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**Literature Survey**

**Team Members**

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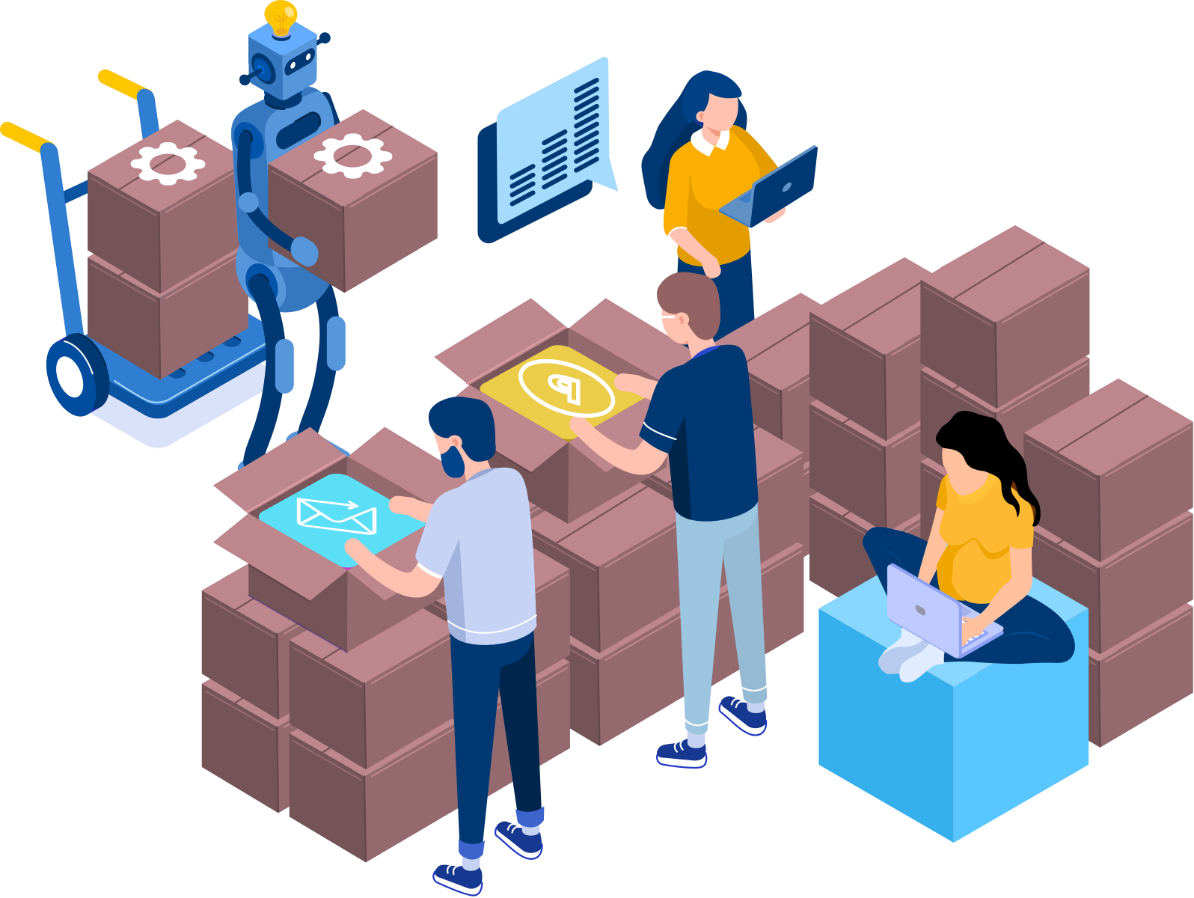
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| **INTRODUCTION**    A difficult issue in supply chain management is inventory management. The company's issue is that they have no system in place to monitor inventory data. The store finds it challenging to keep track of the inventory information. The main challenge for every inventory stock management is keeping track of how much stock is bought and how much stock is used. In this case, a tool or system to help with inventory management would be useful. The term "inventory management" describes the control of the quantity, quality, location, and transportation of a wide range of goods used in manufacture by a range of commercial enterprises or in sales by a range of retailers.  Typically, inventory management systems are constrained and restricted to a predetermined range of items and are unable to be altered and expanded in response to the needs of the client. The Inventory Management System puts a lot of effort into making it flexible and simple for the end user to use, with ongoing customer support to change the use. Inventory Management System concentrates on making it easier by adding details of different other entities that are a part of the company, in contrast to other software that offers comparable features.  **LITERATURE SURVEY**  **1. Design of a Computerized Inventory Management System for Supermarkets**  **Aim:**  The purpose of this article is to develop a computerised inventory management system that will help managers make decisions about how much inventory to order, when to order more inventory, and how to keep track of transactions.  **Scope:**  This work focuses on stock control, management, and tends to fix business abnormalities. It examines the capacity to view current ones as well as the opening of new stocks and stock updates. By automating the human processes and capturing them, it offers a rapid method of operating.  **Implementation**:  New stock, stock orders, stock updates, product or item searches to determine availability, and stock reports are all handled electronically by this system.   * To ensure security, a login page is made. * If it is successful, the splash screen will appear, followed by an automatic display of the main menu form. * The user can select from the New Stock, Update Stock, Search, and View options on the onscreen menu. * Stock information will be recorded in the user form. * Which are later fetched from the database, displayed, and kept there.   **2. The inventory management system for automobile spare parts in a central warehouse**  **Aim:**  In order to manage the inventory of car parts in a central warehouse, this research seeks to design an expanded fuzzy neural network (EFNN) based decision support system.  **Scope:**  To achieve greater accuracy than using an artificial neural network. This project incorporates domain experts' expertise into enhanced fuzzy neural networks (EFNN), which create connection weights based on the fuzzy analytic hierarchy process (AHP) method without laboriously and slowly rotating them.  **Implementation:**  Three parts make up the proposed system.  The fuzzy AHP's hierarchical structure development  The subject matter specialists are questioned regarding the parts, demand, timing, sales, and other relevant aspects that affect the supply of spare parts.  Weights determination: Based on the suggested framework, a new questionnaire is created. Comparing pairs of items from each level to each element in the level above using questionnaire surveys. There is a 7-point scale in use.  Making decisions using EFNN.  To improve accuracy, the EFNN, a five-layered hybrid neural network with the ability to self-organize its activation function, is used. |
| **3. Design of smart inventory management system for construction sector based on IoT and cloud computing.**  **Aim:**  A novel approach to create a model and show how this can help construction sector in managing inventory of essential form work shuttering products.  **Scope:**  This research reveals that there could be an opportunity to approach barcode-based designs by amalgamating such with Cloud Computing, Arduino-based wireless station nodes, IoT and a secure form channel to access data through a dedicated web portal.  **Implementation:**  The proposed model is a novel Aluminium Shuttering Inventory Management System (ASIMS) consist of barcodes, Arduino-based IoT devices, wireless sensor networks and Cloud Computing to track Aluminium formwork shuttering components under actual field conditions.   * Upon receipt of Aluminium [formwork](https://www.sciencedirect.com/topics/engineering/formwork) shuttering components from vendor at site, a Goods Receipt Note (GRN) entry is passed in the system. * Physical verification of the received items and GRN process have needed to be completed. * The barcode labels for the items are generated and printed. The printed barcode labels are then affixed on the formwork shuttering components. * Using our proposed application, the component is labelled and then mapped with corresponding geolocational coordinates to enable tracking. * Aluminium formwork shuttering components are often cut and resized according to localized requirements. During such process of resizing, the created new items have to be checked, verified physically and logged using our proposed software. Again, new barcode labels have been generated for the new components derived from the parent item.   **4. Design of smart inventory management system for construction sector based on IoT and cloud computing.**  **Aim:**  A novel approach to Design of smart inventory management system for construction sector based on IoT and cloud computing.  **Implementation:**  Inventory management and working capital management are routine activities for a specific company and firms. Inventory is one of the most significant components of current assets and current assets, in general, are part of working capital, so it is crucial to understand the amount locked up in inventory and to manage the inventory in the best possible way. In this section of the research, we analyse and investigate the inventory management practises used by Steel Authority of India Limited.  A very important factor in the short-term liquidity position and a major factor in long-term profitability is the stock of raw materials, work in progress, finished goods, etc. In this research project, data for the previous five years is gathered from the company's annual reports, and various ratios are then applied to the data in order to quantify inventory efficiency. In addition, we used a variety of statistical tools to examine the behaviour of selected ratios.  **5. Relationship Between Inventory Management and Profitability: An Empirical Analysis of Indian Cement Companies.**    **Aim:**  An analysis on relationship Between Inventory Management and Profitability: An Empirical Analysis of Indian Cement Companies.    **Implementation:**  The goal of this essay is to investigate the connection between a firm's profitability and its inventory conversion period. For a sample of five top Indian cement companies over a ten-year period, from 2001–2010, the relationship between inventory management and profitability is examined. Gross operating profit is employed as the dependent variable as a measure of profitability. The impact of the inventory conversion period on gross operating profit is examined using regression analysis in this study, which also takes into account the firm's size, current ratio, and financial debt ratio as control variables. The findings show a significant negative linear association between profitability and the inventory conversion period.  The outcomes of this study corroborate earlier conclusions. According to the results, the inventory conversion period and firm profitability are inversely related; that is, as ICP days rise, a company's profitability declines, and vice versa. It was discovered that the ratio of financial debt and corporate profitability, as determined by GOP, are negatively correlated. Inferred from this was the notion that profitability rises when the ratio of financial debt falls. According to this study's findings, there was a positive association between firm size and GOP, indicating that profitability rises as business size increases. GOP support had a negative correlation to current ratio. |
| **CONCLUSION**  A manual pen and paper system must be replaced with an inventory management system. Its primary objective is to regulate how the products are moved and stored, with the added advantages of improved security and quicker handling. A software programme called an inventory management system is essential for keeping track of a certain retailer's stock levels. Additionally, it can offer insightful data to sales analytics. In the end, it serves as a company's lifeline because it drives profitability by creating sales. A company's overall success may be significantly impacted by how it manages its inventory.  **REFERENCES**     1. Abisoye, O. A., Boboye, F., & Abisoye, B. O. (2013). Design of a computerized inventory management system for supermarkets. 2. Li, S. G., & Kuo, X. (2008). The inventory management system for automobile spare parts in a central warehouse. Expert Systems with Applications, 34(2), 1144-1153. 3. Saleem, A. (2020). Automated inventory management systems and its impact on supply chain risk management in manufacturing firms of Pakistan. Int J Supply Chain Manag, 9, 220-231. 4. Bose, R., Mondal, H., Sarkar, I., & Roy, S. (2022). Design of smart inventory management system for construction sector based on IoT and cloud computing. e-Prime-Advances in Electrical Engineering, Electronics and Energy, 2, 100051. 5. Kasim, H., Zubieru, M., & Antwi, S. K. (2015). An assessment of the inventory management practices of small and medium enterprises (SMEs) in the Northern Region of Ghana. *European Journal of Business and Management*, *7*(20), 28-40. 6. Panigrahi, C. M. A. (2013). Relationship between inventory management and profitability: An empirical analysis of Indian cement companies. *Asia Pacific Journal of Marketing & Management Review*, *2*(7). |