Sri Lanka Institute of Information Technology

Apparel Management System

for

Golden Needle Apparels (Pvt.) Ltd.

Software Requirement Specification

Information Technology Project 2016

Project ID: **ITP_MLB_G3_07**

Submitted by:

1. IT15536662 - M.B.P. Millewa
2. IT15114754 - S.G.T. Kumarasinghe
3. IT15107992 - A.A.C.S. Amarasinghe
4. IT15113832 - K.A.I. Nilsindu
5. IT15137074 - A.M.K.D. Dilrukshi
6. IT15007384 - I.M.I.H.B. Ilangasinghe
7. IT15007452 - P.H. C. J. De Silva
8. IT15128782 - S. S. Rathnasekara

Submitted to:

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Mr. Aruna Ishara Gamage

03/08/2016

Table of Contents

Chapter

1. Introduction

1.1 Purpose

The purpose of this system being developed is to remove the manual transactions that are currently taking place in the company and fully automate the current system. The SRS will describe how this software will work and what it will do. Apparel Management System for Golden Needle Apparels PVT Ltd is to be developed by us. After many discussions among the team members and Company employees regarding the problems faced by the current manual system the functional and nonfunctional requirements have been listed down in this SRS document. The main intention of writing this document was to analyze the requirements of the system and the solutions that has been decided by us to develop the best software for the end user. The project being developed will meet all the requirements mentioned in this document. The SRS can be modified to fit the end users' requirements if they are not satisfied, by the system development team who will be reviewing this document during and after the development process.

1.2 Document Conventions

The IEEE Standards of software requirements are followed by the SRS document. The basic conventions of this document listed below. The document is developed using Microsoft Office Word 2016. Use Case is written using Alistair Cockburn's template [6].

	Font	**Face**	**Size**
Headings	Times New Roman	Bold	16
Sub Headings	Times New Roman	Bold	14
Other Text	Times New Roman	Normal	12

1.3 Intended Audience and Reading Suggestions

Intended Audience	Concerned Areas
Development Team	Functional requirements, User Cases, Class Diagram, ER diagram
Project Team	The complete document to fully understand the expectations of the system.
End User	Functional requirements, non-functional requirements, User Cases to see if the project team is developing the software according to their expected requirements.

1.4 Product Scope

The software for the system we are developing will remove all the problems associated with the current manual system and increase the efficiency and productivity of the system. Once the system is automated the production will speed up, will take up less office space thus reducing expenses and company turnover will increase. The buyers will be satisfied since delivery system is automated and stock keeping is made easier since ROL is notified by the system automatically thus reducing the stress of the supervisors and the company can run more smoothly. Data backup is done by the new software so the reliability of the system is maintained and data security is heightened.

1.5 References

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[3] T. Crosby, "How inventory management systems work," in howstuffworks, HowStuffWorks, 2007. [Online]. Available:http://money.howstuffworks.com/how-inventory-management-systems-work.htm. Accessed: Jul. 12, 2016

[4] B. Laney, "5 retail apparel management software tools you need to know," in Retail Operations, Alert Tech, 2015. [Online]. Available:http://alerttech.net/retail-apparel-management-software/. Accessed: Jul. 06, 2016.

[5]"What is maintenance? Definition and meaning," BusinessDictionary.com, 2016. [Online]. Available: http://www.businessdictionary.com/definition/maintenance.html. Accessed: Jul. 10, 2016.

[6]. [Online]. Availablehttp://alistair.cockburn.us/get/2465Accessed: Jul. 28, 2016.

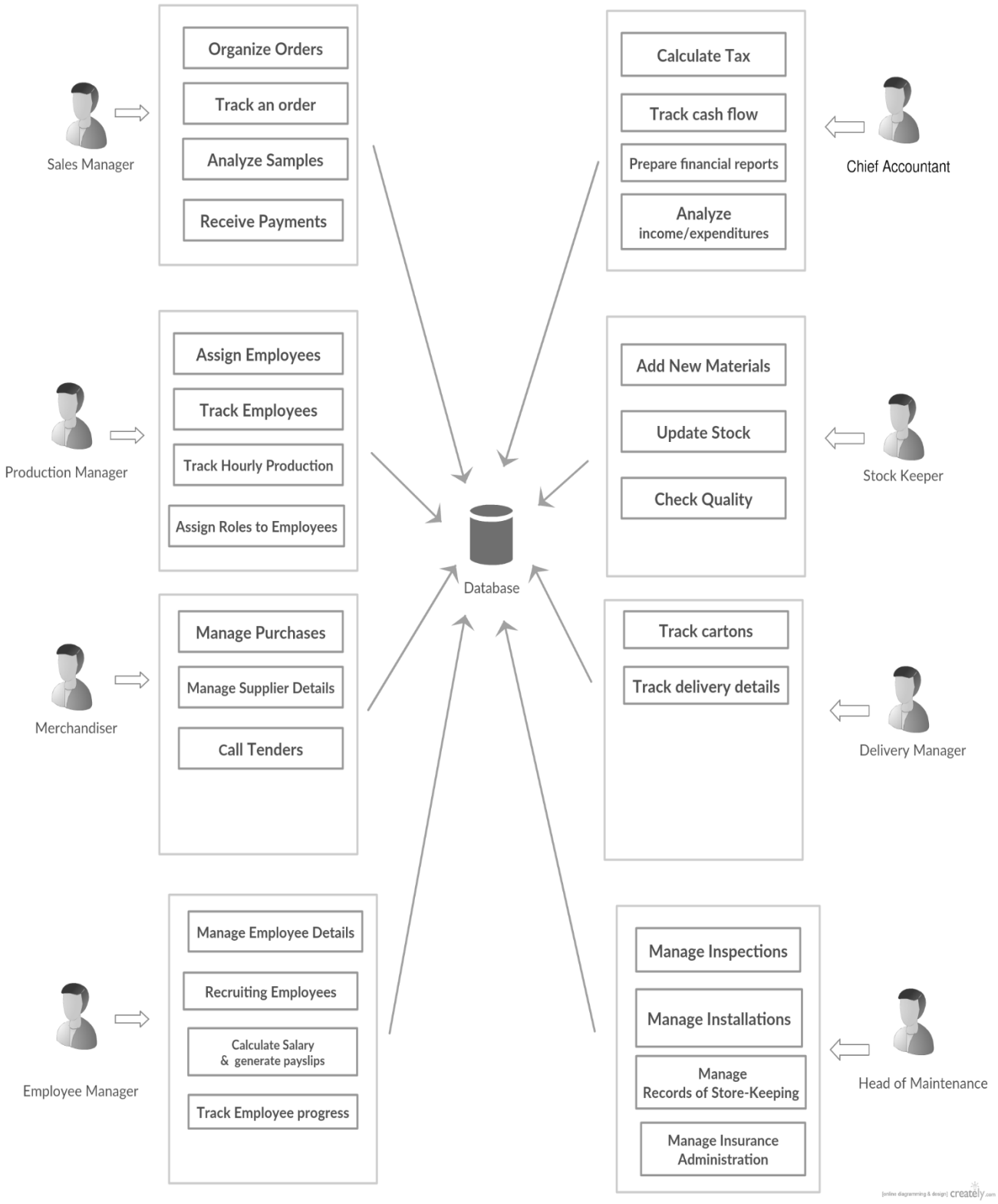
[7] Drawing UML Diagrams[online] available at: Creately.com/diagram-type/use-case Accessed: Jul 30 2016.

