COLLEGE STOCK INVENTORY MANAGEMENT SYSTEM

Dr. A.B. Gadicha*1, Deepansha R. Nakhale*2, Anuja V. Talkit*3, Aachal S. Katre*4

*1HOD, AIDS, P. R. Pote Patil College Of Engineering & Management, Amravati, Maharashtra, India.
*2,3,4Student, CSE, P. R. Pote Patil College Of Engineering & Management, Amravati, Maharashtra, India.

DOI: https://www.doi.org/10.56726/IRJMETS51595

ABSTRACT

The proposed work is aimed at developing a website named Stock Inventory Management System for managing the inventory system of any organization. The College Stock Inventory Management System (CIMS) refers to the system and processes to manage the stock of organization with the involvement of Technology system. This project intends to introduce the user-friendly website for various related activities such as record purchase order from staff members, stationery product requisition, generate purchase orders for suppliers and generate bills for accounts section and many other related processes.

Keywords: CSIMS, Requisition, Inventory, Feasibility.

I. INTRODUCTION

The proposed work aims is to introduce user-friendly application software for various related activities such as record purchase orders from staff members, stationery product requisition, generate purchase orders for suppliers and generate bills for the accounts section and many other related processes.

Orders, sales, and delivery are tracked using a web-based solution known as the College Inventory Stock Management System. Maintaining the proper level of inventory, managing the proper stocks of the college inventory, raising request from different departments, invoice generation, and guaranteeing that your products are always in stock are all features of stock management software. What was traditionally a time-consuming, laborious procedure of counting each item individually and recording it now automated by stock management software.

The project's goal is to create an inventory management system for the college that will control the stock of various goods. The application will have modules for stock information of various product categories, stock that is available, item prices, and so on. Additionally, any reports pertaining to purchases and sales can be extracted. All of the items, stock data, categories, and subcategories will be included in the inventory management system. The inventory is controlled by some estimates rather than exact figures in the manual method that is already in place; either too little or too much stuff is ordered. This causes stock to run out or inventory to accumulate.

The undertaking The Inventory Management System is a comprehensive desktop program created with Visual Studio software and Net technologies. The primary goal of the project is to create software for an inventory management system model, which will display all of the organization's stock information. It is a desktop program that runs over an intranet and includes an admin component for managing inventory and system maintenance.

The management of an organization's stock is the foundation of this desktop program. The application includes a general organization profile, sales information, purchase information, and the organization's remaining stock. Together with the specifics of the transaction balance, this application also shows the stock's remaining balance.

Every new stock is generated, assigned a name, and given an entry date. It can also be updated as necessary based on transactions or, in the unlikely event that a sale is returned. Here, the login page is made to safeguard the organization's stock management against theft and improper usage of the inventory.

The goal of this work is to create Inventory Management System, a desktop program for controlling any organization's inventory system. The system and procedures used by an organization to manage its stock while integrating technology are referred to as the Inventory Management System (IMS). This system can be used to create sales and inventory reports on a daily or weekly basis, save inventory details, maintain stock, and update inventory depending on sales information.

www.irjmets.com

@International Research Journal of Modernization in Engineering, Technology and Science
When it's time to record, a smart inventory management system will notify the distributor. The Inventory Management System is a crucial tool for automatically monitoring bulk shipments. The number of errors made when recording stock is reduced with the aid of an automated inventory management system.

II. LITERATURE SURVEY

M. O Yinyeh, S. Alhassan has suggest that, time and money savings are two advantages of putting an inventory management system in place. Man-hours are wasted when data is manually entered and recorded in the absence of such a system. Real-time inventory management systems save time in the warehouse and office by processing and updating transactions automatically. To prevent stockouts and the need to tie up too much cash in inventory, the system can also be set up to notify management when a specific level is reached and push them to place new orders for the products. To ensure precise inventory management, the system can also track products using tracking criteria like barcodes or serial numbers.

The adoption of this inventory management software in Ghana’s public colleges would greatly lessen the challenges related to inventory management. Using an automated system can lead to better decision-making, more customer satisfaction, and increased profitability and cash flow. Universities can lower costs, boost productivity, and increase profitability by anticipating, regulating, and managing their inventories. Cash flow is improved by buying the right inventory in the right quantities, and decision-making is improved by fast and accurate data collection that provides access to real-time business analytics. Last but not least, having the appropriate products on hand and easily accessible raises client happiness. [1]

Punam Khobragade, Roshni Selokar, Rina Maraskolhe, Prof.Manjusha Talmale has suggest that, The lengthy and accuracy-dependent process of creating backup data is highlighted in the article as a challenge. Redefining the needs and constraints of the automation solution is essential because the project's scalability raises risk and processing time.

