Phase 3: Data Modeling & Relationships

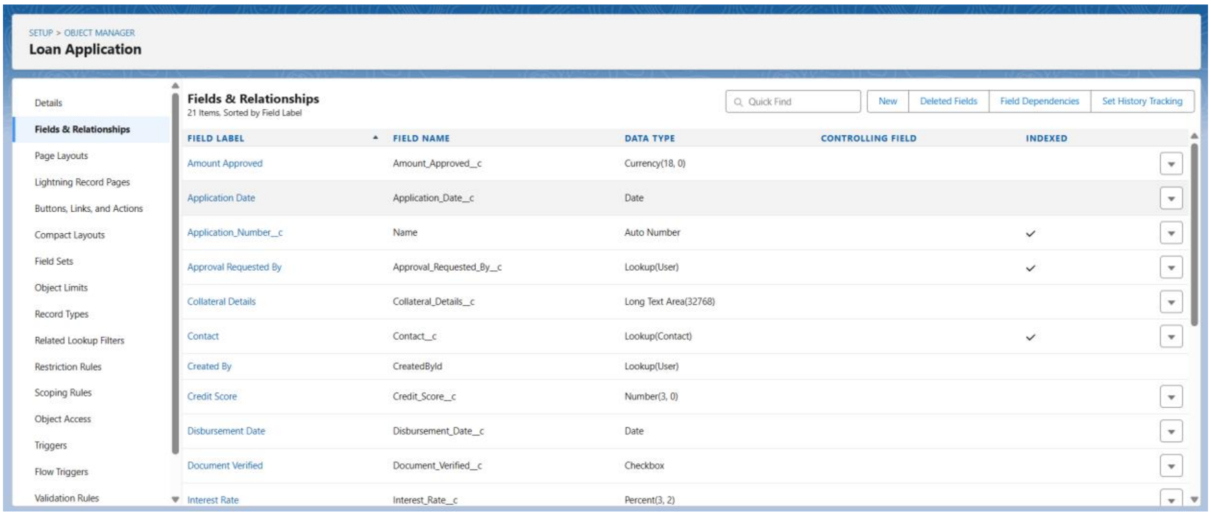
Step 1: Create Custom Objects, fields and relationships

A. Create Loan_Application__c

1. In Salesforce, click ⚙ Setup (top right).
2. In Quick Find, type Object Manager → click it.
3. Click Create → Custom Object → New Custom Object.
4. Enter:
   - Label: Loan Application
   - Plural Label: Loan Applications
   - Record Name: Application_Number__c
     - Data Type: Auto Number
     - Display Format: LN-{0000}
   - Select checkboxes: Allow Reports, Track Activities
5. Click Save.

Add Custom Fields (from Object Manager → Loan Application → Fields & Relationships → New):

- **Relationship:** Lookup Relationship → Contact → Field Label: Contact (API: Contact__c)
- Picklist → Loan Type → Values: Personal, Home, Auto, Business (API: Loan_Type__c)
- Currency → Loan Amount (16,2) (API: Loan_Amount__c)
- Number → Tenure Months (3,0) (API: Tenure_Months__c)
- Percent → Interest Rate (3,2) (API: Interest_Rate__c)
- Picklist → Status → Values: Draft, Submitted, Pending_Docs, Under_Review, Approved, Rejected, Disbursed, Closed (API: Status__c)
- Date → Application Date (API: Application_Date__c)
- Date → Disbursement Date (API: Disbursement_Date__c)
- Text (20) → PAN (API: PAN__c)
- Checkbox → Document Verified (API: Document_Verified__c)
- Number (3,0) → Risk Score (API: Risk_Score__c)
- Lookup Relationship → User → Label: Approval Requested By (API: Approval_Requested_By__c)
- Currency → Amount Approved (API: Amount_Approved__c)
- Long Text Area (255) → Rejection Reason (API: Rejection_Reason__c)
- Number (3,0) → Credit Score (API: Credit_Score__c)
- Checkbox → Is Active (API: Is_Active__c)
- Long Text Area → Collateral Details (API: Collateral_Details__c)