[8] NetBeans[online] Available at :https://**netbeans**.org/projects/editor Accessed: July 29 2016.

2. Overall Description

2.1 Product perspective

This Apparel management system is a stand-alone system. This does not follow any previous versions or does not partly join to any other existing system that is currently being used in the garment. This system will track the whole process and the maintenance of each order of the factory. This system will not only automate the functions of the existing manual system, but also it will add some important features which may assist in increasing the revenue.



(Image 2.1.1) Overall description of the system

2.2 Product Functions

- **Sales Management System**

  The Sales Management System will organize the received orders and track the sales efficiently. It records of all the received orders, orders to be completed and finished orders. The payments received will also be handled by this function. Also this function keeps track of the details about the samples, which the company authority can get an idea about.

- **Manufacture Process Management System**

  Manufacture Process Management System is an integral part of the Apparel Management System, in which the fabric is converted to a garment product. This system also keeps an eye on the properly working machineries, calculates the hourly total production of garment, checks for defects in completed garments, suggest designs. This system is also responsible for keeping track of daily employees' attendance in each line and assigning roles to each employee in the production line.

- **Purchasing Management System**

  Purchasing Management System aims the management of the assets and raw material purchases in the organization. The function focuses on creating well defined purchase reports for individuals as well as yearly/monthly cost reports. The company can determine the best supplier for a particular purchase by analyzing the supplier data and their tender prices stored in the system.

- **Package and Delivery Management System**

  Package and Delivery Management is the administration of proper packing and delivery to the buyer. Various types of packaging are done and the type of packaging entirely depends on the apparel. Packing type, carton type, and number of pieces per carton, weight, and packed date, employee id of the person who last checked the carton, buyer and the shipping date should be recorded to the system.

- **Account management system**

  Account management system involves maintaining bank account, developing financial statements, recording the cash flow and analyzing the financial performance of the company. It keeps record of the costs incurred and income produced within a given period. This also involves tax calculation.

- **Stock Management System**

  Stock Management involves managing the stock of the company. Adding new stock details, updating them and adding new raw material details are the key functions of this system. The reordering levels and the accuracy of the quantity and quality are also tracked by this system.

- **Employee Management System**

  Employee details, human resource management details and payroll system are administered under this System. Recurring and training of new employees are handled by this system. It should update whenever a pay rate is changed or an employee leaves the company. Once wages are cleared, generating salary payment receipts are also done by this department.

- **Maintenance Management System**

  The Apparel Management System covers maintenance of equipment and building of the company which also involves details of maintenance of all the utilities. The system will inspect each and every vital equipment and building. Details such as the date of the most recent inspection, the name of the inspector etc. are also recorded with the equipment details.

2.3 Operating Environment

- The System will entirely run on Microsoft Windows operating System.
- The database function will be run using SQL Server.
- The interface designs are done in the Windows .net environment.

2.4 Design and Implementation Constraints

It is a corporation's policy to have the payment invoices and the apparel request application in soft copies. So, that the development team cannot allow the user to request for a garment using the system itself. The system will only provide the orders-required users to log on to the system and find whether a required type of orders is there in the corporation premises.

As the corporation wants original hard copies for their orders and the other processes have to be done manually system can only notify the authorized personnel to make the payment to those companies when necessary. The clients company will have to maintain their system with the use of our user documentation.

2.5 Project Documentation

The project team will product the following documents during the life cycle of this project.

Project Proposal	:	Submitted after initial requirements gathering.
System Requirement Specification	:	Submitted at the end of the requirements analysis phase.
Final Project Report	:	Submitted at the completion of the project.

2.6 User Documentation

After the completion of the project the development team will provide the client company with a full detail of using all the interfaces and how to maintain the system.

2.7 Assumptions and Dependencies

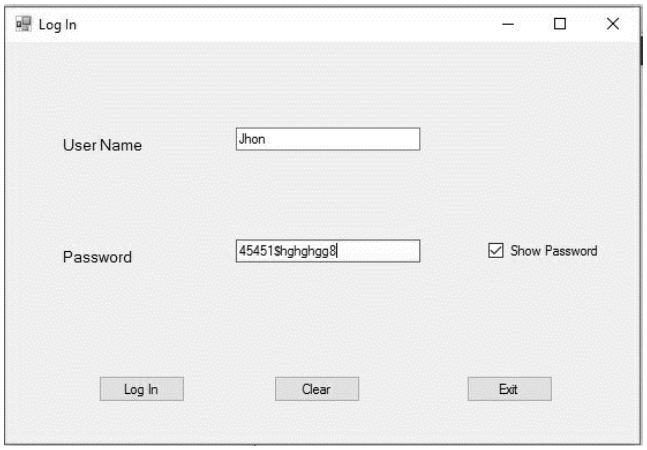
Product needs following third party software to implement the system.

- SQL Server 2014 for database Management functionalities.
- Visual Studio 2013.

