



Creation Of An Application For School Management



SALESFORECE NAAN MUDHALVAN PROJECT REPORT

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BONAFIDE CERTIFICATE

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ACKNOWLEDGEMENT

At the outset, we express our heartfelt gratitude to god, who has been our strength to bring this project to light.

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LIST OF ABBREVIATION

CRM Customer Relationship Management
ESP Email Service Provider
UI User Interface
UX User Experience
OWD Org - Wide Default
CTA Call To Action
CSV Comma - Separated Values
SLA Service Level Agreement
API Application Programming Interface
SaaS Software as a Service
PaaS Platform as a Service

CHAPTER - 1

INTRODUCTION

Salesforce, a leading cloud-based Customer Relationship Management (CRM) platform, is a pivotal tool for organizations to manage customer data, optimize sales processes, and elevate customer interactions. Its multifaceted features include Sales Cloud, which enhances sales management through lead tracking, opportunity management, and seamless email integration. Service Cloud focuses on exceptional customer support, featuring case management, knowledge base development, and multi-channel support. Marketing Cloud empowers businesses with marketing automation, email campaigns, social media engagement, and in-depth analytics. Salesforce's hallmark is its customizability, allowing businesses to tailor the platform to meet specific requirements, while robust integration capabilities facilitate seamless connections with other business applications.

The platform equips businesses with powerful reporting and analytics tools, enabling data-driven decisions and insightful, customized reports and dashboards. Salesforce ensures mobile accessibility, enabling users to stay connected and productive while on the move. A paramount emphasis on data security and compliance guarantees data protection and privacy. Whether you're a small start-up or a large enterprise, Salesforce offers scalability to accommodate your evolving needs.

Through Salesforce, organizations foster improved customer relationships, increased sales efficiency, and superior customer support. It empowers businesses to make data-driven decisions, streamline operations, and create impactful, targeted marketing campaigns. This introduction encapsulates Salesforce's capabilities and benefits, offering a concise overview for your project document, allowing for a better understanding of how the platform can contribute to your specific project goals.

CHAPTER - 2

PROJECT SPECIFICATIONS

2.1 Project Goal:

The primary goal of the Employee Travel Approval Application in Salesforce for corporates is to optimize and streamline the management of employee travel requests and approvals. The project aims to provide a user-friendly and efficient solution that automates approval workflows, ensures real-time visibility and notifications, and simplifies expense tracking and reimbursement. User training and support are essential for ensuring adoption, and the application should be scalable and highly customizable to meet evolving organizational needs. Overall, the project's focus is on enhancing productivity, cost control, and compliance with corporate policies in the realm of travel management.

2.2 Project Scope

- Creation of developer account (Milestone 1):**

To create a developer account in Salesforce, visit the Salesforce Developer website, sign up for a free account, and follow the registration process.

- Tabs Creation (Milestone 2):**

Tabs will be configured to segment and simplify access to different sections of the application, such as travel requests, approvals, feedback, and reporting.

- App Creation (Milestone 3):**

The Employee Travel Approval Application will be launched, serving as the primary hub for submitting, reviewing, and approving corporate travel.

- Fields & Relationships (Milestone 4):**

Custom fields and relationships will be defined to capture travel details like destination, dates, expenses, and justifications.

- **Profile Configuration (Milestone 5):**

User profiles will be set up to dictate roles, access permissions, and interaction levels within the application.

- **Role and Role Hierarchy (Milestone 6):**

The platform will structure role-based access controls to specify who can view, edit, or approve travel requests, with hierarchies such as junior employees, senior employees, team leads, and department heads.

- **Users (Milestone 7):**

Users will be added and configured based on their roles within the organization. This step involves determining the permissions and access levels for each user category.

- **Sharing Rules (Milestone 8):**

Predefined criteria will inform sharing rules, ensuring data is appropriately shared and accessed, maintaining confidentiality where needed.

- **User Adoption Strategies (Milestone 9):**

Tools, training sessions, and guides will be introduced to ensure users can efficiently utilize the application. Feedback loops will be set up to continually enhance user experience.

- **Reports Generation (Milestone 10):**

Custom reports will be developed, offering stakeholders insights into travel trends, expenses, approval durations, and policy adherence.

- **Dashboards Development (Milestone 11):**

Visual dashboards will be designed, showcasing KPIs, travel analytics, and summary reports for a swift overview and decision-making.

- **Apex Classes and Triggers (Milestone 12):**

Apex classes are used to define custom business logic in Salesforce, while triggers are Apex code that automate actions in response to data changes, such as record updates or inserts.

2.3 Problem Statement Definition :

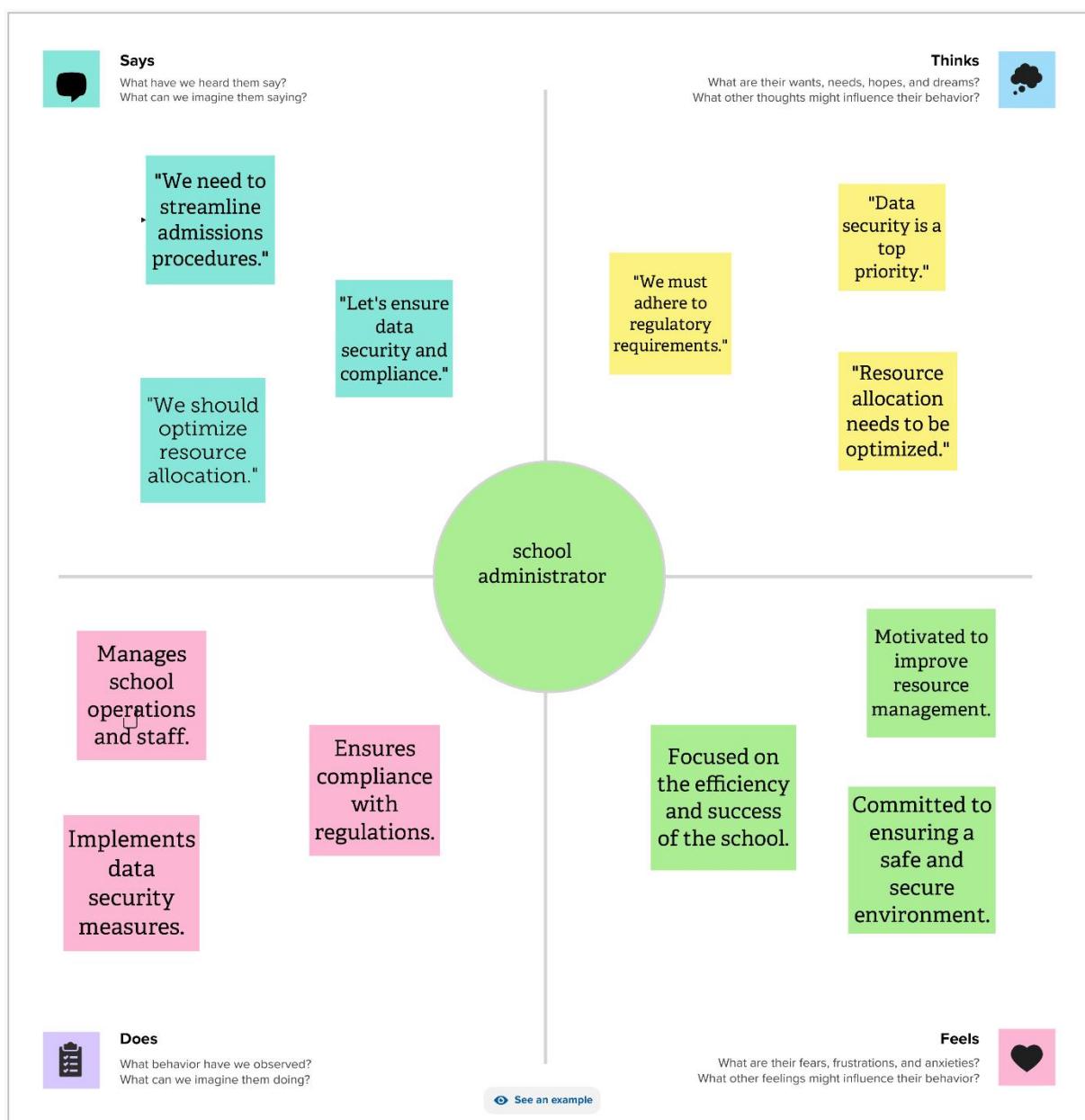


Problem Statement (PS)	I am (Student)	I'm trying to	But	Because	Which makes me feel
PS	Student	Creating a comprehensive school management application to streamline administrative tasks, enhance communication, and improve overall efficiency for educators, students, and parents.	Developing a user-friendly school management app to automate administrative processes, manage student data, and facilitate seamless communication between school staff, students, and parents	Developing a school management application to simplify administrative processes, facilitate better communication, and enhance academic operations for improved educational outcomes and stakeholder satisfaction.	Developing a user-friendly school management application to provide a seamless and empowering experience for all stakeholders, fostering a sense of ease and satisfaction

2.3 Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behavior and attitudes.

