Abstract

The problem arise nowadays is the manual paper work is goes behind the time and results in waste of time, money and physical and mental efforts put by the company employee. This project implemented is to ensure the company management that the overall data storage process for the company data can be far more cheap, time saving and very easy and efficient to use than the current manual paper work system. The Information System for the Liaison Company uses the Client Server technology for the communication between the administrator of the company and its employees. The system is aimed at developing a software system that allows the administrator to view employee activities at the same time allowing employee to enter the data about company matter in the system. The system is hoped to help organization to increase the performance of the working environment among all the staff of the organization. This Information System for the Liaison company contain devices (hardware and software) which are Desktops with windows operating system at client side, SQL Server install at the server side, Graphical User Interface (GUI) and a database.

In conclusion at the end is to build an effective system that will easily store details about company matters and allow the administration to view the employee activity and control and manage the employee details.

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Chapter 1

Introduction

1.1 Introduction of Project

Today computerized information systems are the nerve of any large or small scale business firm or the company. This computerized information systems are welcome by both company administrative and the executives of the company. They decrease the paper work in company and saves lot of time, space and cost involve in storing, managing and maintaining the data stored in the paper format. Such systems are helpful to company's administrations to receive immediate feedback and help them to control and manage their user in proper way.

The Information system for a Liaison company provides services for the Agri Chemicals Limited to store all necessary data related to their OPO's. The system will work in client-server environment so it incorporate all key benefits of client server technology such centralized control, secure communication, and data centralization.

As for system development and implementation, it should be able to help in managing their employees account systematically. The system must have database that contains employees information and it must be able to help employee to manipulate data, update database, alert manager accordingly, and also nice interface to make it easier to use. Finally, the Information system must be user friendly for commercial purpose.

This system will reduce the paper work, money, employee's efforts and the time during entire data transaction process in the company.

1.2 Problem Statement

The purpose of this project is to overcome of the problem that arises in a company where company have to keep their all the historical data related to the transactions done by the system in the paper work format. If such paper data got missed or paper on which data is stored not treated carefully then recovering or regenerating such data is very difficult task.

This system implemented in order to decrease the time and money of the company spends on keeping the track of data in paper format. This problem is not productive for the big company as it is hard to ensure consistency within an organization. So our

system deals with the problem which are exist in the current system. The main problem faced by the current system is the time inconvenience. The existing makes use lot of paper which makes difficulties for the higher authorities to keep the track of the data and make any modification in the stored data. As the existing system works manually so it is not appropriate for the higher authority to deal with the existing system in tricky situation. Although another problem lies are storage and printing materials. The paper work method requires printing materials like ink, pen, printer, paper in order to store data on the paper. After storing the details on the paper we also required a sufficient physical space to store and maintain those papers.

So our main aim is to develop a system that will easily store such details in less time and uses no paper at all if possible. It must not harm the user privacy at the same time and provide a GUI that will allow user to easily deal with application.

1.3 Scope of the Project

This system gives a possible, low cost and efficient solution for all the above mentioned problems. This system helps the company employee to easily enter the required information and administrator to manage and control employees.

This is client server based application where a desktop application at the server side allows the higher authority to easily manage the employee details and view their latest activities in the system. At client side each employee having their desktop allows them to enter the information about company supplier, Overseas Purchase Order details and etc. Each employee can generate a request to delete supplier details or the overseas purchase order details.

The main goal of this project to build a solution that demonstrate and produces a cost effective mechanism of using Information System for the Liaison Company for mentioned company so that individual in company can get their job done easily.

1.4 Relevance and Motivation of Project

Now days, one of the major problems lies within organization is to track the historical of the organization without wasting any extra time and money. As the employees are permitted to gather and feed the information to the system at the same time administrator keep an eye on each employee activity. Therefore, we develop a computer solution which works in client-server environment with guarantee to solve all the mentioned problems.

Many types of software are available to store historical data of the company. But such softwares are too costly, so small scale companies can't afford it. So, our main goal is to build an application which will be easily available for all organization with small cost.

