



Computer Programming Lab

Project Manual

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Your task is to design a console based management system that would be used at a general store that primarily sells three types of items (beverages, packed goods, unpacked goods). Each item costs a certain amount and is sold for a profit.

The system will have the following users:

1. Admin
The admin will have access to the complete functionalities of the system. Admin can also add/remove/update other users.
2. Cashier
The cashier will be handling the cash counter.
3. Stock Manager
The stock manager will be able to update the stock.

Admin Functionalities:

1. Add New Stock:
Admin can add new item which contain following things
Item ID (Unique for all items), Name, Quantity, Average price, Sale price.
2. Update Stock:
Admin can update Name, Average price, Sale price and Quantity.
But new Quantity should be more than previous quantity.
3. Remove any Stock:
Admin can remove any Item from the stock.
If the quantity of item is more than zero there should be a warning message if Admin ignore the warning then remove the item from stock otherwise back to the main menu.



4. Generate Stock Report:

Admin can generate the stock report in which you have to display all the stock.

ID	Name	Quantity	Average Price	Total average price	Sale Price	Total sale Price
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Total average price = Average price * Quantity

Total sale price = sale price * Quantity

And at the end you have to Display Count of Items, Quantity, Total Average Price, Total Sale Price.

5. Search any item:

Admin Enter Item ID and you have to Display its Report.

ID	Name	Quantity	Average Price	Total average price	Sale Price	Total sale Price
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Total average price= Average price * Quantity

Total sale price= sale price * Quantity

6. Generate Sale Report:

You have to Display all the Sold items with the employee ID who sold that item

ID	Name	Employee ID	Quantity	Average Price	Total average price	Sale Price	Total sale Price
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Total average price= Average price * Quantity

Total sale price= sale price * Quantity

And at the end you have to Display Count of Items, Quantity, Total Average Price, Total Sale Price Also Display the profit or loss(amount).

7. Generate Person wise Sale Report:

Admin Enter Employee ID and you have to Display its Report.

ID	Name	Quantity	Average Price	Total average price	Sale Price	Total sale Price
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Total average price= Average price * Quantity

Total sale price= sale price * Quantity

And at the end you have to Display Count of Items, Quantity, Total Average Price, Total Sale Price



8. Add New Employee

Admin can Add Employee. Employee Information is ID, Password, Name, salary, Type, Contact, CNIC, Address.
Only three Type of Employees

1. Workers
2. Stock Management
3. Cashier

9. Update Employee Info:

Admin Enters the Employee ID and can change his Name, Salary, Contact, Address.

10. Remove any Employee:

Admin Enters Employee ID can delete any employee but system should have to display a confirmation message.

Cashier Functionalities:

1. Generate bill:

Cashier can add all those products in the bill which customers buy and show the total amount. Cashier add the Reserving amount and the system Display the Remaining amount on screen also a Warning Message in case of receiving amount is less then total amount.

Cashier also add the Employee who Sold that Item but any cashier or stock manager cannot sale any item.

A warning message show if the product quantity is less than 1.

If Total amount is greater than 5000 then 5% Discount.

If Total amount is Greater than 10000 then 10% Discount.

If Total Amount is greater than 20000 then 15% Discount.



2. Search any item:

Cashier Enter Item ID and you have to Display its Report.

ID	Name	Quantity	Average Price	Sale Price
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Stock Manager Functionalities:

1. Add New Stock:

Stock management can add new item which contain following things
Item ID (Unique for all items), Name, Quantity, Average price, Sale price.

2. Update New Stock

Stock manager can update Name, Average price, Sale price.
But cannot update Quantity.

3. Remove any item:

Stock manager can remove any Item from the stock if and only if the Quantity of Items is Zero. If the Quantity is Greater than zero then Stock manager cannot Remove that Item.

4. Generate Stock Report

Stock Manager can generate the stock report in which you have to display all the stock.

ID	Name	Quantity	Average Price	Total average price	Sale Price	Total sale Price
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Total average price= Average price * Quantity

Total sale price= sale price * Quantity

And at the end you have to Display Count of Items and Quantity only.

5. Search any Item

Admin Enter Item ID and you have to Display its Report.

ID	Name	Quantity	Average Price	Total average price	Sale Price	Total sale Price
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Total average price= Average price * Quantity

Total sale price= sale price * Quantity



About Filing:

1. [Stock.txt](#)

ID |Name |Quantity |Average Price |Sale Price

2. [Sale.txt](#)

ID |Name |Quantity |Employee ID |Average Price |Sale Price

3. [Employee.txt](#)

Employee ID |Name |Type |Salary |Contact |Address

Note:

You have to handle all the Exceptions.

File handling is Compulsory.

All users would be required to sign in to the system using a username and a password (encrypted).
The system should have all necessary CP concepts implemented.

The system would also be storing all the sales data. Each item in the stock would be given a unique ID and a credit score which would show its contribution to the overall sale of the store.

Hope for the Best, prepare for the Bad and Be Ready for the worst. 😊