

Phase 6: User Interface (UI) Development Name: Alekhya Nam

Overview Phase 6 focuses on building the interactive User Interface of the Smart Manufacturing Portal. This phase connects backend logic (Apex classes) with Lightning Web Components (LWCs) so that Users, Managers, and Account-related roles can interact with the portal efficiently.

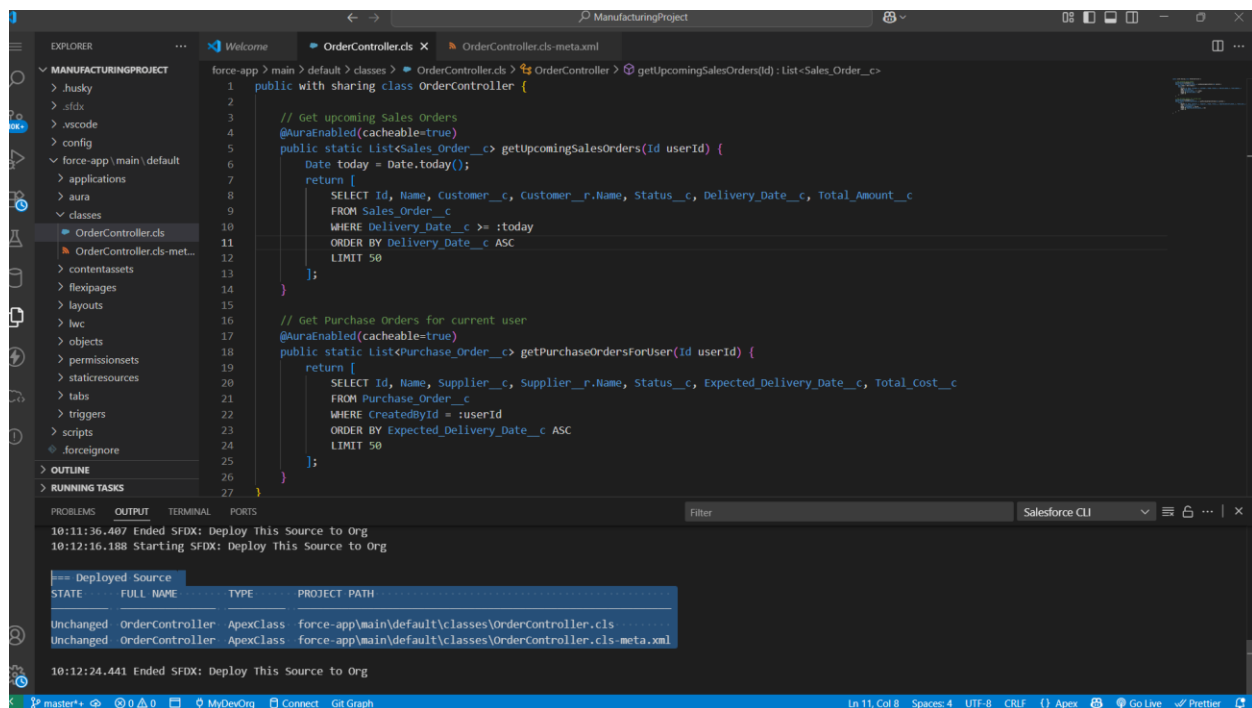
Key Highlights: - Display upcoming Sales Orders and Purchase Orders. - Allow creation of new Sales Orders directly from Account pages. - Provide a global view of upcoming orders on the Home Page.

Step 1: Apex Controller – OrderController.cls Purpose & Use: The Apex controller acts as the backend logic for fetching order data. It provides methods that LWCs call to retrieve upcoming Sales Orders and Purchase Orders.

Key Functionalities: 1. `getUpcomingSalesOrders(userId)` – Returns upcoming Sales Orders for a user in the future, limited to 50. 2. `getPurchaseOrdersForUser(userId)` – Returns Purchase Orders created by the logged-in user, limited to 50.

How it's used: - The `orderList` component uses these methods to dynamically display upcoming orders. - When a user opens their Account record page or Home Page, the Apex controller fetches real-time data from Salesforce.

Deployment: - Deployed from VS Code using SFDX: Deploy Source to Org.