1.5 Organization of Report

The focus of this report is to provide more information about Information System for the Liaison Company along with its working principles.

Chapter 01 (Introduction) gives idea about various concepts used in system before we are going to implement them. Chapter 02 (Review of Literature) specifies review about the system from literature point of view by comparing current and previous system. Chapter 03 (Planning and Formulation) deals with the chronological plan to be execute in order to implement the proposed system. Chapter 04 (Proposed Methodology) will explain the various components to be used in the system. Chapter 05 (Design of System) will give an overview of various types of design proposed for the current system.

Chapter 2

Review of Literature

2.1 Introduction to Agri Chemicals Pvt. Ltd.

Agri Chemicals Limited is fall under the category of a liaison company. Liaison means Communication or cooperation which facilitates a close working relationship between people or organizations. The company deals with variety of products and services like – Tiles, Machinery and part manufacturer, Agricultural inputs and fertilizers, Butyl Acetate, Chemicals, Paint chemicals and etc.

Agri Chemicals Limited's Foreign Company Registration Number is F04489. The company is established in year 2002. There are about 10 employees working in the company.

Company Name	:	Agri Chemical Limited
Date and Country of Incorporation	:	01 December 2012, United Kingdom
Type of Office	:	Branch Office
Address	:	No. B/504, City point, Near Kohinoor hotel, Andheri- Kurla road, J. B. Nagar, Andheri(east), Mumbai - 400059, Maharashtra, India.
Company Status	:	Active

2.2 Working of Existing System

The Agri Chemical Limited is a Liaison company which provides variety of services to its customers. The manual paper work method is used to do all the data transaction done in the system. Customer requests for services toward company. Company then generates the OPR document against the customer request. Then the document is send to various suppliers attached to the company. Company employees choose the best quotation send by the supplier which will fulfill the clients need. When client confirm their request the OPO document is generated and the copies of OPO is send to both client and supplier. All the document generated and pass on in the company are in paper work format.

There are various terminologies used in the company working method are mentioned below along with their abbreviations:

- OPR : Overseas Purchase Requisition Order
- OPO : Overseas Purchase Order
- AGLPO : Agri Chemicals Limited Purchase Order
- LPO : Leasing Purchase Order

There are lots of disadvantages associated with the existing paper method utilized in the mentioned company as given below:

- Paper work method is requires paper and other printing material to store the data on paper which leads to extra money put by the company on printing materials such as – papers, printers, ink, etc.
- To maintain and keep track of data on regular basis with such system is very difficult task. Altering data requires the generation of entirely new document.
- The existing system is very time consuming and expensive.

