# **Phase 6: User Interface Development 🎨**

**Project:** Supply Chain Traceability & Inventory Management System

**Goal:** Develop intuitive Lightning interfaces using Lightning App Builder and custom Lightning Web Components (LWC) for inventory monitoring and product traceability.

### **1. Lightning App Builder Configuration**

A custom Lightning App was created to provide a centralized workspace for all users. Custom Record Pages were designed to improve data consumption.

| **Item** | **Component** | **Key Configuration** | **Rationale** |
| --- | --- | --- | --- |
| **Custom App** | Supply Chain Management | Tabs for Lot, Shipment, Retail Location. | Centralized navigation for the entire supply chain data model. |
| **Lot Record Page** | Custom Page Layout | Related Lists (Shipments, Retail Locations) placed prominently. | Streamlines data review for managers conducting manual checks. |

### **2. Lightning Web Components (LWC)**

Two custom LWCs were developed to provide the necessary interactivity and actionable data.

#### **A. Traceability Scanner LWC (Core QA Tool)**

| **LWC Name** | **Placement** | **Functionality** |
| --- | --- | --- |
| traceabilityScanner | Lot Record Page (Custom Tab) | Allows users to input a barcode, calls LotBarcodeController, and displays the full product journey (origin, all shipments, current locations). |

#### **B. Inventory Dashboard LWC (Core Management Tool)**

| **LWC Name** | **Placement** | **Functionality** |
| --- | --- | --- |
| inventoryDashboard | App Home Page | Calls InventoryReorderScheduler.getLowInventoryItems to display a summary list of all products and locations below the reorder threshold. |

### **LWC Deployment Confirmation**

The successful deployment of both LWCs, making them available in the Lightning App Builder.

### **Visualizing the Dashboard LWC**

The inventoryDashboard component provides a clean, immediate view of stock issues on the application's home page.