MediBridge

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Abstract –

The Medibridge is the project that will going to help to streamline the pharmaceutical supply chain. The Medibridge focuses on bridging the gap between supplier and retailer so they can communicate and make trades efficiently so we are going to develop a mobile application to do the proposed task. The app is mainly designed for medical supplier and retailers so there is no role of general public here.Supplier can manage inventory on the data based in our app and also retailer gets the simpler way to order the required medicines and keep track on transactions.

The app aims to improve transparency in medical supply chain and also reduces cost for both supplier and retailer and also increases efficiency of supply chain.The system enhances the availability of essential medicines in remote areas where timely delivery is a big task..

INTRODUCTION

. • Intoday'sfast paced pharmaceutical market where the supply chain is still old school so we proposed idea to revolutionize the supply chain by implementing our project. Medibridge serves the purpose to efficiently connect the supplier and retailer. Helps to provide convenience for both. The platform makes supply chain far better in remote areas where supplier cannot provide service promptly.Thisplatform simplifies the process of browsing, ordering and tracking of the medicines. The project also helps supplier to manage inventory, process orders.

• However, Medibridge not only increases the transparency and trust but also help to take decisions faster to both supplier and retailer. That eventually affects the overall operations between the supplier and retailer.

• Insummary,Medibridge revolutionize the pharmaceutical supply chain and also promotes the use of technology in medical field and easy to use so anyone can understand it.Also, very useful in these growing demands market.

Review of Literature

Study of Existing System

1.   **Traditional supply chain**: The current supply chain the supplier needs to visit the retailer twice once to take order and second to deliver the order. So, this is very cost and resource wasting. Also difficult to manage the inventory.

2.   **Manual Order Processing:** Currently the retailer place the order using methods like Phone Calls, E-mails or Physical Forms. Which is not that much practical in this generation and also hard to keep the record. This is very time-consuming process.

3.   **Inventory Mismanagement:** Because of the traditional methods used by retailer it is very hard to manage the inventory properly cause there is no proper records of every purchase of that particular retailer.

4.   **Limited Access In Remote Areas:** The supplier mostly avoid the retailers in the remote areas because of difficulty to provide the service. The retailers are also tired of delayed orders processing and there is no easy access in remote areas.

5.   **Lack Of Transparency:** In traditional supply chain for both supplier and retailer there is no accurate delivery tracking system. Making retailer difficult to know when the order is arriving.

6.   **Costly Systems:** In current supply chain the devices or systems used to manage are very costly so most of supplier and retailer avoid it.

Findings from Literature Review

By studying and analyzing the current supply chain in pharmaceuticals we have identified some limitations, like manual order placing, less transparency in delivery, limited access in remote areas. These systems depend on outdated methods for managing inventory and processing order which can result in inefficient, delays and increased cost mainly on smaller retailers in remote areas. The medibridge provides user friendly solution. Making it easier for supplier and retailer to connect and work together efficiently.   .

Problem statement

 The proposed system acts as a solution for all the problems in pharmaceutical industry.

Suppliers and retailers face many challenges in maintain smooth supply chain. They face many issue like delayed in deliveries, also miscommunication during the deliveries ,stock storage. These problem are created during inefficient inventory management and unclearness between supplier-retailer relationship, which affects the business efficiency and also market reach .

Project Scope

The scope of project will create a user-friendly pharmaceutical app to help medical suppliers and retailers to manage their activities, transparent manner and improve productivity. It will include secure user registration and login with email and two-factor authentication, allowing users to update their profiles with personal and farm details. Also providing real-time tracking and updates on inventory for both suppliers and retailers. This platform is made for ensuring secure, fast and reliable delivery to retailers. This platform will be scalable for future growth and customer support. This software focus on business-to-business interaction, without involvement of medicines or direct consumer sales.

3.Objective of Proposed System

1.   **Optimize Supply Chain:** Simplify the supply chain operations to ensure seamless interactions between suppliers and retailers.
2.   **Secure Delivery:** Ensure safe and timely delivery of essential medicines, minimizing delays and mismanagement.
3.   **Business Efficiency:** Increase the overall business efficiency for both suppliers and retailers by reducing operational complexity.
4.   **Market Expansion**: Provide an opportunity for suppliers to expand their reach by connecting with more retailers.
5.   **Supplier-Retailer Connectivity**: Build a robust communication platform that enhances supplier-retailer relationships

Modules of software system

•   **Supplier:**The supplier supplies medicines to retailers.
•   **Retailers:**The Retailer places orders and receive the order

