ONLINE GARMENTS PRODUCTION
AND
EXPORT SYSTEM

By

S. BRAHADEESWARI
Reg. No. 71206621010

Of

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Of

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BONAFIDE CERTIFICATE

Certified that this project report titled **ONLINE GARMENTS PRODUCTION AND EXPORT SYSTEM** is the bonafide work of **Ms. S. Brahadeeswari (Register No: 71206621010)** who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not from part of any other project report or dissertation on the basis of which a degree or award was conferred on a earlier occasion on this or any other candidate.

Supervisor

Head of the Department

Submitted for the viva-voce examination held on ....26.07.09...........

Internal Examiner
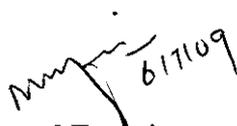
External Examiner

Le Connoisseur Ventures Pvt Ltd

Date: 23/6/09.
Coimbatore.

This is to certify that S.BRAHADEESWARI has completed an internship with "Le Connoisseur Ventures Pvt Ltd.," – Tirupur. The Period of internship is from **5th Jan 2009 to 29th May 2009**. During this period the intern has been working on a project entitled as **Online Garments Production and Export System**. We found that intern's conduct is **GOOD**.

Yours truly,

For **Le Connoisseur Ventures Pvt. Ltd.**
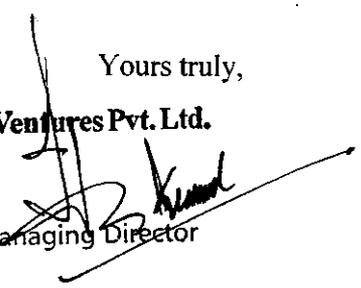
Managing Director

ABSTRACT

Recently the readymade garments industries have an increasing growth all over the world. Global readymade garments exporters have experienced extraordinarily high rates of growth, along with the continual entry of new suppliers especially from Tirupur. The purpose of this project is to co-ordinate whole business process of the readymade garments Le connoisseur Ventures which involves production, inventory management and export system. The production procedures and the current inventory management system should be analyzed for providing better solution to the entrepreneurs relevant to this field. This leads to the design and implementation of a web enabled database application to support the manufacturing procedure. This is a web application designed with variety of features to satisfy the customers of Le Connoisseur Ventures as well as to support the manufacturer of this industry in case of the production, inventory and export management. The business analysis part was accomplished successfully and domain knowledge is gained properly through the direct interaction with the employees and customers of Le Connoisseur Ventures. The production cycle of the industry is conceptualized properly. A model is suggested to follow up the production, inventory and export management system. There are many applications available in market for production, export and inventory management, but this application was customized and developed for taking account of the limited computer knowledge of the users and the limited technologies in textile field. Thus this web application is designed in a best way to attain the requirements specification of Le Connoisseur Ventures.

ACKNOWLEDGEMENT

It is beyond the comprehension of mere elegance of word to acknowledge someone who has been the guiding spirit behind the dissertation. I am very much grateful to Vice Principal Dr. R.Annamalai and Dean Dr. S. Thangasamy for his excellent support.

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I feel much privileged to thank Mr.Harikumar, CEO of Le Connoisseur Ventures who had acknowledged his full support for doing a project in his own concern.

I would like to thank my parents and families for their love, continuous encouragement and support to study in this college and inspiring me at every step of my life. This is also the proper time to thank my friends as I truly appreciate their support.

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List of Abbreviations

Acronyms	Full Form
OGPES	Online Garments Production and Export System.
LC	Letter Of Credit
QC	Quality Control

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CHAPTER 1

INTRODUCTION

1.1 SYSTEM OVERVIEW

Automation is the key to increase efficiency, performance and reliability in any system and is being rapidly followed in all walks of life. Thus here the manual works of Le Connoisseur Garments are automated with the help of OGPES.

The main objective of the system is to automate the production and export system of Le Connoisseur Ventures. It's a tool for the customer to place the order and to get invoice online and to verify samples given by the garments. A customer can view the updated status of their order easily, which helps them to give their feedback on time. It assists the employees of Le connoisseur in production planning and control. It generates timely reports effectively.

Major functionalities of this web application are,

❖ Order Placement
❖ Order Processing
❖ Production Planning
❖ Material Purchasing
❖ Production and Quality control
❖ Shipment

These functionalities are modularized in a computable manner using bottom up fashion. The system analysis and a deep domain study is performed which will be listed in the following session.

1.2 ORGANIZATION OVERVIEW

Le Connoisseur Ventures Pvt. Ltd - A reputed garments at Tiruppur, which cater to the demands of domestic markets and export its products to clients in leading consumer markets in Canada, EEC and Australian countries. It uses advanced technology and equipment to produce internationally acceptable products like knitted garments, knitted cotton garments which are stitched using interlock, drop needle, single rib, pique and fleece. This has been possible because of their diligent and efficient work force and advanced production facilities.

As headed by CEO Mr. Harikumar, its activities are streamlined as per the production targets and the talent and expertise of its professionals. The raw material is sourced from certified vendors and the entire production is done under the constant surveillance of their expert quality auditors. This nullifies the possibility of any discrepancy in their products and quality. Due to all the available machineries and testing amenities their entire assortment is at part with their-international-compatriots.

With prompt deliveries it is widely accepted and appreciated for its products and customized services. Owing to the diversified attributes of their garments are widely demanded in the markets of Italy and other countries.

They are having a buying office in Coimbatore. It is located exactly in pioneer apartments. This buying office will act as a bridge for customer and their production department. The customers who visit the factories will be treated with good enough discipline. This gives the better customer satisfaction which leads to best business.

CHAPTER 2

SYSTEM STUDY AND ANALYSIS

2.1 EXISTING SYSTEM

The current situation in garments industries is very poor in case of computerizations. Though each of these industries is investing millions of dollars in their business for different plants and machineries but they really do not care about the computerization of their system. The reason behind this is lack of computer skills of the managements, unskilled users of the computer system and ignorance about the strengths of the computerization. The current scenario is -

1. An average of 8 to 10 computers is used in most of the garments factory but they are the novice compute users as they have started to use it not more than 7 years.

2. The major use of computers in these industries is to communicate with the buyers through emails.

3. There is no computer skilled people working in those industries and no IT professionals are appointed to work permanently. If any computer fault occurs, the management contacts with small computer retail seller to repair the system.

4. All the works are carried out in pen and paper and this is slowing down the business processes. Errors are made frequently and there is no efficient way to keep the records of the data. Most of the time, they are losing the old data.

Similar scenario is happening in Le Connoisseur Ventures too and they are using computers only to send electronic mails. To perform calculations they usually prefer manual pen-paper computation or occasionally MS Excel. They are actually in

need of a distributed mechanism as they are having buying office, factory and their customers in different locations.

2.2 PROPOSED SYSTEM

❖ **OGPES** Will reduce time spending on paper based work.

❖ It provides a good Customer Satisfaction.

❖ It will reduce the errors in calculations and computations.

❖ It generates Quick Reports from Raw Data.

❖ It can reduce,

- The risk of error occurrence.

- Inconsistency of the data.

❖ It will also increase the integrity of data.

❖ By avoiding unnecessary works the man power can be properly utilized.

❖ A proper information system can help the industry to keep track of the production, inventory and export.

❖ System generated report will help the audit department to get transparent report of each and every transaction held on the organization over the financial year.

The main goal of Customer Relation Management is to maximize the profit and revenue of the business and to satisfy the customers with the intelligent business strategies which are going to be achieved through the proposed system. It is highly sophisticated and planned to design by considering pros and cons of Le Connoisseur's employees. The proposed system will improve their reliability of the working system and provide them a high business growth in textile market.

2.3 FEASIBILITY ANALYSIS

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

2.3.1. Feasibility Consideration

2.3.1.1 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 level of technology is determined by factors such as the software tools available, the machine environment, platform etc. Almost the tools are available but we installed some components which may not be considerably impractical. Thus the project becomes technically feasible.

2.3.1.2 Operational Feasibility

Operational Feasibility asks if the system will work when it is developed and installed. It checks for the support of the management, the current business methods, user's involvement and their attitude towards the proposed system, etc.

Here the proposed system has found encouraging support from the management as it will be of great use to them.

2.3.1.3 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 project by returning benefits equal to or exceeding the costs incurred in developing the system.

The proposed benefits of the system will outweigh 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 company/project.

CHAPTER 3

DEVELOPMENT ENVIRONMENT

3.1 HARDWARE REQUIREMENTS

The hardware support required for deploying the application,

- ❖ Processor   :   Pentium 4 or Above
- ❖ RAM   :   Minimum 4 GB
- ❖ Hard Disk   :   20 GB or more

3.2 SOFTWARE REQUIREMENTS

The software support required for deployment is:

- ❖ Operating System   : Windows XP
- ❖ Web Server   : Tomcat Server 6.0
- ❖ Database   : MySQL
- ❖ Software for Development : J2EE
- ❖ Scripting Language   : JS
- ❖ Text Editor   : Edit +2
- ❖ Browser   : IE6
- ❖ Designing Package   : Adobe Photoshop CS2

3.3 PROGRAMMING ENVIRONMENT

3.3.1 J2EE

Java 2 Enterprise Edition covers the overall development framework under Java. Most web-based applications and portals are developed using J2EE as it provides dynamic web-applications in an efficient manner. This application is developed using the apache beehive framework of J2EE. The front end (J2EE) is developed using Tomcat 6.0.

3.3.1.1 JSP

A Java Server Page (JSP) file is nothing more than another way to view a servlet. The concept of a JSP file is to allow us to see a Java servlet as an HTML page. This view eliminates all of the ugly print () statements that normally show up in Java code. The JSP file is pre-processed into a .java file, and then compiled into a .class.

