**Step 1: Define Data Structure**

* **Input**: Create a CSV file inventory.csv with the following columns:
  + Product ID
  + Product Name
  + Category
  + Price
  + Stock
  + Total Sales
* **Output**: A well-structured file that acts as a data source for IMS and DSS.

**Step 2: Design IMS Core Functionalities**

* **Input**: User commands or choices from a menu-driven program.
* **Output**: IMS functions to manage inventory.

**Algorithm: Add a New Product**

1. Load the inventory.csv file.
2. Check if the Product ID already exists:
   * If yes, print an error message.
   * If no, append the new product details.
3. Save the updated file.

**Algorithm: Update Product Details**

1. Load the inventory.csv file.
2. Check if the Product ID exists:
   * If no, print an error message.
   * If yes, update the specific field (e.g., stock, price).
3. Save the updated file.

**Algorithm: Record a Sale**

1. Load the inventory.csv file.
2. Check if the Product ID exists:
   * If no, print an error message.
   * If yes, fetch the current stock:
     + If stock is sufficient, deduct the sold quantity and update Total Sales.
     + If stock is insufficient, print an error message.
3. Save the updated file.

**Algorithm: View Inventory**

1. Load the inventory.csv file.
2. Display all product details to the user.

**Step 3: Implement DSS for Restocking Recommendations**

* **Input**: Threshold for stock levels and sales data.
* **Output**: List of products needing restocking.

**Algorithm: Recommend Restocks**

1. Load the inventory.csv file.
2. Iterate through the products:
   * Identify products where Stock < threshold.
   * Append these products to a recommendation list.
3. Print the recommendation list.

**Step 4: Integrate IMS and DSS**

* **Input**: User choice from a menu.
* **Output**: Combined IMS and DSS functionalities.

**Algorithm: Main Menu**

1. Display options to the user:
   * Add Product
   * Update Product
   * Record Sale
   * View Inventory
   * Recommend Restocks
   * Exit
2. Take user input and map it to corresponding IMS or DSS functionality:
   * Call add\_product() for adding products.
   * Call update\_product() for updating details.
   * Call record\_sale() for recording sales.
   * Call view\_inventory() to display all products.
   * Call recommend\_restock() to analyze and recommend restocking.
3. Loop until the user chooses to exit.