

Phase 3: Data Modeling & Relationships

Introduction

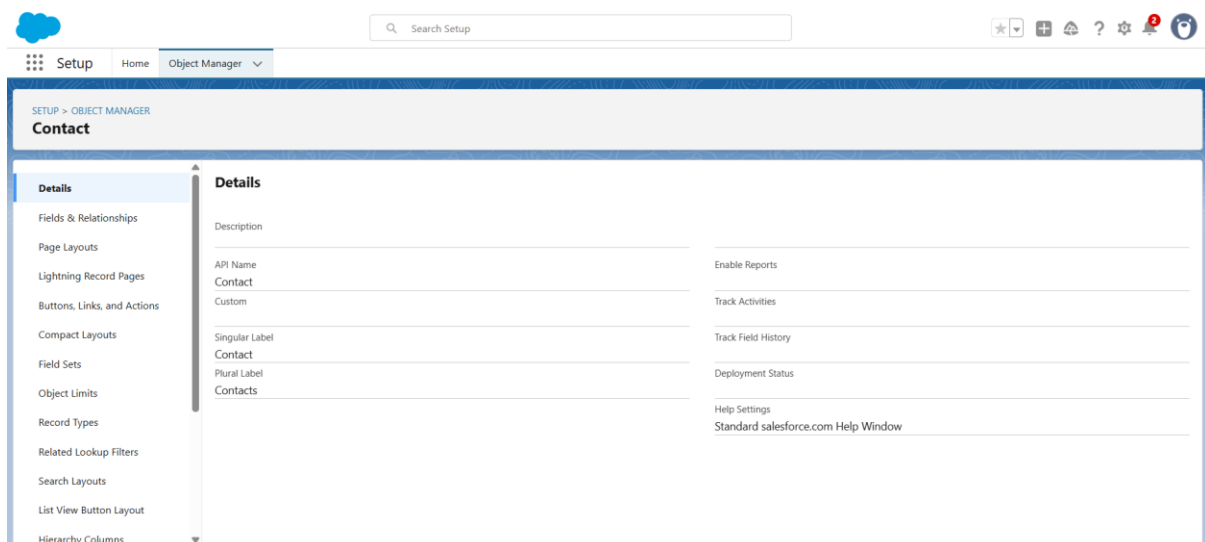
This phase focuses on building the data structure for EcoCart Logistics CRM inside Salesforce. Data modeling ensures that all business entities such as Orders, Shipments, and Customers are represented correctly, and relationships between them are properly established. A strong data model provides the foundation for process automation, reporting, and customer transparency.

Objectives

- Identify which standard objects (e.g., Contact for Customers) can be reused.
- Create necessary custom objects (e.g., Orders, Shipments).
- Define fields for each object (text, number, picklist, formula, lookup, etc.).
- Establish relationships (Lookup, Master-Detail, Junction objects if required).
- Create record types for variations in business processes.
- Design page layouts and compact layouts for usability.
- Use Schema Builder to visualize the data model.

1. Standard & Custom Objects

- **Standard Object:**
 - **Contact:** Used for customers (Name, Phone, Email, Address).
- **Custom Objects:**
 - **Order:** Represents an order placed by the customer.
 - **Fields:** Order ID, Order Date, Delivery Address, Total Amount, Order Status.
 - **Shipment:** Represents the shipment of an order.
 - **Fields:** Shipment ID, Status (Pending, In Transit, Delivered), Expected Delivery Date, Actual Delivery Date, Assigned Agent.



SETUP > OBJECT MANAGER

Order

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

Details

Description

Order object for ordering products.

API Name

Order__c

Custom

✓

Singular Label

Order

Plural Label

Orders

Enable Reports

Track Activities

Track Field History

Deployment Status

Deployed

Help Settings

Standard salesforce.com Help Window

EditDelete

SETUP > OBJECT MANAGER

Shipment

Details

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Object Access

Details

Description

API Name

Shipment__c

Custom

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Singular Label

Shipment

Plural Label

Shipments

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Standard salesforce.com Help Window

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2. Fields Creation

Order Object Fields

- Order ID → Auto Number (ORD-0001, ORD-0002).
- Order Date → Date.
- Delivery Address → Text Area (Long).
- Total Amount → Currency.
- Status → Picklist (New, Processing, Completed, Cancelled).