MVC Architecture

Model-View-Controller architecture is all about dividing application components into three different categories Model, View and the Controller. Components of the MVC architecture have unique responsibility and each component is independent of the other component. Responsibilities of the components are:

Model:

Model is responsible for providing the data from the database and saving the data into the data store. All the business logic are implemented in the Model. Data entered by the user through View are check in the model before saving into the database. Data access, Data validation and the data saving logic are part of Model.

View:

View represents the user view of the application and is responsible for taking the input from the user, dispatching the request to the controller and then receiving

response from the controller and displaying the result to the user. HTML, JSPs, Custom Tag Libraries and Resources files are the part of view component.

Controller:

Controller is intermediary between Model and View. Controller is responsible for receiving the request from client. Once request is received from client it executes the appropriate business logic from the Model and then produces the output to the user using the View component. Page flow and XML are the part of Controller.

➤ **Intercepting Files**

The presentation-tier request handling mechanism receives many different types of requests, which require varied types of processing. In this System the login page (header.jsp, authenticate.java) are used as intercepting filters.

➤ **Front Controller**

The presentation-tier request handling mechanism must control and coordinate processing of each user across multiple requests. Such control mechanisms may be managed in either a centralized or decentralized manner. The structure of the front controller is as follows. Page Flow is the front controller used in our system.

➤ **View Helper**

The system creates presentation content, which requires processing of dynamic business data. The Value Object (VO) is the view helper in ETS.

➤ **Business Delegate**

A multi-tiered, distributed system requires remote method invocations to send and receive data across tiers. Here custom control implementation contains the business logic.

> **Data Access Object**

Access to data varies depending on the source of the data. Access to persistent storage, such as to a database, varies greatly depending on the type of storage (relational databases, object-oriented databases, flat files, and so forth) and the vendor implementation. The DB Controller acts as the DAO.

Content Management System (CMS)

A **content management system** (CMS) is a computer application used to create, edit, manage, search and publish various kinds of digital media and electronic text. CMS are frequently used for storing, controlling, versioning, and publishing industry-specific documentation such as news articles, operators' manuals, technical manuals, sales guides, and marketing brochures. The content managed may include computer files, image media, audio files, video files, electronic documents, and Web content.

There are various nomenclatures known in this area: Web Content Management, Digital Asset Management, Digital Records Management, Electronic Content Management and so on. The bottom line for these systems is managing content and publishing, with a workflow if required.

Web Content Management System (WCM) is a CMS designed to simplify the publication of Web content to Web sites, in particular allowing content creators to submit content without requiring technical knowledge of HTML or the uploading of files.Benifits of managing contents at components level:

1. Greater consistency and accuracy.
2. Reduced maintenance costs.
3. Reduced delivery costs.
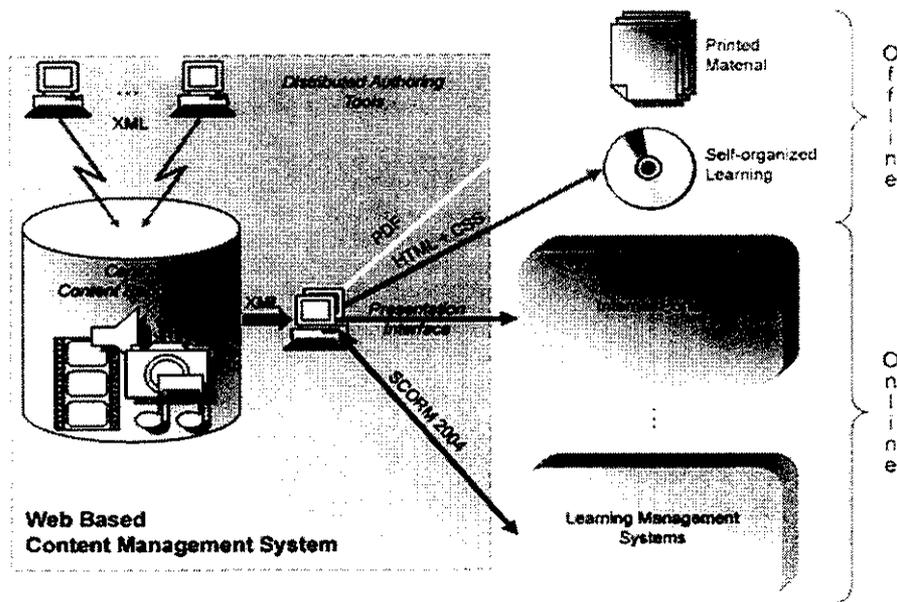4. Reduced translation costs.

Figure 3.1 Web based component

3.3.2. Apache-TomcatServer

Apache is a HTTP server developed by NCSA (National Center for Supercomputing Applications) at the University of Illinois, playing the important rule in the growth of World Wide Web. This open source software is maintained by Apache Software Foundation. This application can be run on different operating system such as Linux, UNIX, Solaris, Microsoft Windows, Mac OS X, FreeBSD, and Novell NetWare. It is used for both static and dynamic web pages.

3.3.3. MySQL

MySQL is the post popular DBMS in web application development, was first released initially on 23 May 1995. This DBMS provides powerful features for data management; MySQL is multi threaded and multi user SQL DBMS. This is free software, supports cross platform. Some successful MySQL project is youtube, wikipedia, adobe, nokia, CNET Networks etc
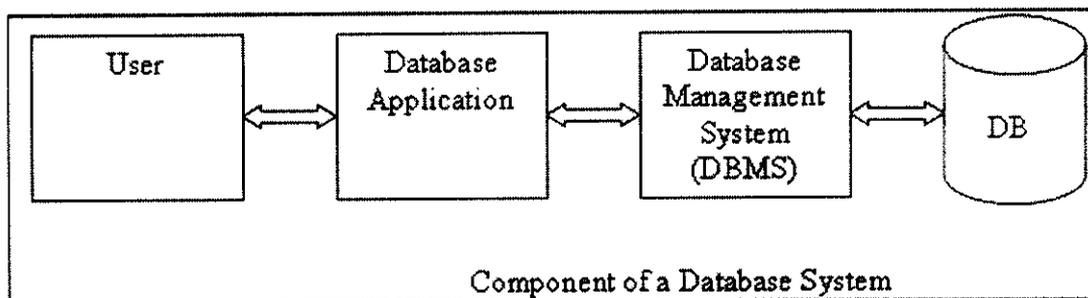
Figure 3.2Database Component

Advantages of MySQL:

- Scalability and Flexibility

- High Performance

- High Availability

- Robust Transactional Support

- Web and Data Warehouse Strengths

- Strong Data Protection

- Comprehensive Application Development

- Management Ease

- Open Source Freedom and 24 x 7 Support

3.3.4 JDBC Connectivity

Java and JDBC are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries. According to Sun Microsystems, JDBC is not an acronym and does not stand for Java Database Connectivity.

JDBC is a platform-independent interface between relational databases and Java. In today's Java world, JDBC is a standard API for accessing enterprise data in relational databases using SQL (Structured Query Language). Data and metadata (data about data/information) are at the heart of most business applications, and JDBC deals with data and metadata stored and manipulated in relational database systems (RDBMSs).
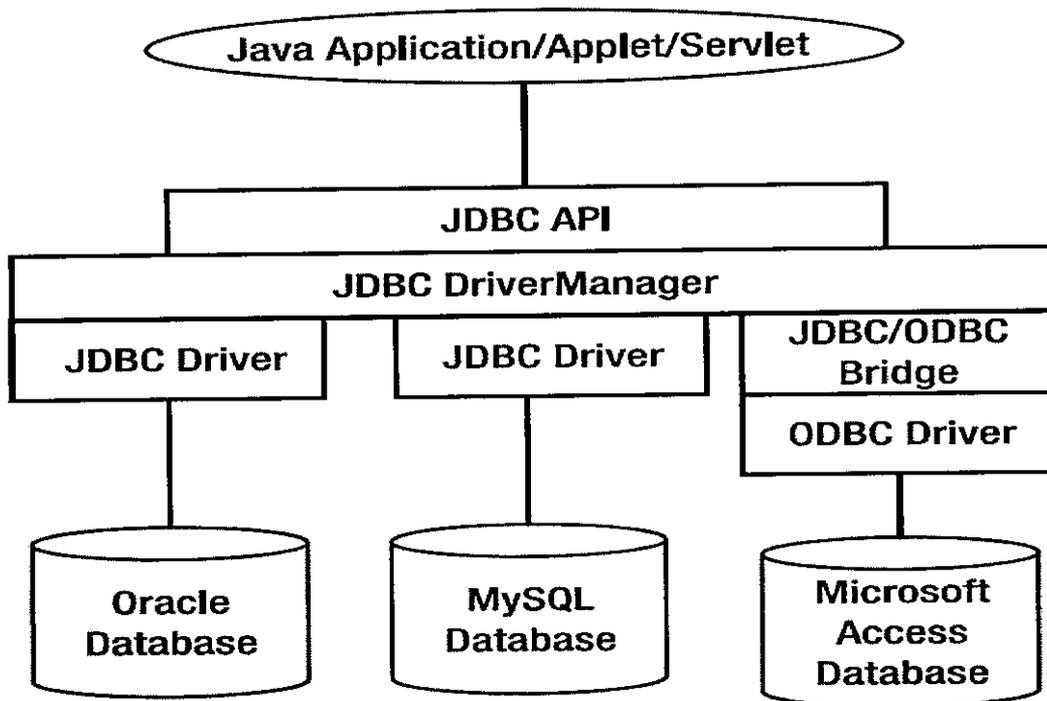
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Figure 3.3 Java Database Application using JDBC

The figure 3.1 presents the basic outline of the JDBC architecture. JDBC's DriverManager class provides the basic service for managing a set of JDBC drivers. The DriverManager loads JDBC drivers in memory, and can also be used to create java.sql.Connection objects to data sources (such as Oracle and MySQL).

