

## Smart Waste Management Tracker – Salesforce Project

### Phase 3: Data Modeling & Relationships

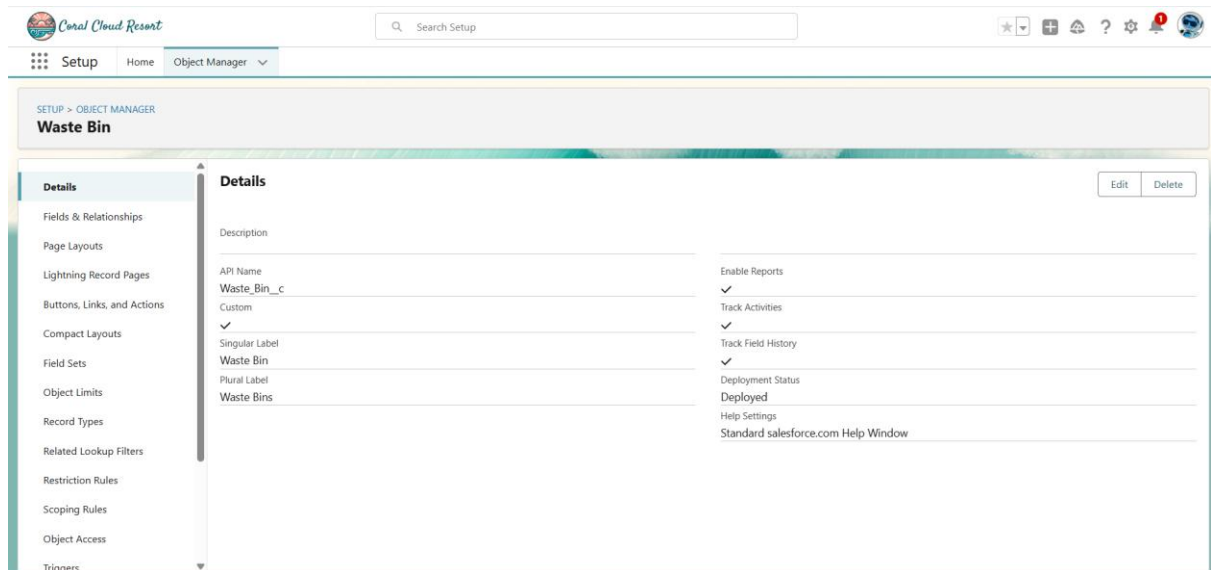
#### Step 1: Goal of Phase 3

- 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.
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#### Step 2: Create Custom Objects

##### WasteBin\_\_c

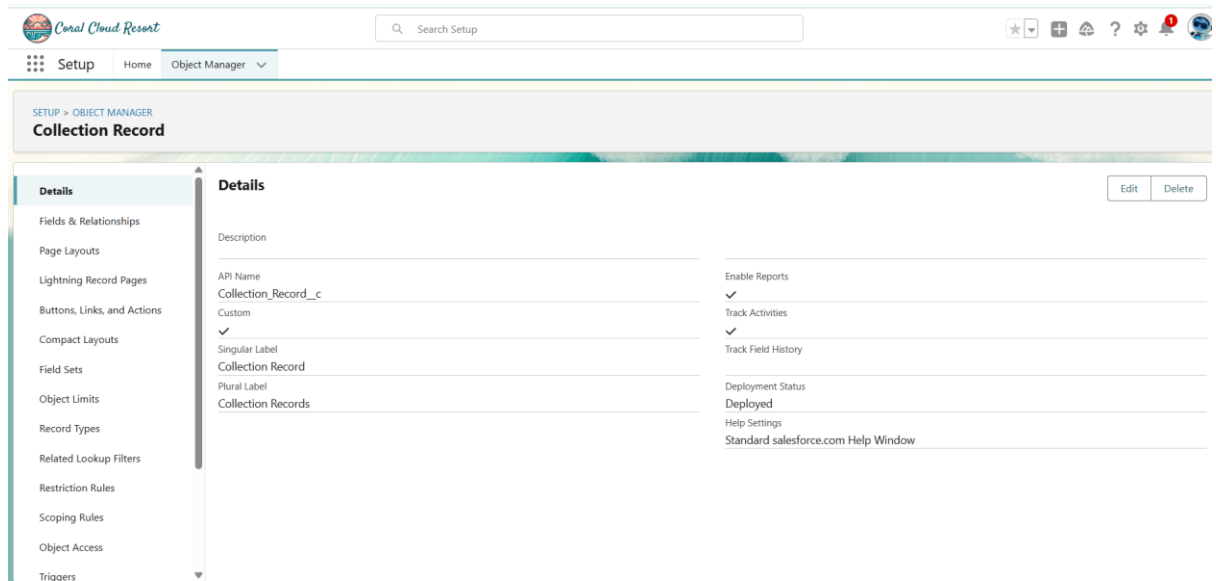
- Object Name: Waste Bin
- Record Name: Waste Bin Name (Text)
- Optional: Allow Reports & Activities → ✓
- Save.