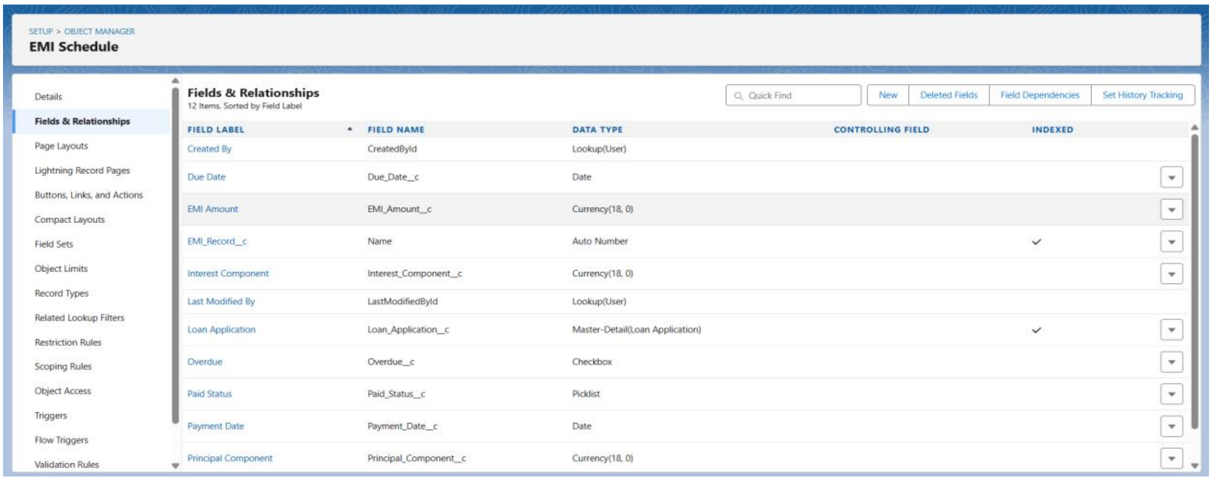
B. Create EMI_Schedule__c

Steps:

1. Go to **Setup** → **Object Manager** → **Create** → **Custom Object**.
2. Enter:
   - **Label:** EMI Schedule
   - **Plural Label:** EMI Schedules
   - **Record Name:** EMI_Record__c
     - Data Type: Auto Number
     - Format: EMI-{0000}
3. **Relationship**: **EMI Schedule** → **Loan Application**
4. Save.

Add Fields:

- Number (3,0) → Sequence (API: Sequence__c)
- Date → Due Date (API: Due_Date__c)
- Currency → EMI Amount (API: EMI_Amount__c)
- Currency → Principal Component (API: Principal_Component__c)
- Currency → Interest Component (API: Interest_Component__c)
- Picklist → Paid Status → Values: Pending, Paid, Partially Paid, Overdue (API: Paid_Status__c)
- Checkbox → Overdue (Default False) (API: Overdue__c)
- Date → Payment Date (API: Payment_Date__c)



C. Create EMI_Payment__c

Steps:

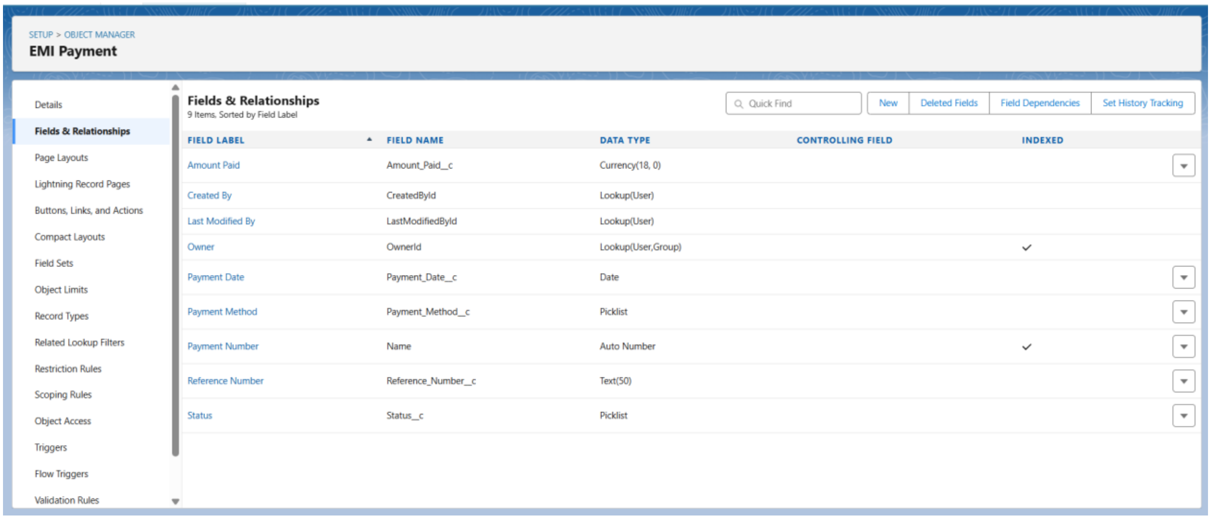
1. Go to **Setup → Object Manager → Create → Custom Object**.
2. Enter:
   - **Label:** EMI Payment
   - **Plural Label:** EMI Payments
   - **Record Name:** Payment Number
     - Auto Number format: PAY-{0000}

3.Relationship: **EMI Payment → EMI Schedule (Lookup Relationship)**

4.Save.

