

# Software Requirements Specification (SRS)

## Application Name

QA Training App

## Document Purpose

This document defines the **functional requirements** of the QA Training App. The application is already implemented. Students must use this document as the **primary reference** to understand system behavior and create: - UI test cases - Functional test cases - Negative and validation test cases

**Note:** API-level details are intentionally excluded from this document. Students must refer to **Swagger documentation** to understand APIs.

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## 1. System Overview

The QA Training App is a web-based application used for managing: - User authentication - Categories and sub-categories - Plants (inventory items) - Sales transactions

The system supports **role-based access control** with two roles: - **Admin** - **User**

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## 2. User Roles & Access Control

Feature	Admin	User
Login	Yes	Yes
View Dashboard	Yes	Yes
View Categories	Yes	Yes
Add / Edit / Delete Category	Yes	No
View Plants	Yes	Yes
Add / Edit / Delete Plant	Yes	No
View Sales	Yes	Yes
Create Sale	Yes	No
Delete Sale	Yes	No

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## 3. Authentication Module

### 3.1 Login Page

**URL:** /ui/login

**Purpose:** Allow users to authenticate using username and password.

#### *Functional Requirements*

- Username and Password fields are mandatory.
- Validation messages are displayed **below respective fields** in red color.
- Invalid login displays a global error message: **“Invalid username or password.”**
- Successful login redirects the user to the **Dashboard page**.
- Logout displays a success message.

#### *Validation Rules*

Field	Rule	Message
Username	Required	Username is required
Password	Required	Password is required

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## 4. Dashboard

**Access:** Admin, User

**Purpose:** Display the main landing page after successful login.

#### *Functional Requirements*

- Dashboard loads immediately after login.
- Navigation menu highlights the active page.
- Category, Plants and Sales summary information will be displayed.

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## 5. Category Management Module

### 5.1 Category List Page

**URL:** /ui/categories

**Access:** Admin, User

#### *Functional Requirements*

- Display list of categories with pagination.
- Support searching by category name.
- Support filtering by parent category.
- Support sorting by:
  - ID
  - Name
  - Parent category
- If no records exist, display:  
**“No category found”**

#### *Admin-Specific Features*

- “Add Category” button is visible only to Admin.
  - Edit and Delete actions are disabled or hidden for non-admin users.
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## 5.2 Add / Edit Category Page

**URLs:** - Add: /ui/categories/add - Edit: /ui/categories/edit/{id}

**Access:** Admin only

#### *Functional Requirements*

- Category Name is mandatory.
- Parent Category selection is optional.
- Empty parent selection creates a **main category**.
- Validation errors are displayed below the field.
- Cancel button navigates back to category list.

#### *Validation Rules*

Field	Rule	Message
Category Name	Required	Category name is required
Category Name	Length 3–10	Category name must be between 3 and 10 characters

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## 6. Plant Management Module

### 6.1 Plant List Page

**URL:** /ui/plants

**Access:** Admin, User

#### *Functional Requirements*

- Display paginated list of plants.
- Search plants by name.
- Filter plants by category.
- Sorting supported on:
  - Name
  - Price
  - Quantity
- Display “Low” badge when quantity is below 5.
- If no plants exist, display:  
**“No plants found”**

#### *Admin-Specific Features*

- “Add Plant” button visible only to Admin.
  - Edit and Delete actions available only to Admin.
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## 6.2 Add / Edit Plant Page

**URLs:** - Add: /ui/plants/add - Edit: /ui/plants/edit/{id}

**Access:** Admin only

#### *Functional Requirements*

- Plant Name, Category, Price, and Quantity are mandatory.
- Category must be a sub-category.
- Validation errors appear below respective fields.
- Cancel button returns to plant list.

#### *Validation Rules*

Field	Rule	Message
Name	Required	Plant name is required
Name	Length 3–25	Plant name must be between 3 and 25 characters
Price	Required	Price is required
Price	> 0	Price must be greater than 0
Quantity	Required	Quantity is required
Quantity	$\geq 0$	Quantity cannot be negative
Category	Required	Category is required

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## 7. Sales Management Module

### 7.1 Sales List Page

**URL:** /ui/sales

**Access:** Admin, User

#### *Functional Requirements*

- Display paginated list of sales records.
- Sorting supported on:
  - Plant name
  - Quantity
  - Total price
  - Sold date
- Default sorting by sold date (descending).
- If no sales exist, display:  
**“No sales found”**

#### *Admin-Specific Features*

- “Sell Plant” button visible only to Admin.
  - Delete action available only to Admin.
  - Delete requires confirmation prompt.
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## 7.2 Sell Plant Page

**URL:** /ui/sales/new

**Access:** Admin only

#### *Functional Requirements*

- Plant dropdown lists available plants with current stock.
- Quantity must be greater than zero.
- On successful sale:
  - Stock is reduced
  - User is redirected to sales list
- On error:
  - Error message displayed on the same page
- Cancel button navigates back to sales list.

#### *Validation Rules*

Field	Rule	Message
Plant	Required	Plant is required
Quantity	$\geq 1$	Quantity must be greater than 0

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## 8. Error Handling & Messages

- Validation errors are shown near respective input fields.
- API errors are displayed as alert messages.
- Unauthorized access:
  - Redirects to login page if not logged in
  - Redirects to 403 page if role is insufficient

## 9. Assignment Usage Note (For Students)

This document must be used to: - Understand expected system behavior - Identify positive and negative scenarios - Design UI and functional test cases

API requests, responses, and edge cases must be derived from **Swagger documentation** provided with the application.

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**End of Document**