The screenshot shows the Visual Studio Code editor with the `OrderController.cls` file open. The file contains two Apex methods: `getUpcomingSalesOrders` and `getPurchaseOrdersForUser`. The terminal at the bottom shows the SFDX deployment process, including the command `sfdx force:source:deploy` and the resulting deployment of the `OrderController` class to the Salesforce org.

```
public with sharing class OrderController {  
    // Get upcoming Sales Orders  
    @AuraEnabled(cacheable=true)  
    public static List<Sales_Order__c> getUpcomingSalesOrders(Id userId) {  
        Date today = Date.today();  
        return [  
            SELECT ID, Name, Customer__c, Customer_r.Name, Status__c, Delivery_Date__c, Total_Amount__c  
            FROM Sales_Order__c  
            WHERE Delivery_Date__c >= :today  
            ORDER BY Delivery_Date__c ASC  
            LIMIT 50  
        ];  
    }  
  
    // Get Purchase Orders for current user  
    @AuraEnabled(cacheable=true)  
    public static List<Purchase_Order__c> getPurchaseOrdersForUser(Id userId) {  
        return [  
            SELECT ID, Name, Supplier__c, Supplier_r.Name, Status__c, Expected_Delivery_Date__c, Total_cost__c  
            FROM Purchase_Order__c  
            WHERE CreatedById = :userId  
            ORDER BY Expected_Delivery_Date__c ASC  
            LIMIT 50  
        ];  
    }  
}
```

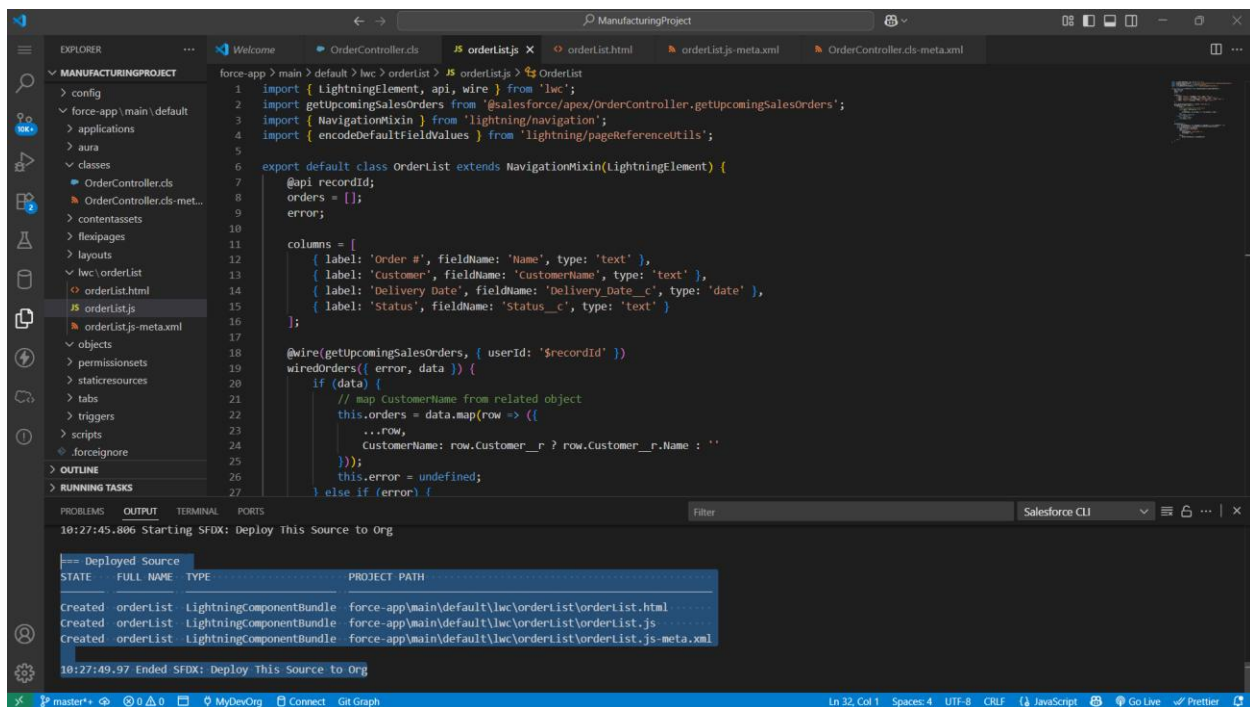
Terminal Output:

```
10:11:36.407 Ended SFDX: Deploy This Source to Org  
10:12:16.188 Starting SFDX: Deploy This Source to Org  
  
===== Deployed Source =====  
STATE      FULL NAME      TYPE      PROJECT PATH  
Unchanged  OrderController ApexClass  force-app/main/default/classes/OrderController.cls  
Unchanged  OrderController ApexClass  force-app/main/default/classes/OrderController.cls-meta.xml  
  
10:12:24.441 Ended SFDX: Deploy This Source to Org
```

Step 2: LWC – orderList Purpose & Use: This component shows a list of Sales Orders and Purchase Orders in a datatable and allows users to create new orders directly from the page. It is used in Account record pages, Manager views, and Home Pages.