Add Fields:

- Date → Payment Date (API: Payment_Date__c)
- Currency → Amount Paid (API: Amount_Paid__c)
- Picklist → Payment Method → Values: NetBanking, UPI, Cash, Cheque, Card (API: Payment_Method__c)
- Text → Reference Number (API: Reference_Number__c)
- Picklist → Status → Values: Success, Failed, Pending (API: Status__c)



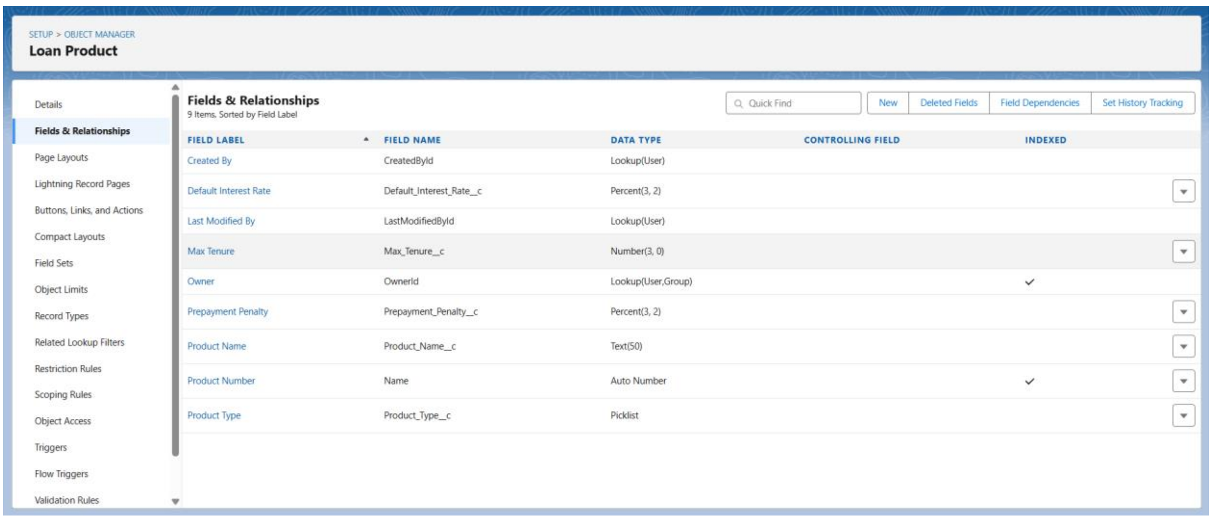
D.Create Loan_Product__c

Steps:

1. Setup → Object Manager → New Custom Object.
2. Enter:
    - Label: Loan Product
    - Plural Label: Loan Products
    - Record Name: Product Number (Auto Number: PROD-{0000})
3. Save.

Fields:

- Text → Product Name (API: Product_Name__c)
- Picklist → Product Type → Values: Personal, Home, Auto, Business (API: Product_Type__c)
- Percent → Default Interest Rate (API: Default_Interest_Rate__c)
- Number → Max Tenure (Months) (API: Max_Tenure__c)
- Percent → Prepayment Penalty (API: Prepayment_Penalty__c)



Step 3: Create Custom Object Tabs & lightning app

1.Click ⚙ Setup (top right).

2.In Quick Find, type Tabs → click Tabs under User Interface.

3.Scroll to Custom Object Tabs → click New.

A. Loan Applications Tab

1. Object: Select Loan Application.
2. Tab Style: Choose a color/icon you like (e.g., green or money icon).
3. Click Next.

B. EMI Schedules Tab

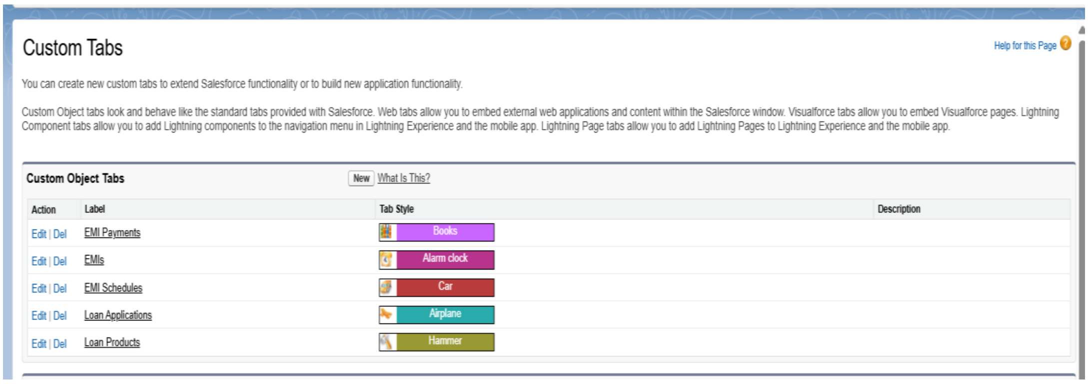
1. Object: Select EMI Schedule.
2. Tab Style: Pick a different icon/color.
3. Click Next.

