

Phase 3 — Data Modelling & Relationships

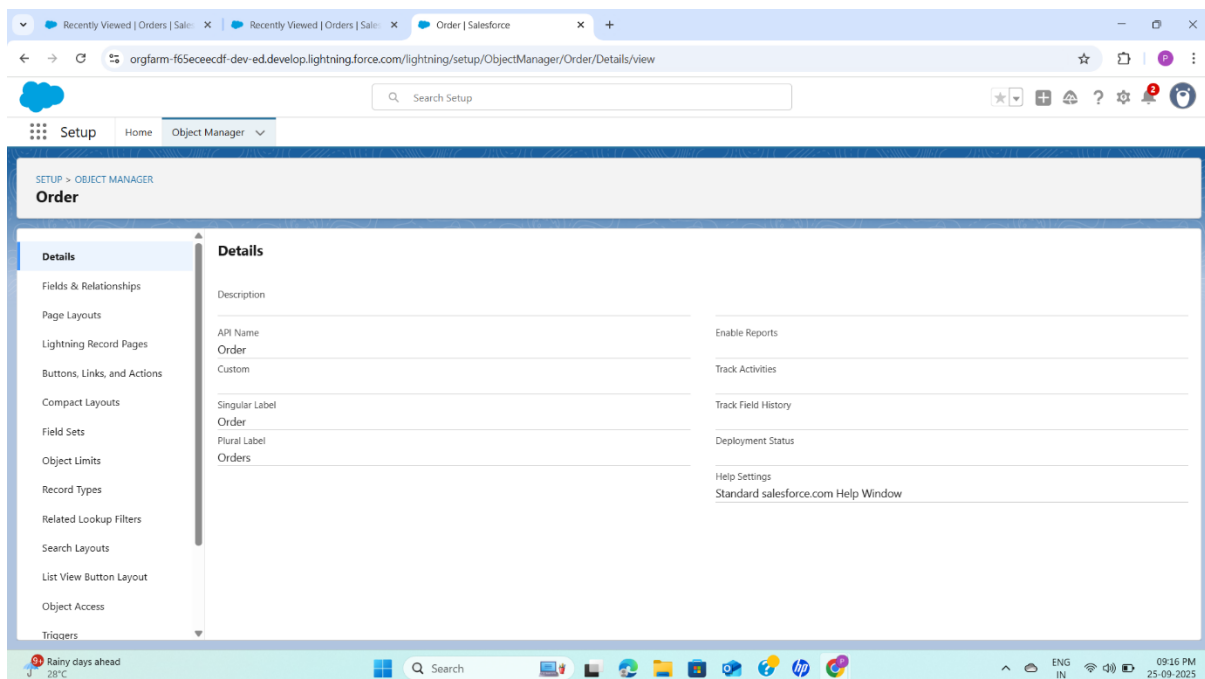
In Salesforce, data modelling is the process of defining **objects, fields, and relationships** so that business processes can be represented properly in the system. For a restaurant CRM, the core entities include Orders, Order Items, Bookings, and Loyalty Accounts.

Custom Objects

Custom objects are created to represent real-world entities. In this case:

- **Order** → Captures details of a customer's order.

These objects are configured with reporting, activities, and field history tracking enabled so data can be monitored and analysed.



The **Order object** captures all information about a customer's food order. It acts as the central business record for sales transactions in the restaurant. Each order may be tied to a **customer (Contact)**, a **Booking** (if it was pre-reserved), and contains multiple **Order Items** (individual dishes).

- The **Order Type** field differentiates whether the order is Dine-In, Takeaway, or Delivery.
- The **Status** field shows the order lifecycle (e.g., Draft → Placed → Preparing → Served → Paid → Cancelled).
- **Payment Status** ensures financial tracking, while **Total Amount** provides billing details.
- If delivery is chosen, an address is also stored.

Key Relationship:

Orders are **parents** to Order Items in a Master-Detail relationship, ensuring that if the order is deleted, all its line items are removed. This also allows roll-up summaries of order totals.

