

Phase 3: Data Modeling & Relationships – Last Mile Delivery CRM

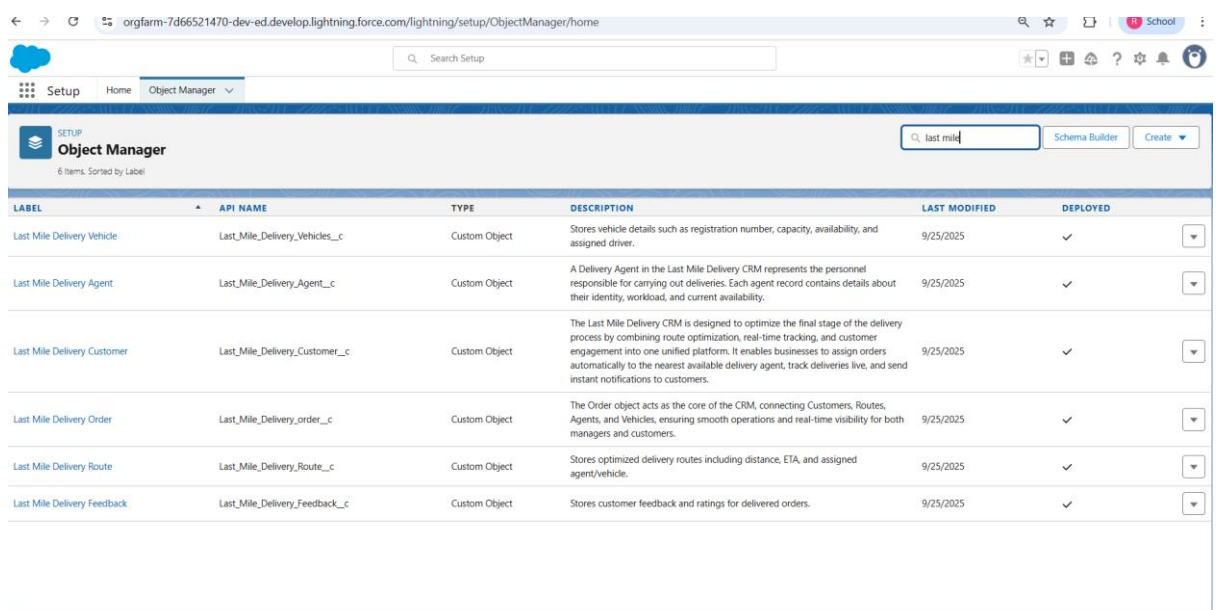
Step 1: Standard & Custom Objects

Six key objects will be created to store business-critical data:

- **Customer** – Stores customer details such as name, contact info, address, and feedback history.
- **Order** – Stores details of each delivery order including order ID, delivery window, and status.
- **Delivery Agent** – Stores information about delivery personnel including assigned region, contact, and workload.
- **Vehicle** – Stores vehicle details such as registration number, capacity, availability, and assigned driver.
- **Route** – Stores optimized delivery routes including distance, ETA, and assigned agent/vehicle.
- **Delivery Feedback** – Stores customer feedback and ratings for delivered orders.

Steps followed:

- Navigated to **Setup → Object Manager → Create → Custom Object**.
- Added **Label, Name**, enabled reports/search.
- Saved and created **Tabs** for each object.
- Repeated the process for all six objects.



The screenshot displays the Salesforce Object Manager interface. The browser address bar shows the URL: orgfarm-7d66521470-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/home. The page title is "Object Manager" with a sub-header "6 Items, Sorted by Label". A search bar contains the text "last mile". Below the header is a table listing six custom objects:

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Last Mile Delivery Vehicle	Last_Mile_Delivery_Vehicles__c	Custom Object	Stores vehicle details such as registration number, capacity, availability, and assigned driver.	9/25/2025	✓
Last Mile Delivery Agent	Last_Mile_Delivery_Agent__c	Custom Object	A Delivery Agent in the Last Mile Delivery CRM represents the personnel responsible for carrying out deliveries. Each agent record contains details about their identity, workload, and current availability.	9/25/2025	✓
Last Mile Delivery Customer	Last_Mile_Delivery_Customer__c	Custom Object	The Last Mile Delivery CRM is designed to optimize the final stage of the delivery process by combining route optimization, real-time tracking, and customer engagement into one unified platform. It enables businesses to assign orders automatically to the nearest available delivery agent, track deliveries live, and send instant notifications to customers.	9/25/2025	✓
Last Mile Delivery Order	Last_Mile_Delivery_order__c	Custom Object	The Order object acts as the core of the CRM, connecting Customers, Routes, Agents, and Vehicles, ensuring smooth operations and real-time visibility for both managers and customers.	9/25/2025	✓
Last Mile Delivery Route	Last_Mile_Delivery_Route__c	Custom Object	Stores optimized delivery routes including distance, ETA, and assigned agent/vehicle.	9/25/2025	✓
Last Mile Delivery Feedback	Last_Mile_Delivery_Feedback__c	Custom Object	Stores customer feedback and ratings for delivered orders.	9/25/2025	✓

Step 2: Fields

Customer

- Name (Text, 80) – Standard field
- Email (Email)
- Phone (Phone)
- Address (Text)
- Preferred Delivery Slot (Picklist: Morning, Afternoon, Evening)
- Loyalty Status (Picklist: Regular, Premium, VIP)
- Owner (Lookup → User/Group)
- Created By (Lookup → User)
- Last Modified By (Lookup → User)

The screenshot shows the Salesforce Setup interface for the 'Last Mile Delivery Customer' object. The 'Fields & Relationships' section is active, displaying a table of fields. A 'Snipping Tool' notification is visible in the bottom right corner.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Mile Delivery	Email_c	Email		
Last Mile Delivery Name	Name	Text(80)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		
Phone	Phone_c_c	Phone		

Order

- Order Number (Auto Number)
- Customer (Lookup → Customer)
- Pickup Location (Text)
- Drop Location (Text)
- Order Date (Date)
- Delivery Window (Time Range)

- Order Status (Picklist: Pending, Out for Delivery, Delivered, Failed)
- Payment Status (Picklist: Pending, Paid, COD)

Delivery Agent

- Agent Name (Text)
- Phone (Phone)
- Assigned Region (Text)
- Current Workload (Number → Active Orders)
- Availability Status (Picklist: Available, Busy, Off-Duty)

Vehicle

- Vehicle Number (Text)
- Capacity (Number)
- Vehicle Type (Picklist: Bike, Van, Truck)
- Status (Picklist: Available, In Use, Under Maintenance)
- Assigned Agent (Lookup → Delivery Agent)

Route

- Route Name (Text)
- Distance (Number, 18,2)
- Estimated Time (Number → Minutes)
- Optimized Path (Long Text)
- Vehicle (Lookup → Vehicle)
- Agent (Lookup → Delivery Agent)