3. External Interface Requirements

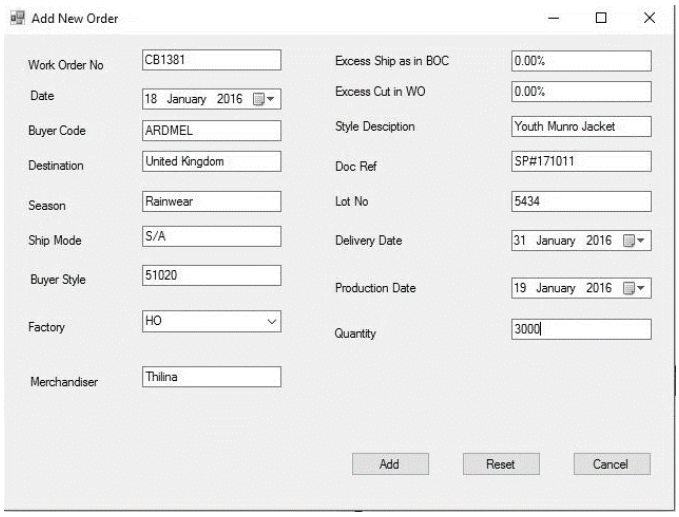
3.1 User Interfaces

Our system consists with following interfaces for users to interact with the system**.**



(Image3.1.1) User login Interface.

This is the user login screen of the system. Therefore, they all have to log on to the system using their pre assigned User Name and the Password.

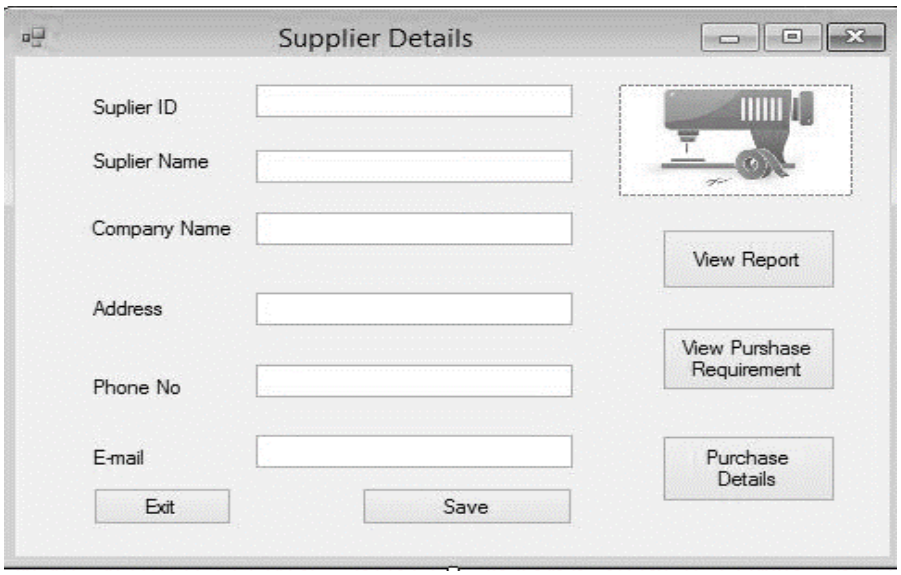


(Image 3.1.2) Add New Order Interface.

This interface is used to add received order details from the buyer to the system database. The above data will be entered by the Sales Manager of the company.

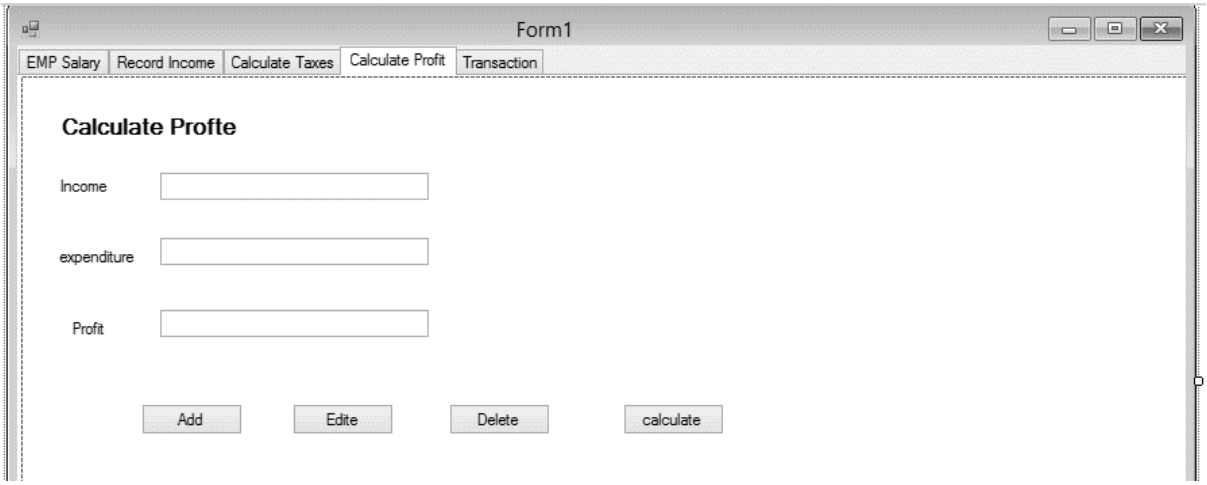
(Image 3.1.3) Add New Order Interface.

The main interface will display the employee allocation for the machine and the quantity need to produce and the remaining quantity needed to be produced will be displayed in the main GUI with the line, the style each line is ongoing.



(Image 3.1.4) Supplier Details Interface.

The head of the purchase department will the above details required and the filled details will be saved to the supplier table in the system database.