C. EMI Payments Tab

1. Object: Select EMI Payment.
2. Tab Style: Pick icon/color.
3. Click Next.

D. Loan Products Tab

1. Object: Select Loan Product (if created).
2. Tab Style: Choose icon/color.
3. Click Next.



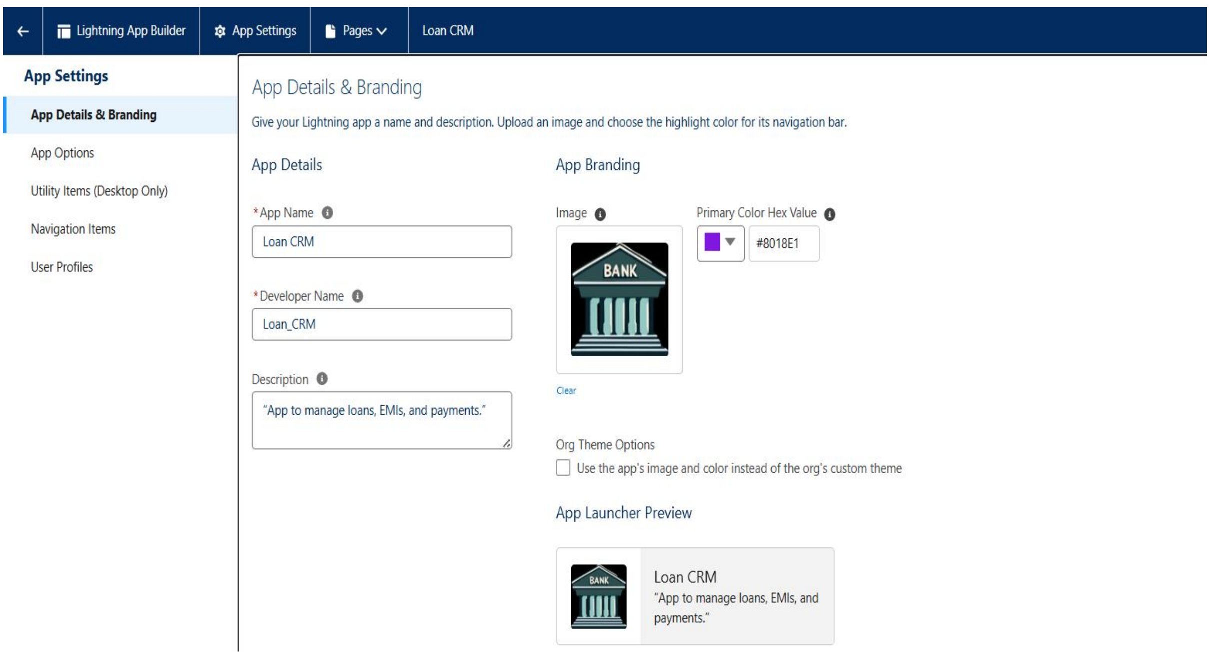
Create the Loan CRM Lightning App

Click **Setup** .

1. In **Quick Find**, type **App Manager** → **click it**.
2. Click **New Lightning App** (top right).
3. App Name: Loan CRM and choose a logo and color,

Add Tabs to Lightning App Navigation

1. Go to Setup → App Manager.
2. Find your Loan CRM Lightning App → click Edit.
3. Under Available Items, select:
    - Loan Applications
    - EMI Schedules
    - EMI Payments
    - Loan Products (optional)
4. Click the Add → button to move them to Selected Items.
5. Arrange order as preferred.
6. Click Save.



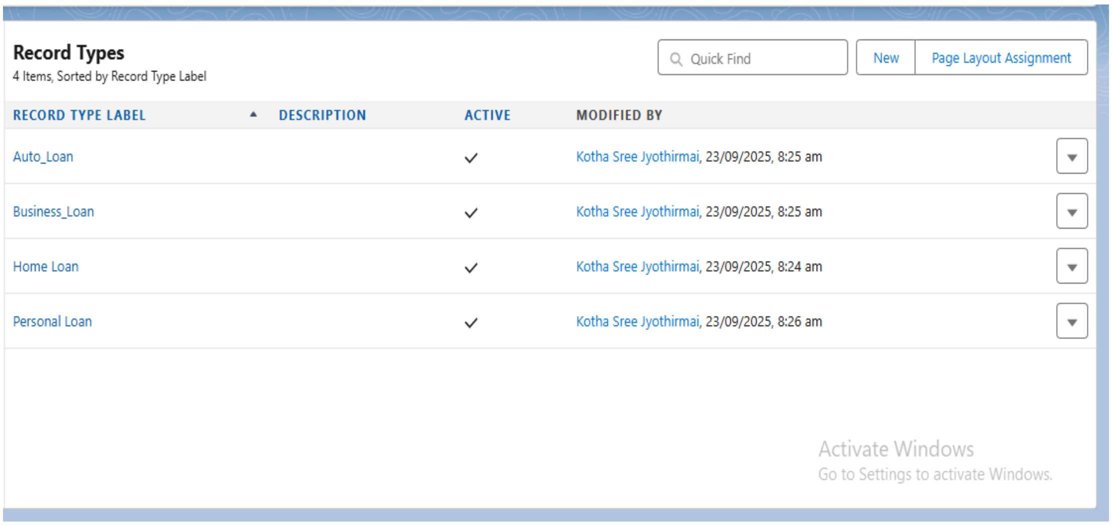
Step 4: Page Layouts & Record Types

1) Create Record Types

- Go to Setup → Object Manager → Loan_Application__c → Record Types.
- Click New Record Type.