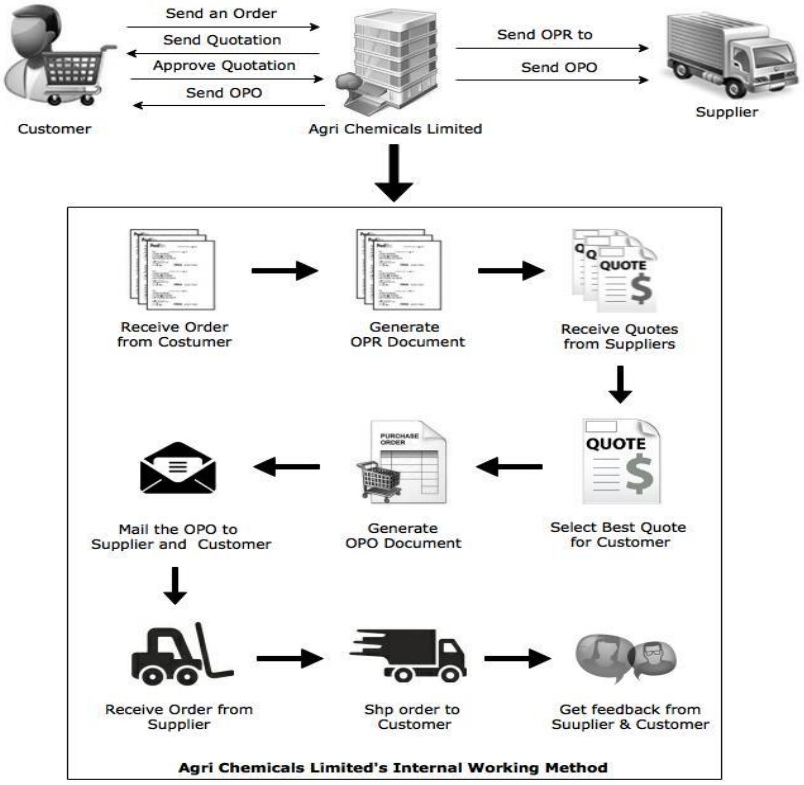

Figure 2.1 Block Diagram of the System

2.3 Key Benefits of Computer Based Information System

Computer based information system provides a range of benefits to consumers and businesses, such as:

- Computerized systems allow users to store large amount of data in a little space like hard disk, external storage devices, etc. Where the earlier paper work method require healthy amount of space to store the data.
- It is easy to alter or dispose the previously stored information with the help of computerized information system. Where in paper work method we have to recreate a document if we want to make any changes in previously stored data.
- The computerized system stores the details with great precision and done it in less time frame unlikely to the old paper work method used in the company.
- As the data is stored in the electronic format allows company to decrease their spending of money on the printing materials while using the old paper work method.
- The computerized system is also beneficial from the environmental point of view as its basic principle is to use of paper as low as possible.

2.4 Application of Client-Server Computer Based Information System:

Client-Server computer systems can be split into two basic categories.

- **Server side application:** The Server side application provides the rich GUI towards higher authority of the company. The application allows the administration to track and monitor the employee activities.
- **Client side application:** The Client side application allow gathering of required information and afterwards transmitted towards the server side application. In, such case employee puts the information at the client side application after all the verification and validation is done at the client then the information is transmitted towards server.

Chapter 3

Planning and Formulation

3.1 Planning and Formulation Table

Table 3.1 Planning and Formulation Table

Sr. No.	Task	Activity	Duration (Weeks)	Resource Name
1	Topic Decision	Searching through Internet for the topics.	1	Internet
2	Topic Approval	Submit the Abstract copy of the project to the Head of the Department of the Information Technology.	1	-
3	Study of Objective and Introductory Work	Studying about topic and other research material for the project	4	Agri Chemicals Pvt. Ltd. Company Co-workers
4	Selection of Hardware and Software platform	Searching for the most suited programming technologies from hardware and software requirements point of view.	1	Internet

Sr. No.	Task	Activity	Duration (Weeks)	Resource Name
5	Collection of Data	Collection of data such as employee related data, Supplier data, OPR data and etc.	3	Agri Chemicals Pvt. Ltd. Company Co-workers
6	Preparation of Final Report and Presentation	Preparing the project Report based on the given guideline.	2	Guidelines mentioned by the Project Guide

Chapter 4

Methodology

4.1 Proposed System

Proposed system store the historical data about the company working manner in the form of electronic data instead of paper work data which happened in the past. We can develop this for any other company according to their business module or working environment. This application considers the information provided by company employee through the desktop application built on a client side. The application can be built up using various other technologies like Java, C, and CPP for platform independence. But almost 100% of users are familiar with the windows operating system, so we stick to the .net platform for developing an application.

Proposed system consist the following modules:

- **Variety of forms to store information:**

  This module is built at the client side desktop application. In this module variety of application forms provided by the software system in order to get information about the company related suppliers, Overseas purchase order details and other information. These forms also help company employees to view, alter and print the information of the same. Also system stores the data about employee profile which give the more information about the employee to the system administrator.

- **Obtaining employee activities on day to day basis:**

  This is administrative side module. In this module the administrator can track the employee activities on the day to day basis by clicking just the “View Employee Activities” button. The employee holds the unique id of its own which allows the administrator to determine the activities performed by the employee on daily basis. The system can generate the graphical information of the stored data which allows the higher authority to analyze the data more intensively and helps them to make the right decisions in tricky situations as quickly as possible.

