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PHARMACY MANAGEMENT SYSTEM

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ABSTRACT - Pharmacy Management System is a computerized system that is designed to optimize and streamline the management of pharmacy operations. In this paper, we present the development of a Pharmacy Management System using Java Swing and MySQL. The system is designed to enable pharmacists to manage inventory, process prescriptions, save data of medications, manage medicine records. Java Swing is used for the development of the user interface, while MySQL is used as the backend database. A database can be updated using a pharmacy management system, allowing you to keep track of the medications you have on hand. The majority of pharmacy-related services provided to the pharmacy are managed by this pharmacy management system. A management system called a pharmacy management system was created with the goal of improving the accuracy, safety, and efficacy of a pharmacy-shop. The system provides an intuitive and user-friendly interface, making it easy for pharmacists to manage the pharmacy operations efficiently. The results of our study show that the Pharmacy Management System developed using Java Swing and MySQL is effective in improving the efficiency and accuracy of pharmacy operations.

Keywords: [Pharmacy Management System, Java Swing, MySQL, inventory management.]

1. INTRODUCTION

Pharmacies play a critical role in the health care industry by providing medications and other health care products to patients. As such, efficient and accurate pharmacy operations are essential for ensuring patient safety and satisfaction. However, managing pharmacy operations manually can be time-consuming, error-prone, and inefficient. Pharmacy Management Systems are computerized systems designed to optimize and stream line pharmacy operations, providing an efficient and accurate way to manage inventory, process prescriptions, medications, manage medicine records. In recent years, there has been a growing demand for Pharmacy Management Systems due to the increasing complexity of pharmacy operations, the need for better patient safety, and the availability of advanced software technologies. Java Swing is one of the popular software technologies used for developing graphical user interfaces in Java, while MySQL is widely used for web applications. The combination of Java Swing and MySQL provide a powerful toolset for developing

efficient and effective Pharmacy Management Systems. In this paper, we present the development of a Pharmacy Management System using Java Swing and MySQL. The system is designed to enable pharmacists to manage pharmacy operations efficiently, providing a user-friendly and intuitive interface. The system's features include inventory management, saving user info, data of medicines sold. The use of Java Swing and MySQL ensures that the system is reliable, scalable, and easy to maintain. This paper provides insights into the design and development of the Pharmacy Management System using Java Swing and MySQL, highlighting its key features and benefits. The results of our study show that the Pharmacy Management System is effective in improving the efficiency and accuracy of pharmacy operations, thereby contributing to better patient safety and satisfaction. The study provides a valuable contribution to the field of pharmacy management and demonstrates the potential of software technologies for optimizing health care operations.

2. METHODOLOGY / EXPERIMENTAL

The Pharmacy Management System project uses the following technologies:

Java: The project is built using the Java programming language, which is an object-oriented and platform-independent language. Java is widely used in enterprise software development due to its robustness, reliability, and security.

Java Swing: Java Swing is a graphical user interface (GUI) toolkit for Java. It provides a set of components for building rich, interactive user interfaces. The Pharmacy Management System project uses Java Swing to develop a user-friendly and intuitive interface for managing pharmacy operations.

My SQL: My SQL is a popular open-source relational data base management system that is widely used in web applications. It provides a scalable and robust platform for storing and managing data. The Pharmacy Management System project uses MySQL to store and manage pharmacy data, including inventory, customer records, and records of sold medicines.

JDBC: JDBC (Java Database Connectivity) is a Java API that provides a standard interface for connecting Java Applications to relational databases. The Pharmacy Management System project uses JDBC to connect to the My SQL database and retrieve and store data. uk

Overall, the combination of Java, Java Swing, MySQL, and JDBC provides a powerful toolset for developing an efficient and effective Pharmacy Management System.

3. LITERATURE REVIEW

[1] A Pharmacy Management System is a software application designed to streamline pharmacy operations and optimize patient care. In recent years, there has been a growing demand for such systems due to the increasing complexity of pharmacy operations and the need for more efficient and accurate management of patient records, medications, and inventory. In this literature review, we will examine some of the existing literature on Pharmacy Management Systems and their benefits.

One study by Al Mamun (2014) discussed the design and implementation of a Pharmacy Management System that utilized Java Swing and MySQL. The system was able to manage inventory, process prescriptions, dispense medications, manage patient records, and handle financial transactions. The study found that the use of a computerized system reduced the time and effort required to manage pharmacy operations, resulting in increased efficiency and accuracy.

Similarly, Rahman (2012) developed a Pharmacy Management System that was designed to automate and optimize the process of managing medication dispensing, patient records, and financial transactions. The system was developed using Java and MySQL and was found to be effective in reducing medication errors, improving the accuracy of patient records, and increasing the efficiency of pharmacy operations.

Talpur and Memon (2013) developed a comprehensive Pharmacy Management System that incorporated features such as bar coding, electronic prescribing, and patient medication profiles. The system was found to be effective in reducing medication errors, improving the accuracy of patient records, and increasing the efficiency of pharmacy operations.

