Phase 6: User Interface Development

This phase focuses on developing a **dynamic and responsive user interface** for the **RePlastix Management App** using **Lightning Experience** tools and **Lightning Web Components (LWC)**. It bridges the gap between backend logic and frontend presentation, ensuring smooth interaction and user-friendly design.

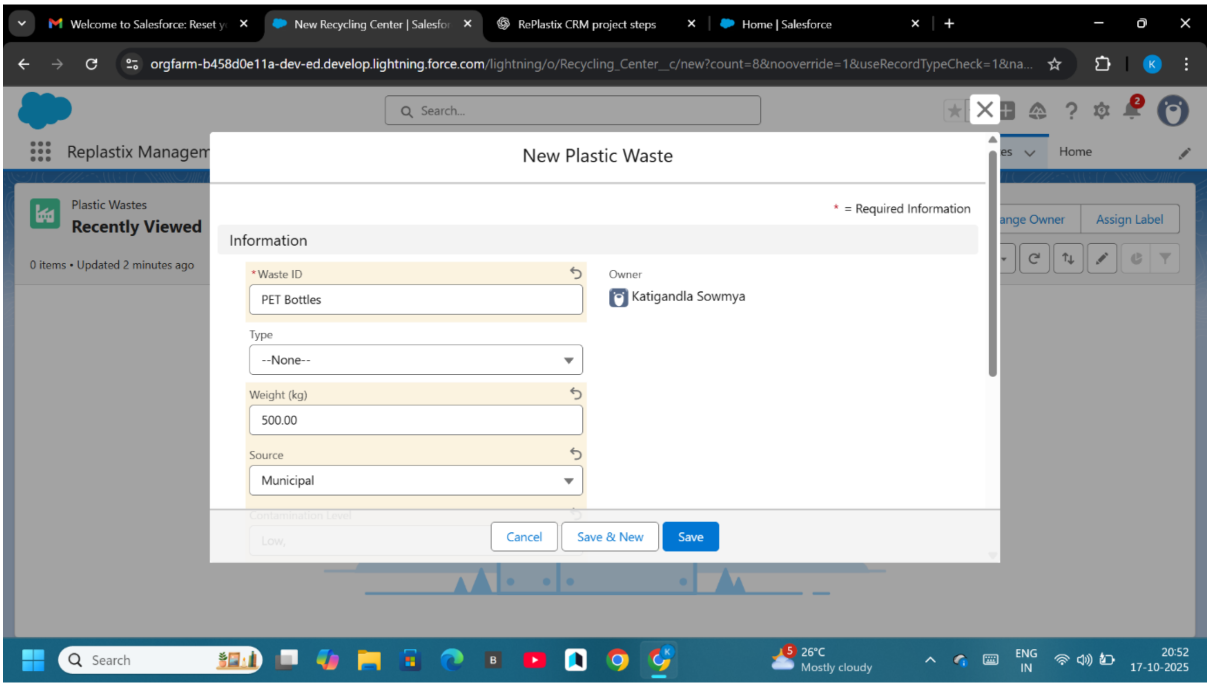
1. Lightning App Builder

Purpose:
To visually design and customize pages (Home, Record, and App Pages) without code.

Usage:

- Drag and drop components like Charts, Lists, and Custom LWCs.
- Create unique experiences for different profiles (Admin, Manager, etc.).
- Integrate dashboards and quick actions for efficient workflows.

Use Case:
Customize the RePlastix Home Page to display total waste collected, recent orders, and quick links.



orgfarm-b458d0e11a-dev-ed.develop.lightning.force.com/lightning/o/Recycling_Center__c/new?count=8&nooverride=1&useRecordTypeCheck=1&na...

New Plastic Waste

* = Required Information

Information

*Waste ID	PET Bottles
Owner	Katigandla Sowmya
Type	--None--
Weight (kg)	500.00
Source	Municipal
Contamination Level	Low,

Cancel | Save & New | Save

2. Record Pages

Purpose:
To create tailored layouts for each object (e.g., Plastic Waste, Orders, Recycled Products) showing essential information and actions.

Usage:

- Use Lightning Record Pages to add custom LWCs (e.g., “Order Summary” component).
- Arrange Tabs for **Details**, **Related Lists**, and **Reports**.
- Highlight Panels for quick data visibility.