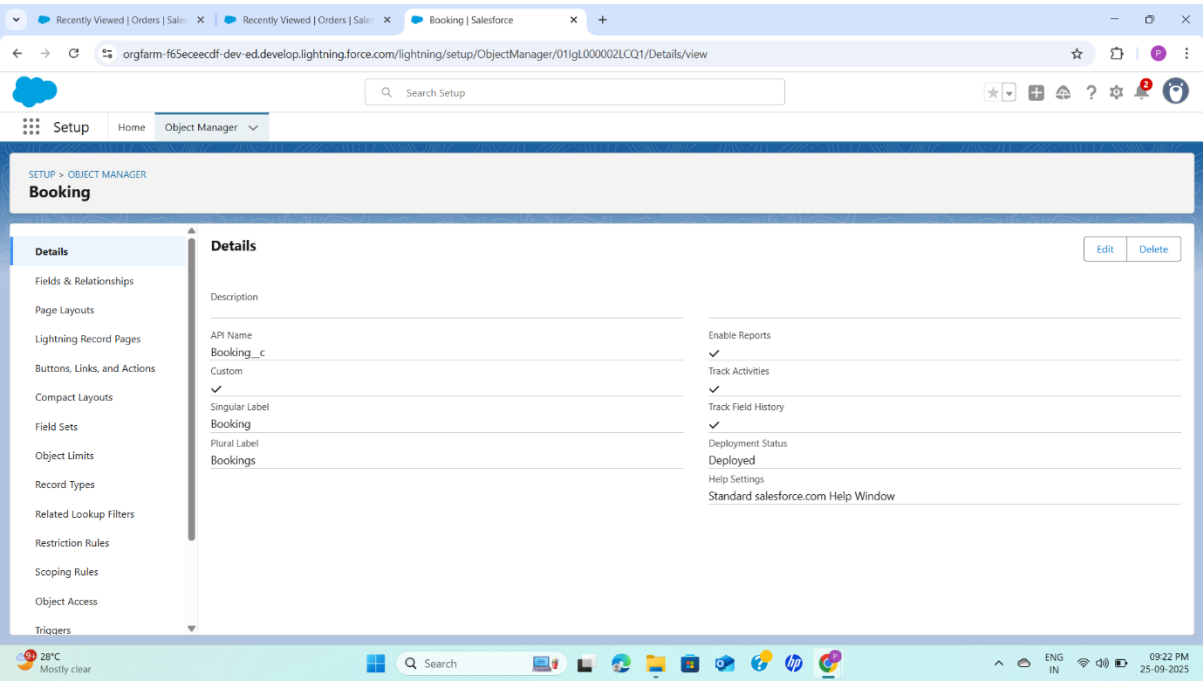
This screenshot shows the 'Fields & Relationships' page for the 'Order' object in Salesforce. The page displays a list of 40+ fields, sorted by Field Label. The fields are organized into columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The 'Original Order' field is highlighted in blue.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Account Name	AccountId	Lookup(Account)		✓
Account Number	AccountNumber	Text(40)		
Activated By	ActivatedById	Lookup(User)		
Activated Date	ActivatedDate	Date/Time		✓
Bill To Contact	BillToContactId	Lookup(Contact)		✓
Billing Address	BillingAddress	Address		
Company Authorized By	CompanyAuthorizedById	Lookup(User)		
Company Authorized Date	CompanyAuthorizedDate	Date		
Contact	Customer_c	Lookup(Contact)		✓
Contract End Date	ContractEndDate	Date		
Contract Name	ContractName	Text(80)		

This screenshot shows the 'Fields & Relationships' page for the 'Order' object in Salesforce. The page displays a list of 40 items, sorted by Field Label. The fields are organized into columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The 'Original Order' field is highlighted in blue.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Original Order	OriginalOrderId	Lookup(Order)		✓
Payment Status	Payment_Status__c	Picklist		
PO Date	PoDate	Date		
PO Number	PoNumber	Text(80)		
Price Book	Pricebook2Id	Lookup(Price Book)		✓
Reduction Order	IsReductionOrder	Checkbox		
Ship To Contact	ShipToContactId	Lookup(Contact)		✓
Shipping Address	ShippingAddress	Address		
Status	Status__c	Picklist		
Status	Status	Picklist		
Total Amount	Total_Amount__c	Roll-Up Summary (SUM Order Item)		

Booking → Stores reservations made by customers.

