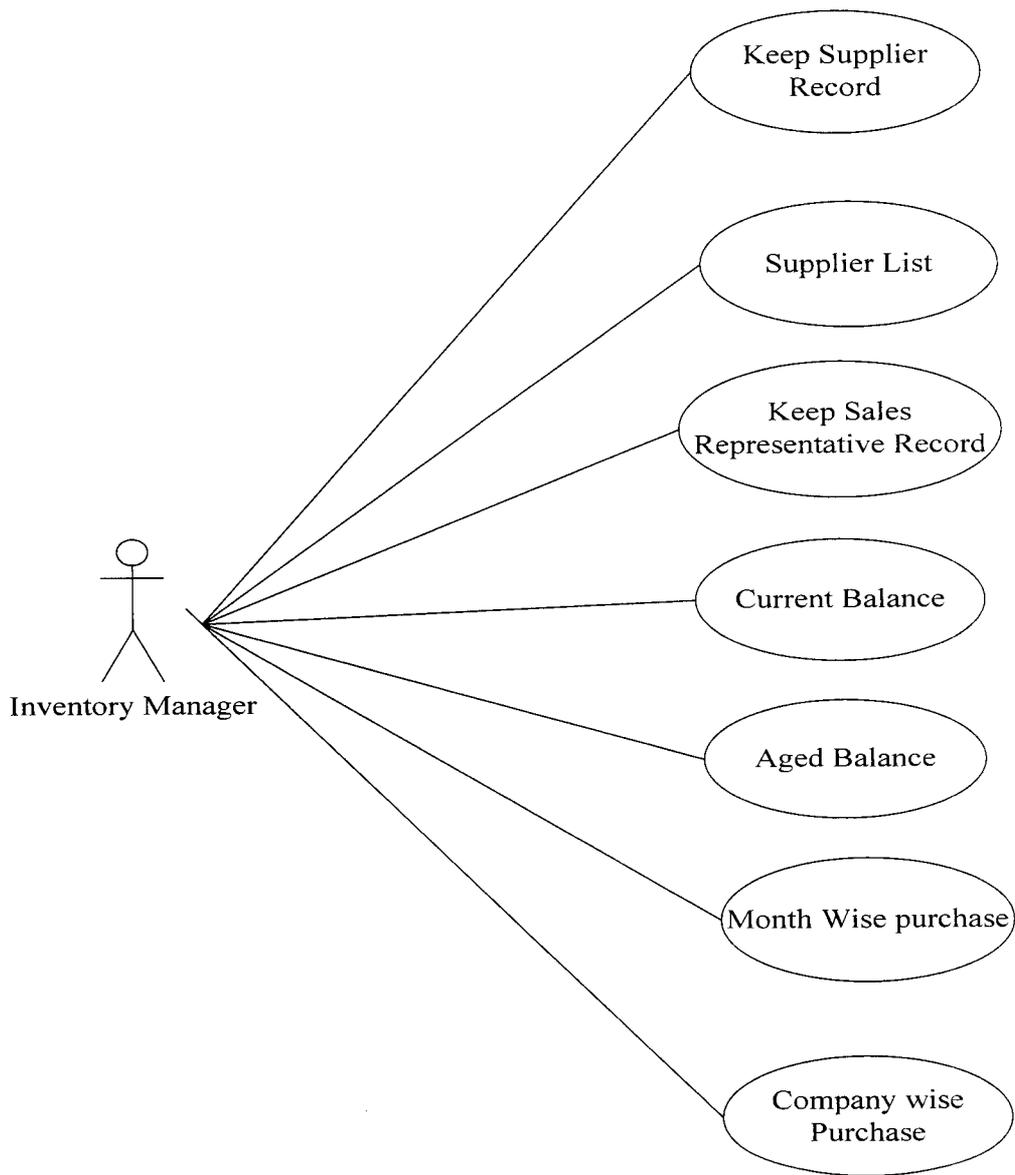


Figure 4.2.1.2 Supplier Operations

Purchase module

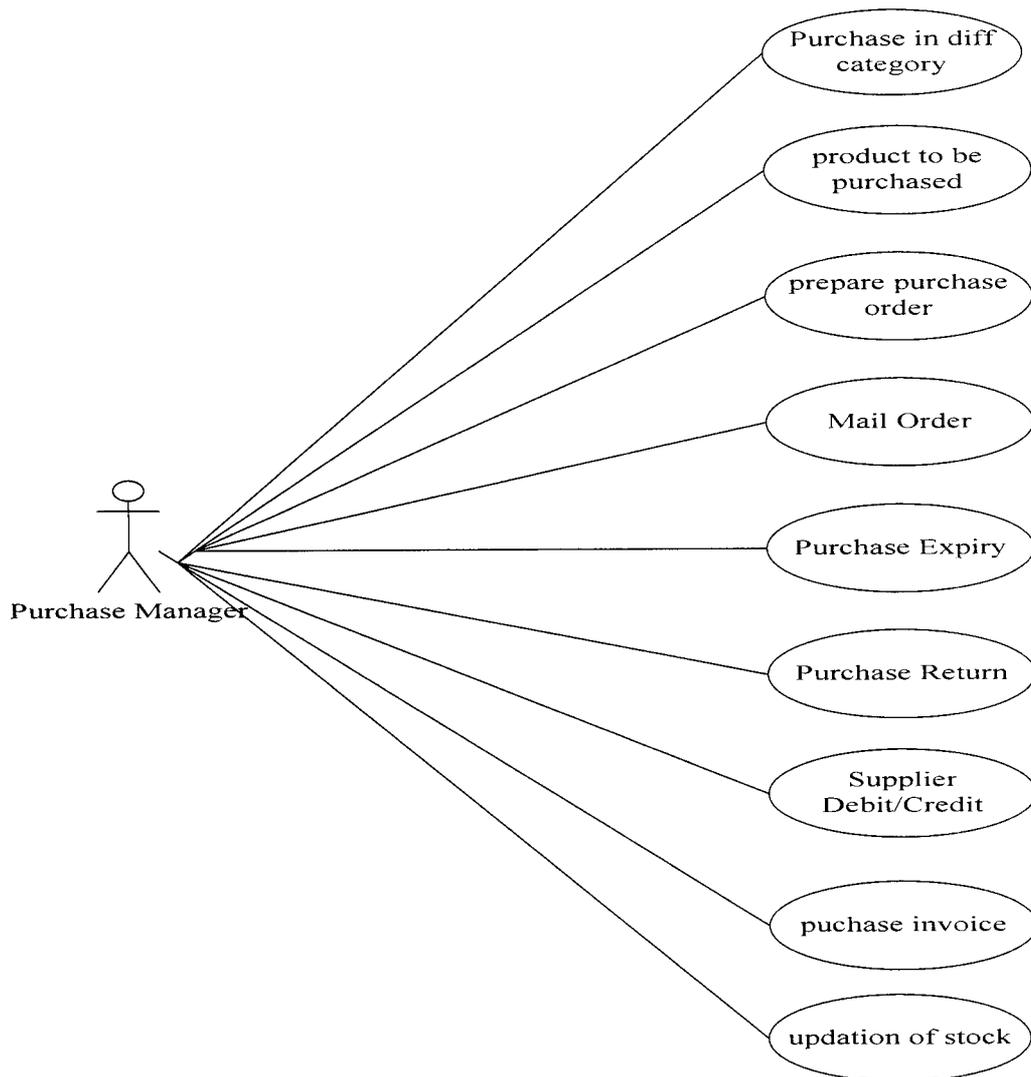


Figure 4.2.1.3 Purchase Module

Customer Operations

