Phase 3: Data Modelling & Relationship

Standard & Custom Objects

- ➢ Standard Objects: Provided by Salesforce itself (i.e., Account, Contact, Opportunity, Reports, User etc.)
- ➢ Custom Objects: Objects you create to store data specific to your app.

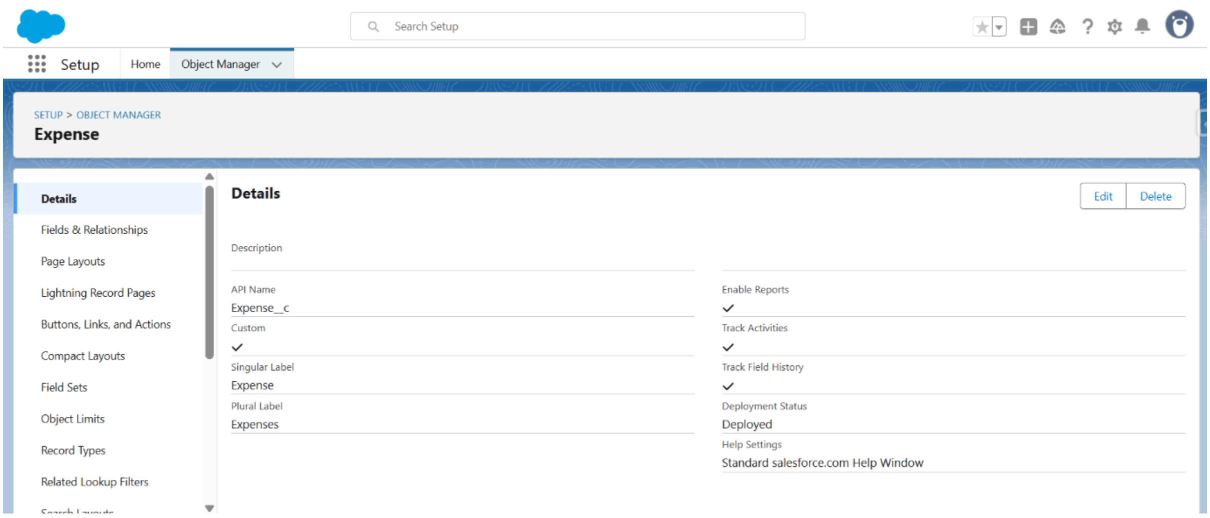
  Eg: Expenses__c , Budget__c.

Creation of Custom Objects:

Setup → Object Manager → custom object .

Fill the required details like label, Plural label, API name, Record Name and check the required permission (i.e., allow search ,allow activities, Track filed history etc.)

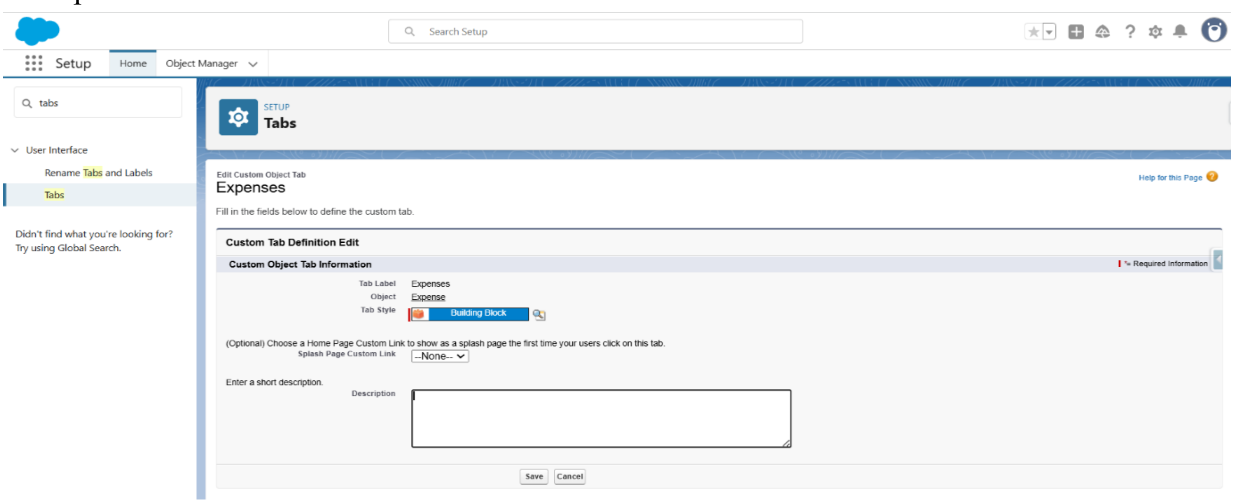
Save it.