Features: - Displays columns like Order Name, Customer / Supplier, Status, Delivery / Expected Date, Total Amount / Cost. - Shows error messages if data cannot be fetched. - New Order button opens the Sales Order creation page with default values prefilled when applicable.

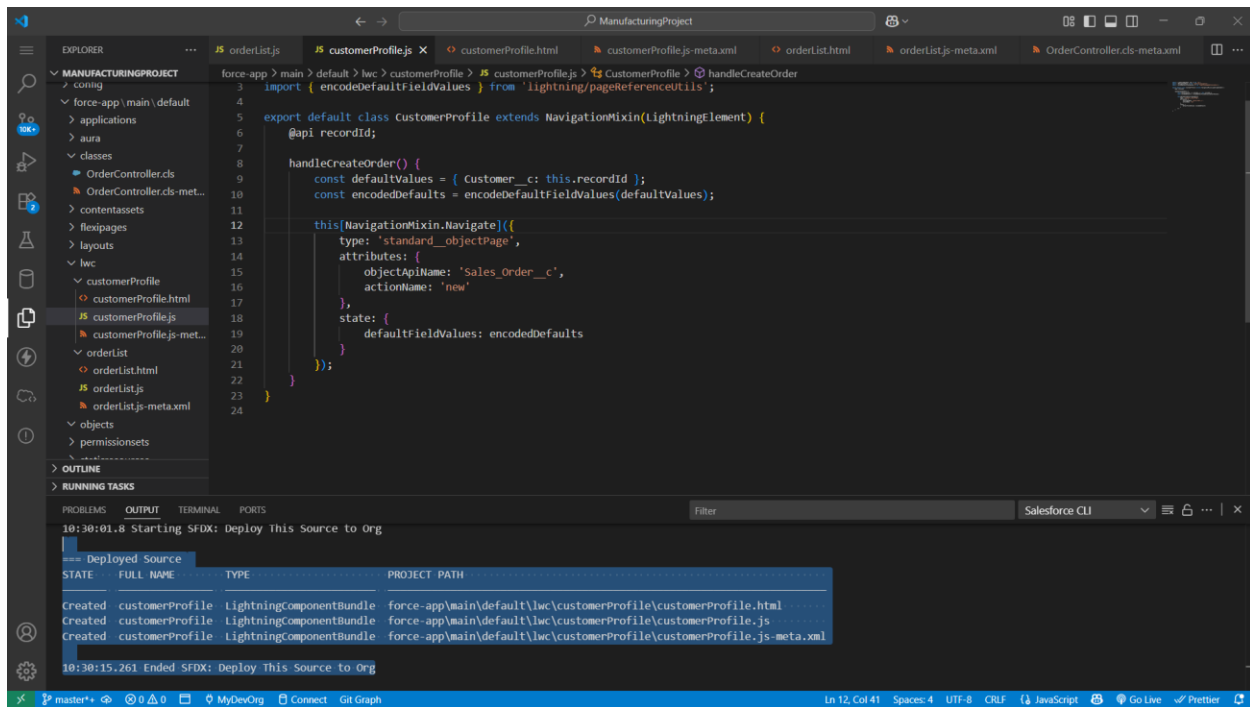
How it works: - Calls the OrderController Apex methods using @wire. - Formats returned data for the datatable. - Uses NavigationMixin and encodeDefaultFieldValues to prefill fields in the new order modal.



Step 3: LWC – customerProfile Purpose & Use: The customerProfile component is a quick action panel on the Account page. It allows users to create a new Sales Order for the current Account without navigating away.

