



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 11 Issue: IV Month of publication: April 2023

DOI: <https://doi.org/10.22214/ijraset.2023.51262>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Development of Inventory Management System Used in Production Industry

Dr. Pundlik G. Mehar¹, Aditya Pardhi², Amol Borkar³, Damini R. Vaidya⁴, Harshal R. Umredkar⁵, Rohit Somkuwar⁶
¹Assistant Professor, ^{2,3,4,5,6}Student, Dept of Mech Engg., K.D.K. College of Engineering, Nagpur

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.

I. INTRODUCTION

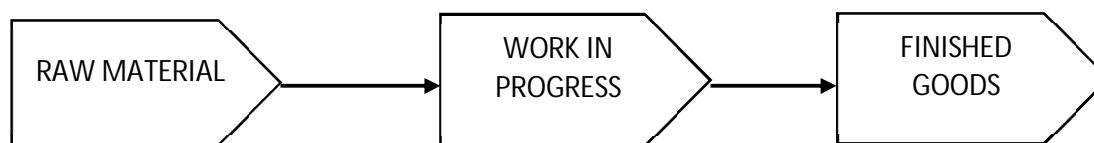
This Software "Inventory Management System", is used for recording the information about the day to day transaction of stock of an organization. It stores purchase information of the products with credit/debit information from the supplier. Similarly, it stores sales information with credit/debit about the customer.

If a product is purchased, then the related information is stored in stocks, that is stocks are up to date. Another part I it prepare sales report after product it sold. in the sales information, the information about who sold the product is also kept, so there is no problem for misunderstandings in future.

Inventory management information system is high performance software, which speed up the business operation of the organization. Every organization, which deals with the raw materials, put its great effort in the efficient utilization of its raw, material according to its need and requirement The organization has to perform number of tasks and operations in order to run its business in manual system.

- Estimation of new raw material required.
- Preparation of purchase order.
- Preparation of inward sale invoice.

Inventory is components forming the part of the manufacturing process. Inventory is basically classified into 3 types, these are: Raw Material, Work in Progress and Finished Goods



- *Raw Material:* This is the basic material which goes into the process of manufacturing. It forms the base of finished goods.
- *Work in Progress:* These are semi-finished goods.
- *Finished Goods:* This is the final output of the manufacturing process.

II. FEATURES

- 1) *Reliability*: Achieve more secure development SQL SERVER provider's rich security features to protect data and network resources.
- 2) *Confidentiality*: Protect your data. SQL server clustering supports Kerberos authentication on a virtual server and Microsoft style policies on standard logins so that a consistent policy is applied all accounts in the domain.
- 3) *Integrity*: SQL Server support encryption capabilities within database itself, fully integrated with a key management infrastructure. By default client server communication are in encrypted.
- 4) *Scalability*: Customer can easily scale up and scale down the functionality according to the requirements.
- 5) *Platform Independent*: This Software can be easily subjected to any platform like Mac, Windows and Linux.
- 6) *Flexibility*: It is very flexible to the user policy. *User Friendly*: The interface of the Software enhances user experience to a wider range.
- 7) *Less Expensive*: This software is not much costlier to buy.
- 8) *Speed*: Each and every operation takes very less time to execute.
- 9) *Accessibility*: User can easily access such type of software from anywhere, at any time.

III. LITERATURE REVIEW

Products are considered as the business resources for the organization. This includes managing the product with appropriate way to review any time as per the requirement. Therefore it is important to have a computer based IMS which has the ability to generate reports, maintain the balance of the stock, details about the purchase and sales in the organization. Before developing this application we came up with 2Inventory Management System existing in the market, which helps to give the knowledge for the development of our project. This application software is only used by the large organization but so we came up with the application which can be used by the small company for the management of their stock in the production houses. After analysing the other inventory management system we decided to include some of common and key features that should be included in every inventory management system. So we decided to include those things that help the small organization in away or other.