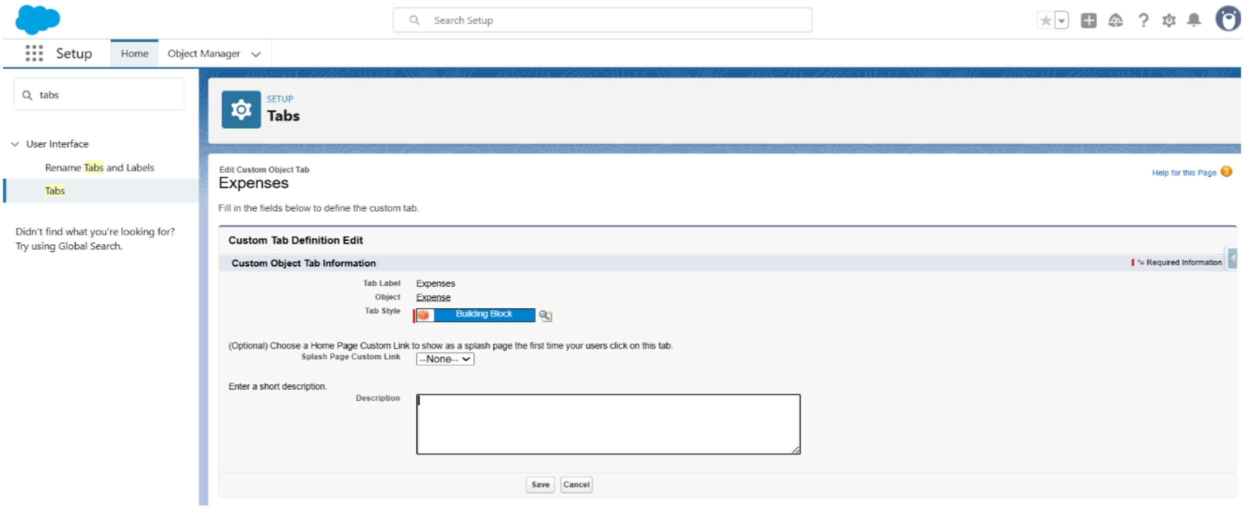
Create Tab :

Setup → *Tabs* → *New* → choose Expense → pick an icon → Save.

☞ Expense Tab



☞ Budget Tab:

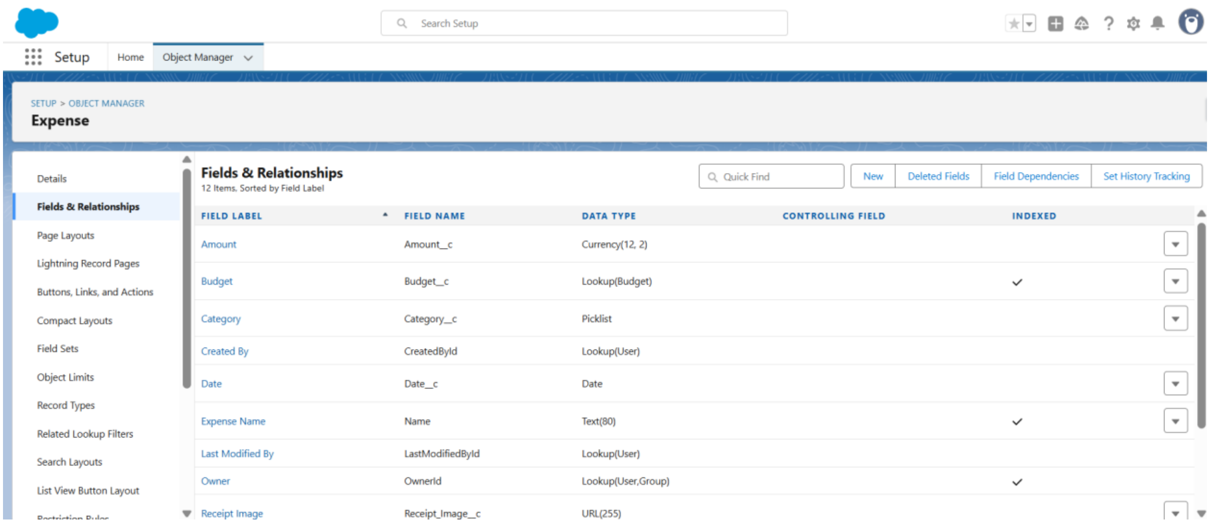


Fields

Field types: Text, Text Area, Number, Currency, Date, Picklist, Lookup, Master-Detail, Formula, Roll-Up Summary, Checkbox, URL, File, etc.

☞ Expense field types:

- ☐ Expense Name (record name)
- ☐ Date (Date)
- ☐ Amount (Currency
- ☐ Category (Picklist)
- ☐ User (Lookup → User)
- ☐ Budget (see relationships below)



☞ Budget Fields:

☐ Budget name (Text)

