Pharmacy Medicine Supply Management System

Rushikesh .N. Chatap, DR. Rupali Mahajan
Computer Engineering Department

Abstract:
This system is designed to help pharmacies manage their supplies of medicines more efficiently. It allows pharmacists to track the quantity and type of medicines they have in stock, as well as order and receive new supplies quickly and easily. It also enables pharmacist to track patient orders and deliveries, and to keep records of all transactions for compliance purposes. The system is designed to be user-friendly and secure, and can be tailored to individual pharmacy needs

Keywords: stock control, MR Meetings, Pharmacy chain, health product.
DOI: 10.24297/j.cims.2023.5.19

1. Introduction

The Pharmacy Medicine Supply Management System is a comprehensive software solution designed to manage the supply and inventory of medicines and medical supplies in pharmacies. It enables pharmacies to track and record the supply of medicines, monitor the availability of stock, and manage the delivery of medicines to patients. This system provides an efficient and accurate way to keep track of the supply of medicines and medical supplies, ensuring that patients receive the right medication at the right time. The system also helps pharmacies to keep track of their finances, allowing them to easily manage their finances and ensure that they remain profitable.

Currently, a manual system is in place in the pharmacy, which requires pharmacists to manually monitor every drug in the store. This approach often leads to errors due to the pharmacist's workload and time constraints. By implementing a Pharmacy Management System, pharmacies can streamline their operations, reduce errors, and improve customer service.

2. Literature Review

The use of automated pharmacy medicine supply management systems (PMSMS) has become increasingly important in the healthcare industry over the past decade. Automated PMSMS provide a comprehensive, efficient, and cost-effective way for healthcare providers to manage drug supply chains and ensure patient safety. The literature on PMSMS has focused on

identifying the potential benefits of such systems, examining the challenges associated with their implementation, and exploring the implications for health care providers. The potential benefits of PMSMS include improved patient safety, enhanced drug availability, improved inventory management, and cost savings. Patient safety is improved by providing an accurate and timely supply of the right medication. PMSMS can also improve drug availability by reducing the time required to replenish supplies and ensuring that the right medications are always in stock. Additionally, PMSMS can provide improved inventory management and cost savings by reducing the amount of time and resources required to monitor and restock drug supplies. Despite the potential benefits of PMSMS, there are several challenges associated with their implementation. These include the need for accurate and timely data, the need for user training and support, the need for secure data storage and transfer, and the potential for system errors. Additionally, PMSMS may require significant upfront investments in terms of hardware and software, as well as ongoing investments in terms of training and maintenance. Finally, there are several implications of PMSMS for healthcare providers. For example, healthcare providers may need to invest in additional staff to manage the system, which could potentially add to their costs. Additionally, healthcare providers may need to adjust their workflow processes to accommodate the new system, which could lead to a period of adjustment and disruption.

3. Research Methdology

Our work with a thorough research of the data model (ERD model) as we believe that data is the foundation of any system. This helped us to define and discover our data, as well as understand the relationships between them. Through this process, we gained knowledge about the pharmaceutical business that is on par with someone in the industry.

Our design principle is to "Start with Why" in order to gain a clear understanding of why users need this app/website. It is important to understand user demand in order to meet their needs. Instead of directly asking them what they need, we observe the medicines they use to design a more user-centric system.

The use of an efficient pharmaceutical management system is essential, as it involves information technology and plays a crucial role in the demand and supply chain. Information about drugs is important, not just in terms of their usage, but also their side effects and consequences. This system evaluates medicines and hospital pharmacy services, which can be improved through user collaboration and feedback. The implementation of this system requires

an appropriate design to ensure accuracy and speed, especially during emergencies such as the Covid-19 pandemic.

Optimal control of pharmaceutical supplies is the first step towards the healing phase of each patient, which requires the application of information technology, computers, and inventory theory. Maintaining a balance between the supply and demand for medicines is a critical consideration for hospital pharmacy management, which protects the interests of both the hospital and the patients.

I prepared various notes read articles did interactions with Medical Owners what are there needs entities in the pharmaceutical management system shown in Figure 1 where activities or processes in the system are related to verbs. Figure 1 is a brief, wordless overview to explain some conceptual relationship between data, information, and activities for managing a drugstore as part of Second, based on the data flow diagram, each process follows data entities that can have the implementation of each data.

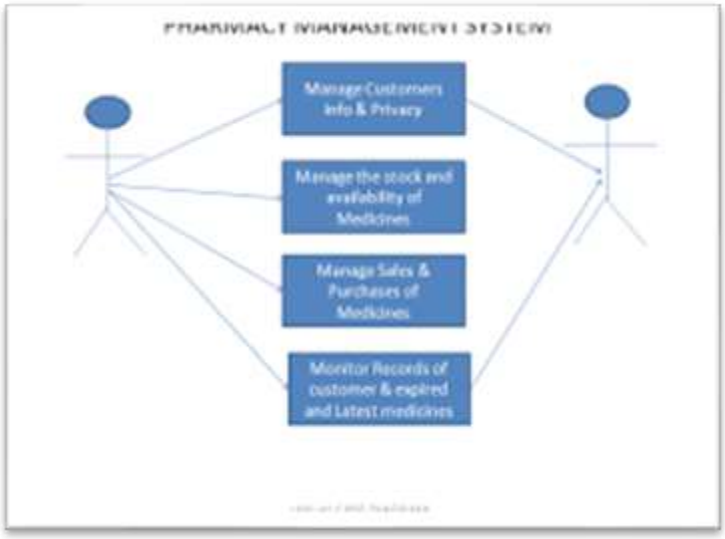


Figure 1: Visual Proposed system flow

To develop a pharmaceutical management system, the first step is to establish interfaces with other systems to input user data and information. As part of the overall management system, data integration is essential, and some data is accessed through the system interface or extracted from various sources. The pharmaceutical management system requires specific data related to 1) Suppliers: entities referred to as custodians or producers of a product, which act as

