

Phase 3: Data Modeling & Relationships

1. Standard & Custom Objects, Fields

- **Standard Objects:** Salesforce provides default objects like *Account*, *Contact*, *User*, *Task*, etc. For our project, we don't need to customize these much, except maybe linking them with our custom object.
- **Custom Object:** Create a **Project Tracker** custom object.
 - **Fields to add:**
 - Project Name (Text, Auto Record Name)
 - Project Type (Picklist: IT, Marketing, Finance, etc.)
 - Project Manager (Lookup → User)
 - Start Date (Date)
 - End Date (Date)
 - Progress (Percent)
 - Budget (Currency)
 - Actual Budget (Currency)
 - Project Status (Picklist: Not Started, In Progress, Completed, On Hold)
 - Priority (Picklist: Low, Medium, High)
 - Project Phase (Picklist: Planning, Execution, Closure)
 - Team Members (Lookup → Contact)

SETUP > OBJECT MANAGER

Inventor

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Fields & Relationships

6 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)		
Email	Email_c	Email		
Inventor Name	Name	Text(80)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Organization	Organization_c	Text(22)		
Owner	OwnerId	Lookup(User,Group)		✓

SETUP > OBJECT MANAGER

Patent

Details

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16 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
Abstract	Abstract_c	Long Text Area(32768)		
Created By	CreatedById	Lookup(User)		
Days Until Expiry	Days_Until_Expiry_c	Formula (Number)		
Expiry Date	Expiry_Date_c	Date		
Filing Date	Filing_Date_c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Patent Number	Name	Text(80)		✓
Potential Duplicate	Potential_Duplicate_c	Checkbox		
Priority Date	Priority_Date_c	Date		

https://orgfarm-ed8554d225-dev-ed.develop.lightning.force.com/one.app#/setup/Obj...

SETUP > OBJECT MANAGER

Renewal

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

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List View Button Layout

Restriction Rules

Scoping Rules

Fields & Relationships

8 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)			
Name	Name	Auto Number		✓	▼
Notes	Notes__c	Long Text Area(32768)			▼
Owner	OwnerId	Lookup(User,Group)		✓	
Patent	Patent__c	Lookup(Patent)		✓	▼
Renewal Date	Renewal_Date__c	Date			▼
Renewal Status	Renewal_Status__c	Picklist			▼

SETUP > OBJECT MANAGER

Legal Notice

Details

Fields & Relationships

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Fields & Relationships

8 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)			
Description	Description__c	Long Text Area(32768)			▼
Last Modified By	LastModifiedById	Lookup(User)			
Legal Notice Number	Name	Auto Number		✓	▼
Notice Date	Notice_Date__c	Date			▼
Notice Type	Notice_Type__c	Picklist			▼
Owner	OwnerId	Lookup(User,Group)		✓	
Patent	Patent__c	Lookup(Patent)		✓	▼

2. Record Types

- Create Record type for Patent: Utility Patent

SETUP > OBJECT MANAGER

Patent

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Record Type

Utility Patent

Back to Custom Object: Patent

Use the Edit button to change the properties of this record type. Use the Edit links in the Picklist Values related list to choose the picklist values available for records with this record type.

Edit

Record Type Label	Utility Patent	Active	✓
Record Type Name	Utility_Patent		
Namespace Prefix			
Description			
Created By	Parvez Sharief	9/26/2025, 12:02 AM	Modified By Parvez Sharief, 9/26/2025, 12:02 AM

Picklists Available for Editing

Picklists Available for Editing Help

Action	Field	Modified Date
Edit	Status	9/26/2025, 12:02 AM

3. Page Layouts

- **Patent Layout:** Show Patent Number, Filing Date, Grant Date, Status, Inventor, Linked IP.