Use Case:
Display waste type, weight, and recycling center directly in the Plastic Waste record page.

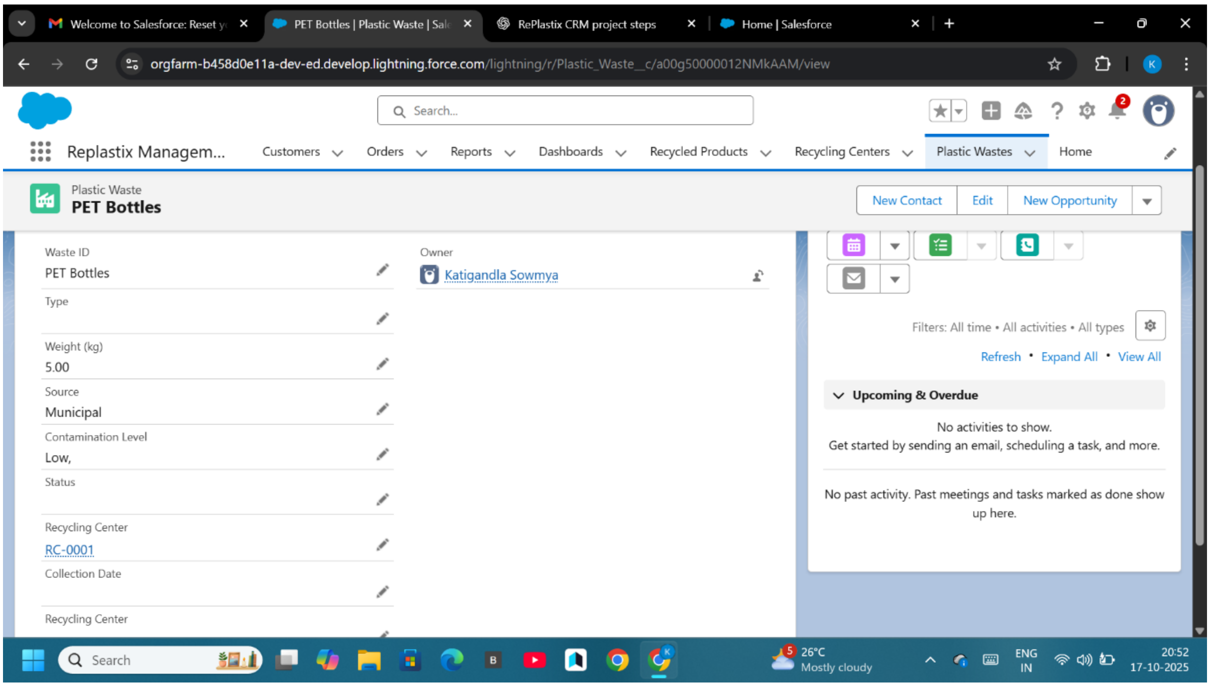
3. Tabs

Purpose:
To allow users to navigate between different objects, records, or custom components easily.

Usage:

- Create custom tabs for LWCs like “Waste Dashboard” or “Customer Insights.”
- Add these tabs to the RePlastix Lightning App Navigation Bar.

Use Case:
A “Reports” tab showing real-time analytics on waste recycling and product sales.


Welcome to Salesforce: Reset y
PET Bottles | Plastic Waste | Sal
RePlastix CRM project steps
Home | Salesforce
orgfarm-b458d0e11a-dev-ed.develop.lightning.force.com/lightning/r/Plastic_Waste__c/a00g50000012NMkAAM/view
Search...
Replastix Managem...
Customers
Orders
Reports
Dashboards
Recycled Products
Recycling Centers
Plastic Wastes
Home
New Contact
Edit
New Opportunity
Filters: All time • All activities • All types
Refresh • Expand All • View All
Search
26°C
Mostly cloudy
ENG
IN
20:52
17-10-2025

Plastic Waste
PET Bottles

Waste ID
PET Bottles

Type

Weight (kg)
5.00

Source
Municipal

Contamination Level
Low,

Status

Recycling Center
RC-0001

Collection Date

Recycling Center

Owner
Katigandla Sowmya

Upcoming & Overdue

No activities to show.
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

4. Home Page Layouts

Purpose:
To provide users with a personalized dashboard showing key insights and shortcuts.

