Smart Waste Management Tracker – Salesforce Project
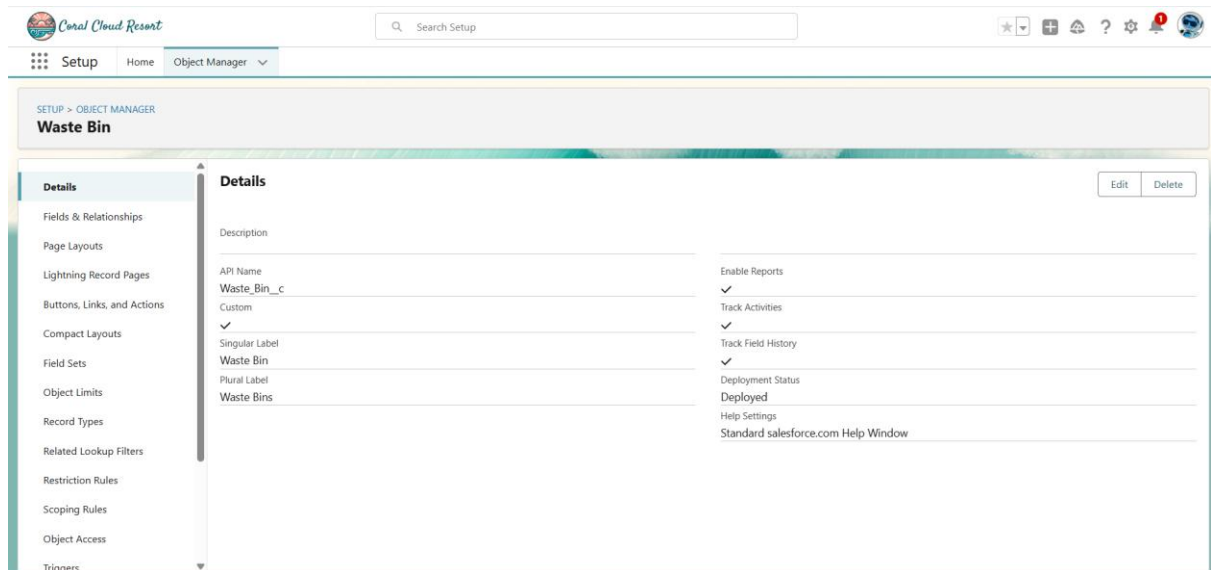**Phase 3: Data Modeling & Relationships**

Step 1: Goal of Phase 3

- Define data model for Waste Management.

- Create custom objects: **WasteBin__c** and **CollectionRecord__c**.

- Define fields, relationships, validation rules, and page layouts.
  Expected Outcome: Objects ready for record creation & data capture.
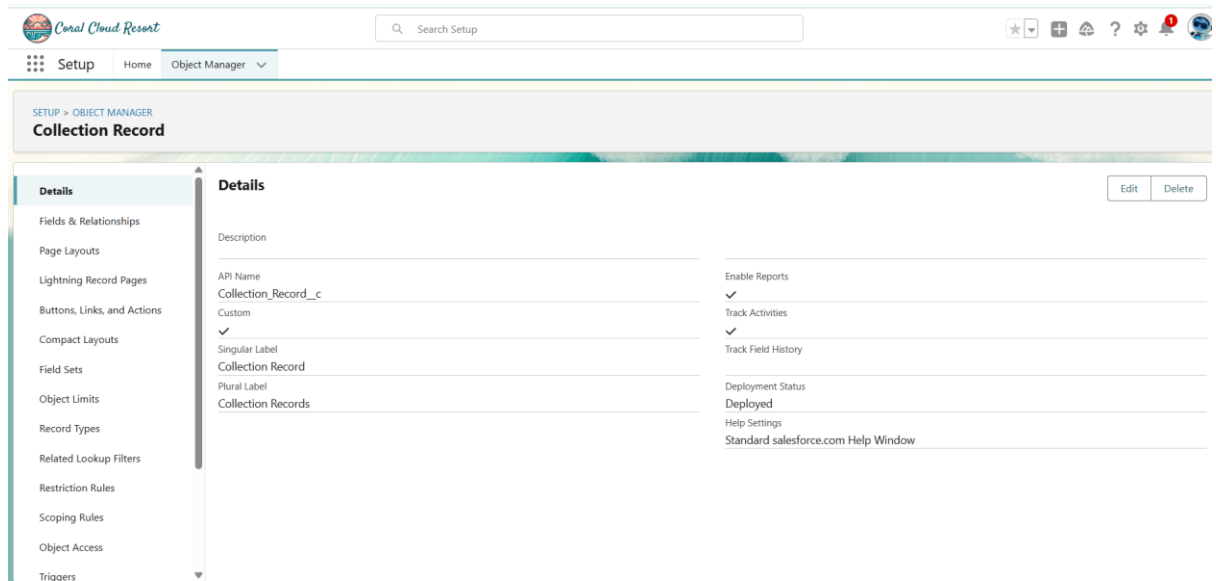