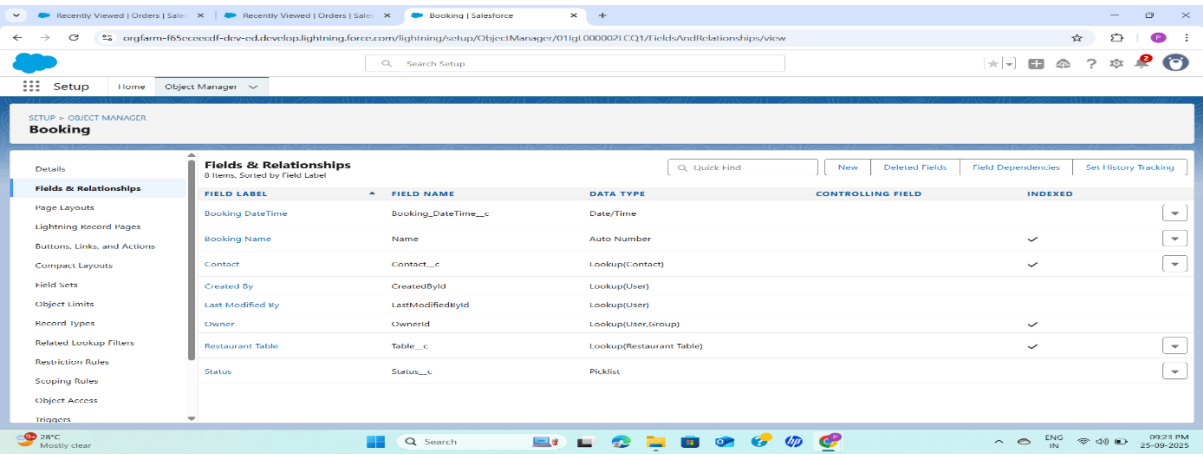


The **Booking** object manages restaurant reservations. It allows customers to reserve a table for a specific time slot and number of guests.

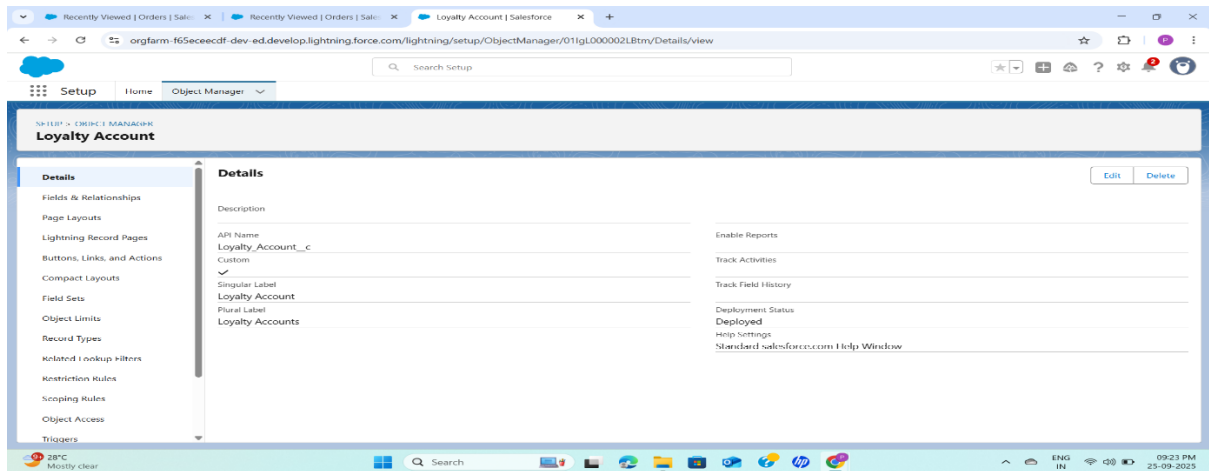
- The **Booking Time** defines when the reservation occurs.
- **Pax** indicates the number of people.
- **Status** reflects the booking lifecycle (Confirmed, Seated, NoShow, Cancelled).
- Each booking is linked to a **Contact** (customer) and to a **Restaurant Table** to manage seating capacity.

Key Role:

Bookings help prevent overbooking, improve customer service, and give staff visibility into restaurant occupancy.



Loyalty Account → Tracks points and tier for customer loyalty.