Create the following record types one by one:

- Personal Loan
- Home Loan
- Auto Loan
- Business Loan



2) Create Page Layouts

Go to Setup → Object Manager → Loan_Application__c → Page Layouts.

Click New to create separate page layouts for each loan Example:

- Personal Loan Layout
- Home Loan Layout
- Auto Loan Layout
- Business Loan Layout

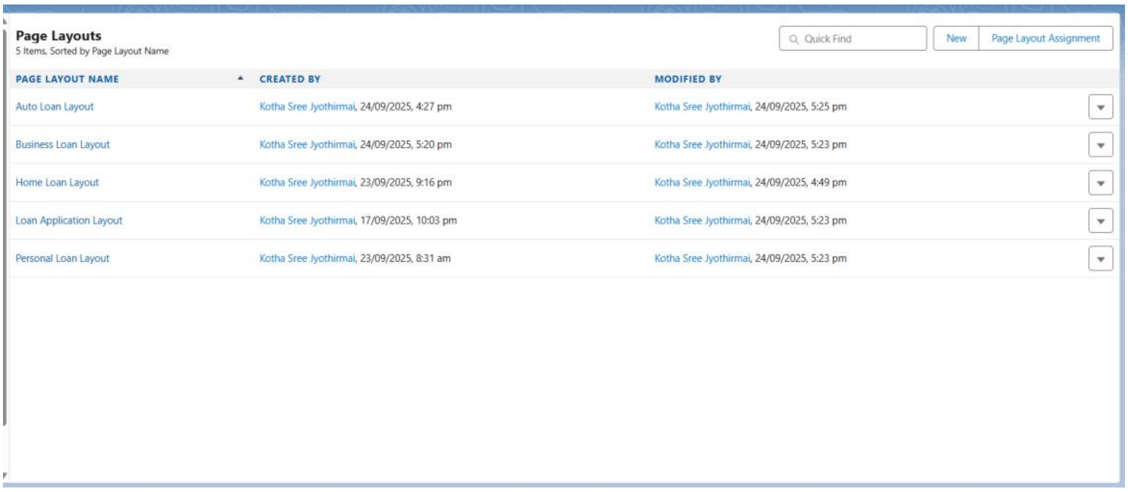
In each layout:

- Drag and drop fields according to loan type.
- For Home Loan, include Collateral fields.
- For other loans, hide fields not relevant.

Add Related Lists:

- EMI Schedules
- EMI Payments

Add Custom Buttons or Quick Actions as needed (e.g., “Generate EMI Schedule” or “Approve Loan”).



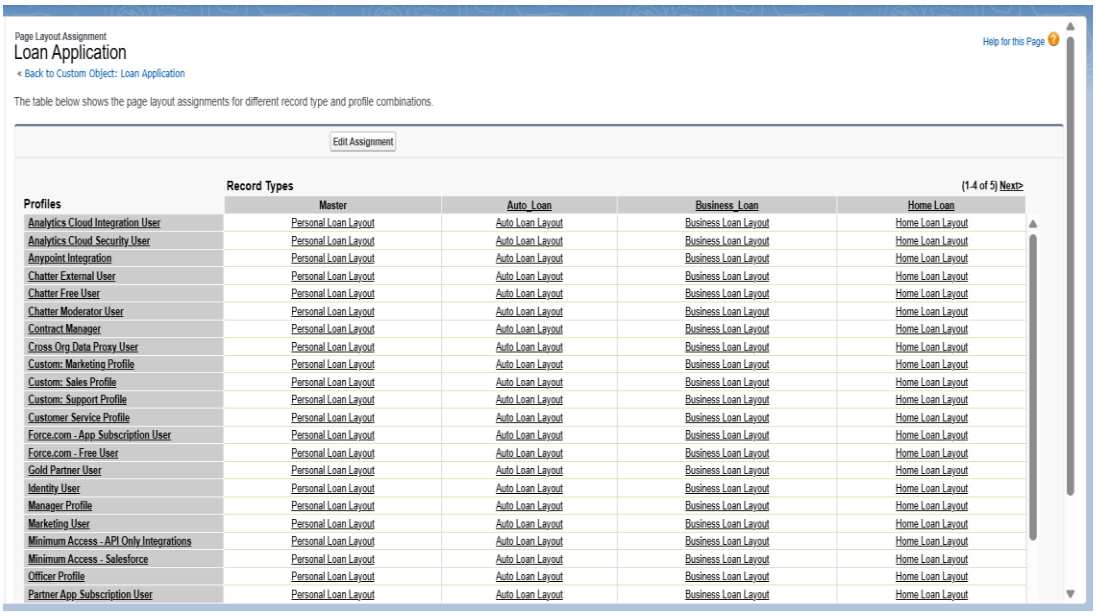
Page Layouts
5 Items, Sorted by Page Layout Name