The screenshot shows the Salesforce Setup interface for the 'Order' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, and Object Access. The main content area is titled 'Fields & Relationships' and displays a table of 9 fields, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By (CreatedBy, Lookup(User)), Delivery Address (Delivery_Address__c, Long Text Area(32768)), Last Modified By (LastModifiedById, Lookup(User)), Order Date (Order_Date__c, Date), Order ID (Order__c, Auto Number), Order Name (Name, Text(80)), Order Status (Order_Status__c, Picklist), Owner (OwnerId, Lookup(User,Group)), and Total Amount (Total_Amount__c, Currency(18, 0)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Delivery Address	Delivery_Address__c	Long Text Area(32768)		
Last Modified By	LastModifiedById	Lookup(User)		
Order Date	Order_Date__c	Date		
Order ID	Order__c	Auto Number		
Order Name	Name	Text(80)		✓
Order Status	Order_Status__c	Picklist		
Owner	OwnerId	Lookup(User,Group)		✓
Total Amount	Total_Amount__c	Currency(18, 0)		

Shipment Object Fields

- Shipment ID → Auto Number (SHP-0001, SHP-0002).
- Status → Picklist (Pending, In Transit, Delivered, Delayed).
- Expected Delivery Date → Date.
- Actual Delivery Date → Date.
- Assigned Agent → Lookup (User).

The screenshot shows the Salesforce Setup interface for the 'Shipment' 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, and Object Access. The 'Fields & Relationships' section is selected, displaying a table of 9 items sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Actual Delivery Date (Date), Created By (Lookup(User)), Expected Delivery Date (Date), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), Shipment ID (Auto Number), Shipment Name (Text(80)), Status (Picklist), and User (Lookup(User)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Actual Delivery Date	Actual_Delivery_Date__c	Date		
Created By	CreatedById	Lookup(User)		
Expected Delivery Date	Expected_Delivery_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Shipment ID	Shipment_ID__c	Auto Number		
Shipment Name	Name	Text(80)		✓
Status	Status__c	Picklist		
User	User__c	Lookup(User)		✓

3. Record Types

- **Order Record Types:**

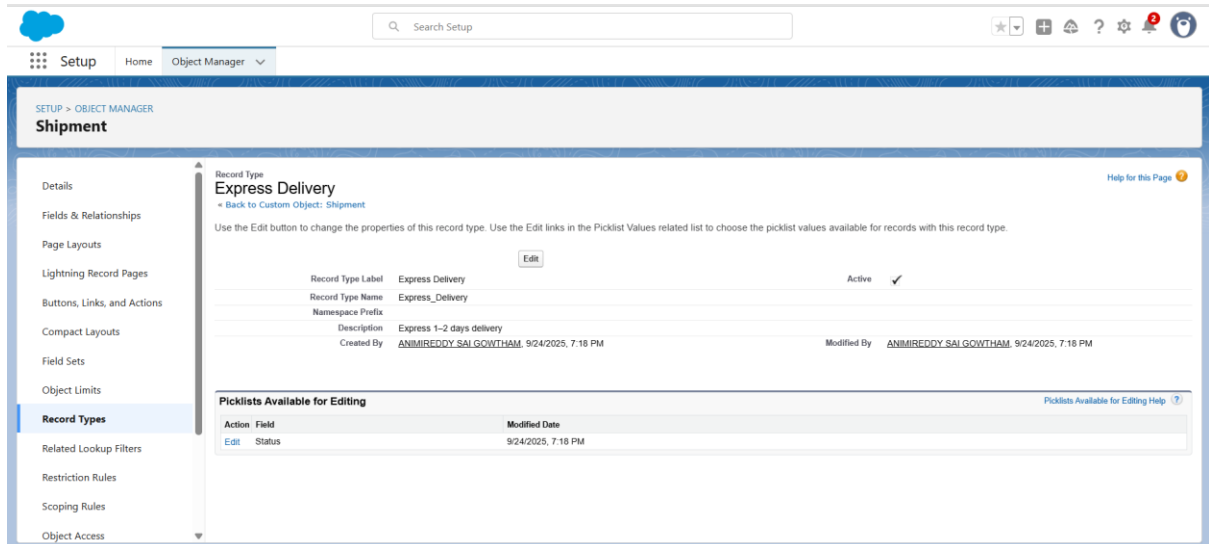
- **Retail Order** → Standard customer order.
- **Bulk Order** → Large volume orders (may require manager approval).