JDBC programming can be explained in the following simple steps:

- Importing required packages
- Registering the JDBC drivers
- Opening a connection to a database
- Creating a Statement/PreparedStatement/CallableStatement object
- Executing a SQL query and returning a ResultSet object
- Processing the ResultSet object
- Closing the ResultSet and Statement objects
- Closing the connection

CHAPTER 4

SYSTEM DESIGN

Methodology is defined as a collection of procedures, techniques and tools that is used for the development. Methodology is not only a set of methods but it also includes the ideas, rationale and assumptions which is underling the research or investigation. It does not emphasis only on a particular area or specific analysis techniques but also it points everything that encapsulates for development of a system.

As a system developer, software development methodology helps us to contribute our effort to develop and implement a system by the collection of theories and concepts, comparative studies of different approaches and by development of individual methods. During the analysis and design of this project the following methodology was followed.

1. System Study.
2. System Analysis.
3. System Design.
   a. Process Modeling
   b. Data Modeling
   c. Behavioral Modeling
4. Implementation and Code Generation

4.1. System Study

Fact findings are the technique to gather data or to collect data. There are different approaches which are used to gather information i.e. interview, questioner survey, sampling etc. In this project I have used interview as the fact finding techniques. Interview is the most common technique in fact findings and to collect information accurately. To get best result, this technique should involve the top level, mid level and entry level employees. The requirements of top management are different form the requirement of the entry level employees. And the point of view about the system is also different for different levels of employees. My approach was to take interviews of different groups.

In record review, I have gone through the sample of transaction reports (daily production report, order report etc) that are used on the company in day to day basis. This supports to get an idea about the entities and relation for designing relational database. In this project, the system approach methodology is followed to break down the complex system into pieces. This helps to solve and design the small methods individually and integrate these results to get the complete solution during the process of software development lifecycle. System approach methodology includes two major parts - System analysis and System design.

4.2. System Analysis

System analysis deals with the analysis of the entire system. Technology is applied on analysis of the system which satisfies the needs of the individuals. The problems are analyzed to determine the nature of the system. Business processes are the day today tasks for any business. There is a relation in between the business and the business customers. The business process includes the set of business rules, computer systems, the operations and the actions of the business. The aim of system analysis is to understand the ins and outs of the business process, analyzing of the statistical and day to day data used in the business, and to draft the interaction of the technology with information. All business is depending on data. Data represents the reality therefore

understanding the dimension of data plays an important rule in system analysis. However in this project system analysis deals with the following areas:

1. Identification and documentation of existing business events.

2. Communication of the operation of the business process to the business managements involved in this area.

3. Identification of the process measurements and development of a list of process requirements to evaluate the improvement.

4. Documentation of the business process using the appropriate techniques.

```
        ┌─────────────┐     Natural fibers (Agricultural sector)
        │    Fiber    │     • e.g. cotton, wool, silk.
        └─────────────┘     Manmade fibers (Chemical
                            industry):
Spinning Fiber into Yarns   • Synthetic fibers, e.g. polyester, nylon.
                            •Artificial fibers, e.g. rayon, acetate.

        ┌─────────────┐
        │    Yarns    │
        └─────────────┘
                            Spun
Processing Yarn into Fiber  • e.g. cotton & manmade fibers wool
                            Filament
                            •e.g. silk

        ┌─────────────┐
        │   Fabrics   │
        └─────────────┘
                            Woven e.g. denim, sheeting
Cutting and Making Fabrics into  Knit
       finished goods       Non woven
                            Industrial fabrics
                            Other final textiles

        ┌─────────────┐
        │  Clothing   │
        └─────────────┘

Apparel
• e.g. shirts, blouses, trousers, shorts,
skirts, underwear
```

Figure 1: Textile and Clothing Process

Figure 4.1 Textiles and Clothing Process

4.3. Design

System design is the process of defining the architecture of the business rules which satisfies the requirements specified for the business. It refers both logical and physical design of the system. Object Oriented Design (OO) has recently become the most popular method to design any system. UML (Unified Modeling Language) is the standard language to define the object oriented models. In Object Oriented Analysis and Design (OOAD), systems are divided into different groups of interaction object. It is the most current approach of software engineering. System design includes process model, data flow model, ER model, behavior modeling and data dictionary. However the above models were used to design the business procedures.

4.3.1. Process Modeling

Process modeling is the set of activities to transform the business requirements into software. Here elements of the processes of the business were identified and described by their role and order.
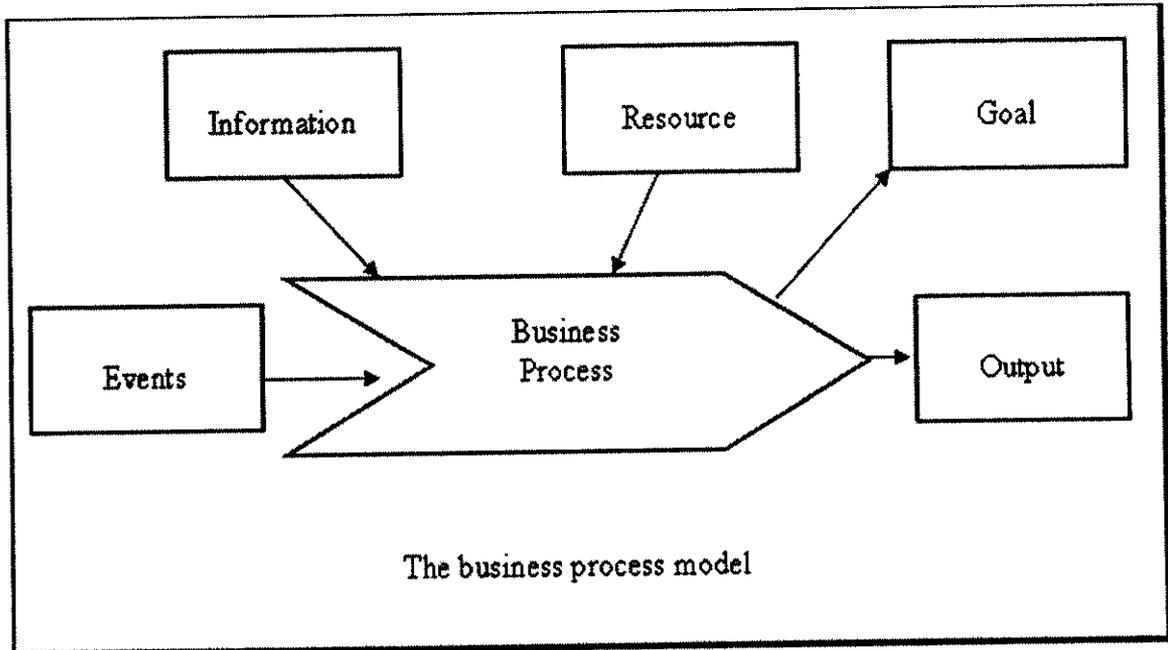
Figure 4.2 System Flow Diagrams - Business Perspective 1
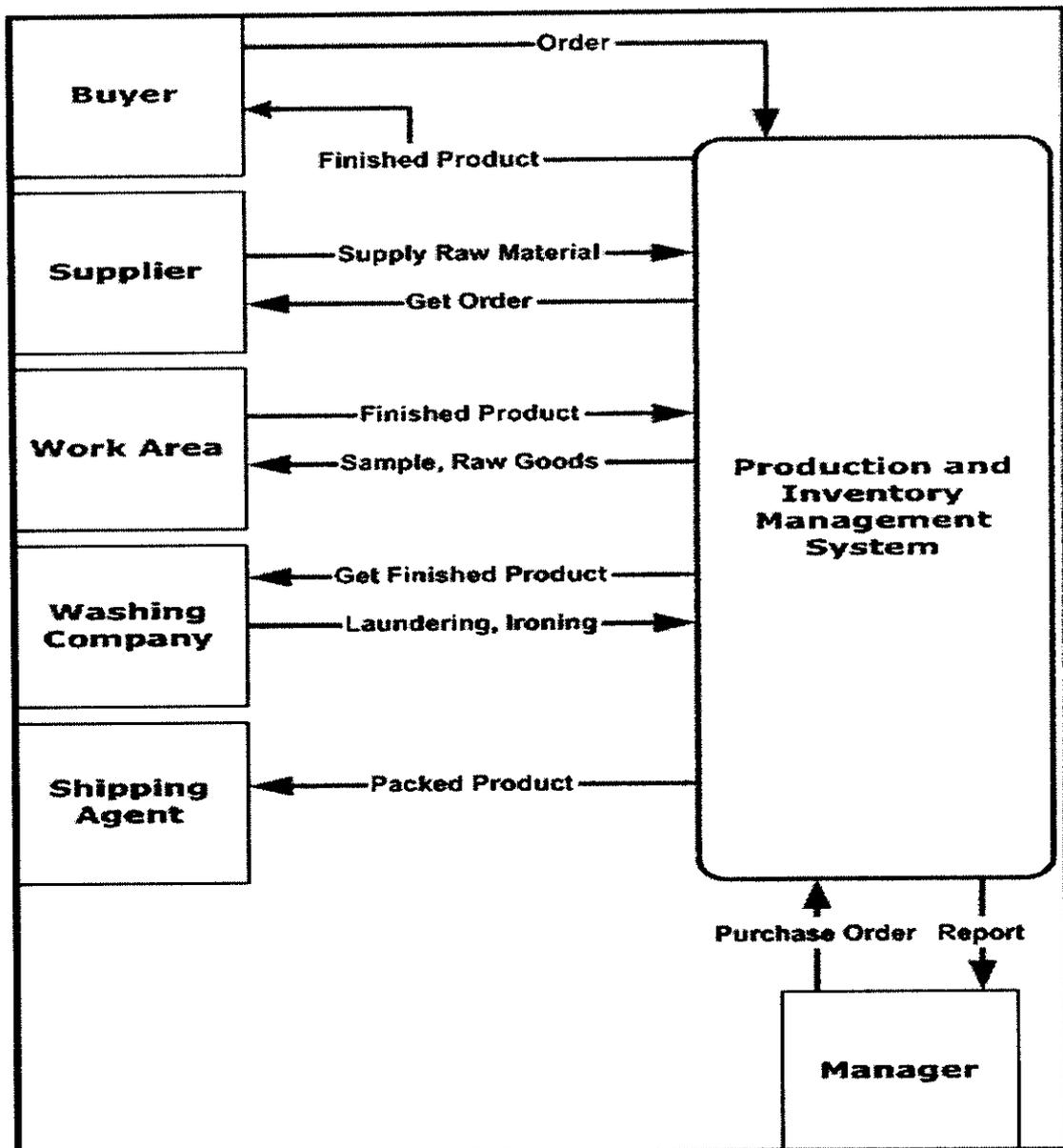
Figure 4.3 System Flow Diagrams - Business Perspective 2
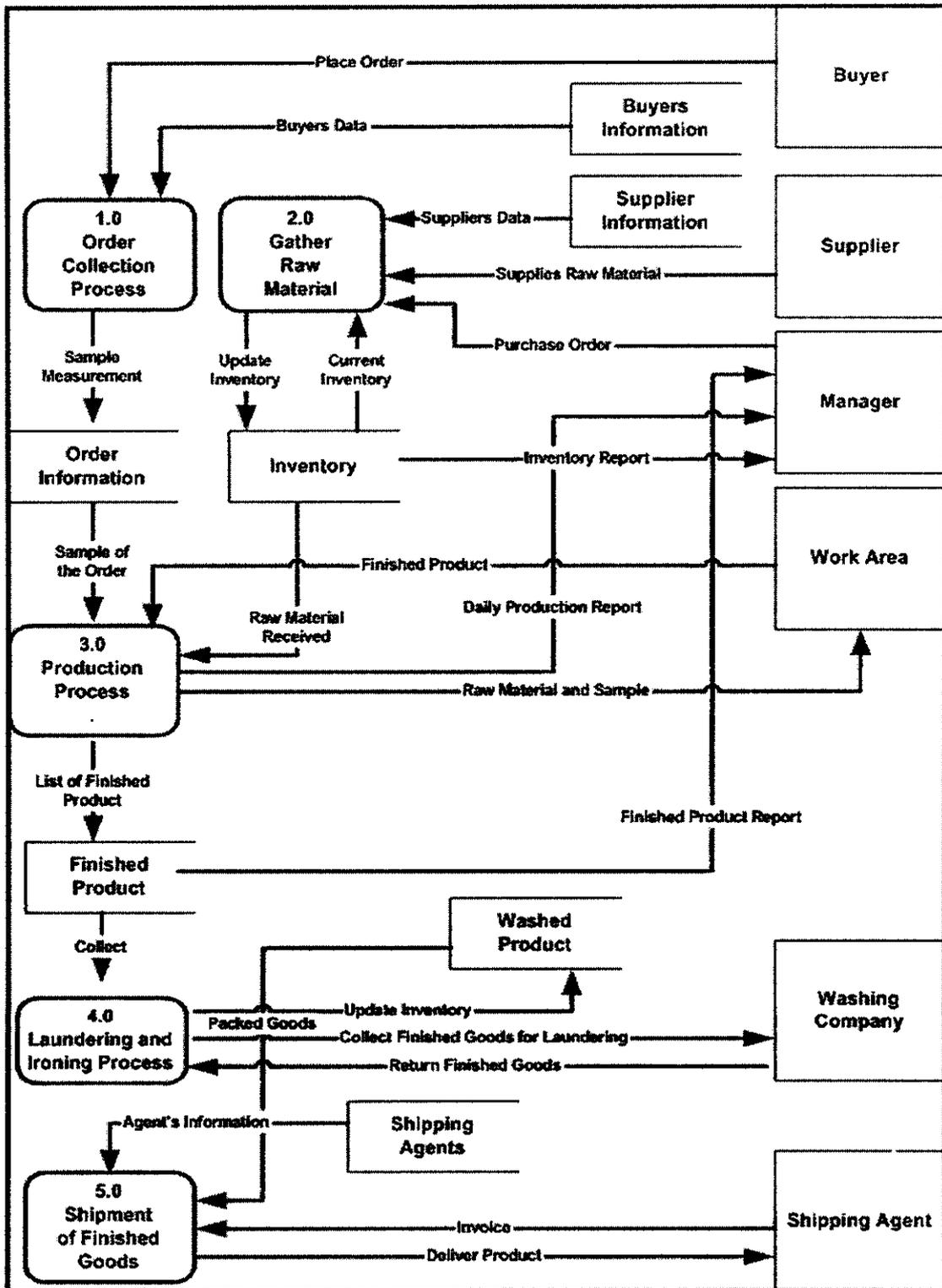
Figure 4.4 System Flow Diagrams - Business Perspective 3