The screenshot shows the Salesforce Setup interface for the 'Waste Bin' custom object. The top navigation bar includes the 'Coral Cloud Resort' logo, a search bar, and various utility icons. The main navigation menu on the left lists options like Setup, Home, and Object Manager. The 'Object Manager' section is expanded, showing 'Waste Bin' under 'SETUP > OBJECT MANAGER'. The 'Details' tab is selected, displaying a list of configuration options on the left and their current values on the right. The options include 'Fields & Relationships', 'Page Layouts', 'Lightning Record Pages', 'Buttons, Links, and Actions', 'Compact Layouts', 'Field Sets', 'Object Limits', 'Record Types', 'Related Lookup Filters', 'Restriction Rules', 'Scoping Rules', 'Object Access', and 'Triggers'. The 'Details' section shows the following values: 'API Name' is 'Waste\_Bin\_\_c', 'Custom' is checked, 'Singular Label' is 'Waste Bin', 'Plural Label' is 'Waste Bins', 'Enable Reports' is checked, 'Track Activities' is checked, 'Track Field History' is checked, 'Deployment Status' is 'Deployed', and 'Help Settings' is 'Standard salesforce.com Help Window'. 'Edit' and 'Delete' buttons are visible in the top right corner of the details section.

##### CollectionRecord\_\_c

- Object Name: Collection Record
- Record Name: Collection Record Name (Text)
- Optional: Allow Reports & Activities → ✓
- Save.