The screenshot shows the 'New Record Type' page for the 'Order' object in Salesforce Setup. The left sidebar contains navigation links: 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, and Object Access. The main content area is titled 'New Record Type Order' and includes a 'Step 1. Enter the details' section. Below this, the 'Record Type' section contains fields for 'Existing Record Type' (set to '-Master-'), 'Record Type Label' (set to 'Bulk Order'), 'Record Type Name' (set to 'Bulk_Order'), and a 'Description' field. The 'Active' checkbox is checked. A table at the bottom shows 'Record Types Currently Available' for the 'Analytics Cloud Integration User' profile, with 'Retail Order (Default)' listed. There are checkboxes for 'Make Available' and 'Make Default'.

The screenshot shows the 'Record Types' page for the 'Order' object in Salesforce Setup. The left sidebar is the same as the previous screenshot. The main content area is titled 'Record Types' and shows a list of 2 items, sorted by Record Type Label. The table has columns for 'RECORD TYPE LABEL', 'DESCRIPTION', 'ACTIVE', and 'MODIFIED BY'. The data rows are 'Bulk Order' and 'Retail Order', both of which are active and were modified by 'ANIMIREDDY SAI GOWTHAM' on 9/24/2025 at 7:15 PM and 7:12 PM respectively. There are 'Quick Find', 'New', and 'Page Layout Assignment' buttons at the top right of the table.

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY
Bulk Order		✓	ANIMIREDDY SAI GOWTHAM, 9/24/2025, 7:15 PM
Retail Order		✓	ANIMIREDDY SAI GOWTHAM, 9/24/2025, 7:12 PM

- **Shipment Record Types:**
 - **Standard Delivery** → 3–5 days.
 - **Express Delivery** → 1–2 days.



SETUP > OBJECT MANAGER

Shipment

Record Type

Express Delivery

[Back to Custom Object: Shipment](#)

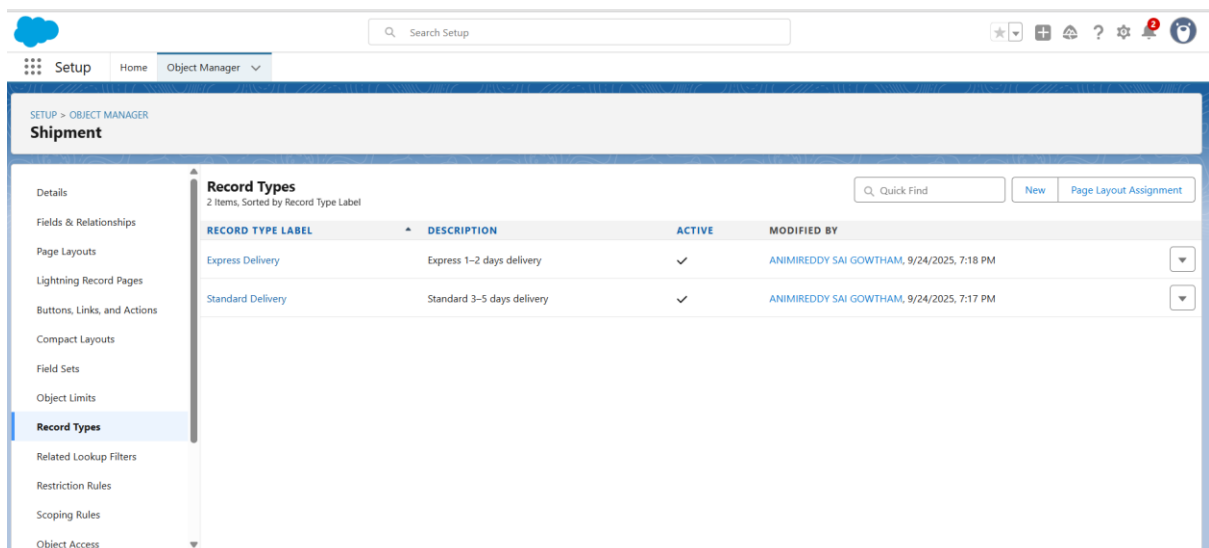
Use the Edit button to change the properties of this record type. Use the Edit links in the Picklist Values related list to choose the picklist values available for records with this record type.