It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.



2.3 Ideation & Brainstorming :

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Step-1: Team Gathering, Collaboration and Select the Problem Statement:

Template

Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

⌚ 10 minutes to prepare
💡 1 hour to collaborate
👥 2-8 people recommended

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

⌚ 10 minutes

1 Define your problem statement

The need for a comprehensive School Management Application arises from current administrative inefficiencies and communication challenges in education.

⌚ 5 minutes

PROBLEM
How might we create a comprehensive school management application that addresses the existing inefficiencies in school administration, communication?

Key rules of brainstorming

To run a smooth and productive session:

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

Need some inspiration?
See a live version of this template to kickstart your work.

Open example →

Step-2: Brainstorm, Idea Listing and Grouping:

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

TIP
You can select a sticky note and it will be pinned to your board for everyone to see.

Person 1	Person 2	Person 3	Person 4
Feature Categories: Identity and list essential features, like attendance tracking, grades management, communication tools, and resource scheduling.	User Personas: Define user personas (teachers, students, parents, admin, students) to tailor the app's functionality and user experience.	User Interface: Design an intuitive and visually appealing interface to enhance user engagement and ease of use.	Security Measures: Implement security protocols to protect sensitive data and ensure data privacy.
Notification System: Develop a notification system for real-time updates on events, grades, and school announcements.	Integration Options: Explore integration with other tools and systems (e.g., calendars, learning management systems) to enhance functionality.	Feedback Mechanism: Include feedback channels for users to report issues and suggest improvements.	Scalability and Updates: Plan for future scalability and regular updates to adapt to evolving educational needs.

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

⌚ 20 minutes

TIP
Add sticky notes to key notes to make it easier to find them later. You can also change colors to highlight themes within your mind.

Accessibility and Inclusivity: Brainstorm ideas for ensuring the application is accessible to all users, including those with disabilities.

Community Engagement: Discuss features that foster a sense of community and engagement among school stakeholders.

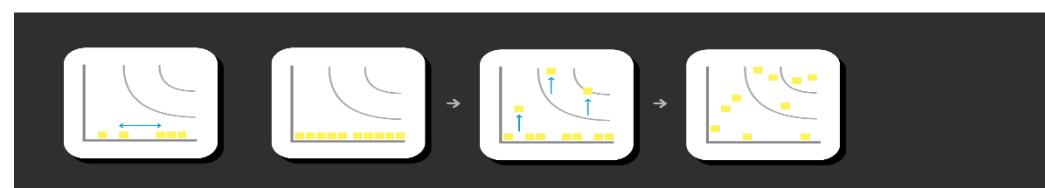
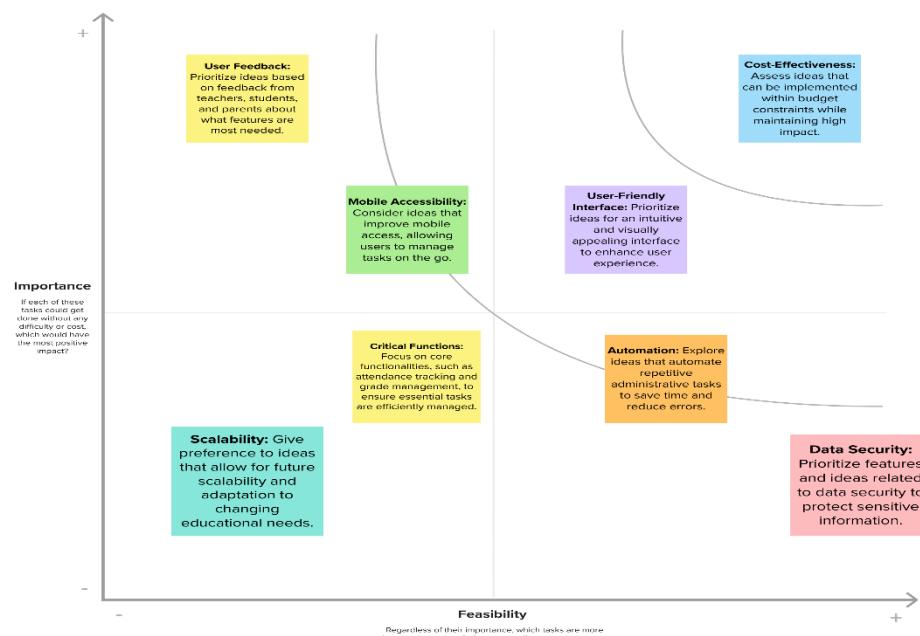
Step-3: Idea Prioritization:

4 Prioritize

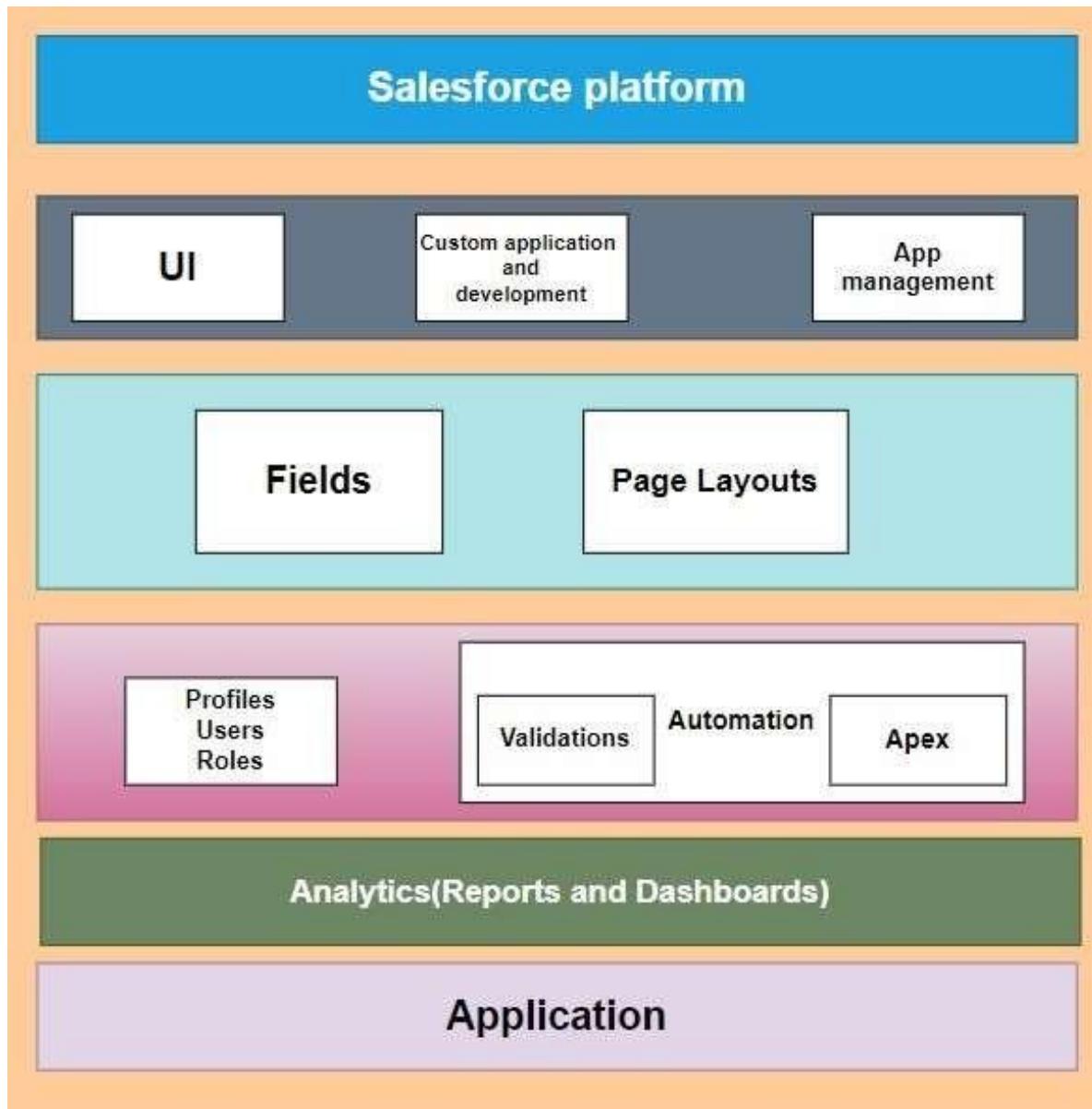
Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes

TIP:
Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can then move the cursor or the laser pointer holding the **H key** on the keyboard.



2.4 Technical Requirements



2.5 Functional Requirements

- 2.5.1 **User Registration and Authentication:** Provide a registration and login system for employees, approvers, and administrators to access the application securely.
- 2.5.2 **Travel Request Submission:** Allow employees to submit travel requests, providing essential details such as travel dates, destinations, purpose, and estimated expenses.
- 2.5.3 **Customizable Approval Workflows:** Support the configuration of approval workflows, including the ability to set approval criteria, create multi-level approval hierarchies, and define routing rules.
- 2.5.4 **Real-time Notifications:** Automate email notifications to keep employees informed about the status of their travel requests and notify approvers when their input is required.
- 2.5.5 **Expense Tracking:** Enable employees to record and track travel-related expenses, categorizing them for easy reference and reimbursement.
- 2.5.6 **Approval Management:** Provide a dashboard for approvers to review and approve travel requests, with the ability to leave comments or request additional information.
- 2.5.7 **Reporting and Analytics:** Offer a suite of reporting tools to generate insights into travel expenses, approval trends, and policy compliance. These reports should be customizable and accessible to authorized users.
- 2.5.8 **Mobile Accessibility:** Ensure that the application is accessible on mobile devices, allowing users to submit requests and perform approvals on the go.
- 2.5.9 **Security and Access Control:** Implement robust security measures and role-based access control to protect sensitive travel data and ensure that only authorized personnel can access, edit, and approve travel requests.
- 2.5.10 **Integration Capabilities:** Support integration with other corporate systems, such as accounting and HR software, to

- streamline expense tracking, data sharing, and synchronization of travel data.
- 2.5.11 **User Training and Support:** Provide training materials and support resources for users and approvers to ensure they can navigate and utilize the application effectively.
 - 2.5.12 **Scalability and Customization:** Design the application to be highly scalable, allowing it to adapt to the evolving needs of the organization. Ensure it can be customized to accommodate specific workflows and policies.
 - 2.5.13 **Compliance Features:** Include features to ensure compliance with corporate and regulatory policies, including the ability to capture and store necessary documentation for audits.
 - 2.5.14 **Budget Management:** Implement tools for tracking and managing travel budgets, helping organizations stay within financial limits.
 - 2.5.15 **Expense Reimbursement:** Facilitate the expense reimbursement process by allowing approvers to verify expenses and trigger reimbursement to employees.
 - 2.5.16 **User Profiles and Roles:** Define user profiles and roles to determine who can perform specific actions within the application.
 - 2.5.17 **Approval History and Audit Trail:** Maintain an audit trail and history of all travel requests, approvals, and changes for transparency and accountability.
 - 2.5.18 **Notifications and Reminders:** Send automated reminders and notifications to users for pending actions, approvals, and upcoming trips.
 - 2.5.19 **Document Management:** Provide a repository for storing travel-related documents, such as itineraries, receipts, and approvals.
 - 2.5.20 **Multi-platform Support:** Ensure compatibility with various web browsers and devices, enhancing user accessibility.

CHAPTER - 3

OBJECT CREATION

Objects:

Salesforce objects are database tables that permit you to store data that is specific to an organization. It consists of fields (columns) and records (rows).

Salesforce objects are of two types:

1. Standard Objects: Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.

In This Application We Use 9 Standard Objects:

1. Account
2. Contact.
3. Opportunity
4. Lead.
5. Case
6. Task and Event
7. User
8. Product
9. Custom Object.

2. Custom Objects: Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization. They are the heart of any application and provide a structure for sharing data.

In This Application We Use 5 Custom Objects:

1. Employee Details
2. Expense
3. Expense Item
4. Travel Approval

1) Create A Custom Object for School Details:

Step 1: Log in to Salesforce with administrative privileges.

Step 2: Click the "Gear" icon and select "Setup" to access the Salesforce Setup menu.

Step 3: In Setup, find "Objects" and select "Object Manager."

Step 4: Click the "Create" button to create a new custom object.

Step 5: Object Settings

Label: Enter "School."

Plural Label: Enter "Schools."

Step 6: Choose to auto-number records or manually specify the record name as "Employee Name."

Step 7: Select "Text" as the data type for the record name.

Step 8: Check the Allow Reports checkbox.

Step 9: Check the Allow Search checkbox.

Step 10: Click "Save" to create the "School" object.

The screenshot shows the Salesforce Setup interface with the URL d5j00000cirgean-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115j000002zbK5/edit?address=%2F0115j000002zbK5%2Fe%3freURL%3D%252Fsetup%252Fobject%252F. The page title is "school | Salesforce". The main content is titled "Edit Custom Object school". The left sidebar lists various setup categories: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, Triggers, and Flow Triggers. The right pane contains the "Custom Object Definition Edit" form. It includes sections for "Custom Object Information" (Label: school, Plural Label: school), "Object Name" (Object Name: school, Example: Account), "Description" (a large text area), "Context-Sensitive Help Setting" (radio buttons for standard help or Visualforce page), and "Content Name" (dropdown menu set to None). A note at the bottom explains the Record Name field.

The screenshot shows the Salesforce Setup interface with the URL d5j00000cirgean-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115j000002zbK5/view. The page title is "school | Salesforce". The main content is titled "Details" for the "school" object. The left sidebar is identical to the previous screenshot. The right pane displays the object's details in a tabular format. The columns are: Description (empty), API Name (school_c), Custom (Custom), Singular Label (school), Plural Label (school), Enable Reports (checked), Track Activities (unchecked), Track Field History (unchecked), Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). There are "Edit" and "Delete" buttons in the top right corner of the details section.

2)Creation of Student:

Step 1: Log in to Salesforce with administrative privileges.

Step 2: Click the "Gear" icon and select "Setup" to access the Salesforce Setup menu.

Step 3: In Setup, find "Objects" and select "Object Manager."

Step 4: Click the "Create" button to create a new custom object.

Step 5: Object Settings

Label: Enter "Student."

Plural Label: Enter "Students."

Step 6: Choose to auto-number records or manually specify the record name as "Student Name."

Step 7: Select "Text" as the data type for the record name.

Step 8: Check the Allow Reports checkbox.

Step 9: Check the Allow Search checkbox.

Step 10: Click "Save" to create the "Student" object.

student | Salesforce

d5j00000cirgean-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01Ij000002zbKF/edit?address=%2F01Ij000002zbKF%2Fe%3FretURL%3D%252Fsetup%252Fobject%25...

Setup Home Object Manager

SETUP > OBJECT MANAGER student

Custom Object Definition Edit

Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports. Be careful when changing the name or label as it may affect existing integrations and merge templates.

Label: student **Example:** Account
Plural Label: students **Example:** Accounts
 Starts with vowel sound

The Object Name is used when referencing the object via the API.