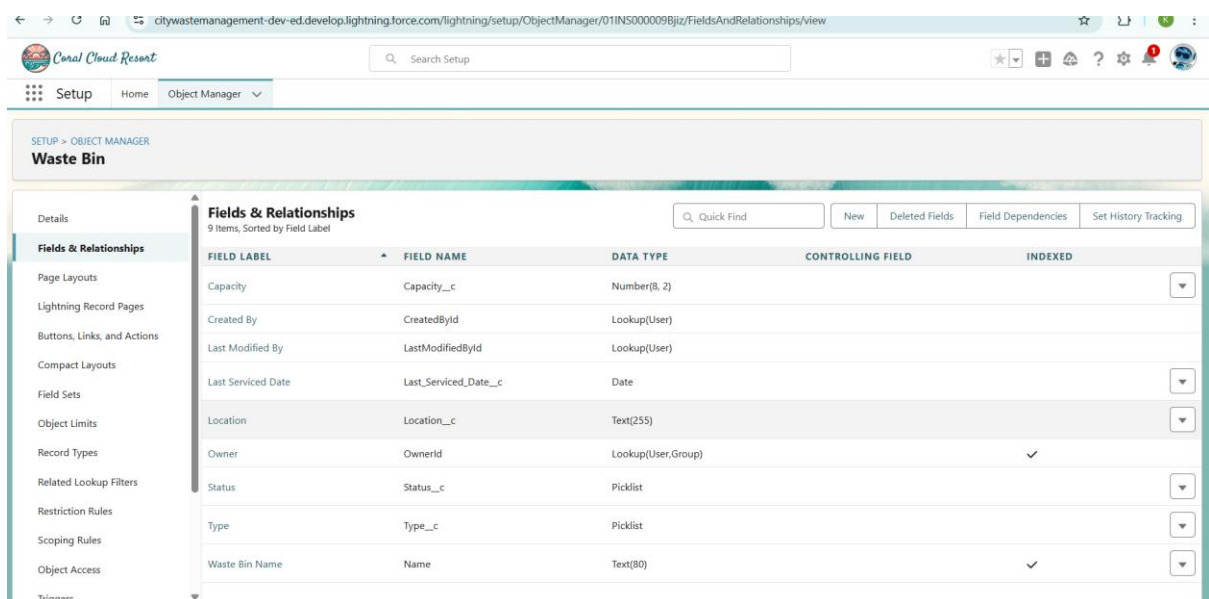


### Step 3: Define Fields for WasteBin\_\_c

#### 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
LastServedDate	Date	-



## Step 4: Define Fields for CollectionRecord\_\_c

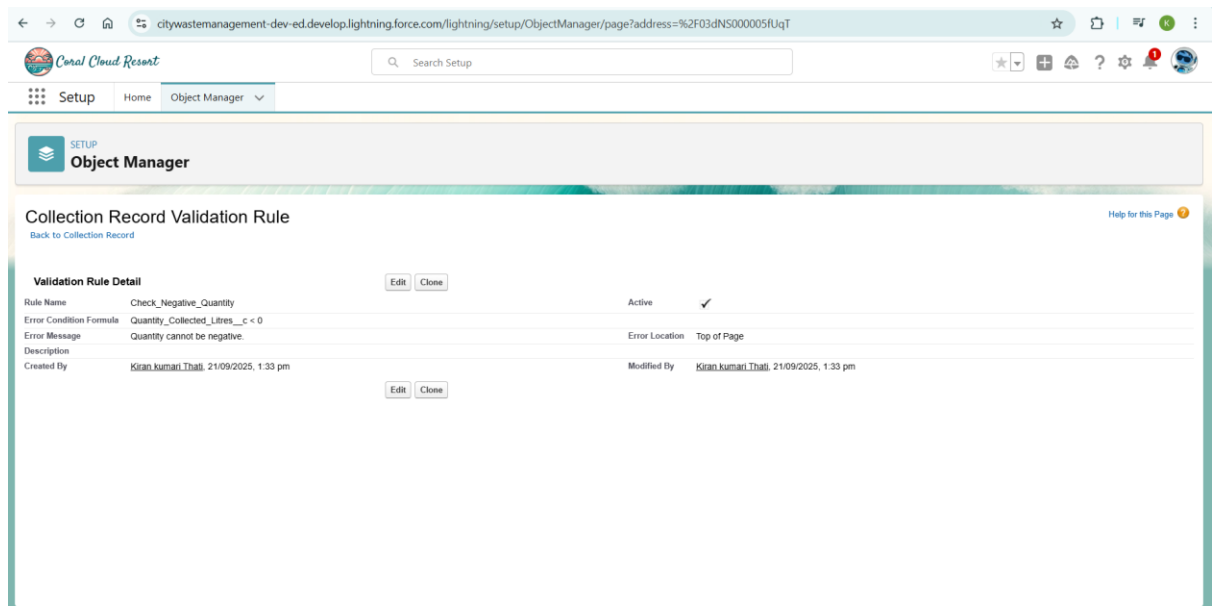
Field Label	Data Type	Notes
CollectionDate	Date/Time	-
CollectedBy	Lookup(User)	Optional filter: Collection Staff
QuantityCollected	Number	Max 8,2
Notes	Text Area	Optional
WasteBin	Lookup(WasteBin__c)	Relates record to bin

The screenshot shows the Salesforce Lightning Setup interface for the 'Collection Record' object. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, Object Access, and Triggers. The main content area is titled 'Fields & Relationships' and shows a table of 8 items, sorted by Field Label. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are: Collected By (User\_\_c, Lookup(User), Indexed), Collection Date (Collection\_Date\_\_c, Date/Time, Indexed), Collection Record Name (Name, Text(80), Indexed), Created By (CreatedById, Lookup(User), Indexed), Last Modified By (LastModifiedById, Lookup(User), Indexed), Owner (OwnerId, Lookup(User, Group), Indexed), Quantity Collected (Litres) (Quantity\_Collected\_Litres\_\_c, Number(8, 2), Indexed), and Waste Bin (Waste\_Bin\_\_c, Lookup(Waste Bin), Indexed).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Collected By	User__c	Lookup(User)		✓
Collection Date	Collection_Date__c	Date/Time		✓
Collection Record Name	Name	Text(80)		✓
Created By	CreatedById	Lookup(User)		✓
Last Modified By	LastModifiedById	Lookup(User)		✓
Owner	OwnerId	Lookup(User, Group)		✓
Quantity Collected (Litres)	Quantity_Collected_Litres__c	Number(8, 2)		✓
Waste Bin	Waste_Bin__c	Lookup(Waste Bin)		✓