[Edit](#)

Record Type Label	Express Delivery	Active	✓
Record Type Name	Express_Delivery		
Namespace Prefix			
Description	Express 1–2 days delivery		
Created By	ANIMIREDDY.SAI.GOWTHAM	9/24/2025, 7:18 PM	Modified By: ANIMIREDDY.SAI.GOWTHAM, 9/24/2025, 7:18 PM

Picklists Available for Editing

Action	Field	Modified Date
Edit	Status	9/24/2025, 7:18 PM



SETUP > OBJECT MANAGER

Shipment

Record Types

2 Items, Sorted by Record Type Label

[Quick Find](#) [New](#) [Page Layout Assignment](#)

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY
Express Delivery	Express 1–2 days delivery	✓	ANIMIREDDY.SAI.GOWTHAM, 9/24/2025, 7:18 PM
Standard Delivery	Standard 3–5 days delivery	✓	ANIMIREDDY.SAI.GOWTHAM, 9/24/2025, 7:17 PM

4. Relationships

- **Order ↔ Shipment (One-to-Many Lookup):**
 - One Order can have many Shipments.
 - Shipment object has a **Lookup field** to Order.
- **Shipment ↔ Contact (Customer Lookup):**
 - Shipment linked to Customer (Contact).
- **Shipment ↔ User (Assigned Agent Lookup):**
 - Shipment linked to the Delivery Agent user.

SETUP > OBJECT MANAGER
Shipment

Details
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Object Access

Shipment
New Relationship

Step 6. Add custom related lists Step 6 of 6

Previous Save & New Save Cancel

Field Label	Order
Data Type	Lookup
Field Name	Order
Description	

Specify the title that the related list will have in all of the layouts associated with the parent.
Related List Label

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout.
To change the location of this field on the page, you will need to customize the page layout. To change the values that appear, you will need to customize the Record Types.

☒ Add Related List
☒ Order Layout

☒ Append related list to users' existing personal customizations

Previous Save & New Save Cancel

Setup Home Object Manager

SETUP > OBJECT MANAGER
Shipment

Details
Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
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Object Limits
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Restriction Rules
Scoping Rules
Object Access

Shipment
New Relationship

Step 5. Add reference field to Page Layouts Step 5 of 6

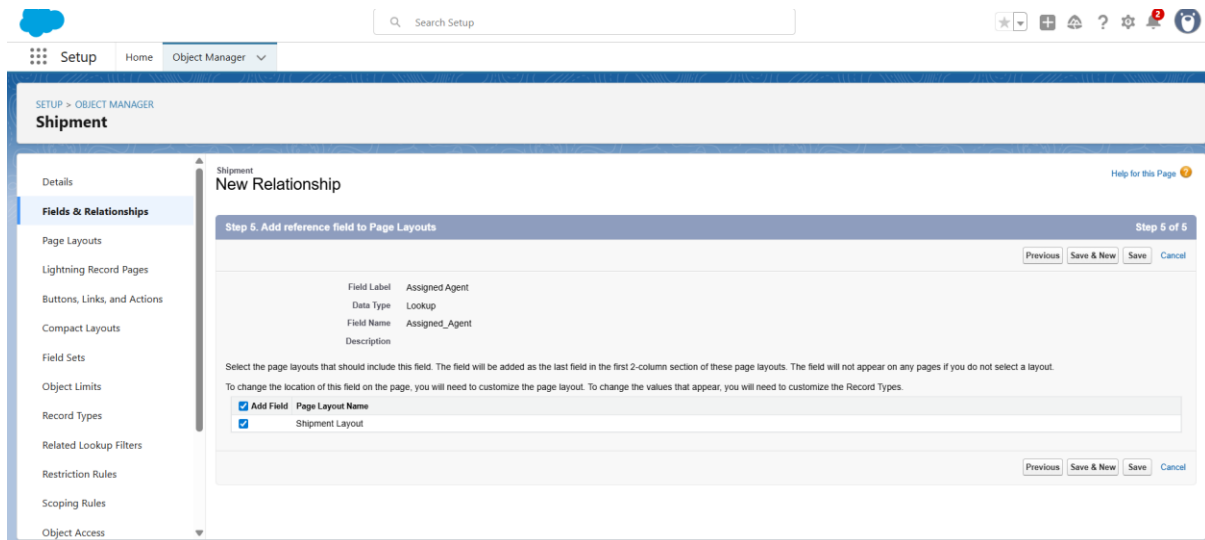
Previous Next Cancel

Field Label	Customer
Data Type <td>Lookup</td>	Lookup
Field Name <td>Customer</td>	Customer
Description <td></td>	

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout.
To change the location of this field on the page, you will need to customize the page layout. To change the values that appear, you will need to customize the Record Types.

