

## 1. Functional Requirements

Functional requirements describe **what the system must do**.

### 1.1 Product Management

The system must allow users to:

#### 1. **Add new products**

- Enter product name
- Enter product price
- Enter product quantity in stock
- Validate input data

#### 2. **Update product information**

- Modify product price
- Increase quantity (restocking)
- Decrease quantity (sales)
- Prevent quantity from dropping below 0

#### 3. **View products**

- Display all products
- Show product name, price, and current quantity
- Optionally view a specific product

#### 4. **Delete products**

- Remove a product by name or ID
- Confirm deletion before removing

## 2. Non-Functional Requirements

Non-functional requirements describe **how the system should perform**.

### 1. **Usability**

- Clear text-based menu
- Simple navigation
- Informative error messages

### 2. **Reliability**

- Validate all user input
- Handle errors gracefully (e.g., letters instead of numbers)

### 3. **Performance**

- Fast response time for small to medium product lists

### 4. **Maintainability**

- Clean and organized code structure
- Separation of logic and user interface
- Easy to extend (e.g., adding file or database storage later)

### 5. **Compatibility**

- Runs in a standard console
- No additional software required