Phase 3: Data Modeling & Relationships

Introduction

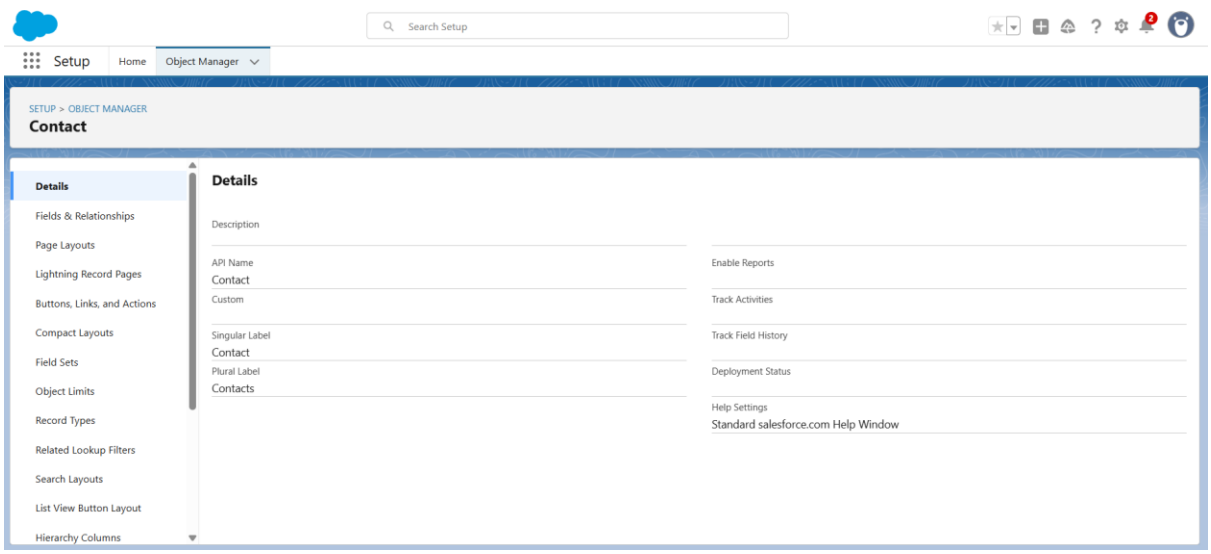
This phase focuses on building the data structure for EcoCart Logistics CRM inside Salesforce. Data modeling ensures that all business entities such as Orders, Shipments, and Customers are represented correctly, and relationships between them are properly established. A strong data model provides the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

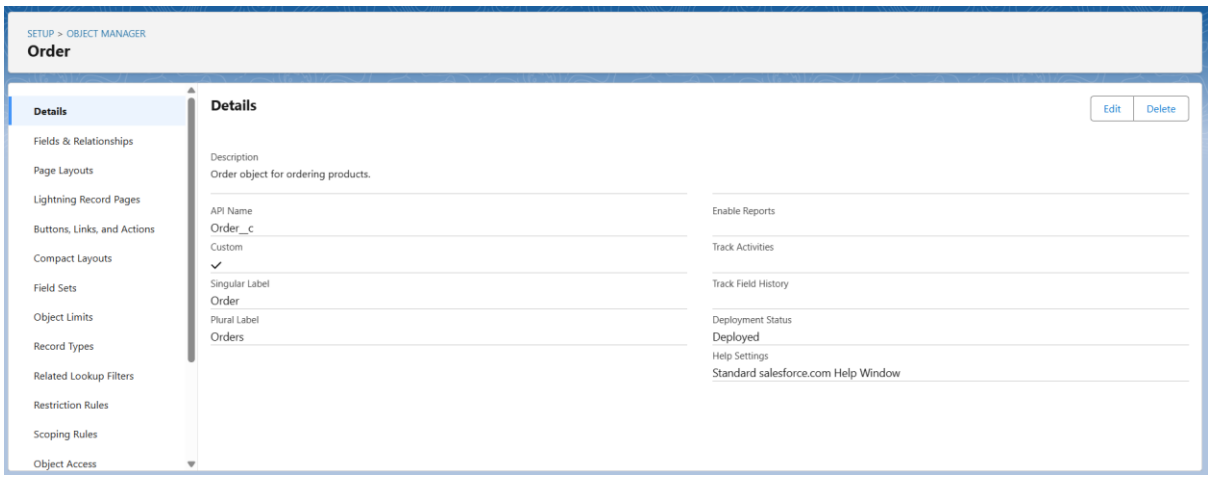
Objectives

- 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.

