

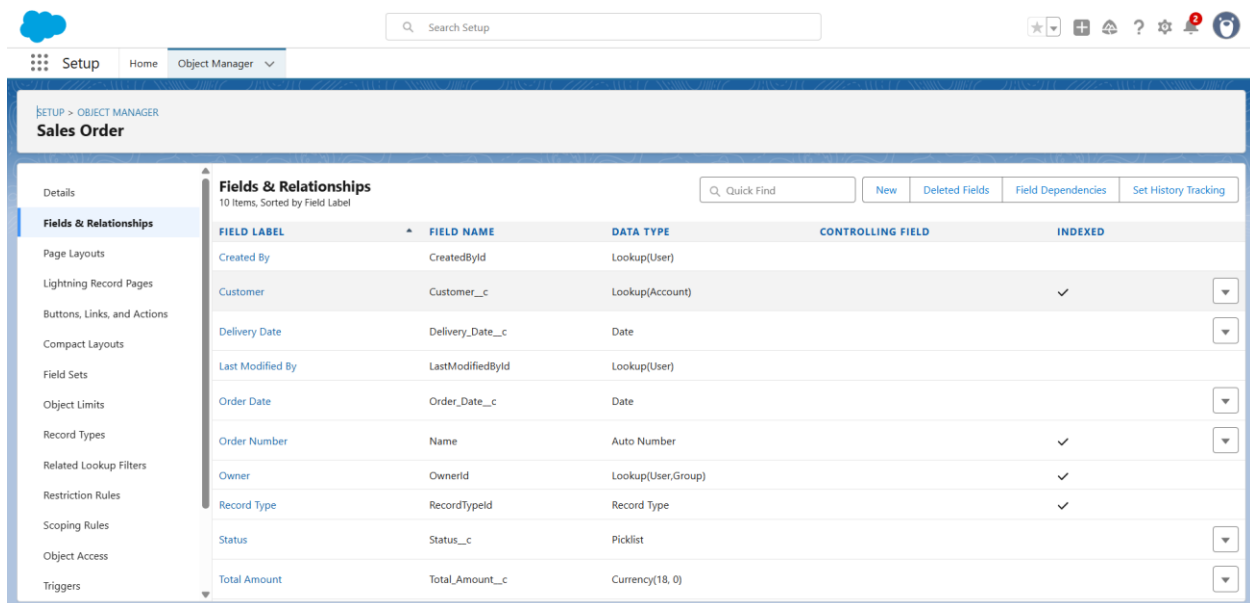
Phase 3: Data Modeling & Relationships

1. Objects and Fields

The following custom objects were configured with essential fields:

Sales Order

- Order Number (Auto Number)
- Customer (Lookup → Account)
- Order Date (Date)
- Delivery Date (Date)
- Status (Picklist: Pending, Approved, Shipped, Delivered, Cancelled)
- Total Amount (Currency)



The screenshot shows the Salesforce Setup interface for the Sales Order object. The left sidebar contains navigation links: Details, Fields & Relationships (selected), 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, and Triggers. The main content area is titled 'Sales Order' and 'Fields & Relationships'. It displays a table of 10 fields, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By, Customer, Delivery Date, Last Modified By, Order Date, Order Number, Owner, Record Type, Status, and Total Amount.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Customer	Customer__c	Lookup(Account)		✓
Delivery Date	Delivery_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Order Date	Order_Date__c	Date		
Order Number	Name	Auto Number		✓
Owner	OwnerId	Lookup(User,Group)		✓
Record Type	RecordTypeId	Record Type		✓
Status	Status__c	Picklist		
Total Amount	Total_Amount__c	Currency(18, 0)		

Purchase Order

- PO Number (Auto Number)
- Supplier (Lookup → Account)
- Order Date (Date)
- Expected Delivery Date (Date)
- Status (Picklist: Pending, Ordered, Received, Cancelled)
- Total Cost (Currency)

Setup Home Object Manager

Search Setup

Setup > OBJECT MANAGER

Purchase Order

Details

Fields & Relationships 10 Items, Sorted by Field Label

Q, Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Expected Delivery Date	Expected_Delivery_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Order Date	Order_Date__c	Date		
Owner	OwnerId	Lookup(User,Group)		✓
PO Number	Name	Auto Number		✓
Record Type	RecordTypeId	Record Type		✓
Status	Status__c	Picklist		
Supplier	Supplier__c	Lookup(Account)		✓
Total Cost	Total_Cost__c	Currency(18, 0)		

