Step 3: Creating a Design Outline

Planned Tasks

1. **Add New Product**:

   - Input: Product `name`, `price`, and `stock quantity`.
   - Output: Add product to the list.

2. **Update Stock**:

   - Input: Product `name` and stock change (+ or -).
   - Output: Update stock in the product list.

3. **View Products**:

   - Input: None.
   - Output: Display all products with their details.

4. **Remove Product**:
   - Input: Product `name`.
   - Output: Remove product from the list.

Code Components

1. **Variables**:

   - A list to store product details (`List<Product>`).
   - Temporary variables for user input.

2. **Methods**:

   - `AddProduct()`
   - `UpdateStock()`
   - `ViewProducts()`
   - `RemoveProduct()`
   - `Main()` for the application entry point.

3. **Control Structures**:

   - Use `if-else` and `switch` for menu selection.

4. **Loops**:
   - Use a `while` loop for keeping the application running until the user exits.

Start

Begin the process with initial preparations and gather necessary information.

Main Loop

Begin the main loop for managing inventory options until exit.

Show Menu

Display the inventory options to the user.

User Input

Get the user's choice of action from the displayed menu.

Switch Case

Evaluate the user's input and direct to appropriate function based on the choice.

Exit

Terminate the loop if the user chooses to exit.

Add Product

Direct to add product function based on user input.

Update Stock

Direct to update stock function based on user input.

View Products

Direct to view products function based on user input.

Remove Product

Direct to remove product function based on user input.

End

Conclude the process of the inventory management system.