Step 2: Create Custom Objects
WasteBin__c

- Object Name: Waste Bin

- Record Name: Waste Bin Name (Text)

- Optional: Allow Reports & Activities → ✔

- Save.

CollectionRecord__c

- Object Name: Collection Record

- Record Name: Collection Record Name (Text)

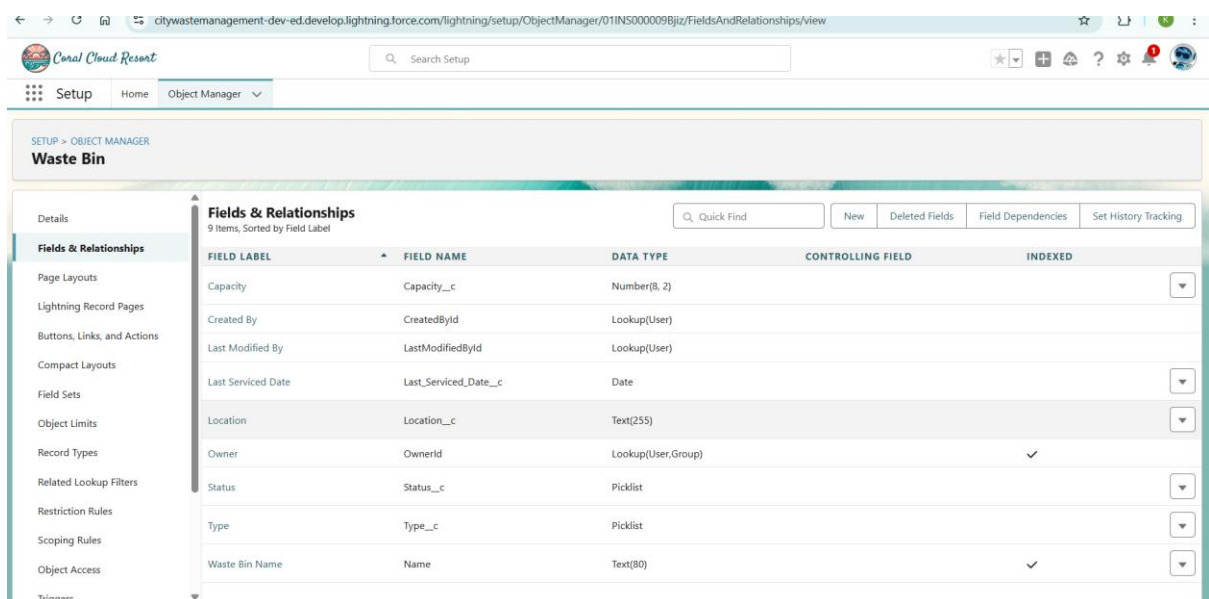- Optional: Allow Reports & Activities → ✔

- Save.