☒ Add Field
☒ Shipment Layout

Previous Next Cancel

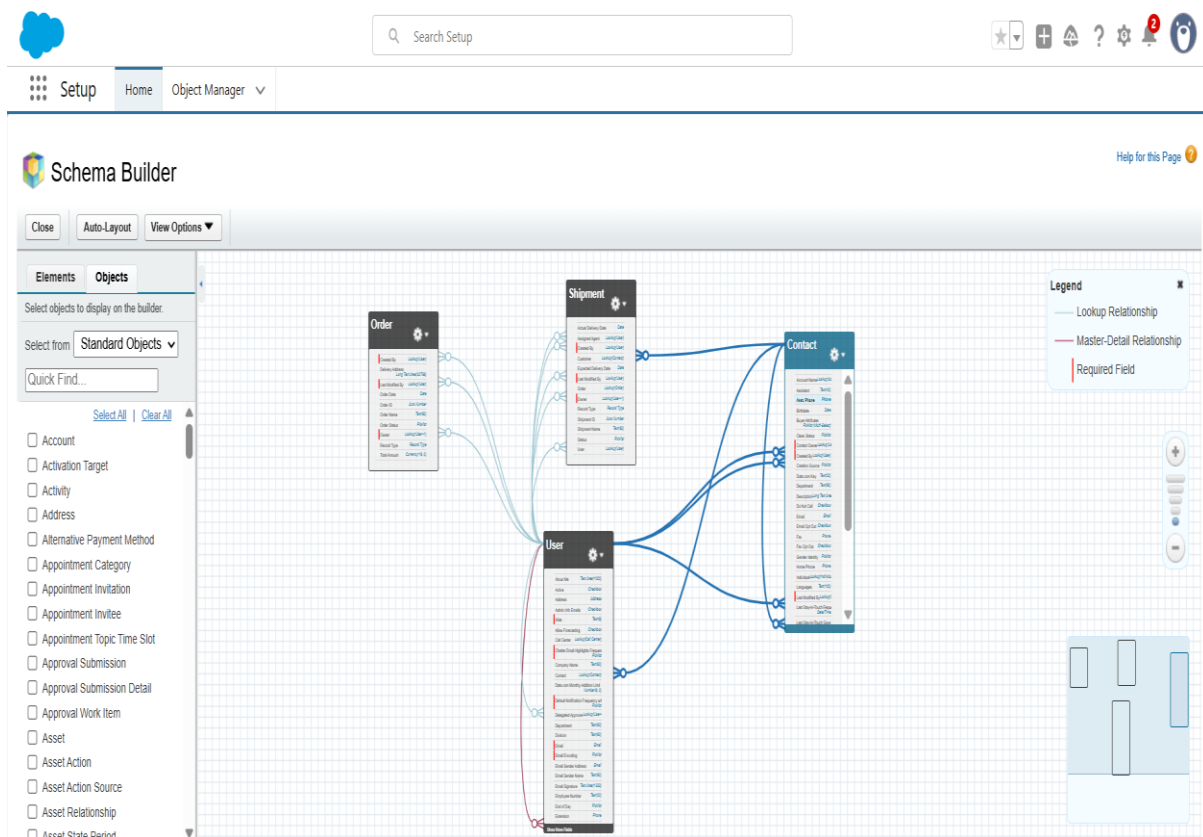


5. Page Layouts & Compact Layouts

- **Order Page Layout:** Displays Order ID, Customer, Total Amount, Shipments related list.
- **Shipment Page Layout:** Displays Shipment ID, Status, Expected/Actual Delivery Date, Assigned Agent.
- **Compact Layouts (Mobile):**
 - Orders: Order ID, Order Date, Status.
 - Shipments: Shipment ID, Status, Expected Delivery Date.

6. Schema Builder Visualization

- Path: **Setup → Schema Builder**.
- Added **Order**, **Shipment**, **Contact**, **User** objects.
- Visualized relationships:
 - Order → Shipments (Lookup).
 - Shipment → Contact (Lookup).
 - Shipment → User (Lookup).



Results Achieved

- **Order and Shipment custom objects** created with required fields.
- **Relationships established** between Orders, Shipments, Customers, and Agents.
- **Record types configured** to differentiate order and shipment types.
- **Page layouts and compact layouts** designed for desktop and mobile users.
- **Schema Builder** used to visualize and confirm the data model.

Next Steps

- Move to **Phase 4: Process Automation (Admin)**.
- Build **validation rules** (e.g., Delivery Date \geq Order Date).
- Automate **notifications and approvals** via Flows.
- Implement **approval process** for bulk orders or delayed shipments.