



Sri Lanka Institute of Information Technology

**Dilushi Apparel System  
Software Requirement Specification**

Information Technology Project 2017

Project ID: ITP-MLB-JN-05

Submitted by:

1. IT\_15\_1133\_82 – (Wijesundara W.M.D.M )
2. IT\_15\_0451\_40 – (Ekanayake T.W)
3. IT\_15\_1487\_28 – (Rumana Banu M.N)
4. IT\_15\_1497\_18 – (Udagedara C.L)
5. IT\_15\_1318\_98 –(P.J.G Nimeshika)
6. IT\_15\_1461\_20 –(Dananjaya P.N.L)
7. IT\_15\_1423\_06 –(Chandrasekara B.U.C)
8. IT\_15\_2254\_98 –(Perera E.V.M)

Submitted to:

(Supervisor's signature)

.....

Lecturer (Mrs.) Mauri Hennayake

20/03/2017

# Table of Contents

<b>Table of Contents .....</b>	<b>i</b>
<b>Revision History .....</b>	<b>ii</b>
<b>1. Introduction.....</b>	
1.1    Purpose .....	1
1.2    Document Conventions .....	1
1.3    Intended Audience and Reading Suggestions .....	2
1.4    Product Scope.....	3
1.5    References .....	4
<b>2. Overall Description.....</b>	<b>4</b>
2.1    Product Perspective .....	4
2.2    Product Functions.....	5
2.3    User Classes and Characteristics.....	5
2.4    Operating Environment .....	5
2.5    Design and Implementation Constraints .....	5
2.6    Project Documentation .....	6
2.7    User Documentation.....	6
2.8    Assumptions and Dependencies .....	6
<b>3. External Interface Requirements .....</b>	<b>7</b>
3.1    User Interfaces.....	7
3.2    Hardware Interfaces .....	14
3.3    Software Interfaces.....	14
3.4    Communications Interfaces.....	
<b>4. System Features.....</b>	<b>15</b>
4.1    Use case diagram and use case scenario .....	16
4.2    Functional Requirment .....	40
<b>5. Other Nonfunctional Requirements .....</b>	<b>50</b>
5.1    Performance Requirements .....	50
5.2    Safety Requirements.....	50
5.3    Security Requirements .....	50
5.4    Software Quality Attributes .....	50
5.5    Business Rules.....	51
<b>6. Other Requirements .....</b>	<b>52</b>

# Revision History

Name	Date	Reason For Changes	Version

# 1. Introduction

## 1. 1.1 Purpose

The newly implemented software will be able to handle all the functions of the existing manual system and these are specialized for the apparel industry. Roughly 5-6 computers are connected to the server will be used with the system for input and output. The employees are computer literate so only basic training of the software will be required and the new system can take over immediately. The new system shall accommodate the past records and inventory of the previous manual system therefore it will have all the attributes of the previous files and few more extras according to new additional requirements and all of these will be saved in the centralized database. Since it is centralized all data provided reliable, consistence and more accurate. As garments are mainly focus on fashions fast manufacturing process needs to be done. Our software will allow to optimized logistics and manufacturing beforehand and anticipate delays making our manufacturing more efficient. And our software will allow to collect and analyze details later. The purpose of this document is to present a detailed description of the system as an agreement between the client and the developer. All functions and features of the system that the client will receive in the respective time frame will be described in detail.

## 1.2 Document Conventions

1. This document is prepared using Microsoft Word 2016 and has used the font type “Times New Roman”. The fixed font size that has been used to type this document 12pt with 1.5-line spacing.
2. UML diagram have been created in the website “[www.draw.io](http://www.draw.io)” according to UML 2.0 standards.
3. Standard IEEE template is the template used to organize the document and its flow and IBM Relational Architecture has used for drawing use cases.

## 1.3 Intended Audience and Reading Suggestions

This document is intended for the reference of the development team, supervisor of the team, the client and relevant user personnel in the departments. The document can be used to refer any functionality as individual or as whole and contains an overall description of each feature including external and non-functional requirements such as hardware configurations, communications and performance optimization.

Diagrams describe each function in detail if read by an individual with technical knowledge or expertise in the area. They can be used in any case to check the initial requirements and the final solutions that have been developed.

## 1.4 Product Scope

The software product which is under development is intended to manage daily tasks of the company with ease. According to their requirements the main problems faced by Dilushi Apparel are that there is no proper system to handle day today activities. At present the company does not have an automated system or any software based applications to run their activities. This is time consuming because each and every detail has to be entered into multiple books. Dilushi fashion is a medium size family run apparel manufacturer; currently all its processes are recorded manually on paper. And they have tried to maintain a spreadsheet only for Inventory system but it has failed due to Data Inconsistency. Currently owner wants everything to be recorded and be easily available/accessible them. So that they will be able to can make better decisions.

The system we suggested would be a software specialized for apparel industry and their needs. It will consist with the following sections: -

- Sales Management System
- Marketing Management System
- System Settings System
- Style Management System
- Sampling Management System
- Manufacturing planning System
- Manufacturing Management System
- Procurement Management System
- Inventory Management System
- Distribution Management System
- Maintenance Management System
- Finance Management System
- Human Resource Management System

And come up with all benefits from a computerized System.

User friendliness and high efficiency will be considered when designing the system. The problem will be systematically broken down into modules which can function separately from different physical departments. The main focus will be error free information management to perform day to day activities at no risk. This will be ensured through a thorough testing phase before implementation. The new system will be implemented in parallel with the old system for a certain time (around 6 months) until 100% system stability is guaranteed.

### Main benefits of this system

- The system will be fully automated and errors will be minimized.
- Data entering / searching / retrieval will be faster hence it will save time and cost.
- Physical documents can be totally eliminated and replaced with the systematic inventory which would be updated each time.
- The data will be consistent throughout the system.
- The on-screen and printed data will be more legible by any person in case the staff changes.
- More Reliable & Available than the current system.

### **Goals of the system**

- i. When there is a need for searching any past records that task should be able to be done easily and accurately.
- ii. Passwords and access levels should be available for the users who use different parts of the system.
- iii. Should be a multi user system since there are several users needing to use the system simultaneously.
- iv. Save time for businesses
- v. Increase automation and accuracy
- vi. System should be scalable
- vii. Different access level for different users
- viii. The system should be error free and reliable
- ix. Multi users should be able to use simultaneously
- x. Reports created should be up to date

## **1.5 References**

### **Book**

- [1] James Rumbaugh/Ivar Jacobson/Grady Boach,The Undefined Modeling Language Reference Manual, An imprint of Addison Wesley Longman, Inc.
- [2] Elmasri Navathe, Fundamentals of Database Systems, 4th edition, Pearson.
- [3] Raghu Ramakrishnan/Johannes Gehrke, Database Management Systems, 2<sup>nd</sup> edition.

### **Personal Interview/Communication**

- [4] Interview with Mrs. Dilushi Perera, Owner of the Garment in 10<sup>th</sup> of December 2016.

## 2. Overall Description

### 2.1 Product Perspective

The main objective of computerizing the apparel system is to reduce the cost and time by replacing the current manual system which has been maintaining their documents in papers which was not efficient. The proposed software will computerize all the departments. The newly introduced software will provide an easy access to the system and it will contain user friendly functions with attractive interfaces. This will speed up input and retrieval of data in and out of the system; hence the manual process will be replaced. This will also minimize the possibility of getting errors during calculations done.

### 2.2 Product Functions

- Sales

This function includes Add, Update and Delete processes of main 4 departments as follows

- Customer
- Sales design inquiry
- Sales design inquiry approval
- Sales Inquiry
- Sales Invoice
- Sales Payment
- Sales Return

- Marketing

This function includes Add, Update and Delete processes of main 4 departments as follows

- Marketing design inquiry
- Marketing design inquiry approval

- Design

This function includes Add, Update and Delete processes of main 4 departments as follows

- Request and Create Design
- Design Costing
- Design Approval

- **Sample**

This function includes Add, Update and Delete processes of main 4 departments as follows

- Request and Create Sample
- Sample Costing
- Sample Approval

- **Manage Manufacturing Scheduling**

This function includes Add, Update and Delete processes of main 4 departments as follows

- Cutting Scheduling
- Sewing Scheduling
- Washing Scheduling
- Iron and Packing Scheduling

- **Manage Manufacturing/Production**

The details of the product after the manufacturing process are managed. For example, the wastages, Damages, Qualified products etc. This is also divided among 4 departments

- Cutting
- Sewing
- Washing
- Iron and Packing

- **Procurement**

This function includes Add, Update and Delete processes of main 4 departments as follows

- Supplier Portfolio
- Purchasing
- Return goods

- **Inventory**

This function includes Add, Update and Delete processes of main 4 departments as follows

- Raw Materials
- Finished Products
- Accessories
- Machine parts
- Machineries
- Re-order list

- Distribution Management system

This function has 5 main parts. Add, Update, Delete, Search processes are included in these parts.

- Distribution
- Shipment
- Vehicle
- Fuel Bills
- Vehicle Maintenance

- Maintenance

This function includes Add, Update and Delete processes of main 4 departments as follows

- Job Request
- Job Inspecting and Estimation
- Order Parts
- Contractors
- Job out source

- Finance

This function includes Add, Update and Delete processes of main 4 departments as follows

- Bank
- Expenses
- Fixed Assets
- Loans
- Cash Flows
- Profit and Loss
- Income

- Human Resource

This function includes Add, Update and Delete processes of main 4 departments as follows

- Employee
- Payroll
- Department
- Leaves

## **2.3 User Classes and Characteristics**

There are 11 main actors in the apparel system.

### **1. Sales Executive**

Sales Executive is the lowest ranking employee in sales department who will do the day to day activities of this department. He will mainly interact with the customers. The sales executive will have full access to the sales functions except the sales approval function. He can also view inventory details. Also he can check the progress of design inquiries.

### **2. Sales Manager**

He is the head of the Sales department. He has the access to all the interfaces. If a design or sample has to be approved, he is the one responsible for approval. Apart from these he can view any details.

### **3. Marketing executive**

Marketing executive is the lowest ranking employee in marketing department. He is the one taking market design inquiries.

### **4. Designer**

He is the one responsible to add new designs taking the sales design inquiry from customer and Market design inquiry. He also calculates the cost for samples and designs. He sends the details for approval by the manager.

### **5. Design manager**

He is the one responsible for designing. The approvals are done by him.

**6. Event scheduler**

As per our system, the production is divided into 4 main departments such as cutting, sewing, washing and Iron and packing. He is the one to plan the manufacturing process. The days taken to complete each process and the one to assign the supervisor.

**7. Store keeper**

Store manager is the one working in the inventory department. He can add product to the inventory.

**8. Store manager**

Store manager can manage all the inventory related item. He also can approve the orders.

**9. Accountant**

Accountant is the one to manage financial details. He is responsible for generating salary, expenses, fix assets etc.

**10. Finance manager**

He has access to all the functions an accountant has. Apart from that he can generate reports.

**11. Data Entry Operator**

Data entry operators are office assistants who enter, store, and retrieve business related data based on customers. Only data entry option is given to the data entry operator therefore if he/she want to modify the data entered previously they should get it done through the manager. Data entry operators plays the boundary role of the system.

## **2.4 Operating Environment**

### **4.1. Hardware (Minimum Hardware Requirements)**

- Client's system
- Intel Pentium dual core 3220 processor.
- Intel C77 chipset compatible motherboard.
- 2GB ram.
- 60GB solid state drive (SSD).
- OEM case and power supply.
- 17-inch monitor (resolution 1366x768).
- Mouse, keyboard, ups and etc....
- Epson LQ50 printer

### **4.2. Software**

- Remote MYSQL server (AWS MYSQL instance).
- Microsoft WINDOWS 10.
- Avira free antivirus.
- Jasper soft report
- Java SE Runtime environment

## 2.5 Design and Implementation Constraints

Client requires that the attendance should be generated through ID

Software development crew provides their best effort in developing the system. In order to maintain the reliability and durability of system, some design and implementation constraints are applied.

All report design format will be design by the client because they will change according to their need.

Maintenance and support of the system will only be provided for the first.

## 2.6 Project Documentation

This document was created on the implementation phase and delivered. This was prepared after Planning, Requirement gathering and Analysis and analysis feasibility study as mentioned in the introduction. After further analysis and requirement specification SRS Document is submitted.

This document includes following steps.

- i. Planning and Requirement Analysis
- ii. Defining Requirements
- iii. Designing the product architecture
- iv. Developing the Product

Final report will be submitted after finish the developing phase and the testing phase including all the project documentation components (such as Introduction) that will be delivered along with the software. Identify any known project documentation delivery formats or standards.

## 2.7 User Documentation

User manual provide to the client will give a clear idea in interacting with the system. It will be written in a simple understandable language concealing the inner complexity of the system. A hard copy of the user manual will be delivered to the client with the delivery of system.

## 2.8 Assumptions and Dependencies

- Assume all calculations are done in Sri Lankan Currency (LKR).
- The system will depend on Amazon cloud services to provide with reliable database.
- Assume all manufacturing processors will at least take one day.
- All time calculations are rounded off to one day.

# 3. External Interface Requirements

## 3.1 User Interfaces

*Please Refer the Appendix1 to see the screen shots of the User Interface.*

## 3.2 Hardware Interfaces

The Dilushi Apparel System will require specific hardware other than Computer

- Printer – All reports and invoices will be print using a printer.

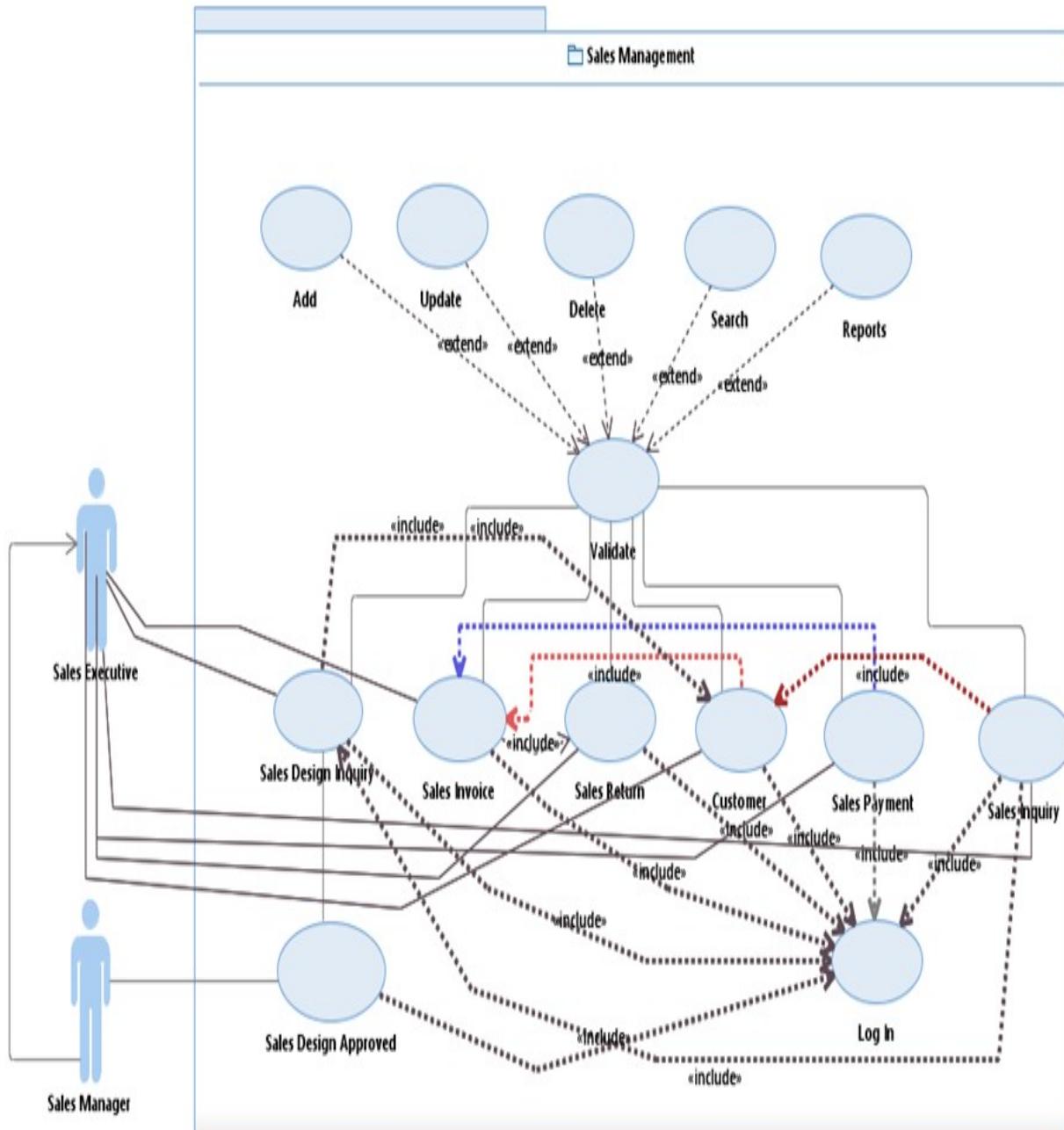
## 3.3 Software Interfaces

- All reports are generated using jasper 5.4.
- All database activities are handled by Amazon MySQL instance.

