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Group project

Berry POS System

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1 Introduction

A point-of-sale (POS) system is a software application that is used to process sales transactions in a retail or service environment. POS systems typically include features such as product scanning, inventory management, and customer loyalty programs.

This proposal outlines the requirements, features, benefits, implementation plan, and timeline for a simple POS system development in C# WPF using MVVM pattern with SQLite code first approach. The system will be called "Berry POS System" and will allow users to order products from a list of available products, calculate the total cost of the order, pay for the order using cash, save the order information to the database, manage inventory levels, and have different features for admin and user.

2 Overview

The system will be developed using the following technologies:

- Programming Language: C#
- Framework: WPF
- Design Pattern: MVVM
- Database: SQLite
- Approach: Code First

The system will have the following features:

- A user-friendly interface that allows users to easily order products.
- The ability to calculate the total cost of an order.
- The ability to pay for an order using cash.
- The ability to save order information to the database.
- The ability to manage inventory levels by adding, updating, and deleting products from the database.
- The ability to track the quantity of each product in stock and the total cost of inventory.
- Different features for admin and user. Admin users will have access to all features of the system, while user users will only have access to the ability to add products and customer orders.

Screens

The system will have the following screens:

- Home screen: This is the main screen of the system. It will display a list of all products in the database.
- Products screen: This screen will display a list of all products in the database, along with their details. Admin users will be able to add, update, and delete products from the database.
- Orders screen: This screen will display a list of all orders that have been placed in the system. Admin users will be able to view and edit order information.
- Inventory screen: This screen will display a list of all products in the database, along with their inventory levels. Admin users will be able to add, update, and delete products from the database.
- Reports screen: This screen will display a variety of reports, such as sales reports, inventory reports, and customer reports. Admin users will be able to generate reports.

Functionality

The system will have the following functionality:

- Home screen: Users will be able to view a list of all products in the database.
- Products screen: Users will be able to view a list of all products in the database, along with their details. Admin users will be able to add, update, and delete products from the database.
- Orders screen: Users will be able to view a list of all orders that have been placed in the system. Admin users will be able to view and edit order information.
- Inventory screen: Users will be able to view a list of all products in the database, along with their inventory levels. Admin users will be able to add, update, and delete products from the database.
- Reports screen: Users will be able to generate a variety of reports, such as sales reports, inventory reports, and customer reports. Admin users will be able to generate reports.

3 Benefits

The system will provide the following benefits to businesses:

- Increased efficiency in processing orders.
- Improved accuracy in tracking inventory levels.
- Enhanced customer service.
- Reduced costs associated with manual inventory management.
- Different features for admin and user. This will allow businesses to have more control over who has access to what information and features in the system.

4 Implementation Plan

The system will be implemented in the following phases:

- Phase 1: Design and development of the user interface.
- This phase will involve designing the user interface for the system, including the screens that users will interact with. The interface will be designed to be user-friendly and easy to use.
- Admin users will have access to the following screens:
    - Home screen
    - Category screen
    - Products screen
    - Orders screen
    - Stock screen
    - Reports screen

- User users will have access to the following screens:
    - Home screen
    - Products screen
    - Category screen
- Phase 2: Development of the database model.
- This phase will involve creating the database schema for the system. The database will store information about products, orders, Stock levels, and user permissions.
- Phase 3: Development of the business logic.
- This phase will involve developing the code that will power the system. The code will be written in C# and will use the MVVM design pattern.
- Phase 4: Testing and debugging.
- This phase will involve testing the system to ensure that it is working properly. Any bugs that are found will be fixed.
- Phase 5: Deployment.

5 Timeline

- The system is expected to be completed within 6 months

6 Conclusion

This proposal outlines the requirements, features, benefits, implementation plan, and timeline for a simple POS system development in C# WPF using MVVM pattern with SQLite code first approach. The system will provide businesses with several benefits, including increased efficiency in processing orders.