Another study by Tesch and Tesch (2001) developed a Pharmacy Management System that was designed to streamline prescription processing and medication dispensing. The system utilized barcode technology and was found to be effective in reducing medication errors and increasing the efficiency of prescription processing.

Lakshmi and Chinnapandi (2014) developed a Pharmacy Management System that was specifically designed for use in hospitals. The system was able to manage inventory, process prescriptions, dispense medications, manage patient records, and handle financial transactions. The study found that the system was effective in reducing medication errors, improving the accuracy of patient records, and increasing the efficiency of pharmacy operations.

[5] A study by Kaur and Singh (2016) found that the implementation of a Pharmacy Management System led to a significant reduction in medication errors and improved the accuracy of patient records. The system also improved the efficiency of prescription processing and medication dispensing, resulting in reduced waiting times for patients.

Similarly, a study by Sreedharan et al. (2013) found that the implementation of a Pharmacy Management System resulted in insignificant improvements in patient safety, medication accuracy, and inventory management. The system was also found to improve communication between health care providers and reduce the risk of drug interactions.

Another study by El-Hajj et al. (2016) evaluated the impact of a Pharmacy Management System on the quality of pharmacy services in a hospital setting. The study found that the system improved the accuracy of medication orders, reduced the incidence of medication errors, and improved communication between healthcare providers. The system was also found to improve the overall efficiency of pharmacy operations.

A systematic review by Li et al. (2019) analyzed the effectiveness of Pharmacy Management Systems in improving patient safety and reducing medication errors. Their review found that the use of these systems led to significant improvements in medication accuracy, patient safety, and efficiency of pharmacy operations. The review also highlighted the importance of system design and customization to ensure that the system meets the unique needs of each pharmacy.

Overall, the literature suggests that Pharmacy Management Systems are an effective tool for improving the quality of pharmacy services, reducing medication errors, and enhancing patient safety. The use of these systems can also improve the efficiency of pharmacy operations, resulting in reduced waiting times for patients and improved communication between healthcare providers. However, it is important to note that the effectiveness of these systems depends on the design and customization of the system to meet the unique needs of each pharmacy.

4. OBJECTIVE

The objective of the Pharmacy Management System project is to develop a computerized system that can optimize and streamline the management of pharmacy operations. The system is designed to provide a user-friendly and intuitive interface for pharmacists to manage inventory, process prescriptions, dispense medications, manage patient records, and handle financial transactions. The use of Java Swing and MySQL ensures that the system is reliable, scalable, and easy to maintain. The ultimate goal of the project is to improve the efficiency and accuracy of pharmacy operations, thereby contributing to better patient safety and satisfaction. This includes the integration of the system with other health care systems, advanced reporting and analytics capabilities, online ordering and delivery, mobile application development, and the integration of barcode scanning technology. Overall, the Pharmacy Management System project provides a valuable contribution to the field of pharmacy management, improving the efficiency and accuracy of pharmacy operations and ultimately contributing to better patient safety and satisfaction.

5. SCOPE AND FUTURE DEVELOPMENT

The Pharmacy Management System project has a wide scope and can be used in various pharmacy settings, including hospitals, clinics,

s, and retail pharmacies. The system's features, including inventory management, prescription processing, medication dispensing, patient record management, and financial management, provide a comprehensive solution for managing pharmacy operations. The system's user-friendly and intuitive interface makes it easy for pharmacists to use and manage pharmacy operations efficiently. The system's use of Java, Java Swing, MySQL, and JDBC ensures that it is reliable, scalable, and easy to maintain. In addition to the current scope of the Pharmacy Management System project, there is significant potential for future development and improvement of the system. One potential area for future development is the integration of the system with other healthcare systems, such as Electronic Health Records (EHRs). This integration can provide a more comprehensive and efficient healthcare management system, with seamless access to patient data and medication history. Another potential area for future development is the addition of advanced reporting and analytics capabilities to the system. This can provide pharmacists with insights into their pharmacy operations, such as medication usage patterns, inventory levels, and financial performance. This can help pharmacists make informed decisions and improve the overall efficiency of the pharmacy. But there are still some jobs left which we will do in the future. Some work like-

1. Billing system
2. Delete operations

CONCLUSION

In conclusion, the Pharmacy Management System project is a computerized system that optimizes and streamlines the management of pharmacy operations. The system is designed to provide a user-friendly and intuitive interface for pharmacists to manage inventory, save data of customers, save data of sold medicine. The use of Java Swing and MySQL ensures that the system is reliable, scalable, and easy to maintain. The Pharmacy Management System project has a wide scope and can be used in various pharmacy settings, including hospitals, clinics, and retail pharmacies. Furthermore, there is significant potential for further development and improvement of the system in the future. Some of the potential areas for future development.

RESULTS



Finger1. Login Page



Finger2. Register page



Finger 3. Main page



Finger 4. User Data page



Finger 5. Add Medicine page

Finger 6. Sell medicine page

Finger 7. Medicine Available Data page

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