4.3.2. Data Modeling

Data modeling is the most important part of relation database management system (RDBMS). If the model is not perfect, application will not work properly and the outcome as per the requirements of the user. So a proper data model reflects the business rules of any organization. Data model is based on the business rules, which contains data and information of the business. There are two types of data models - logical data model and physical data model. Logical Data Model explores the conceptual design of the database. It revel the business rules and the data architecture of an organization. This model describes the entities and the relationship among the entities. Physical Data Models are used to design the internal schema of the database. The tables inside the database, the attributes and the relationship in between the tables are described here. In this project a new database was designed to develop a new system. The business rules of the factory were analyzed and based on these rules a proposed system was developed.
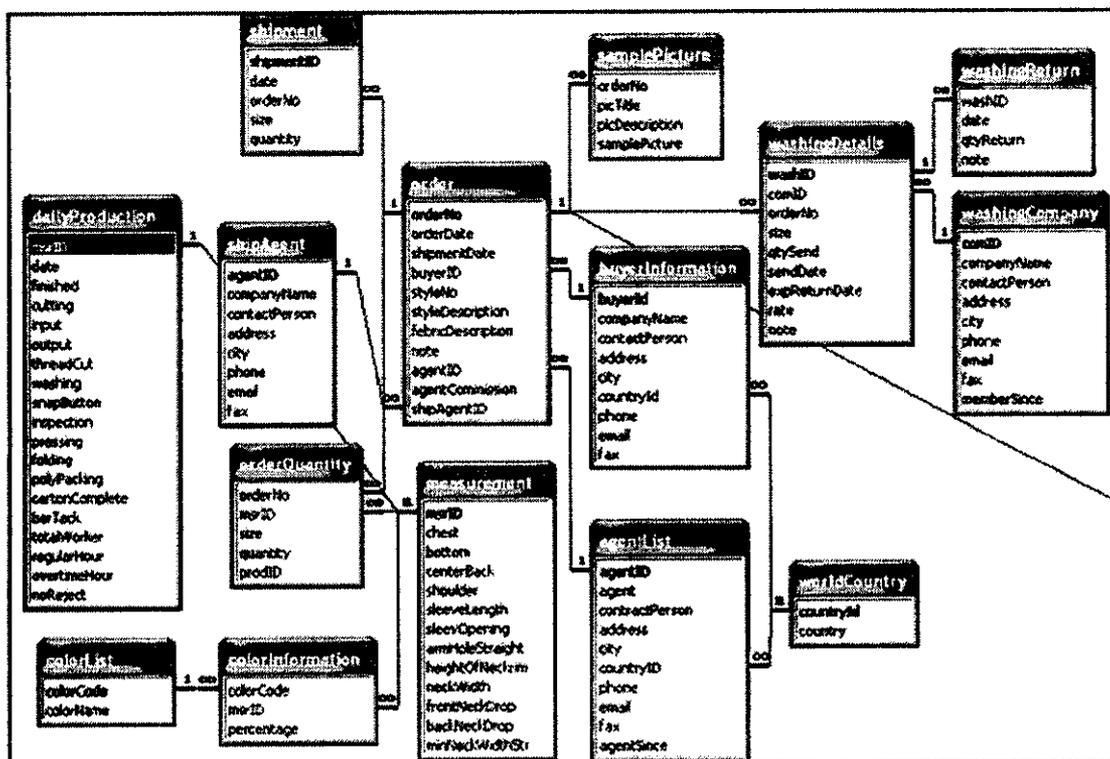
Figure 4.5 ER-Diagram–Productions

