Ideation Phase
Literature Review

Team ID	PNT2022TMID03825
Project Name	Project - Inventory Management System For Retailers

S.No	TITLE OF PAPER	AUTHOR	YEAR	JOURNAL NAME
1	Inventory management for retail companies: A literature review and current trends	Cinthya Vanessa Muñoz Macas, Jorge Andrés Espinoza Aguirre, Rodrigo Arcentales-Carrión, Mario Peña	2021	IEEE International Conference on Information Systems and Software Technologies (ICI2ST)
2	Case Study on an Android App for Inventory Management System with Sales Prediction for Local Shopkeepers in India	Tejal Tandel, Sayali Wagal, Nisha Singh,Rujata Chaudhari, Vishal Badgujar	2020	IEEE International Conference on Advanced Computing & Communication Systems
3	Implementation of Inventory Management System	Keshav Srivastava, Dilip Kumar Choubey, Jitendra Kumar.	2020	IEEE International Conference on Innovative Computing and Communication
4	A Proficient Process for Systematic Inventory Management	Rahil Sheth, Mukund Vora, Rohit Sharma, Mohit Thaker, Prasenjit Bhavathankar	2020	IEEE International Conference for Emerging Technology (INCET)
5	Design and Implementation of a Store Management System	G Divya Jyothi, K Navya	2017	IEEE International Conference on Intelligent Sustainable Systems (ICISS)

Inventory management for retail companies: A literature review and current trends

This article's objective is to examine and summarise a large body of literature on inventory management that includes numerous definitions and key ideas for the retail industry. To identify the primary trends and indicators of inventory management in Small and Medium-sized Enterprises, a systematic literature study was conducted (SMEs). The five-year study period between 2015 and 2019 focuses solely on the retail industry. The main findings of this study include the top inventory control and management models, the Key Performance Indicators (KPIs) for managing them correctly, and the advantages and difficulties of selecting or implementing an effective system. According to this research, there are 22 crucial inventory management KPIs that must be taken into account when shops assess their inventories. Ten main indicators were established from them, including inventory level, actual inventory and its connection to the business' information system, shortage or shortage frequency, frequency of product reordering or replenishment, service level, replacement frequency, product availability, inventory excess, number of items on the shelf, and level of income or profit. These indications enable the business to monitor stock levels, manage them effectively, and present a high level of customer service and product availability.

Case Study on an Android App for Inventory Management System with Sales Prediction for Local Shopkeepers in India

In this article, the author proposed the idea of developing a mobile app that offers all the functionality of a point-of-sale system and provides insight into potential future sales is a very affordable and practical solution to this issue. It will make it possible for store owners to monitor their current goods purchases and billing. They will be able to modify their investments in goods and supply because of the predictive sales analysis, ensuring maximum profitability. A store's customer base will grow if it has pertinent items that meet customer needs.According to the study, the crucial part of this mobile app is sales prediction and analysis and this can be done by using data mining algorithms to the customer information that has been gathered as well as the temporal data that the merchants have provided.Regression Analysis is the algorithm that works best in this situation.

Implementation of inventory management system

The objective of this study is to develop a system that effectively manages all the data regarding the dealer, supplier, manufactured goods, and raw materials. The many issues with storing unstructured data can be resolved using MongoDB, which saves data row-by-row and supports indexing. Other NoSQL databases like Cassandra and Neo4j do not have this feature. Hence, the data is stored in MongoDB on the backend, and the frontend is created using Java on NetBeans to provide a good Graphical User Interface (GUI), allowing anyone to access the inventory without any technical knowledge. Every day, the entire E-Commerce department stores a tonne of data, which can occasionally lead to huge things going missing, bad inventory management, and losing sight of their database. The customers also play a significant role in creating this situation by altering the products in the cart, leaving the cart with things at any time, which causes issues at checkout, and frequently cancelling the orders. A system that not only stores this changing data, but also manages it effectively, is absolutely necessary. The present project might assist in fixing the issue and providing the agreed-upon quality of customer service.

A Proficient Process for Systematic Inventory Management

The proposed approach controls an organization's inventory and aids in a better analysis of data relating to the storage and sale of items so that pertinent insights can be drawn from it. The system can be used to generate sales reports daily, weekly, or monthly in the form of different visualisation charts by storing and updating the details of the inventory, stock maintenance, and system. It suggests creating a system for storing data by keeping track of the stock information for products classified under different brands and categories. The system recognises the necessity for an input device, a locked enclosure, a computer device, a data store, and a portal site or application in order to provide a comprehensive environment for effective warehouse and inventory management. The portal, application, computing device, and data repository must all be connected via the internet or a dispersed network. The system offers a technique that will make use of the idea of data analysis to supply details on the most popular, lucrative, and uninteresting stocks.

Design and implementation of Store Management System

Delivering an improving client experience is both an opportunity and a challenge in this era of technology expansion and growing customer demands. Store management hires a retailer to give in-store retail customers a more engaging and modern shopping experience. With the help of this innovation, the store administrators will be able to exchange data consistently with all other participants in the inventory network. Additionally, it can prevent "loss of offer" problems to a greater extent by acting proactively. The store management identifies and monitors items in the shelves and automatically alerts retailers when it's time to restock. Automation will take the place of the human data collection process, allowing businesses to obtain data instantly and without encoding or manual involvement. This paper proposes a new feature that will notify the store manager when a shelf is empty and out of stock. So that the store manager can swiftly fill orders that are out of stock by informing the store.