A Review of Inventory Management System

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Abstract—Inventory Management System is extremely beneficial to business owners, as they allow shops to properly store sales and purchase records. When inventory is mismanaged, it leads to dissatisfied consumers, slower sales, too much cash on hand, and warehouses. This inventory system reduces manual work, human mistake, and manual delays while simultaneously speeding up the process. This inventory management system will be able to track sales information as well as inventories. Inventory management system is a web application for Windows that focuses on inventory and sales clearance. It was created for Windows operating systems. The inventory management system has a number of features. This web application has logical tools for evaluating ideal inventory levels and selecting the appropriate replenishment strategies automatically. It also has capabilities like the ability to identify stock levels, compute reorder points automatically, and highlight potential stock-outs. This technique eliminates the risk of stock-outs of fast-moving goods by minimizing delays.

Index Terms: Inventory Management System, track sales, sales clearance, time saving, warehouse, stock.

I. INTRODUCTION

The inventory management system at a warehouse is a set of techniques, methods, and technologies for managing and controlling inventories. It can be used and utilized in a wide range of ways, from simple to complex. It focuses on the needs and scale of the company, as well as the capabilities and utility of the management software. Inventory management system software is a necessary and valuable tool for all firms that deal with inventory. It regulates the movement of stock in and out, keeps track of inventory levels for all items and stock, provides access to sales data and analytics, and helps businesses specify specific safety stock requirements .Inventory management is, in a way, the lifeblood of a company; it is what generates sales, which drives profitability. The advantages of a sophisticated and effective inventory management system can be enormous. The way a company maintains its inventory can have a big impact on its overall success.

A. DEFINITION

The process of ordering, storing, and managing a company's inventories is referred to as inventory management. This includes the production of raw materials, components, and final goods, as well as the storage and processing of these commodities. For companies with complex supply chains and manufacturing processes, balancing the risks of inventory saturation and shortages is extremely hard.

There are four different types of inventory management:

• **Raw Materials:** Any business buys raw materials for its production line in order to turn them into finished goods.

• **Work-in-progress inventory:** This refers to the process of turning raw materials into finished commodities.

• **Completed items:** These are goods that have been entirely built and are now for sale.

• **MRO (maintenance, repair, and operation) items:** Items purchased from a distributor for resale to support the production of finished goods.

B. PROBLEM

Inventory is an important department in the Inventory Management System that needs to be well-managed in order for daily business operations to run successfully. However, because they do not have a computerized system to run their business, some businesses still do not comprehend the need of inventory management. As a result, the level of protection for all data, documents, and anything linked to everyday transactions and inventory is extremely low. For each good and each supplier, a large number of documents and data have been kept which takes a long time and is ineffective for future references, causing time-consuming.

Furthermore, due to weak sales and inventory, the store has difficulty to determining the quantity sold per day for each item as well as the available inventory level of the items. It's difficult to keep the records manually. Another issue that has been noticed is that most customers who make purchases at the store do not obtain a suitable receipt as a reference, which makes it difficult for customers to swap their existing goods if there are any problems.

C. SOLUTION

The storekeeper's requirements for creating backup inventory in a short amount of time and with great efficiency led us to develop a computerization solution based on a desktop. We currently believe that this is predicated on a solution. However, based on the lesson learned, it may require some improvement in the future, thus it is the new request from the shopkeeper. This built software system will include a database that stores and retrieves transaction data as well as information about the inventory of each product in the shop, manages product releases and storage, and summarizes the point of sale. This would result in quicker work improvisation with less time and effort. Because the goal of an Inventory Management System is to decrease paperwork and inefficient inventory management methods, it is expected that this system will aid in making the best inventory management decisions possible.

Here is a solution for some of the requirements of shopkeeper:

a) **Invoice Generator**

We can maintain the clever aspects of invoice management in order to organize information in a single table structure. Every one of the inventive aspects may be found in one view page design for the owner of this company. All of the stock sections must maintain that view in order for it to be refreshed as often as necessary.

b) **Create an invoice**

The invoice design can be printed using the printing module. It can be converted to a PDF format and used to create an invoice for the client.

c) **Look at the Invoice**

This allows the company's owner to see all of the customers who have purchased items from them over the course of a day, week, or month.

d) **Reporting Tool**

A monthly, daily, and weekly sales analysis report is included in the Report Generator. It is a summary of the current situation of a company's sales efforts. It not only depicts distinct trends in sales volume over time, but it also examines the various elements of the sales process and the effectiveness of sales leaders.

II. OBJECTIVES

An inventory management system's primary purpose is to retain stock at a level that is neither overstocked nor under stocked.

Inventory management has both operational and financial goals. Materials and stock should be available in sufficient quantities for operational purposes, whereas minimum working capital should be locked in for functional purposes. The following are the inventory management goals:

• To provide a consistent availability of materials and inventory so that production does not suffer when customers require it.

• To prevent excess inventory and under stocking inventory.

• Ensuring that supplies are available in enough amounts whenever and wherever they are required.

• To minimize various costs related with inventory, such as purchasing, carrying, and storage expenditures, among others.

• To keep material costs down, as they help to keep production costs down.

• To eliminate stock-ordering duplication.

• Minimize losses due to degradation, theft, wastages, and damages.

• To provide the essential content on a constant basis.

• To keep a standardized inventory record.

•To generate a monthly report on sales and inventory activity automatically.

III.REASEARCH METHODOLGY

The investigation of shopkeepers was the primary method used in this study. This study is based on direct data gathered from store owners as well as secondary data gathered from journals, books, articles, annual reports, and websites. Safety stock inventory, FIFO and LIFO are the approaches applied in this research.

IV.SCOPE OF THE PROJECT

This study looks at sales control, inventory management, and how to deal with business abnormalities. It examines the capacity to add new sales, update products and sales details, and see existing ones. It allows for faster operation by recording and automating manual processes.

V. BENEFITS

• Inventory accuracy: Inventory management aids in the organization and streamlining of inventory placement and procurement in order to improve fulfillment.

•Improve Organizational data visibility: Reports and analytical tools provide useful information about how daily processes work and how to plan for the future.

• Preventing stock issues: Inventory optimization can help you avoid stock-outs or surplus stock situations.

• Improved customer service: Inventory management aids in precise delivery and satisfied customers.

•Financial statements are based on a consistent and dependable basis.

• Assures a sufficient supply of materials.

VI. CONCLUSION

This paper describes an Inventory Management System that stores sales data for a certain desktop application. It's a simple desktop application that links to the actual distribution centre, allowing information to be refreshed and confirmed in the store. It's a secure application that prevents data from being spoiled in the stores. It also provides sales information on a daily, weekly, and monthly basis. This system makes inventory management a breeze. Increased income and profitability, a better employee climate, and an overall boost in customer satisfaction will be noticed as a result of the inventory management system.

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