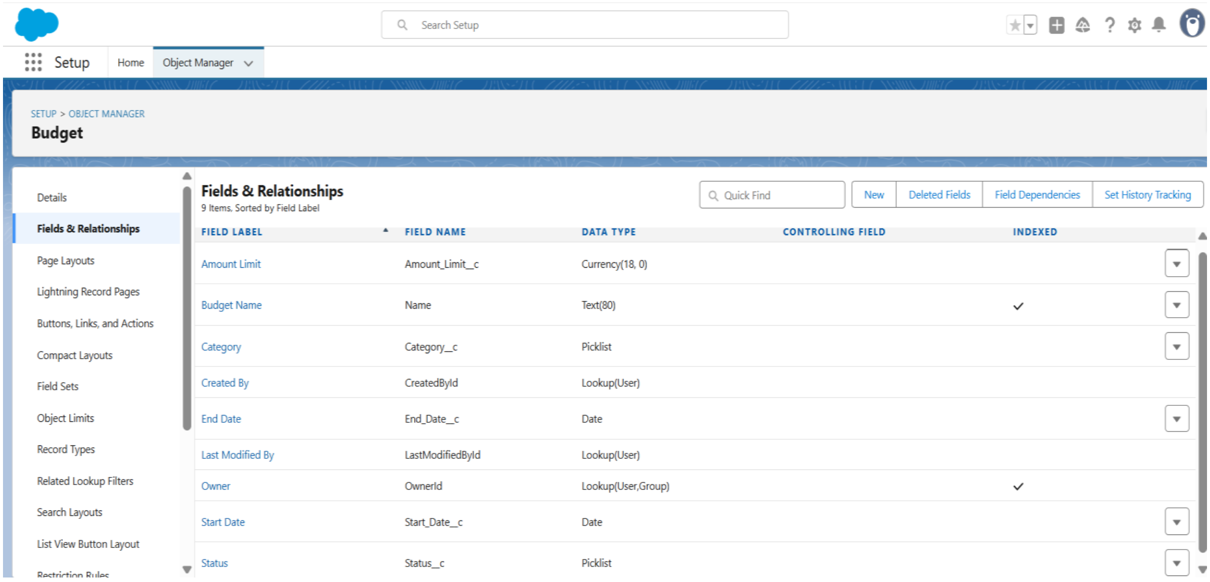
☐ Category , department (picklist)

☐ Amount limit (currency)

☐ Start Date (date)

☐ End Date (date)

☐ Total Expense



Record types:

- Allow different business processes, picklist values, and page layouts for the same object. Use when you need different UIs or data rules per type of record.

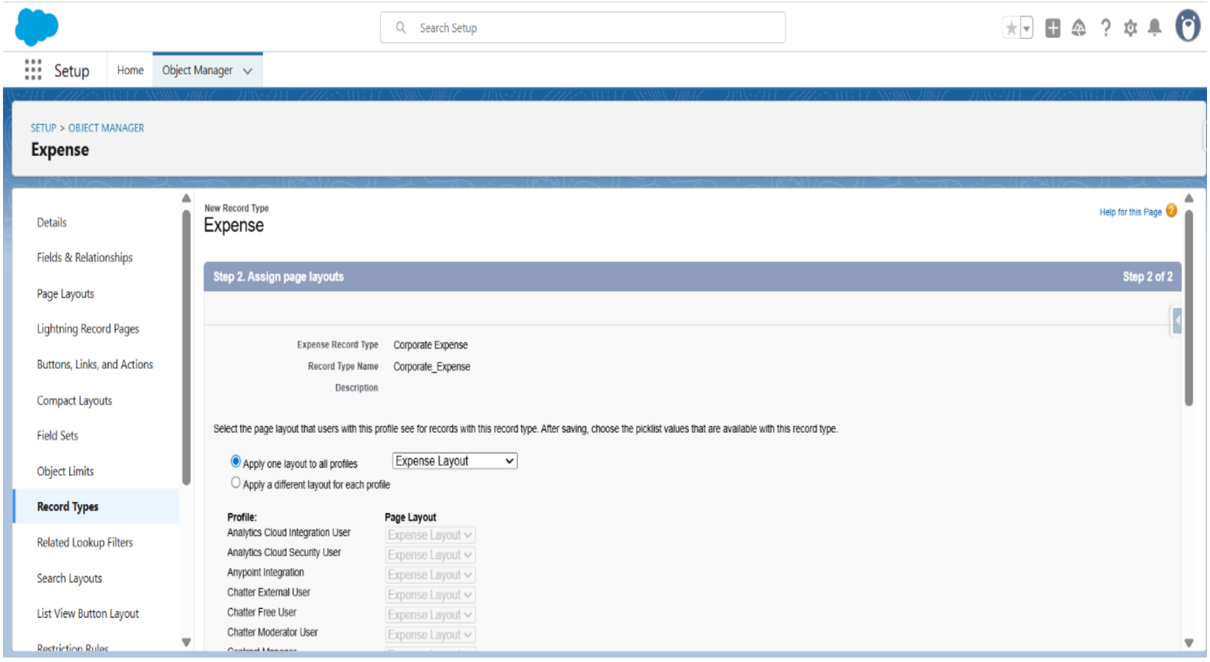
☞ Create record pages:

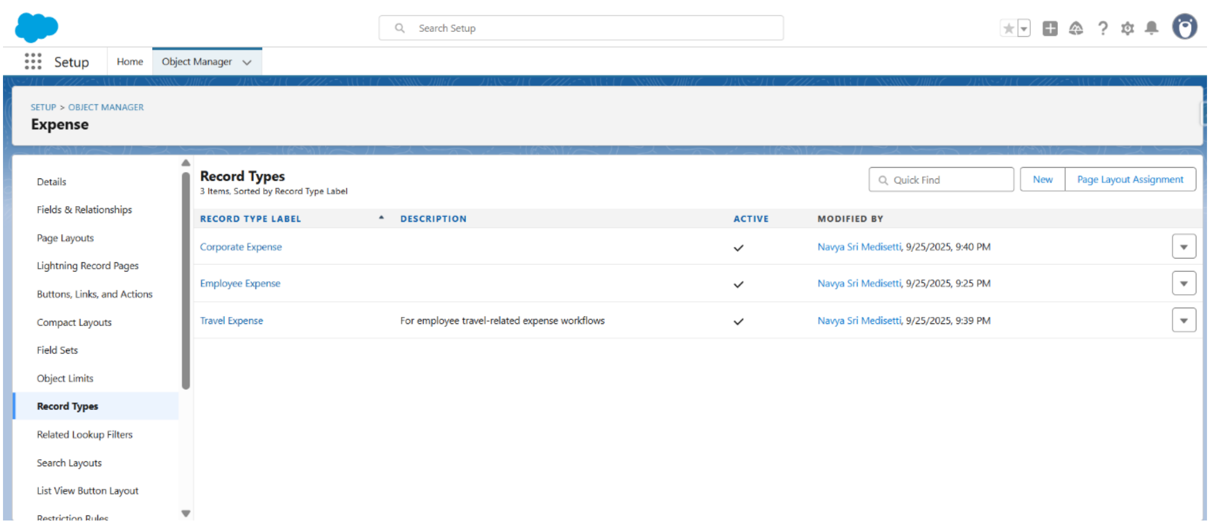
employee expense, corporate expense and travel expense.