Object Name: student **Example:** Account

Description:

Context-Sensitive Help Setting: Open the standard Salesforce.com Help & Training window Open a window using a Visualforce page
Content Name:

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name: student Name **Example:** Account Name

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

Save Save & New Cancel

student | Salesforce

d5j00000cirgean-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01Ij000002zbKF/view

Setup Home Object Manager

SETUP > OBJECT MANAGER student

Details

Description:

API Name: student_c
Custom:
Singular Label: student
Plural Label: students

Edit **Delete**

Enable Reports
Track Activities
Track Field History
Deployment Status
Deployed
Help Settings
Standard salesforce.com Help Window

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

3) Creation of Parent:

Step 1: Log in to Salesforce with administrative privileges.

Step 2: Click the "Gear" icon and select "Setup" to access the SalesforceSetup menu.

Step 3: In Setup, find "Objects" and select "Object Manager."

Step 4: Click the "Create" button to create a new custom object.

Step 5: Object Settings

Label: Enter "Parent."

Plural Label: Enter "Parents."

Step 6: Choose to auto-number records or manually specify the record name as "Item Name" or "Parents Name."

Step 7: Select "Text" as the data type for the record name.

Step 8: Check the Allow Reports checkbox.

Step 9: Check the Allow Search checkbox.

Step 10: Click "Save" to create the "Parent" object.

parent | Salesforce

d5j00000cirgean-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01Ij000002zbKP/edit?address=%2F01Ij000002zbKP%2Fe%3FretURL%3D%252Fsetup%252Fobject%2...

Setup Home Object Manager

SETUP > OBJECT MANAGER parent

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

Edit Custom Object parent

Custom Object Definition Edit

Custom Object Information

The singular and plural labels are used in tabs, page layouts, and reports.
Be careful when changing the name or label as it may affect existing integrations and merge templates.

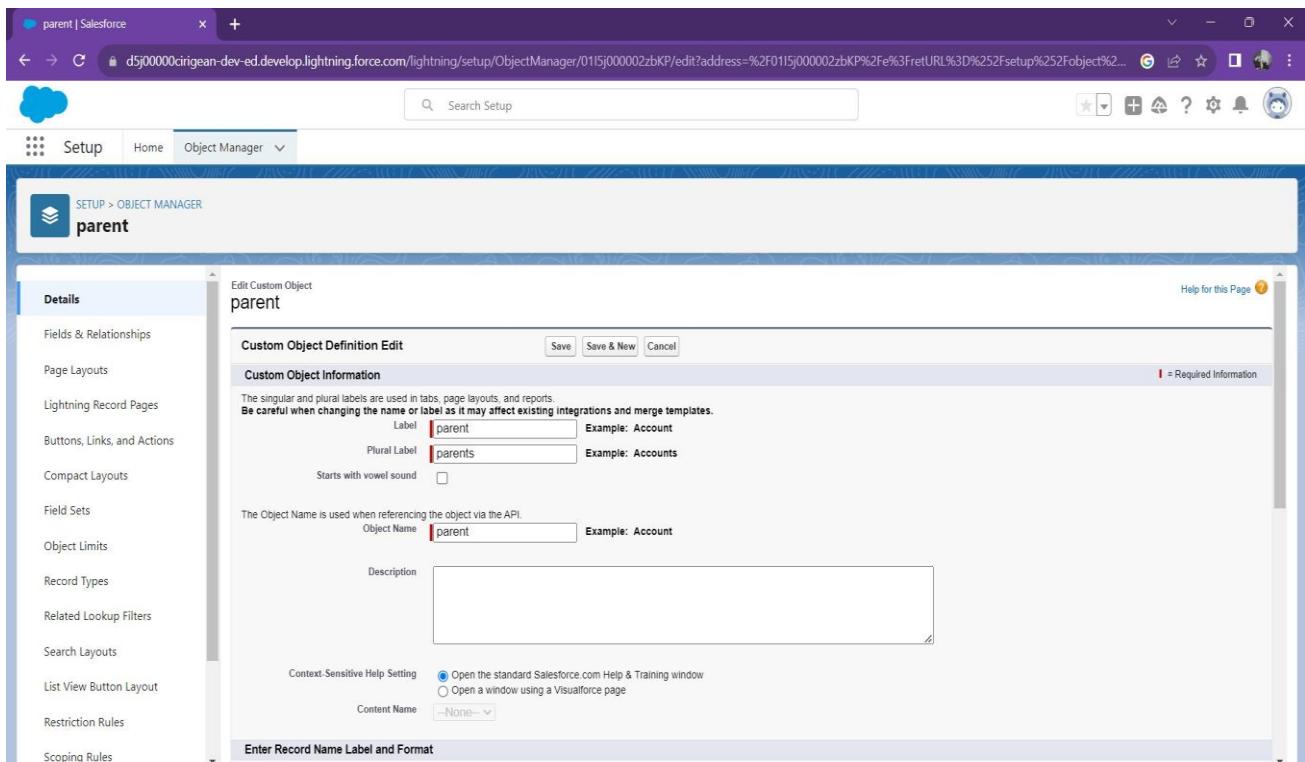
Label: parent Example: Account
Plural Label: parents Example: Accounts
Starts with vowel sound:

The Object Name is used when referencing the object via the API.
Object Name: parent Example: Account

Description:

Context: Sensitive Help Setting: Open the standard Salesforce.com Help & Training window Open a window using a Visualforce page
Content Name:

Enter Record Name Label and Format



parent | Salesforce

d5j00000cirgean-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01Ij000002zbKP/view

Setup Home Object Manager

SETUP > OBJECT MANAGER parent

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

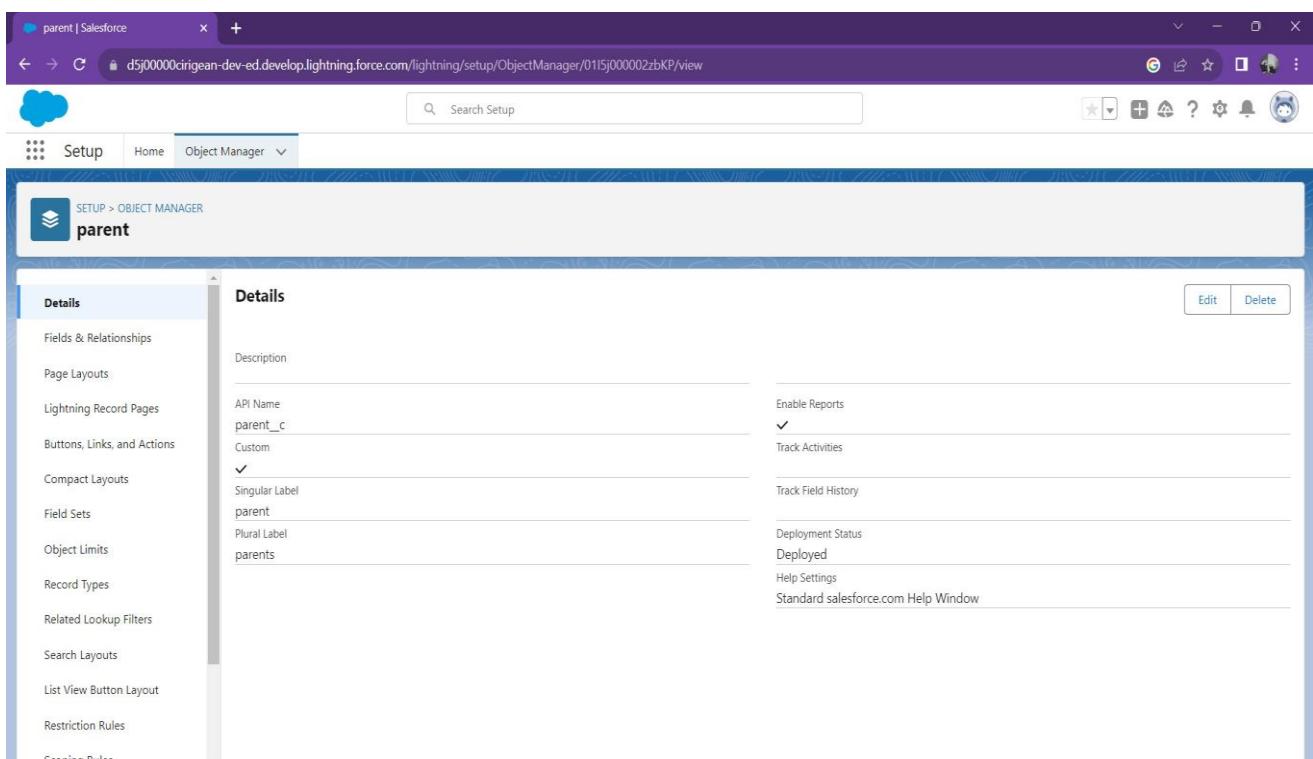
Details

Description:

API Name: parent_c
Custom:
Singular Label: parent
Plural Label: parents

Enable Reports:
Track Activities
Track Field History
Deployment Status: Deployed
Help Settings: Standard salesforce.com Help Window

Edit Delete



Tabs:

Tabs in Salesforce help users view the information at a glance. It displays the data of objects and other web content in the application.