## Step 5: Validation Rule

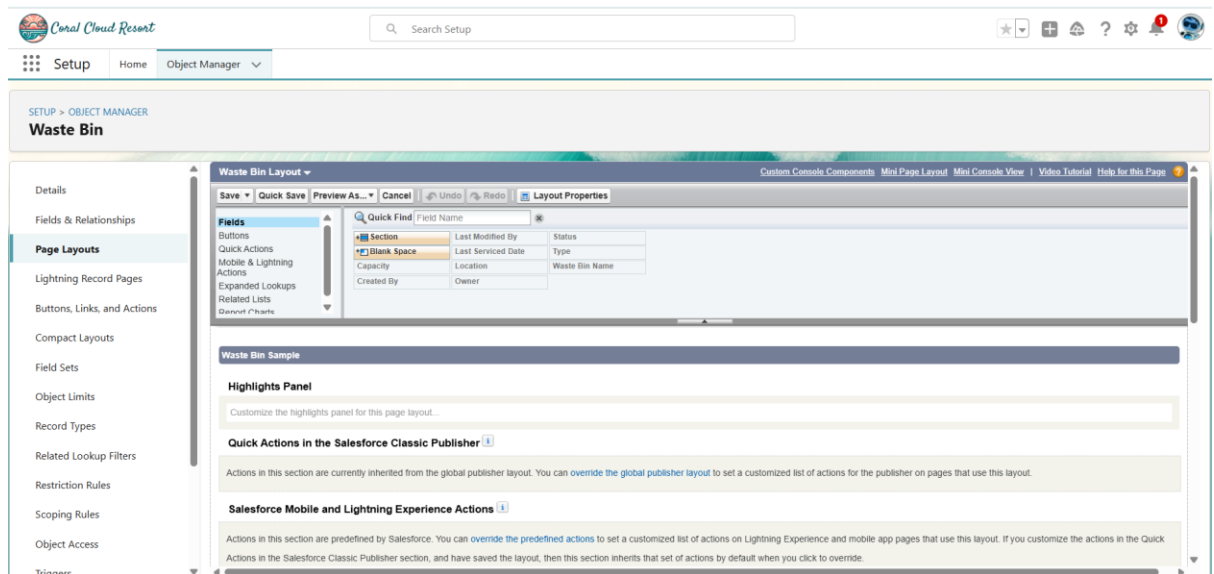
- Object: CollectionRecord\_\_c
- Rule: **QuantityCollected >= 0**
- Error Message: "Quantity cannot be negative."
- Location: Top of page or specific field.