Setup → object manager → expense object → Record types → new

Label : Employee Expense → select picklist categories (i.e., Food, Travel, Utilities, others) → assign to the profiles and select page layout → save it.

Repeat for other record types also.



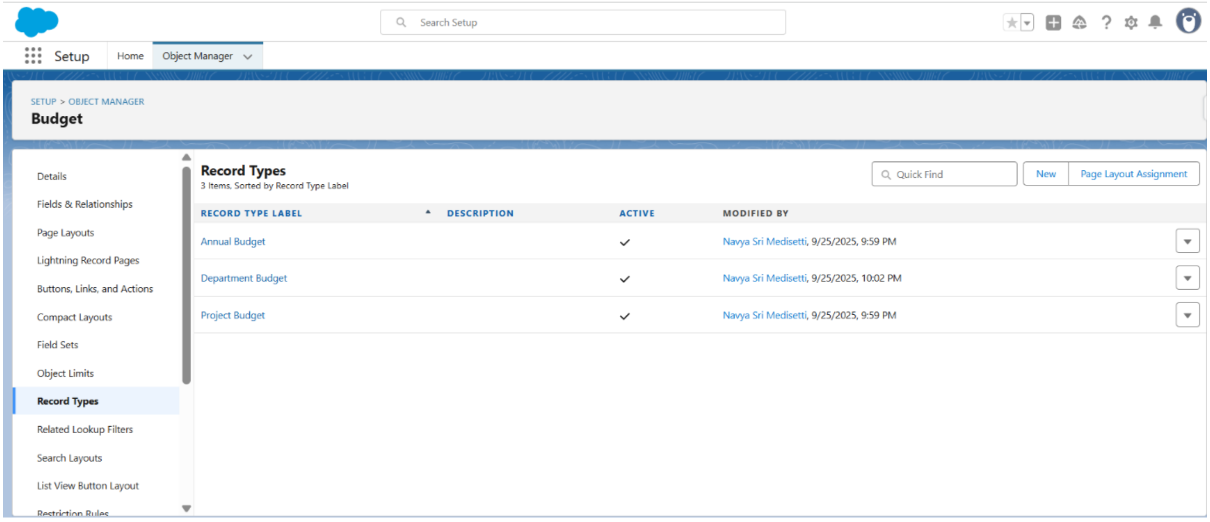


☞ Budget Record Types

Setup → object manager → Budget object → Record types → new

Label : Department Budget → select picklist department (i.e, HR, IT, Sales and services , Marketing , Research and Development etc.)→ assign to the profiles and select page layout → save it.

Repeat same steps for Project Budget and Annual Budget.



Page Layouts:

- Control which fields, related lists, quick actions, and sections appear on record detail pages.

Setup → Object Manager → **Expense** → **Page Layouts** → **New** or click an existing layout.

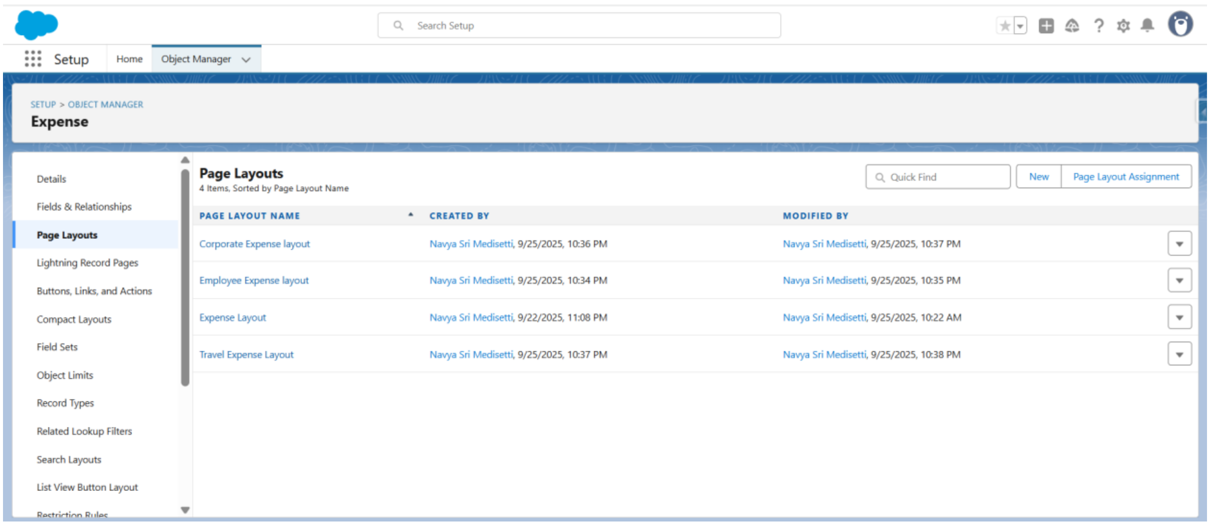
☞ Expense Page Layout:

Different Page Layouts in Expense Layout:

Employee Expense layout

Corporate Expense layout

Travel Expense layout



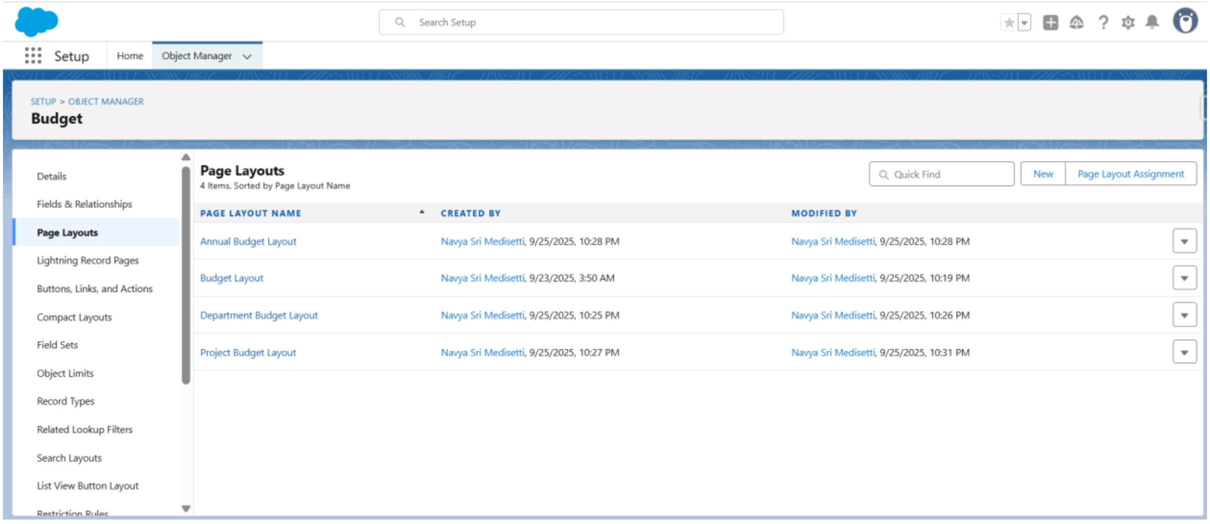
☞ Budget Page Layout:

Created page layouts in Budget objects are:

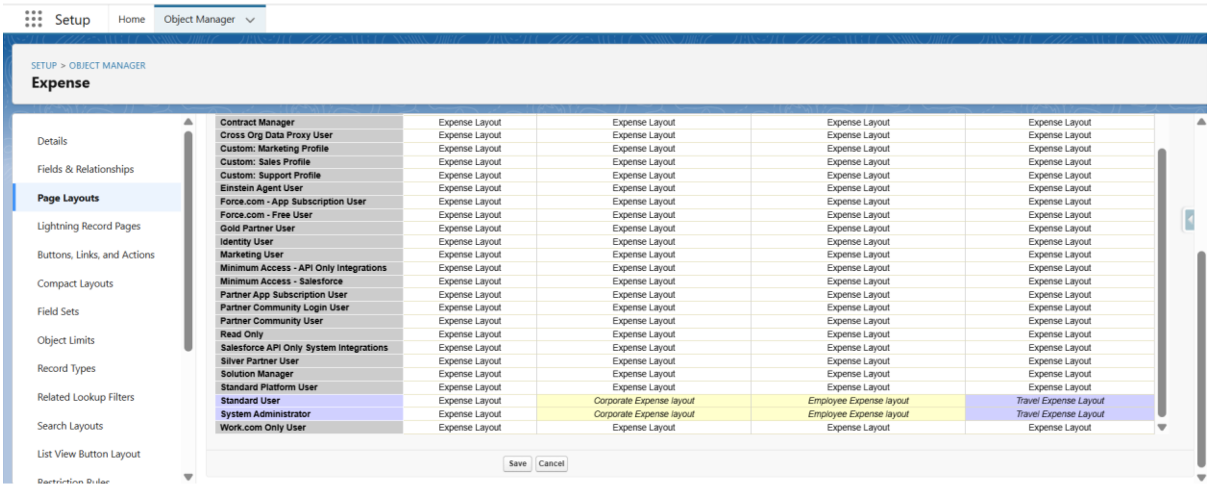
Annual Budget layout

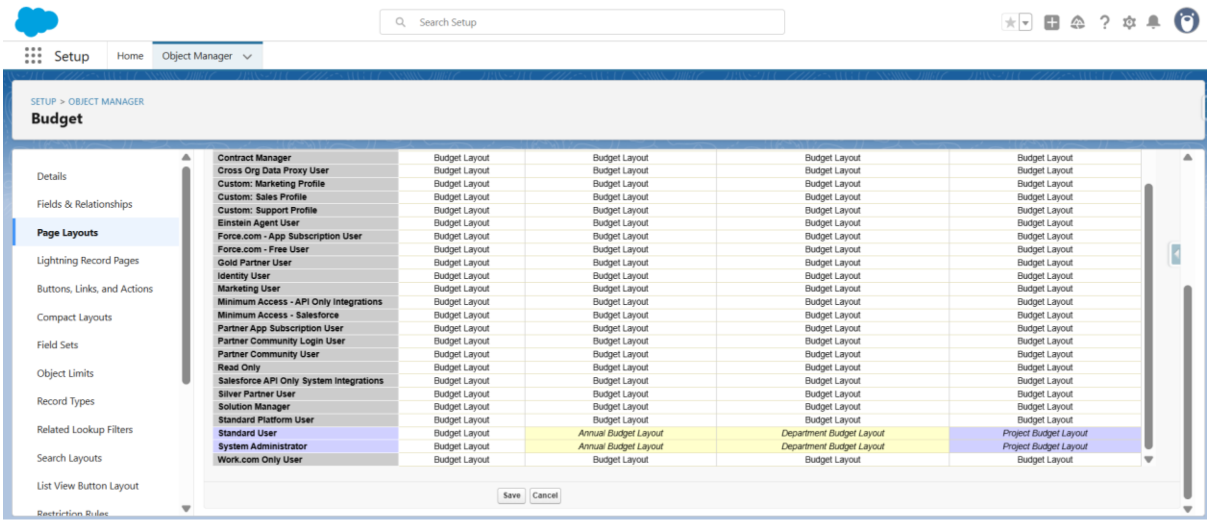
Department Budget layout

Project Budget layout



Assign page out assignments

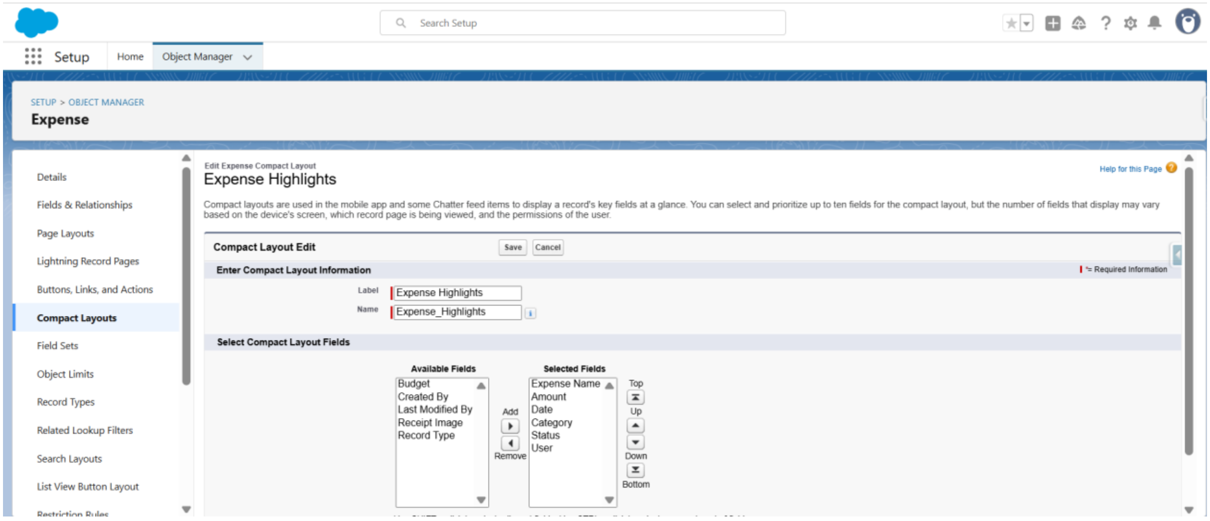




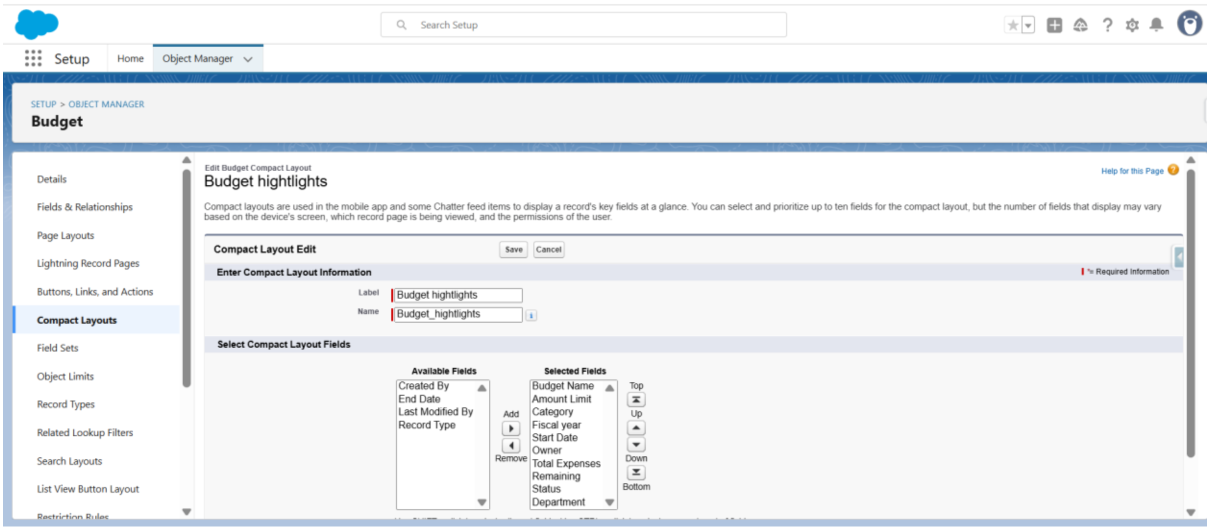
Compact page layout

The small set of fields shown in highlights.