Step 3: Define Fields for WasteBin__c

Field Label	Data Type	Notes
Location	Text	255 chars
Type	Picklist	Recyclable, Organic, Non-Recyclable
Capacity	Number	Max 8,2
Status	Picklist	Empty, Full, Needs Maintenance
LastServicedDate	Date	-

Step 4: Define Fields for CollectionRecord__c

| Field Label	Data Type	Notes
CollectionDate	Date/Time	-
CollectedBy	Lookup(User)	Optional filter: Collection Staff
QuantityCollected	Number	Max 8,2
Notes	Text Area	Optional
WasteBin	Lookup(WasteBin__c)	Relates record to bin

Step 5: Validation Rule

- Object: CollectionRecord__c

- Rule: **QuantityCollected >= 0**

- Error Message: "Quantity cannot be negative."

- Location: Top of page or specific field.
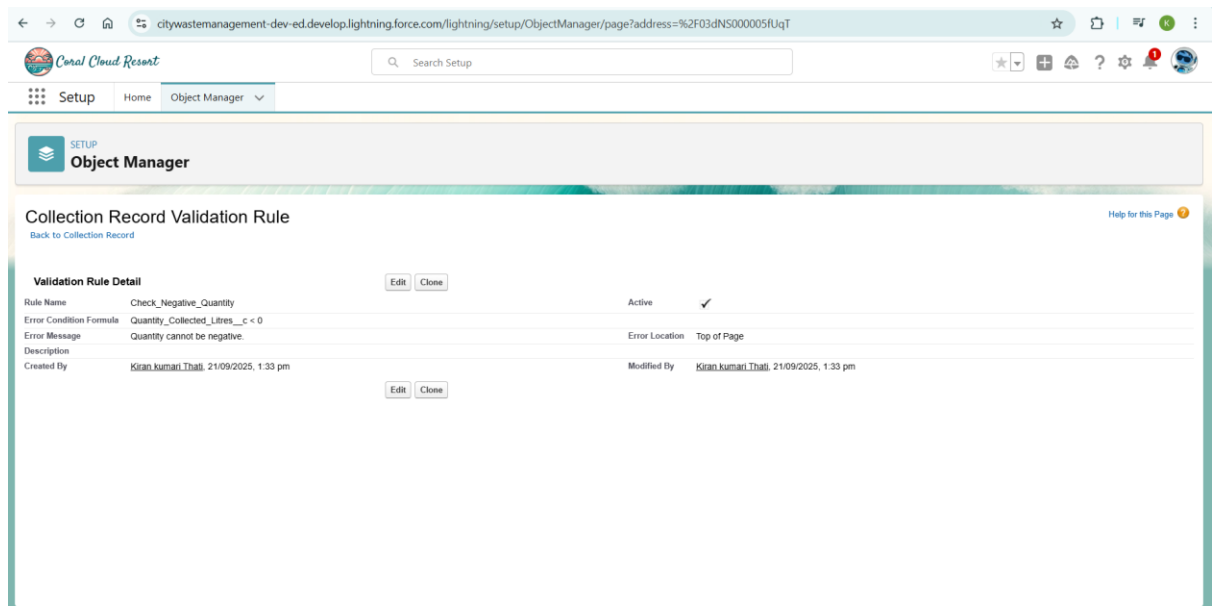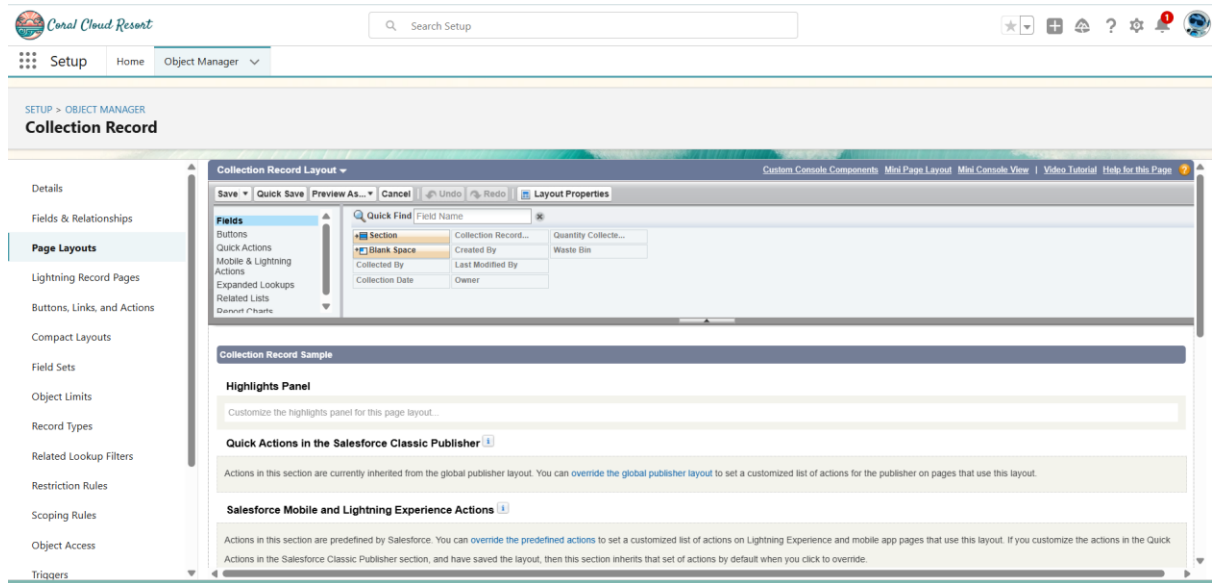