The goal of the study is to deploy a desktop-based automation solution to meet the shopkeeper's need for backup inventory creation with high accuracy and in a short amount of time. The article emphasizes how crucial it is to constantly refining the automated system in light of new shopkeeper requirements and lessons learnt.

Features including stock proportionality, inventory section maintenance, invoice administration, and printing modules are all included in the inventory management system covered in this article. The solution allows the store owner to create PDF invoices, change the inventory, and examine all details on a single view page. In addition, it offers a thorough summary of client purchases, making it easier to analyze products, compute discounts, and handle accounting.[2]

Pratap Chandrakumar, R. Gomathi Shankar has suggest that, The inventory management of WABCO INDIA, a well-known brake manufacturer, is the subject of this research report. The study examines inventory control procedures, encompassing SAP use and ABC analysis. It draws attention to the company's inadequate demand forecasting, which has an impact on production procedures. The study makes the case that better inventory management, more efficient use of labour, and a decrease in completed product inventory can result from enhancing supplier communication and putting precise demand forecasts into practice. According to the ABC investigation, C goods, which make up the bulk of volume and take up a large amount of inventory space, require greater oversight.

In order to decrease dead stock, the study underscores the significance of stock optimisation in supply chain management as well as the necessity of better communication and accurate forecasting. There are references to several research in the field of inventory management that include subjects including inventory control models, all-inclusive inventory management systems, and inventory optimization strategies. The significance of inventory management in attaining financial success, lowering carrying costs, and boosting profitability is also emphasized in the study. The study uses a combination of primary and secondary data collection methods to comprehend the Brake Manufacturing Company's control measures and offer appropriate ways for better inventory control. The study offers a thorough examination of sales, earnings, and inventory levels while highlighting the need for efficient internal forecasting and communication. It concludes that effective inventory management can help a business expand and succeed by resolving a variety of inventory-related issues.[3]
Santosh Soni, Pankaj Chandra, Akanksha Gupta, Deepak Kant Netam, Sushant Kumar, Kaushik Tiwary have suggest that, The Inventory Management System (IMS) project uses HTML, Bootstrap, CSS, JavaScript, PHP, Ajax, and SQL to create an online application for a college's finance department. The application offers an easy-to-use interface for recording transactions, managing financial records, producing reports, and promoting communication between the campus community and the finance department. PHP and Ajax are used in the development of the backend, while contemporary web technologies are used in the frontend. The programme uses dynamic web pages to deliver real-time updates while storing data in a SQL database.

The project’s goals are to boost user experience and increase the college's financial management system's accuracy and efficiency. Features like product tracking, order status updates, inventory search, and thorough stock balance data are all included in the IMS. Its objectives are to deliver precise and timely information, minimise errors, and automate the inventory management process.[4]

Nwafor Chidinma Anulika, Idoko Nnamdi, Agbo Jonathan Chukwuwike, Ogbene Nnaemeka Emeka have suggest that, This study combines the Python Flask Framework and SQLite database model to build and implement an automated inventory management system. The system’s objective is to help retailers overcome the difficulties they encounter in precisely and efficiently managing their inventory.

min interfaces, the system is a web-based platform created especially for online supermarket inventory management. The admin is in charge of managing consumer behaviour and submitting new inventory. The article outlines the features and advantages of an inventory control system, which includes controlling the flow of goods into and out of the company and automating the sales order fulfilment process. Automation is thought to be a speedier and more efficient alternative to human processes. An efficient inventory management system keeps track of products and services, guarantees the proper amount and quality at the correct price, and enhances logistics coordination.[5]

Susan N. Okorie, AK. Jibril P have suggest that, The creation of an electronic inventory management system for Abia State College of Education (Technical) Arochukwu, which presently uses a paper-based system, is the main topic of this research study. The study draws attention to the drawbacks of the current system, including its length, expense, inefficiency, susceptibility to data breaches, and tendency to lose inventory information. The researchers suggest a computerised system that will simplify and enhance inventory management as a solution to these problems.