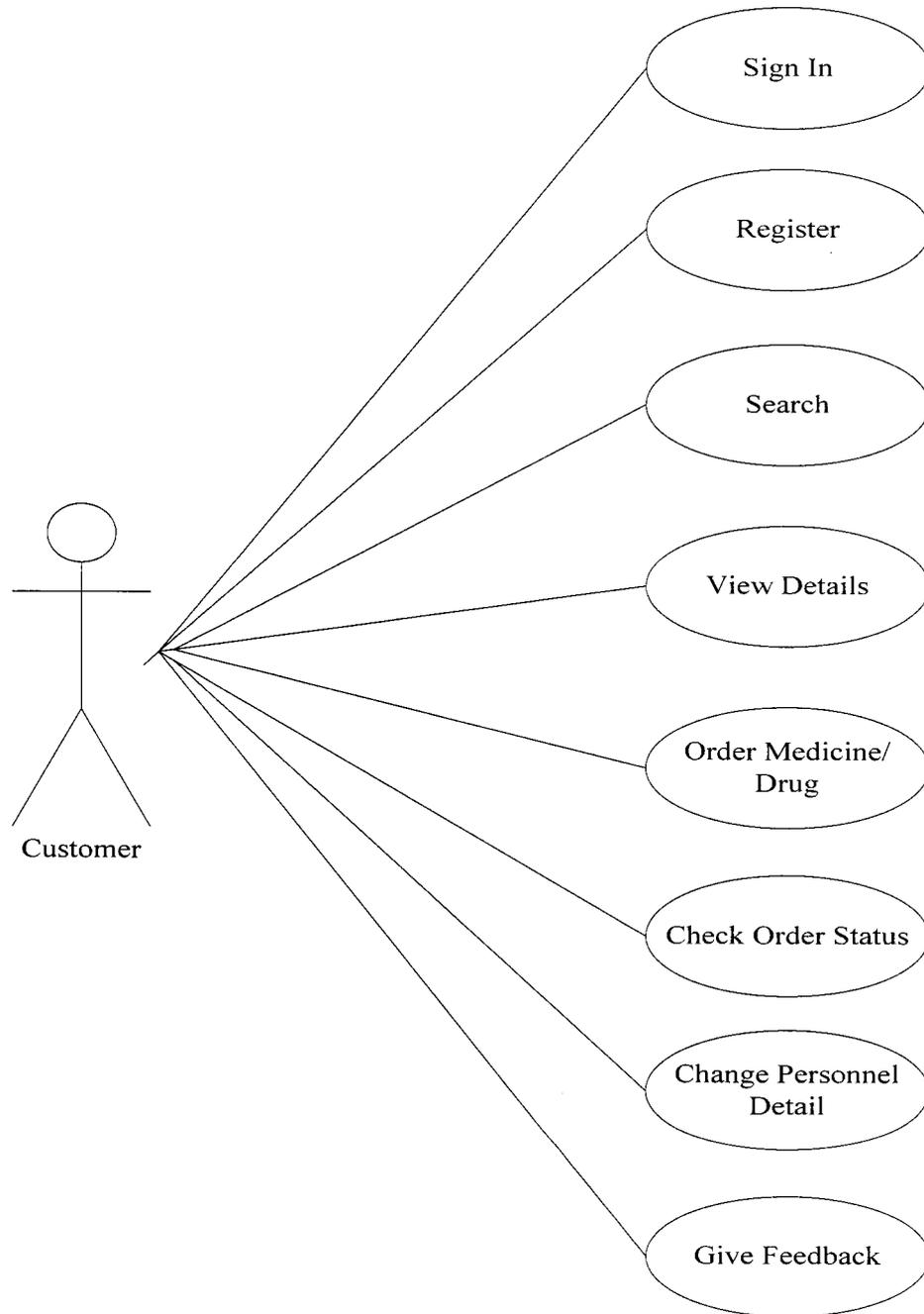


Figure 4.2.1.4 Customer Operations

Order Placement:**Figure 4.2.1.4 order Placement**

4.2.2 Sequence Diagram

Order Processing::