Quick Find | New | Page Layout Assignment

PAGE LAYOUT NAME	CREATED BY	MODIFIED BY
Auto Loan Layout	Kotha Sree Jyothirmai, 24/09/2025, 4:27 pm	Kotha Sree Jyothirmai, 24/09/2025, 5:25 pm
Business Loan Layout	Kotha Sree Jyothirmai, 24/09/2025, 5:20 pm	Kotha Sree Jyothirmai, 24/09/2025, 5:23 pm
Home Loan Layout	Kotha Sree Jyothirmai, 23/09/2025, 9:16 pm	Kotha Sree Jyothirmai, 24/09/2025, 4:49 pm
Loan Application Layout	Kotha Sree Jyothirmai, 17/09/2025, 10:03 pm	Kotha Sree Jyothirmai, 24/09/2025, 5:23 pm
Personal Loan Layout	Kotha Sree Jyothirmai, 23/09/2025, 8:31 am	Kotha Sree Jyothirmai, 24/09/2025, 5:23 pm

3) Assign Page Layouts to Record Types

1. Go to Setup → Object Manager → Loan_Application__c → Record Types.
2. Click Edit on each record type.
3. Under Page Layout Assignment, select the page layout that corresponds to that record type.
4. Save your changes.



Page Layout Assignment
Loan Application
« Back to Custom Object: Loan Application

Help for this Page

The table below shows the page layout assignments for different record type and profile combinations.

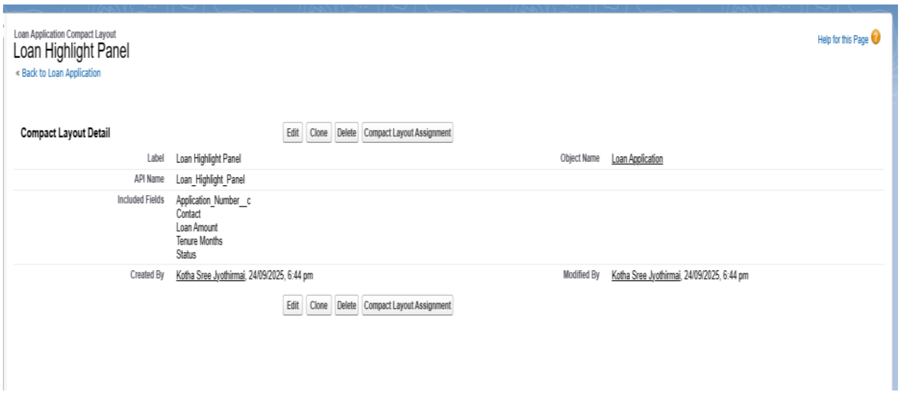
Edit Assignment

Record Types (1-4 of 5) Next>

Profiles	Master	Auto_Loan	Business_Loan	Home Loan
Analytics Cloud Integration User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Analytics Cloud Security User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Anypoint Integration	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Chatter External User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Chatter Free User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Chatter Moderator User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Contract Manager	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Cross Org Data Proxy User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Custom: Marketing Profile	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Custom: Sales Profile	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Custom: Support Profile	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Customer Service Profile	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Force.com - App Subscription User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Force.com - Free User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Gold Partner User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Identity User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Manager Profile	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Marketing User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Minimum Access - API Only Integrations	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Minimum Access - Salesforce	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Officer Profile	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout
Partner App Subscription User	Personal Loan Layout	Auto Loan Layout	Business Loan Layout	Home Loan Layout

4) Configure Compact Layout

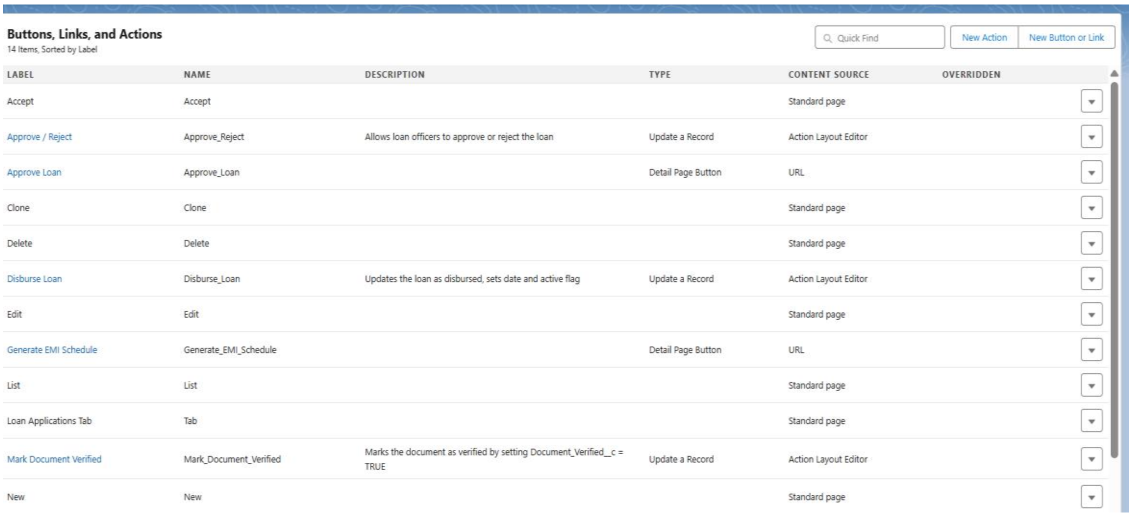
1. Go to Setup → Object Manager → Loan_Application__c → Compact Layouts.
2. Click New to create a compact layout or edit the existing one.
3. Include the following fields in display order:
    - Application_Number__c
    - Contact__c
    - Loan_Amount__c
    - Tenure_Months__c
    - Status__c
4. Save and assign this layout as the primary compact layout.