4.1.1 System Architecture Diagram

The following diagram shows you the overall architecture of the Information System for Liaison Company. The System makes use of desktop application created in VB.NET 2010 along with the SQL Server 2008 as a back end for managing the data in the system. The system works in a client-server environment.

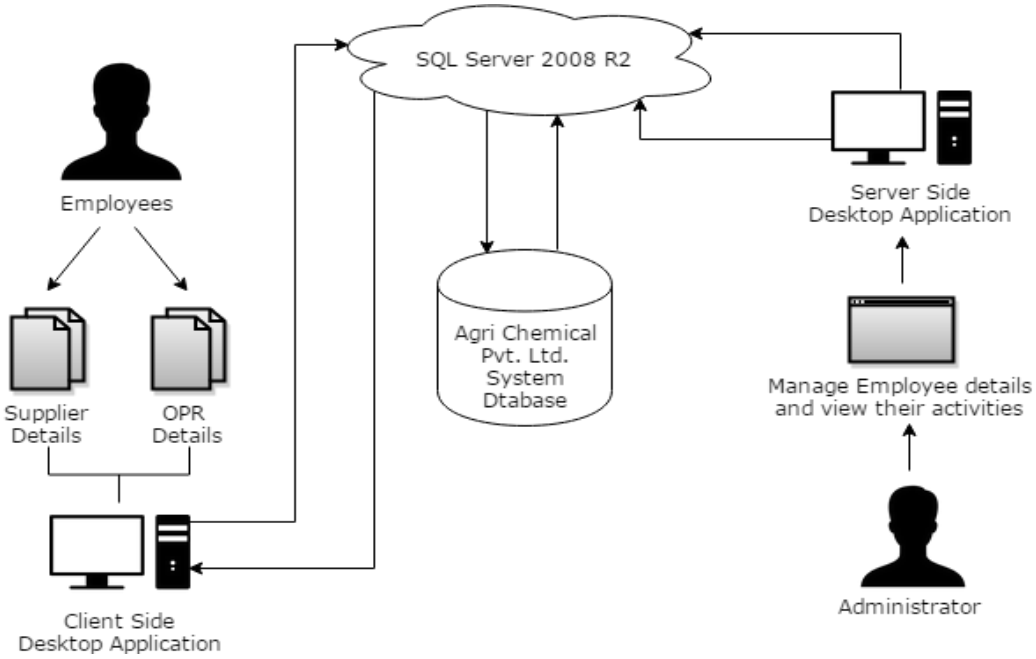

Figure 4.1 System Architecture Diagram

At the server side the desktop application allows the system administrator to control and manage the other users in the system. The desktop application is used by the administrator to manage and control the employee details, View employee day to day activities and also generate a response to the request made by the employee for OPR or Supplier deletion request. The user interface of the desktop application is simple and user friendly, so administrator finds it easy to interact with the system.

At client side each employee provided a desktop application to manage and maintain the details about the Suppliers, OPR details and etc. The SQL server Database service makes the communication possible between server side and client side desktop application.

4.2 Proposed Methodology

4.2.1 Server Side Operation

At server side we provide a desktop application which allows the administrator to control and manage the employee details. The desktop application has a GUI which allow the server side user to easily view the activities of the employee on day to day basis. The GUI makes it easier for the end users of the system to easily interact with the system.

4.2.2 Client Side Operation

At client side the employee also uses the desktop application. Each employee has its own pair of unique ID and password which distinguish it from the rest of the employees in the company. The client desktop application contains set of various forms which allows the employees to add, edit and view or print the details about company suppliers, companies Overseas Purchase Order details and etc. Once the verification is done at both ends of the system by the desktop application itself the data is stored in the database server.