## 4. System Features

### 4.1 Use cases and Use case scenarios

#### 4.1.1 Sales Management



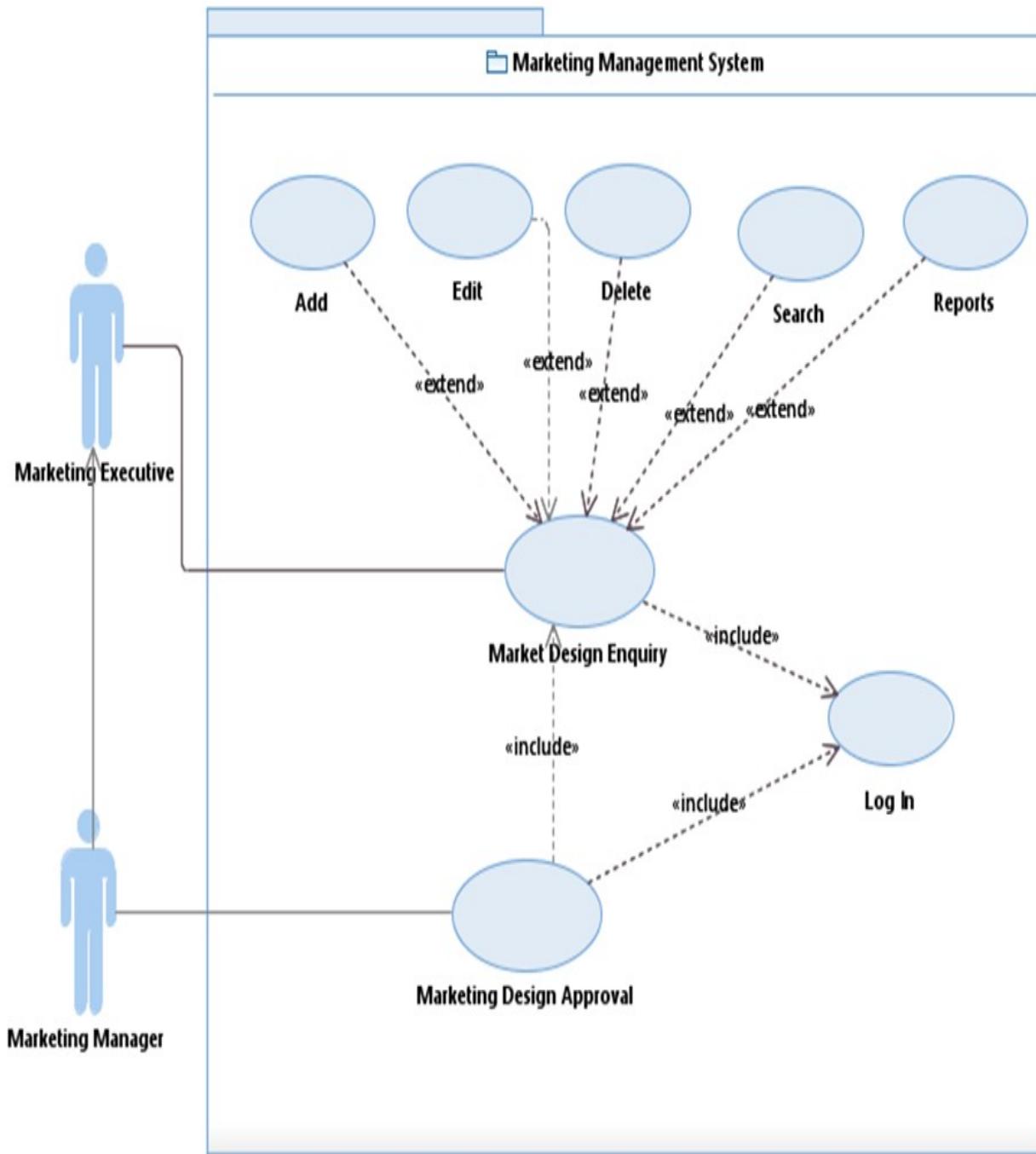
Use Case ID	
Use Case Name	ADD Customer
Main Actor	Sales Executive
pre-Condition	
Post-Condition	Database will be updated with the new customer data
Main Scenario	1.Sales executive will enter customer information 2. Then will press the Add new button and will save in the database.
Extensions	2. a.1 Database update is unsuccessful. 2.a.2 Re-enter the data. 3.a.1 If it is ordered by customer search customer details and get details.

Use Case ID	
Use Case Name	Search Customer
Main Actor	Sales Executive
pre-Condition	Customer should exist to get a result.
Post-Condition	
Main Scenario	1.Sales executive will enter customer search key value 2.Then will press the “Search” button. 3.Result will be displayed on the table.
Extensions	2.a.1 No data will be displayed 2.a.2 Textbox field will not be erased 3.a.1 Re-enter the key.

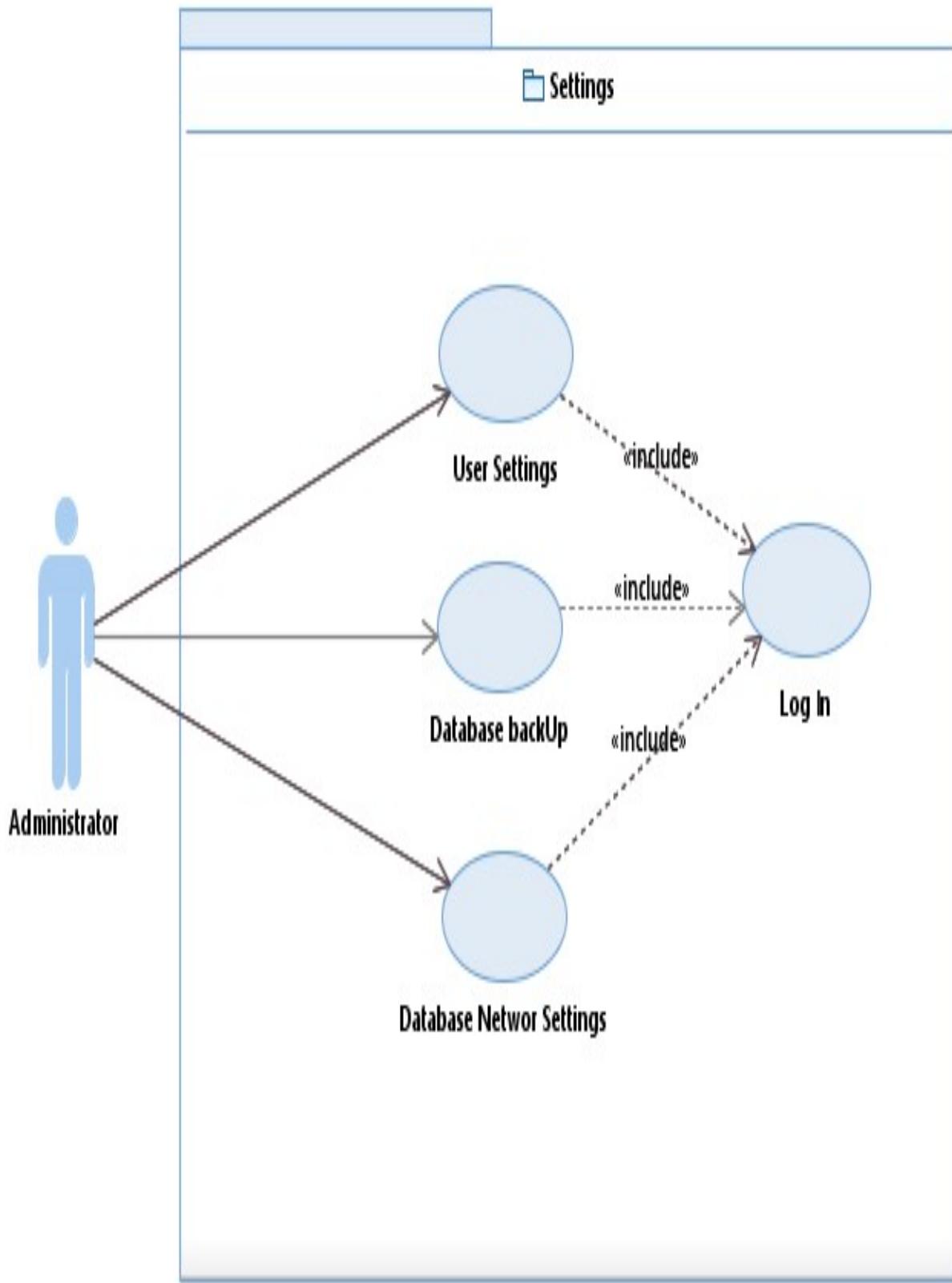
Use Case ID	
Use Case Name	Add Sales Invoice
Main Actor	Sales Executive
pre-Condition	Customer should exist in system.
Post-Condition	
Main Scenario	1.Sales executive will enter customer search key value and choose customer 2.Then will Search & Add Products to the table. 3.Enter the quantity values 3.Choose discount. 4.Press calculate button to get total.
Extensions	2.a.1 Error message with the error 2.a.2 Textbox field will not be erased

Use Case ID	
Use Case Name	Delete Sales Inquiry
Main Actor	Sales Executive
pre-Condition	Sales Inquiry should exist in system.
Post-Condition	
Main Scenario	1.Sales executive will enter customer search key value and choose sales inquiry 2.Press delete button to remove from database.
Extensions	

