

Shop cum Warehouse Management System

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Introduction

This report begins with a brief introduction about this project and the different stages of the design and the development of SHOP CUM WAREHOUSE MANAGEMENT SYSTEM. Before detailed discussion, first of all we would like to give an overall idea about this project.

Shop Cum Warehouse Management System

Shop Cum Warehouse Management System brings a concept of accounting and record keeping digitally instead of doing it on paper. This software is supported to eliminate and in some cases reduce the hardship faced by manual systems. With different login platforms, we provide an improvised way for employee and owner to do their




field of work more accordingly. Customers get a better experience while shopping.

Why Computerized Helpline System?

- Using this program, we will store the information more accurately, efficiently and securely rather than the manually calculated and manual records information.
- The information can be extracted or edited at the ease of the user, without any hassle unlike manually kept records.
- Valuable data can be stored for a longer period of time.
- One can concentrate on their other activities rather than record keeping.

Main Goal of The Project

The aim of this project is to automate the existing manual system by the help of full-fledged software, fulfilling their



requirements. Basically it describes how to manage for good performance and better services for the customers.

The main objective of the project is to manage the details of products, sales, payments, stock. This project specifies roles for different persons according to their work.

Limitation of Existing(manual) System

- Time Consuming.
- Less Data Security.
- More paperwork has to be done.
- Needs Manual Calculations.
- No direct role for the higher officials.
- Low efficiency and redundancy

Advantages of the Proposed System

This proposed system is to develop a system of improved facilities.

- Security of Data.
- Ensure data accuracy.
- Proper control of the higher officials.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency with less paper work.
- User friendliness and interaction.
- Better service.

Future scope of the Proposed System

Future scope of the proposed system circles around maintaining information regarding

- We can add printers.
- We can host the platform on online servers to make it accessible worldwide.

- Integrate multiple load balancers to distribute the loads of the system.
- Create the master and slave database structure to reduce the overload of the database queries.
- Implement the backup mechanism for taking backup of codebase and database on a regular basis on different servers.

Why using C++


Developments in software technology continue to be dynamic. New tools and techniques are announced in quick succession. This has forced the software engineers and industry to continuously look for new approaches to software design and development, and they are becoming more and more critical in view of the increasing complexity of software systems as well as the highly competitive nature of the industry.

These rapid advances appear to have created a situation of crisis within the industry. The following issues need to be addressed to face this crisis:

- How to represent real-life entities of problems in system design?
- How to design systems with open interfaces?
- How to ensure reusability and extensibility of modules
- How to develop modules that are tolerant to any changes in future?
- How to improve software productivity and decrease software cost?
- How to improve the quality of service?
- How to manage time schedules?
- How to industrialize the software development process?

Benefits of OOP

Object oriented contributes to the solution of many problems associated with the development quality of software products. The new