Step 6: Page Layouts

Waste Bin Layout

- Fields order: Location → Type → Capacity → Status → LastServicedDate
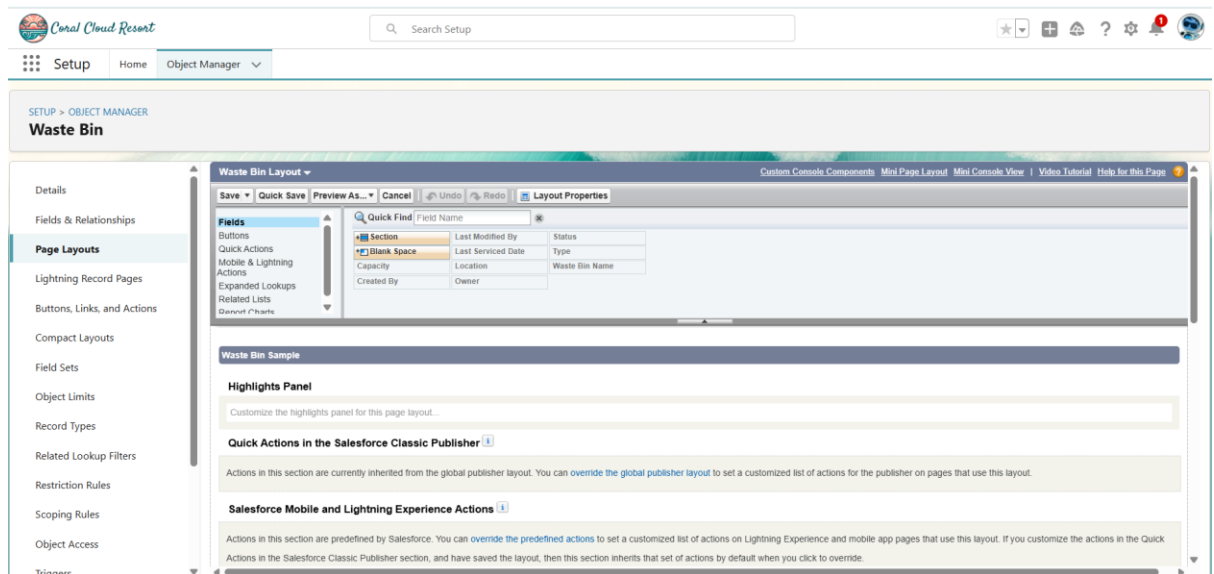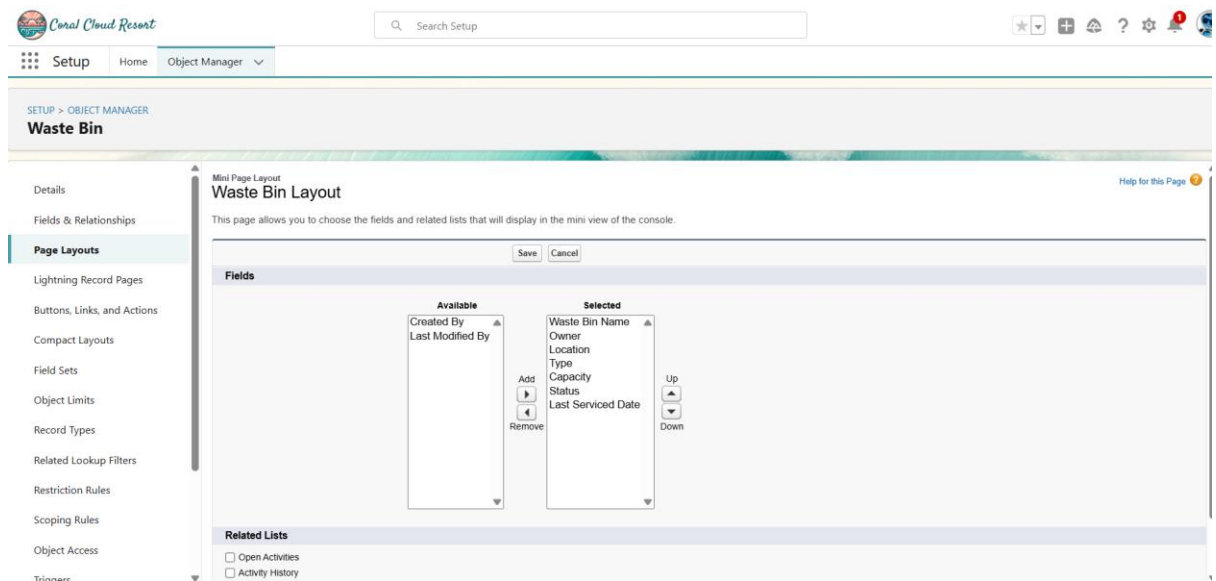