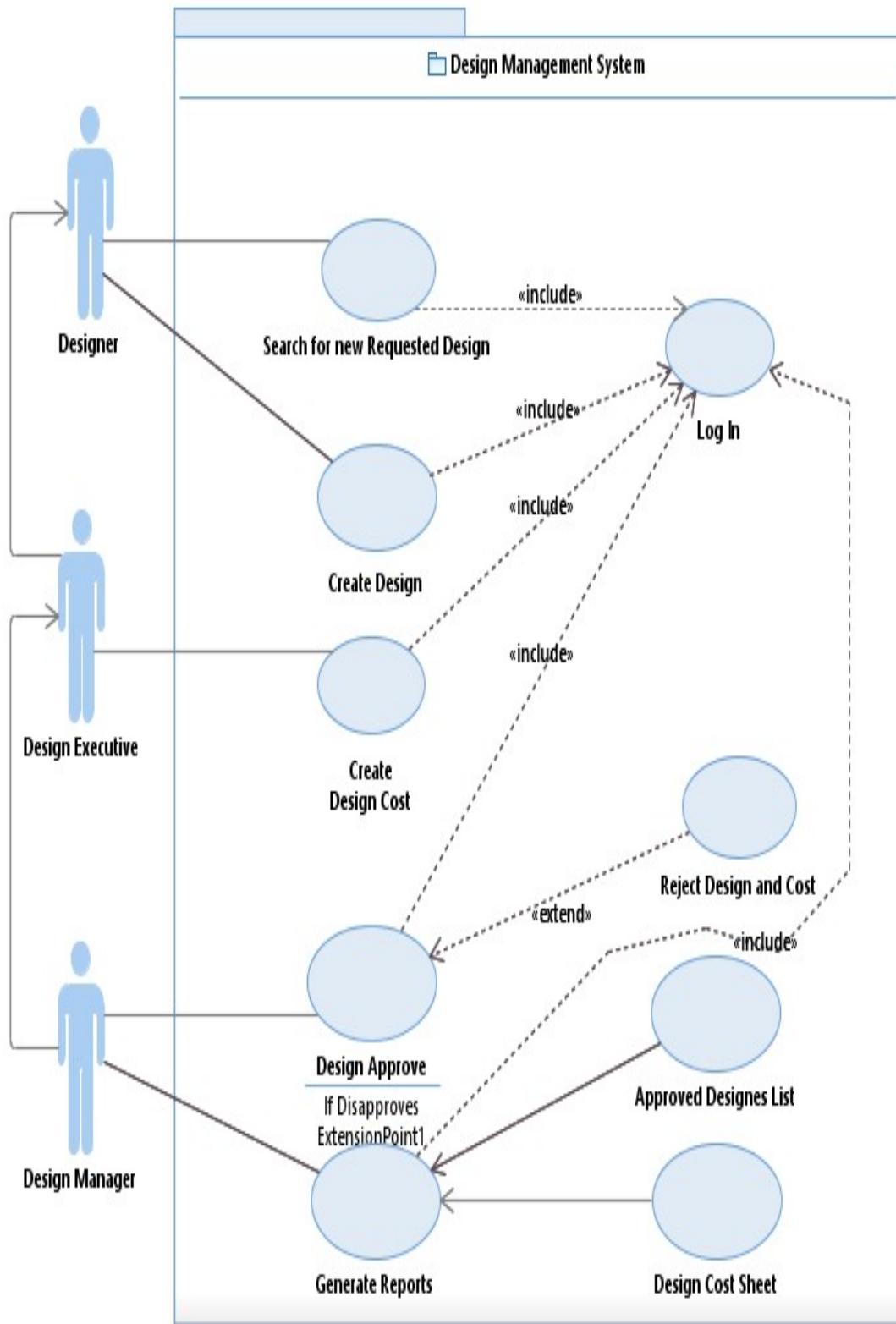
#### 4.1.2 Marketing Management



#### 4.1.3 Settings



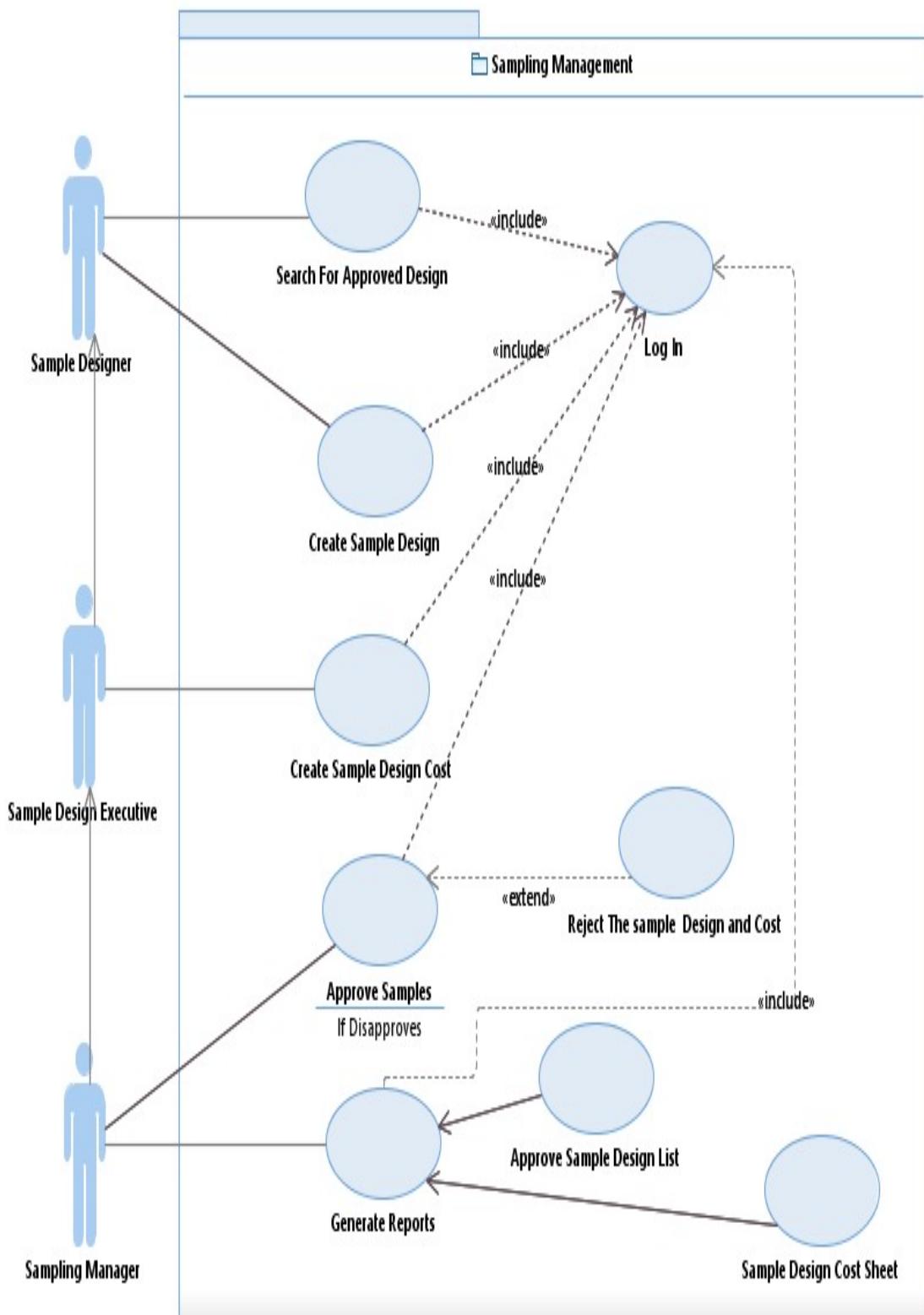
#### 4.1.4 Design Management



Use Case ID	1
Use Case Name	Search For Registered new Designs
Main Actor	Designer
pre-Condition	
Post-Condition	Database will update with the new registered designs
Main Scenario	<ul style="list-style-type: none"> <li>1. Designer will insert new design details.</li> <li>2. Then will press the Add new button and will save in thee database.</li> <li>3. System will check by the Designer.</li> </ul>
Extensions	<ul style="list-style-type: none"> <li>2. a.1 Database update is unsuccessful.</li> <li>2. a.2 Re-enter the data.</li> <li>3. a.1 If it is ordered by customer search customer details and get details.</li> </ul>

Use Case ID	2
Use Case Name	Approve Designs
Main Actor	Design Manager
pre-Condition	
Post-Condition	Database will update with the new Approved designs
Main Scenario	<ul style="list-style-type: none"> <li>1. Design Manager will insert new Approved design details.</li> <li>2. Then will press the Add Approve button and will save in the database.</li> </ul>
Extensions	<ul style="list-style-type: none"> <li>1. a.1 If it is disapproved reject the design and costing.</li> <li>2. a.1 Database update is unsuccessful.</li> <li>3. a.2 Re-enter the data.</li> </ul>

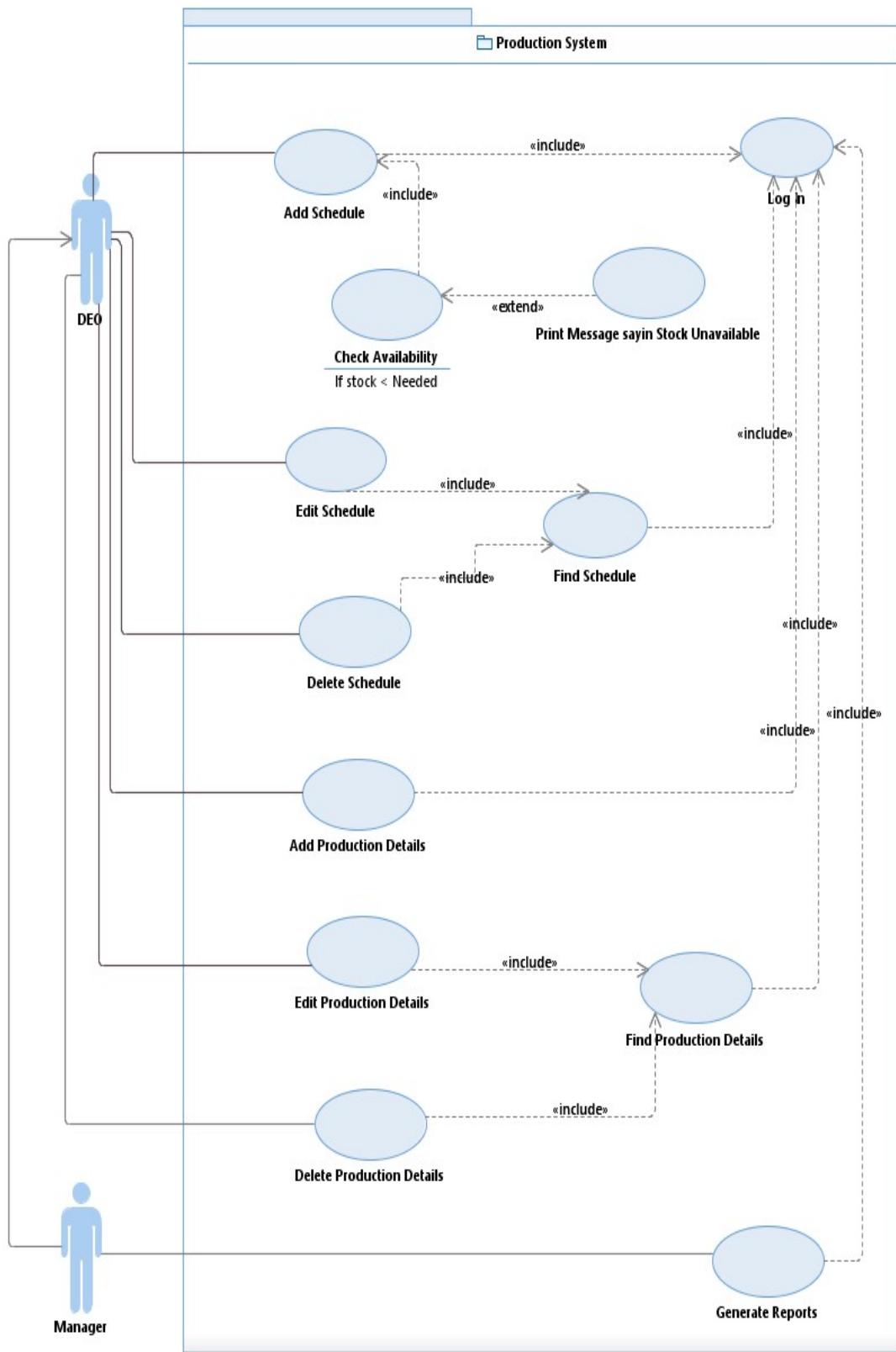
#### 4.1.5 Sampling Management



Use Case ID	1
Use Case Name	Create Samples
Main Actor	Sample Designer
pre-Condition	
Post-Condition	Database will update with the new Created Samples
Main Scenario	1. Sample Designer will insert new create sample details. 2. Then will press the Add button and will save in the database.
Extensions	2. a.1 Database update is unsuccessful. 2. a.2 Re-enter the data.

Use Case ID	2
Use Case Name	Create Samples Costing
Main Actor	Sample Designer Executive
pre-Condition	
Post-Condition	Database will update with the new Created Samples Costing
Main Scenario	1. Sample Designer Executive will insert costing details. 2. Then will press the Add button and will save in the database.
Extensions	2. a.1 Database update is unsuccessful. 2. a.2 Re-enter the data.

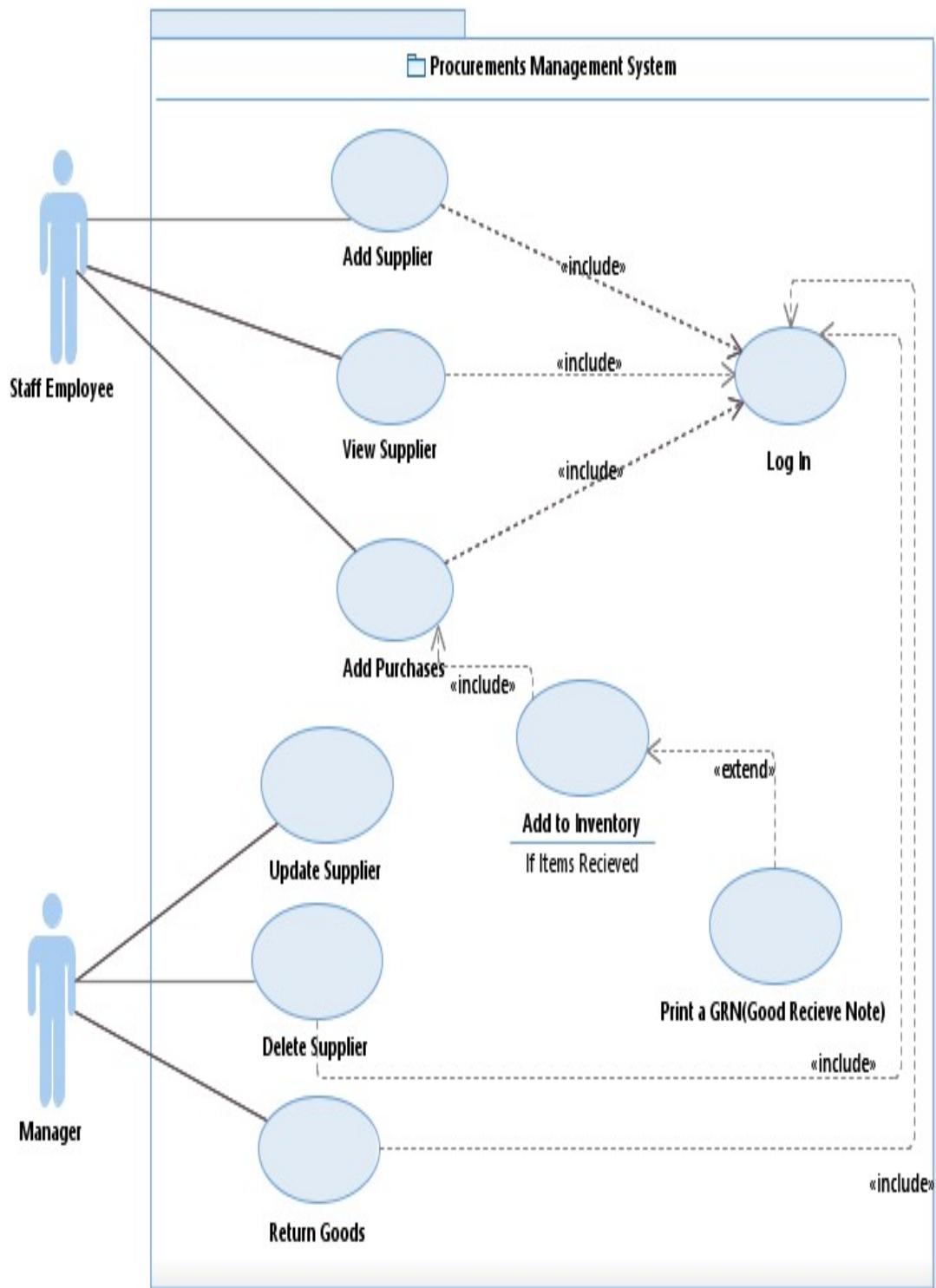
#### 4.1.6 Production Management



Use Case Name	Add Cutting Schedule
Pre-Condition	The style/design table should already be available
Primary Actor	Data Entry Operator
Main Case Scenario	<ol style="list-style-type: none"> <li>1. DEO logs into the system</li> <li>2. If Successful, the interface to enter manufacturing schedule is displayed</li> <li>3. System generates the schedule ID</li> <li>4. DEO selects style ID, material ID and supervisor assigned for particular department</li> <li>5. DEO enters other scheduling details</li> <li>6. Details are stored after checking validity</li> <li>7. Availability of the material is displayed</li> </ol>
Extensions	<ol style="list-style-type: none"> <li>1.1 If login is unsuccessful, display a message saying re-enter details</li> <li>6.1 If details are invalid , display an error message</li> <li>6.2 Re-enter data</li> </ol>