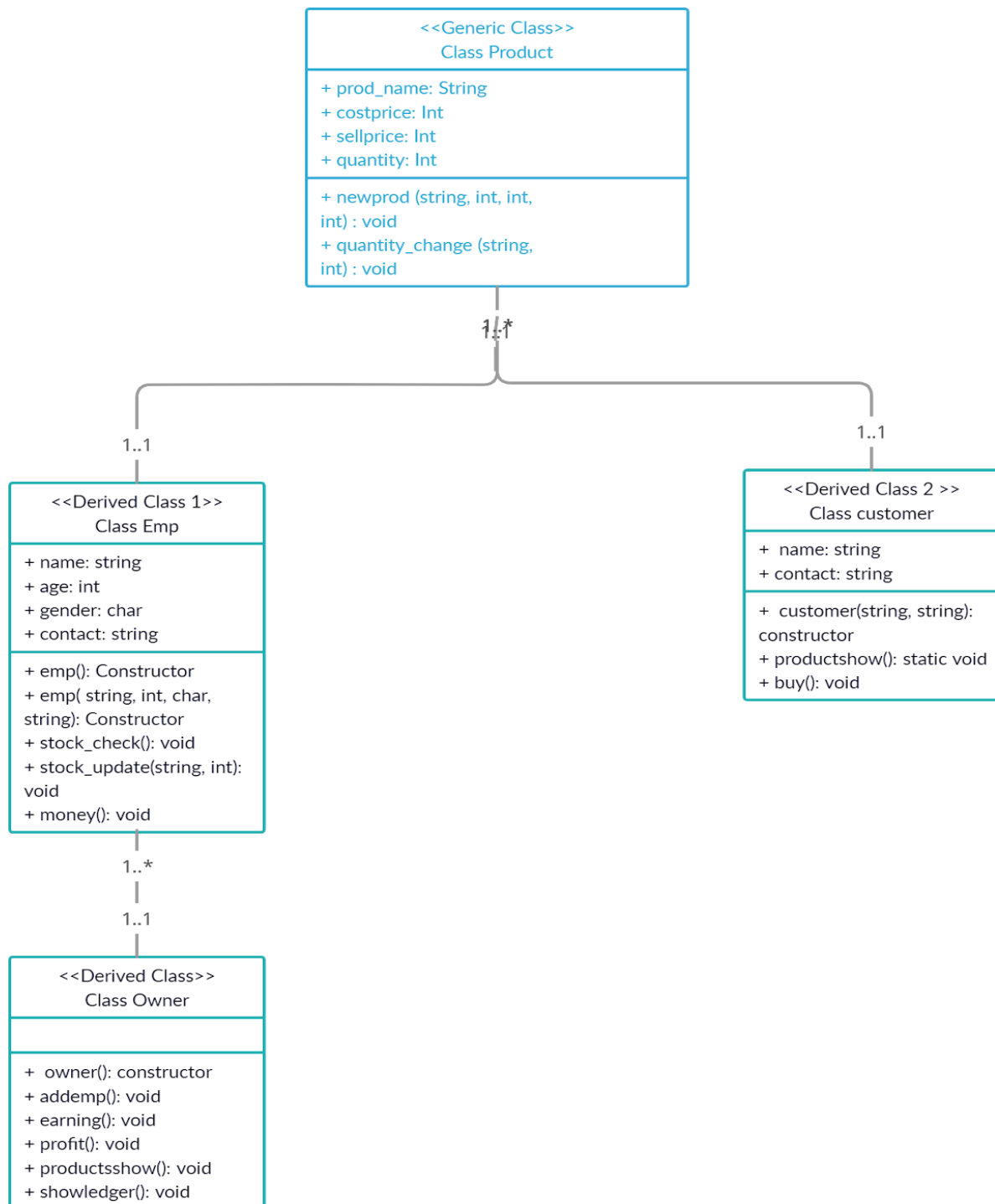


technology promises greater programmer productivity, better quality of software and lesser maintenance cost. The principal advantages are:

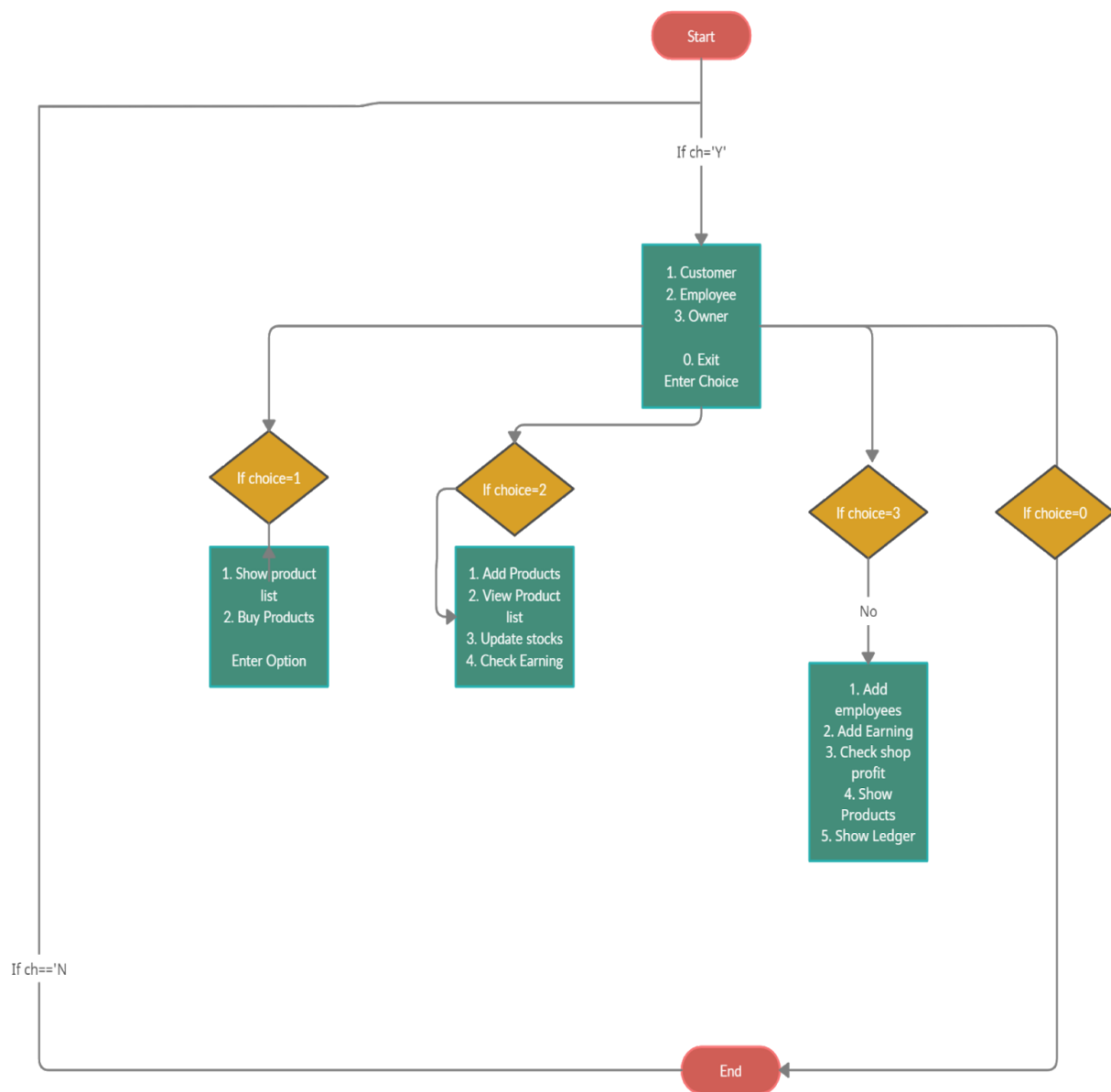
- Through inheritance, we can eliminate redundant code and extend the use of existing classes.
- We can build programs from the standard working modules that communicate with one another rather than having to start writing the code from scratch. This leads to saving of development time and higher productivity.
- The principle of data hiding helps the programmer to build secure programs that cannot be invaded by code in other parts of the program
- It is possible to map objects in the problem domain to those in the program.
- It is easy to partition the work in a project based on objects.
- Object-oriented systems can be easily upgraded from small to large systems.
- Message passing techniques for communication between objects make the interface descriptions with external systems much simpler.