<https://org1arm-149ba1af97-dev-ed.develop.lightning.force.com/one/app#/setup/Object...>

Inventory

- Product Name (Text)
- SKU/Item Code (Text)
- Quantity Available (Number)
- Reorder Level (Number)
- Warehouse Location (Text)

Setup Home Object Manager

Search Setup

Setup > OBJECT MANAGER

Inventory

Details

Fields & Relationships 9 Items, Sorted by Field Label

Q, Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Product Name	Product_Name__c	Text(18)		
Production ID	Name	Text(80)		✓
Quantity Available	Quantity_Available__c	Number(2, 0)		
Reorder Level	Reorder_Level__c	Number(2, 0)		
SKU/Item Code	SKU_Item_Code__c	Text(18)		
Warehouse Location	Warehouse_Location__c	Text(18)		

Production Schedule

- Schedule ID (Auto Number)
- Product (Lookup → Inventory)

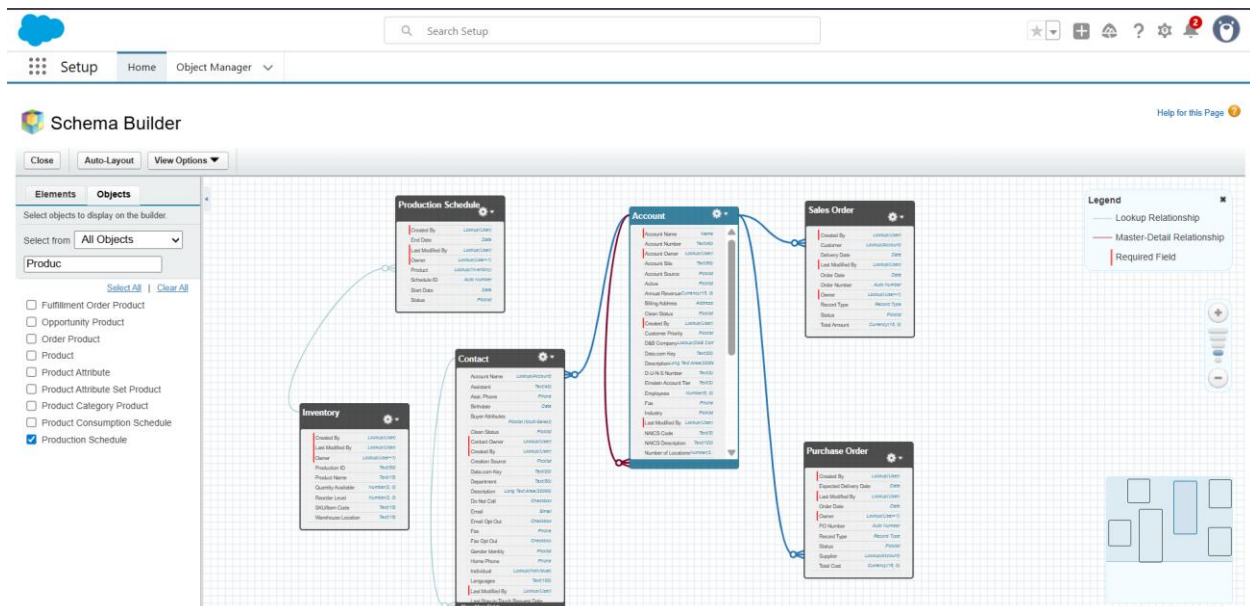
- Start Date (Date)
- End Date (Date)
- Status (Picklist: Planned, In Progress, Completed)

The screenshot shows the 'Production Schedule' object configuration in Salesforce Setup. The 'Fields & Relationships' tab is active, displaying a list of 8 fields. The fields are sorted by Field Label. The table below summarizes the fields shown:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
End Date	End_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Product	Product__c	Lookup(Inventory)		✓
Schedule ID	Name	Auto Number		✓
Start Date	Start_Date__c	Date		
Status	Status__c	Picklist		

2. Relationships

The following relationships were implemented: - Sales Order → Customer (Lookup) - Purchase Order → Supplier (Lookup) - Production Schedule → Inventory (Lookup)



3. Validation Rules

To maintain data quality, the following validation rules were added:

Delivery Date Validation

- Rule Name: DeliveryDateAfterOrderDate
- Formula:

```
AND(  
  NOT(ISBLANK(Delivery_Date__c)),  
  Delivery_Date__c <= Order_Date__c  
)
```

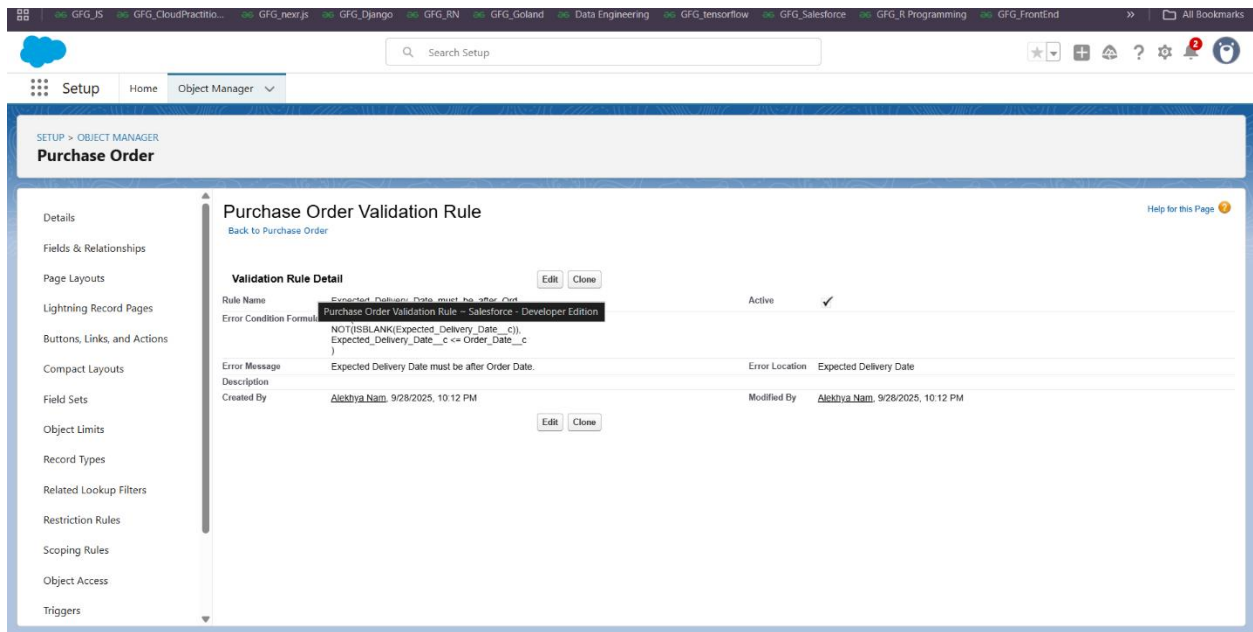
- Error Message: “Delivery Date must be after Order Date.”

The screenshot displays the Salesforce Object Manager interface for configuring a validation rule. The breadcrumb navigation shows 'Setup' > 'Home' > 'Object Manager'. The page title is 'Sales Order Validation Rule' with a 'Back to Sales Order' link. The 'Validation Rule Detail' section includes the following information:

Validation Rule Detail		Edit	Clone
Rule Name	DeliveryDateAfterOrderDate	Active	<input checked="" type="checkbox"/>
Error Condition Formula	AND(NOT(ISBLANK(Delivery_Date__c)), Delivery_Date__c <= Order_Date__c)		
Error Message	"Delivery Date must be after Order Date."	Error Location	Delivery Date
Description			
Created By	Alekhyia Nam, 9/28/2025, 10:09 PM	Modified By	Alekhyia Nam, 9/28/2025, 10:09 PM

At the bottom of the detail section, there are 'Edit' and 'Clone' buttons.

(Additional: Add other rules like Inventory Quantity ≥ 0 , Expected Delivery Date > Order Date)



4. Testing

Sample records were created to verify the relationships and validation rules:

Records Created

- Customers (Accounts)
- Suppliers (Accounts)
- Sales Orders linked to Customers
- Purchase Orders linked to Suppliers
- Inventory Items
- Production Schedules linked to Inventory

Verification

1. Open Sales Order record → Customer is visible
2. Open Purchase Order record → Supplier is visible
3. Open Production Schedule → Inventory item is visible
4. Validation rules tested:
 - Sales Order Delivery Date before Order Date → error appears
 - Correct entries → records saved successfully