Usage:

- Use **Lightning App Builder → Home Page → Edit**.
- Add charts, reports, recent records, and key metrics.
- Assign layouts to specific profiles.

Use Case:
Display total recycled weight, pending orders, and top-performing centers on the RePlastix home page.

5. Utility Bar

Purpose:
To provide quick-access tools available across all pages of the app.

Usage:

- Add tools like Notes, Recent Items, or Custom LWCs to the Utility Bar.
- Useful for shortcuts like “Add New Order” or “Log Call.”

Use Case:
Add a quick “Customer Feedback” LWC for managers to log input instantly.

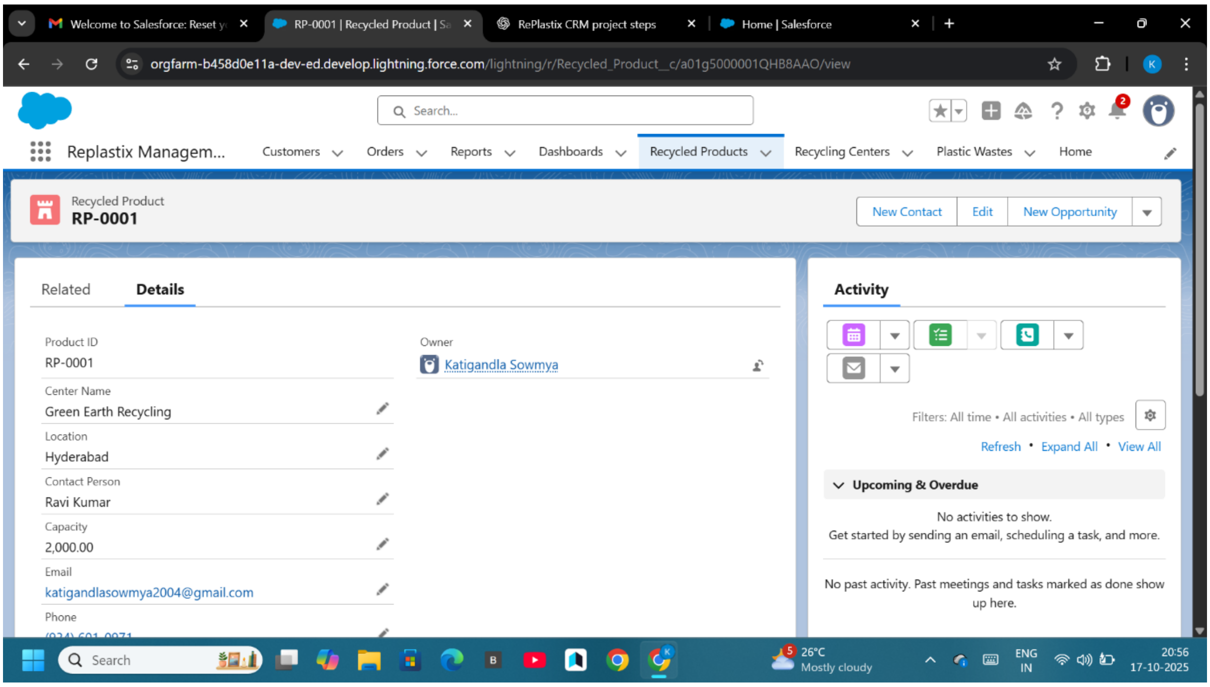
6. LWC (Lightning Web Components)

Purpose:
To build modern, fast, reusable components using HTML, JavaScript, and Apex for Salesforce UI.

Usage:

- Create interactive interfaces like dashboards, calculators, or status indicators.
- Use JavaScript for dynamic updates and event handling.
- Deploy reusable components across multiple pages.

Use Case:
An LWC displaying live recycling statistics (e.g., total waste collected today).