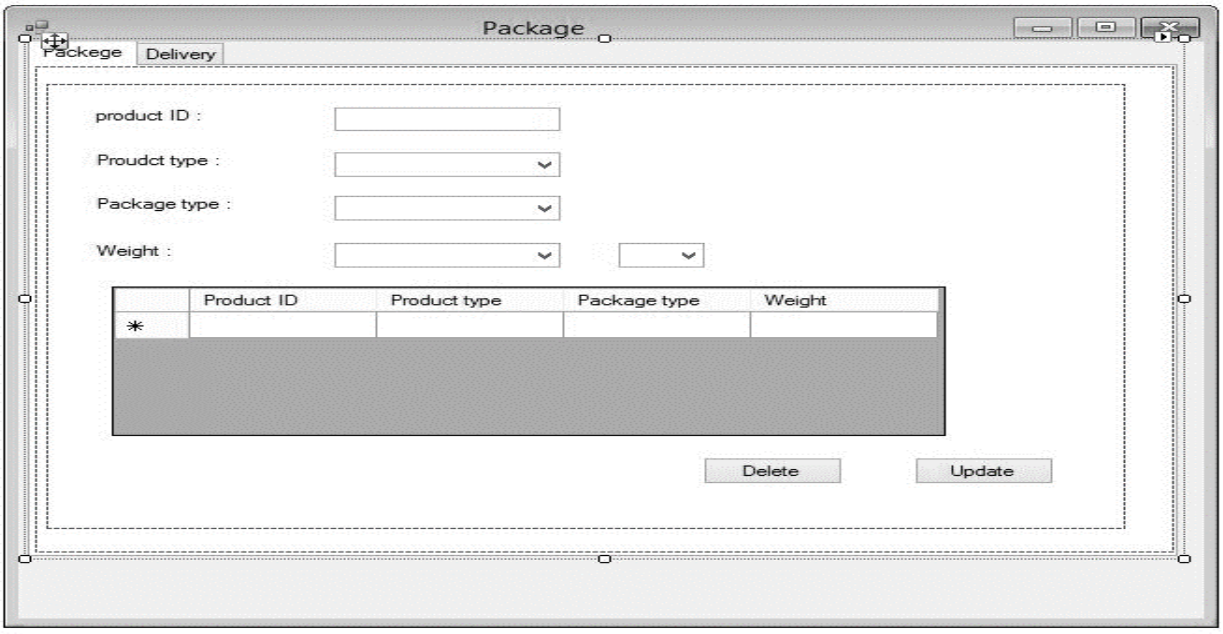


(Image 3.1.5) Calculate Profit Interface.

The Accountant will enter the income and expenditures and profit will be calculated and displayed in the GUI. This is an interface used in the Accounting Department.

(Image 3.1.6) Update Stock Interface

The Stock Keeper will enter the above required details and either add new stocks or will remove from the current stocks.

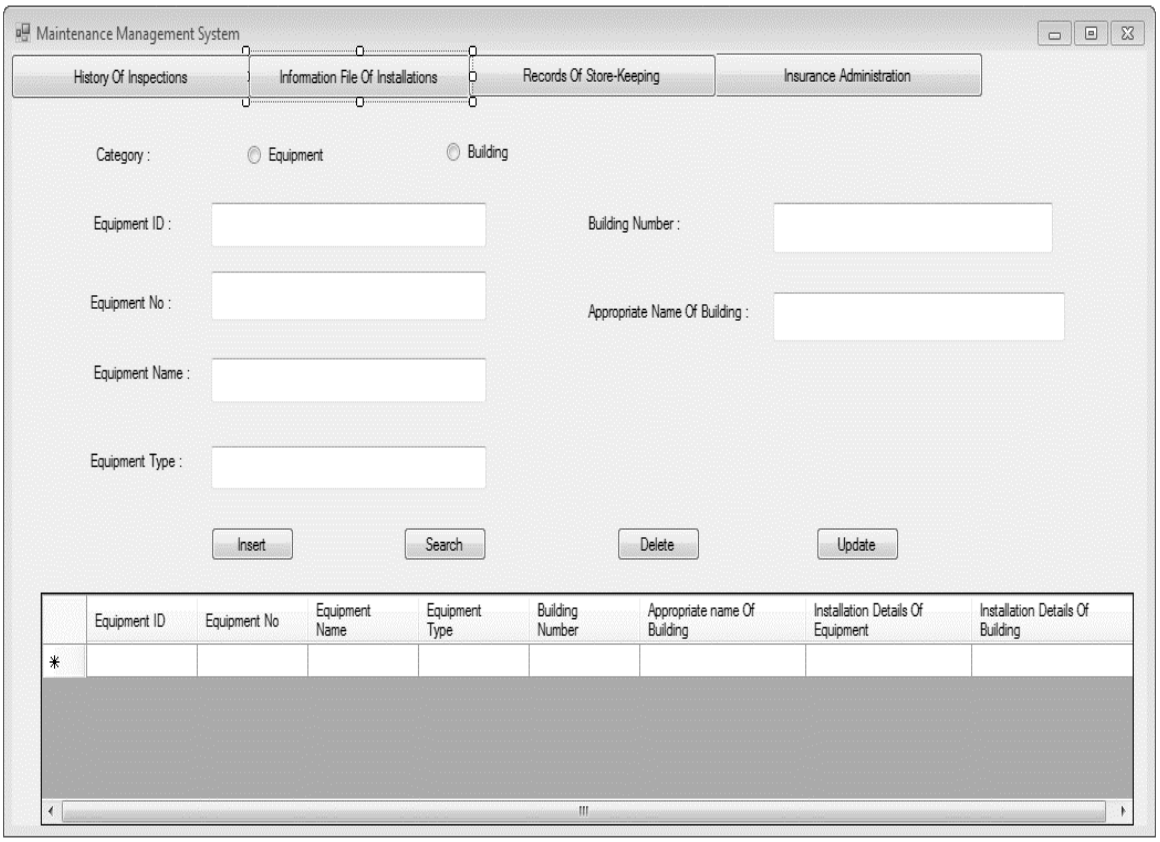


(Image 3.1.7) Package Details Interface

When select the package home GUI the package keeper can update or delete details and delivery GUI also use for update and save to delivery details.

(Image 3.1.8)Add New Employee Interface

Human Resource manager enter the new employee details which will be added as a new employee record once he clicks on the “add employee” button



(Image 3.1.9) Utility Installation Interface

Window allows to operator for inserting information of latest installations. And also operator can delete and update required details of Installations.

3.2 Hardware Interfaces

Developer Side

- Operating System : Windows 10
- Processor : Intel Core i3 (3M Cache,3.50) or above
- RAM : 4GB DDR3 or above
- Storage : 1TB HDD

Client Side

- Operating System : Windows 7 Professional 32 bit or above
- Processor : Intel Core i3 (3M Cache,3.50) or above
- RAM : 4GB DDR3 or above
- Storage : 2TB with additional 2TB for backup Hard Disk

3.3 Software Interfaces

- Development : Visual Studio 2013
- Database : SQL Server 2014
- Report : Report Builder
- Platform : Windows