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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
Edit
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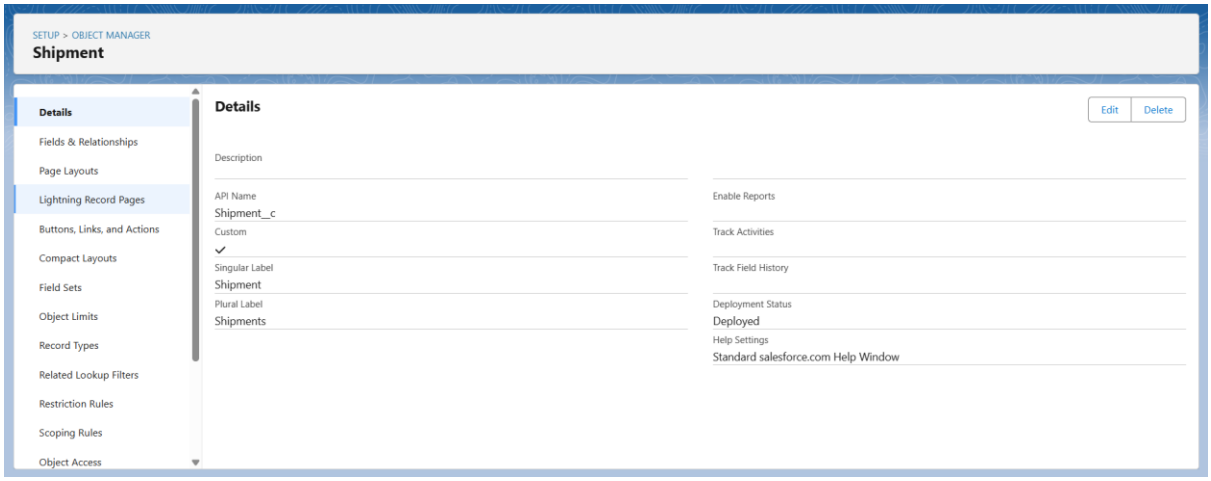
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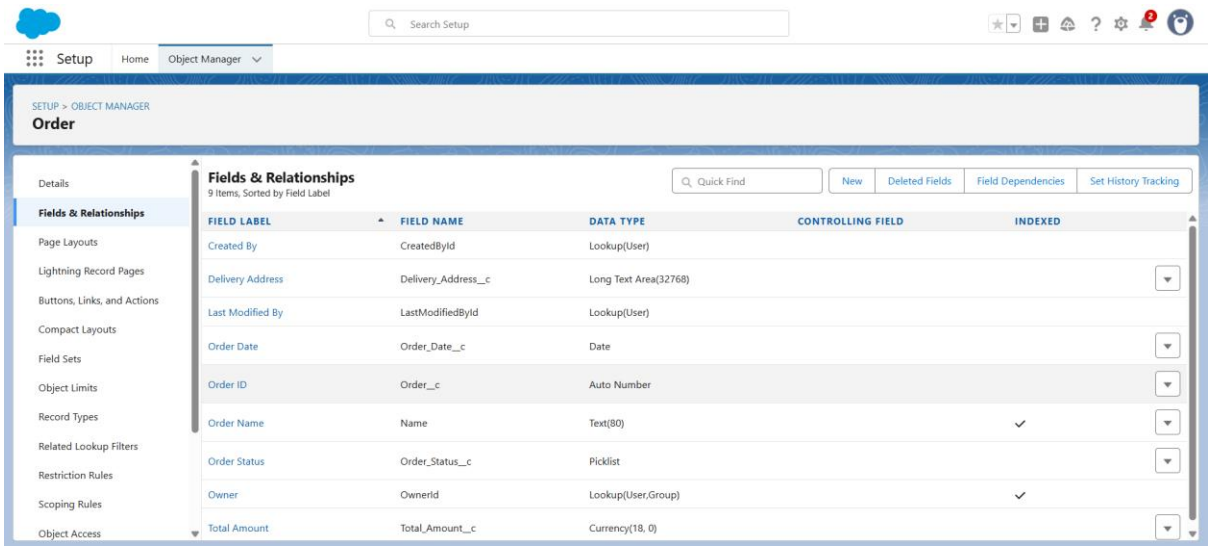
2. Fields Creation

