OOP Project Report

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Abstract

The **Pharmacy Management System** project aims to streamline and automate pharmacy operations, including inventory management, customer records, and billing. The system is developed using Python and Object-Oriented Programming (OOP) principles, with CSV file handling for data storage. It provides a user-friendly interface, reducing manual errors and improving operational efficiency.

Introduction

Pharmacies handle numerous tasks daily, such as managing inventory, recording sales, and generating bills. Manual processes are prone to errors and inefficiencies. This project addresses these challenges by creating an automated **Pharmacy Management System**.

Objectives:

1. Automate billing and inventory tracking.
2. Minimize human errors in record-keeping.
3. Enhance customer service efficiency.

System Design

Technology Stack:

- Programming Language: Python
- Storage: CSV files

Key Components:

1. **Inventory Management**: Add, update, and check stock.

2. **Billing System**: Generate bills for customers based on purchases.
3. **Customer Records**: Maintain purchase histories for customers.

Implementation

The project uses Python's OOP features for modularity and reusability. Key modules include:

1. **Inventory Module**: Handles stock details and updates.
2. **Billing Module**: Calculates total costs and generates receipts.
3. **Data Storage Module**: Stores information in CSV files for persistence.

Results

The Pharmacy Management System successfully:

- Tracks inventory in real-time.
- Automatically generates error-free bills.
- Saves and retrieves data using CSV files.

Conclusion

The Pharmacy Management System meets the objectives of automating pharmacy operations, improving efficiency, and reducing errors. Future enhancements may include integrating a database, adding user authentication, and enabling multi-user functionality.