Collection Record Layout

- Fields order: CollectionDate → CollectedBy → QuantityCollected → WasteBin → Notes

- Effect: Record creation page neat and user-friendly.
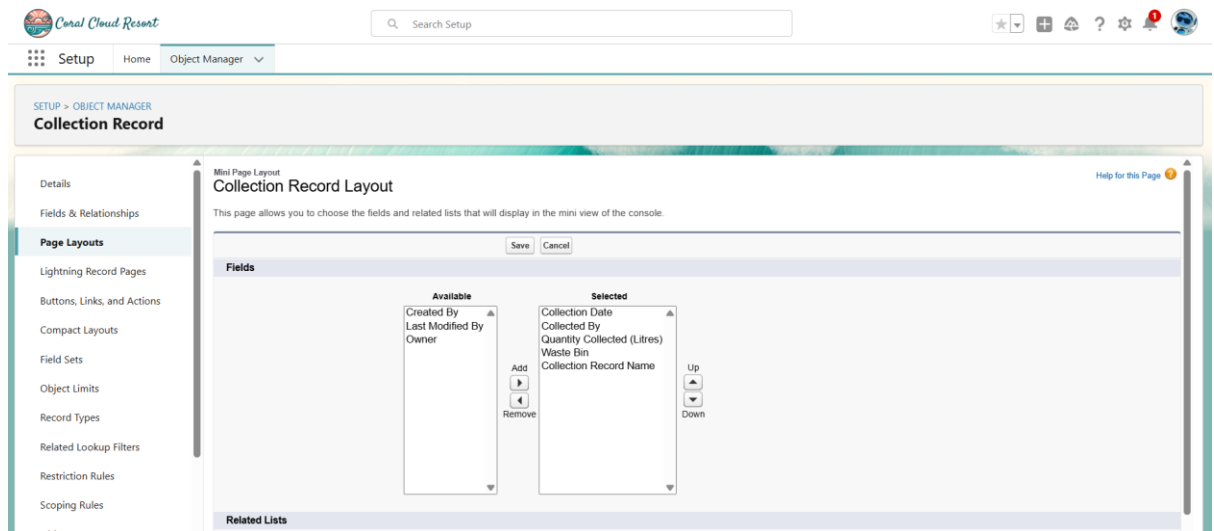

