

BILLING SYSTEM



Potnuru Sai Vachan Roll No: 24ME01070

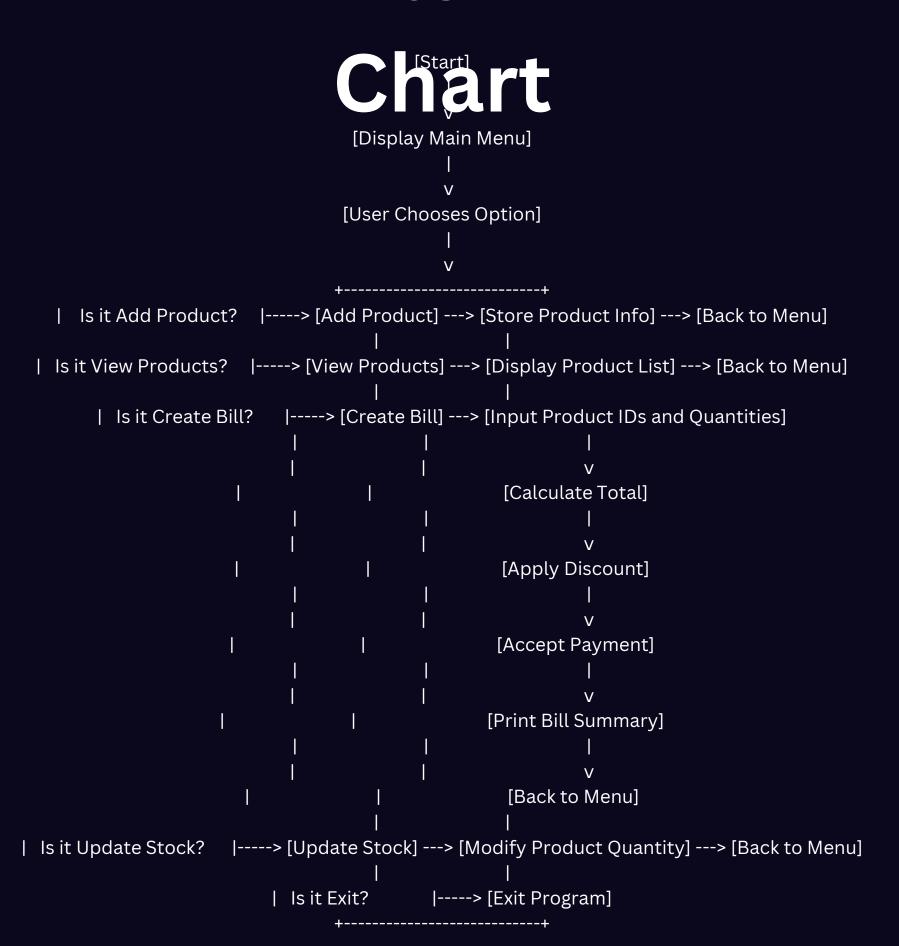
Objective

- The objective of this project is to develop a simple and efficient billing system that allows users to:
 - Add and manage products with unique IDs, names, prices, and stock.
 - Update product stock after sales.
 - Generate bills based on customer purchases, including discounts for large purchases.
 - Provide change calculations based on cash payments.

Key Topics Used in This Project

- C Programming Basics: Variables and Data Types
- Control Statements: (If-else loops)
- Arrays and Structs for organising data
- Input Validation: Checking user input for valid data types (e.g., numeric checks for price and stock) and Ensuring unique product IDs.
- Mathematical Operations
- User Interface: Console-based input and output for user interaction

Flow



Working

- The user starts by adding products with unique IDs using the addProduct() function, which prompts for product details (ID, name, price, stock) and stores them in the product list.
- The program allows viewing available products with the viewProducts() function, displaying the list of all products along with their details for easy reference.
- The stock of products can be updated using the updateStock() function after sales, which modifies the quantity of the specified product based on the sales transactions.
- When creating a bill, the user inputs product IDs and quantities through the createBill() function, which calculates the total amount, applies discounts if applicable, and stores the purchased items for billing.
- The system accepts cash payments through the acceptPayment() function, which calculates the change to be returned to the customer based on the payment made.
- A bill summary is displayed using the printBill() function, which formats and prints the final bill, including the total amount, applied discounts, and change returned to the customer.

Advantage

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- 1. User-friendly interface for adding and managing products.
- 2. Real-time stock updates after sales.
- 3. Automatic discount calculation for large purchases.
- 4. Comprehensive bill summary for customer reference.
- 5.Input validation to enhance reliability and user experience.

Conclusion

This billing system project provides a practical solution for managing sales in a small retail environment. With its focus on user-friendly design and efficient management of products and transactions, it serves as a foundational tool for businesses. Future enhancements could include database integration and multi-user support.