Delivery Feedback

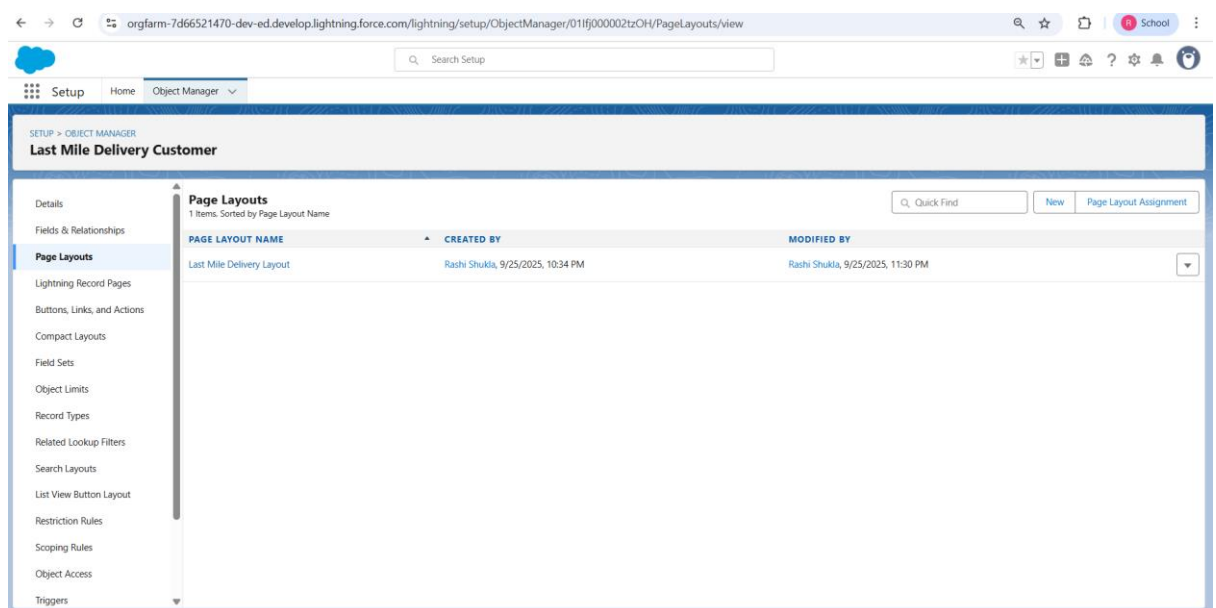
- Customer (Lookup → Customer)
 - Order (Lookup → Order)
 - Rating (Picklist: 1–5 Stars)
 - Feedback Comment (Long Text)
 - Feedback Date (Date)
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Step 3: Record Types

- **Order:**
 - Standard Delivery
 - Express Delivery
 - **Delivery Feedback:**
 - Positive Feedback
 - Complaint/Negative Feedback
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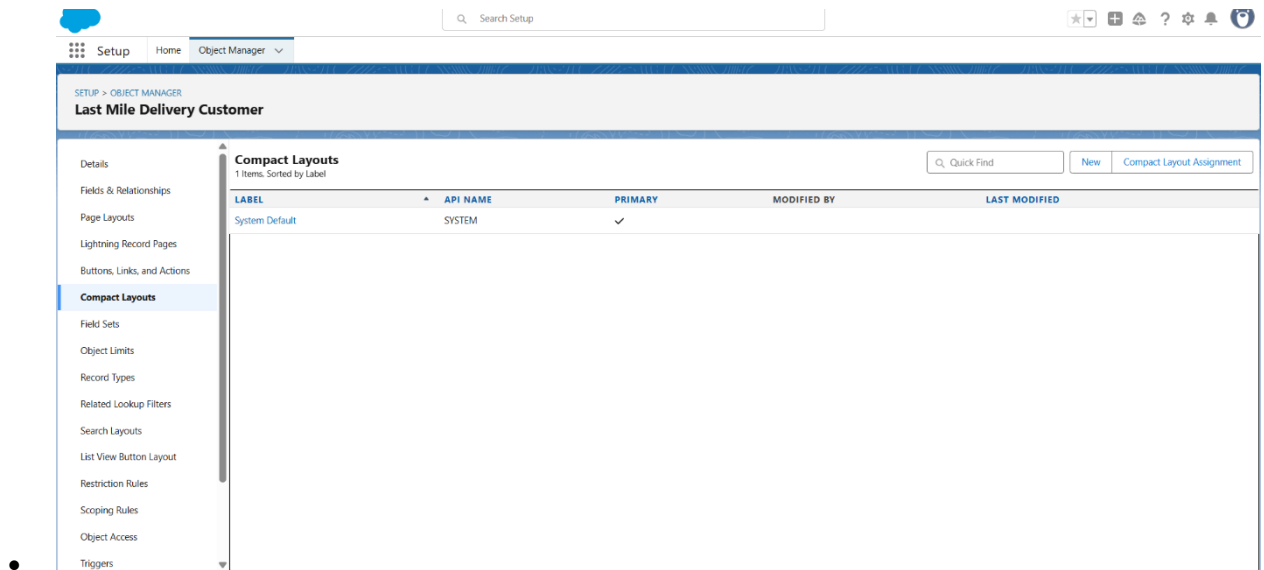
Step 4: Page Layouts

- **Delivery Agent Layout** – Shows assigned orders, workload, and route details.
- **Manager Layout** – Shows dashboards, KPIs, agent/vehicle performance.
- **Customer Layout** – Shows personal info, order history, and feedback.