4.2.3 Prior Approach

One way to keep the track of the historical data in the company is to use the paper work method where all the company transaction related information is printed on paper for the future keepsake. The major issue with this approach is accuracy and speed. It is difficult to maintain the altering data with the paper work method such that if the correction is to be made we have to dispose the previous data printed on the paper and then again print the data on the paper. This results in time consumption and lead company to spend extra money on paper and printing materials like printer, cartage and etc. It is also difficult to store the paper data for very long time because it utilizes the space of the company and it is not very convenient to make backup of such data in case if any bad happens to original data.

4.3 System Requirements

4.3.1 Software Requirements

- Microsoft Visual Studio 2010
- Microsoft SQL Server 2008
- Microsoft .NET Framework 3.5 or above
- Windows Operating System 7 and above
- Microsoft Office 2007 or above

4.3.2 Hardware Requirements

- RAM 2 GB or above
- HDD 120 GB or above
- Processor Intel Core 2 Duo Processor or above

Chapter 5

System Design

5.1 System Design

5.1.1 Use Case Diagram

The use case diagram is a type of UML diagram. It allows us to represent the user interaction with the actual system.

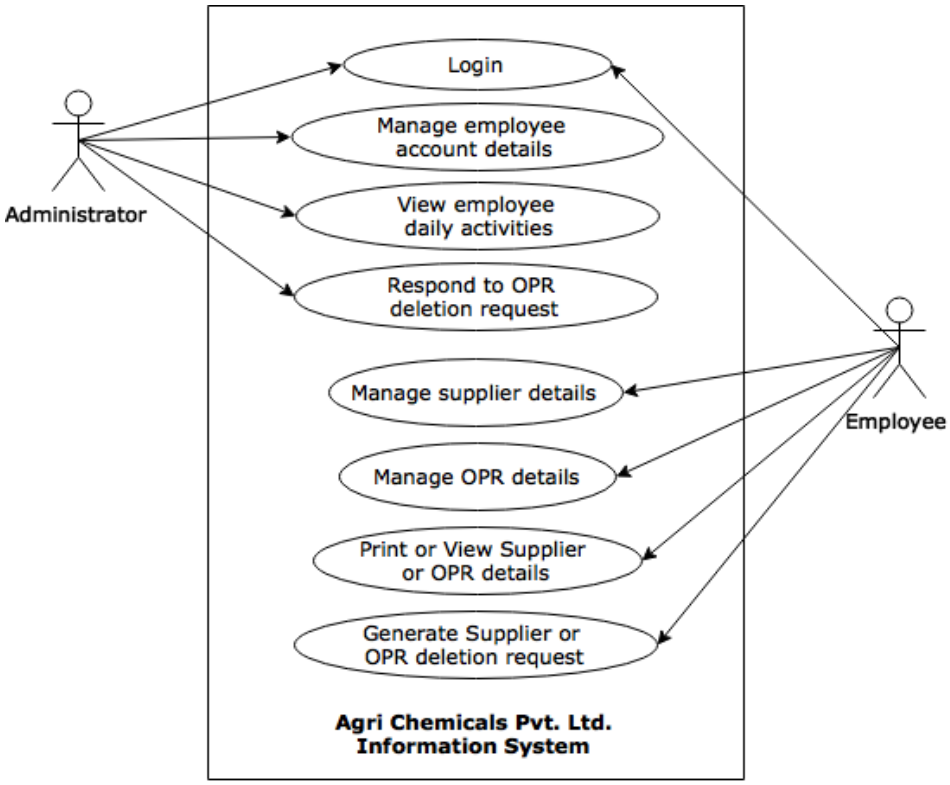

Figure 5.1 Use Case Diagram

There are two types of users in our system i.e. Administrator and Employees. The following diagram represents the Use Case Diagram of the Information System for the Liaison Company.

The administrator can control and manage the each employee details within a system. The employees manage the details about suppliers of company, OPR details and etc. The Administrator and Employee both provided functionalities through which they can make changes in their profile, change account password and etc.

5.1.2 Activity Diagram

Activity diagram is basically a flow chart to represent the flow form one activity to another activity. The activity can be described as an operation of the system.