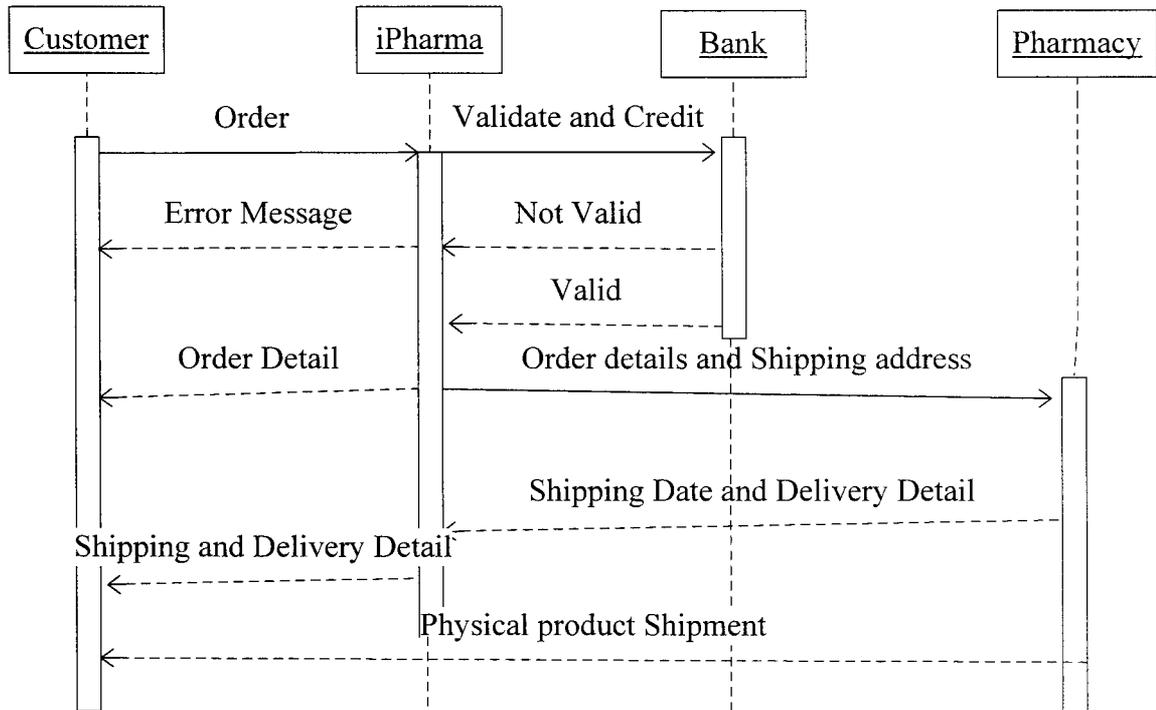


Figure 4.2.2.1 Order Processing

Check order status

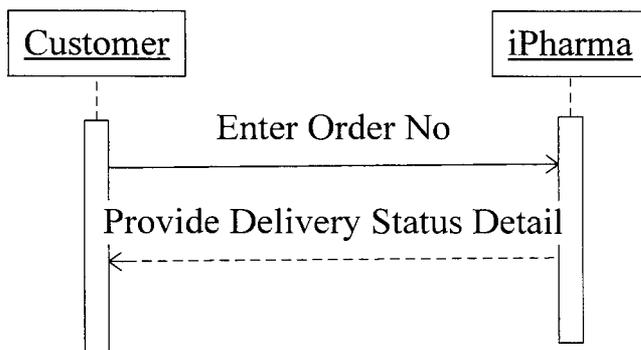
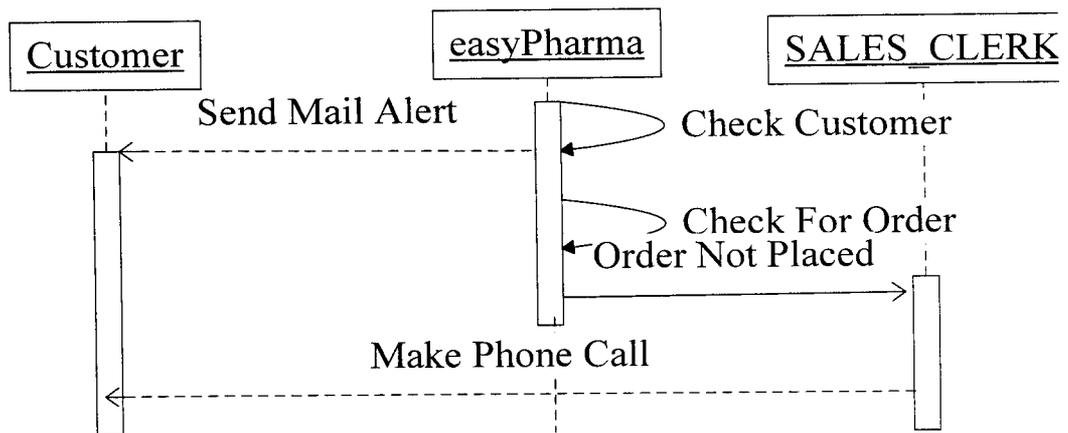