IV. 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.

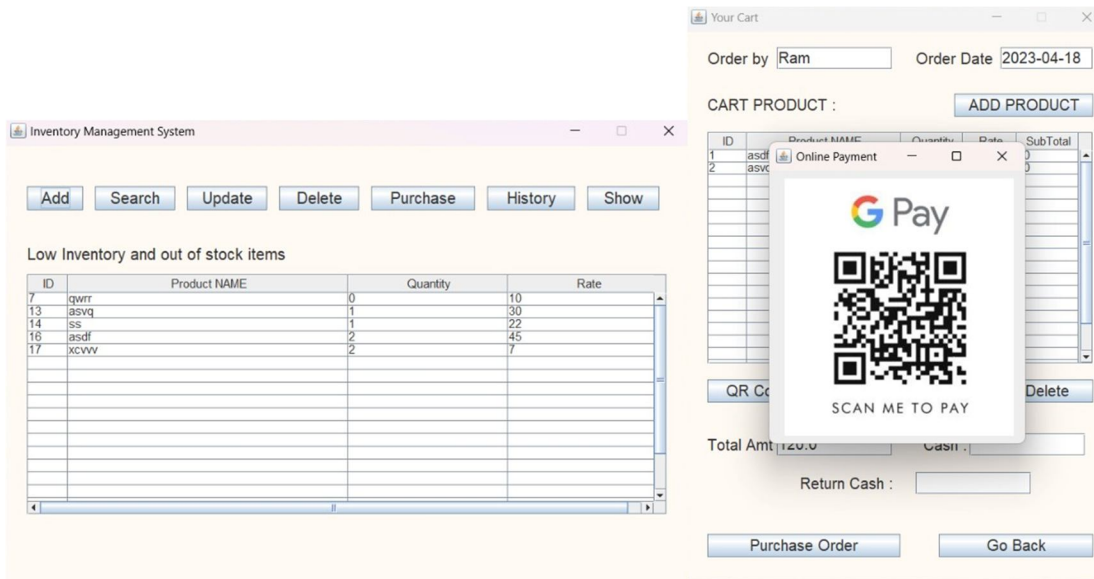
The following are the inventory management goals:

- 1) To provide a consistent availability of materials and inventory so that production does not suffer when customers require it.
- 2) To prevent excess inventory and under stocking inventory.
- 3) Ensuring that supplies are available in enough amounts whenever and wherever they are required.
- 4) To minimize various costs related with inventory, such as purchasing, carrying, and storage expenditures, among others.
- 5) To keep material costs down, as they help to keep production costs down.
- 6) To eliminate stock-ordering duplication.
- 7) Minimize losses due to degradation, theft, wastages, and damages.
- 8) To provide the essential content on a constant basis.
- 9) To keep a standardized inventory record.
- 10) To generate a monthly report on sales and inventory activity automatically.

V. METHODOLOGY

Research strategy can be characterized as efficient and purposive examination of actualities with goal deciding the powerful relationship among such certainties and research between at least two wonders from the broad writing study it is much clearer to contribute specifically for the effective consummation of the venture are impacted by stock administration framework. Specifically looks into were directed to little degree to investigate about stock administration in development ventures. This cause affect on execution of the stock administration. To yield a converted execution, it is important to guarantee the task work successfully. Poll study was directed among development expert to distinguish their feeling towards stock administration framework in their association. The got information is dissected to discover the recurrence of reaction for different elements.

