

Phase 3: Data Modeling & Relationships

1. Standard & Custom Objects

Standard Objects

- Pre-built by Salesforce.
- Examples include Account, Contact, Opportunity, Lead, Order, and Product2.
- Used to manage core business data.

Custom Objects

- Created to store specific business data not covered by standard objects.
- Follow the naming convention: CustomObject__c.
- Examples include Product_Inventory__c and Order__c.

2. Fields

Field Types

- Standard Fields: Provided by Salesforce such as Name, Created Date, and Owner.
- Custom Fields: Created to store additional information like Quantity__c and Minimum_Stock__c.

Common Field Types

- Text, Number, Date, Picklist, Checkbox, Formula, Lookup, and Master-Detail.

3. Record Types

- Allow creation of different business processes, page layouts, and picklist values for the same object.
- Example: Retail Order vs Wholesale Order for the Order object.

Use Cases

- Different page layouts for different departments.
- Different picklist values per business process.

4. Page Layouts

- Control which fields, sections, related lists, and buttons appear on a record detail page.
- Different layouts can be assigned to different profiles or record types.

Steps to Configure

1. Object Manager → Object → Page Layouts.
2. Create or edit layouts by dragging and dropping fields and sections.
3. Assign layouts to profiles or record types.

5. Compact Layouts

- Display key fields at the top of a record page (Lightning record highlights panel).
- Used on both mobile and desktop for quick reference.

Steps to Configure

1. Object Manager → Object → Compact Layouts.
2. Create a new compact layout, select key fields, and assign it to the page layout.

6. Schema Builder

- A visual tool to view and manage objects, fields, and relationships.
- Allows dragging objects, creating fields, and defining relationships visually.

Benefits

- Easy understanding of complex relationships.
- Quickly add fields and relationships without leaving the tool.

7. Lookup vs Master-Detail vs Hierarchical Relationships

Lookup Relationship

- Loose coupling and optional relationship.
- Example: Account → Contact, Product → Product Inventory.

Master-Detail Relationship

- Strong coupling where child record inherits owner and sharing from parent.

- Example: Invoice Items → Invoice.
- Deleting the parent deletes the child record.

Hierarchical Relationship

- Special lookup relationship on the User object to reference another user.
- Example: Manager → Employee relationships.

8. Junction Objects

- Used to create many-to-many relationships between objects.
- Example: Project_Assignment__c linking Employee__c and Project__c.
- Requires two master-detail relationships pointing to the related objects.

Summary

- Objects and Fields form the foundation for storing Salesforce data.
- Record Types and Layouts control user experience and business processes.
- Relationships define how objects are connected.
- Schema Builder helps visualize the complete data model.
- Junction Objects enable many-to-many relationships.