There are mainly 4 types of tabs:

1. **Standard Object Tabs:** Standard object tabs display data related to standard objects.
2. **Custom Object Tabs:** Custom object tabs display data related to custom objects. These tabs look and function just like standard tabs.
3. **Web Tabs:** Web Tabs display any external Web-based application or Web page in a Salesforce tab.
4. **Visual force Tabs:** Visual force Tabs display data from a Visual force Page.

1) Creation of School Tab

Step 1: Log in to Salesforce with administrative privileges.

Step 2: Access Setup from the "Gear" icon.

Step 3: In Setup, find "User Interface" and select "Tabs."

Step 4: Click "New Custom Object Tab."

Step 5: Choose the "School" object and label it as "Schools."

Step 6: Configure tab appearance, accessibility, and styling.

Step 7: Save the tab.

Step 8: Arrange the tab's order in "App Manager."

Step 9: Assign the tab to relevant user profiles in the "Profiles" section of Setup.

Step 10: Test the tab and deploy it for user access.

Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.

Action	Label	Tab Style	Description
Edit Del	domains	Globe	Type of dogs
Edit Del	Employee_names	Camera	Type of cats
Edit Del	parents	Camera	
Edit Del	school	Building Block	
Edit Del	students	Camera	

Web Tabs

No Web Tabs have been defined.

Visualforce Tabs

No Visualforce Tabs have been defined.

2) Creation of Student Tab

Step 1: Log in to Salesforce with administrative privileges.

Step 2: Access Setup from the "Gear" icon.

Step 3: In Setup, go to "Objects and Fields" and select "Object Manager."

Step 4: Create a custom object for "Student" if it doesn't already exist. Ensure it has the necessary fields to capture Student information.

Step 5: Go to "User Interface" in Setup and select "Tabs."

Step 6: Click "New Custom Object Tab."

Step 7: Choose the custom object for "Student."

Step 8: Label the tab as "Student" and configure its style and color.

Step 9: Save the tab.

Custom Object Tabs

Action	Label	Tab Style	Description
Edit Del	domains	Globe	Type of dogs
Edit Del	Employee_names	Camera	Type of cats
Edit Del	parents	Camera	
Edit Del	school	Building Block	
Edit Del	students	Camera	

Web Tabs

No Web Tabs have been defined.

Visualforce Tabs

No Visualforce Tabs have been defined.

3) Creation of Parent Tab

Step 1: Log in to Salesforce with administrative privileges.

Step 2: Access Setup from the "Gear" icon.

Step 3: In Setup, go to "Objects and Fields" and select "Object Manager."

Step 4: Create a custom object for "Parent" if it doesn't already exist. Ensure it has the necessary fields to capture individual Parent details.

Step 5: Go to "User Interface" in Setup and select "Tabs."

Step 6: Click "New Custom Object Tab."

Step 7: Choose the custom object for "Parent."

Step 8: Label the tab as "Parent" and configure its style and color.

Step 9: Save the tab.

Step 10: Arrange the tab's order in your app and assign it to relevant.

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Tabs | Salesforce
- URL:** d5j00000cirgean-dev-ed.lightning.force.com/lightning/setup/CustomTabs/home
- Search Bar:** Search Setup
- Top Navigation:** Setup (selected), Home, Object Manager
- Left Sidebar:** Q tabs, User Interface, Rename Tabs and Labels, Tabs (selected).
- Section Header:** Custom Tabs
- Description:** You can create new custom tabs to extend Salesforce functionality or to build new application functionality.
- Text:** Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.
- Table:** Custom Object Tabs

Action	Label	Tab Style	Description
Edit Del	domains	Globe	Type of dogs
Edit Del	Employee_names	Camera	Type of cats
Edit Del	parents	Camera	
Edit Del	school	Building Block	
Edit Del	students	Camera	

- Section Header:** Web Tabs
- Description:** No Web Tabs have been defined.
- Section Header:** Visualforce Tabs
- Description:** No Visualforce Tabs have been defined.

CHAPTER - 4

LIGHTNING APP

Lightning App:

Apps in Salesforce are a group of tabs that help the application function by working together as a unit. It has a name, a logo, and a particular set of tabs. The simplest app usually has just two tabs.

There are 2 types of Salesforce applications:

Standard apps: these apps come with every occurrence of Salesforce as default. Community, Call Centre, Content, Sales, Marketing, Salesforce Chatter, Site.com, and App Launcher are included in these apps. The description, logo, and label of a standard app cannot be altered.

Custom apps: these apps are created according to the needs of a company. They can be made by putting custom and standard tabs together. Logos for custom apps can be changed.

1. From Setup, enter App Manager in the Quick Find and select App Manager.
2. Click New Lightning App.
3. Enter School Management as the App Name, then click next.
4. Under App Options, leave the default selections and click next.
5. Under Utility Items, leave as is and click next.
6. From Available Items, select Schools, Students, Parents, Reports, and Dashboards and move them to Selected Items. Click Next.
7. From Available Profiles, select System Administrator and move it to Selected Profiles. Click Save & Finish.

Finish resetting your Salesforce | App Manager | Salesforce

d5j00000cirigean-dev-ed.develop.lightning.force.com/lightning/setup/NavigationMenus/home

New Lightning App

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details	App Branding
*App Name <input type="text" value="School Management"/> *Developer Name <input type="text" value="School_Management"/> Description <input type="text" value="Enter a description..."/>	Image <input type="file"/> Primary Color Hex Value <input type="text" value="#0070D2"/> Org Theme Options <input type="checkbox"/> Use the app's image and color instead of the org's custom theme

Next

12	Queue Management	QueueManagement	Create and manage queues for your business.	22/08/2023, 10:44 am	Lightning
13	Sales	Sales	The world's most popular sales force automation (SFA) solution	22/08/2023, 10:44 am	Classic
14	Sales	LightningSales	Manage your sales process with accounts, leads, opportunities, and more	22/08/2023, 10:44 am	Lightning

Finish resetting your Salesforce | App Manager | Salesforce

d5j00000cirigean-dev-ed.develop.lightning.force.com/lightning/setup/NavigationMenus/home