Welcome to Salesforce: Reset y
RP-0001 | Recycled Product | Sa
RePlastix CRM project steps
Home | Salesforce
orgfarm-b458d0e11a-dev-ed.develop.lightning.force.com/lightning/r/Recycled_Product__c/a01g5000001QHB8AAO/view
Search...
Replastix Managem...
Customers
Orders
Reports
Dashboards
Recycled Products
Recycling Centers
Plastic Wastes
Home
New Contact
Edit
New Opportunity
Related
Details
Activity
Filters: All time • All activities • All types
Refresh • Expand All • View All
Upcoming & Overdue
Search
26°C
Mostly cloudy
ENG
IN
20:56
17-10-2025

Recycled Product
RP-0001

Product ID
RP-0001

Owner
Katigandla Sowmya

Center Name
Green Earth Recycling

Location
Hyderabad

Contact Person
Ravi Kumar

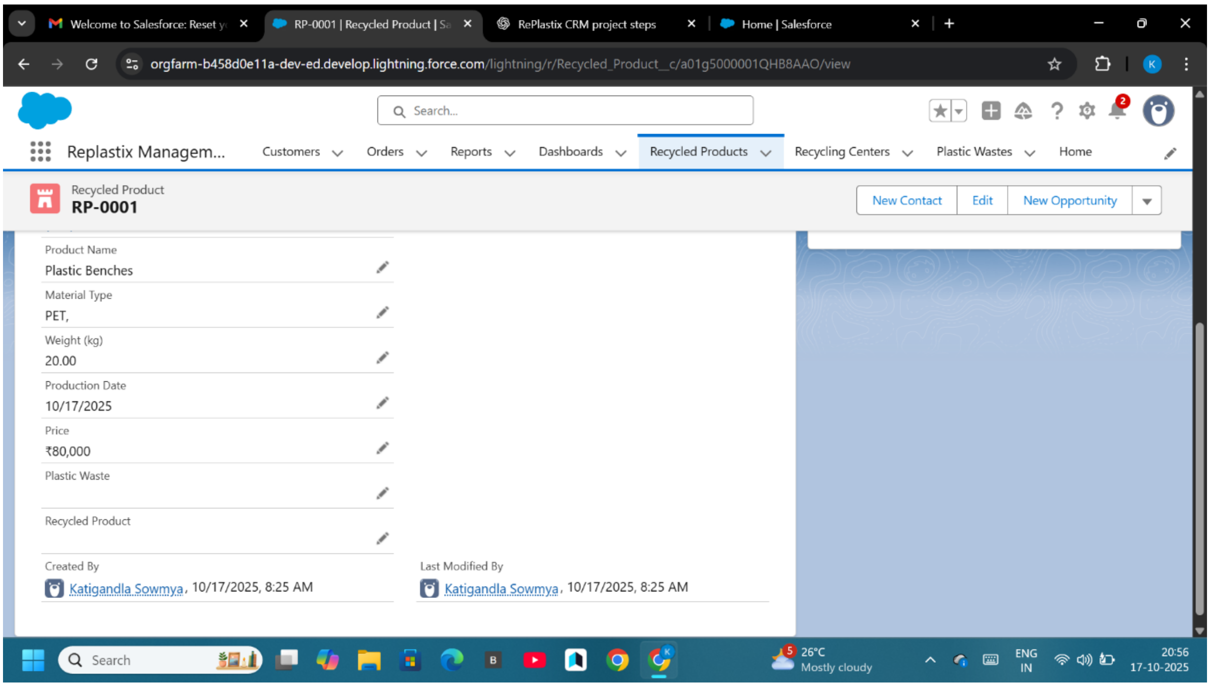
Capacity
2,000.00

Email
katigandlasowmya2004@gmail.com

Phone
(934) 601-0071

No activities to show.
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.



