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**SCD FINAL PROJECT**

**Introduction**

The Point of Sale (POS) Pharmacy Inventory System is a comprehensive solution designed to streamline and optimize the inventory management processes within a pharmacy setting. This document provides an overview of the system, its features, functionalities, and the benefits it brings to pharmacies.

**System Overview**

**2.1 Purpose**

The primary purpose of the POS Pharmacy Inventory System is to facilitate efficient management of pharmaceutical inventory, sales transactions, and related processes in a pharmacy. It aims to enhance accuracy, reduce errors, and improve overall operational efficiency.

**2.2 Scope**

The system covers various aspects of pharmacy operations, including product management, sales transactions, user authentication, and reporting. It caters to the needs of both administrators and staff members involved in inventory management and sales.

**2.3 Features**

**Product Management**: Enables easy addition, update, and removal of pharmaceutical products from the inventory.

**Sales Transactions**: Facilitates quick and accurate processing of sales transactions, including prescription handling and over-the-counter sales.

**User Authentication**: Implements secure login mechanisms to control access based on user roles such as administrators, pharmacists, and cashiers.

**Reporting**: Generates detailed reports on sales, inventory levels, and other relevant metrics for informed decision-making.

**System Architecture**

**3.1 Frontend**

The frontend of the system is developed using Java Swing, providing a user-friendly graphical interface for users to interact with the application. The UI is designed to be intuitive, ensuring ease of use for all staff members.

**3.2 Backend**

The backend is powered by a MySQL database that stores critical information such as product details, sales transactions, and user data. The use of a relational database ensures data integrity and efficient retrieval.

**3.3 Technology Stack**

Java Swing for the frontend

MySQL for the backend database

**System Functionality**

**4.1 User Authentication**

Users are required to log in with their credentials to access the system. The authentication process ensures that only authorized personnel can perform various actions within the application.

**4.2 Product Management**

Pharmacists and administrators can easily manage the inventory by adding new products, updating existing ones, or removing items that are no longer in stock.

**4.3 Sales Transactions**

The system supports both prescription-based sales and over-the-counter transactions. It calculates total costs, handles discounts, and updates inventory levels in real-time.

**4.4 Reporting**

The reporting feature provides valuable insights into sales trends, product popularity, and inventory turnover. This information helps in making informed decisions regarding stock levels and marketing strategies.

**Benefits**

**Efficiency**: Streamlines inventory management, reducing manual errors and saving time.

**Accuracy**: Ensures accurate tracking of inventory levels and sales transactions.

**Security**: Implements secure user authentication to protect sensitive pharmacy data.

**Insights**: Provides actionable insights through detailed reports, aiding in strategic decision-making.

**Conclusion**

The POS Pharmacy Inventory System is a powerful tool designed to enhance the efficiency and accuracy of pharmacy operations. Its user-friendly interface, robust features, and secure architecture make it a valuable asset for pharmacies aiming to optimize their inventory management processes.

**Future Enhancements**

Possible future enhancements may include integration with electronic health record (EHR) systems, online prescription processing, and compatibility with mobile devices for on-the-go inventory management.

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**Revision History**

**Version**  **Date**  **Description Author**

| 1.0 | 01-12-2023 | Initial Release | A&A |
| --- | --- | --- | --- |
| 1.1 | 02-12-2023 | Enhancement | A&A |

This documentation serves as a comprehensive guide for users, administrators, and developers involved with the POS Pharmacy Inventory System.