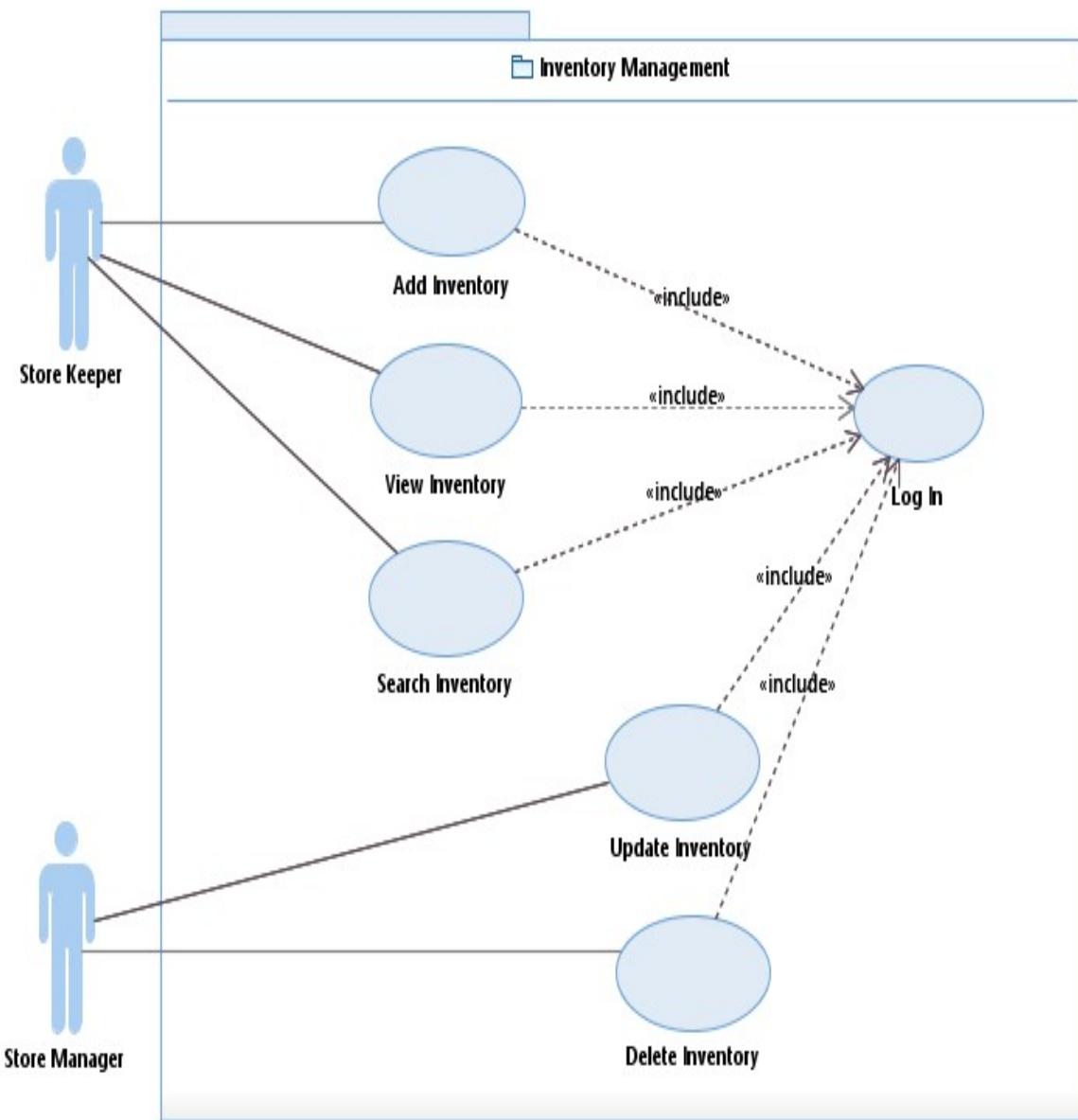
Use Case Name	Edit Sewing Schedule
Pre-Condition	The style should have already being cut
Primary Actor	Data Entry Operator
Main Case Scenario	<ol style="list-style-type: none"> <li>1. DEO logs in</li> <li>2. Select Sewing Schedule</li> <li>3. Select Edit Schedule</li> <li>4. The Updating schedule interface appears</li> <li>5. DEO selects the option by which the entry is searched</li> <li>6. The needed record is entered</li> <li>7. A table containing the information is displayed</li> <li>8. Select the row needed to be updated</li> <li>9. Edit the information</li> <li>10. The details are updated by system after validation</li> </ol>
Extensions	<ol style="list-style-type: none"> <li>1.2 If information containing such record is not available, display a message saying no records found</li> <li>10.1 If details are invalid , display an error message</li> <li>10.2 Re-enter data</li> </ol>

#### 4.1.7 Procurements Management



Use Case Name	Add Purchasing
Pre-Condition	The employees should have an accurate document about the purchase order
Primary Actor	Administrator , Employee
Main Case Scenario	<ul style="list-style-type: none"> <li>i. To enter a purchase user must log in first.</li> <li>ii. Select purchasing from procurements tab.</li> <li>iii. Enter the details to the relevant text fields</li> <li>iv. The purchase id will be automatically generated.</li> <li>v. Then the message will display saying the purchase have added to the system.</li> </ul>

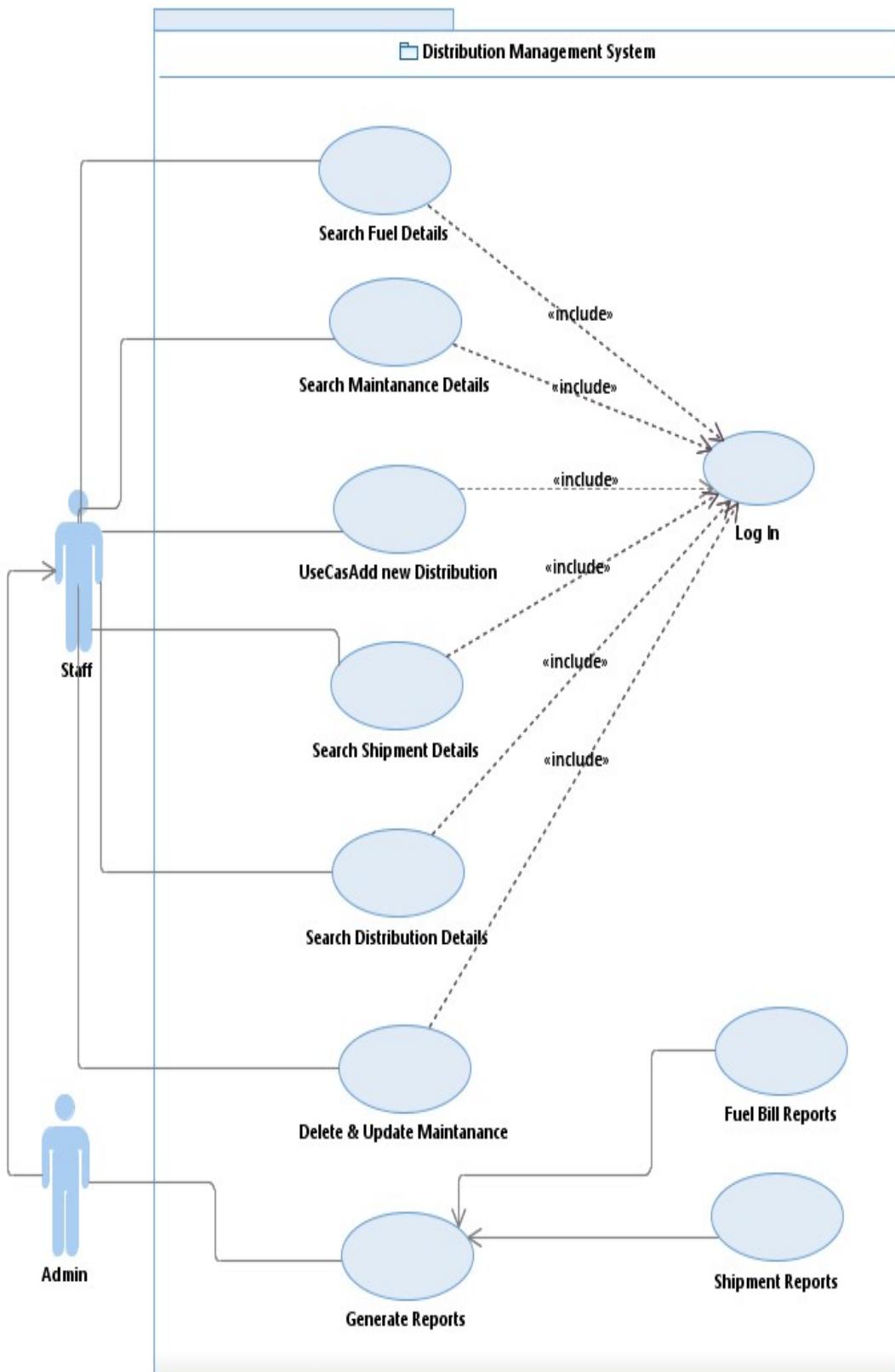
#### 4.1.8 Inventory Management



Use Case Name	Add Items
Pre-Condition	The employee should have a accurate document which contains the Item name , date received , amount received , cost of the item and the document should state that , the entering items are Raw Material , Finished Products , Accessories , Machine Parts or Machinery Items
Primary Actor	Administrator , Employee
Main Case Scenario	<ol style="list-style-type: none"><li>i. To enter an item to the system, an staff or administrator should be logged into the system.</li><li>ii. After login the administrator or staff, the Item name , date received , amount received , and cost of the items is to be entered for entering the data into the system.</li><li>iii. An item id will be automatically generated and added to the system.</li></ol>

Use Case Name	View Inventory
Pre-Condition	<ul style="list-style-type: none"> <li>▪ The item which the user is viewing should have been added in the Inventory</li> </ul>
Primary Actor	Administrator , Employee
Main Case Scenario	<ol style="list-style-type: none"> <li>i. The Administrator or Staff logins to the system.</li> <li>ii. If the login is successful , Administrator or Staff chooses the inventory which has to be displayed from the Inventory Management menu.</li> <li>iii. If the logged in computer has a good connection with the hosted computer , It will display all the items of the selected category of the inventory system.</li> </ol>
Alternative Flows	<ol style="list-style-type: none"> <li>i. The user must log into the system.</li> <li>ii. The particular staff member needs to contact the administrator.</li> </ol>

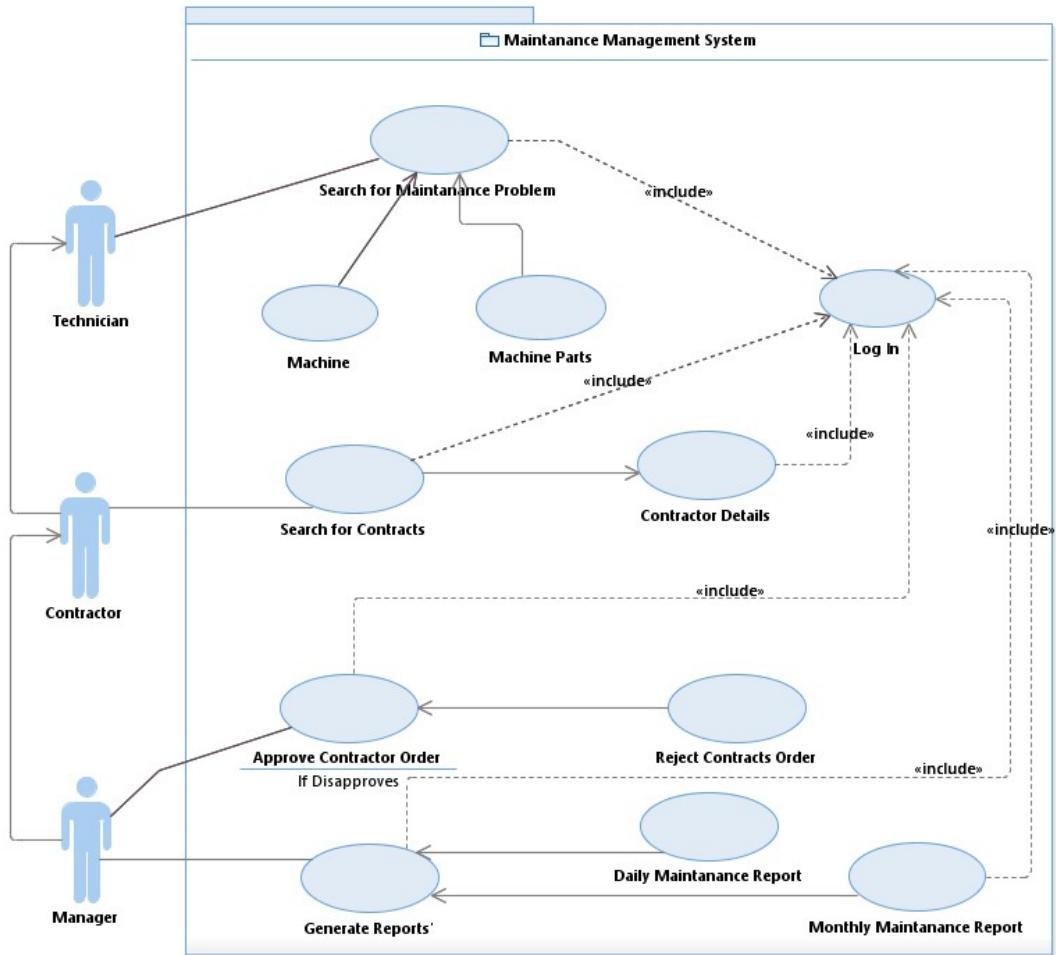
#### 4.1.9 Distribution Management



Use case name	Search distribution Details
Primary Actors	Staff member and Administrator
Main Flow Events	<ol style="list-style-type: none"> <li>1. Staff member and administrator enter the user name &amp; password to login to the system.</li> <li>2. Staff member and Administrator enter the distribution ID or date.</li> <li>3. System display the all distribution details.</li> <li>4. End of the searching system will generate a particular distribution report.</li> </ol>
Alternative Flows	<ol style="list-style-type: none"> <li>1)             <ol style="list-style-type: none"> <li>1 .a. If staff member can not login to the system.</li> <li>1 .b. The particular staff member needs to contact the administrator.</li> <li>1 .c. After contacted the admin. He can add the new member</li> </ol> </li> <li>2)             <ol style="list-style-type: none"> <li>2 .a. If the distribution Id is invalid system will give the error massage.</li> </ol> </li> </ol>

Use case name	Delete and Update maintains
Primary Actor	Administrator
Main Flow Events	<ol style="list-style-type: none"> <li>1. Administrator login to the system.</li> <li>2. Search the old maintains using maintain ID.</li> <li>3. Edit the current data in particular id or delete selected details.</li> <li>4. System will automatically add the new updates to the data base.</li> </ol>
Alternative Flows	<ol style="list-style-type: none"> <li>2.a. If the maintains ID is invalid.</li> <li>2.b. System prompts to reenter the correct ID</li> </ol>

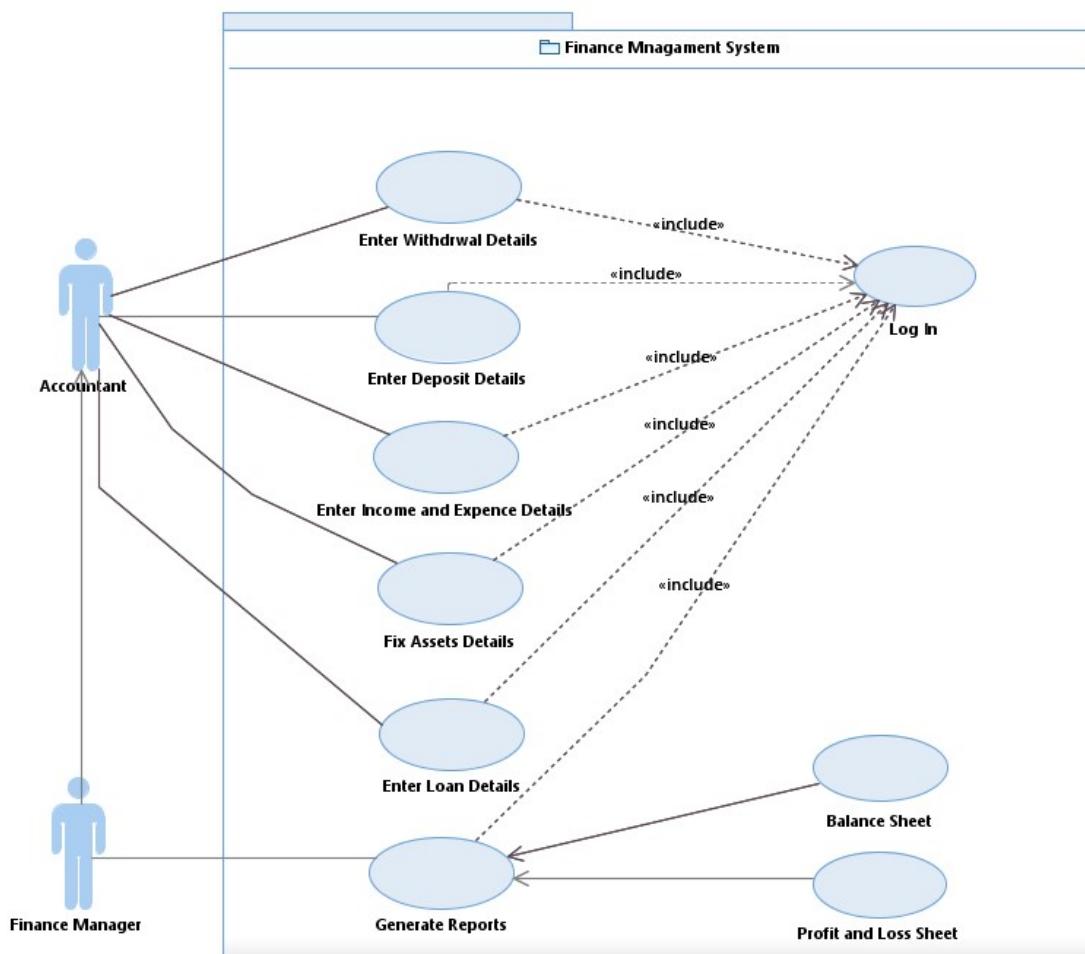
#### 4.2.0 Maintenance Management



Use Case ID	1
Use Case Name	Search for things faulty
Main Actor	Technician
pre-Condition	
Post-Condition	Database will update with the new data
Main Scenario	1.Log in to the system. 2.System will display Maintenance Request page . 3.User fills all the field with correct information. 4.System validate all the fields. 5.New faulty will be search to the database. 6. Display “Successful message”
Extensions	6.a.1 Database update is unsuccessful. 6.a.2 Re-enter the data.