VI. INVENTORY MANAGEMENT SYSTEM EXECUTION SNAPSHOT



Inventory Management System

Buttons: Add, Search, Update, Delete, Purchase, History, Show

Low Inventory and out of stock items

ID	Product NAME	Quantity	Rate
7	qwrr	0	10
13	asvq	1	30
14	ss	1	22
16	asdf	2	45
17	xcvv	2	7


Your Cart

Order by: Ram Order Date: 2023-04-18

CART PRODUCT : ADD PRODUCT

ID	Product NAME	Quantity	Rate	SubTotal
1	asdf	2	45	90
2	asvq	1	30	30

Online Payment

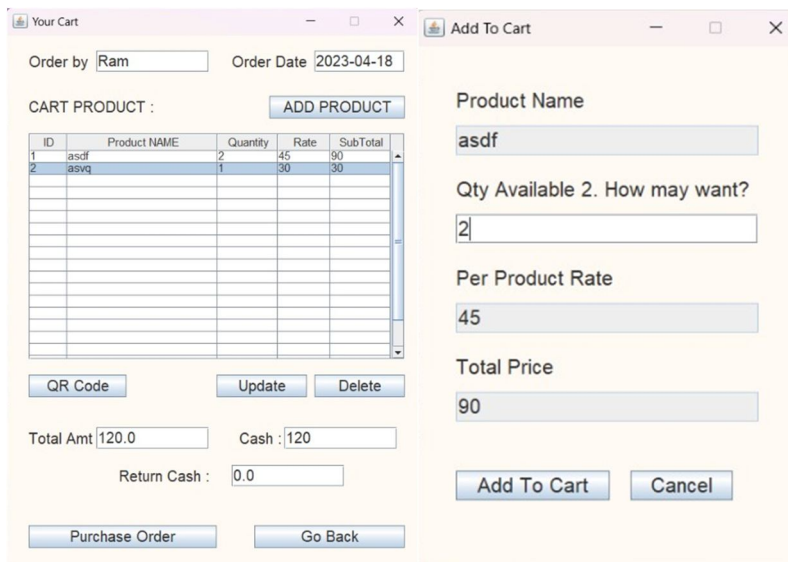


SCAN ME TO PAY

Total Amt: 120.0 Cash: 120

Return Cash : 0.0

Buttons: Purchase Order, Go Back



Your Cart

Order by: Ram Order Date: 2023-04-18

CART PRODUCT : ADD PRODUCT

ID	Product NAME	Quantity	Rate	SubTotal
1	asdf	2	45	90
2	asvq	1	30	30

Buttons: QR Code, Update, Delete

Total Amt: 120.0 Cash: 120

Return Cash : 0.0

Buttons: Purchase Order, Go Back

Add To Cart

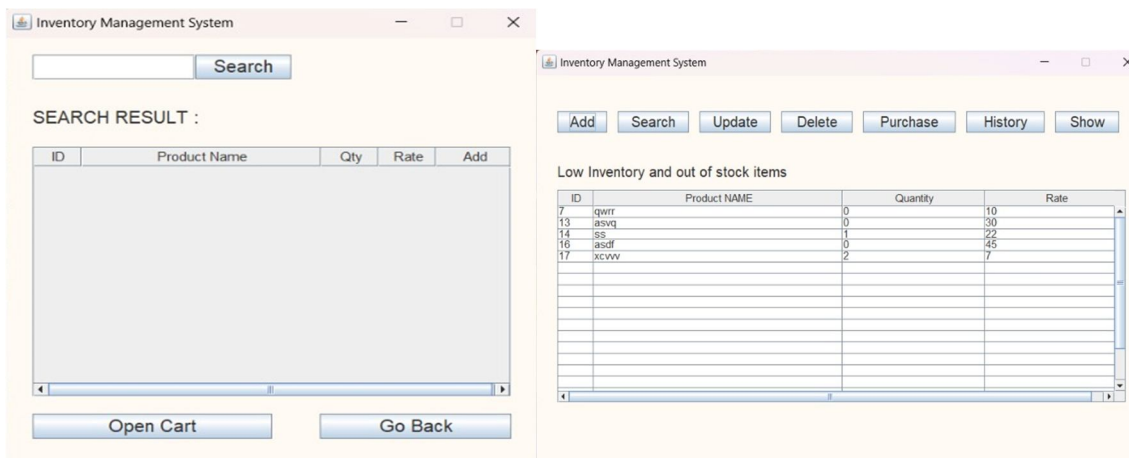
Product Name: asdf

Qty Available 2. How may want? 2

Per Product Rate: 45

Total Price: 90

Buttons: Add To Cart, Cancel



Inventory Management System

Search

SEARCH RESULT :