New Lightning App

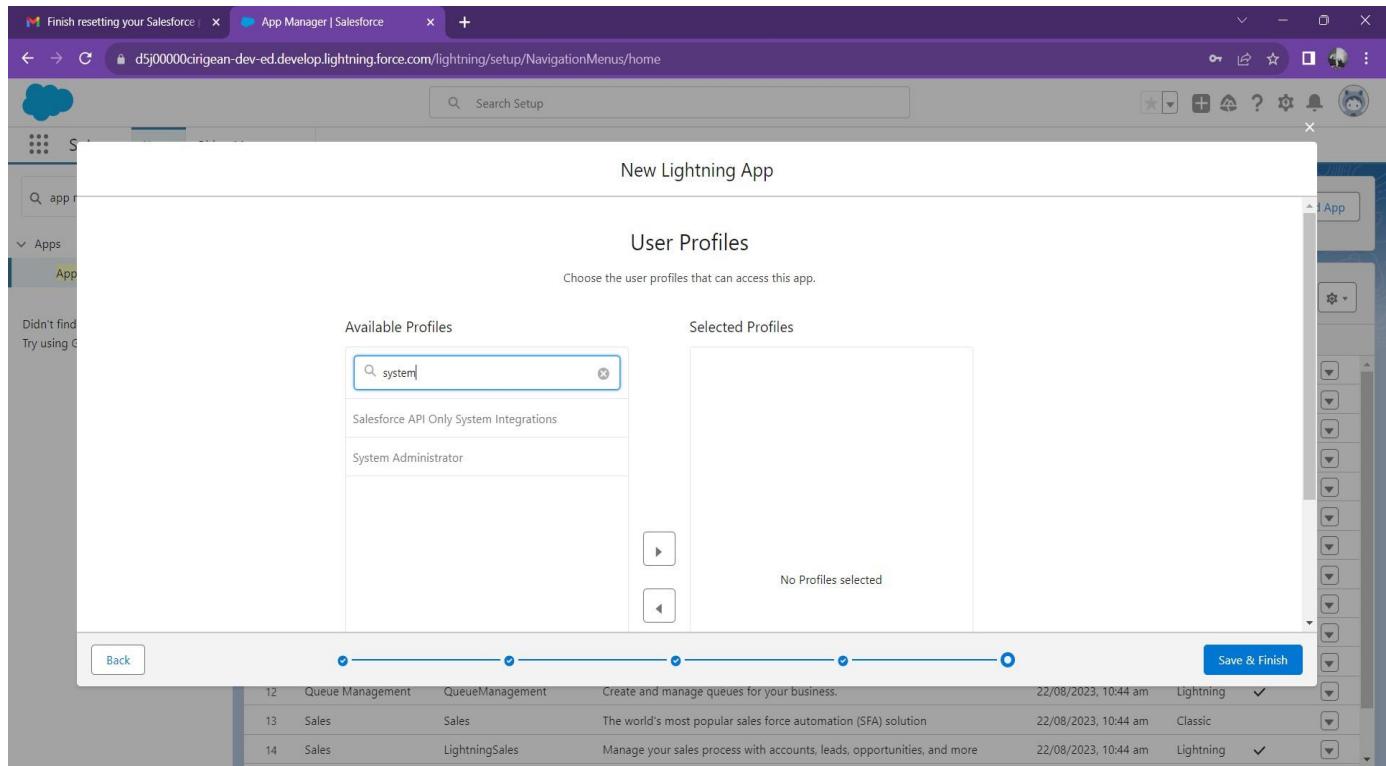
Navigation Items

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

Available Items	Selected Items
Available Items <input type="text" value="report"/> <input type="button" value="Create"/>	Selected Items <input type="text" value="Reports"/> <input type="button" value="Up"/> <input type="button" value="Down"/>

Back Next

12	Queue Management	QueueManagement	Create and manage queues for your business.	22/08/2023, 10:44 am	Lightning
13	Sales	Sales	The world's most popular sales force automation (SFA) solution	22/08/2023, 10:44 am	Classic
14	Sales	LightningSales	Manage your sales process with accounts, leads, opportunities, and more	22/08/2023, 10:44 am	Lightning



To verify your changes, click the App Launcher, type School Management and select the School Management app.

Note:

- App Launcher-Displays available apps.
- App Name-Displays the current selected app.
- Navigation menu -Displays the tabs available inside the app.

CHAPTER - 5

FIELDS AND RELATIONSHIP

Fields and Relationship:

Fields in Salesforce represent what the columns represent in relational databases. It can store data values which are required for a particular object in a record.

There are 2 types of fields in Salesforce

Standard fields: There are four standard fields in every custom object that are Created By, Last Modified By, Owner, and the field created at the time of the creation of an object. These fields cannot be deleted or edited and they are always required. For standard objects, the fields which are present by default in them and cannot be deleted from standard objects are standard fields.

Custom fields: The Custom fields which are added by the administrator/developer to meet the business requirements of any organization. They may or may not be required.

The screenshot shows the Salesforce Object Manager interface. The left sidebar has a 'Fields & Relationships' section selected. The main content area displays a table titled 'Fields & Relationships' with 7 items, sorted by Field Label. The table includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data is as follows:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
Created By	CreatedById	Lookup(User)		
Highest Marks	Highest_Marks__c	Roll-Up Summary (MAX student)		
Last Modified By	LastModifiedById	Lookup(User)		
Number of student	Number_of_student__c	Roll-Up Summary (COUNT student)		
Owner	OwnerId	Lookup(User/Group)	✓	
school Name	Name	Text(80)	✓	

The screenshot shows the 'Fields & Relationships' section of the Salesforce Object Manager. The page title is 'school | Salesforce'. The left sidebar lists various setup categories under 'Fields & Relationships'. The main content area displays a table of fields:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address_c	Text Area(255)		
Created By	CreatedBy	Lookup(User)		
Highest Marks	Highest_Marks_c	Roll-Up Summary (MAX student)		
Last Modified By	LastModifiedBy	Lookup(User)		
Number of student	Number_of_student_c	Roll-Up Summary (COUNT student)		
Owner	OwnerId	Lookup(User.Group)		✓
school Name	Name	Text(80)		✓

The screenshot shows the 'New Custom Field' creation wizard, Step 2: Enter the details. The page title is 'school | New Custom Field'. The left sidebar is identical to the previous screenshot. The main content area is titled 'Step 2. Enter the details' and includes the following fields:

- Field Label:** Address
- Field Name:** Address
- Description:** (empty text area)
- Help Text:** (empty text area)
- Required:** Always require a value in this field in order to save a record
- Auto add to custom report type:** Add this field to existing custom report types that contain this entity
- Default Value:** Show Formula Editor

Below the form, there is a note about formula syntax.

1) Creation Of Fields For The Student Objects

The screenshot shows the Salesforce Object Manager interface for the 'student' object. On the left, a sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main area is titled 'Fields & Relationships' and displays a table of fields. The columns are: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
class	class_c	Number(18, 0)		
Created By	CreatedById	Lookup(User)		
Email	Email_c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Marks	Marks_c	Number(18, 0)		
Phone number	Phone_number_c	Phone		
Results	Results_c	Picklist		
school	school_c	Master-Detail(school)	✓	
student Name	Name	Name	Text(80)	✓

1) Phone Data Type:

The screenshot shows the 'Object Manager' page in Salesforce, specifically the 'Field Types' section. A list of data types is shown with 'Phone' selected. Each option has a brief description to its right.

- Auto Number
A system-generated sequence number that uses a display format you define. The number is automatically incremented for each new record.
- Checkbox
Allows users to select a True (checked) or False (unchecked) value.
- Currency
Allows users to enter a dollar or other currency amount and automatically formats the field as a currency amount. This can be useful if you export data to Excel or another spreadsheet.
- Date
Allows users to enter a date or pick a date from a popup calendar.
- Date/Time
Allows users to enter a date and time, or pick a date from a popup calendar. When users click a date in the pop-up, that date and the current time are entered into the Date/Time field.
- Email
Allows users to enter an email address, which is validated to ensure proper format. If this field is specified for a contact or lead, users can choose the address when clicking Send an Email. Note that custom email addresses cannot be used for mass emails.
- Number
Allows users to enter any number. Leading zeros are removed.
- Percent
Allows users to enter a percentage number, for example, '10' and automatically adds the percent sign to the number.
- Phone
Allows users to enter any phone number. Automatically formats it as a phone number.
- Picklist
Allows users to select a value from a list you define.
- Picklist (Multi-Select)
Allows users to select multiple values from a list you define.
- Text
Allows users to enter any combination of letters and numbers.
- Text Area
Allows users to enter up to 255 characters on separate lines.
- Text Area (Long)
Allows users to enter up to 131,072 characters on separate lines.
- Time
Allows users to enter a local time. For example, "2:40 PM", "14:40", "14:40:00", and "14:40:50:600" are all valid times for this field.
- URL
Allows users to enter any valid website address. When users click on the field, the URL will open in a separate browser window.