Use Case ID	2
Use Case Name	Search for contracts
Main Actor	Contractor
pre-Condition	
Post-Condition	Database will update with the new data Approved the contracts
Main Scenario	1.Log in to the system. 2.System will display to the Contractor page . 3.User fills all the field with correct information. 4.System validate all the fields. 5.New faulty will be search to the database. 6. Display “Successful message”
Extensions	6.a.1 Database update is unsuccessful. 6.a.2 Re-enter the data.

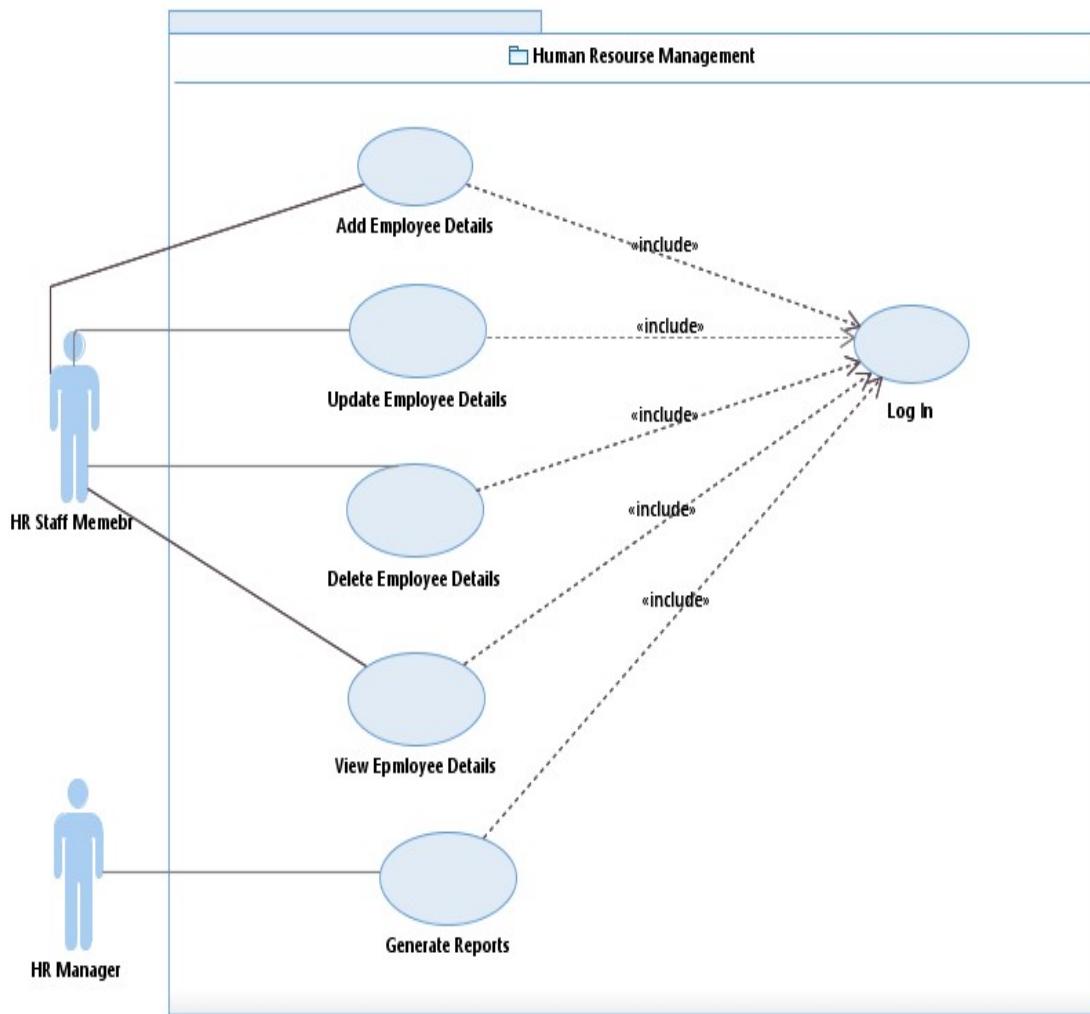
#### 4.2.1 Finance Management System



Use case ID	1
Use case name	Calculate Fix Assets
Post-condition	Update database
Primary actor	Accountant
Main Scenario	<ul style="list-style-type: none"> <li>1.Enter Fix Asset Cost and Depreciation rate</li> <li>2.Get Depreciation automatically.</li> <li>3. Display accumulative depreciation automatically.</li> <li>4. Update database.</li> <li>5. Display “Successful message”</li> </ul>
Extensions	<ul style="list-style-type: none"> <li>5.a.1 Database update is unsuccessful.</li> <li>5.a.2 Re-enter the data.</li> </ul>

Use case ID	2
Use case name	Income and Expenses
Post-condition	Update database
Primary actor	Accountant
Main Success Scenario	<ul style="list-style-type: none"> <li>1.Get all department income and expenses</li> <li>2. Calculate total income and expenses.</li> <li>3.Store output in the database.</li> <li>4. Display “Successful message”</li> </ul>
Extensions	<ul style="list-style-type: none"> <li>4.a.1 Database update is unsuccessful.</li> <li>4.a.2 Re-enter the data.</li> </ul>

#### 4.2.2 Human Resource Management



Use Case ID	1
Use Case Name	Register new Employee to the system.
Main Actor	Administrator.
pre-Condition	
Post-Condition	Database will update with the new Employee details
Main Scenario	1. Administrator will insert relevant details of the new employee. 2. Then administrator will press the insert button. 3. System will validate the entered details by the administrator.
Extensions	3.a.1 Database update is unsuccessful.  3.a.2 Re-enter the data.

Use Case ID	2
Use Case Name	View leave details
Main Actor	Employee
pre-Condition	Employee should be registered in the system
Post-Condition	Database will update with the leave details with respect to that specific employee
Main Scenario	1. Employee select the date . 2. Check the number of leaves left or taken for on or before the selected date, 3. System will show the related details of leaves for that day.
Extensions	1.a.1 If the employee selects a date later than the system date it will prompts an error message.

## 4.2 Functional Requirements

### 4.1.1 Sales Management

<b>Function 1</b>	<b>Customer Management – Add Customer</b>
Input	Name, Company, Phone, E-mail, Address
Output	Da Database Record. Database successfully updated message.
Processing	Validate the given details. Add Customer details.

<b>Function 2</b>	<b>Sales Management – Add Sales Invoice</b>
Input	Choose customer Id, Sales Inquiry ID, Product ID
Output	Database Record. Database successfully updated message.
Processing	Validate the given details. Add Invoice details.

<b>Function 3</b>	<b>Sales Management – Delete Sales Inquiry</b>
Input	Choose Sales Inquiry ID or enter Sales Inquiry ID
Output	Database updated. Database successfully updated message.
Processing	Search and delete the record from database

<b>Function 4</b>	<b>Customer Management – Search Customer</b>
Input	Customer ID, Name, Company, Phone
Output	Show results in a table.
Processing	Query the search key in the database. If any result, convert it to a table format.

#### 4.1.2 Style Management

Function 5	Style Management
Input	Enter new Design details, Enter Design Costs and Enter Approve design details.
Output	Database Record, Database successfully updated message, Generate reports for Design Manager.
Processing	Calculation and Summarizing, Validate the given details and record the information into the database.

#### 4.1.3 Sample Management

Function 6	Sample Management
Input	Enter new Sample Design details, Enter Sample Design Costs and Enter Approve Sample design details.
Output	Database Record, Database successfully updated message, Generate reports for Sample Design Manager.
Processing	Calculation and Summarizing, Validate the given details and record the information into the database.

#### 4.1.4 Manufacturing Planning Management

<b>Function 7</b>	<b>Add Cutting Schedule</b>
Input	Style ID, Quantity, Material ID, Minutes per Sample, Start Date, End Date, Supervisor ID, No of Labourers , Room no, No of Lines, Width
Output	Database Record, Availability status, Display total width, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Calculate the total width Check Availability

<b>Function 8</b>	<b>Add Sewing Schedule</b>
Input	Style ID, Cutting ID, Quantity, Minutes per Sample, Start Date, End Date, Supervisor ID, No of Labourers, Room no, No of Lines, Width
Output	Database Record, Database successfully Added message, Display particular style ID / Cutting ID details
Processing	Validate the given details and record the information in to the database.

#### **4.1.5 Manufacturing Management**

<b>Function 9</b>	<b>Add Cutting details</b>
Input	Schedule ID ,style ID, Wastages, Damages, Qualified pieces
Output	Database Record, Display particular schedule ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Calculate total wastages.

<b>Function 10</b>	<b>Add Washing details</b>
Input	Schedule ID ,style ID, Wastages, Damages, Qualified pieces
Output	Database Record, Display particular schedule ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Calculate total wastages.

#### **4.1.6 Inventory Management**

<b>Function 11</b>	<b>View Inventory</b>
Input	Item Category
Output	Item Details
Processing	The system will validate the category and retrieve the data relevant to the specified category.

<b>Function 12</b>	<b>Search Inventory</b>
Input	Item Number or Name (It can be a Raw Material , Finished Product or a Machine Maintenance Part)
Output	Search results
Processing	The system will validate the item number or name and retrieve the item details

<b>Function 13</b>	<b>Adding items to Inventory</b>
Input	Item name , quantity , cost and Date
Output	Confirmation message about the recently added Item
Processing	Validate the User entered data and Send it to the Database

<b>Function 14</b>	<b>Removing an Item</b>
Input	Item name or Number
Output	Confirmation message about the recently deleted item
Processing	Validate the item number or name and delete the requested item

<b>Function 15</b>	<b>Updating an Item</b>
Input	Enter the name of the item you want to update with the details which has to be changed
Output	Confirmation message about the recently update Item
Processing	Validate the user entered name and change the details according to the user entered data.

#### 4.1.7 Distribution Management

<b>Function 16</b>	<b>Add Fuel Details</b>
Input	Fuel ID ,Vehicle ID, Driver's ID , Helper's ID, Fuel Station Name, Bill Number, Unit Price, Units, Cost, Date
Output	Database Record, Display particular Fuel ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Calculate total cost. Auto generate fuel ID. Date picker gets the system date while form loading.

<b>Function 17</b>	<b>Add Shipment Details</b>
Input	Shipment ID , Supplier, Address, Phone, Shipped Date, From, Delivery Date, Received By, Description
Output	Database Record, Display particular Shipment ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Auto generate Shipment ID.

<b>Function 18</b>	<b>Add Vehicle Details</b>
Input	Vehicle ID, Type, Lysine Number, Mileage, Driver Id, Driver Name, Engine Number, Service Duration
Output	Database Record, Display particular Vehicle ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Auto generate vehicle ID.

<b>Function 19</b>	<b>Add Distribution Details</b>
Input	Distribution Id, Vehicle ID, Driver's ID, Helper's ID Date, Distribution Cost, Distribution Mileage
Output	Database Record, Display particular Distribution ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Auto generate Distribution ID. Date picker gets the system date while form loading.

<b>Function 20</b>	<b>Add Maintenance Details</b>
Input	Maintains ID, Vehicle Id, Garage Name, Address, Phone, Maintains Description, Cost, Date.
Output	Database Record, Display particular Maintains ID details, Database successfully Added message.
Processing	Validate the given details and record the information in to the database. Auto generate Maintains ID. Date picker gets the system date while form loading.

#### 4.1.8 Maintenance Management

<b>Function 21</b>	<b>Maintenance Management</b>
Input	Job Inspection Estimation details, maintenance Request details, Technician details.
Output	Database Record, Database successfully updated message, Generate reports for Maintenance Manager.
Processing	Calculation and Summarizing, Validate the given details and record the information into the database.

#### **4.1.9 Finance Management**

<b>Function 22</b>	<b>Finance Management</b>
Input	Withdrawal Details , Deposit Details , Expenses, Loan Details and Fix asset
Output	Database Record, Database successfully updated message, Generate reports of accounts for Finance Manager.
Processing	Calculation and Summarizing, Validate the given details and record the information into the database.

#### **4.1.10 Human Resource Management**

<b>Function 23</b>	<b>Human Resource Management</b>
Input	Employee ID, Name, Address, Email, Gender, Address
Output	Database Record, Database successfully updated message,
Processing	Update the employee details. Validate the given details and record the information in to the database.

## 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

Performance requirements define acceptable response times for system functionality. Although the system is developed suiting for the least system performances, the performance of the system will highly depend on the performance of the hardware and software components of the installing computer. When consider about the timing relationships of the system the load time for user interface screens shall take no longer than two seconds. It makes fast access to system functions. The login information shall be verified within five seconds causes' efficiency of the system. Returning query results within five seconds makes search function more accurate.

### 5.2 Safety Requirements

There are several user levels in tour management system, Access to the various subsystems will be protected by a user log in screen that requires a user name and password. This gives different views and accessible functions of user levels through the system. Maintaining backups ensure the system database security. System can be restoring in any case of emergency.

### 5.3 Security Requirements

Data entry operators can only add or edit a customer. Only admins can delete customers. Admin has the maximum privilege to all subsystems. Access to the various subsystems will be protected by a user log in screen that requires a user name and password. All passwords are encrypted, so no one can see the passwords. Only administrator can reset the usernames and passwords of the users.

### 5.4 Software Quality Attributes

- Availability The system shall be available during normal office hours in tour and travel management sections but its 24\*7 days available in vehicle rental system.
- Efficiency Reports will be displayed right after user clicks generate report button, and bill calculation will also be calculated right after user gives relevant information.
- Flexibility New features can be added without getting any defects at any time.
- Integrity We have given every user a password and a username to access the system, therefore only the accessed user can be modified the system, and most importantly when a user inserts invalid details system will generate error message so the user can reenter them.

- Maintainability We are going to maintain the system for free for the 1st three months. Then we will charge for every update or change done after that period from the client.
- Reusability Generating reports will be used in every function.
- Testability Tests can be made at any time for any function easily when needed.
- Sri Lanka Institute of Information Technology
- Usability Since the interfaces are user friendly anyone can understand what it's about and also reports will be generated by a click of a button, data insertion, update and deletion can also be done easily click.
- Robustness All the bill calculation, salary calculation will be generated accurately without having defects. And also all the reservation processes will also be added accurately to the database and they can be easily modified through functions.