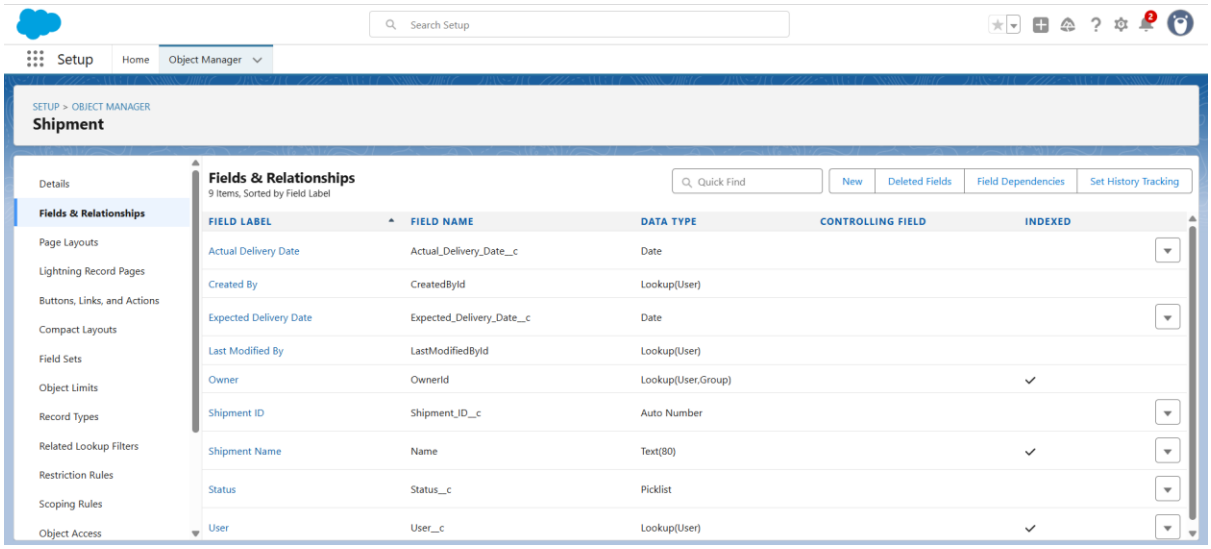
Order Object Fields

- 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).