Step 5 — Quick Actions

Add in Mobile & Lightning Actions section:

- Submit For Approval
- Mark Document Verified (sets Document_Verified__c = TRUE)
- Disburse Loan (updates Status__c = Disbursed, Disbursement_Date__c = TODAY(), Is_Active__c = TRUE)
- Approve / Reject (loan officers only)



Buttons, Links, and Actions
14 Items, Sorted by Label

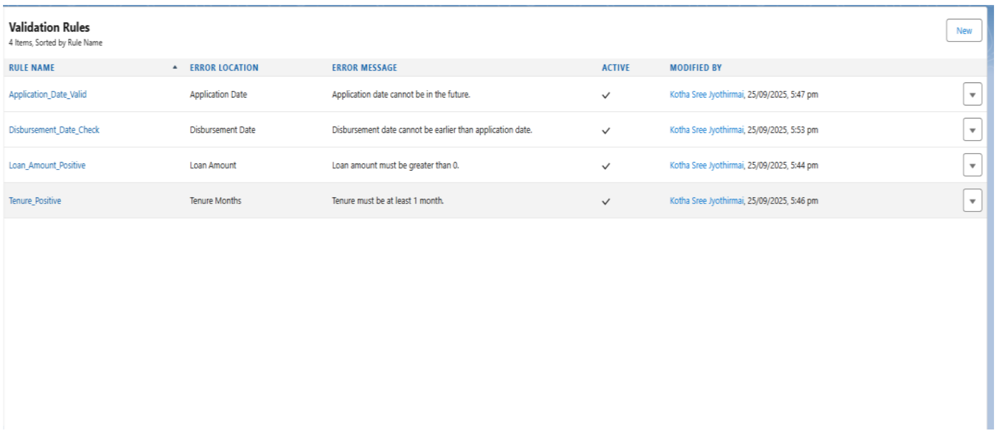
LABEL	NAME	DESCRIPTION	TYPE	CONTENT SOURCE	OVERRIDDEN
Accept	Accept			Standard page	
Approve / Reject	Approve_Reject	Allows loan officers to approve or reject the loan	Update a Record	Action Layout Editor	
Approve Loan	Approve_Loan		Detail Page Button	URL	
Clone	Clone			Standard page	
Delete	Delete			Standard page	
Disburse Loan	Disburse_Loan	Updates the loan as disbursed, sets date and active flag	Update a Record	Action Layout Editor	
Edit	Edit			Standard page	
Generate EMI Schedule	Generate_EMI_Schedule		Detail Page Button	URL	
List	List			Standard page	
Loan Applications Tab	Tab			Standard page	
Mark Document Verified	Mark_Document_Verified	Marks the document as verified by setting Document_Verified__c = TRUE	Update a Record	Action Layout Editor	
New	New			Standard page	

Step 6 — Validation Rules

Setup → Object Manager → Loan_Application__c → Validation Rules → New

1. Loan Amount > 0
2. Tenure > 0
3. Disbursement_Date_Check
4. Application_Date_Valid

   Create these validation rules one by one



Validation Rules
4 Items, Sorted by Rule Name

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Application_Date_Valid	Application Date	Application date cannot be in the future.	✓	Kotha Sree Jyothirmai, 25/09/2025, 5:47 pm
Disbursement_Date_Check	Disbursement Date	Disbursement date cannot be earlier than application date.	✓	Kotha Sree Jyothirmai, 25/09/2025, 5:53 pm
Loan_Amount_Positive	Loan Amount	Loan amount must be greater than 0.	✓	Kotha Sree Jyothirmai, 25/09/2025, 5:44 pm
Tenure_Positive	Tenure Months	Tenure must be at least 1 month.	✓	Kotha Sree Jyothirmai, 25/09/2025, 5:46 pm

Step 7 — Duplicate Management

1. Matching Rule for Contact

- Setup → Duplicate Management → Matching Rules → New Rule
- Object: Contact
- Fields to Match:
  - PAN__c (Exact)
  - Email (Exact)

- Save & Activate.