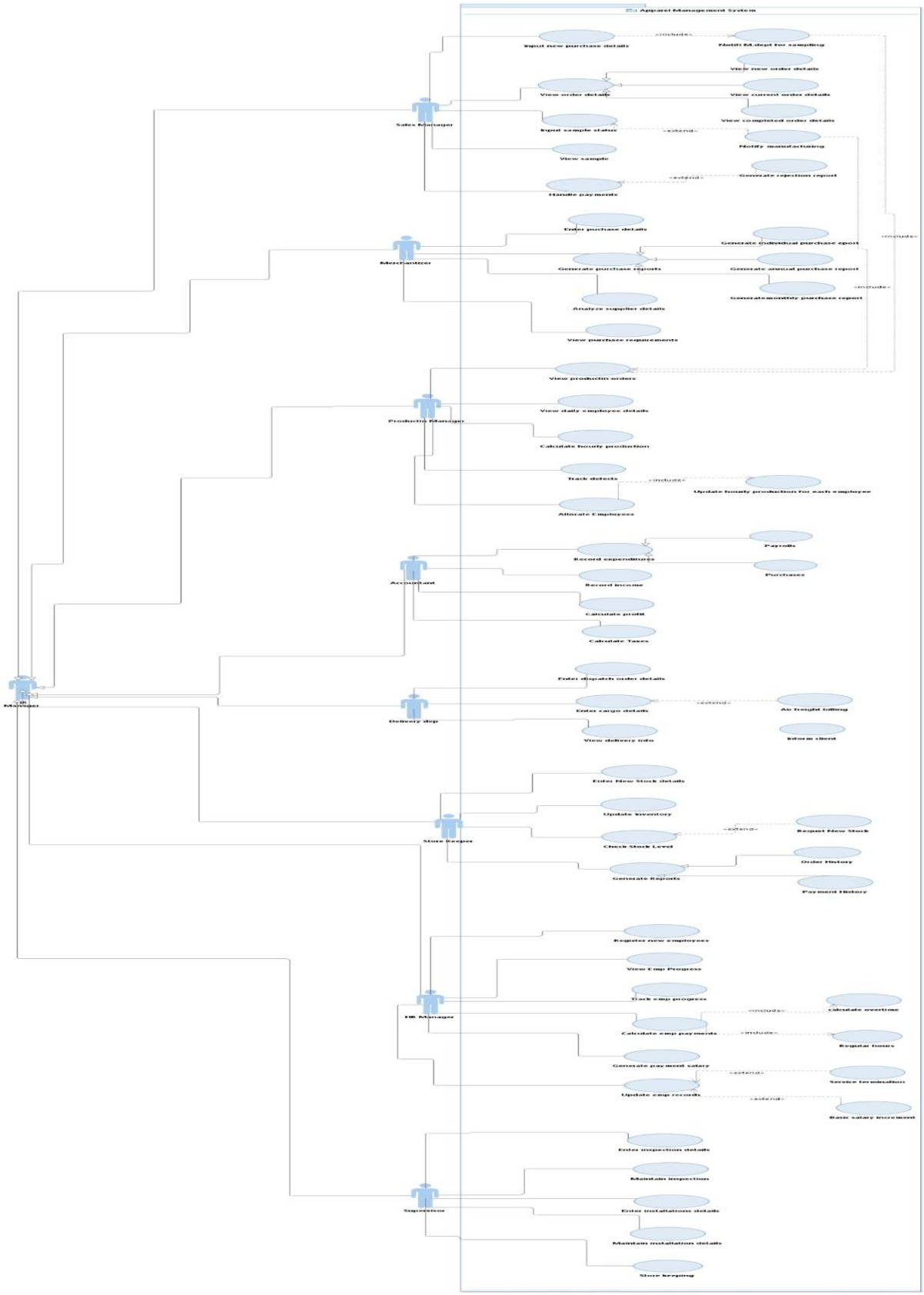
3.4 Communications Interfaces

A stable internet connection is needed when getting tender prices from the supplier from the company website therefore user must have,

- ADSL connected or Wi-Fi connection.
- As well as a LAN network to access the Database in the server machine from all node machines within the organization.

4. System Features

4.1 Use Case Diagram.



4.2 Use Case Scenarios

Sales Management System	
Use Case Name	*Input sample status.*
Primary Actor	Sales Manager.
Precondition	• Primary Actor logged in to the system. • The company has received the order.
Main Flow	**1.** Use case starts when System prompts the function list. **2.** User clicks on "Add Sample" button. **3.** System prompts user to enter sample details. **4.** User enters the sample details. **5.** User clicks on "Add" button. **6.** System prompts for confirmation. **7.** User confirms. **8.** Sample details are added to the system. **9.** A message box appears that stating "Successfully Added!". **10.** Use case ends when the user clicks on the "OK" button on the message box.
Extensions	**5.a.** User clicks on "Add" button without completing required fields. **5.a.1.** System prompts for fill the blank fields. **5.b.** User clicks on " Cancel" button. **5.b.1.** System displays the previous interface.

Sales Management System.	
Use Case Name	*Input New Purchase Details.*
Primary Actor	Sales Manager
Precondition	• Primary Actor logged in to the system. • The company has received the order.
Main Flow	**1.** Use case starts when System prompts the details of received order. **2.** User enters the order details to the system. **3.** User selects "save". **4.** System prompts for confirmation. **5.** User confirms **6.** A message box appears that stating "Successfully Added!". **7.** Use case ends when user exit from the window.
Extensions	**3.a.** User selects **"**Cancel**"**. **3.a.1.** The window will close and the use case ends**.** **4.a.** User denies the confirmation message **4.a.1.** Order details entry window will remain with the entered data**.** **4.b.** User confirms the prompt **4.b.1**. Notification sends to the Manufacturing Department for sampling**.**

Manufacture Process Management System.	
Use Case Name	*View production order.*
Primary Actor	Production Manager
Precondition	• Primary Actor logged in to the system.
Main Flow	**1.** Use case starts when Production Manager log to the system. **2.** A prompt message will then be displayed to enter the username and password. **3.** Production Manager Enter his username and password. **4.** System will then prompt an option menu. **5.** Production Manager Selects check notification option. **6.** Then the Production Manager can notify Manufacturing department for sampling. **7.** Production Manager will receive that the sampling is completed. **8.** View production orders is then clicked by the Production Manager. **9.** System will display the details of production orders.
Extensions	**3.a.** User enters incorrect username and password. **3.a.1.** Print error message **3.a.2.** Reject login to the system **3.a.3.** Prompts again to enter user details. **3. b.** User enters invalid login credentials more than five times. **3.b.1.** System sends verification code to users' email. **3.b.2.** System requests the verification code.

