

Inventory Automation System

Abstract

Inventory Automation System is an online software application which fulfills the requirement of a typical Stock Analysis in various godowns. It provides the interface to users in a graphical way to manage the daily transactions as well as historical data. Also provides the management reports like monthly inwards, monthly deliveries and monthly returns.

This application maintains the centralized database so that any changes done at a location reflects immediately. This is an online tool so more than one user can login into system and use the tool simultaneously.

The aim of this application is to reduce the manual effort needed to manage transactions and historical data used in various godowns. Also this application provides an interface to users to view the details like the daily Stock Statements of all godowns.

Existing System

Current system is a manual one in which users are maintaining ledgers, books etc to store the information like suppliers details, inwards, deliveries and returns of items in all godowns, customer details as well as employee details. It is very difficult to maintain historical data. Also regular investments need to purchase stationary every year.

Disadvantages:

The following are the disadvantages of current system

1. It is difficult to maintain important information in books
2. More manual hours need to generate required reports
3. It is tedious to manage historical data which needs much space to keep all the previous years ledgers, books etc
4. Daily transactions are to be entering into different books immediately to avoid conflicts which are very difficult
Co-ordination between various branches is very difficult

Proposed System

Proposed system is a software application which avoids more manual hours that need to spend in record keeping and generating reports. This application keeps the data in a centralized way which is available to all the users simultaneously. It is very easy to manage historical data in database. No specific training is

required for the employees to use this application. They can easily use the tool that decreases manual hours spending for normal things and hence increases the performance. As the data is centralized it is very easy to maintain the stocks of the various items in all godowns.

Advantages:

The following are the advantages of proposed system

- Easy to manage all the daily transactions
- Can generate required reports easily
- Easy to manage historical data in a secure manner
- Centralized database helps in avoiding conflicts
- Easy to use GUI that does not requires specific training.

Scope of the System

The proposed system scope is Internet. We are using this system through out the world. In future it can be enhanced to be a global communication medium for multinational companies. We can also implement internationalization (i18n) to support user interface in various/local languages.

Module Description

The system “**Inventory Automation System**” consists of 4 modules

1. EMPLOYEE INFORMATION MODULE
2. INWARDS AND REPORTING MODULE
3. DELIVERIES MODULE AND RETURNS MODULE
4. ADMINISTRATOR MODULE

1. **EMPLOYEE INFORMATION MODULE:** This module maintains all the information which belongs to the employees who are working for the company. It allows the administrator to add an employee record to the database very easily and it allows to view the list of employees in tabular format out of which he can edit a particular employee. Admin can take the print of employee report just by making a single on print icon and It also allows the administrator to remove an employee from list. It makes all the above can be done very flexibly.

2. **INWARDS MODULE:** This module maintains all the information related to manage inwards done in the godowns. All the inwards are recorded to database and can be viewed as a report that displays all the inwards made by the company at each godown. It allows the normal user to enter godown-wise inwards details whenever inwards done in any godown. It facilitates the user to select godown id from the list which prevents entering invalid godown ids and allows the user to select the directly from a calendar which reduces lot of confusion in date formats and all. It doesn't allow admin to enter the above details.

This module used to provide reports required by the higher management. It provides a facility to generate dynamic reports like information about the godown, monthly inwards, monthly deliveries,

monthly returns and stock statements very easily.

3. **DELIVERIES MODULE:** This module deals with major and crucial part which includes deliveries of items whose purpose is for sale or service. This module provides interface to add the deliveries details and can be viewed as a report that displays all the deliveries made by the company at each godown. It allows the normal to enter whenever some delivery to has to done from any godown. It facilitates the select godown id and item id from the list for better user-friendliness. It also asks the user to select purpose of the delivery whether it is sale or service.
It provides an option to take the print out of delivery report.

This module deals with another major and crucial part which includes returns of items whose purpose is of damage or order cancelled. This module provides interface to add the returns details and can be viewed as a report that displays all the returns made by the customer at each godown. It allows the normal user to enter return details whenever a return will takes place at any godown. It provides the facility for the user to select the delivery items list out of which he can select id of return item very easily. It also facilitates the user to view returns report in tabular format.

4. **ADMINISTRATOR MODULE:** This module is used to manage the details of users of the application. Users are divided into two categories.
 - a. Admin
 - b. Normal user

It allows administrator to add a new user, view the list of user and delete a user from the list. It allows to

send a print request to the printer for printing user report

Features to be implemented

- *Session management*
- *Connection pooling*
- *Normalized database*
- *Prevention of duplication login*
- *Design patterns*
- *Three-tier architecture*
- *Maintainability*
- *Easy deployment with Ant script.*
- *Exception handling*
- *Client-side validations*

Technologies to be used

- *Web Presentation: HTML, CSS*
- *Client – side Scripting: JavaScript*
- *Programming Language: Java*

- **Web based Technologies: Servlets, JSP**
- **Database Connectivity API: JDBC**
- **CASE tool: Rational Rose/ Visual Paradigm/ Enterprise Architect**
- **Backend Database: Oracle/SQL Server/MY SQL/MS Access**
- **Operating System: Windows XP/2000/2003, LINUX, Solaris**
- **J2EE Web/Application Server: Tomcat/Web logic/Web sphere/JBoss/Glass Fish**
- **IDEs: Eclipse with My Eclipse plug-ins/Net Beans/RAD**
- **Browser: IE/Mozilla**

Hardware requirements

- **Pentium processor ----- 233 MHZ or above**
- **RAM Capacity ----- 128MB**
- **Hard Disk ----- 20GB**
- **Floppy disk ----- 1.44 MB**
- **CD-ROM Drive ----- 32 HZ**
- **KEYBOARD ----- 108 Standard**