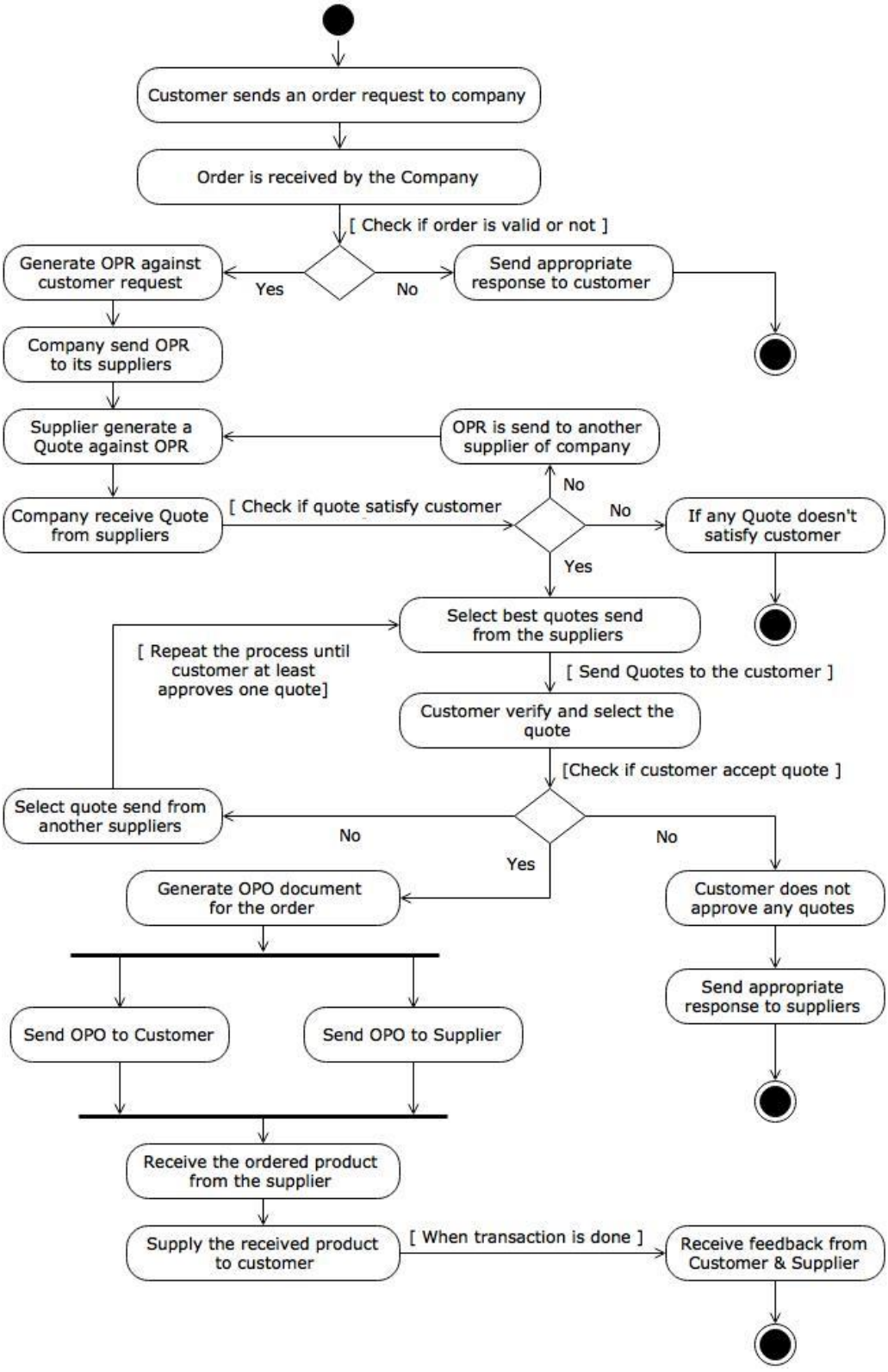

Figure 5.2 Activity Diagram

When customer sends an order to the company, it first checks whether the order is appropriate or not. If yes then the OPR is generated and it sends to various suppliers attached to company. Suppliers in return send the quotations for the requested OPR to the company. Company chooses the best quotation in client's regards and send to customer. If customer doesn't accept the given quote, company send the another quote from different supplier to customer. If customer accepts quotation, company generates the OPO document and sends its copy to both supplier and customer.

