Inventory Management System using STRUTS Framework Architecture

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Abstract

Every organization needs inventory for smooth running of its activities. It serves as a link between production and distribution processes. The System maintains computerized information related to the Organization. Which maintains and saves data in the form of excel sheets which are being accessed by the organization admin and its employees which is a very tedious job. Security is very low as anyone can access the data, even the ones who are not having permissions to access the database. To reduce these problems the new system is providing a level-wise authorization for the security purposes. The System is related to the processing of information on NPD (New Project Development) which will be including the product activity tracking till the product dispatch. This system also will be providing additional features level-wise authorization for the security purpose.

Keywords: Inventory, MVC Model, Struts Framework, etc.

1. Introduction

Inventory is a technique of maintaining the inventory at different authorized level, so that the production and management applied on different level. Inventory Management is tracking of Information Services and data .In this system four main areas are concern:-

- Maintaining enough inventory-
    An organization needed to manage the inventory such that (Stock, Employee info, Product, PO, Quotation) Management.
- Authorization access in inventory
    Authorization is important for security purpose. Authorization is the function of specifying access rights to resources related to information security in general and to access control in particular.
- Tracking Inventory
    The tracking system is important in inventory system because it will use for track the inventory and analyze the inventory.
- Maintain Flow of control

In this flow of control manage the level wise control to handle inventory system.

2. Issues of Inventory

In this organization Inventory Management is main issue, For managing the product, employee and supplier details, and tracking the progress.

In this Inventory Management System using all issue will be cover on this particular organization, because in this system manage the product, supplier as well as employee details also.

And most important module in this inventory which will be use a encryption technique, for secure login session .This Inventory Management System will be access in Off-line network, and it will be also support multi-user inventory system. This inventory management system is not Desktop application it will be a Web-Based application. most important thing is in this web based application will be made using a struts framework architecture because it will provide unified framework for deploying JSP and Servlet webpage's.

3. Proposed system

This Inventory System will focus on individuals and small businesses' companies. The primary use for the Inventory Management System is to track and monitor sales and available inventory of a business system. Moreover, the functionalities needed by Organization are Items, Orders, Suppliers, Customers, Users and Authentication, Report, Billing". In this inventory system manage the inventory on web-based application with authentication.

When organization needed to maintain the daily work, daily selling, Producing Stock Management, Employee information, Purchase order, Quotation, Billing, Monthly Report. This system is a using JAVA (JSP) technology use for developing the inventories WEB-Based Application. Using the struts framework many security are provided

with authentication algorithm also applied by using java source code because java platform independent language and one more thing it will supported by JAVA programming languages. In this system will be use 3-layerd architecture for making the operation on inventory. First layer will be use for a GUI user side, second layer will be operational layer and third layer will be database side. The database is used for MySql for store and updates the data in inventory for managing and eliminating the cost of managing the inventories.

3.1 Software Process

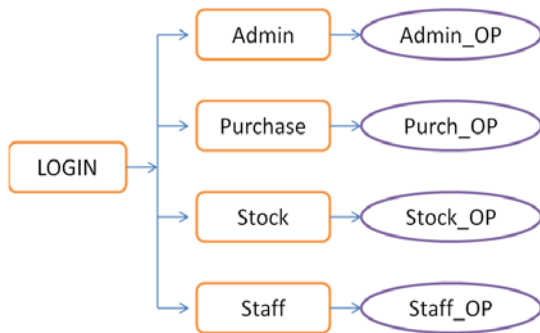Fig.3.1.1 Inventory Management System Process

i.   **Login:** All the Module have login sessions which will be helpful for security purpose. Every User have particular IoginId and Password.

ii. **Admin:** Admin have all authority which is handled Purchase, Stock, Staff module. Admin access all the module for View, Update and Delete. Admin able to control the all module authority.

iii. **Purchase:** Purchase module purchases the product if the product available or not. Purchase module generates purchase order. Purchase orders take request from staff and stock when the products want to purchase.

iv. **Stock:** Stock module Manage the product import export and tracing the sale product and manage the stock(Products)

v.   **Staff:** Staff module is employee based module, this module only for the get the product for stock module and assemble the client location.
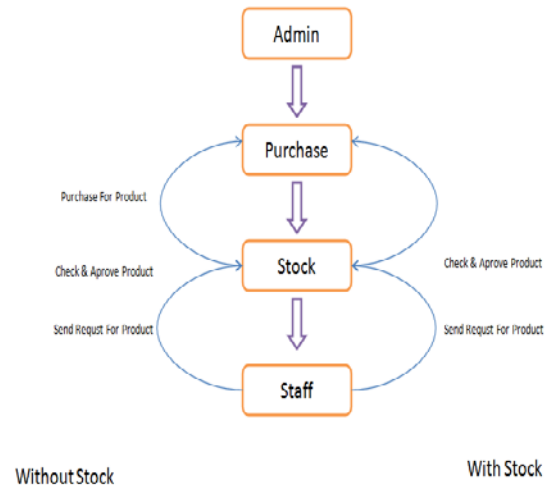
3.2 Internal Process

Fig 3.2.1 Internal System Process

With Stock: Staff panel is send request to the stock panel for product then stock panel will be checked the product in stock (IN/OUT Stock) when the product in stock then the stock panel should be approve the request and then take this product for staff(Employee).

WithOut Stock: Staff panel is send request to the stock panel for product then stock panel will be checked the product in stock (IN/OUT Stock) when the product Out of stock then the stock panel should be approve and send the request to purchase panel and then purchase panel should be purchase the product to supplier, and then take this product for staff(Employee) using stock panel.

4.1 Algorithm

MySQL sha1() function calculates an SHA-1 160-bit checksum for a string. The function returns a value as a binary string of 40 hex digits. If the string supplied as argument is NULL, the function returns NULL.

Eg. SHA1(str)

Query For SHA Encryption
SELECT SHA1('admin');

Explanation:-
The above MySQL statement returns SHA1 checksum of admin string. The return value is

d228359c41174cede6b3c401eb8d11746a4ad1eb.

Conclusion

This paper has presented an inventory management system, the database needs to be updated every day or before inventories so that new eligible data may be enrolled and those who are useless are removed from the database. In this paper the inventory related discussed and in general and the focus is on making the Inventory system more user friendly and faster than other. Also we have discussed Struts framework architecture based MVC Model technique to managed correctly action to view and view to action flow. This Inventory management system helps a particular organization or companies to manage the inventories without any problem.

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