



Overview of the program:

This program is a Supermart Management System implemented in C.  
It provides functionalities for managing product information in a supermart.

Objective :

- To create a basic inventory management system for a supermart. This system allows users to:
1. Add product details: Record information about products, such as name, manufacturer, quantity, and price.
  2. View all products: Display the inventory, showing all the stored product details.
  3. Search by manufacturer: List products based on a specific company's name.
  4. Track inventory size: Display the total count of products in the supermart.

Future work and Improvements:

1. Error Handling:
  - Check for buffer overflow during input (e.g., scanf for strings).
  - Validate user inputs to ensure valid data is entered (e.g., non-negative quantities or prices).
2. Dynamic Array:
  - Replace the fixed-size array with dynamic memory allocation to handle an arbitrary number of products.
3. Persistent Storage:
  - Save inventory data to a file so it persists across program executions.
4. Better Formatting:
  - Use formatted tables for displaying product information.
5. Search Enhancements:
  - Allow partial matches for company or product names using case-insensitive comparisons.

Conclusion of the Code:

- The provided program successfully demonstrates a basic inventory management system for a supermart. It enables the user to:
1. Add Products: Efficiently input product details such as name, manufacturer, available quantity, and price.
  2. View Inventory: Display all products currently stored in the inventory.
  3. Search by Manufacturer: Filter and list products based on the company name.
  4. Track Inventory Size: Show the total number of products added to the system.

Display,Input and Output of code

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****#####WELCOME TO SUPERMART #####****

1. Add product information
2. Display product information
3. List all products of a given company
4. List the count of products in the supermart
5. Exit

Enter one of the above: |
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```
Enter one of the above: 1
Enter product name = Toothpaste
Enter company name = Sensodyne
Enter available quantity = 100
Enter price = 70
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```
Enter one of the above: 2
You have entered the following information
Product name = Toothpaste
Company name = Sensodyne
Available quantity = 100
Price = 70.00
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```
Enter one of the above: 3
Enter company name: sensodyne
Products from company sensodyne:
Product: Toothpaste, Quantity: 100, Price: 70.00
```

```
Enter one of the above: 4

No. of products available in the supermart: 1
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