Recycled Product
RP-0001

Product Name
Plastic Benches

Material Type
PET,

Weight (kg)
20.00

Production Date
10/17/2025

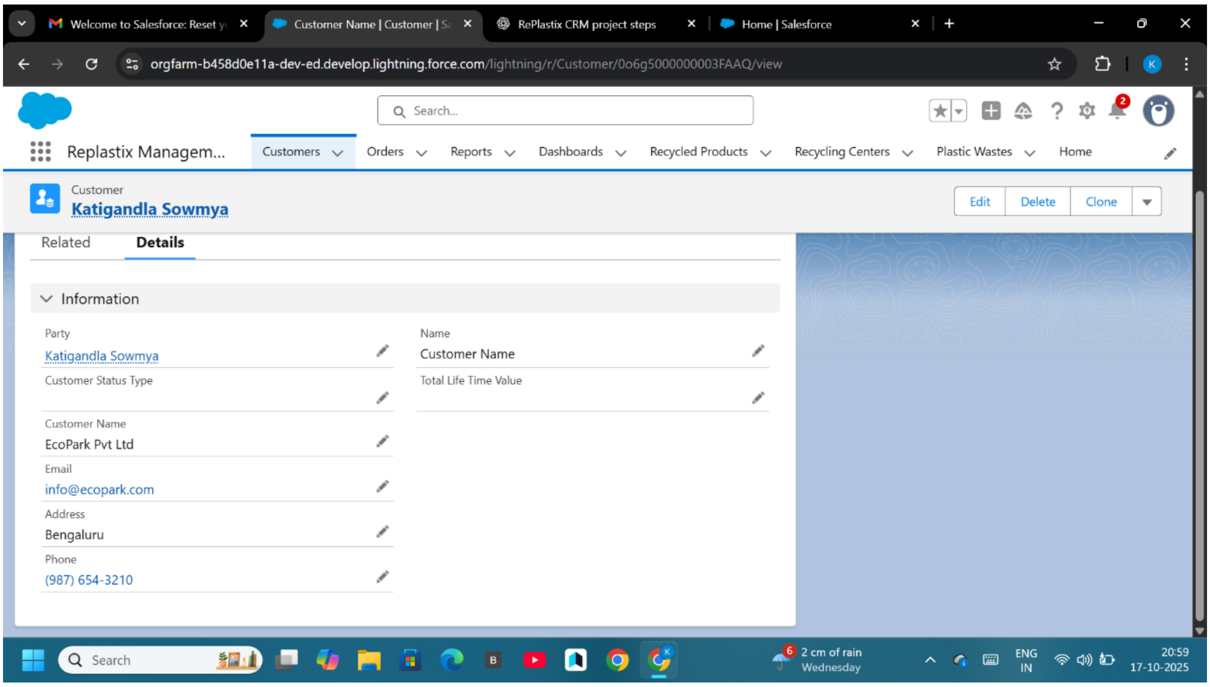
Price
₹80,000

Plastic Waste

Recycled Product

Created By
Katigandla Sowmya, 10/17/2025, 8:25 AM

Last Modified By
Katigandla Sowmya, 10/17/2025, 8:25 AM



Customer
Katigandla Sowmya

Information

Party
Katigandla Sowmya

Name
Customer Name

Customer Status Type

Total Life Time Value

Customer Name
EcoPark Pvt Ltd

Email
info@ecopark.com

Address
Bengaluru

Phone
(987) 654-3210

7. Apex with LWC

Purpose:
To connect LWCs with backend data using **Apex Controllers**.

Usage:

- Use @AuraEnabled Apex methods to fetch or update records.
- Integrate business logic from Apex into the frontend dynamically.

Example:
Fetch all open orders for a selected customer using an Apex class and display them in an LWC table.

8. Events in LWC

Purpose:
To enable communication between components (Parent ↔ Child).

Types of Events:

- **Custom Events:** Used when a child sends data to the parent.
- **Pub/Sub Events:** Used for sibling component communication.

Use Case:
When a user selects a product in one LWC, another LWC updates to display product details instantly.

9. Wire Adapters

Purpose:
To retrieve Salesforce data declaratively (without writing Apex code).

Usage:

- Import from lightning/uiRecordApi or lightning/uiObjectInfoApi.
- Use @wire to fetch record data automatically.

Example:
Display the customer's name and contact details using a @wire(getRecord) call.

10. Imperative Apex Calls

Purpose:
To call Apex methods programmatically (with parameters or conditions).

Usage:

- Use when you need to fetch data **on button click** or **conditional logic**.
- Import Apex method and call it using await in JavaScript.

Use Case:
When the user clicks "Generate Report," an Apex method is invoked to calculate total recycled waste.

11. Navigation Service

Purpose:
To navigate programmatically within Salesforce using JavaScript.

Usage:

- Redirect to records, lists, or external URLs.
- Commonly used with buttons or events.

Example:
Navigate to a Customer's record after an order submission.

✅ Conclusion of Phase 6: User Interface Development

In this phase, we enhanced the **RePlastix Management App** with a responsive, component-based interface using **LWC** and **Apex integration**.
The app now supports:

- **Dynamic data display** via LWCs.
- **Real-time interaction** with Apex and Events.
- **Smooth navigation** through custom tabs, utility bar, and record pages.

This phase ensures a modern, intuitive user experience for all RePlastix users, from administrators to field managers.