## 5.5 Business Rules

The system is designed in a way where responsibility and privileges are decreased in the order of Owner, Manager, Supervisors (data entry operator). The role of Manager is selected in the aim of making Owners hands free from regular interfering with the system. So most of the privileges that Owner has are given to Manager.

Some features like that are, Income and Profit Calculation (daily/monthly/year), Accessing Payment Records, Processing Annual Reports, *add/delete/update/search* of regular functions. Data entry operators are given with the most frequently used features of the system which has less responsibility than others we discussed before. Delete of the responsible records from the system is only allowed for the Manager, Owner or Administrator.

## **6. Other Requirements**

When the system is completely developed and submitted to the client, few sessions will be required to make the users of the system understand about the functionality of it and some time to adapt to the system. After those sessions, it's required that a member from the development team should spend sometime in the system background for an agreed time period. That time period will be used in identifying new bugs that could not be reached in the earlier phases of the development process.

# **Appendix 1**

## **Screen Shots**

### **User Interface**

## 1. Customer Add form

The screenshot shows a Windows application window titled "Customer Management". At the top, there are buttons for "ADD Customer", "Search & Edit", "Delete", and "Reports". The main area contains a form titled "To Add A New Customer Please Fill The Information Below". The form includes fields for "Customer ID" (with a dropdown arrow), "Customer Name", "Company Name", "Phone", "E-Mail", "Address", and "Date" (with a date picker). Below the form are two buttons: "Reset All Fields" and "ADD New Customer".

Fig.1

## 2. Sales Design Inquiry Form

The screenshot shows a Windows application window titled "Sales Design Inquiry Management". At the top, there are buttons for "ADD Design Inquiry", "Search & Edit", "Delete", and "Reports". The main area contains a form for adding a design inquiry. On the left, there are fields for "Date", "Sales Design Inquiry ID", "Customer ID", "Customer Name", and buttons for "New Customer" and "Search Customer". In the center, there is a large text area for "Description". To the right of the description area are buttons for "Size" (dropdown), "Select Size", "Add Row", "Quantity" (text input), "Delete Row", "Colour" (dropdown), "Select Color", and "Clear". At the bottom left, there are fields for "Design Name", "Main Description", and "Due Date". At the bottom right, there is a placeholder for "Please upload Sketch Image" with buttons for "ADD Image" and "ADD a sketch Image". At the very bottom left is a "Reset All" button.

Fig.2

### 3. Sales Designs Inquiry Approval Form

The screenshot shows a Windows application window titled "Sales Design Inquiry Approval Management". The main interface includes:

- A search bar at the top left with fields for "Sales Design ID" and "Search" buttons.
- A "View All" button on the right side of the search bar.
- A large central area for displaying design sketches, which is currently empty.
- To the right of the sketch area, there is a table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". Below this table is a placeholder box labeled "Sketch Preview".
- At the bottom, there is a row of buttons: "Sales Design Inquiry ID" (with a dropdown arrow), "Approved Name" (text input field), "Approved" (dropdown menu), and "Update Approval" (button).

Fig.3

### 4. Sales Inquiry Form

The screenshot shows a Windows application window titled "Sales Inquiry Management". The main interface includes:

- An action bar at the top with buttons for "ADD Sales Inquiry", "Search & Edit", "Delete", and "Reports".
- Input fields for "Sales Inquiry ID" (dropdown), "Customer ID" (dropdown), "Customer Name" (text input), "Search Customer" (button), "Reset All" (button), "Date" (text input), and "Estimated date of purchase" (text input).
- A large central area for displaying inquiry details, which is currently empty.
- On the right side, there are "Add" and "Delete" buttons.
- At the bottom, there is a "Note" text area, and a row of buttons for "Total" (text input), "Discount Rate" (dropdown), "Grand Total" (text input), "Calculate Total" (button), and "ADD Invoice" (button).

Fig.4

## PROJECT ID: ITP-MLB-JN-05 Dilushi Apparel System

### 5. Sales Invoice form

The screenshot shows two windows side-by-side. The left window is titled "Sales Invoice Management" and contains fields for "Sales Invoice ID", "Customer ID", "Customer Name", "Sales Inquiry ID", "Date", "Search Customer", "Reset All", "Search Sales Inquiry", "Add", "Delete", "Total", "Calculate Total", "Discount Rate", and "Grand Total". It also has a large central area for displaying invoice details and an "ADD Sales Invoice" button. The right window is titled "Customer Management" and contains fields for "Customer ID", "Customer name", "Customer phone", "Search", "New Customer", "Search", and "View All". It includes a table with columns "Title 1", "Title 2", "Title 3", and "Title 4", and a "Select" button.

Fig.5

### 6. Sales Payment Form

The screenshot shows two windows side-by-side. The left window is titled "Sales Payment Management" and contains fields for "Sales Payment ID", "Customer ID", "Customer Name", "Sales Invoice ID", "Date", "Reset All", "Search Sales Invoice", "Payment Type", "Total Payable", "Payment Amount", "Due Amount", "Calculate", and an "ADD Sales Payment" button. The right window is titled "Customer Management" and contains fields for "Sales Invoice ID", "Search", "View All", and "Reset All". It includes a table with columns "Title 1", "Title 2", "Title 3", and "Title 4", and a "Select" button.

Fig.6

## 7. Sales Return Form

fig.7

## 8. Marketing Design Inquiry Form

Fig.8

## 9. Marketing Design Inquiry Approval Form

The screenshot shows a software interface titled "Market Design Inquiry Approval Management". The main window is titled "Market Design Inquiry Approval". At the top left is a search bar labeled "Market Design ID" with a "Search" button and a "View All" button. Below the search bar is a large empty rectangular area. To the right of this area is a table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4", each containing four empty rows. Further down on the right is a section titled "Sketch Preview" with a large empty rectangular area. At the bottom of the window are several input fields: "Market Design Inquiry ID" (with a dropdown arrow), "Approved Name" (text input), "Approved" (dropdown menu set to "Approved"), and "Update Approval" (button). There are also two small empty rectangular boxes on the far left.

Fig.9

## 10. Create Design Add Form

The screenshot shows a software interface titled "Creating Designs". The main window is titled "Create Designs". On the left side, there is a form with various input fields and selection menus. The fields include "Style ID" (text input), "Style Description" (large text area), "Designer" (text input), "Categories" (dropdown menu), "Size" (dropdown menu), "Gender" (radio buttons for "Male" and "Female"), "Type" (dropdown menu), "Status" (radio buttons for "Start", "In Progress", and "Finished"), "Collection" (dropdown menu), "Colour Information" (dropdown menu), "Date" (text input with a date picker icon), and "Add Design", "Reset All", "Generate", and "Demo" buttons at the bottom. To the right of the form is a table with columns: Style ID, Style D..., Style Size, Gender, Type, Collection, Color, Designer, Status, and Date. Below the table is a large empty rectangular area. At the bottom right of the table area are buttons for "Add a New Color" (text input) and "Add A New Colour" (button).

Fig.10

## PROJECT ID: ITP-MLB-JN-05 Dilushi Apparel System

### 11. Bill of Material Add Form

The screenshot shows a Windows application window titled "BILL\_OF\_MATERIAL FORM". At the top, there are menu options: "ADD Bill", "Search & Update", "Delete", and "Reports". The main area is divided into several sections:

- BILLING INFORMATION FOR FINISHED DESIGN ITEM:** Contains fields for "Date", "Style ID" (dropdown), "Style Description" (text area), "Accessories" (text area), "Quantity", "Colour", "Cost", and "Final Cost". Below these are three buttons: "ADD", "Reset", and "Print".
- Table Headers:** Two tables are shown with their respective headers. The first table has columns: Number, Accessories, Quantity, Colour, Cost, and Final Cost. The second table has columns: Date, StyleId, StyleDes, Accessories, Quantity, Colour, Cost, and Final Cost.
- Buttons and Fields:** On the right side, there are buttons for "Add R...", "Select", "Delete ...", "Clear", and a "DEMO" button. There are also input fields for "Number", "Accesso...", "Quantity", "Colour", "Cost", and "Final Cost".
- Buttons at the bottom:** "ADD", "Reset", "Print", and "DEMO".

Fig.11

### 12. Approve Designs Add Form

The screenshot shows a Windows application window titled "Design Approval Form". At the top, there are menu options: "Approve Designs", "View Design", "Design ID", and "ViewAll". The main area is divided into two main sections:

- Left Section:** Contains a table header with columns: Style Id, Style Descript..., Size, Gender, Type, Collection, Colour, and Status. Below the table is a form with fields: "Approval ID" (text box), "Approval Name" (text box), "Status" (radio buttons for "Approve" and "Not Approved"), "Date" (text box), and a "Comment" text area. At the bottom are buttons: "Add Approve", "Reset", and "Demo".
- Right Section:** Contains a table header with columns: Approved ID, Select, View, and View All. Below the table is a form with fields: "Approved ID" (text box), "Approval Name" (text box), "Status" (text box), "Date" (text box), "StyleId" (text box), and a "Comment" text area. At the bottom are buttons: "Delete", "Update", "Reset", and "Demo".

Fig.12

## PROJECT ID: ITP-MLB-JN-05 Dilushi Apparel System

### 13. Create Sample Add Form

**Sample Cost Add**

Accessory_Id	Accessory_Name	Accessory_Cost	Accessory_Value	Accessory_Type

**ViewAll**

SampleId	SampleName	StyleId	Description	Accessories	Quantity	Cost	TotalCost

**Add** **Update** **Delete** **Reset** **Demo**

Fig.13

### 14. Sample Approval Form

**Sample Approval**

**View Sample** **SampleId**

Sample Id	Style Id	Description	Size	Date	Sample Type	Name of Item	Quantity	Unit Price/R...	Total Cost

**S\_App\_Id** **App\_Name** **App\_Date** **ApprovedBy** **Status** **Comment**

**SampleApproveId** **SampleID** **Approval Name** **ApprovedBy** **Approval Date** **Status** **Comment**

**Approve** **Not Approve**

**Add** **Reset** **Generate Report** **Demo** **View** **Update** **Delete** **Reset** **Demo**

Fig.14

### 15. Add Cutting Schedule Form

Fig.15

### 16. Add Cutting Details Form

Fig.16

### 17. Add Iron and Packing Schedule form

Fig.17

### 18. Add Iron and Packing Details Form

Fig.18

## PROJECT ID: ITP-MLB-JN-05 Dilushi Apparel System

### 19. Add Sewing Schedule Form

The screenshot shows a Windows application window titled "Sewing Schedule". The menu bar includes "ADD Sewing schedule", "Search & Delete", and "Reports". The main form has a "Schedule ID" input field. Below it is a "Item" section with "Style No" and "Cutting ID" inputs, and a "Search" button. To the right is a "Days" section with fields for "No of Minutes per Sample", "Total No of Hours", "Start Date", and "End Date". At the bottom left is a large empty grid table with columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". At the bottom center is an "ADD schedule" button.

Fig.19

### 20. Add Sewing Details Form

The screenshot shows a Windows application window titled "Sewing management". The menu bar includes "ADD Sewing details", "Search & Edit | | Delete", and "Reports". The main form has a "Sewing ID" input field. Below it is an "Item" section with "Style ID" and "Schedule ID" inputs, and a "Search" button. To the right is a large empty grid table with columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". At the bottom right are fields for "Damages" (with a "pcs" suffix) and "Total No of Qualified pieces". At the very bottom center is an "Add" button.

Fig.20

## 21. Add Washing Schedule Form

Fig.21

## 22. Add Washing Details Form

Fig,22

### 23. Add Accessories Form

The screenshot shows a software window titled "Accessories". At the top left is a toolbar with icons for ADD Accessory, Search & Edit, Delete, and Reports. The main area has a search bar with "Accessory Name" and buttons for "Search", "View All", and "Reset All". Below the search bar is a table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". To the right of the table is a large form with fields for "Accessory ID", "Accessory Name", "Cost Per Unit", "Quantity", "Stock Value", "Accessory Type", "Re-Order Level", and "Date". Each field has a corresponding input box. At the bottom right of the form are "Edit" and "Delete" buttons.

Fig.23

### 24. Finished Product Form

The screenshot shows a software window titled "Finished Products". At the top left is a toolbar with icons for ADD Product, Search & Edit, Delete, and Reports. The main area contains several input fields: "Product ID", "Product Name", "Design ID", "Design Description", "Material Cost Per Unit", "Quantity", "Stock Value", "Selling Price", and "Date". Next to these fields is a dropdown menu for "Product Type" set to "Shirt", with a note "Right CLICK to add a new Type". Below the type dropdown is a text area with "Please upload Image" and an "ADD an Image" button. At the bottom left are "Add Product" and "Reset All" buttons. To the right of the input fields is a table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

fig.24

## 25. Add Machine Parts

The screenshot shows a Windows application window titled "Machine Parts". The tab "ADD Machine Part" is selected. The interface includes a toolbar with icons for "Search & Edit" and "Delete", and a "Reports" button. On the left, there is a vertical list of input fields: "Machine Part ID" (text box), "Machine Part Name" (text box), "Machine Number" (dropdown menu), "Part Value" (text box), "Quantity" (text box), and "Purchased Date" (text box with a browse button "..."). Below these fields are two buttons: "Add Part" and "Reset All". To the right of the input fields is a large empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". The entire application window has a light gray background.

Fig.25

## 26. Add Machine Form

The screenshot shows a Windows application window titled "Machine Parts". The tab "ADD Machine" is selected. The interface includes a toolbar with icons for "Search & Edit" and "Delete", and a "Reports" button. On the left, there are several input fields: "Purchased Date" (text box with a browse button "..."), "Machine ID" (text box), "Fixed Asset ID" (text box), and "Asset Type" (text box containing "Machinery"). To the right of these fields are four corresponding input fields: "Cost" (text box), "Depreciation Rate %" (text box), "Depreciation" (text box), and "Accumulate Depreciation" (text box). Below these groups of fields are two buttons: "Add Machine" and "Reset All". To the right of the input fields is a large empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". The entire application window has a light gray background.

Fig.26

## 27. Raw Materials Form

The screenshot shows a Windows application window titled "Raw Materials". The menu bar includes "Raw Materials", "ADD Materials", "Search & Edit || Delete", and "Reports". The main area contains fields for Material ID, Material Name, Material Cost Per Unit, Quantity, Value, Re-Order Quantity, and Date. Below these fields are two buttons: "Add Material" and "Reset All". To the right of the input fields is a large, empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

Fig.27

## 28. Local Purchases Form

The screenshot shows a Windows application window titled "Purchases". The menu bar includes "Purchases", "Local Purchases", and "Foreign Purchases". The main area contains fields for Order No, Purchase Description, Quantity, Unit price, Total amount, Advance, Payment method (radio buttons for Credit and Cash), Supplier (dropdown menu), and Estimated delivery. Below these fields are four buttons: "Add Order", "Update", "Delete", and "Reset All". To the right of the input fields is a large, empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

Fig28

## 29. Add Supplier Details Form

**General**

ID	<input type="text"/>	Proprietor	<input type="text"/>
Name	<input type="text"/>	Website	<input type="text"/>

**Address**

Address 1	<input type="text"/>	Country	<input type="text"/>
City	<input type="text"/>	Postal code	<input type="text"/>

**Contact**

Tel No	<input type="text"/>
E-mail	<input type="text"/>
Fax	<input type="text"/>
Account No	<input type="text"/>

**Action Buttons:** Add, Reset All

Fig.29

## 30. Add Distribution Details Form

**Distribution Management**

**ADD Distribution** | Search & Update || Delete Reports

Distribution ID	<input type="text"/>
Vehicle ID	<input type="text"/>
Driver's ID	<input type="text"/>
Helper ID	<input type="text"/>
Date	<input type="text"/> ...
Distribution Cost	<input type="text"/>
Distribution Mileage	<input type="text"/>

**Action Buttons:** ADD, Clear All

Fig.30

### 31. Add Fuel Details Form

The screenshot shows a Windows application window titled "Fuel Management". The tab "ADD Fuel" is selected. The interface includes a toolbar with "Search & Update", "Delete", and "Reports" buttons. On the left, there is a vertical list of input fields with labels: "Fuel ID", "Vehicle ID", "Driver ID", "Fuel Station Name", "Bill No", "Unit Price", "Units", "Cost", and "Date". Below these fields are two buttons: "ADD" and "Clear All". To the right of the input fields is a large, empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". The entire window has a standard Windows-style border with minimize, maximize, and close buttons.