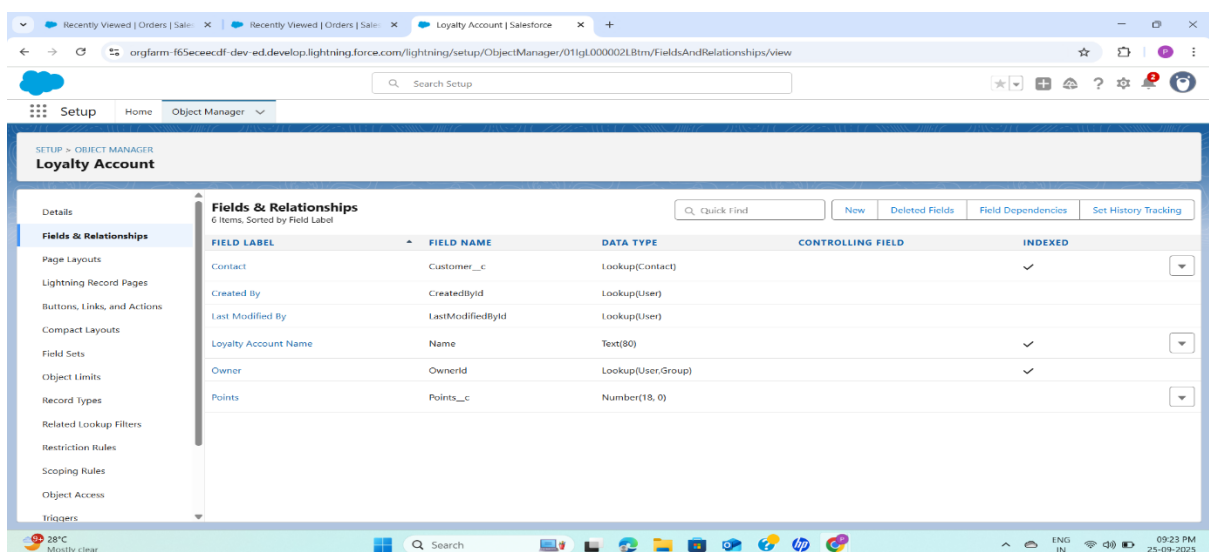


The **Loyalty Account** object tracks customer engagement through points and reward tiers. It is tightly linked to the **Contact** object (the customer).

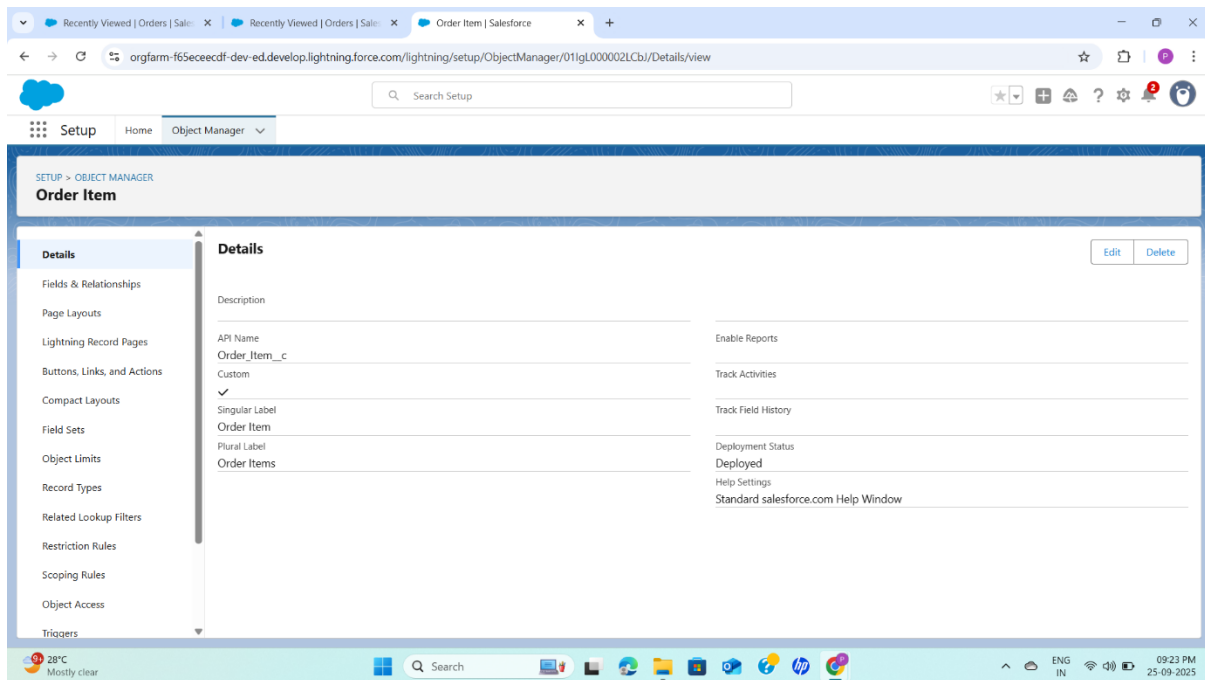
- Each customer can have a **Loyalty Account** where points are credited based on orders.
- **Points Balance** keeps track of available reward points.
- **Tier** (Bronze, Silver, Gold, etc.) reflects customer loyalty level.
- **Join Date** stores when the customer enrolled in the loyalty program.