ID	Product Name	Qty	Rate	Add
----	--------------	-----	------	-----

Buttons: Open Cart, Go Back

Inventory Management System

Buttons: Add, Search, Update, Delete, Purchase, History, Show

Low Inventory and out of stock items

ID	Product NAME	Quantity	Rate
7	qwrr	0	10
13	asvq	0	30
14	ss	1	22
16	asdf	0	45
17	xcvv	2	7

Add Product

Product Name

Product Quantity

Per Product Rate

Total Price

Your Cart

Order by Order Date 2023-04-18

CART PRODUCT :

ID	Product NAME	Quantity	Rate	SubTotal
1	asdf	2	45	90

Total Amt 90.0 Cash :

Return Cash :

VII. CONCLUSION AND FUTURE WORK

To conclude, Inventory Management System is a simple desktop based application basically suitable for small organization. It has every basic item which is used for the small organization. Our team is successful in making the application where we can update, insert and delete the item as per the requirement. This application also provides a simple report on daily basis to know the daily sales and purchase details.

A. Future Work

- 1) Details study about all the material was not possible because of time limit.
- 2) Some of the information was kept confidential by the steel industries department.
- 3) Study was confined only to the selected components in the stores department of steel company.
- 4) Comparative study may be new research problem for the future work.

VIII. ACKNOWLEDGMENT

We would like to thank our guide Dr. P. G. Mehar and Head of the department Dr. S. K. Chaudhary for the encouragement and support that they have extended. We would also like to thank the anonymous reviewers who provided helpful feedback on our project script. We, also would like to thank Mr. Laxmikant Banobakode, Production head at Mecgale Pneumatics, Nagpur for his support and help needed for the project.

REFERENCES

- [1] Varalakshmi G S, Asst Prof. Shivalaela "A Review of Inventory Management System" ISSN 2278-1021, Vol 10, Issue 6- June, 2021.
- [2] Aditya A. Pande, S. Sabihuddin, "Study of Material Management Techniques on Construction Project", International Journal of Informative & Futuristic Research, ISSN: 2347-1697, Vol.2 (3), May 2015, pp.3479-3486.
- [3] Punam Khobragade, Roshni Selokar, Rina Maraskolhe "Research paper on Inventory Management System" e-ISSN 2395-0056, Vol 5, Issue 04 -April, 2018.
- [4] James Gosling, JAVA (Programming Language), <http://www.java.com>.
- [5] Erlangga Bayu Setyawan, Ajeng Yunita, Satriana Rasmaydiwan Sekarjatiningrum "Development of Real Time Inventory Monitoring System" issue 3-Feb,2022.
- [6] Anjali Mishra, Harshal Anil Salunkhe "A Study of Inventory Management System of Linamor India Pvt., Ltd, Pune.
- [7] Anas M. Atieh, Hazem Kaylani, Yousef Al-abdallat,Abeer Qaderi, Luma Ghoul, Lina Jaradat, Iman Hdairis "Performance improvement of inventory management system processes by an automated management system" CIRP CMS 2015.
- [8] Huseyin S. K., Selim Z., and Dursun D. "Selecting the methods and flow process of the system" Volume 42, Issue 5, 1 April 2015.
- [9] Ali, M., and Cullinane, J., 2014, "A Study to Evaluate the Effectiveness based Decision Support System," Procedia Technology.
- [10] Darya Plinere, Arkady Borisov "Case Study on Inventory Management Improvement", doi: 10.1515/itms-2015-0014.
- [11] Punam Khobragade, Roshni Selokar, Rina Maraskolhe, Prof. Manjusha Talmale, "Research paper on Inventory management system", Volume: 05 Issue: 4 April, 2018.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)