Manufacture Process Management System.	
Use Case Name	*Calculate hourly Production.*
Primary Actor	Production Manager
Precondition	Primary Actor logged in to the system.
Main Flow	**1.** Use case starts when system prompts a form to enter quantity information of the garment type. **2.** User enters the particular information. **3.** User clicks the "ok" button. **4.** System will prompt new window with list of production. **5.** User selects a production. **6.** User clicks calculate button. **7.** System displays the hourly production window.
Extensions	**1.a.** User enters invalid quantity details. **1.a.2.** System displays an error message.

Purchasing Management System	
Use Case Name	*Enter Purchase Details.*
Primary Actor	Merchandiser.
Precondition	Primary Actor logged in to the system.
Main Flow	1. Use case starts when user login to the System. 2. User enters the purchase details. 3. Validate entered details. 4. User select Add. 5. System adds the purchase details in to the DB. 6. Use case end when user exit from the window.
Extensions	**2.a.** Submit with empty fields. . **2.a.1.** Display error message. **2.a.2.** Rejects to update the database. **2.a.3.** Prompts again to fill required fields

Purchasing Management System	
Use Case Name	*Enter Supplier Details.*
Primary Actor	Merchandiser
Precondition	Primary Actor logged in to the system.
Main Flow	1. Use case starts when user login to the System 2. Enter the supplier details 3. Validate entered details 4. User select save button 5. Save the supplier details in the database
Extensions	**2.a.** Submit with empty fields. . **2.a.1.** Display error message. **2.a.2.** Rejects to update the database. **2.a.3.** Prompts again to fill required fields

Accounting Management System	
Use Case Name	*Record Income.*
Primary Actor	Accountant.
Precondition	Primary Actor logged in to the system.
Main Flow	**1.** User visits the "Record expenditure" GUI. **2.** Press the "Add" button. **3.** The system will display the details of Income. **4.** The Accountant fills the fields requested to be filled. **5.** The Accountant clicks on "Add" button. **6.** All the provided information and the system date be passed to the database. This will be the end of the use case scenario.
Extensions	**4.a.** Submit with empty fields. . **4.a.1.** Display error message. **4.a.2.** Rejects to update the database. **4.a.3.** Prompts again to fill required fields

Accounting Management System	
Use Case Name	*Calculate Profit.*
Primary Actor	Accountant.
Precondition	Primary Actor logged in to the system.
Main Flow	**1.** User visits the "Record expenditure" GUI. **2.** Press the " Add " button. **3.** The system will display the details of profited to be add, containing the commodity, buy for, sell for, unite profit, profit threshold, whether its worst case, Best case or Average. **4.** The Accountant fills the fields requested to be filled. **5.** The Accountant clicks on "Add" button. **6.** All the provided information and the system date be passed to the database. This will be the end of the use case scenario.
Extensions	**3.a.** Submit with empty fields. . **3.a.1.** Display error message. **3.a.2.** Rejects to update the database. **3.a.3.** Prompts again to fill required fields

Employee Management System.	
Use Case	*Calculating Employee Salary.*
Primary Actor	HR Manager.
Pre-condition	Primary Actor logged in to the system.
Main Flow	**1.** User visits the "Wage Calculation" GUI. **2.** User enters Employee ID and Employee Name. **3.** Include:: (Check Employee Validity.) **4.** System prompts the user to enter number of hours worked during pay period. (Regular hours) and hourly rate. **5.** User enters the time in, time out and date and system displays the no of hours worked by the employee. **6.** System asks the employee to enter overtime hours and overtime rate. **7.** System returns monthly wage of employee. **8.** User clicks on generate payment receipts and the system displays and prints the pay slips. **9.** Send paycheck to bank account. **10.** Include:: (User enters Employees account number and NIC to the system.) **11.** System updates inventory.
Extensions	**2.a.** Employee name is no longer in the system. **2.a.1.** Display error message. **2.a.2.** Terminate the operation. **7.a.** Employee gets bonus **7.a.1.** User ticks the check box called “Bonus”. **7.a.2.** Text field activates and user enters values to the text field. **7.a.3**. Display the monthly wage. **11.a.** Payment is not made. **11.a.1.** System rejects to update the database.

Employee Management System.	
Use Case	*Hiring new Employee and assign training.*
Primary Actor	Factory Manager
Pre-condition	Applicant sign up into company page with details for verification.
Main Flow	**1.** Applicant clicks on Applications to apply for job. **2.** Completed form is accepted by the system. **3.** System process the applicant details and send them to HR Manager by Email. **4.** After selection process notify applicant if they are hired or not. **5.** Request for interviews with successful applicant. **6.** Manager enters new employee info to the Employee table. **7.** Send new employee details to trainee manager **8.** Trainee manager enters details to Training Table. **9.** Notify dates, time and training type required by each employee.
Extensions	**2. a.** Submit form with empty fields. **2.a.1.** Display error message. **2.a.2.** Rejects submission of the form. **2.a.3.** Prompts again to fill required fields.

Stock Management System	
Use Case Name	*Updates Stock.*
Primary Actor	Stock Keeper
Precondition	Primary actor should has logged in to the system.
Main Flow	**1.** User visits the "Stock Controlling Home" GUI. **2.** Press the "Update Stock" button **3.** The system will display the details of stock to be updated, containing the *Stock ID, Material Name, and Quantity of the Stock* and whether it's an addition or removal of stock. **4.** The Stock Keeper fills the fields requested to be filled. **5.** The Stock Keeper clicks on "Update Stock" button. **6.** A dialog box will appear asking the user to confirm the operation **7.** All the provided information and the system date with the current username will be passed to the database "Stocks" table. This will be the end of the use case scenario.
Extensions	**5.a.** Submit with empty fields. . **5.a.1.** Display error message. **5.a.2.** Rejects to update the stock. **5.a.3.** Prompts again to fill required fields **5.b.** Submit without selecting the type of update**.** **5.b.1.** Display error message. **5.b.2.** Rejects submission of the form. **5.b.3.** Prompts again to fill required fields'

	6.a. User ignores the confirmation message. **6.a.1.** System displays the previous interface. **6.a.2.** Database will not update.