☞ Expense highlight compact page layout:



☞ Budget highlight compact page layout:

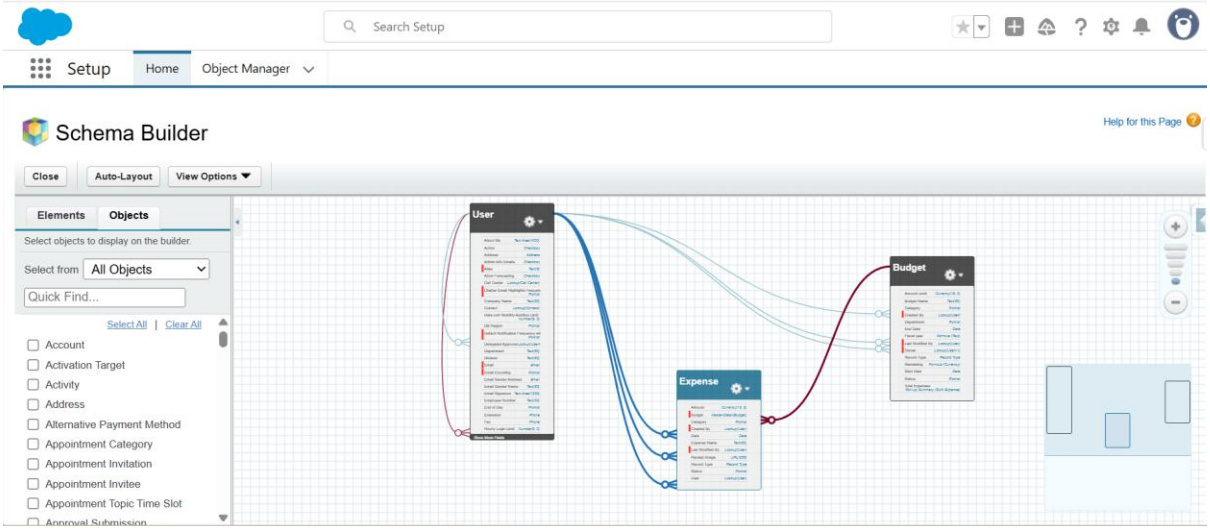


Schema Builder:

- It is a **visual tool in Salesforce** that lets you "**see, create, and manage objects, fields, and relationships"** graphically.

Setup → search for schema Builder in Quick Box → click it (canvas will be opened)

Drag and drop or select the required Objects for observing relation between in graphically / diagrammatic view.



Lookup vs Master-detail Relationship:

Lookup Relationship

- Loose link between two objects.
- Child record can exist without parent.
- No roll-up summary fields.

Master-Detail Relationship

- Master (parent) controls sharing & ownership of the detail (child).
- Deleting master deletes child.
- Supports **Roll-Up Summary** fields on master (SUM, COUNT, MIN, MAX of child fields).
- Master must exist when child is created (required).

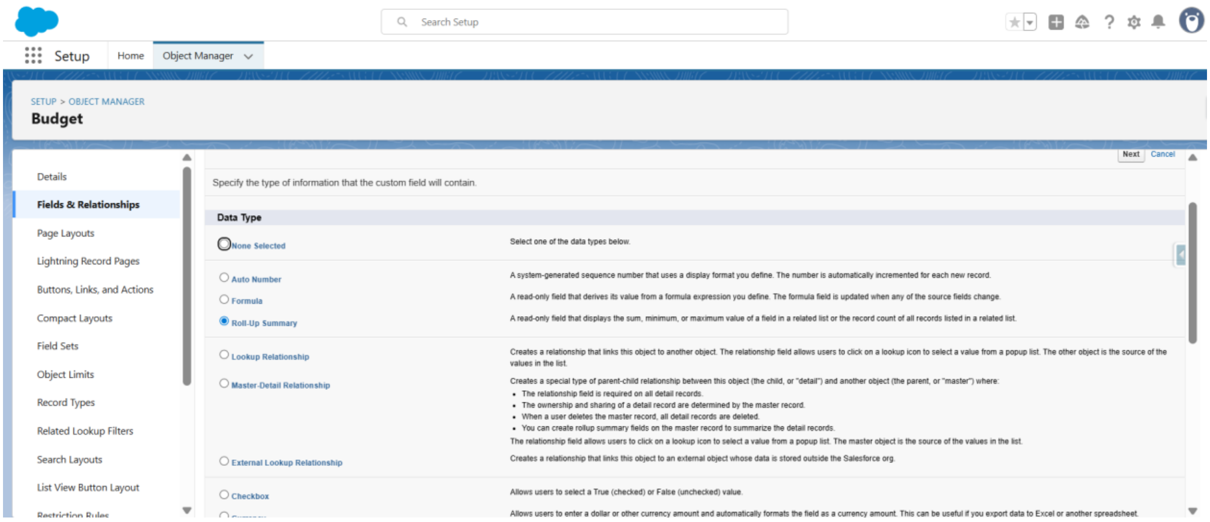
Change field type:

Setup → Expense → Fields & Relationships → click Lookup field → **Change Field Type** → Master-Detail.