2. Duplicate Rule for Loan Applications

- Setup → Duplicate Management → Duplicate Rules → New Rule
- Object: Loan_Application__c
- Matching Rule: (Contact__c + Loan_Type__c)
- Action:
    - Block when a duplicate record is created
    - Alert with message → *"This contact already has an active loan of this type."*

Duplicate Rules can only compare **fields** Contact__c + Loan_Type__c

They **cannot** check additional conditions like:

- Status__c != Closed (we only want to block active loans).
- So used apex trigger,class

Trigger Code

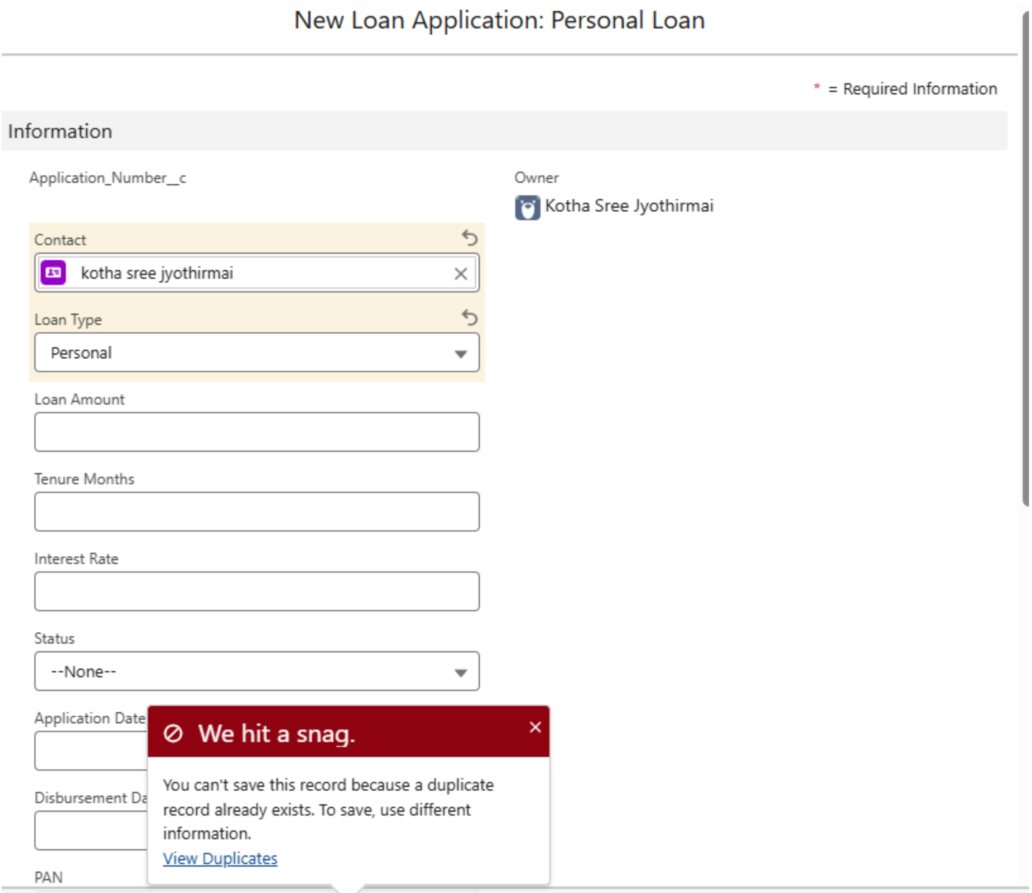
```
trigger LoanApplicationTrigger on Loan_Application__c (before insert,
before update) {
    LoanService.preventDuplicateActiveLoans(Trigger.new);
}
```

Create Apex Handler Class

1. In Developer Console: **File → New → Apex Class**
2. Name it: LoanService
3. Add the following code:

```
public with sharing class LoanService {
  public static void preventDuplicateActiveLoans(List<Loan_Application__c> loans) {
    Set<Id> contactIds = new Set<Id>();
    for (Loan_Application__c l : loans) if (l.Contact__c != null) contactIds.add(l.Contact__c);

    if (contactIds.isEmpty()) return;

    // Define statuses considered "active"
    List<String> activeStatuses = new List<String>{'Pending','Approved'};
    Map<Id, List<Loan_Application__c>> existingMap = new Map<Id,
List<Loan_Application__c>>();

    for (Loan_Application__c ex : [
      SELECT Id, Contact__c, Loan_Type__c, Status__c
      FROM Loan_Application__c
```

```
        WHERE Contact__c IN :contactIds AND Status__c IN :activeStatuses
    ]) {
        Id key = ex.Contact__c;
        if (!existingMap.containsKey(key)) existingMap.put(key, new List<Loan_Application__c>());
        existingMap.get(key).add(ex);
    }

    for (Loan_Application__c l : loans) {
        if (l.Contact__c != null && existingMap.containsKey(l.Contact__c)) {
            // Optional: Check Loan Type if needed
            for (Loan_Application__c existing : existingMap.get(l.Contact__c)) {
                if (existing.Loan_Type__c == l.Loan_Type__c) {
                    l.addError('This contact already has an active loan of this type.');
                }
            }
        }
    }
  }
}
```



Step 8 — Schema Visualization

- Go to Setup → Schema Builder.
- Add: Loan_Application__c, EMI_Schedule__c, EMI_Payment__c, Contact.
- Verify relationships visually.