Figure 4.2.2.2 Check Order Status

Email Alert:**Figure 4.2.2.3 Email Alert**

CHAPTER 5

SYSTEM DEVELOPMENT

System development is a series of operations performed to manipulate data to produce output from computer system. This aim at translating the design of the system produced during the design phase into code in user programming language. A modular approach is used for the development of the software.

The development phase for the project was created from the specifications created during the design phase. A principal activity of the development phase is coding and testing the computer program that make up the computer program component of the overall system. Other important activities include implementation, planning, equipment acquisition and system testing. The development phase concludes with the report and review.

5.1 MODULE DESCRIPTION

5.1.1 Product and Stock module

Product Module is the heart of inventory control module. It keeps detailed information of all the products which are sold or purchased along with their current stock. The whole process of Inventory Control is fully automated. The inventory control module keeps track of good and damaged / expired stock separately. This module produces various reports like Sales & Stock Statement, Sales Ledger, Products nearing expiry, Products to be reordered along with company wise Price List, Product List. All the reports can be printed and the columns to be printed can be selected.

1. Product record

1.1 Adding a new product

1.2 Finding product information

- 1.3 Editing a product record
- 1.4 Deleting a product record
- 1.5 Using product data grid
2. Product list
3. Price list
4. Customized price list
5. Periodic sales and stock management
 - 5.1 Good stock and Bad stock
 - 5.2 Preparing stock and sales statement
 - 5.3 Modifying closing stock
6. Sales and stock management(Manual Module)
7. Stock item movement analysis
 - 7.1 Stock item movement register/stock register
 - 7.2 Bill wise product sales
 - 7.3 Bill wise product purchase
 - 7.4 Bill wise sales return
 - 7.5 Bill wise purchase return
 - 7.6 Graph of product sale
 - 7.7 Graph of product purchase
 - 7.8 Salability of product
 - 7.9 Movements of product
 - 7.10 Slow moving items
8. Product nearing expiry date
9. Products to be reordered list
10. Internal stock transfer of Expired/Breakage products
 - 10.1 Transfer of expired product to bad stock
 - 10.2 Transfer of breakages to bad stock
11. Record of breakages/Expired products
12. List of breakages/Expired products

5.1.2 Purchase Module

Purchase Module takes care of all purchase functions including invoicing, maintaining ledger and producing various purchase reports. It keeps detailed information of all the cash / credit purchase invoices, supplier return memos etc... The whole process of Ledger updation is fully automated. The module also includes purchase Expiry / Breakages Return Memo (returned to supplier) and supplier debit / credit notes.

Clearing and forwarding which is essentially a stock transfer is also handled separately by the purchase module. All the purchase transactions are shown in the Purchase Book which is made according to the type of the purchase transactions. This module produces various reports Purchase Book and Supplier Return and other Transactions book. All the reports can be printed and the columns to be printed can be selected.

5.1.3 Sales Module

Sales Module takes care of all sales functions including invoicing, maintaining ledger and producing various sales reports. It keeps detailed information of all the sales invoices, sales return memos etc. The whole process of Ledger updation is fully automated. The sales module keeps track of outstanding invoices. Sales database

1. Quotations
2. Sales order
3. Delivery challan
4. Sales invoice
5. Books of sales
6. Sales returns/transactions
7. Sales return/reports
8. Company wise sales
9. Month wise sales

5.1.4 Supplier Module

Supplier module receives and process information about the suppliers. It has all the information about ledger balances and outstanding invoices centralized at one place. The reminder letters for outstanding invoices can be printed for all or selected suppliers. The buying habit of the supplier and transaction history is also prepared in this module. List / address label of the customers can be printed through this module.

1. Supplier record
 - 1.1 Adding new supplier
 - 1.2 Finding supplier information
 - 1.3 Editing a supplier record
 - 1.4 Deleting a supplier record
 - 1.5 Setting up supplier A/C heads
2. Supplier list
3. Supplier current balance
4. Supplier aged balance
5. Supplier transaction history
6. Company wise sales
7. Month wise sales
8. Month wise company sales
9. Month wise company purchase

5.1.5 Customer and Online Sales module

Order placement:

This module allows the customer to place the order, provide search(By company, By category, By generic) facilities and collect the information from the customer regarding the delivery address, credit card or debit card information for payment.