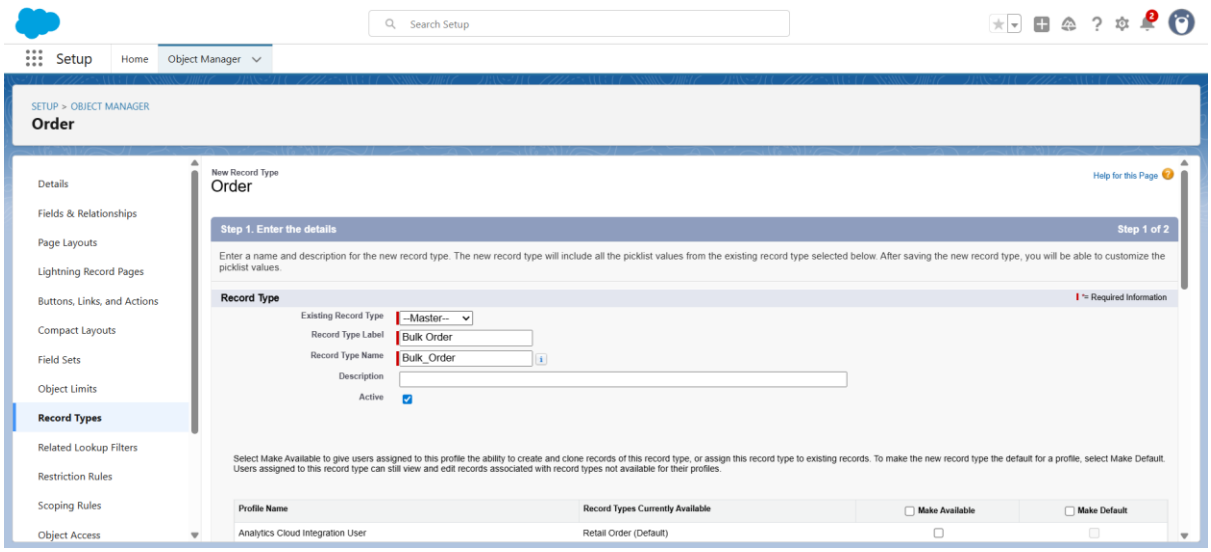
Shipment Object Fields

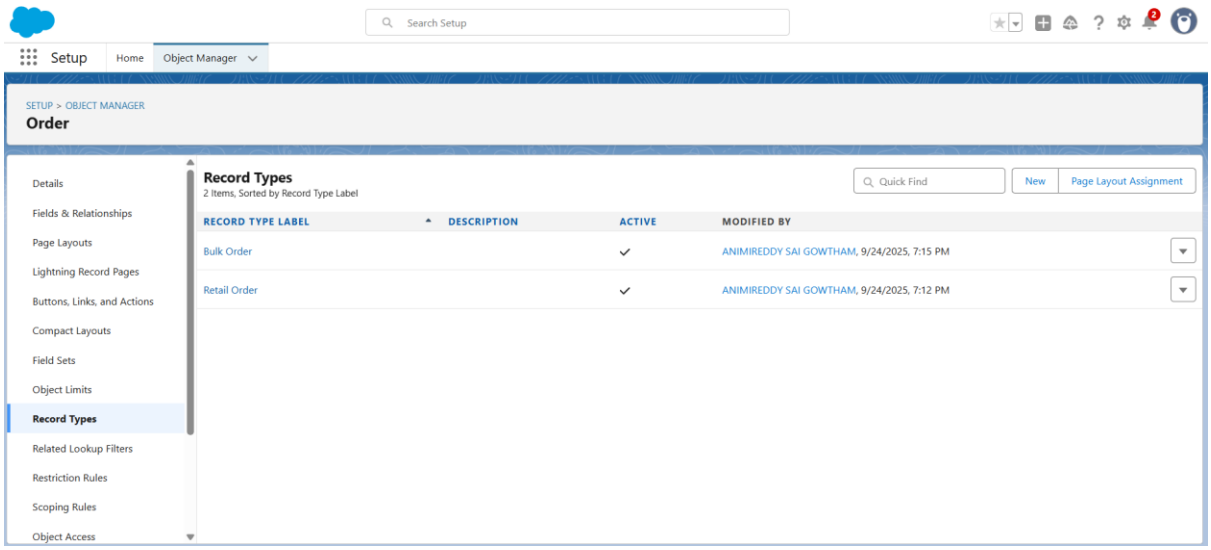
- Shipment ID → Auto Number (SHP-0001, SHP-0002).
- Status → Picklist (Pending, In Transit, Delivered, Delayed).
- Expected Delivery Date → Date.
- Actual Delivery Date → Date.
- Assigned Agent → Lookup (User).