the link between the drug source or manufacturer and the user. Each drug product from the factory has information about its function, use, procedure for use, expiration period, ingredients, and potential side effects. 2) Customers: entities that refer to buyers of products from shops or stores that have warehouses. Information about each customer or patient, collected either by a doctor or a customer, is entered into the system, including complaints and recommendations for medicines. 3) Warehouses: entities referred to as stocks, which serve as storage areas to ensure that market demand is properly fulfilled. 4) schedule a meetings of medical representatives with doctors.

4. Tools & Technologies

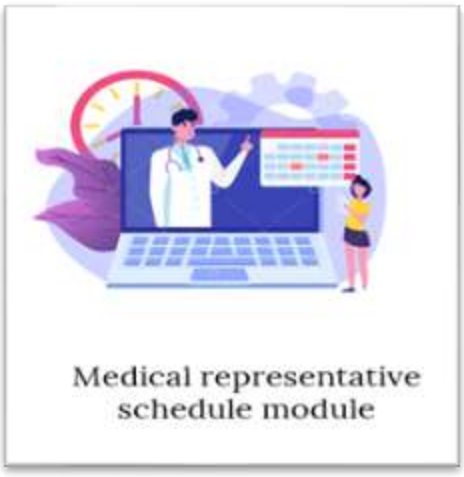
- Angular
- VS-Code
- Java
- Spring Tool Suite
- Postman

Dependencies

- Maven
- Spring Boot
- JPA
- H2 Database
- Lombok

Microservices

Medicine stock module Provides information on the pharma company medicine stock by the godown area



Medical representative schedule module Creates a schedule to have meetings with doctors. The list of doctors that this pharma company is targeting can be stored as a pre-defined information in this Microservice.

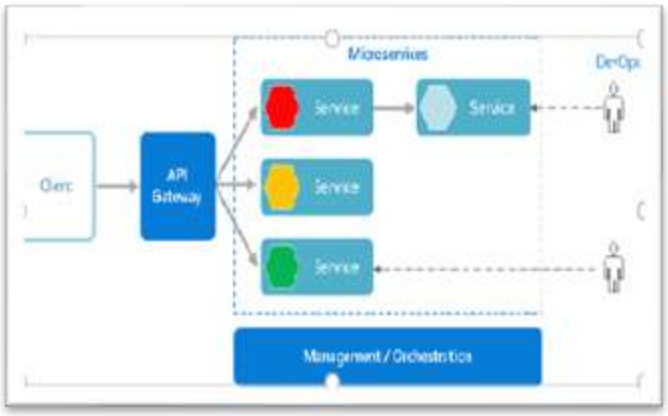
Pharmacy Medicine Supply module Gets the medicine count as demand as input from web portal. Interacts with the Medicine supply microservice to find the final demand of medicine that can be supplied to its pharmacists.

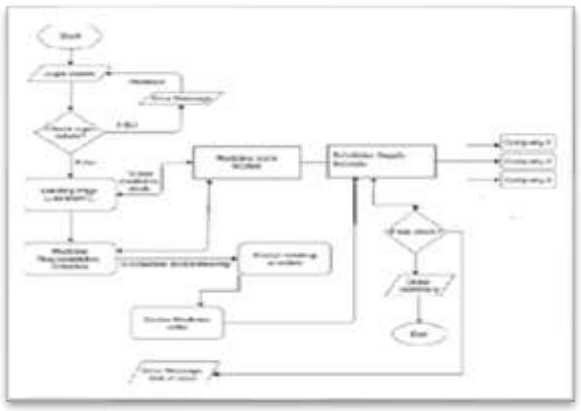
Authorization service This microservice is used with anonymous access to Generate JWT.

Pharmacy Medicine Supply Portal A Web Portal that allows a member to Login and perform operations like login, scheduling meet, medicine demand and supply.

System Architecture Diagram

Flow Chart diagram





5. Result

6. Conclusion

The Pharmacy Medicine Supply Management System is an essential tool for pharmacies to track and manage the supply of medicines. It allows pharmacies to monitor and manage the stock of medicines, track sales, and keep accurate records. This system can also be used to track the expiration dates of medicines, check the availability of medicines, and alert pharmacists when inventory is low. This system will help pharmacies to manage their inventory more efficiently, reduce waste, and ensure timely delivery of medicines to customers. Pharmacy Medicine Supply Management System is an important part of any pharmacy's operations and will help to improve patient care.

ACKNOWLEDGEMENT

The satisfaction of successful completion of task would be incomplete without mentioning of people whose cooperation made it possible, Worth while constant guidance and encouragement crown all efforts with success. I am grateful to our project guide **DR. Rupali Mahajan** for the guidance, The amount of inspiration and constructive suggestions that were so helpful for us in the preparation of this project.

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