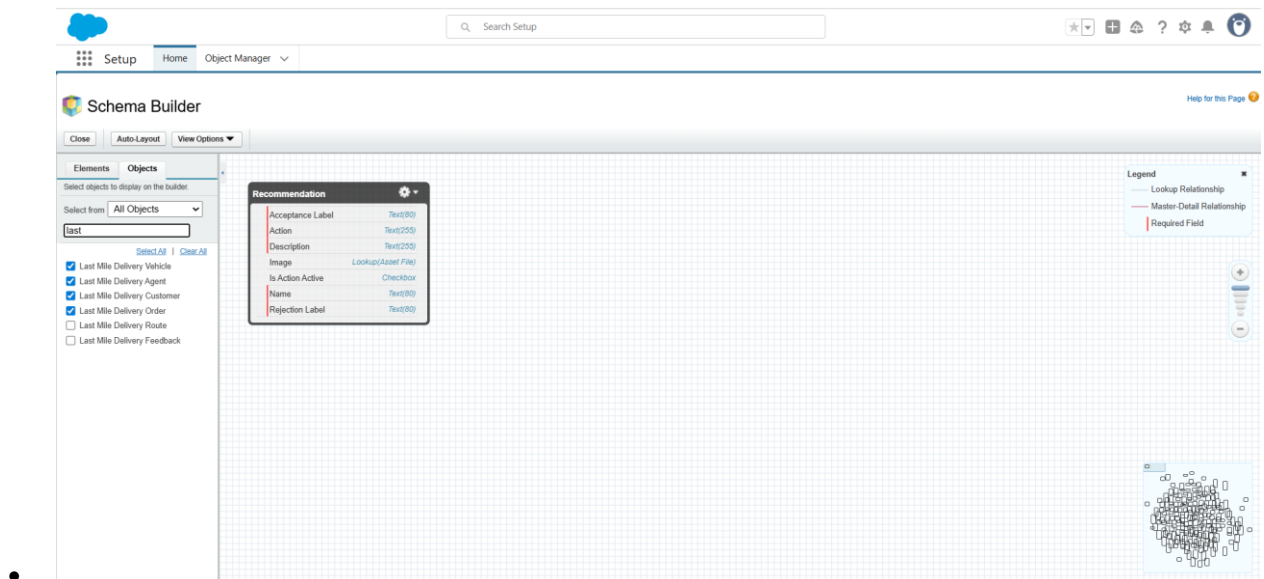
Step 5: Compact Layouts

- **Order Compact Layout:** Order Number, Delivery Status, Delivery Window.
- **Customer Compact Layout:** Full Name, Phone, Email, Loyalty Status.
- **Delivery Agent Compact Layout:** Agent Name, Assigned Region, Availability.
- **Vehicle Compact Layout:** Vehicle No, Capacity, Status.



Step 6: Schema Builder

- Used to visualize all **objects and relationships**.
- Shows **lookups** between Orders, Customers, Agents, and Routes.
- Helps managers and developers understand **data flow** in the CRM.



Step 7: Lookup vs Master-Detail vs Hierarchical Relationships

- **Lookup Relationship:**
 - Order → Customer
 - Route → Vehicle / Delivery Agent

- **Master-Detail Relationship:**
 - Vehicle → Delivery Agent (Vehicle depends on assigned Agent).
 - **Hierarchical Relationship (User-specific):**
 - Manager → Agent (used for reporting hierarchy).
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Step 8: Junction Objects (Optional for Future Enhancement)

- **Agent ↔ Route Junction:** If multiple agents can handle multiple routes.
 - **Order ↔ Vehicle Junction:** If orders can be split into multiple vehicles.
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