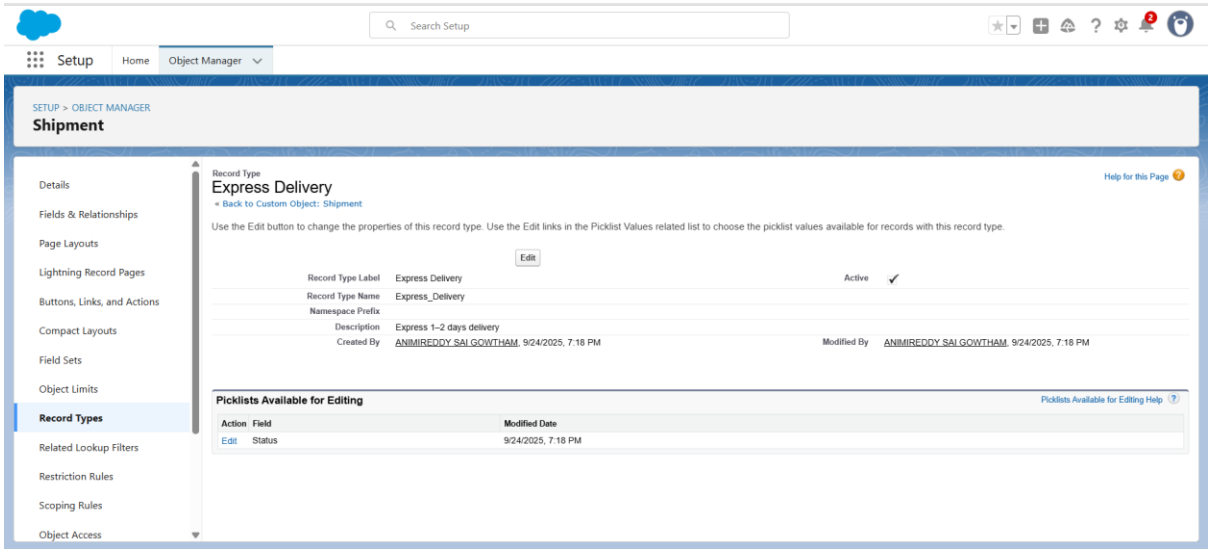
3. Record Types

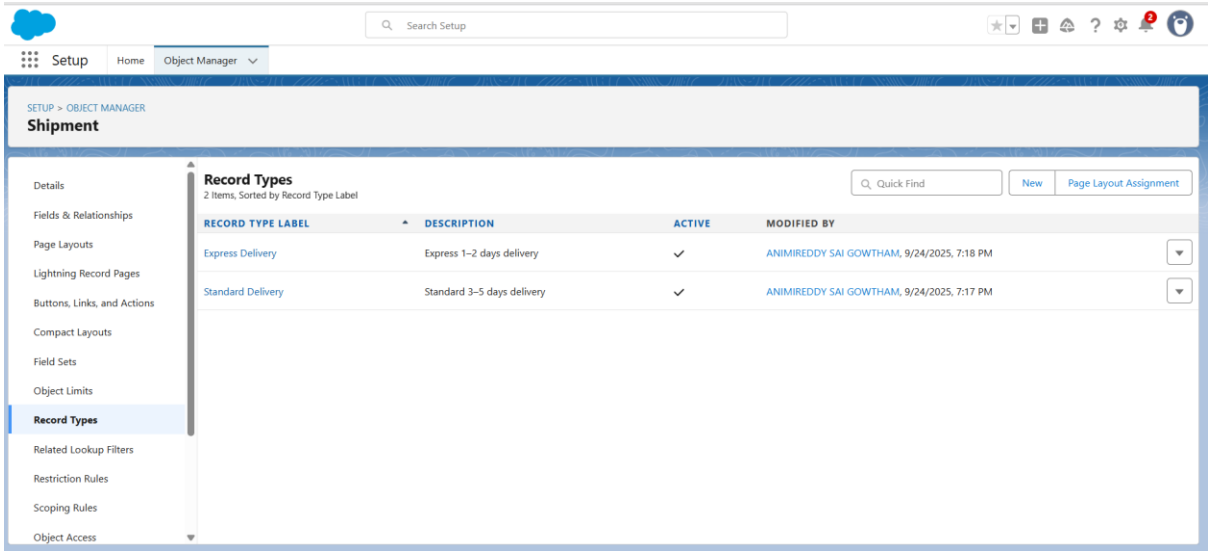
- **Order Record Types:**
    - **Retail Order** → Standard customer order.
    - **Bulk Order** → Large volume orders (may require manager approval).





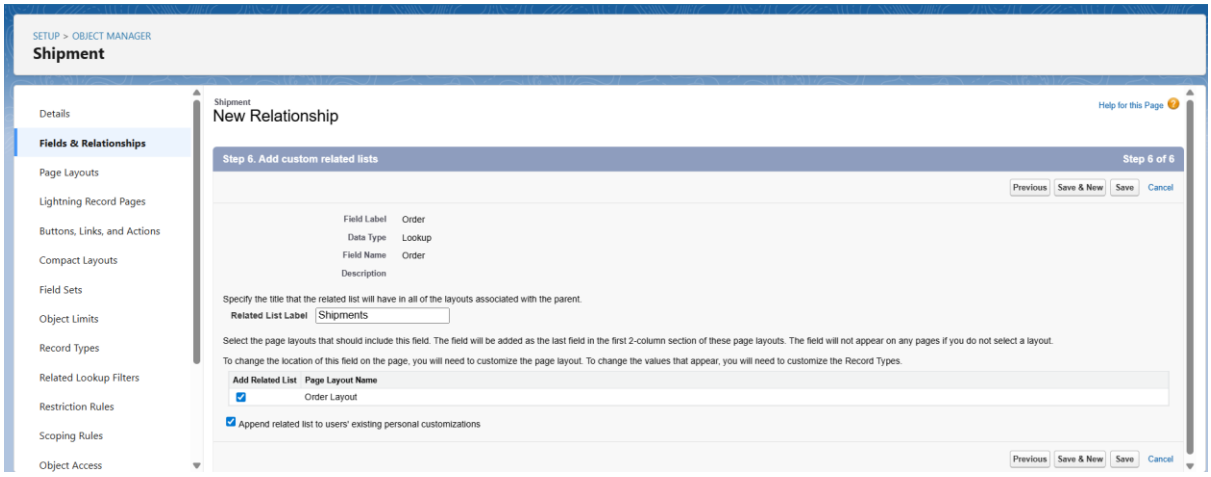
- **Shipment Record Types:**
  - **Standard Delivery** → 3–5 days.
  - **Express Delivery** → 1–2 days.