4.3.3. Behavioral Modeling

With the aid of use case diagrams the behavior of the system was captured. Use case provided a way for us to come to a common understanding with the system and the end users.
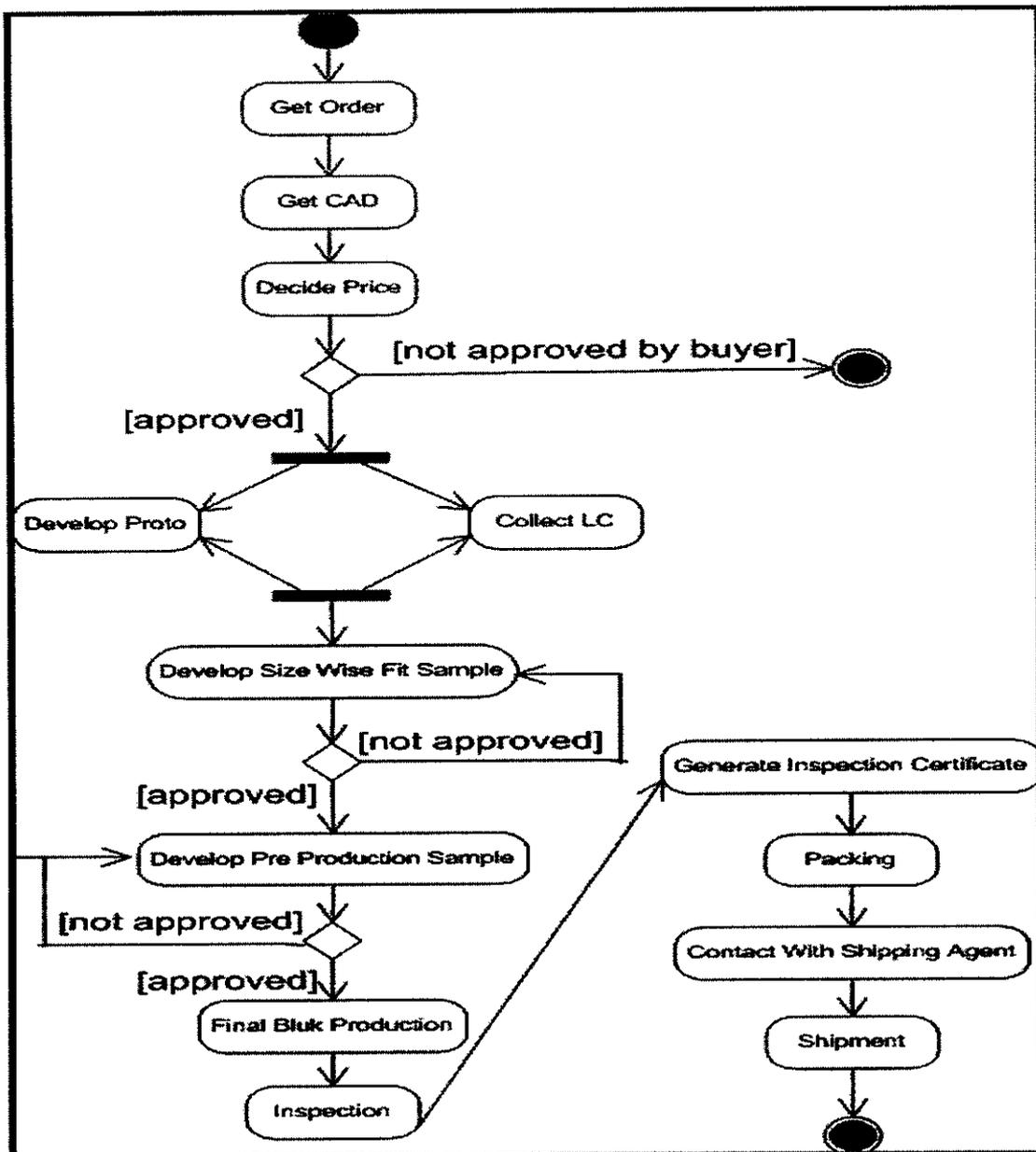

Figure 4.6 Activity Diagram of Production

Analysis of the Activity Diagram

Assumption   :   The user has authority to use this transaction

Use Case Initiation   :   This Use Case starts on demand

Course of Events

The buyer places an order to the manufacturers. The manufacturers get the color visual (CAD) or Original sample from the buyer. The company decides the price accordingly and sends the price to the buyer for their approval. If the buyer agrees with the price then the company goes for production else the buyer looks for another manufacturer who can provide lower costs. Once the buyer approves the price, the factory develops a proto sample. At the same time, the factory collects the Letter of Credit (LC) or Purchase Order from the buyer.

After development of the proto type and after getting the purchase order, the factory develops a size fit sample for approval. If the size wise sample is not approved, the factory continues to develop this sample again until they get an approval. After getting approval, the factory develops a per production sample. Pre production sample goes with all original brandings like actual fabric in actual color, actual color print and embroidery, all actual accessories like labels, buttons, packing etc. And the factory sends the pre production sample to the buyer for their final approval. Once they approve the sample, final bulk production is started. After final production either buyer does the inspection or we do the inspection on behalf of buyers and then we will produce an inspection certificate which is a compulsory with the shipping document.

The factory does the packing as per the buyer's instruction after finishing inspection. When the packing is finished, the commercial department contracts with the buyers nominated shipping agents for shipment. That agency is responsible for shipment of the products from factory to the buyer.

PreCondition   :   Shipment is from a valid Shipping company.

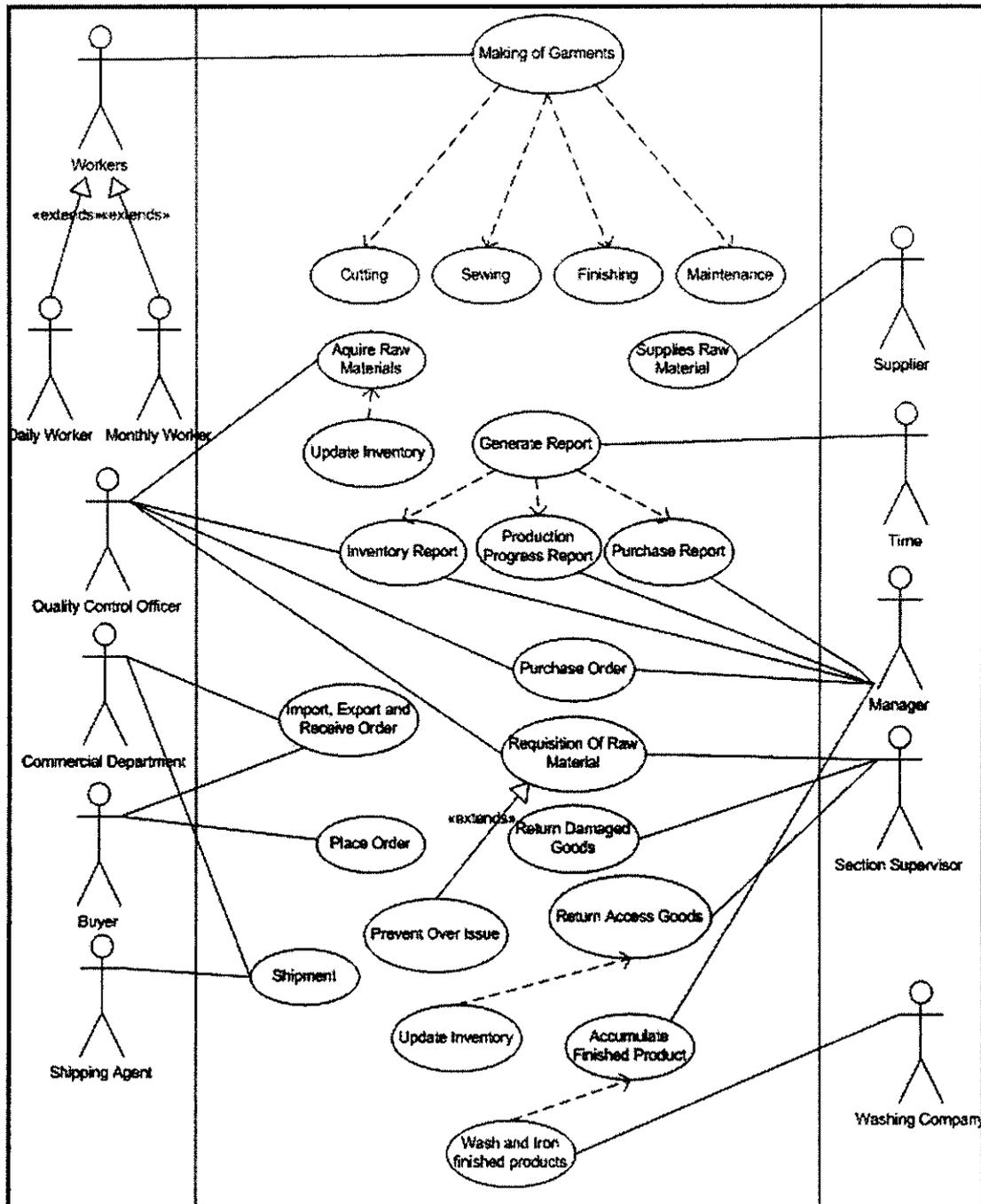**Post Condition**   :   The factory needs to print all the confirmation from the buyer during production.

Figure 4.7 Use case of entire system

CHAPTER 5

SYSTEM IMPLEMENTATION

5.1. MODULES

The entire work is broken into modules for simplification and then the work is carried out as follows. Here the use case of different process is also given. There are five modules and they are:

❖ Administration Module

❖ Order Processing Module

❖ Material Processing Module

❖ Sampling and Quality Control Module

❖ Shipment Module

Some of the use cases are given below,

YARN REQUIREMENT PROGRAMMING
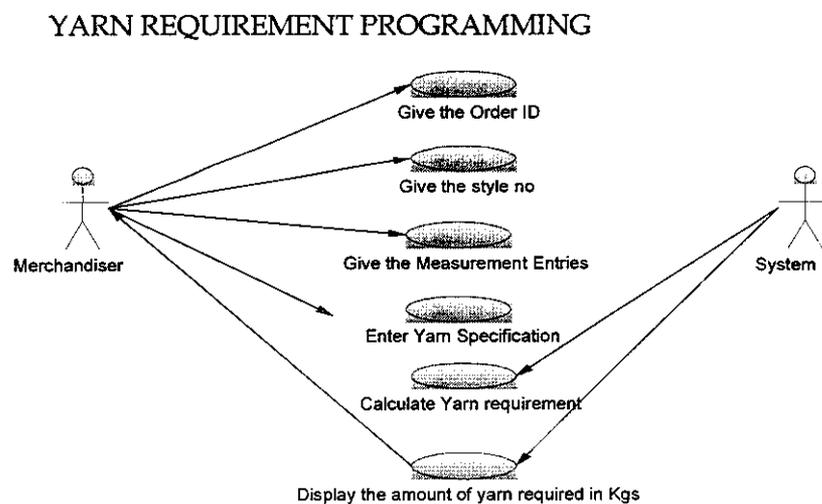
Figure 5.1 Yarn Requirement Programming