- Ensure all Expense records have a Budget value (no null parents).
- Change field type: Setup → Expense → Fields & Relationships → click Lookup field → **Change Field Type** → Master-Detail.
- If any child records w/out parents exist, conversion will fail — populate them first.

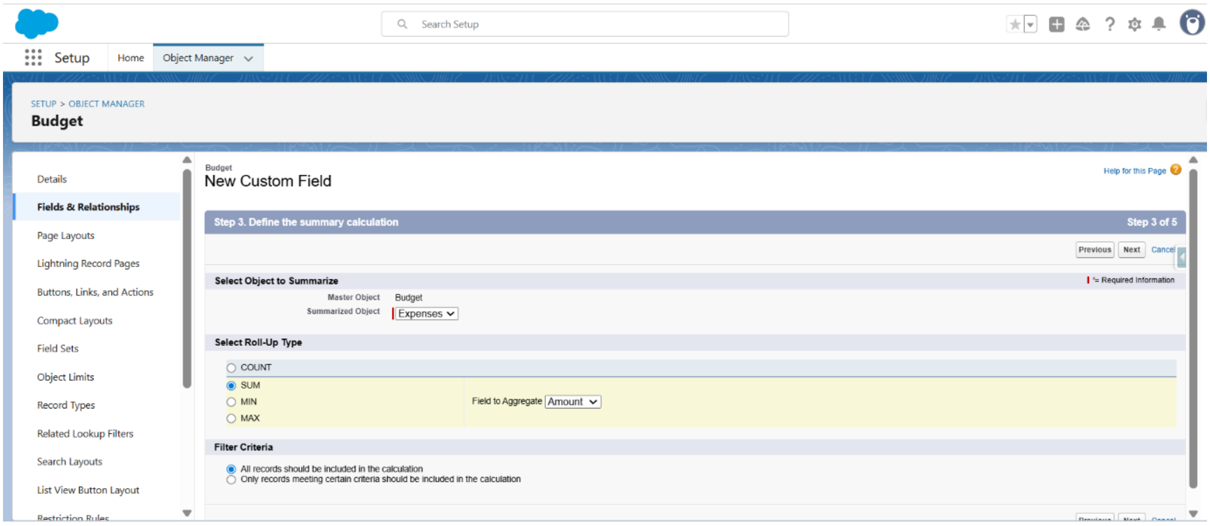
Budget__c to summarize expenses with a roll-up summary, **make Expense a Master-Detail child of Budget** (Budget = master, Expense = detail).

This gives you Total Expenses on Budget as a Roll-Up Summary.

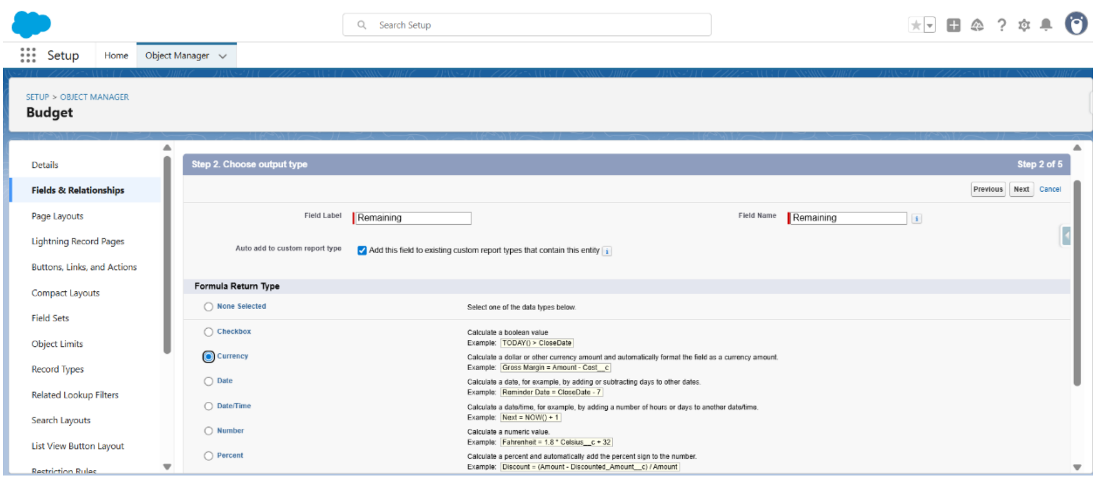


Enter label details and next.

Select summarized object → Expenses. Select Roll-up type → sum. Assign Field to Aggregate → Amount



1. Go to **Budget** → **Fields & Relationships** → **New** → **Formula**.
2. Field Label: Remaining → Return Type: Currency → Next.



3. Formula: Amount_Limit__c - Total_Expenses__c and check syntax for errors.
4. Next → Set Field-Level Security → Add to layout → Save.