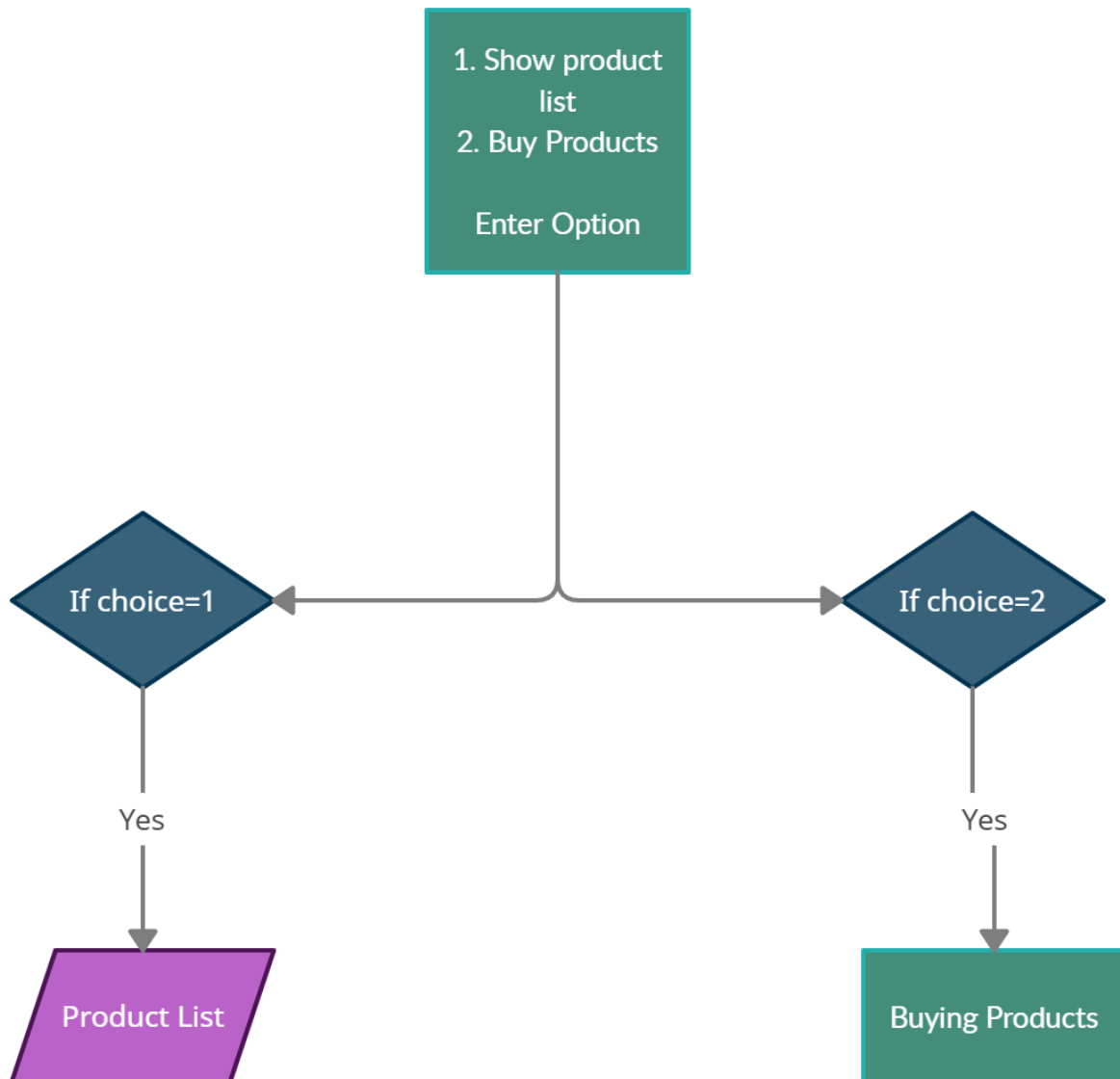
Software complexity can be easily managed.

