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Workshop Inventory Management System

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Abstract-Inventory management is a vital process that entails managing and organizing goods within a facility, controlling the movement of products from manufacturers to warehouses and sales points. It encompasses tasks such as acquiring and maintaining merchandise, order handling, logistics, returns, and cost control. Technological advancements and software applications have transformed inventory management, making it crucial for marketing managers and finance controllers due to its impact on the supply chain and financial well-being of a company.

Keywords: *Inventory Management System (IMV), Java, Xampp Server, Database.*

I.Introduction

Outdated manual inventory management systems involve time-consuming data entry and report creation, leading to authentication issues and redundancy. Tracking inventory and optimizing storage becomes challenging for growing businesses. Intense competition in the global market necessitates improving inventory control systems. Companies must introduce new products and designs, maintain flexibility, and respond to changing market needs, customer expectations, and technological advancements. Key improvement measures include inventory levels, work-in-progress, product quality, technological advancements, and production process flexibility. Increasing the capacity of existing facilities is necessary.

II. Literature Survey

We have analyzed other existing web applications, software's and android applications related to our desktop application "Inventory Management System ". and there we conclude the pros and cons of these existing system and compare our website with them and try make our website suitable beyond these 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

:The disadvantages of existing inventory management can be listed as under

1. Expensive:

Although the system provides such great features and makes the entire business a lot better and efficient, all this comes at a cost. Big time businesses can cover up the cost or

the one time investment in some time but in the case of small or medium-sized businesses, it is at times not feasible to maintain such software.

2. Complexity : Although the use of an inventory management system makes handling the inventory quite easy but learning how to operate it is quite a task. Special training sessions and manuals should be adhered to, to successful.

3. Malicious Hacks: Hackers look for any way to get company or consumer information. An inventory system connected to point-of-sale devices and accounting is a valuable resource to hack into in search of potential financial information or personal details of owners, vendors or clients.

Proposed System:

Inventory management refers to the process of handling inventory, starting from sourcing materials to fulfilling customer orders. It involves the science of purchasing, supervising, controlling, and distributing stock for sale, all of which is stored in a facility.

The proposed system is a software application that aims to simplify inventory management by reducing the need for manual record-keeping and report generation. This application stores data in a centralized manner, allowing all users to access it simultaneously. Managing historical data becomes effortless with the database. Additionally, no specific training is required for employees to use the application. They can easily utilize the tool, saving time on routine tasks and improving overall performance. With centralized data, maintaining stock levels for various items in multiple warehouses becomes highly convenient.

III. Methodology

The Workshop Inventory Management System is a software application designed to efficiently manage and track inventory in a workshop or manufacturing setting. This system streamlines the entire inventory management process, from receiving and storing materials to tracking usage and reordering.

The system begins with the receiving process, where incoming materials or parts are logged into the system. Each item is assigned a unique identification number, and relevant details such as quantity, supplier information, and date received are recorded. This information helps maintain a comprehensive record of all inventory items.

Once the materials are logged into the system, they are stored in designated locations within the workshop. The system provides the ability to define specific storage areas and assign items to these locations for easy retrieval. This ensures that inventory is organized and easily accessible when needed.

When materials are used in the workshop for production or repairs, the system tracks the usage. The inventory is automatically updated, reducing manual effort and eliminating the risk of errors. This real-time tracking feature allows for accurate monitoring of stock levels and helps in avoiding stockouts or overstocking situations.

To optimize inventory levels, the system generates notifications when stock reaches predefined reorder points. This enables

timely reordering of materials, ensuring that there is no disruption in workshop operations due to insufficient inventory. Additionally, the system can generate reports and analytics on inventory usage, stock levels, and reorder patterns, providing valuable insights for inventory planning and cost optimization.

The Workshop Inventory Management System also facilitates inventory audits and stock reconciliation. It allows for periodic physical counts of inventory to verify the accuracy of the system's records. Any discrepancies can be identified and addressed promptly, ensuring data integrity and minimizing inventory discrepancies.

Overall, the Workshop Inventory Management System simplifies the entire inventory management process, from receiving to usage tracking and reordering. It improves efficiency, reduces manual effort, minimizes stockouts, and provides valuable insights for better inventory control and cost management in a workshop environment.

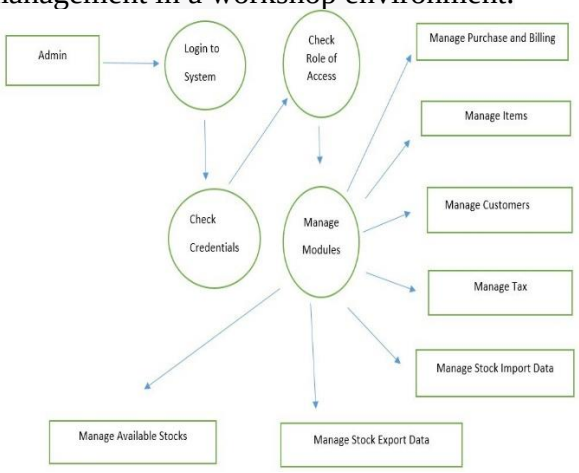

Fig3.1:Data Flow Diagram

IV. Conclusion

While developing the system a conscious efforts has been made to create develop a software package making use of available tools, techniques and resources, that would generate a proper system.

While making the system, an eye has been kept on making it as user- friendly, cost-effective and as flexible as possible. As such one may hope that the system will be acceptable to any user and will adequately meet his/her needs.

As in case of any system development processes where there are a number of shortcomings, there have been some shortcomings in the development of this system and that is why the project still under modification.

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