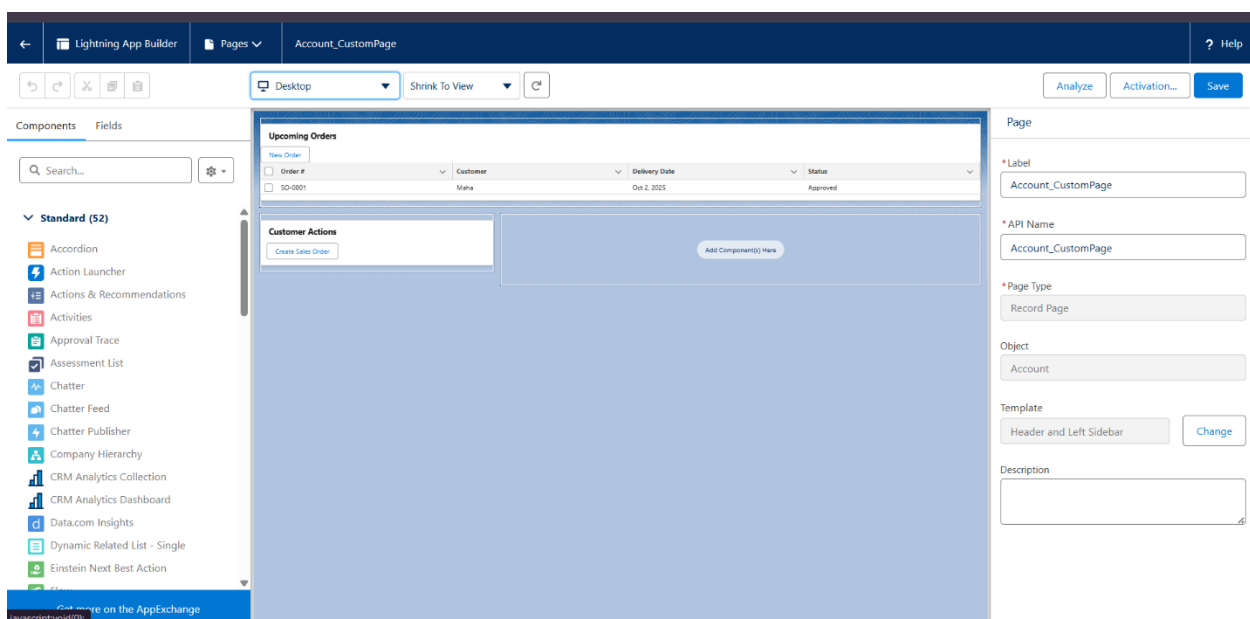
Features: - Displays a Create New Sales Order button. - Prefills the Customer field in the new order modal.

How it works: - Appears in the sidebar of Account record pages. - Clicking the button opens the new Sales Order creation page with Customer prefilled.



Step 4: Adding Components to Pages Purpose & Use: The LWCs are added to Salesforce pages using Lightning App Builder, so users can see and interact with them directly on the record pages or Home Page.

Steps & Usage: 1. Account Record Page – Sidebar: customerProfile, Main region: orderList.
2. Home Page / Manager Page – Main region: orderList global view.



Step 5: Testing the UI Purpose & Use: Ensures all components work as intended and users can interact with orders efficiently.

Testing Steps: 1. Open an Account record → verify customerProfile sidebar appears → click Create New Sales Order → verify Customer is prefilled. 2. Open an Account record → verify orderList in the main region shows upcoming Sales Orders / Purchase Orders. 3. Open the Home Page → verify orderList shows global upcoming orders. 4. Click New Order button → verify default field values prefill correctly. 5. (Optional) Error Handling: Temporarily modify Apex to throw an exception → verify LWC shows a friendly error message.

The screenshot displays the Salesforce interface for an Account record named 'Maha'. The top navigation bar includes the account name, a 'Follow' button, and links for 'New Contact', 'New Case', and 'New Note'. Below this, a header section lists account details: Type, Phone ((455) 454-5454), Website (maha.com), Account Owner (Alekhya Nam), Account Site, and Industry. The main content area is divided into two columns. The left column, under the 'Related' tab, shows 'Customer Actions' with a 'Create Sales Order' button, a message about no potential duplicates, and sections for 'Contacts (0)', 'Opportunities (0)', 'Cases (0)', and 'Notes & Attachments (0)', each with a 'New' or 'Upload Files' button. The right column, under the 'Activity' tab, shows 'Upcoming Orders' with a 'New Order' button and a table of orders. The table has columns for Order ID, Status, Date, and Total Amount. One order is listed: SO-0001, Approved, Oct 2, 2023, \$1,200.00. Below the table are filters and a 'Refresh' button. The bottom section, 'Upcoming & Overdue', shows no activities to show.

Order ID	Status	Date	Total Amount
SO-0001	Approved	Oct 2, 2023	\$1,200.00