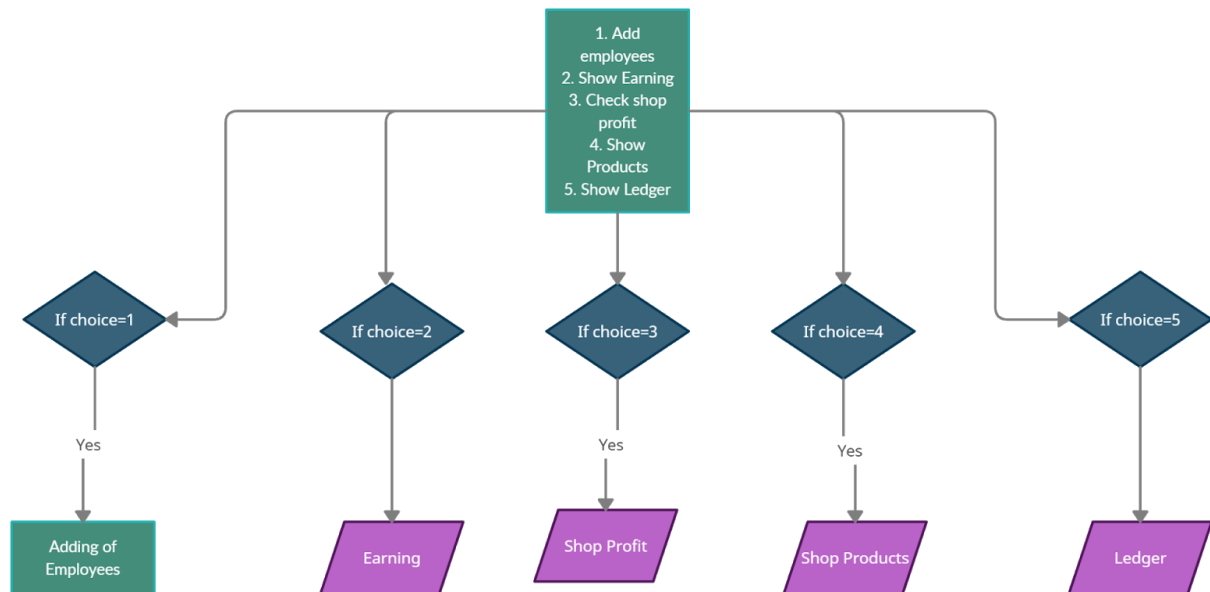
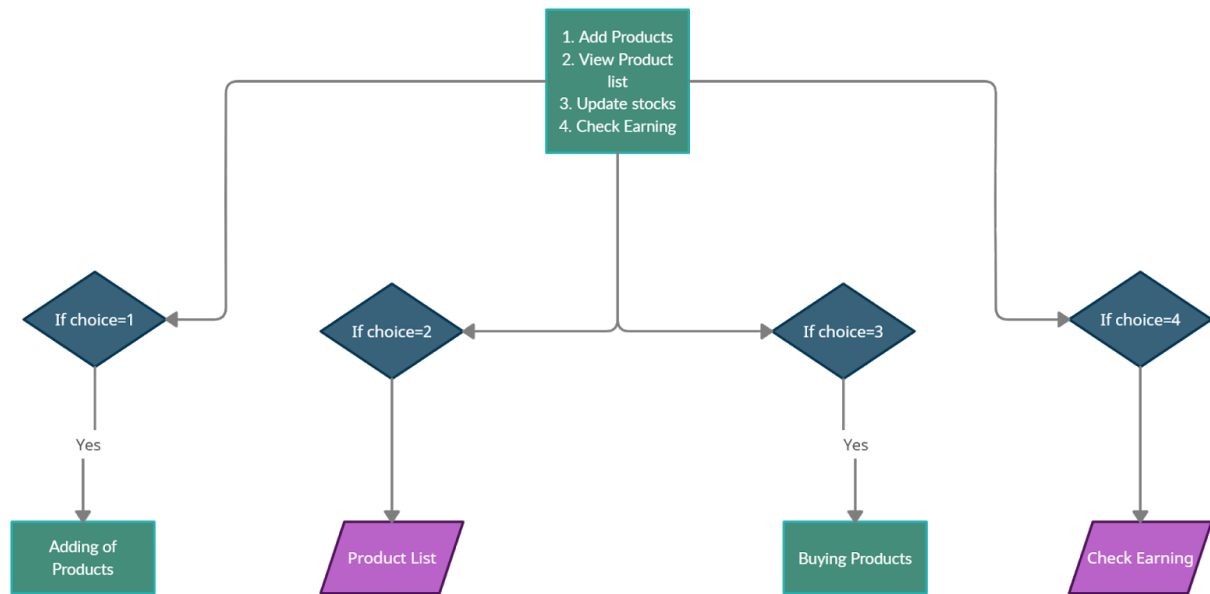
System Analysis: Class Diagram