Fig.31

### 32. Add Maintenance Details Form

The screenshot shows a Windows application window titled "Maintenance Management". The tab "ADD Maintenance Details" is selected. The interface includes a toolbar with "Search & Update", "Delete", and "Reports" buttons. On the left, there is a vertical list of input fields with labels: "Maintaince ID", "Vehical ID", "Garaj Name", "Address", "Phone", "Maintaince Description", "Cost", and "Date". Below these fields are two buttons: "ADD" and "Clear All". To the right of the input fields is a large, empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". The entire window has a standard Windows-style border with minimize, maximize, and close buttons.

Fig.32

### 33. Add Shipment Details Form

The screenshot shows a Windows application window titled "Shipment Management". The menu bar includes "ADD Shipment", "Search & Update | | Delete", and "Reports". The main area contains a form with the following fields:

Shipment ID	<input type="text"/>
Supplier	<input type="text"/>
Address	<input type="text"/>
Phone	<input type="text"/>
From	Select <input type="button" value="▼"/>
Shipped Date	<input type="text"/> ...
Delivery Date	<input type="text"/> ...
Received By	<input type="text"/>
Description	<input type="text"/>

At the bottom left are "ADD" and "Clear All" buttons. To the right is a large empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

Fig.33

### 34. Add Vehicle Details Form

The screenshot shows a Windows application window titled "Vehicle Management". The menu bar includes "ADD Vehicle", "Search & Update | | Delete", and "Reports". The main area contains a form with the following fields:

Vehicle ID	<input type="text"/>
Type	<input type="text"/>
Lyson No	<input type="text"/>
Milage	<input type="text"/>
Driver ID	<input type="text"/>
Driver's name	<input type="text"/>
Engine no	<input type="text"/>
Servise Duration	<input type="text"/>

At the bottom left are "ADD" and "Clear All" buttons. To the right is a large empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

Fig.34

### 35. Maintenance Request Form

The screenshot shows a software window titled "maintenanceRequest". The top menu bar includes "ADD", "Search & Edit || Delete", and "Reports". The main area contains five input fields: "maintanance ID" (text box), "Description" (text box), "Department" (text box), "Machine ID" (text box), and "Date" (text box with a calendar icon). Below these fields are three buttons: "Demo", "Reset All", and "ADD". To the right of the input fields is a grid table with columns labeled "MaintenanceID", "Description", "Department", "Machine/PartNo", and "Date". The table has several empty rows.

Fig.35

### 36. Job Inspection Estimation Form

The screenshot shows a software window titled "Jobinspection\_Estimation". The top menu bar includes "ADD", "Search & Edit || Delete", and "Reports". The main area contains six input fields: "Machine ID" (text box), "Description" (text box), "Department" (text box), "Machine Part" (text box), "Technician ID" (text box), and "Technician Name" (text box). Below these fields are three buttons: "Demo", "Reset All", and "ADD". To the right of the input fields is a grid table with columns labeled "Order ID", "Title Descri...", "Company ...", "Technician ID", "Technician ...", and "Date". The table has several empty rows.

Fig36

37.Oder Parts Form

The screenshot shows a Windows application window titled "OderParts". The top menu bar includes "ADD", "Search & Edit || Delete", and "Reports". The main area contains several input fields: "Order ID" (text box), "Description" (text box), "Company Name" (text box), "Amount" (text box), "Technician ID(Recommend)" (text box), "Technician Name" (text box), and "Date" (text box with a calendar icon). Below these fields are three buttons: "Demo", "Reset All", and "ADD". To the right of the input fields is a grid table with columns: Order ID, Title Descri..., Company ... , Technician ID, Technician ... , and Date. The grid has six rows, though only the first row contains data.

Fig.37

38. Contractors Form

The screenshot shows a Windows application window titled "Contractor". The top menu bar includes "ADD", "Search & Edit || Delete", and "Reports". The main area contains several input fields: "Contractors ID" (text box), "Contractors Name" (text box), "Phone" (text box), "E-Mail" (text box), "Address" (text box), and "Date" (text box with a calendar icon). Below these fields are three buttons: "Demo", "Reset All", and "ADD". To the right of the input fields is a grid table with columns: Contactor ID, Contactor Name, Phone, Email, Address, and Date. The grid has six rows, though only the first row contains data.

Fig.38

### 39. Balance Sheet

The screenshot shows a Windows application titled "Balance Sheet". The interface is divided into two main sections: "ASSETS" on the left and "LIABILITIES AND CAPITAL" on the right.

**ASSETS**

- FIX ASSETS**
  - Land And Buildings: [Text Box]
  - Machinery: [Text Box]
  - Vehicale: [Text Box]
  - Investments: [Text Box]
  - Total: [Text Box]
- CURRENT ASSETS**
  - Stock: [Text Box]
  - Debtors: [Text Box]
  - Cash: [Text Box]
  - Bank: [Text Box]
  - Total: [Text Box]
- TOTAL ASSETS**: [Text Box]

**LIABILITIES AND CAPITAL**

- ShareHolders Fund**: [Text Box]
- Share Capital**: [Text Box]
- Reserves And Surplus**: [Text Box]
- Profit And Loss**: [Text Box]
- Total**: [Text Box]
- NON CURRENT LIABILITIES**
  - Long Team Loans: [Text Box]
  - OtherLong Term Liabilities: [Text Box]
  - Total: [Text Box]
- CURRENT LIABILITIES**
  - Short Team Loans: [Text Box]
  - Other Current liabilities: [Text Box]
  - Total: [Text Box]
- TOTAL LIABILITIES**: [Text Box]

Buttons on the right side:

- Generate Report
- Reset All
- Demo

Fig.39

### 40. Bank Details Form

The screenshot shows a Windows application titled "Bank Details". It has two main sections: "DEPOSIT DETAILS" on the left and "WITHDRAWAL DETAILS" on the right.

**DEPOSIT DETAILS**

- Cheque No: [Text Box]
- Customer ID: [Text Box]
- Bank Name: Select Bank [Dropdown]
- Branch Name: [Text Box]
- Deposit Date: [Text Box] ...
- Amount: [Text Box]

Buttons below the input fields:

- ADD
- EDIT
- Search
- DELETE
- Reset All
- Demo

**WITHDRAWAL DETAILS**

- Cheque No: [Text Box]
- Bank Name: Select Bank [Dropdown]
- Branch Name: [Text Box]
- Withdraw Date: [Text Box] ...
- Amount: [Text Box]

Buttons below the input fields:

- ADD
- EDIT
- Search
- DELETE
- Reset All
- Demo

Below the sections are two tables:

Title 1	Title 2	Title 3	Title 4	Title 5	Title 6

Title 1	Title 2	Title 3	Title 4	Title 5

Fig.40

#### 41. Cash Details Form

The screenshot shows a Windows application window titled "Cash Details". The main panel is labeled "Cash" and contains fields for "Cash Id" (text box), "Cash Type" (dropdown menu with "Select Type" option), "Description" (text area with scroll bar), and "Amount" (text box). Below these fields are five buttons: "ADD", "EDIT", "SEARCH", "DELETE", and "Demo". To the right of the main panel is a grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4". A "Total" label with an associated text box is positioned below the grid.

Fig.41

#### 42. Expenses Form

The screenshot shows a Windows application window titled "Expences". The main panel is labeled "Expences" and contains fields for "Bill No" (text box), "Expences Type" (dropdown menu with "Select Expence" option), "Date" (text box with a calendar icon), "Description" (text area with scroll bar), and "Amount" (text box). Below these fields are five buttons: "ADD", "EDIT", "SEARCH", "DELETE", and "Demo". To the right of the main panel is a grid table with five columns labeled "Title 1", "Title 2", "Title 3", "Title 4", and "Title 5". A "Total" label with an associated text box is positioned below the grid.

Fig.42

#### 43. Income Form

The screenshot shows a Windows application window titled "Income". On the left, there is a vertical stack of input fields: "Bill No" (text box), "Income Type" (dropdown menu set to "Select Income"), "Date" (text box with a browse button "..."), "Description" (text area with scroll bars), and "Amount" (text box). Below these fields are five buttons: "ADD", "EDIT", "SEARCH", "DELETE", and "Demo". To the right of the input fields is a data entry grid with five columns labeled "Title 1" through "Title 5". A "Total" label with an associated text box is positioned below the grid. The entire window has a standard Windows-style border and title bar.

Fig.43

#### 44. Fix Assets

The screenshot shows a Windows application window titled "Fix Assets". On the left, there is a vertical stack of input fields: "Machinery" (text area), "Other Fix Assets" (grouped label), "Date" (text box with a browse button "..."), "Fix Asset ID" (text box), "Fix Assets Type" (dropdown menu set to "Select Items"), "ID" (text box), and "Accumulate Depreciation" (text box). Below these fields are five buttons: "ADD", "EDIT", "DELETE", and "Demo". To the right of the input fields is a data entry grid with six columns labeled "Title 1" through "Title 6". The entire window has a standard Windows-style border and title bar.

Fig.44

#### 45. Loan Details Form

Title 1	Title 2	Title 3	Title 4	Title 5	Title 6	Title 7

Fig.45

#### 46. Profit and Loss Form

Fig.46

#### 47. Design Preview Department

Design Preview [Department]

Department ID:	<input type="text"/>		
Department Name:	<input type="text"/>		
<input type="button" value="Insert"/> <input type="button" value="Update"/> <input type="button" value="Delete"/> <input type="button" value="Refresh"/>			
Title 1	Title 2	Title 3	Title 4

Fig.47

#### 48. Design Preview Salary

Design Preview [Salary]

Salary ID:	<input type="text"/>	Net Salary:	<input type="text"/>
ETF:	<input type="text"/>	OT rate:	<input type="text"/>
Allowenace:	<input type="text"/>	Basic Salary:	<input type="text"/>
Employee ID:	<input type="text"/>		
OT hours:	<input type="text"/>		
EPF:	<input type="text"/>		
<input type="button" value="Insert"/> <input type="button" value="Update"/> <input type="button" value="Delete"/>			
Title 1	Title 2	Title 3	Title 4

Fig.48

#### 49. Design Preview Leave

The screenshot shows a window titled "Design Preview [Leave]". On the left side, there are several input fields and buttons:

- Leave ID:
- Approval:
- No of days:
- Reason:
- Type:
- Employee ID:
- Requested Date:  Sick Leave
- End date:
- Start date:

Below these are three buttons: Insert, Update, and Delete.

To the right of the input fields is a large empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

Fig.49

#### 50. Design Preview Employee

The screenshot shows a window titled "Design Preview [Employee]". On the left side, there are various input fields and dropdown menus:

- Employee ID:
- First Name:
- Last Name:
- Gender: Male  Nationality: Sri  Dep ID: Item 1  DOB:
- NIC:  Mobile No:
- Address:
- E mail:

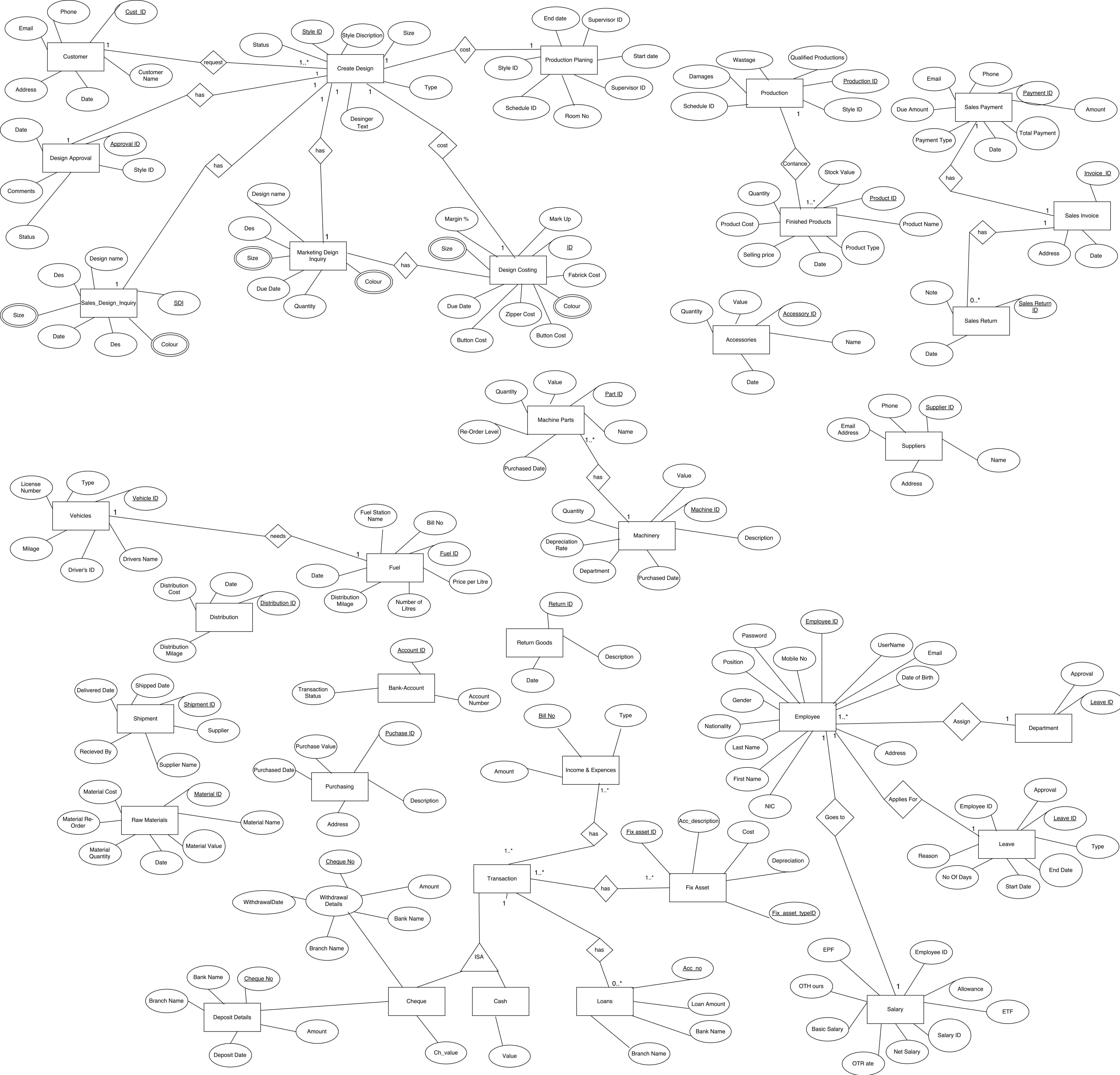
Below these are four buttons: Update, Delete, Insert, and Refresh.