Placing and Accepting
Order
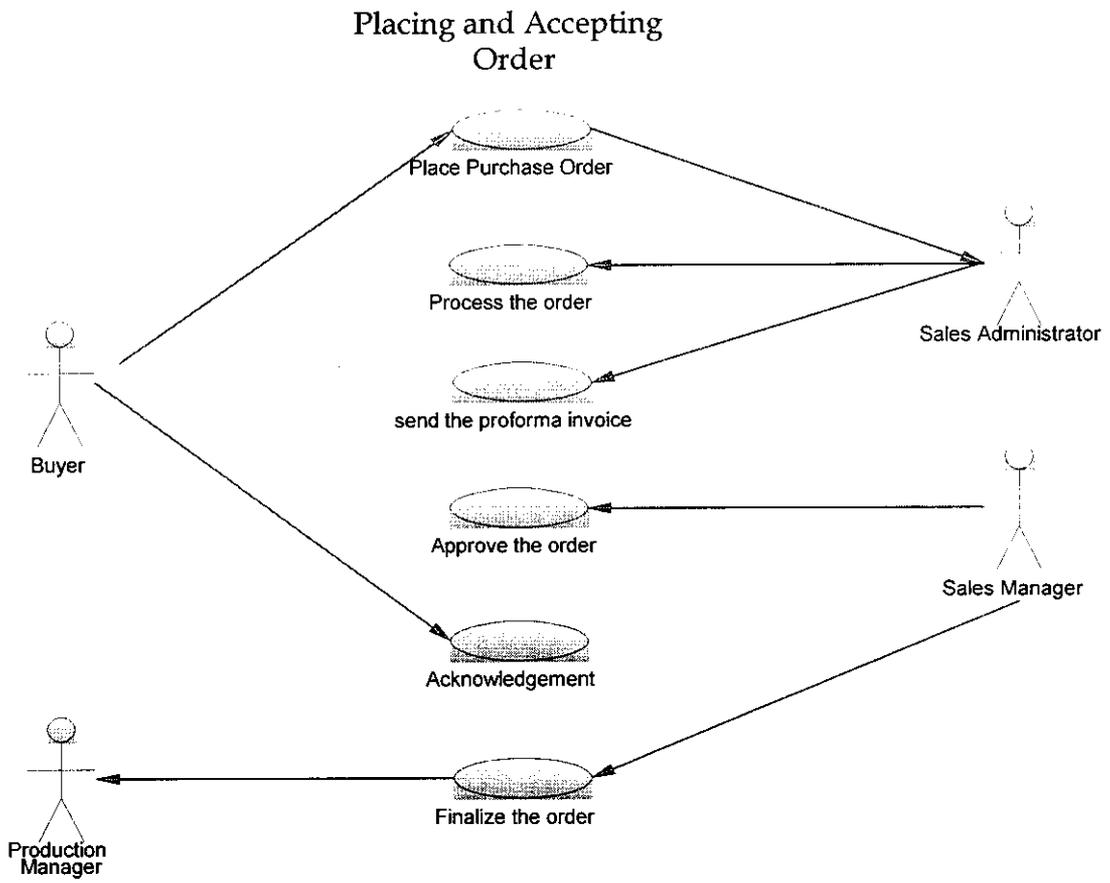
Figure 5.2 Placing and Accepting Order

Yarn Purchase Order to Supplier

Enter Purchase Order
No

Specify the
department

Select the Supplier
Name

Give the item
description

Enter the quantity of yarn
required

Specify the delievery
details

Send it to the
supplier

Merchandiser

System
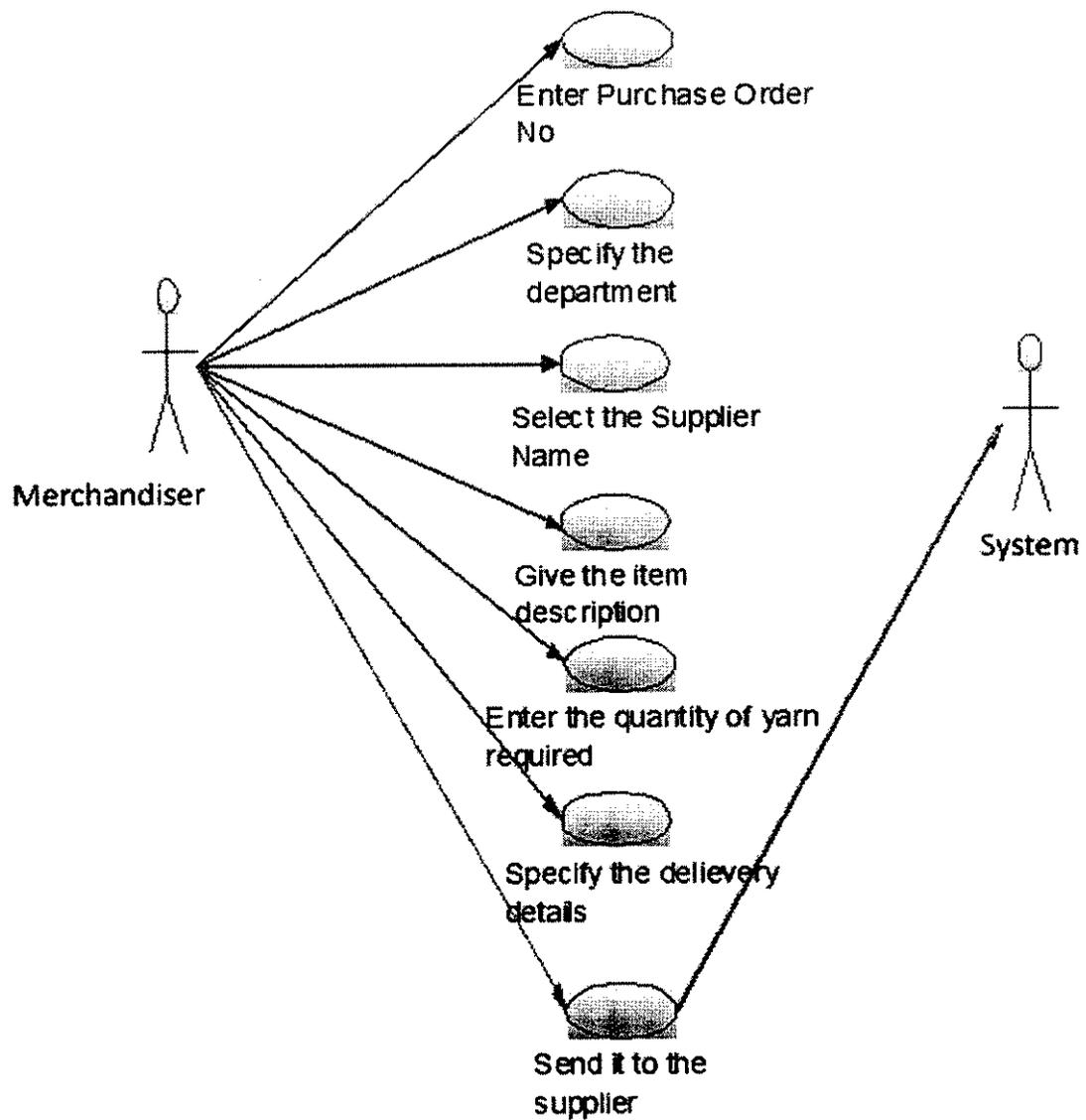
Figure 5.3 Yarn Purchase Order to Supplier

New Entry into Master
Component
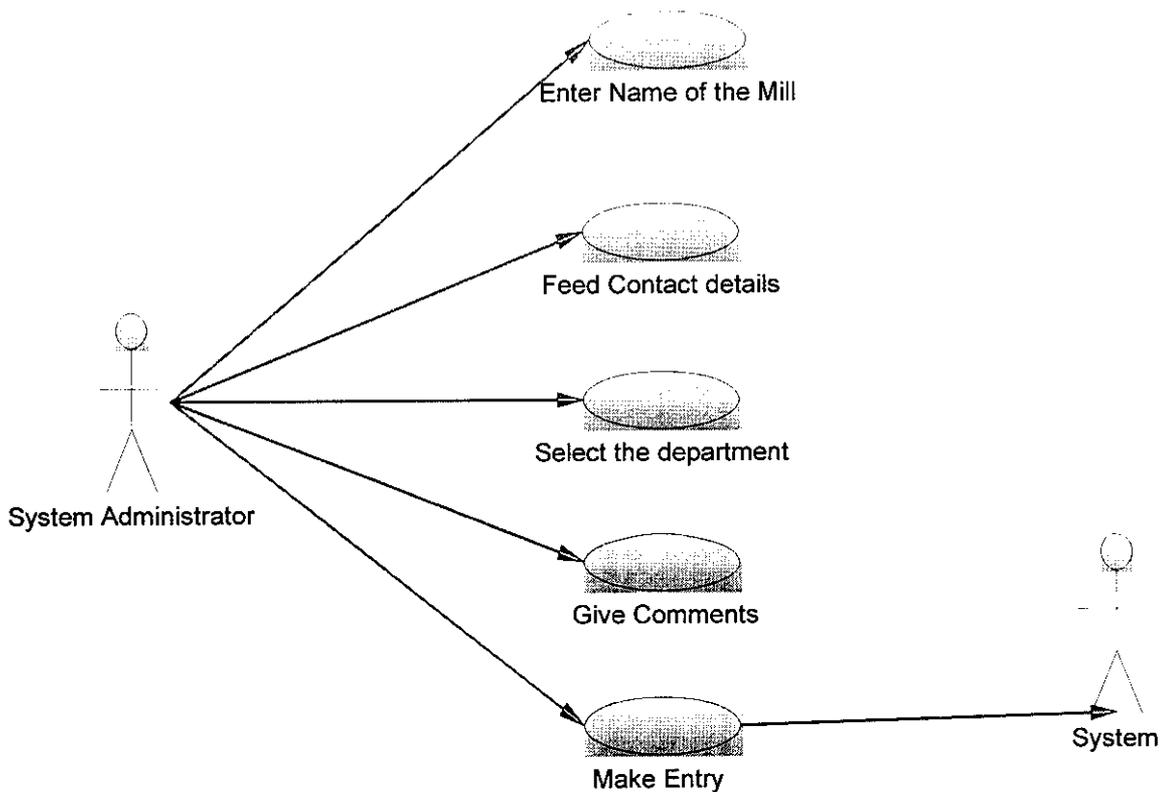
Figure 5.4 New Entries into Master Component

5.2. Coding:

This phase is divided into 2 parts - database implementation and user interface implementation (code generation). In the first part, the logical database design was implemented as the physical database design. All the data types were defined properly on each table. The relations among the tables were described by using primary key and foreign key concepts. The second part was to generate code to insert business data to the database through user interface. This part includes the followings, to create user interfaces to insert, update and search and delete data and to generate different reports for the managements from those data.