Order Processing:

Once the customer placed the order the details regarding the price, ordered, discount, Date of delivery and from where the delivery will be made will be sent to the customer's mail and the credit card or debit card is validated in parallel.

Check order status:

Customer checks the status of delivery using order id. This service is enabled only when they have already ordered.

Drug description:

This module contains the details of drug like uses, how taken, warnings/precautions, missed dose, possible side effects, storage, overdose,

Login:

This Module allows the consumer to sign to purchase, search, give feedback and view drug descriptions. If consumer doesn't have account, they will sign up and register him.

Registration:

This Module allows the consumer to register with easyPharma. It collects the information regarding personnel details, contact details and shipping details.

Email alert:

This Module sends the email alert to the regulars customers (like Bp patient, Heart Patient and diabetes patient etc...).

Feedback and contact us:

This Module collects the information from the regarding their purchase experience and their suggestions.

CHAPTER 6

SYSTEM IMPLEMENTATION

Implementation is the state in the System where the theoretical design is turned into a working system. The system can be implemented only after through testing is done and if found to work according to the specification. The most crucial stage in achieving a new successful system relies in giving confidence for the users on the new system that will work efficiently and effectively.

It involves careful planning, investigation of the current system and to constraints on implementation, design of methods to achieve the changeover, an evaluation of changeover methods apart from planning. System Analysis and design efforts will be more complex system being used for writing program code.

Program Code Preparation

One of the important development activities is the code of programming. The system Use cases and other channels are converted to modular programs; they have to be compiled, tested and debugged.

CHAPTER 7

TESTING

Testing is an important part of the software development life cycle. The amount of testing required is related to the size and complexity of the application.

7.1 TYPES OF TESTING

Testing mainly focuses on the identifying the unseen defects in the developed software. There are different types of testing which are discussed in this section.

7.1.1 UNIT TESTING

Unit testing concentrates on each unit of the software implemented in the source code. The developer at the module level carries this out and this testing is white-box oriented. The module interface is tested to ensure that information properly flows into and out of the program unit under test. All independent paths through the control structure are exercised to ensure that all statements in a module have been executed at least once.

7.1.2 INTEGRATION TESTING

Integration testing is a systematic technique for constructing the program structure, while at the same time conducting tests to uncover errors associated with interfacing. That is, the program is constructed and tested in small segments, which makes it easier to isolate and correct. This testing focuses on the design and construction of the software architecture. The testing team carries this out and this testing is black box oriented.

Integration testing is a systematic technique for constructing the program structure while at the same time conducting tests to uncover errors associated with interfacing. The objective is to take unit-tested modules and build a program structure that has been dictated by the design. Both integration and testing is done in this phase. Units are combined one at a time and tested, till entire software gets integrated.

7.1.3 VALIDATION TESTING

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

requirements are met. After each validation test case has been conducted, one of the two possible conditions exists.

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

7.1.4 SYSTEM TESTING

System testing is not a process of testing the functions of the complete system, which has already been achieved, by function testing. System testing is the process of attempting to demonstrate how the program does not meet its objectives.

7.2 SAMPLE TEST CASES

The testing is done in the form of writing a report which consists of a format which has the test cases along with the expected result in the respective cycles. Table 6.1 shows the sample test cases.

Table 6.1 Sample test cases and its results

S No	Test Cases	Expected result	Cycle1
1	Will any popup message be given when user try to order product before selecting product?	Yes	Pass
2	Will any popup message be given when user try to upload prescription without selecting category?	Yes	Fail
3	Will any popup message be given when user order product ?	Yes	Pass
4	Whether the user can upload imaged prescription other than image files?	No	Fail
5	Will any message be given when product period is expired?	Yes	Pass

CHAPTER 8

PERFORMANCE AND LIMITATIONS

8.1 MERITS OF THE SYSTEM

- Provides fast and efficient billing using ajax
- Alert for product expiry, deficiency and customers
- online order and delivery
- customer retainment
- providing information for all the drugs sold

8.2 LIMITATIONS OF THE SYSTEM

- Internet connection, credit card and little knowledge is necessary for customers to order online