Stock Management System.	
Use Case Name	*Assign Materials.*
Primary Actor	Stock Keeper.
Precondition	Primary actor should has logged in to the system.
Main Flow	**1.** User visits the "Stock Controlling Home" GUI **2.** Press the "Assign Materials" button **3.** The system will display the production line id, the material id, quantity and remarks to be filled by the user. **4.** The Stock Keeper fills the fields requested to be filled. **5.** The Stock Keeper clicks on "Assign Materials" button. **6.** A dialog box will appear asking the user to confirm the operation. **7.** All the provided information and the system date with the current username will be passed to the database "Assigning" table. **8.** Details will be updated in "Stock" table. **9.** The above assigning details will be forwarded to the "Manufacturing Process Management Department". **10.** This will be the end of the use case scenario.
Extensions	**5.a.** Submit with empty fields. . **5.a.1.** Display error message. **5.a.2.** Rejects to update the stock. **5.a.3.** Prompts again to fill required fields

	6.a. Assigning quantity exceeds the available quantity. **6.a.1.** Display error message. **6.a.2.** Terminate the operation. **6.b.** User ignores the confirmation message. **6.b.1.** System displays the previous interface. **6.b.2.** Database will not update.

Package and Delivery Management System.	
Use Case Name	*Updates Package Details.*
Primary Actor	Package Keeper.
Precondition	Primary actor should has logged in to the system.
Main Flow	1. User visits the "package and delivery" GUI. 2. Press the "Update" button. 3. The system will display the details of product ID, Product type, Package type, and weight. 4. The Package Keeper clicks on "Update" button. 5. A dialog box will appear asking the user to confirm the operation. 6. All the provided information and the system date with the current username will be passed to the database "Package" table. This will be the end of the use case scenario.
Extensions	**4.a.** Submit with empty fields. . **4.a.1.** Display error message. **4.a.2.** Rejects to update the stock. **4.a.3.** Prompts again to fill required fields.

Package and Delivery Management System.	
Use Case Name	*Add Delivery Details.*
Primary Actor	Package Keeper
Precondition	Primary actor should has logged in to the system.
Main Flow	**1.** User visits the "Package and Delivery" GUI. **2.** Press the "Delivery" button. **3.** The system will display the export country, buyer name, Buyer Email, Delivery place and Date. **4.** The Package Keeper fills the fields requested to be filled. **5.** The Package Keeper clicks on "Save" button. **6.** A dialog box will appear asking the user to confirm the operation **7.** All the provided information and the system date with the current username will be passed to the database "Delivery" table. **8.** Details will be updated in "Package" table and use case scenario will end.
Extensions	**5.a.** Submit with empty fields. . **5.a.1.** Display error message. **5.a.2.** Rejects to update the stock. **5.a.3.** Prompts again to fill required fields. **6.a.** Assigning quantity exceeds the available quantity. **6.a.1.** Display error message. **6.a.2.** Terminate the operation.

Maintenance Management System.	
Use Case Name	*View History of Inspections.*
Primary Actor	Maintenance Supervisor.
Preconditions	Primary actor should has logged in to the system.
Main Flow	**1.** System asks operator to log into the system. **2.** Operator enters the user name and password. **3.** System validates the login details. **4.** Operator fills the text fields which're required by the system and clicks on the search button. **5.** System shows all the results on the data table which're requested by the operator. **6.** Operator enters the information of Inspections to the system by selecting on the Insert button. **7.** System stores all the new information in the database. **8.** Operator clicks on the Delete button to remove inappropriate information. **9.** Operator select required information field and clicks on the Update button. **10.** System stores recently updated information in the database.
Extensions	**1.a.** User enters incorrect username and password. **1.a.1.** Print error message **1.a.2.** Reject login to the system **1.a.3.** Prompts again to enter user details. .**4.a.** Submit with empty fields. . **4.a.1.** Display error message. **4.a.2.** Rejects to update the database. **4.a.3.** Prompts again to fill required fields

Maintenance Management System.	
Use Case Name	*Records of Store-Keeping.*
Primary Actor	Maintenance Supervisor.
Preconditions	Primary actor should has logged in to the system.
Main Flow	**1.** Operator selects the Records of Store-Keeping from the main page. **2.** Operator inserts the details on text fields which're requested by the system and clicks on the Search button. **3.** System gives an output on the data table. **4.** Operator enters the records of store keeping by selecting on the insert button. **5.** System stores all the given new information in the database. **6.** Operator clicks on the Delete button to clear all unwanted, inappropriate details. **7.** Operator selects the required information field and clicks on the Update button. **8.** System stores latest updated details in the database.
Extensions	**4.a.** Submit with empty fields. . **4.a.1.** Display error message. **4.a.2.** Rejects to update the database. **4.a.3.** Prompts again to fill required fields

4.3 Functional Requirements

F1: User Login	
Input	User Name, Password
Process	Check the *User Name* and *Password* entered by the user and let the user to login
Output	User Profile Page

F2: Input Order Details	
Input	Order Details
Process	Insert ***Order Details*** in to the system database.
Output	Display a success message.

F3: Allocate Employees	
Input	Emp Id, Operation, Order No, Date, Production Line
Process	Check the *User Name* and *Password* entered by the user and let the user to login
Output	Display operations and allocated employees for each operation.

F4: Calculate Hourly Production	
Input	Product ID, Quantity
Process	Check and validate product ID and get the quantity of that product.
Output	Display the Hourly Production

F5: Analyze Supplier Details	
Input	Material ID
Process	Get suppliers' prices for particular material and arrange them according to ascending order and graphically represent to user.
Output	Analysis Report

F6: Calculate Profit	
Input	Income, Expenditures, Tax Rates, Time Range
Process	Deduct expenditures and taxes from the income within a given time range
Output	Display the net profit within given time range.

F7: View Delivery Info	
Input	Order No
Process	Check the system database and display the Delivery Status related to the given order number.
Output	Delivery Status

F8: Calculate Employee Payments	
Input	Number of Overtime Hours, Emp_ID, ,basic salary,requitment ID,NIC
Process	Wage calculation
Output	Display payment record

F9: Assign Needles to Employees	
Input	Emp_ID, Needle type
Process	According to relevant Employee the relevant needle is being assigned.
Output	Assigned box is displayed to the particular user

F10: Handling the Damaged Machines	
Input	Emp_ID, Machine Id
Process	Check the damage caused to machine whether by employee or is a machine fault
Output	A notification message will be displayed

F11: Search Available Stocks	
Input	Current date, Material Id
Process	Find the available stock quantity of the requested material from the database
Output	Quantity of the given materials in stocks

F12: User Logout	
Input	Select logout option
Process	Processing the request to logout from the system.
Output	Successfully logout from the system. Redirected to the login interface.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Apparel Management System should provide efficient service than the existing manual system. All notifications are more efficient than the current manual system. Apparel Management System not only efficient for the mentioned functionalities. It increases the efficiency of all manual system's requirements. The proposed system that we are going to develop will be used to make some valuable notifications and valuable reports that client needed. Therefore, it is expected that the database would perform functionally all the requirements that are specified by the client.

