Recipe & Meal Planning manager

Phase 3: Data Modeling & Relationships

1.Standard & Custom Objects

For this project, the following objects were used:

Object Type	Object Name	Purpose
Custom	Recipe	Stores recipe details like name, description, cooking time, difficulty, and cuisine type
Custom	Meal Plan	Stores meal plans (weekly, monthly) and links recipes to a plan
Custom	Ingredients	Stores ingredients used in recipes
Custom	Shopping List	Tracks items needed for meal plans

2.Fields

Each custom object was assigned relevant fields:

Recipe

- Recipe Name (Text)

- Description (Long Text)

- Cooking Time (Number)

- Difficulty (Picklist: Easy, Medium, Hard)

- Cuisine Type (Picklist: Indian, Italian, etc.)

- **Meal Plan Lookup** (Lookup to Meal Plan)

Meal Plan

- Meal Plan Name (Text)

- Start Date (Date)

- End Date (Date)

Ingredients

- Ingredient Name (Text)

- Quantity (Number)

- Unit (Picklist: grams, ml, cups)

- **Recipe Lookup** (Master-Detail to Recipe)

Shopping List

- Shopping List Name (Text)

- Date (Date)

- Notes (Text Area)

- **Ingredient Lookup** (Lookup to Ingredients)

3.Record Types

- No special record types were required; default record types are used for all objects.

4.Page Layouts

Custom page layouts were created for each object:

- **Recipe Layout:** Displays Recipe fields and related list of Ingredients.

- **Meal Plan Layout:** Displays Meal Plan fields and related list of Recipes.

- **Ingredients Layout:** Displays Ingredient fields and links to Recipe.

- **Shopping List Layout:** Displays Shopping List fields and links to Ingredients.

5.Compact Layouts

- Customized compact layouts were created to show key information on record highlights (e.g., Recipe Name, Cooking Time, Difficulty).

6.Schema Builder

- Visual schema built using Salesforce Schema Builder to show relationships:

  - Recipe → Meal Plan (Lookup)

  - Ingredient → Recipe (Master-Detail)

  - Shopping List → Ingredients (Lookup)

7.Lookup vs Master-Detail vs Hierarchical Relationships

- **Recipe → Meal Plan:** Lookup (a recipe can optionally belong to a meal plan).

- **Ingredient → Recipe:** Master-Detail (ingredients cannot exist without a recipe).

- **Shopping List → Ingredients:** Lookup (shopping list can include multiple ingredients).

8.Junction Objects

- Not used in this project as no many-to-many relationships required a separate junction object.

9.External Objects

- Not applicable for this project (no external data sources connected).

10. Testing & Verification

Sample Data Created:

- Recipes: Chocolate Cake, Veggie Pizza

- Ingredients: Flour, Sugar, Dough, Cheese, Tomato

- Meal Plans: Weekly Healthy Plan

- Shopping Lists: Weekly Grocery List

Verification Steps:

1. **Related Lists:**

   - Open a Meal Plan → Recipes are visible.

   - Open a Recipe → Ingredients are visible.

2. **Record Access:**

   - Logged in as End User → OWD = Private → Only own records visible.

   - Logged in as Admin → Can see all records.

Outcome: All relationships, layouts, and record access worked as intended.