8.3 FUTURE ENHANCEMENT

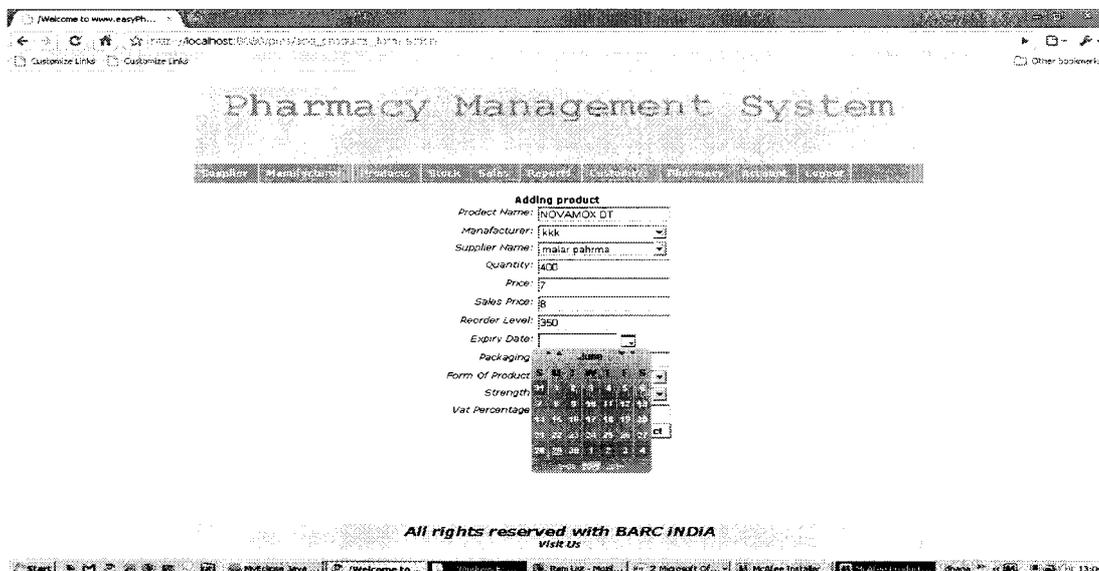
- Integrating all the branches of the pharmacy and maintain detail in a centralized database
- Provide smart card for customers to increase the purchase
- e-Prescription for the patient from the doctor

CHAPTER 9

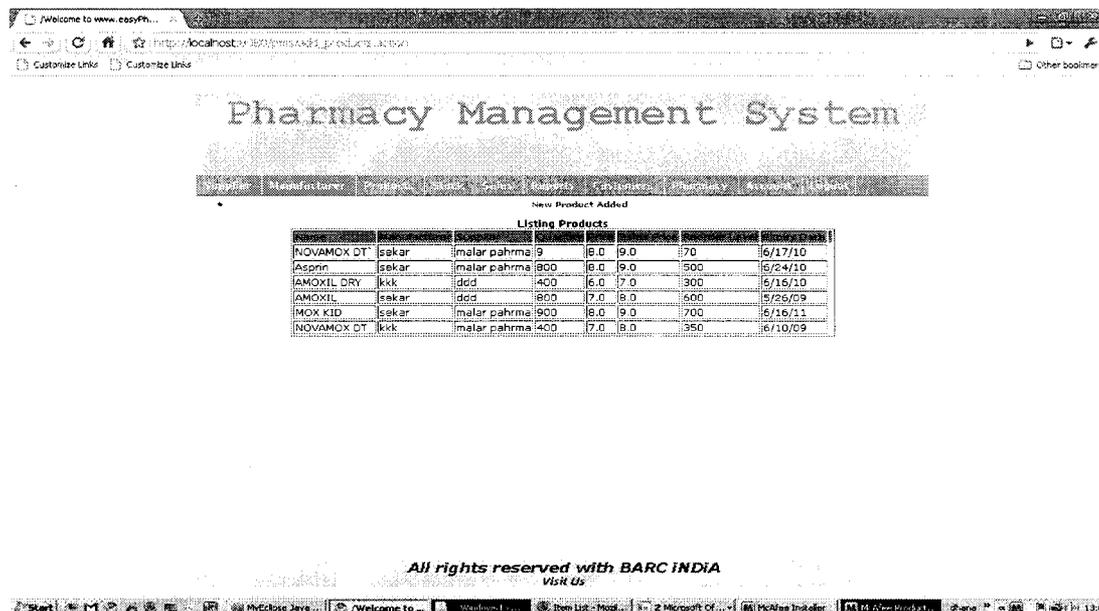
APPENDICES

9.1 SAMPLE SCREENS

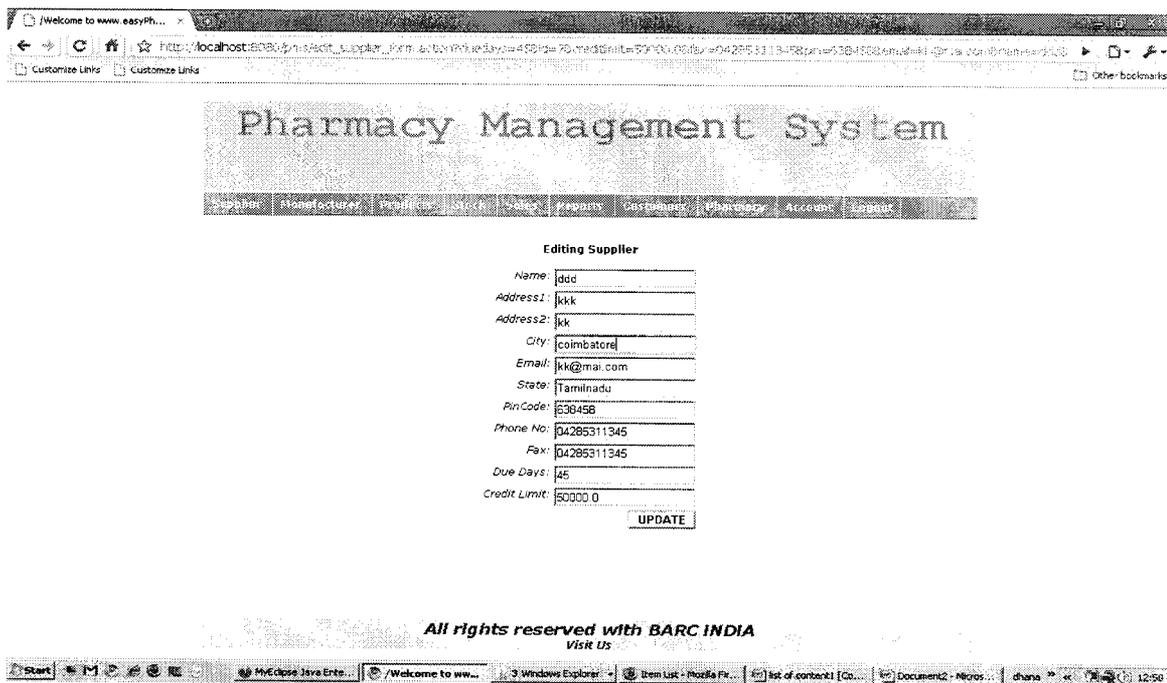
Add Product Form:



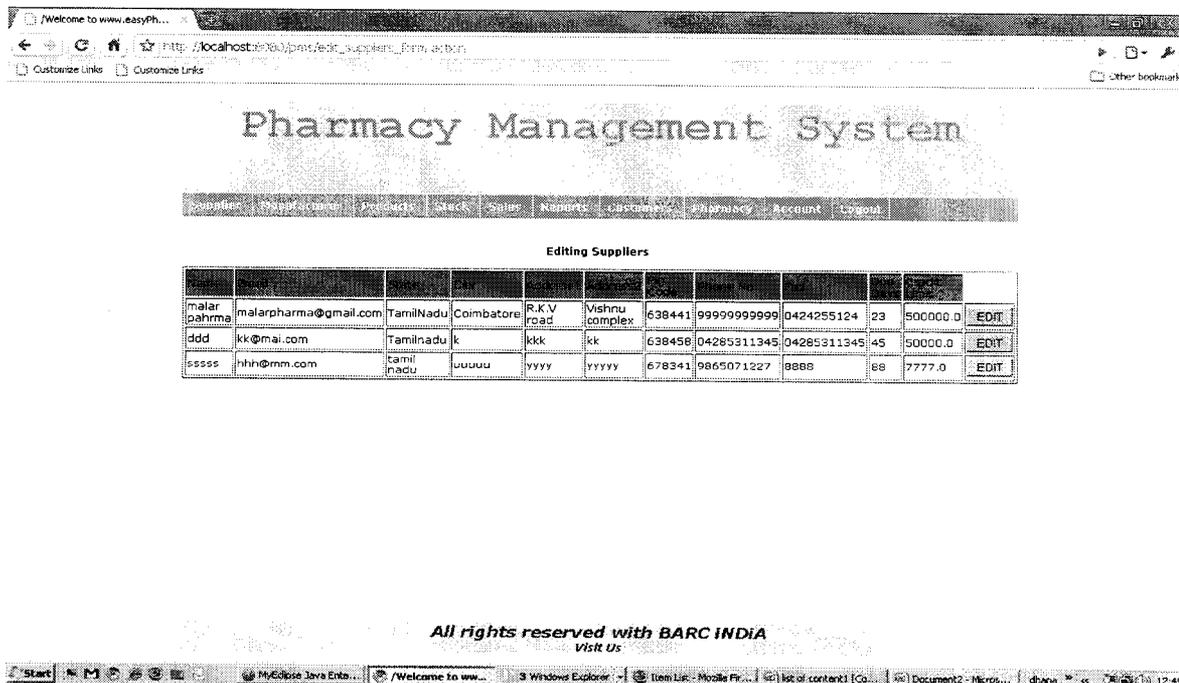
Listing Product:



Updating Supplier:



Editing Suppliers:



Deleting Manufacturer:

Pharmacy Management System

Deleting Manufacturer

Name	Company	Website	Delete
sekar	sekar	sekar	Delete
dnhhj	india	www.barc.net	Delete
44	444	www.444.com	Delete
kk	england	www.444.com	Delete

Do you want to delete?

OK Cancel

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Visit Us

Billing:

Pharmacy Management System

Adding Items To Cart

Selected Product Name: NOVAMOX DT

Enter Quantity: 8

submit

Name	Quantity	Price	Subtotal	Remove
MOX KID	8	9.0	72.0	Remove
Asprin	8	9.0	72.0	Remove
Total			144.0	

Order Items

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Change Password Form:

Pharmacy Management System

Home | About Us | Contact Us | Privacy Policy | Terms & Conditions | Pharmacy | Account | Logout

Changing Password

User Name:

Existing Password:

Desired Password:

Confirm Password:

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Visit Us

Start | MyEclipse Java Edit... | /Welcome to www... | 3 Windows Explorer... | Item List - Mozilla Fi... | list of content: [Co... | Document2 - Micros... | dhana... | 13:33

List of Products By Alphabet:

My JSP 'index.jsp' starting... x

http://localhost:8080/Pharmacy/Welcome.html

Customize Links | Customize Links

Welcome To Pharma

Online Pharmacy

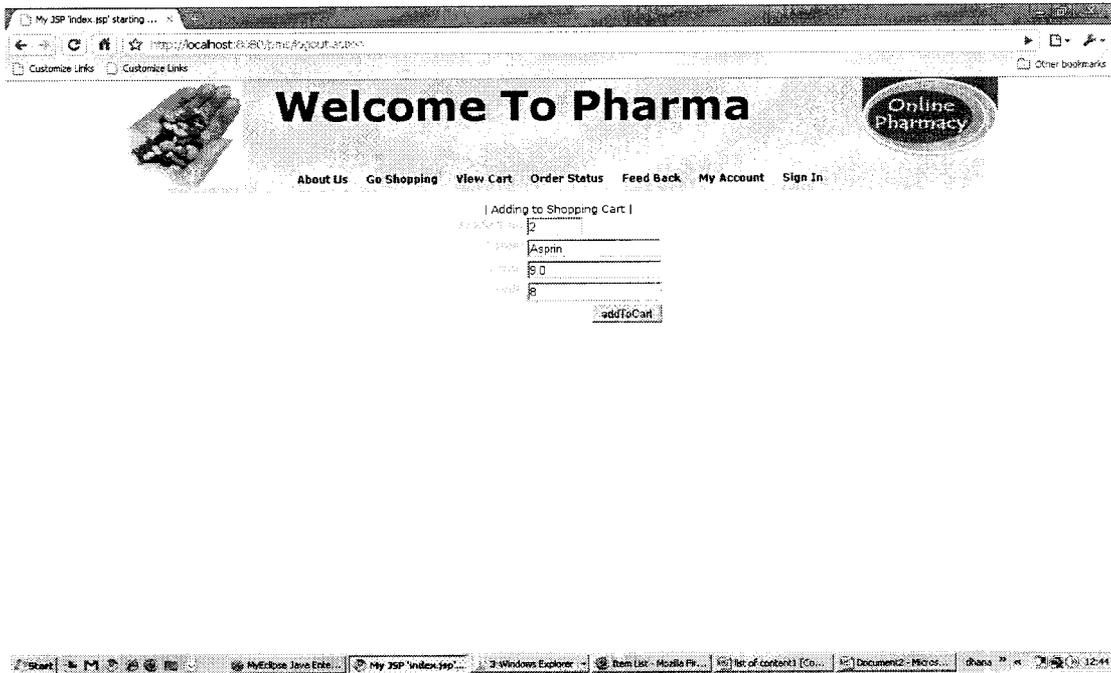
About Us | Go Shopping | View Cart | Order Status | Feed Back | My Account | Sign In

ABCDEF GHIJKL MNOPQRST UVWXYZ

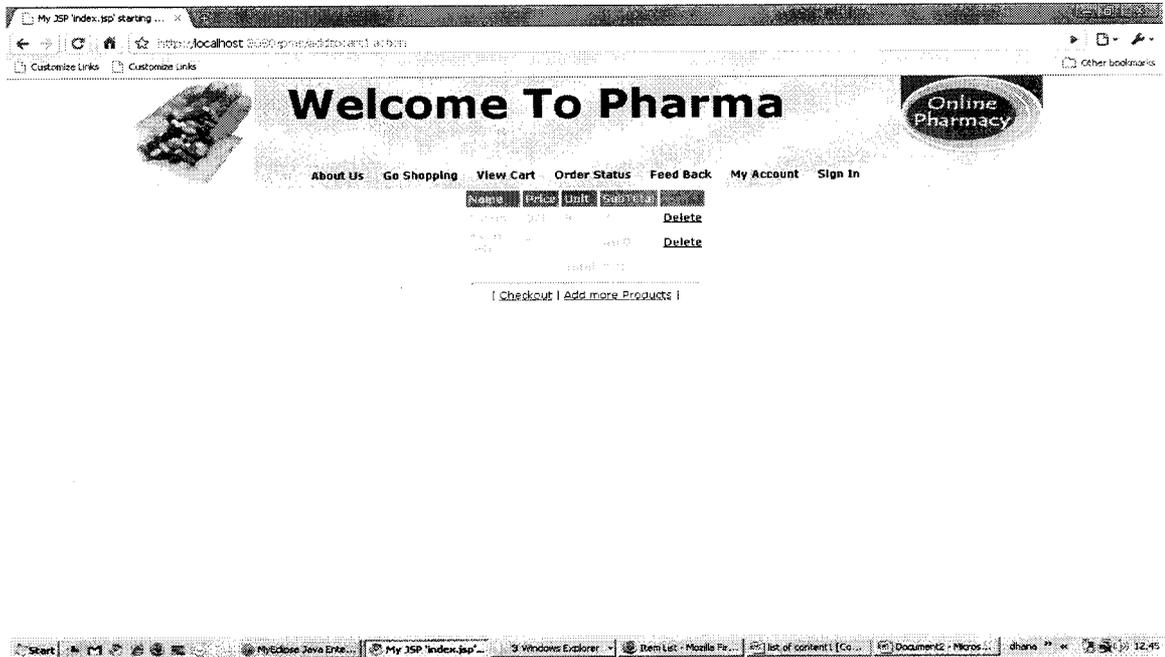
- ▶ Aspirin
- ▶ AMOXIL DRY
- ▶ AMOXIL

Start | MyEclipse Java Edit... | My JSP 'index.jsp' etc... | 3 Windows Explorer... | Item List - Mozilla Firefox... | list of content: [Comod... | dhana... | 12:44

Adding Items To Cart:



Items In Cart:



CHAPTER 9

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