Key Role:

This object supports marketing and customer retention strategies by incentivizing repeat business.



Order Item → Child of Order, representing individual menu items within the order.

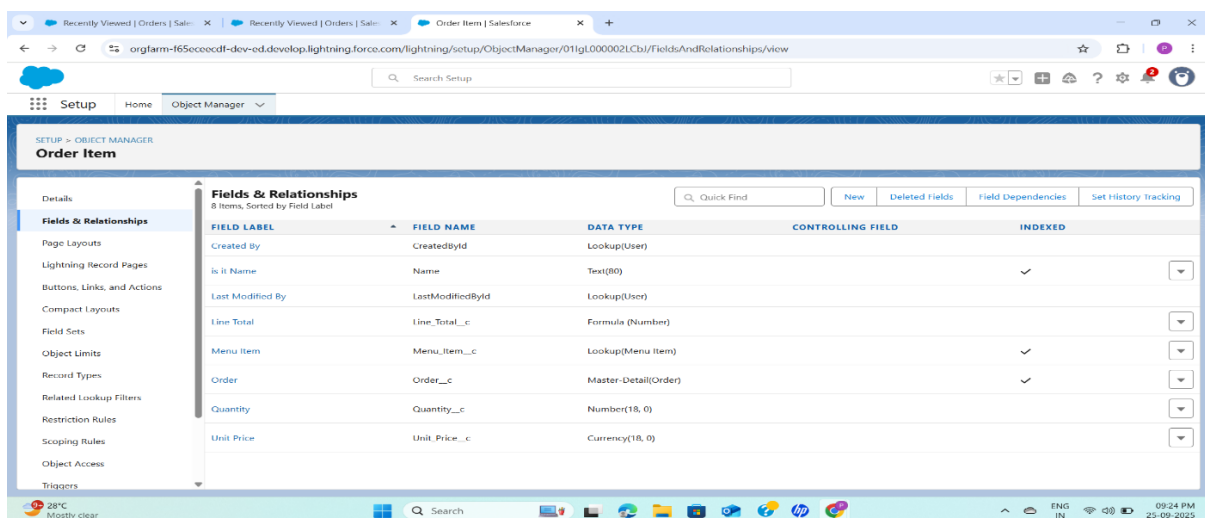


The **Order Item** object represents the specific menu items within an order. It ensures detailed tracking of what was ordered, in what quantity, and at what price.

- It is **child** to Order (via Master-Detail).
- It links to the **Menu Item** object, which contains the catalog of dishes available.
- **Quantity** and **Unit Price** define the financial details, while **Line Total** (Quantity × Price) ensures accurate calculation per item.

Key Role:

Without Order Items, the Order object would only represent a lump sum; Order Items break it down into granular details for billing, kitchen preparation, and inventory.



There are some fields and relationships in the menu item that are given below

The screenshot shows the Salesforce Setup interface for the 'Menu Item' object. The 'Fields & Relationships' tab is selected, displaying a table of 6 fields. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are Category, Created By, Last Modified By, Menu Item Name, Owner, and Price. The 'Menu Item Name' field is highlighted in blue.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Category	Category__c	Picklist		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Menu Item Name	Name	Text(80)		✓
Owner	OwnerId	Lookup(User,Group)		✓
Price	Price__c	Currency(18, 0)		

The **Restaurant Table** object represents the physical seating arrangement in the restaurant. It helps the system track which tables are available, reserved, or occupied during a booking. This ensures efficient seat management and prevents double-booking.

The screenshot shows the Salesforce Setup interface for the 'Restaurant Table' object. The 'Details' tab is selected, displaying a form with various fields. The 'Description' field is highlighted in blue. The 'API Name' is 'Restaurant_Table__c'. The 'Singular Label' is 'Restaurant Table' and the 'Plural Label' is 'Restaurant Tables'. The 'Deployment Status' is 'Deployed'.

