INVENTORY MANAGEMENT SYSTEM FOR RETAILERS

LITERATURE SURVEY

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Paper 1 :

Stanley Ewenike, Elhadj Benkhelifa and Claude Chi Belushi, “Cloud Based Collaborative Software Development”

Cloud computing is a technology trend that is changing the IT landscape and changing collaboration [3]. One of its most notable advantage lies in its adaptability to varying contexts of use, its extensibility, as well as, the numerous possibilities and opportunities it presents for all stakeholders to collaborate [37]. However, not unlike most emerging paradigms, mixed feelings trail adoption of the Cloud [4], [5], [38]. For collaborative software development, the benefits include, but are not limited to, cost savings, scalability, agility for business and development peak period needs, motivation for

innovation and increased R&D [29]. On the other hand, there are fears about: security issues; vendor lock-in and interoperability issues, portability issues; automation, performance issues; availability issues; handling uncertainty about: heterogeneity and content type, location of client, bandwidth unpredictability, dynamic workload variations, workflow schedules, architecture and resource optimization; availability and integrity of relevant information within participating teams and systems; context awareness and reproducibility within contexts; amongst others [27], [37], [39]. Some of these challenges and issues listed here are partly inherited since Cloud Computing itself, is a paradigm that leverages a couple of other technologies

Paper 2 :

Inventory management for retail companies

Published Year: 1 March 2021
Author: Cinthya Vanessa Muñoz Macas
Journal Name: 2021 Second International Conference on Information Systems and Software Technologies (ICI2ST)

In recent years, the correct management of inventories has become a fundamental pillar for achieving success in enterprises. This article aims to

analyze and present extensive literature concerning inventory management, containing multiple definitions and fundamental concepts for the retail sector. A systematic literature review was carried out to determine the main trends and indicators of inventory management in Small and Mediumsized Enterprises (SMEs). The primary outcomes of this study are the leading inventory management systems and models, the Key Performance Indicators (KPIs) for their correct management, and the benefits and challenges of choosing or adopting an efficient inventory control and management system. Findings indicate that SMEs do not invest resources in the sophisticated system instead, a simple Enterprise Resource Planning (ERP) system or even programs such as Excel or manual inventories are mainly used.

Paper 3 :

Reconstructing inventory management theory

Published Year: June 2006
Author: Geoff Buxey
Journal Name: International Journal of Operations and Production Management

This paper sets out to discuss practical inventory control systems. The orthodox theory revolves around the purchaser and balances ordering costs against

charges for carrying goods in stock. However, for any company holding thousands of different items the directives for constructing the best system(s) are confusing and the logic seems inconsistent. This paper is to clarify this hitherto unsatisfactory situation and to provide robust guidelines for managing such inventories. The myopic standpoint of established models neglects the impact of various ordering policies at the supplier’s end, where the promotion of cost-effective and responsive warehouse and transport operations is paramount. As a rule, both areas benefit from stable resource planning, based on cyclic orders and delivery schedules along with fixed vehicle routes. This paper provides a new perspective on stock control that brings theory into line with modern supply chain management concepts

Paper 4 :

An Intelligent Model for Sales and Inventory Management

Published year: October 2011
Author: Sylvanus Anigbogu
Journal Name: Indian Journal of Computer Science and Engineering (IJCSE)

This work involved developing an intelligent model for sales and inventory management aimed at bridging the substantial gap between the theory and the practice of inventory management. The system developed has the capability of providing automatic demand and lead time pattern identification for inventory management. The intelligent inventory model was formulated using the concept of fuzzy logic. Inventory is the stock of some kind of physical commodity. Inventory can also be seen as the number of products that a merchandising firm has available to sell at any given time. The inventory management system again monitors the quantity of each product available for sale and helps to ensure that proper stock levels are maintained.

Paper 5:

A Cloud-Based Retail Management System

Published Year: March 2015
Author: Adewole Adewumi
Journal Name: International Conference on Soft Computing, Intelligence Systems, and Information Technology

Retail management systems have been deployed extensively as web applications and stand-alone systems. However, in order to maximize return on

investment while also improving retail business efficiency and performance, it is imperative to explore newer technologies that can be leveraged. Cloud computing shows great potential in this regard, and so it is our aim in this paper to develop a cloud-based retail management system. We realize this by first designing the framework of the system and then implementing it. Cloud computing represents a radical change in the way information technology (IT) services are offered to the public. Its concept relies on sharing computing resources rather than owning local servers in order to handle applications. It can be implemented under three major service models namely: Software as a service (SaaS), Platform as a Service (PaaS), and infrastructure as a Service (IaaS). They can be deployed as private clouds, public clouds, community clouds, or hybrid clouds.

Paper 6 :

Inventory Management System for Warehouse

Published Year: June 2019
Author: Prof. Dr. Sagar B. Tambe
Journal Name: International Research Journal of Engineering and Technology (IRJET)

A proposed Inventory Management system that is used in the industry provides automation, efficiency, and convenience in everyday life. An enterprise has a variety of components that are used by employees for routine activities. Keeping track of these components becomes problematic wherein the components might go missing at the hands of employees. To remedy this, various types of technologies like a Bar-code Scanner or RFID (Radio-frequency Identification) based on the Tracking Component system are developed for providing automation, withdrawing the components, and keeping better track of them. In this system, we can maintain login sessions for an authorized person which are tracked by using RFID tags. The components are tracked when they get in range of RFID Reader to scan RFID tags. When a person withdraws the components, the system maintains a record of them. If any employee fails to return the component, it goes under the pending state. If any component illegally crossed exit doors then the system generates an alarm and also displays a shortage of component warning, the number of available components and required components are to be displayed enabling automated inventory management with minimal manual intervention. We are also incorporating machine learning which will help us understand the product ratings i.e. which products are used more etc. Using machine learning with RFID tags will make the system more efficient and profitable as it will generate demand for the

products on its own. The data will be stored in the cloud which will make it accessible from anywhere remotely. The data can also be viewed on mobile using the cloud.

Paper 7 :

Cloud-Based Inventory System for Effective Management of Under and Over-stock Hazards

Published year: June 2021
Author: Rashidah Olanrewaju
Journal name: 8th International Conference on Computer and Communication Engineering (ICCCE)

Inventory can be defined as the goods and materials used by the organization for the sake of manufacturing and sales, including the items to support all the processes. A good inventory system management can increase the efficiency of operations, reduce cost, and maximize profit. Hence, led to the automation of all the manual tasks and finally please the customer of the organization. The cloud-based computerized inventory system is

proposed with the integration of a barcode scanner to replace the usage of manual and paperbased systems. The interface is developed using Hypertext Markup Language, JavaScript, and Cascading Style Sheet while the backend database is coded. It is undeniable that the manual inventory system needs to be changed to an automated inventory system that can reduce the time taken, reduce human error, and improve the efficiency of the inventory using My Structured Query Language.