Activity Diagrams







Program Structure

We are developing a Shop cum Warehouse Management system in order to provide a computerized facility to the personnel related to shopping and store the records digitally.

Naming Conventions

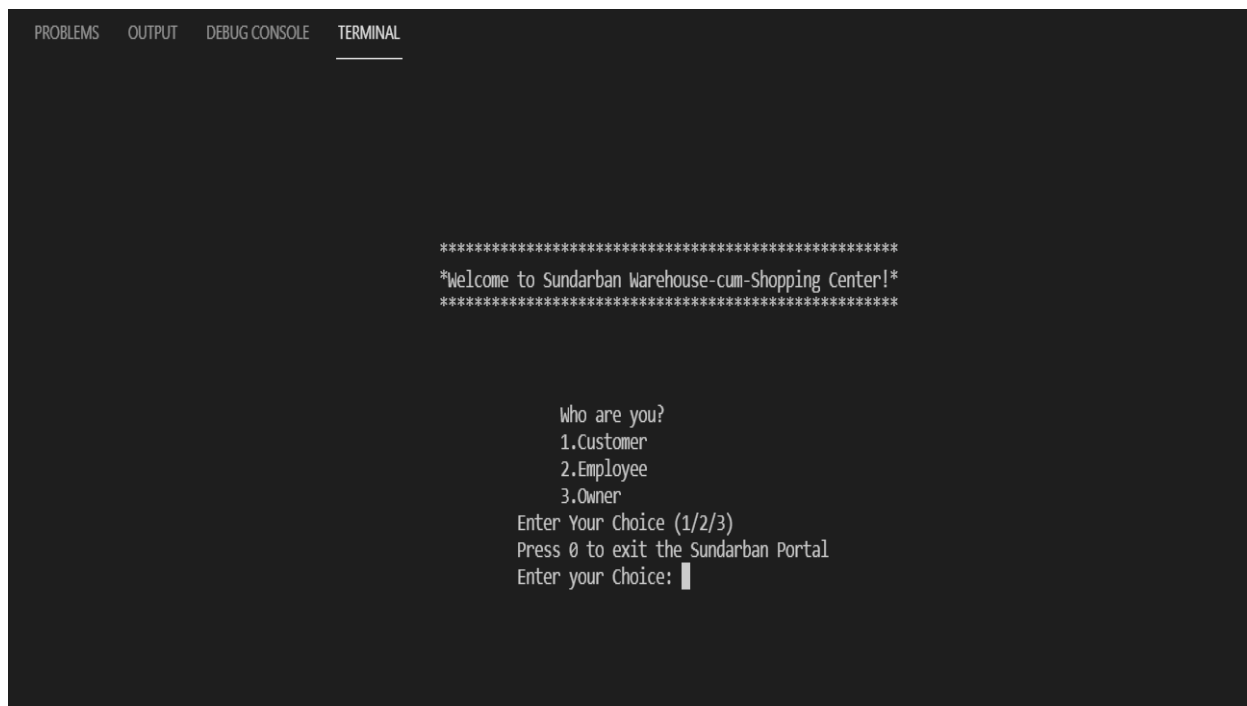
Objects	Naming Conventions
Header Files	customer.h, employee.h, owner.h, product.h
Classes	mp, owner, product

