PROJECT REPORT OOP LAB

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Inventory Management System

Group Member: 3

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PROBLEM STATEMENT

Need of a management system for handling the store.

INTRODUCTION

This project will be based on the idea of an offline store management application which will handle shopping items in terms of categories.

EXISTING PROBLEMS

Manual Documentation

Managing inventory with paperwork and manual processes is tedious and not secure. And it doesn't easily scale across multiple warehouses with lots of stock.

Stock Problem

Perishable and fragile stock need specialized plans for care and storage. And high-value inventory needs specific loss-prevention strategies and inventory controls.

Inventory Loss

The loss of inventory due to spoilage, damage or theft can be a supply chain problem. It requires identifying, tracking and measuring problem areas.

Proposed Solution/Changes

Give employees the right inventory tools for the job. They need software to replace manual inventory documentation, and paperless transactions for invoices and purchase orders.

Aim

Our aim is that our project would have three main modules (i.e. Retailer, Customer & Admin), in which we have provided unique functionalities. We've also prioritized the application in terms of a GUI environment (by providing 3 diff. menu outlooks) so that it ensures a good interaction between the retailer/customer and the application with complete checkout process.
Hence, catering all the requirements of both Retailer, customer & Admin with an ensured smooth experience.

Tools

Language used: C++

IDE: DEV C++,Visual Studio and X-Code

Techniques

Filing (i.e. read/write abstract class objects)

Inheritance (i.e. multi-level)

Abstraction (i.e. all data is in private & protected mode)

Polymorphism (function. overloading, function. Overriding, operator overloading)

Encapsulation (i.e. all data is private/protected)

Templates/ Variadic Templates (i.e. for generic functions.)

Pointer Arrays (i.e. 2D dynamic object pointer array)

Timeline/Breakup

Brainstorming of the idea, understanding the implementation and cracking down the basic requirement of Retailer, Customer and Admin.

Identifying the Basic and Advance Entities, Attributes and Behaviors.

Implementing the Basic Classes and Creating Functions as prototypes.

Analyzing the coding the functions and making the function call in the int main.

Creating a menu for Retailer, Customer and Admin.

Using the concept of pointer for dynamic memory.

Using Advanced C++ Concepts Such as Encapsulation, Polymorphism, Abstraction, and Inheritance for better code.

Using Concepts of Filing throughout the Project for Storing data.