SETUP > OBJECT MANAGER

Patent

Details

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Scoping Rules

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Fields

Buttons

Quick Actions

Mobile & Lightning Actions

Expanded Lookups

Related Lists

Report Charts

Quick Find

Field Name

Section

Days Until Expiry

Owner

Record Type

Status

Blank Space

Expiry Date

Patent Number

Reminder 30 Sent

Title

Abstract

Filing Date

Potential Duplicate

Reminder 7 Sent

Created By

Last Modified By

Priority Date

Reminder 90 Sent

Information (Header visible on edit only)

Patent Number Sample Text Owner Sample Text

Title Sample Text

Abstract Sample Text

Filing Date 9/26/2025

Priority Date 9/26/2025

Expiry Date 9/26/2025

Status Sample Text

Days Until Expiry 971.19

Reminder 30 Sent ✓

Reminder 7 Sent ✓

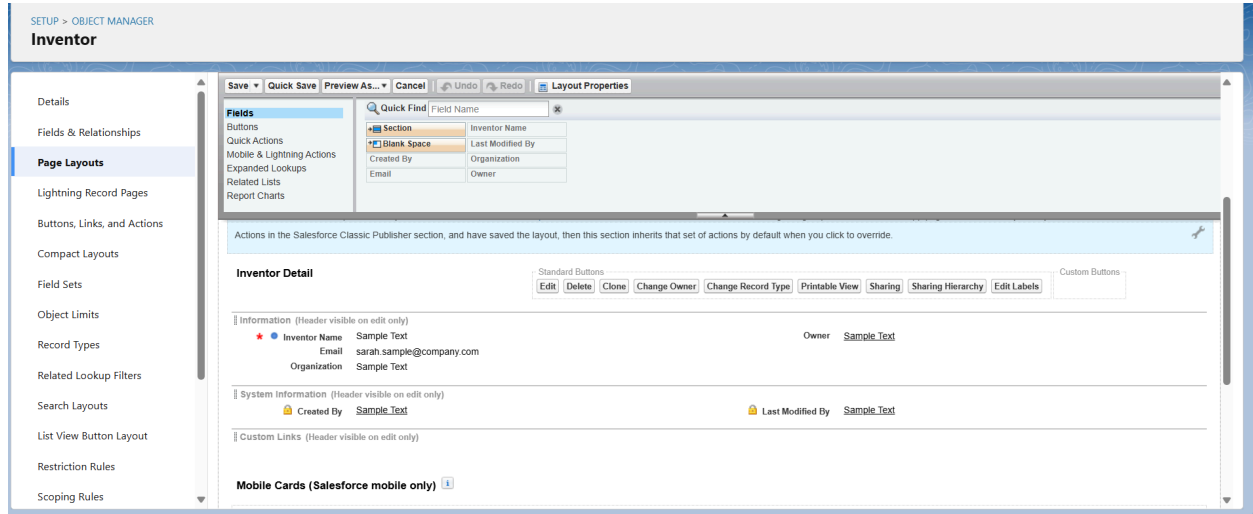
Potential Duplicate ✓

System Information (Header visible on edit only)

Created By Sample Text Last Modified By Sample Text

Custom Links (Header visible on edit only)

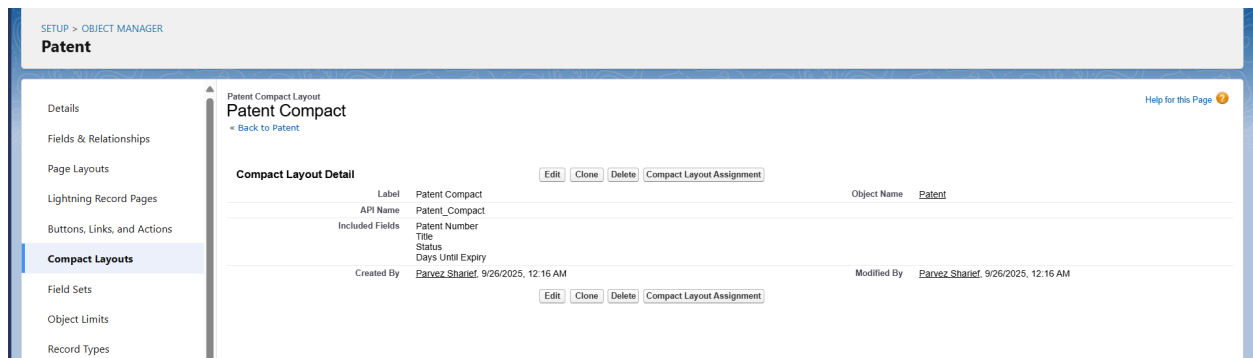
- **Inventor Layout (if custom):** Basic contact info + patents linked.