The screenshot shows the Salesforce Object Manager setup page. The URL is <https://d5j00000cigrgean-dev-ed.lightning.force.com/lightning/setup/ObjectManager/page?address=%2Fp%2Fsetup%2Ffield%2FCustomFieldStageManager%3Fid%3D00N5j00000S4hMy%2...>. The page title is "Object Manager". The sub-page title is "Edit student Custom Field Phone number". The step is "Step 2. Enter the details".

Field Label: Phone number

Field Name: Phone_number

Description: (empty)

Help Text: (empty)

Required: Always require a value in this field in order to save a record

Default Value: Show Formula Editor

Use formula syntax. Enclose text and picklist value API names in double quotes . ("the_text"), include numbers without quotes ("5"), show percentages as decimals (.10), and express date calculations in the standard format. (Today) To reference a field from a Custom Metadata type record use: \$customMetadataType__Record\$Field__c

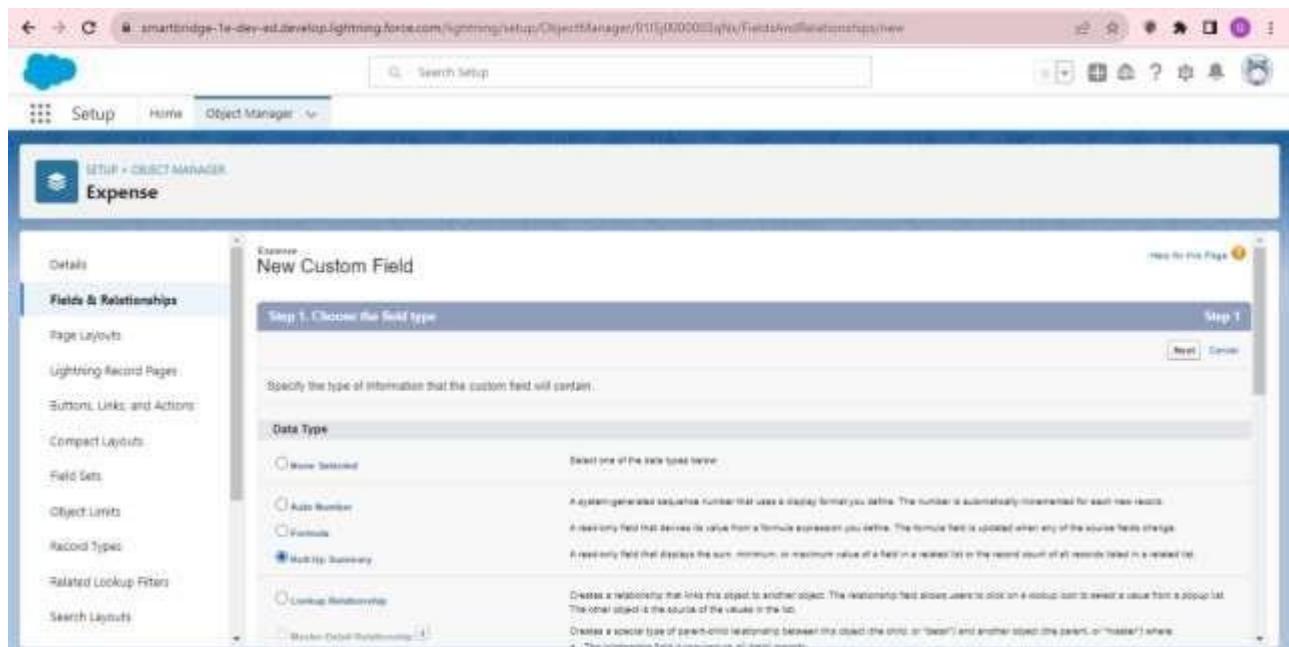
2) Email Data Type:

The screenshot shows the Salesforce Object Manager setup page. The URL is <https://d5j00000cigrgean-dev-ed.lightning.force.com/lightning/setup/ObjectManager/page?address=%2Fp%2Fsetup%2Ffield%2FCustomFieldStageManager%3Fid%3D00N5j00000S4hMy%2...>. The page title is "Object Manager". The sub-page title is "Data Type".

Data Type:

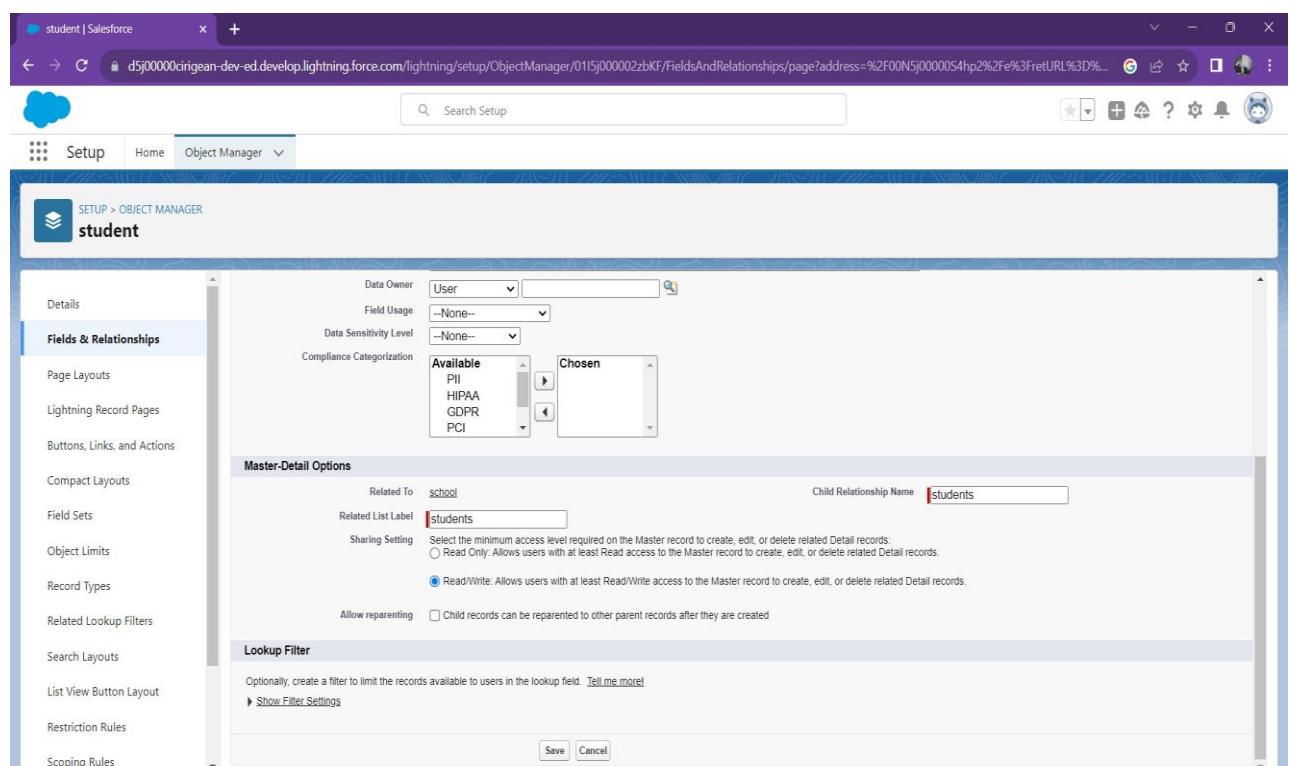
- None Selected Select one of the data types below.
- Auto Number A system-generated sequence number that uses a display format you define. The number is automatically incremented for each new record.
- Checkbox Allows users to select a True (checked) or False (unchecked) value.
- Currency Allows users to enter a dollar or other currency amount and automatically formats the field as a currency amount. This can be useful if you export data to Excel or another spreadsheet.
- Date Allows users to enter a date or pick a date from a popup calendar.
- Date/Time Allows users to enter a date and time, or pick a date from a popup calendar. When users click a date in the pop-up, that date and the current time are entered into the Date/Time field.
- Email Allows users to enter an email address, which is validated to ensure proper format. If this field is specified for a contact or lead, users can choose the address when clicking Send an Email. Note that custom email addresses cannot be used for mass emails.
- Number Allows users to enter any number. Leading zeros are removed.
- Percent Allows users to enter a percentage number, for example, '10' and automatically adds the percent sign to the number.
- Phone Allows users to enter any phone number. Automatically formats it as a phone number.
- Picklist Allows users to select a value from a list you define.
- Picklist (Multi-Select) Allows users to select multiple values from a list you define.
- Text Allows users to enter any combination of letters and numbers.
- Text Area Allows users to enter up to 255 characters on separate lines.
- Text Area (Long) Allows users to enter up to 131,072 characters on separate lines.
- Time Allows users to enter a local time. For example, "2:40 PM", "14:40", "14 40 00", and "14:40:50 600" are all valid times for this field.