Step 7: Mini Page Layouts (Optional)
Waste Bin Mini Layout

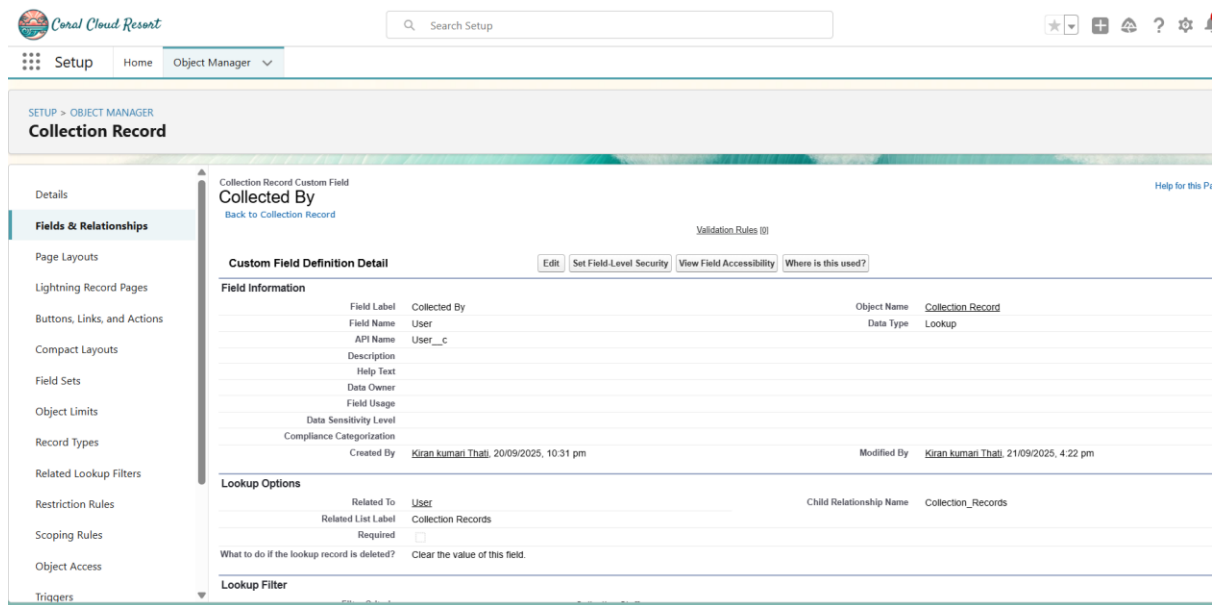- Fields: Waste Bin Name, Owner, Location, Type, Capacity, Status, LastServicedDate

Collection Record Mini Layout

- Fields: Collection Record Name, WasteBin, CollectedBy, QuantityCollected

Step 8: Relationships & Lookup Filters (Optional)

- CollectedBy → Lookup(User)

  - Optional filter: Only Collection Staff users

- WasteBin in CollectionRecord → Lookup(WasteBin__c)

Step 9: Expected Outcome (Phase 3 Completion)

- Custom objects **WasteBin__c** and **CollectionRecord__c** created.

- All fields defined with proper data types.

- Page layouts & mini layouts arranged.

- Validation rules set.

- Ready for record creation & testing in Phase 4.