## Step 6: Page Layouts

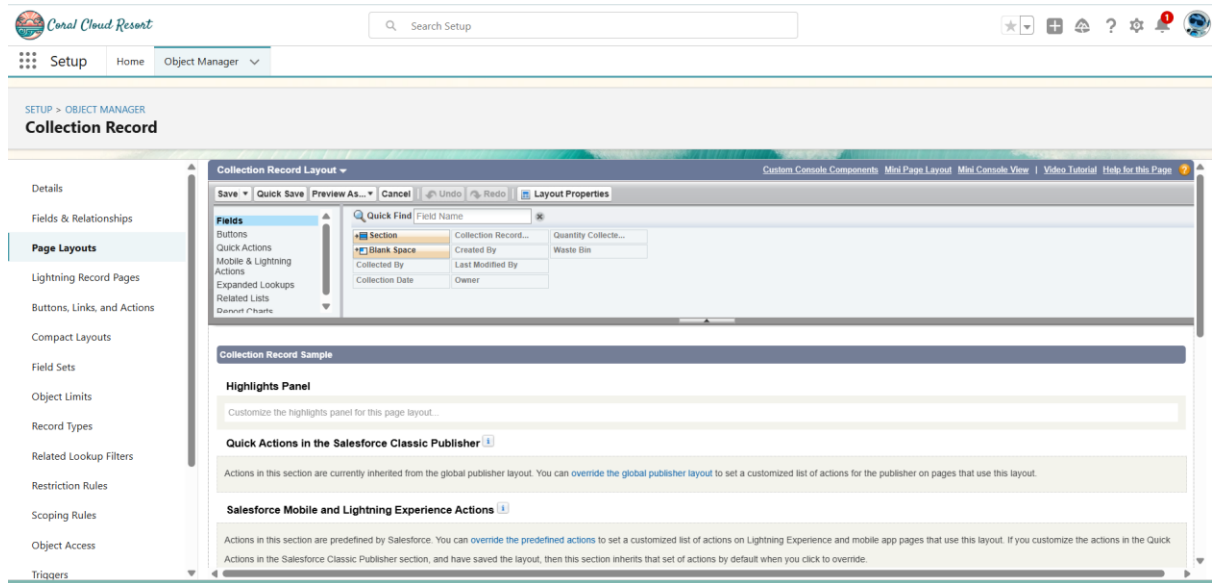
### Waste Bin Layout

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



### Collection Record Layout

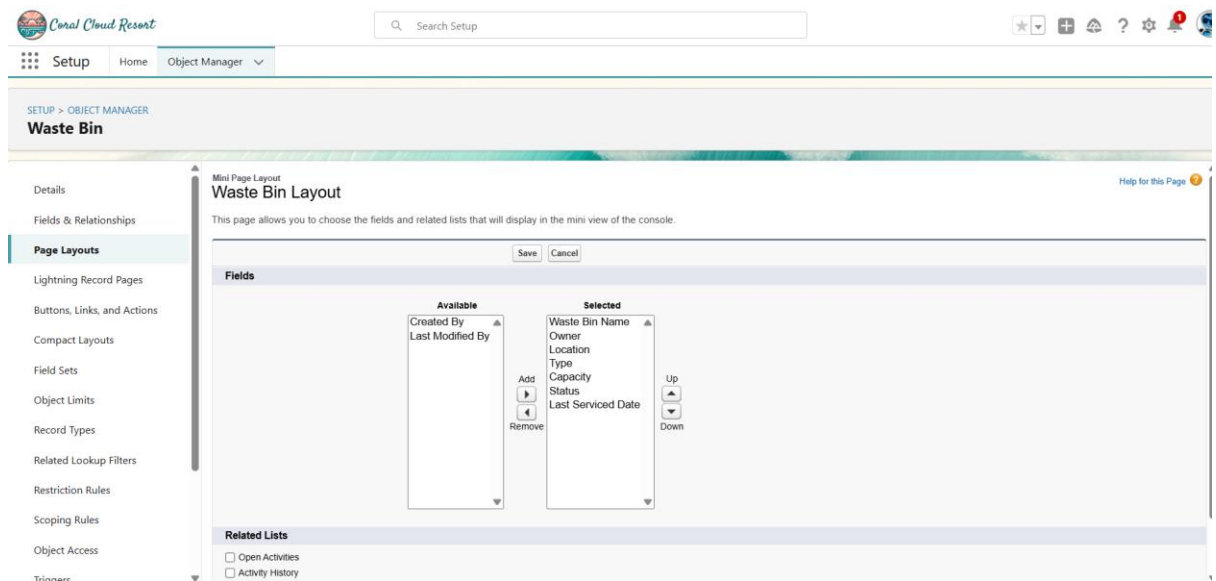
- Fields order: CollectionDate → CollectedBy → QuantityCollected → WasteBin → Notes
- Effect: Record creation page neat and user-friendly.