5.2 Safety Requirements

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup. The backup will secure data.

5.3 Security Requirements

After releasing the system to user, the security problems may arise. The system configuration settings can only be updated by the system administrators.

Employees of the Golden Needle Apparels (only relevant Employee to the system) can access to the system using user name and password under different predefined security levels.

We are going to develop secure *database* for the system. Only system administrator can access to the database.

User name is given to user by the system administrator under the guidance of Production Manager. After the first login they free to change their password as they want. The password may contain six characters or more.

5.4 Software Quality Attributes

The Quality of the system is maintained in such a way so that it can be very user friendly to all the users of the system. It is not need IT educated people to use the system.

The system is platform independent. And developer is going to use open source language and open source development tools. Client doesn't want to spent lot of money for the Software requirements.

The system insures it increases following features.

- **Usability**

  The whole system consists of user friendly interfaces.

- **Reliability**

  The system database is updated each time new information is added. Data and process validation is achieved through this.

- **Profitability**

  Hidden delivery transportation costs can be recovered by the new system. Due to less time consuming and cost saving, the overall profitability of the company will be increased.

- **Efficiency**

  Related multiple activities can be done concurrently as well as the entering and retrieval of data can be done effectively.

- **Maintainability**

  When a problem is occurred it is easy to fix it, because the system documentation provides overall description of the system and how to handle problems in the system and also because the system is implemented using the object oriented approach.

5.5 Business Rules

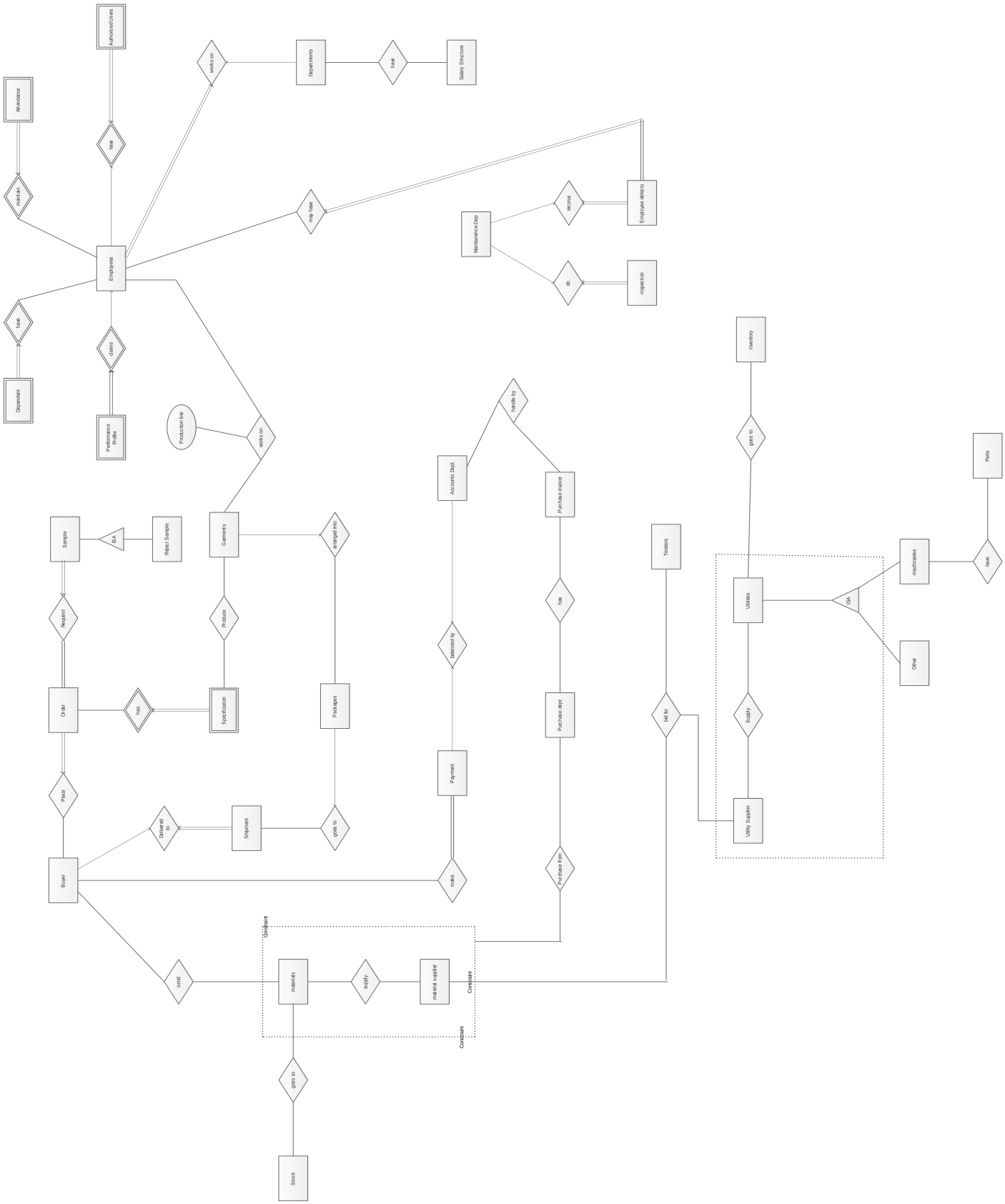
There are different users with different access permissions for this Apparel Management System. Each user has some specific functions he can operate and some require superior authorities. All the users for the system can only be created by an Admin user. The users created by admin have different levels of access. Only the head of the departments can make significant changes to the database such as; only the Main Store Keeper can add of remove stocks and add new details to the system, the Employee Manager is the only user who has access to employee salary records, all the order details are only accessible to the Sales Manager etc. This rule will ensure the accuracy and security of the company data.

Appendix A: Glossary

- SRS : Software Requirement Specification.
- NIC : Network Interface Card.
- Database : A system which store data to retrieve later.
- SQL : Structured Query Language.
- Website : A domain on the World Wide Web.
- EX_BOC : Excess Ship as in BOC.
- EX_WO : Excess Cut as in WO.
- DOC Ref : Document Reference Number.

Appendix B: Analysis Models

ER Diagram



Class Diagram