At last company receives the ordered product from its supplier and sends to customer. Once overall process is done company receive feedback from both customer and the supplier.

5.2 Data Flow Diagrams

5.2.1 DFD Level 0 Diagram

The Data Flow Diagram (DFD) allows us to understand the data flow within the system. All the activities performed by the system were represented in the DFD Diagrams. The following diagram represents the DFD Level 0 diagram of the Information System for the Liaison Company.

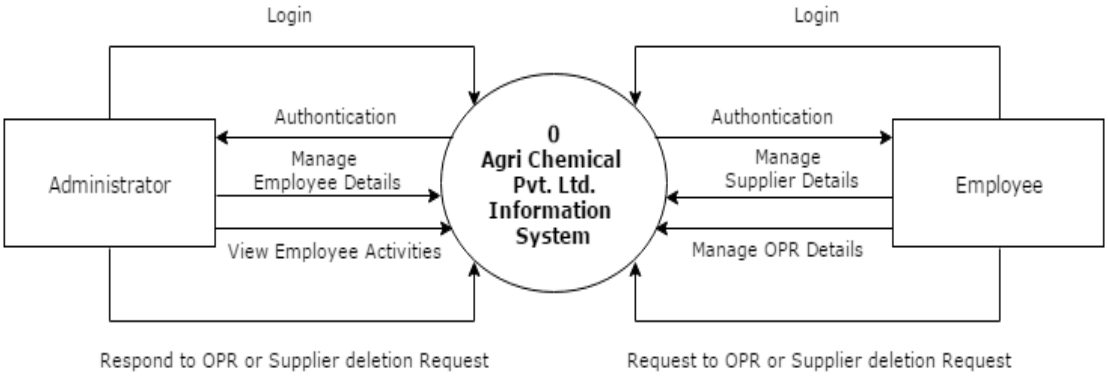

Figure 5.3 DFD Level 0 Diagram

The Administrator makes use of server side application to view all employee details or to manage and control the employee activities in the system. The employee makes use of their client side application to maintain the details about suppliers, OPR and other company related information intact within the system.

5.2.2 DFD Level 1 Diagram

Data Flow Diagram level 1 is the extension of DFD Level 0 Diagram. It represents the most of the major processes from the DFD Level 0 Diagram. The following diagram represents the DFD Level 1 Diagram of the Information System for the Liaison Company.