Details
Description
API Name Restaurant_Table__c
Custom ✓
Singular Label Restaurant Table
Plural Label Restaurant Tables
Enable Reports
Track Activities
Track Field History
Deployment Status Deployed
Help Settings Standard salesforce.com Help Window

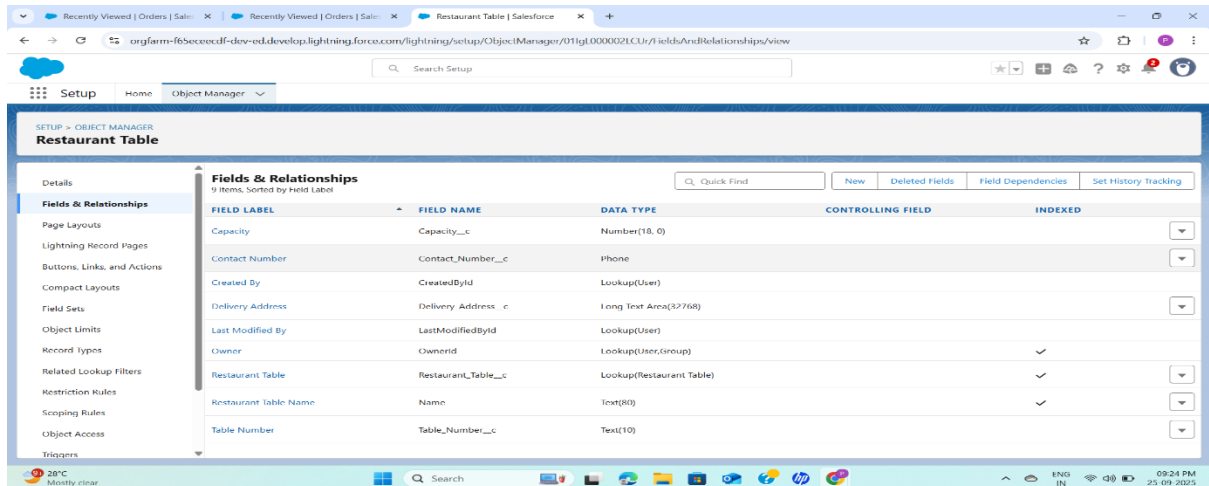
The **Restaurant Table** object represents the physical tables in the restaurant. It ensures that seating arrangements are managed efficiently.

- Each table has a **unique identifier (Table Number)**.

- **Capacity** defines how many guests it can accommodate.
- **Status** indicates whether a table is Available, Reserved, Occupied, or Out of Service.
- **Location** can differentiate indoor vs outdoor seating.

Key Relationship:

Bookings are linked to Restaurant Tables, ensuring that reservations are tied to real seating capacity. This avoids double-booking and helps staff assign tables efficiently



Create Page Layouts

Go to **Object Manager** → **Order__c** → **Page Layouts**.

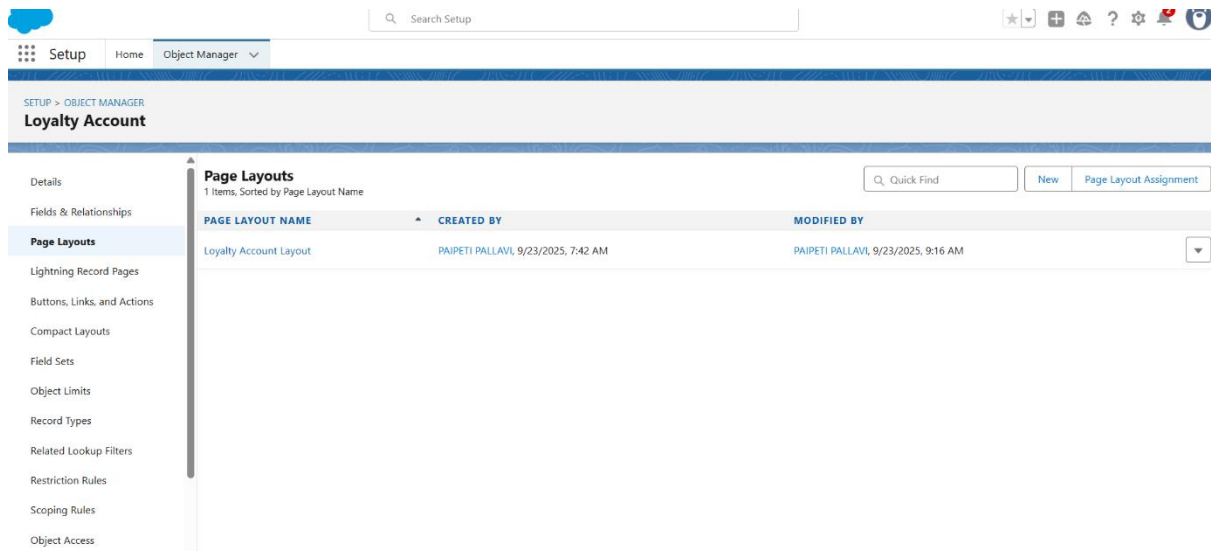
Create/Clone 2 layouts:

Order Layout – Dine-In

- Key fields: Table, Booking, Order Items, Status.

Order Layout – Delivery

- Same as above + **Delivery Address, Contact Phone, Delivery Notes**.



Creating Tabs for Custom Objects in Salesforce

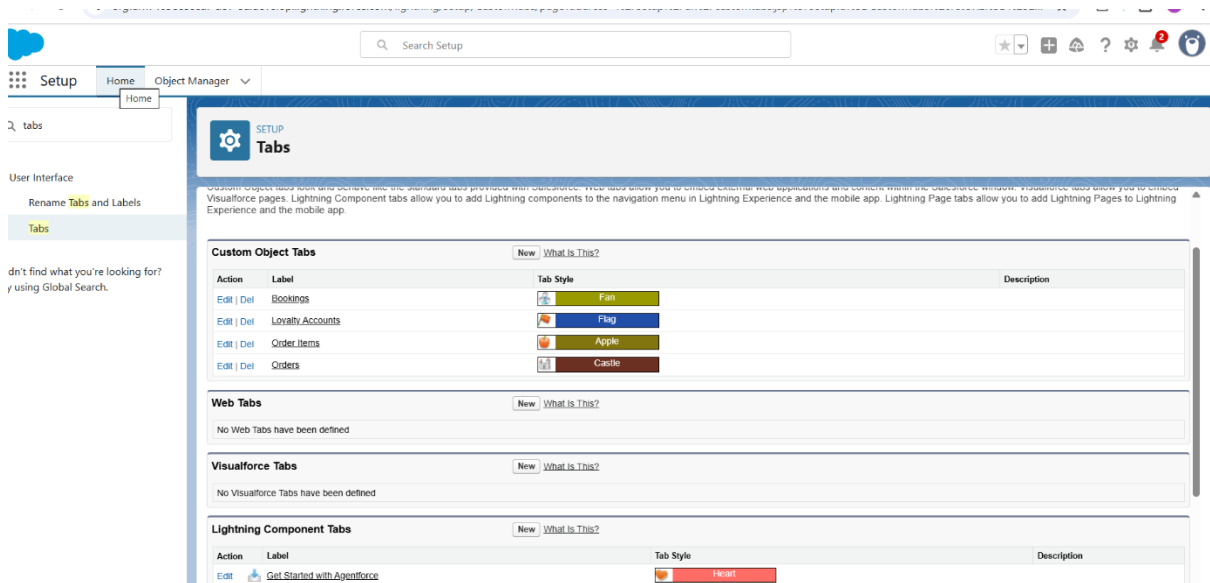
A **tab** in Salesforce is a user interface element that provides direct access to objects, records, or web resources from the Salesforce app's navigation bar. Think of a tab as a “doorway” into the database — without it, a custom object may exist but users cannot reach it easily from the UI.

The Booking tab makes reservations discoverable to hosts and managers. Picking an obvious Tab Style (calendar icon) is a small but important UX affordance — it reduces cognitive load so staff can scan navigation quickly. When you set Tab Visibility to “Default On” for Manager and Host but “Hidden” for Kitchen, you’re enforcing a simple principle: the host and manager need immediate access to create and change bookings, the kitchen does not.

Orders are the central operational object for the restaurant, so their tab should be universally available to everyone involved in order handling (Manager, Host, Kitchen). Setting Tab Visibility to Default On for Manager, Host and Kitchen makes sense because hosts create orders, kitchen staff need to pick up items from the order, and managers monitor/override. The Orders tab provides access to list views (e.g., “Open Orders”, “Pending Payment”) and record pages (where order details, items and status live).