Based on the quantity of products on hand, the designed system can help managers make decisions on where to put inventory based on the generation of reports on products issued and received. Real data was used to test the system, and it was discovered to be effective and functioning. Nevertheless, because the designed system is a desktop application, none of the three users—the college bursar, admin, and inventory staff—can use it concurrently or from various locations. For more effective and efficient inventory management, the researchers advise continuing the development of a web-based system.[6]

### III. METHODOLOGY

Every college need stationery product to carry out the day-to-day activities which involve the use of various stationery products such as registers, files, pens, printing papers, erasers, pencils, markers and many other things. Nonetheless, the majority of colleges keep a register in which they document all transactions pertaining to the purchases of stationery items for the college. Few universities employ automated system software for tasks involving stationery products. College Stock Inventory Management System provides website to carry out activities regarding stationery products for the college which is an automated system instead of making manual entries into books which consumes a great amount of time.

This work is being designed with PHP technology, while the front end is being constructed with HTML, Bootstrap, CSS, and JavaScript. SQL is the database that is utilised to hold inventory data. A dual-core processor, 1GB of RAM, and a 2GB hard drive are the very minimum requirements for running the program on a web server. The system is made to work with Android, MAC, and Windows operating systems.

- **Functional Requirements:**
  - This system comprises of 2 major modules with their sub-modules as follows:
    - **Admin**
• **Login:** Admin can login in his personal account using id and password.

• **Product:** There are two features: the ability to view all products and add new items.

• **Customer:** We can view all of our customers and add new ones here as well.

• **Transaction:** From this page, you can view all of your transactions as well as add new ones.

• **Inward Transaction:** A list of all transactions that occur between the Administrator and Supplier is known as an inward transaction.

• **Outward Transaction:** A list of every transaction that happens between the customer and the administrator.

• **Supplier:** The admin can see his entire associated supplier list here.

• **Staff**

• **Login:** Staff member can login in his personal account using id and password.

• **Product:** There are two features: the ability to view all products and request for new items.

• **View Request Status:** Staff members can check the request’s status here.

• **View Rejected Request:** Staff member Employees can view all of the requests that have been denied here.

• **Context-level Diagram:**

---

### IV. MODELING AND ANALYSIS

• **Project Life Cycle**

A linear sequential flow model of development is the waterfall model. In this case, the process moves through the software implementation phases in a downward, waterfall-like manner. This implies that each stage of the development process is dependent upon the one that came before it; that is, the current phase can only start if the preceding phase is finished. This is just one way to go. This is the first method that is frequently applied to software development.
The Inventory Management System (IMS) project aims to develop a computerized system that facilitates effective inventory management for the college. The main objective of the project is to create an application that can keep track of stock levels, update inventory depending on sales data, save inventory information, and provide daily or weekly sales and inventory reports. Errors that can occur while manually recording stock levels are minimized by the automated and precise inventory tracking and management system (IMS). Additionally, it will offer a way to save past inventory-level data, which may be utilized to produce insights into stock movement and trends over time.
The project’s goal is to develop an intranet-accessible desktop program that is easy to use. It has an administrative component that makes inventory management and system updates possible. In order to guard against the improper use of inventory information, there is also an employee login. The overall goal of the project is to provide the institution with an accurate, dependable, and effective system for managing its inventory. By developing this system, the institution can make sure that it keeps sufficient stock levels and that employees, students, and other stakeholders are informed promptly and accurately about its inventory.

VI. RESULTS AND DISCUSSION

- Project Snapshots

- **Figure 5:** Home Page.

- **Figure 6:** Admin Login.

- **Figure 7:** Admin Dashboard.
Features

- Quick processing and convenient.
- Data updates are simple to perform.
- Manual labour is decreased with the Simple Data Retrieval System.
- Computers are capable of maintaining database records.
- Data redundancy is prevented.
- Less prone to errors and preservation of accuracy.

VII. CONCLUSION

One of the most crucial elements of every organization is time and money. The college stationery department may find it lucrative to implement such software since it makes duties easier to complete and saves money on labor and supplies. Since it's open source, anyone can modify and customize it to suit their needs.

ACKNOWLEDGEMENTS

First of all, we extend our deepest gratitude to our revered Principal Dr. D. T. Ingole without whose support; our Project could not have been transformed into present form.

We are grateful to our guide Dr. A. B. Gadicha HOD, Department of Artificial Intelligence and Data Science Engineering and Co-guide Prof. M. S. Burange HOD, Department of Computer Science and Engineering for providing immense support and guidance. We are beholden for guiding us at every step in the Project. He has most honestly guided us throughout; never leaving us unanswered for any of our doubts. It was his constant persuasion, encouragement, inspiration and able guidance that helped us in completing our Seminar successfully.

VIII. REFERENCES

(IARJET), Volume 2, Issue 8, August 2013, 2278 – 1323.