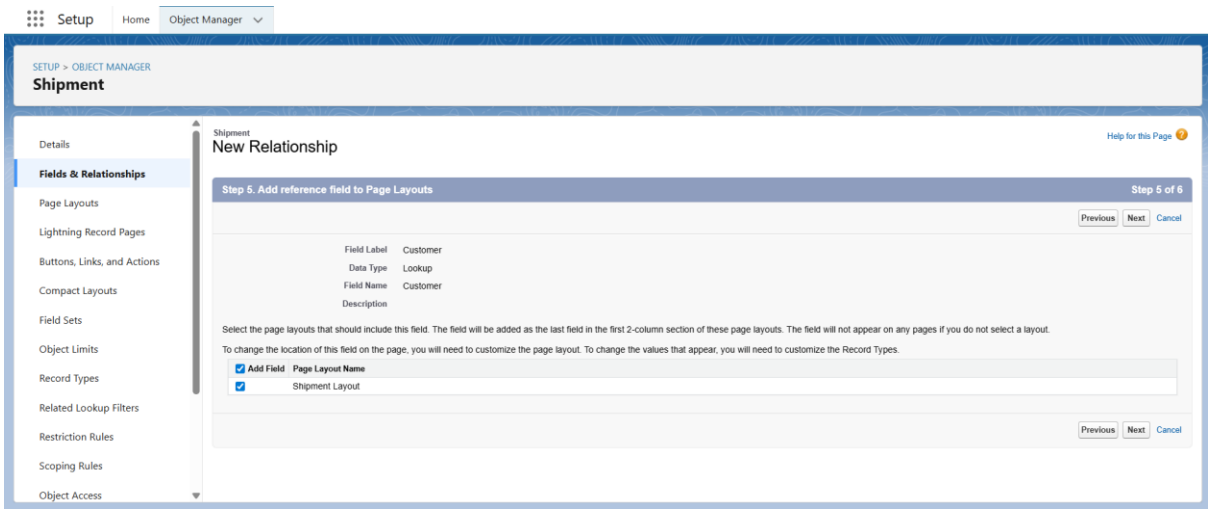


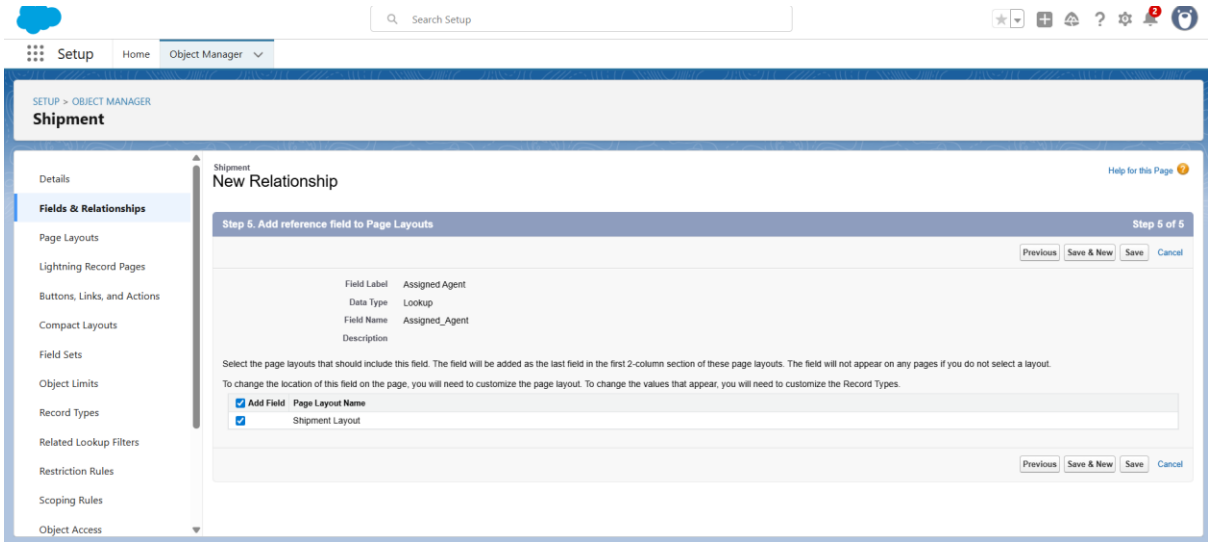


4. Relationships

- **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.





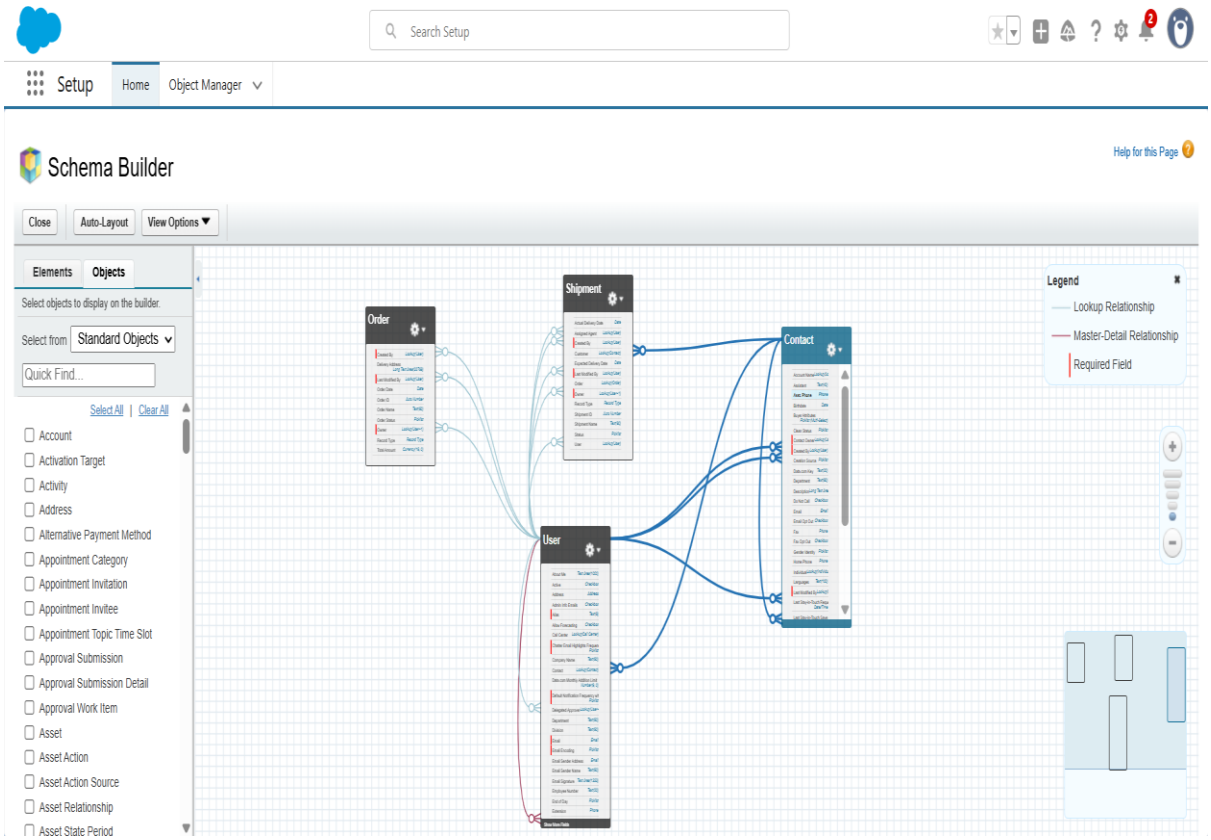


5. Page Layouts & Compact Layouts

- **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 ≥ Order Date).
- Automate **notifications and approvals** via Flows.
- Implement **approval process** for bulk orders or delayed shipments.