Order items are often a child object shown on the Order page as a related list, so creating a standalone Order Items tab is a deliberate admin decision: it’s useful for data management, reporting ad-hoc edits, and bulk imports/cleanups but often unnecessary for everyday order-taking workflows. When you make the tab Default On for Manager and Optional or Read-Only for Host/Kitchen, you are signalling that managers are the ones who might need direct access to the raw line-item data (for auditing, refunds, adjustments) while service staff generally work from the Order parent record and its related list.

Loyalty and rewards often contain personal and behavioural data and so deserve conservative visibility. By making the Loyalty Accounts tab Default On for Manager, Read-Only for Host and Hidden for Kitchen you protect customers’ reward data while still enabling hosts to view balances when assisting customers. This map supports common workflows: marketing and managers analyse and update tiers, hosts can check balances for in-person redemptions, and kitchen staff have no operational need for that information.



Schema Builder

Contact

- **Core Role:** Customer record.
- **Relationships:**
 - Lookup → **Loyalty Account** (one-to-one).
 - Lookup → **Order** (one-to-many).
 - Lookup → **Booking** (one-to-many).
- **Theory:**
The Contact object is the **foundation of CRM**. Every customer interaction begins here — whether booking a table, placing an order, or redeeming loyalty points.

Loyalty Account

- **Core Role:** Tracks rewards/points for each customer.
- **Relationship:** Lookup → **Contact**.
- **Theory:**
Enables the restaurant to manage customer retention by offering a loyalty program. Every order linked to a loyalty account can earn or redeem points.

Booking

- **Core Role:** Stores table reservations.
- **Relationships:**
 - Lookup → **Contact** (who made the booking).
 - Lookup → **Restaurant Table** (where the booking is seated).
- **Theory:**
Ensures efficient **table allocation and reservation management**, preventing double bookings and improving service flow.

Restaurant Table

- **Core Role:** Represents physical seating arrangements.
- **Relationship:** Lookup → **Booking**.
- **Theory:**
Allows staff to map reservations to available tables, track occupancy, and manage seating efficiently.

Order

- **Core Role:** Stores all food/beverage orders.
- **Relationships:**
 - Master-Detail → **Order Item** (an order contains multiple items).
 - Lookup → **Contact** (who placed the order).
 - Lookup → **Booking** (for dine-in orders linked to reservations).
 - Lookup → **Loyalty Account** (if loyalty points are used).
- **Theory:**
The **backbone of restaurant operations** — captures both dine-in and delivery orders. It ties customer transactions to billing, loyalty points, and reporting.

Order Item

- **Core Role:** Captures individual food items within an order.
- **Relationships:**
 - Master-Detail → **Order** (parent).
 - Lookup → **Menu Item** (what was ordered).
- **Theory:**
Provides granularity. Instead of storing only the order total, the restaurant can track exactly which dishes were sold, in what quantity, and at what price.

Menu Item

- **Core Role:** Master catalog of dishes.
- **Relationship:** Referenced by **Order Item**.
- **Theory:**
The restaurant's product database. Every order item references a menu item, ensuring consistency in pricing and reporting.

Lightning Experience | Salesforce | Home | Salesforce

orgfarm-f65ecccdf-dev-ed.lightning.force.com/lightning/setup/SchemaBuilder/home

Schema Builder

Close Auto Layout View Options

Elements Objects

Select objects to display on the builder

Select from All Objects

City

Search Results 1 Close

Loyalty Account

Legend

- Lookup Relationship
- Master-Detail Relationship
- Required Field

The screenshot shows the Salesforce Schema Builder interface. On the left, there's a sidebar with 'Elements' and 'Objects' tabs. Under 'Objects', 'City' is selected. Below it, a search bar shows 'Search Results 1' and 'Close'. The main canvas displays a diagram of relationships between several objects: 'Loyalty Account', 'Contact', 'Account', 'Order', 'Order Item', and 'Product'. Relationships are shown as lines connecting the objects. A legend on the right indicates that blue lines represent 'Lookup Relationship', red lines represent 'Master-Detail Relationship', and red outlines represent 'Required Field'. The bottom of the screen shows a Windows taskbar with the date '25-09-2025' and time '06:06 PM'.