4. Compact Layouts

Compact Layouts help show key info in the record header:

- **Patent Compact Layout:** Patent Title, Patent Number, Status, Expiry Date.

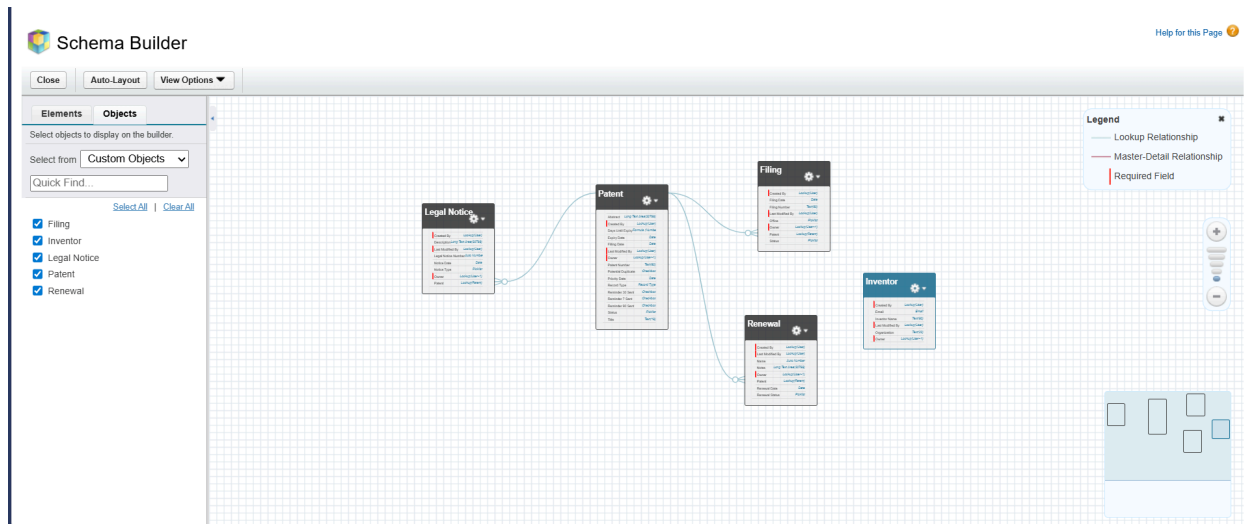


5. Schema Builder

Use Schema Builder to visualize relationships between:

- IP ↔ Patent (Lookup, since one IP can have multiple patents, but each patent belongs to one IP).

- Patent ↔ Inventor (Lookup → Contact).
- IP ↔ Owner (Lookup → Contact/User).



6. Lookup vs Master-Detail vs Hierarchical Relationships

- Lookup:
 - Patent → IP
 - Patent → Inventor (Contact)
 - IP → Owner (Contact/User)
- Master-Detail: Not needed (we don't want child records deleted automatically).
- Hierarchical: Only applies to Users, not required here.

7. Junction Objects

We are not using **Junction Objects** because they are not necessary for this project. While patents can have multiple inventors and vice versa, this complexity can be simplified using standard **Lookup fields** within the time frame.

8. External Objects

*We are not using **External Objects** because they are not necessary for this project. External objects are mainly used when integrating with large external databases or government patent registries. Since our project focuses on demonstrating IP & Patent Management within Salesforce itself, bringing in external objects would increase scope without adding immediate value.*