5.3 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 details about the relevant data for the system are first identified. According to their relationship, tables are designed through the following method.

➤ The data type for each data item in the table is decided.

➤ The tables are then normalized.

The tables are normalized so that they can provide better response time, have data integrity, avoid redundancy and be secure.

5.3.1 TABLE STRUCTURE

Design Conventions Used

1. Appropriate words that describe the table should be used.
2. Words used to describe the table should be separated with an Underscore '_'.
3. No special character other than an underscore is used in formulating a table name.
4. No number should be used anywhere in the table name string.

5.1 **Table Name**: customerdetails

Fields description

❖   custid mediumint not null auto_increment

❖   username varchar(30)

❖   password varchar(30)

❖   companyName varchar(30)

❖   email varchar(30)

- ❖ pccode varchar(10)
- ❖ pacode varchar(10)
- ❖ phone varchar(15)
- ❖ address varchar(50)
- ❖ cityState varchar(20)
- ❖ pin varchar(10)
- ❖ country varchar(20), primary key (custid)

5.2 **Table Name**: employeedetails

Fields description

- ❖ username varchar(30) primary key
- ❖ password varchar(30)
- ❖ designation varchar(20)
- ❖ userlevel tinyint

5.3 **Table Name**: color

Fields description

- ❖ id int primary key
- ❖ description varchar(100)

5.4 **Table Name**: material

Fields description

- ❖ id int primary key
- ❖ description varchar(200)

5.5 Table Name: style

Fields description

❖   id int primary key

❖   description varchar(200)

5.6 Table Name: measurement

Fields description

❖   id int primary key

❖   description varchar(200)

5.7 Table Name: size

Fields description

❖   id int primary key

❖   name varchar(10)

5.8 Table Name: suppliers

Fields description

❖   sno mediumint not null auto_increment

❖   sname varchar(30)

❖   address varchar(50)

❖   email varchar(30),phone varchar(15), primary key (sno)

5.9 Table Name: accessories

Fields description

- ❖ id int primary key
- ❖ description varchar(30)

5.10 Table Name: PURCHASEORDER

Fields description

- ❖ ORDERID MEDIUMINT NOT NULL AUTO_INCREMENT
- ❖ CUSTID MEDIUMINT
- ❖ ORDERDATE DATE
- ❖ GSM MEDIUMINT
- ❖ STYLEID varchar(30)
- ❖ COLORID varchar(30)
- ❖ MATERIALID varchar(30)
- ❖ DELIVERY TINYINT
- ❖ SHIPPINGTERMS VARCHAR(10), PRIMARY KEY(ORDERID)

5.11 Table Name: samples

Fields description

- ❖ sampletype varchar(30)
- ❖ orderid mediumint
- ❖ measurement varchar(30)
- ❖ small int
- ❖ medium int
- ❖ large int
- ❖ xl int

❖ xxl int

5.12. Table Name: comments

Fields description

❖ orderid mediumint

❖ dc date

❖ comment varchar(100)

❖ status varchar(50)

5.13. Table Name: updateorderstatus

Fields description

❖ orderid mediumint

❖ accessories varchar(20)

❖ cutting varchar(20)

❖ production varchar(20)

❖ packing varchar(20)

❖ shipment varchar(20)

5.14. Table Name: ordermaterial

Fields description

❖ poid mediumint not null auto_increment

❖ orderid mediumint

❖ product varchar(30)

❖ description varchar(50)

❖ color varchar(20)

❖ quantity mediumint

❖ quoteprice float

- ❖ paymentterms varchar(20)
- ❖ suppliername varchar(30)
- ❖ deliverstatus varchar(30), primary key (poid)

5.15 Table Name: quantity

Fields description

- ❖ orderid mediumint not null REFERENCES
- ❖ PURCHASEORDER(ORDERID)
- ❖ size varchar(10)
- ❖ pieces int
- ❖ price float

5.4. SYSTEM VERIFICATION AND VALIDATION

System Verification answers the question "Am I building the product right?" It includes the review of interim work steps and interim deliverables during a project to ensure they are acceptable. Verification also determines if the system is consistent, adheres to standards, uses reliable techniques and prudent practices, and performs the selected functions in the correct manner. In data access, it verifies whether the right data is being accessed, in terms of the right place and in the right way.

Validation answers the question "Am I building the right product?" This checks whether the developer is moving towards the right product, whether the development is moving towards the actual intended product that was agreed upon in the beginning. Validation also determines if the system complies with the requirements and performs functions for which it is intended and meets the organization's goals and user needs. It is traditional and is performed at the end of the project. In data access, it checks whether we are accessing the right data, in terms of data required to satisfy the requirement.

CHAPTER 6

SYSTEM TESTING

Testing is a critical element of software quality and assurance and represents the ultimate review of specification design and coding. It is a vital activity that has to be enforced in the development of any system. This could be done in parallel during all the phases of system development. The feedback received from these tests can be used for further enhancement of the system under consideration. The testing phase conducts test using the Software Requirement Specification as a reference and with the goal to see whether the system satisfies the specified requirements. The main types of tests carried out on External True System are:

➢ Unit Test

➢ Integration Test

➢ System Test

6.1. Unit Testing

Module or Unit Testing is the process of testing all the program units that make up a system. Unit testing focuses on an individual module thus allowing one to uncover all the errors made logically and while coding in the module.

In External True System 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.

6.2. Integration Testing

Integration testing tests the process of integrating the various modules to form the completed system. Integration starts with a set of units each individually tested in isolation and ends when the entire application has been built. Integration testing verifies that the combined units function together correctly. It facilitates in finding problem that occur at interface or communication between the individual parts.

External System followed top-down integration testing. Modules were linked to the main menu in a sequence as required in the real time operating mode of the system. In the final stage, the whole system is taken together and tested for integration. A change in one place should be reflected throughout the system. Regression testing is done after each change made into the software. This tests if the change has affected any part of External True System negatively after the change was made. The whole set of test cases need to be run again to do the regression testing.

6.3. System Testing

System testing is actually a serious of different tests, whose primary purpose is to fully exercise the computer-based system. This helps in verifying that all the system elements have been properly integrated and perform the allocated functions. It verifies the entire product after having integrated all software and hardware components, and validates it according to the original project requirement. The system testing takes into consideration the hardware, and the software.

6.3.1. Security Testing

Security testing is important in system testing. Testing is done to ensure that a user with respective rights can only view the various modules and reports presented by External True System. If users try to perform something beyond his assigned rights corresponding messages should be displayed.

Security testing thus, attempts to verify that protection mechanism built into a system will, in fact, protect it from improper penetration.

6.3.2. Stress Testing

Stress Testing executes a system in a manner that demands resources in abnormal quantity, frequency or volume. The System was stress tested by all employees in the project and accessing simultaneously to various modules in the system.

6.4 TEST CASES:

Table 6.1 Test Case for PhoneNo Field

This test case was created for the PhoneNo field in the Supplier details form. A part of this test case also suits for the same field in other forms respectively.

Field	Description	Procedure	Input	Expected output	Actual Output	Result
PhoneNo1	Special Character	Enter special character in the field.	##	Error Message	Error Message	Pass
PhoneNo 2	Starting with a alphabet	Enter PhoneNo starting with an alphabet.	S92	Error Message	Error Message	Pass
PhoneNo3	Null Value	Enter null value in the field.	Null Value	Error Message	Error Message	Pass
PhoneNo 4	Uppercase	Enter uppercase alphabet in the field.	ABDF	Error Message	Error Message	Pass
PhoneNo5	Only 4 digits are given.	Enter PhoneNo with 4 digits instead of 10 digits.	9845	Error Message	Error Message	Pass
PhoneNo 6	A ten digit entry is made.	Enter 10 digits PhoneNo in the field.	9856432190	Accepted	Accepted	Pass

Table 6.2 Test Case for body field in Mplanning form:

This test case was created for the body field in the Material Planning form. A small part of this test case also suits for other measurement fields in material planning.

Field	Description	Procedure	Input	Expected output	Actual Output	Result
Body1	Special Character	Enter special characters in the body field.	@@	Error Message	Error Message	Pass
Body 2	Starting with a character	Enter the body value starting with character.	S67	Error Message	Error Message	Pass
Body 3	Null Value	Enter null value in the field.	Null Value	Error Message	Error Message	Pass
Body 4	Negative value	Enter negative value in the body field.	-89	Error Message	Error message	Pass
Body 5	Maximum Bound Value must be 45	Enter body value greater than 45 in the body field.	101	Error Message	Error Message	Pass
Body 6	Float value	Enter float value in the body field.	25.5	Accepted	Accepted	Pass
Body 7	Character value	Enter character value in the Body field.	Hi	Error Message	Error Message	Pass
Body 8	Expression	Enter expression instead of value in the Body field of marks entry form	20+60	Error Message	Error Message	Pass
Body 9	Valid value (25 to 45)	Enter valid value in the body field.	28	Accepted	Accepted	Pass

Table 6.3 Test Case for GSM field in Place Purchase Order form:

This test case was created for the GSM field in Purchase Order form.