## Step 7: Mini Page Layouts (Optional)

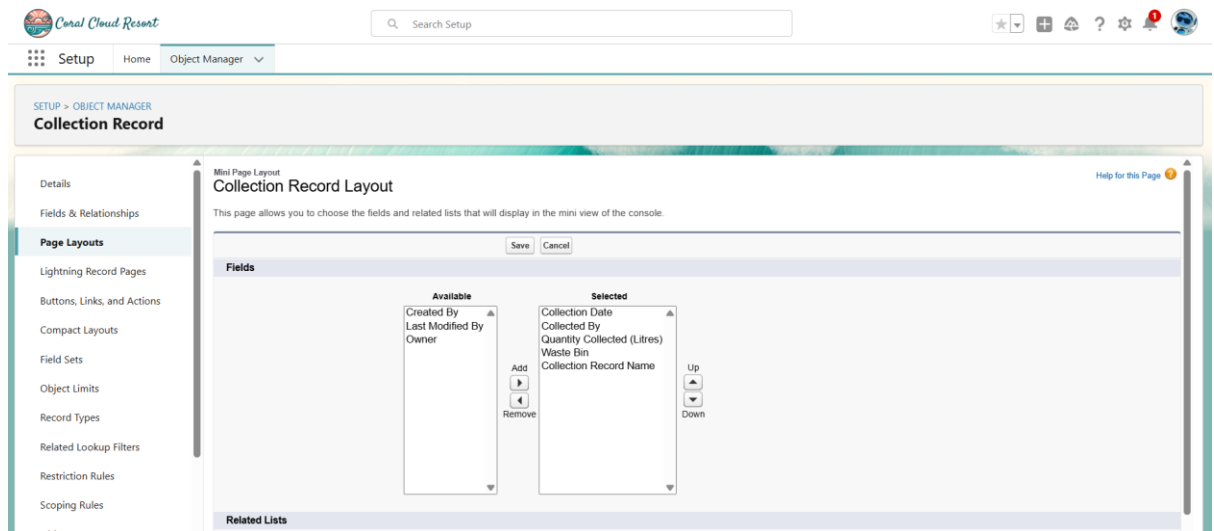
### Waste Bin Mini Layout

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



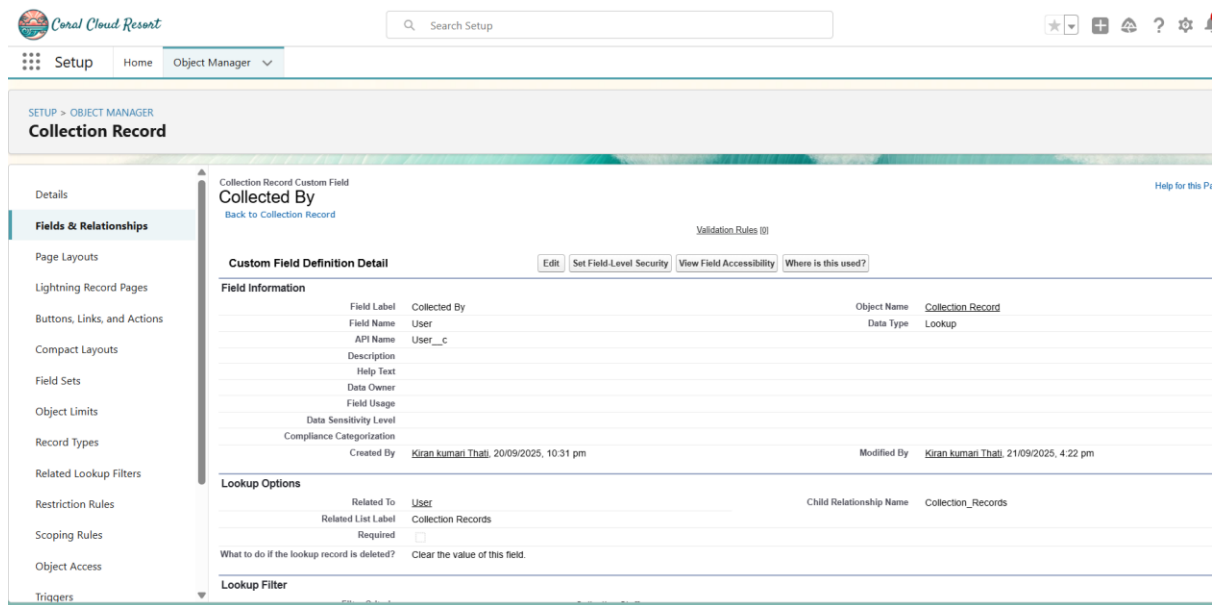
### Collection Record Mini Layout

- 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)

**Coral Cloud Resort** Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER  
**Collection Record**

Details

**Fields & Relationships**

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Restriction Rules

Scoping Rules

Object Access

Collection Record Custom Field  
**Waste Bin**  
Back to Collection Record

Validation Rules 0

**Custom Field Definition Detail** Edit Set Field-Level Security View Field Accessibility Where is this used?

**Field Information**

Field Label	Waste Bin	Object Name	Collection Record
Field Name	Waste_Bin	Data Type	Lookup
API Name	Waste_Bin__c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Kiran.kumar.Thattai, 20/09/2025, 10:33 pm	Modified By	Kiran.kumar.Thattai, 21/09/2025, 4:27 pm

**Lookup Options**

Related To	Waste Bin	Child Relationship Name	Collection_Records
Related List Label	Collection Records		
Required	<input type="checkbox"/>		
What to do if the lookup record is deleted?	Clear the value of this field.		

**Lookup Filter**

## 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.