Requirements

Software Requirements
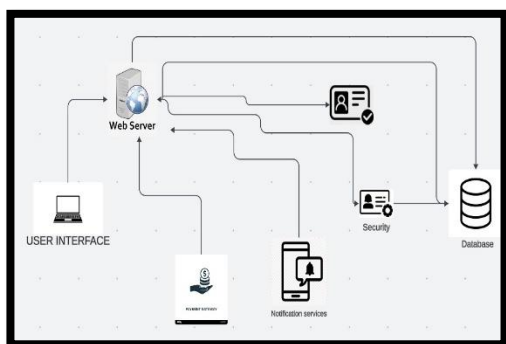
Frontend

- ReactJS
- Html
- csss

Backend

•   Firebase

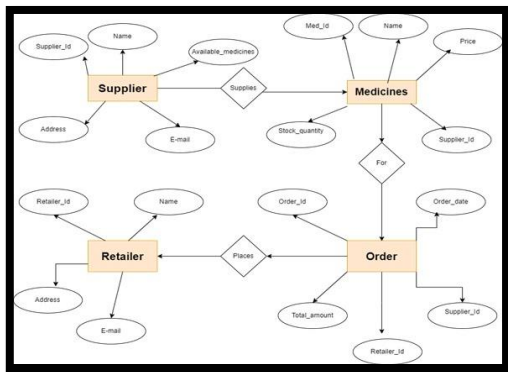### Hardware requirements

•   Server Firebase
•   Ram: 4 gb
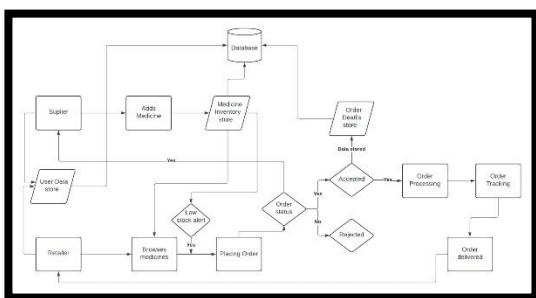•   Processor : intel core i5 or higher
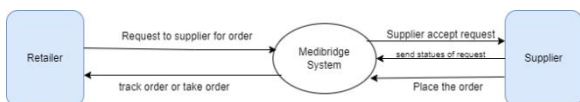•   Storage : 256 gb

Methodology

System Architecture

ER-Diagram

System Flow

Data flow

Application of proposed System

The Medi-Bridge application is like a smart connector for pharmaceutical suppliers and retailers, ensuring easy and transparent supply chain process.It is a bridge between supplier and retailers that enhance communication, manages inventory efficiently,and guarantees the timely delivery of essential medicines.This is helpful as it improves the flow of information,helps in distribution of products, and makes sure that the relevant drugs are provided when needed.

1.Suppliers: Allows Suppliers to easily manage orders, update inventory in real time, and track deliveries. It simplifies the process by reducing paperworks and improving efficiency. It also reduce the time

and efforts. Suppliers can connect to more retailers using this single platform and exploring the market of medicines.

2.Retailers: Allows Retailers to place orders for medicines with just a few clicks,ensuring that they cann't face the shortage problem of medicines MediBridge provides them with a easy way to manage and customize orders as per their specific needs.Retailers can track the status of order and also they know when the order will be deliver.

3.   Pharmacies:Allows Pharmacies to have well information of available stock,to prevent the shortage of medicines and avoid overstocking.This leads to better turnover and cost savings.MediBridge helps pharmacies to provide best services to customers by ensuring the mediciens are always available and delivery on time.This will improves their reputation and customer loyalty.

Advantages and Disadvantages

Advantages

1.Streamlined supply chain operations.

2.Secure and efficient delivery.

3.Improved connectivity between suppliers and retailers.

4.Enhanced inventory management.

  5.Quick and easy ordering process

Disadvantages

1.Potential technical difficulties during implementation.

2.High initial development costs.

3.Dependence on reliable internet connectivity.

4.Data privacy and security concerns.

5.Maintenance and system updates required

Conclusion and future work

 The MediBridge application is likely to revolutionize the pharmaceutical supply chain by increasing its transparency, efficiency, and user friendliness. Its smart features will improve the operations between the suppliers and the retailers by facilitating efficient commutation which in turns leads to reliable delivery of needed medicines. Also, MediBridge application has the potential extending to other industries with similar challenges in the demand fulfillment chain. As the scope of the app expands, it is anticipated that this trust will be deepened by the application of blockchain for information management. Other possibilities in future should be to integrate it with ship and track the environment friendly IoT devices to monitor the environmental aspects affecting the shipment to ensure that the product is handled as specified. MediBridge must be continuously equipped by advances in technologies to stay competitive in supporting supply chain innovation in such a way that, it delivers a reliable management platform for all its users. Individuals

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Source - https://firebase.google.com/

2.**React Native Documentation** - Official documentation on how to build mobile apps using React Native, including best practices for UI components and state management.

Source - https://reactnative.