Field	Description	Procedure	Input	Expected output	Actual Output	Result
GSM1	Special Character	Enter special characters in the GSM field.	@@	Error Message	Error Message	Pass
GSM 2	Starting with a character	Enter the GSM value starting with character.	S67	Error Message	Error Message	Pass
GSM 3	Null Value	Enter null value in the field.	Null Value	Error Message	Error Message	Pass
GSM 4	Negative value	Enter negative value in the body field.	-89	Error Message	Error message	Pass
GSM 5	Float value	Enter float value in the GSM field.	25.5	Error Message	Error message	Pass
GSM 6	Expression	Enter expression instead of value in the GSM field of marks entry form	20+60	Error Message	Error Message	Pass
GSM 7	Numeric value	Enter a number in GSM field	235	Accepted	Accepted	Pass

CHAPTER 7

CONCLUSION

The two major aims of this project are to understand and analysis the business rules which are followed to produce readymade garments and to design a web application to support the manufacturer of Le connoisseur the case of production and inventory management. The business analysis part was accomplished successfully. The production cycle of the industry is conceptualized properly. This application is customized and developed by taking account of limitations of the users of this system. Though, the full features were not implemented, most adequate features are properly implemented and prototypes are developed for the rest features which can be customized at anytime to get information from the database. Thus the overall objective and requirements of the project has been meeting successfully as per plan.

CHAPTER 8

FURTURE ENHANCEMENT

There are further more areas where the application can be developed to support the industry. For example HR system and Accounts system can be developed and integrated with this application to get the better outcome. Different reports can be designed to retrieve data from the database as per the requirements. The requirements of the management, changes over time. So the application also need to upgrade every after certain time. The server side validation was not performed in this application which is mandatory in good programming practice. This needs to be perform before handed over the application to the client.

APPENDICES

SCREEN SHOTS

Home Page
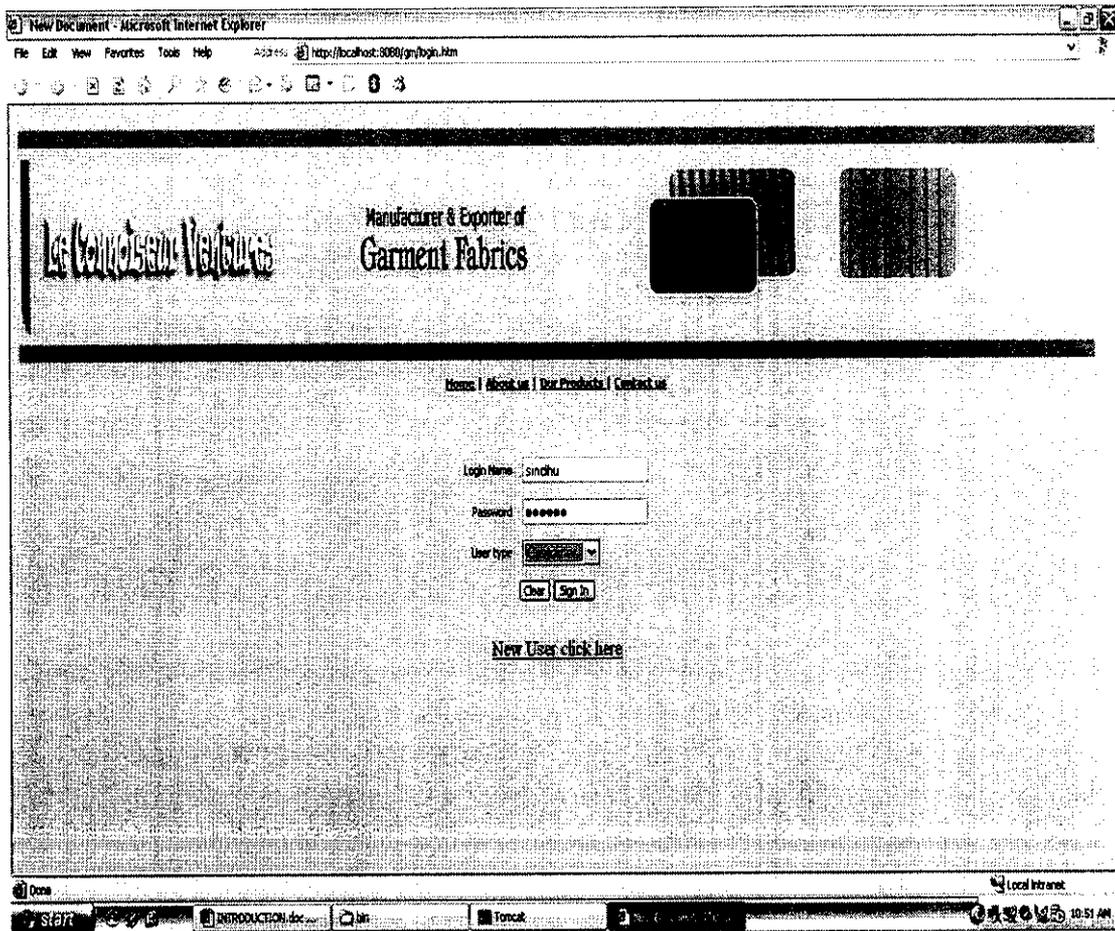
Customer Options Form

Order Placement Form

View Order Status

Fit Sample Form

Employee Options Form

View Placed Order – Select Date

View Placed Order Form

Fabric Inspection Entry Form

Fabric Inspection Report

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On-line Garments Production & Export System

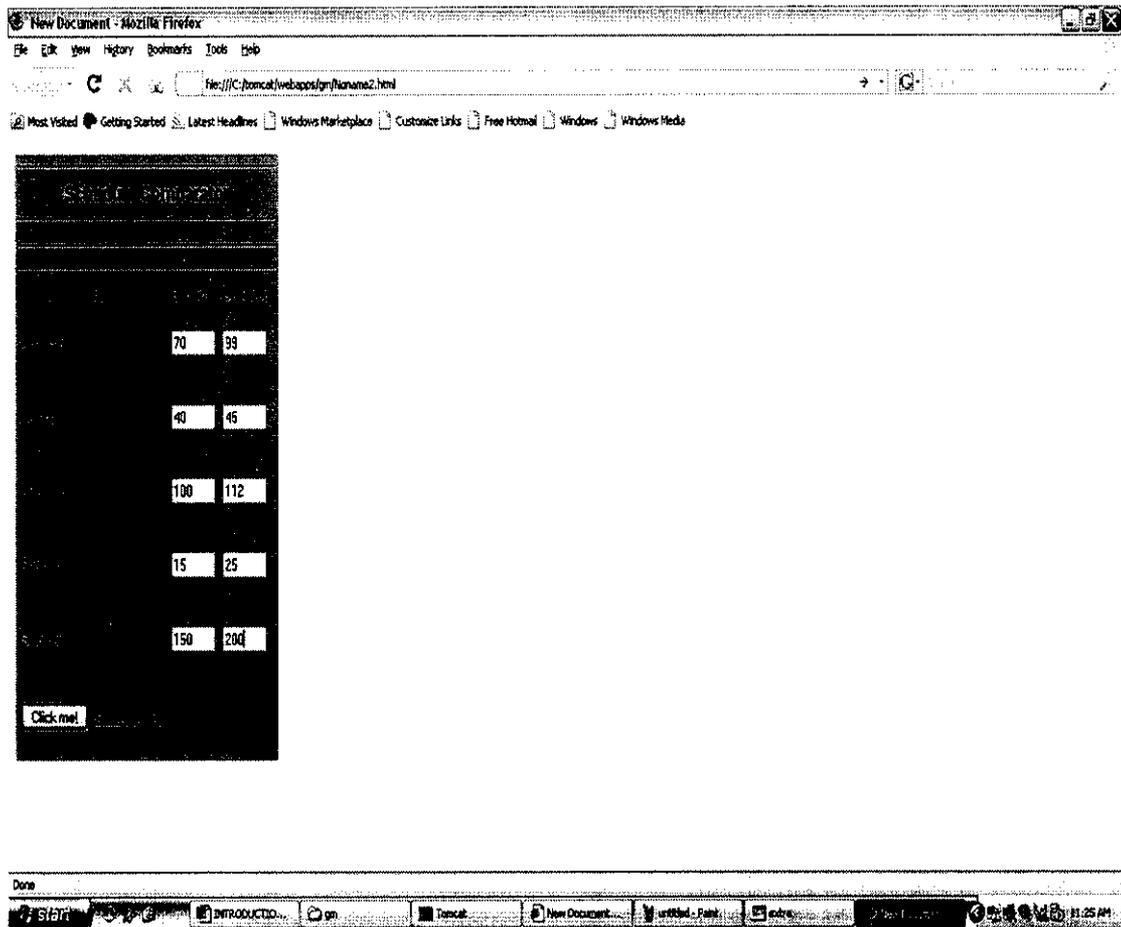Home | About us | Our Products | Contact us

Welcome emp: admin Logout

Fabric inspection report

Order Id   15
Style   Girls long sleeve
Material   Cotton
Company Name   Sindhu garments
Strains   minor
Slub   minor
Foreign Matter minor
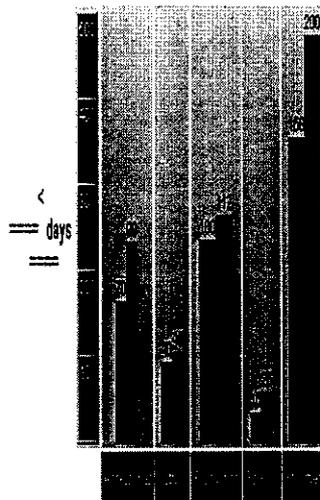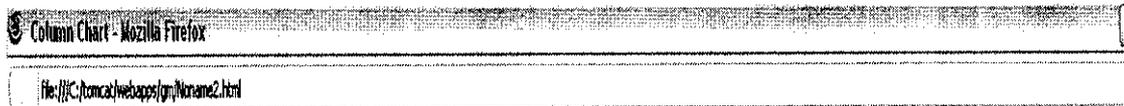Mixed yarn   minor
Proper pattern yes
Status   accepted

[Print]

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Schedule Entry

Schedule Comparator – Chart Generator

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