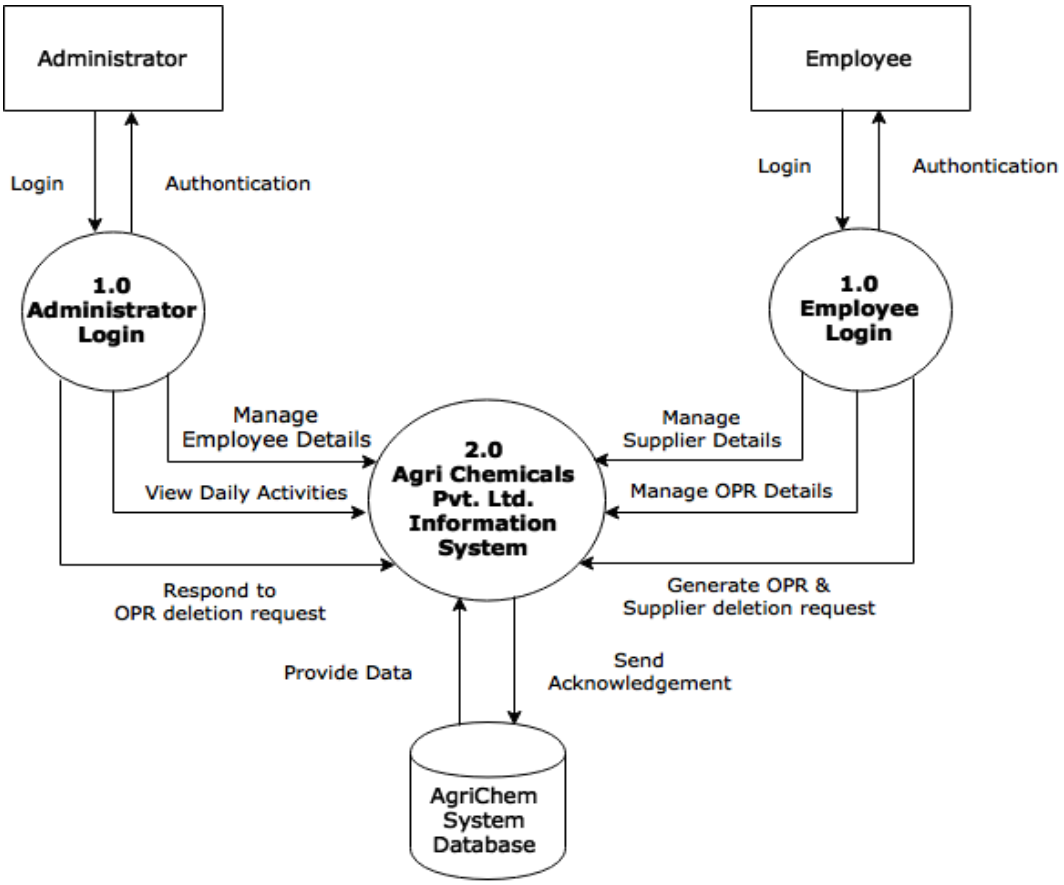

Figure 5.4 DFD Level 1 Diagram

The above diagram shows the major processes handled by the Information System for the Liaison Company. Any user of system must have to logging in order to utilize the system features. If the authentication is valid then user gets access to system. Employee uses the combination of unique id and password to log into the system. Once authentication is done employee can enter into the system. As for the Administrator side he/she can logged in on the server side as the same manner of employee. The services provided by the SQL database management system make sure the data transaction in the system. All the client side data is collected with the help of application and send to the server.

Chapter 6

Conclusion and Future Scope

6.1 Conclusion

For the purpose of keeping track of historical data related to OPR, OPO, Suppliers and any other company matter details we develop a client-server information system for the before mentioned company. As any other company, the mentioned company also works in hierarchical manner. To achieve such hierarchy we created a system where Administrator act as the higher authority and control the work done by the lower authority like company employees in this case. The system stores details about company mattes in the form of electronic data so any modification or disposing of data is less cost effective and very time saving than any other paper methods approached by the company in the past.

6.2 Future Scope

At current point we only develop a desktop version of application which only works on the Windows operating system. So, creating a web based application which provides the user more web based services like web chats, web notifications, connectivity from various platforms like desktop, mobiles and etc.

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Acknowledgement

It is our privilege to express our sincerest regards to our project guide **Prof. Nilima Dongre** for their valuable inputs, able guidance, encouragement, whole-hearted cooperation and constructive criticism throughout the duration of our project.

We will also like to thanks our project coordinator **Prof. Reshma Gulwani** for organizing and coordinating our BE project. We deeply express our sincere thanks to our Head of Department **Prof. Dipti Jadhav** for encouraging and allowing us to represent the project on the topic "Information System for the Liaison Company".

It is our privilege to express our sincerest regards to our principle **Mr. Ramesh Vasapannavara** for his support and encouragement.

We also want to thank all our lecturers who have directly or indirectly helped our project. Last but not the least we express our thanks to our friends for their cooperation and support.

This project involved the collection and analysis of information from a wide variety of sources and the efforts of many people. Thus it would not have been possible to achieve the results reported in this document without their help, support and encouragement.