To the right of the input fields is a large empty grid table with four columns labeled "Title 1", "Title 2", "Title 3", and "Title 4".

Fig.50

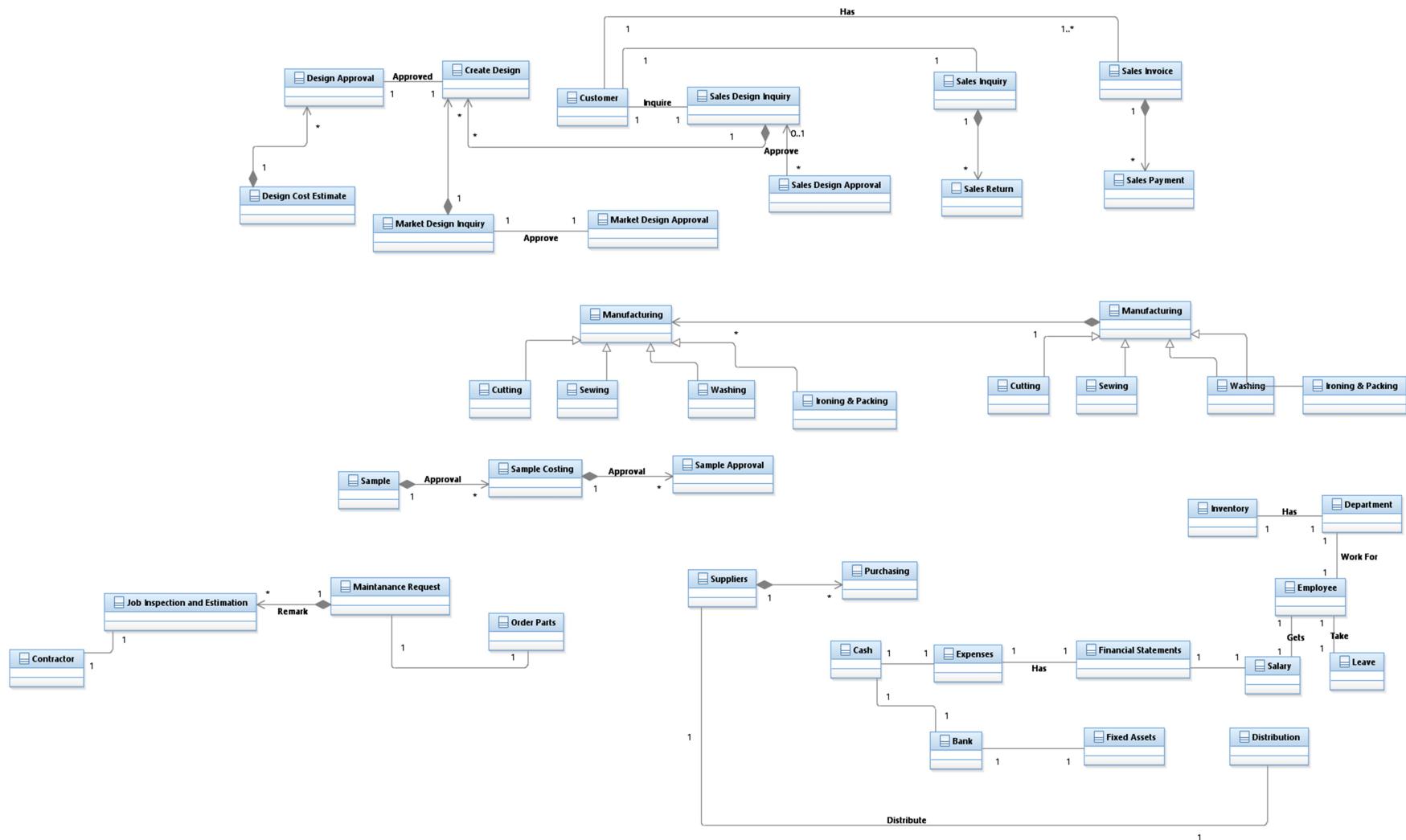
Project ID: ITP-MLB-JN-05 Dilushi Apparel System

# Appendix 2



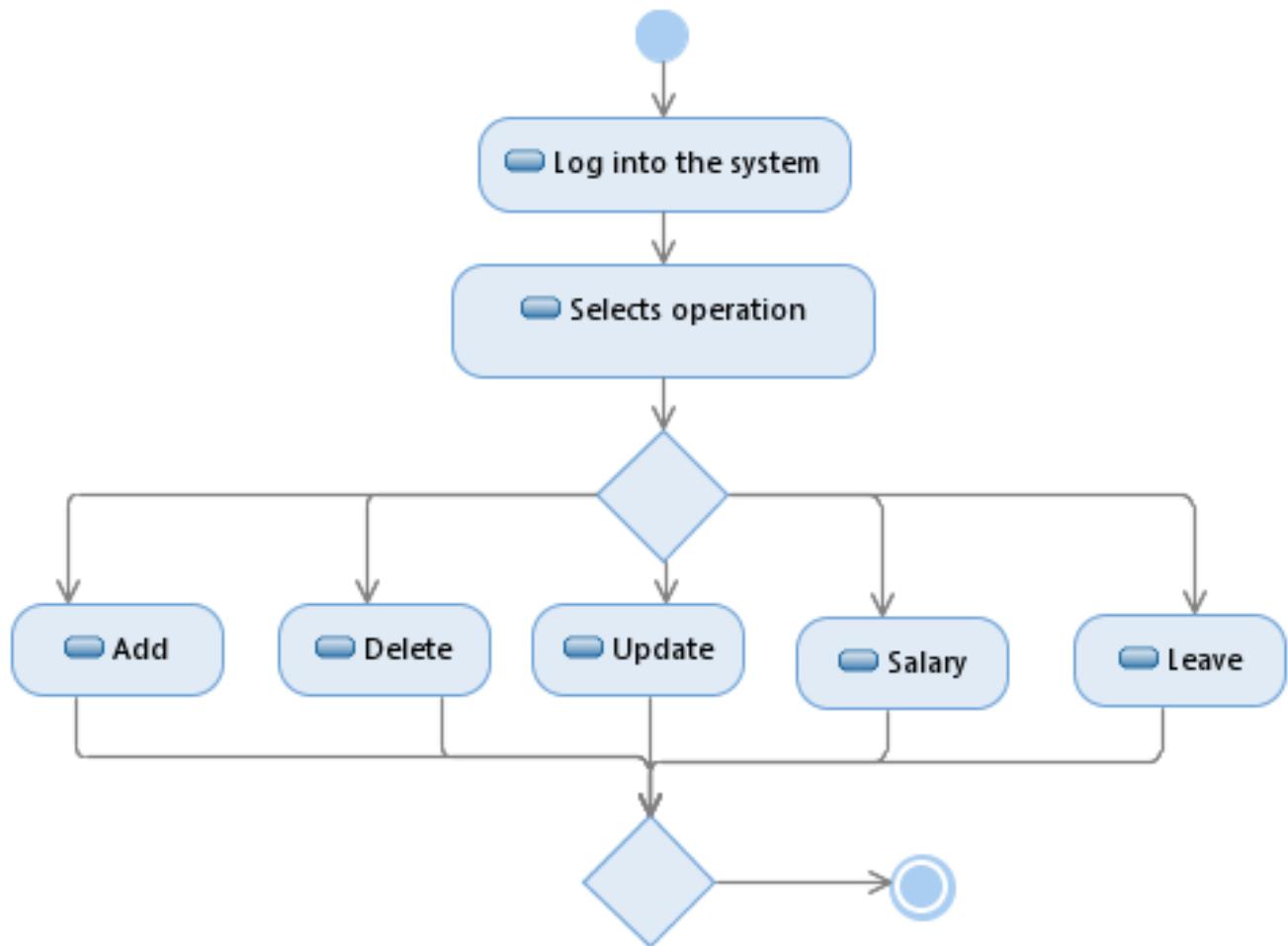
# Appendix 3

Project ID: ITP-MLB-JN-05 Dilushi Apparel System

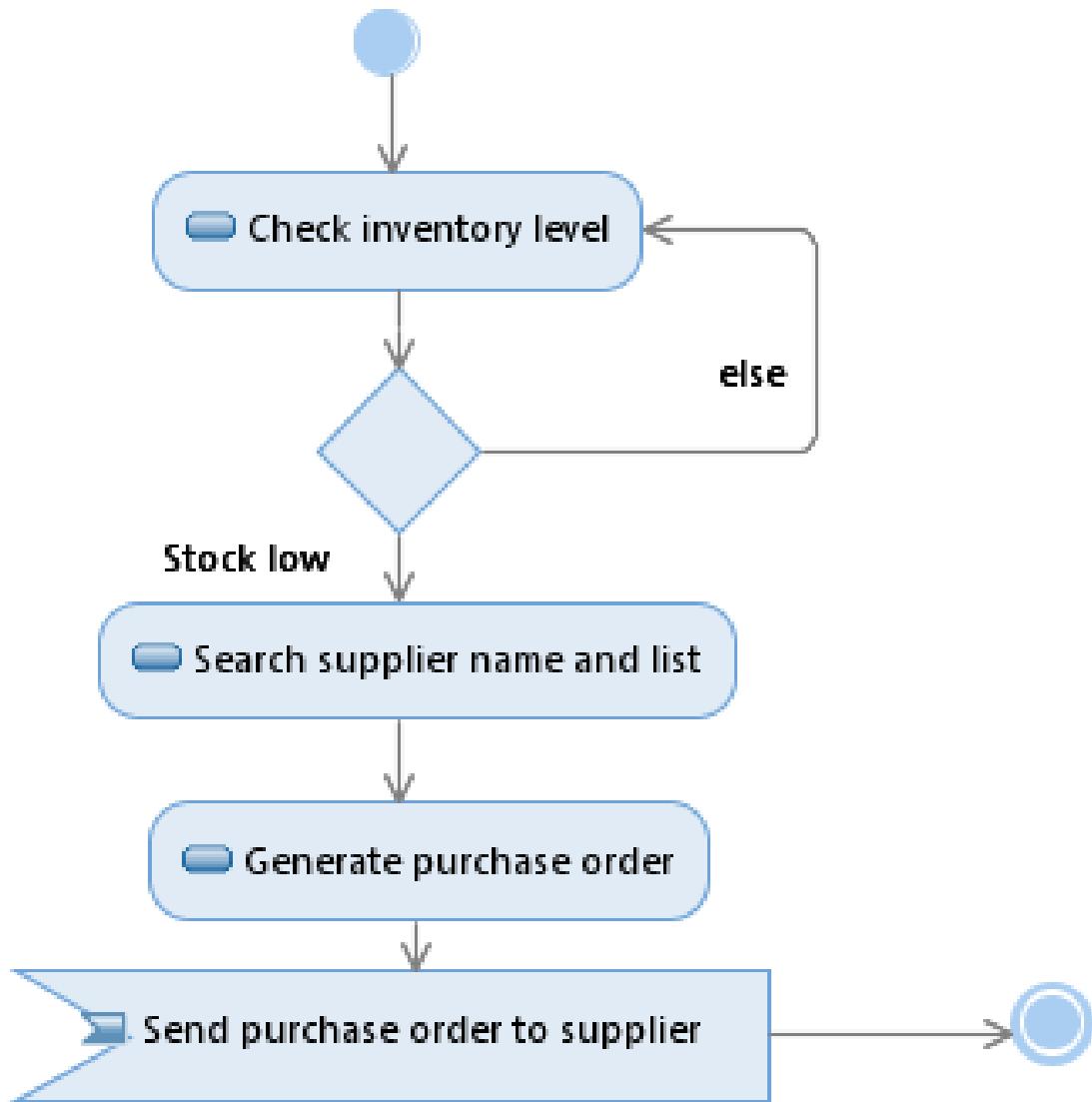


# Appendix 4

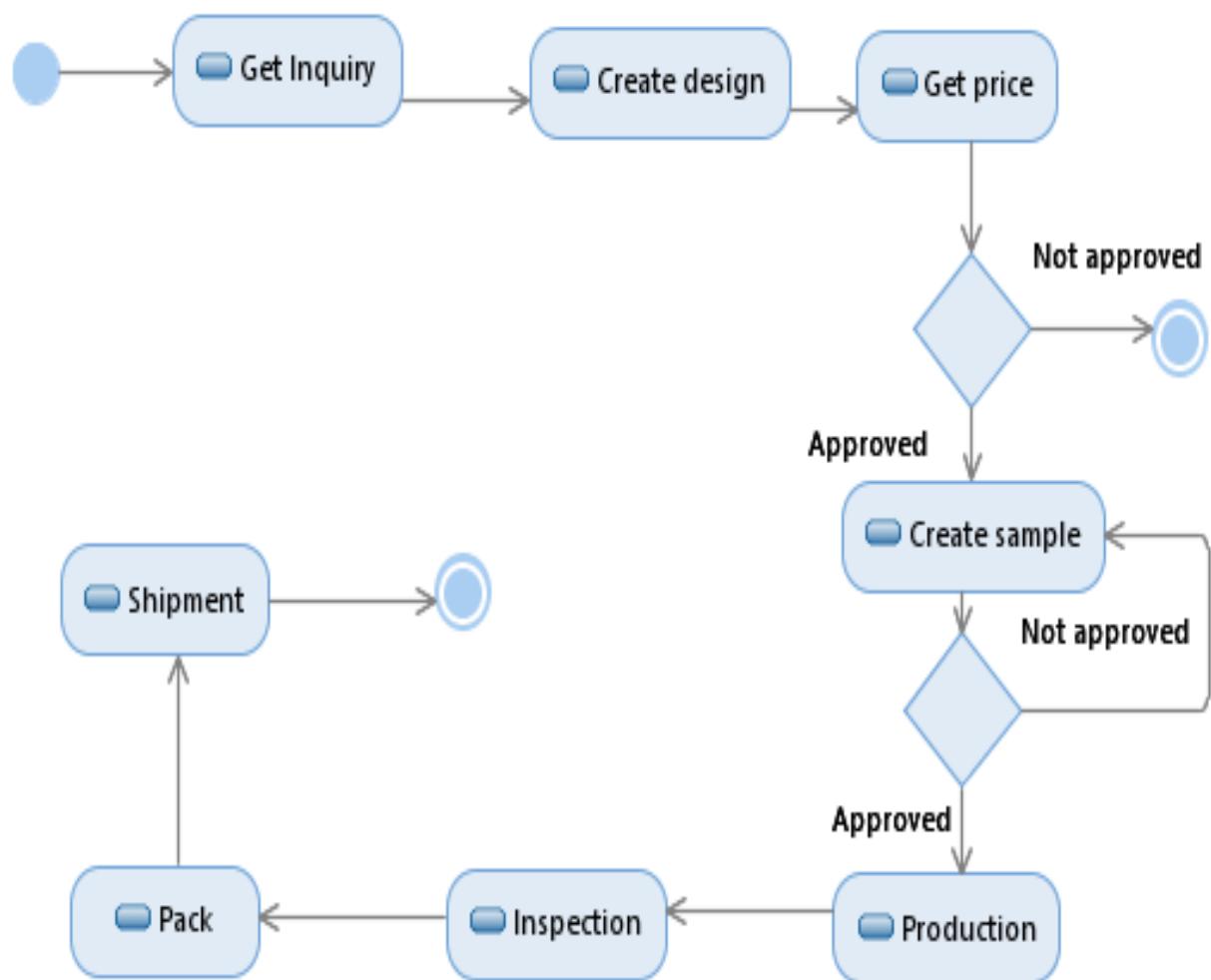
## Employee management



Purchasing



Sales management



Production management