Functions	<code>productshow(); buy();</code> <code>addprod(); stock_check(); stock_update();</code> <code>money();</code> <code>addemp(); earning(); profit(); productsshow();</code> <code>showledger();</code> <code>newproduct(); quantity_change();</code>
Data files	<code>Chocos.txt, Duracell.txt, earning.txt,</code> <code>empdetail.txt, ledger.txt, Maggi.txt,</code> <code>Passwords.txt, productlist.txt, profit.txt,</code> <code>tempbill.txt</code>
Program variables	<code>name, contact, age, gender, costprice, sellprice,</code> <code>quantity, pass, choice, password,</code>
Program files	<code>customer.cpp, employee.cpp, main.cpp,</code> <code>owner.cpp, product.cpp,</code>

Process Logic

There are several features in this program, let's go through some of them:

- **Upon execution, the program welcomes the user(owner, employee, customer) and asks them to specify their role.**

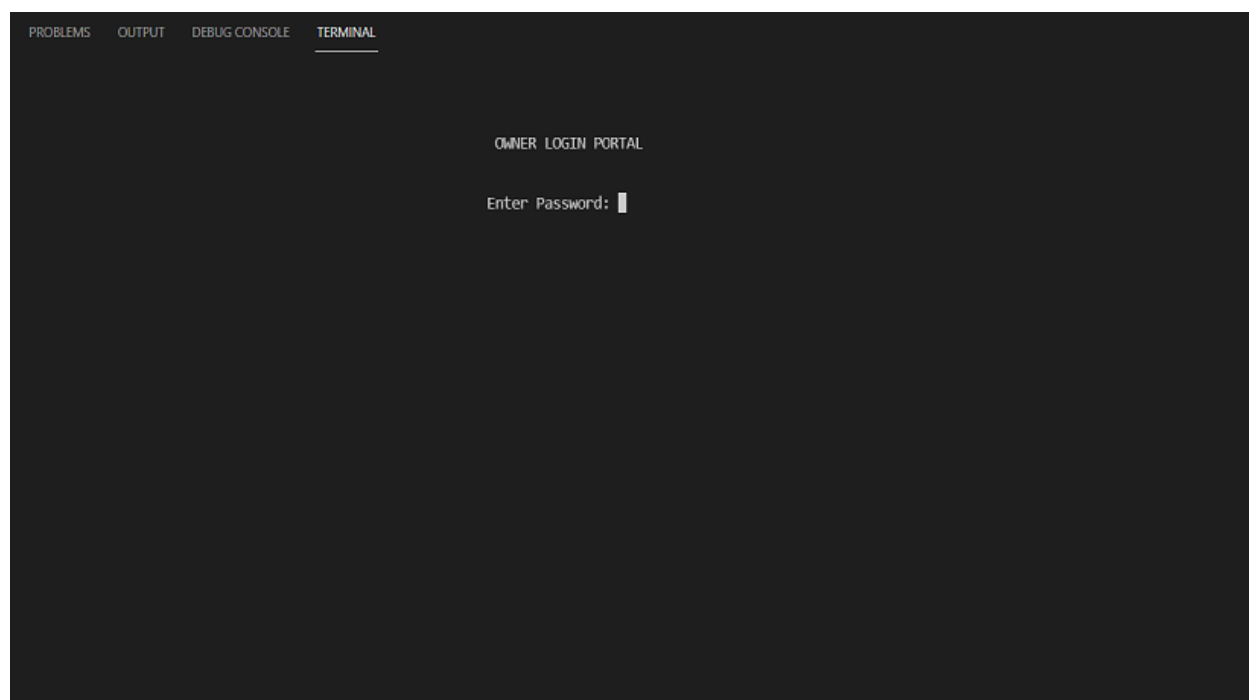


```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

*****
*Welcome to Sundarban Warehouse-cum-Shopping Center!*
*****

Who are you?
1.Customer
2.Employee
3.Owner
Enter Your Choice (1/2/3)
Press 0 to exit the Sundarban Portal
Enter your choice: █
```

- **For employee/owner an entry password is made for security.**



- After owner login he get following features:



- On selecting option 5, an overall ledger is shown to the owner:


```

Show Ledger

-----NEW PRODUCT IN STOCK-----
Product name: Chocos
Cost Price of Product: 120
Selling Price of the Product: 150
Net units of the product in stock: : 120
-----

-----NEW PRODUCT IN STOCK-----
Product name: Maggi
Cost Price of Product: 8
Selling Price of the Product: 12
Net units of the product in stock: : 200
-----

-----STOCK ADDED-----
Name of product: Chocos
Original stock: 120
Added stock: 44Total stock: 164
-----

-----NEW PRODUCT IN STOCK-----
Product name: Duracell
Cost Price of Product: 20
Selling Price of the Product: 25
Net units of the product in stock: : 150
-----

-----NEW ENTRY IN THE LEDGER-----
Original amount in the treasury: 8063913497540557656
Amount of purchase done: 12
Total amount in treasury: 8063913497540557668

Net profit in recent pruchase: 4
Total profit earned till date: 328425718465
-----

-----STOCK ADDED-----Name of product: Maggi
Original stock: 200
Added stock: 5Total stock: 205

```

- On selecting Option 1, the owner can add a new employee details for record keeping. And a feature is also made to terminate or to go to the start of the program as follows:

```

Hello !!!
Hi Owner!!

What do you want to do?
1. Add a new employee
2. View total earning
3. View total profit
4. Show products available
5. Show ledger
Enter your choice: 1

Adding a new employee

Enter employee name: Akshay
Enter employee's age: 22
Enter the gender of employee (M/F): M
Enter employee contact nuber: 7328737488

Want to continue?? (Y/N): █
```

- Now here comes the employee, with a password to enter:

```

EMPLOYEE LOGIN PORTAL

Enter Password: █
```

- After verification, the following features are shown:

```
Hi Employee!!!
Enter your name: Akshay
Hello !!!
Hello Akshay
What you wanna do??
1.Show list of products available
2.Update the stock
3.Show the earning of store
4.Add a new product in stock

Enter Choice: █
```

- **Employee is given the authority to update the stocks in store as follows:**

```
Hi Employee!!!
Enter your name: Akshay
Hello !!!
Hello Akshay
What you wanna do??
1.Show list of products available
2.Update the stock
3.Show the earning of store
4.Add a new product in stock

Enter Choice: 2

Chocos
Maggi
Duracell

Enter the name of product you want to update stock of: Maggi
Enter the product units added in the stock: 50

Stock Updated!!!█
```

- **Employee is given the authority to add any new item in store with every details regarding it as follows:**

```

                                Hi Employee!!!
                                Enter your name: Akshay
                                Hello !!!
                                Hello Akshay
                                What you wanna do??
                                1.Show list of products available
                                2.Update the stock
                                3.Show the earning of store
                                4.Add a new product in stock

                                Enter Choice: 4

Product name: Horlicks
Cost Price of Product: 175
Selling Price of the Product: 200
Net units of the product in stock: : 200
Product added in the list!
█
```

- **For customers no password is required but the program takes note of their contact for further details with a feature to see the product list of store as follows:**

```

                                Hello Customer!!!

                                Enter name: Kanha
                                Enter your contact number: 6576576567

                                Hello Kanha !!!
                                What you wanna do??
                                1.Show Products List
                                2.Buy Products
                                Enter choice (1/2): 1

Products availavble with us:
1 : Chocos
2 : Maggi
3 : Duracell
4 : Horlicks
█
```

- **A successful purchase is made and with this all the stocks are also updated accordingly:**

```

Hello Customer!!!

Enter name: Kanha
Enter your contact number: 7657656777

Hello Kanha !!!
What you wanna do??
1.Show Products List
2.Buy Products
Enter choice (1/2): 2

Products availavble with us:
1 : Chocos
2 : Maggi
3 : Duracell
4 : Horlicks
Enter the number of different products you want to buy: 1
Enter the name of product 1 : Chocos

Enter the no of quantities required of Chocos : 2

Purchase Successful!!!
```