3) Rollup summary:



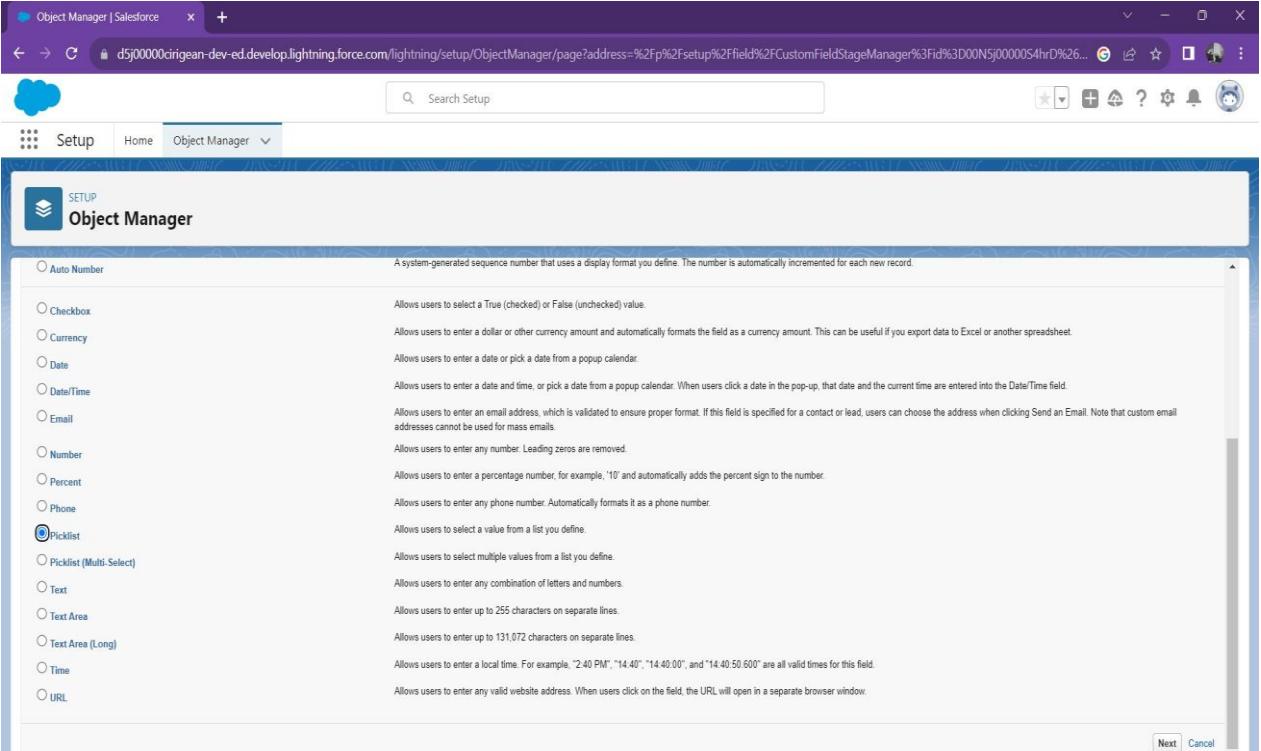
The screenshot shows the Salesforce Setup interface for creating a new custom field. The object is set to 'Expense'. The 'Fields & Relationships' tab is selected. In Step 1, 'Choose the Field type', the 'Rollup Summary' option is chosen. This option is described as reading every field that displays the sum, minimum, or maximum value of a field in a related list on the record (sum of all records listed in a related list). Other options like 'Number' and 'Auto Number' are also shown.

4) Create a master-detail relationship with School object:

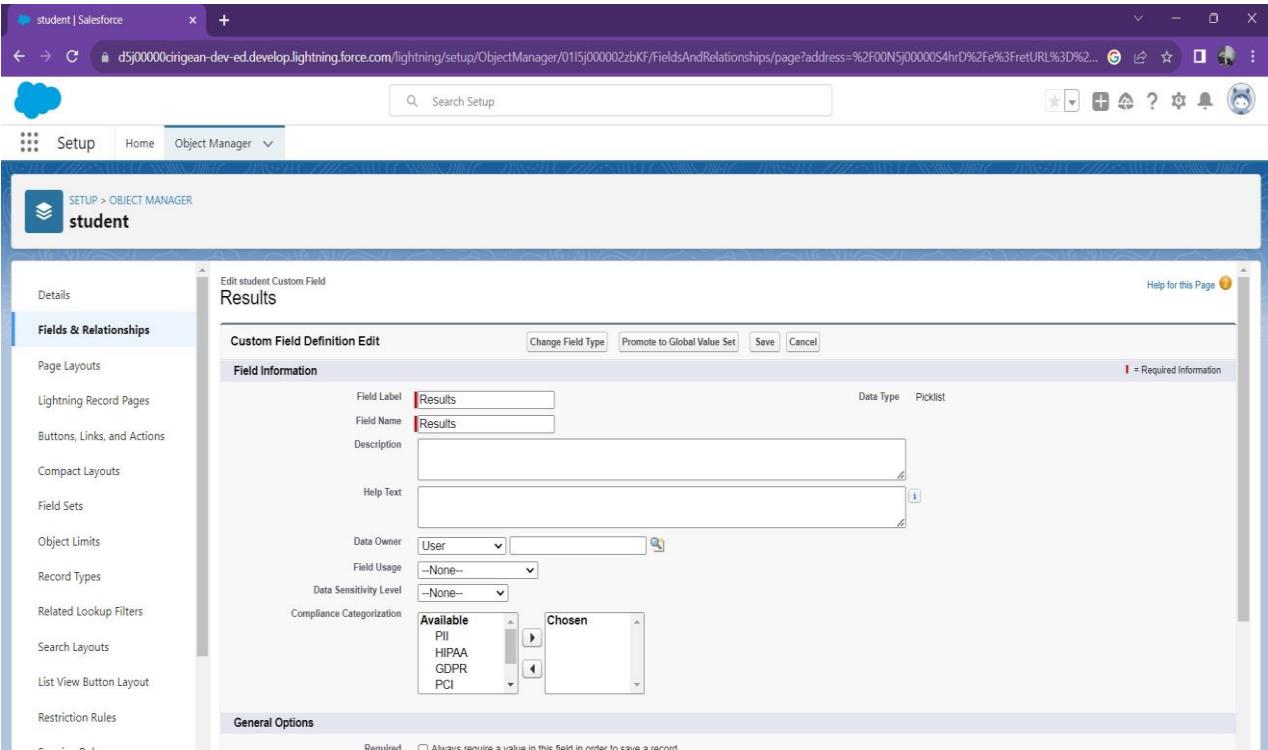


The screenshot shows the Salesforce Setup interface for managing fields and relationships. The object is set to 'student'. Under 'Fields & Relationships', the 'Master-Detail Options' section is active. It shows 'Related To' as 'school' and 'Child Relationship Name' as 'students'. Other settings include 'Field Owner' as 'User', 'Field Usage' as 'None', and 'Data Sensitivity Level' as 'None'. The 'Available' dropdown lists 'PII', 'HIPAA', 'GDPR', and 'PCI', with 'Chosen' indicating 'PII'. The 'Sharing Setting' is set to 'Read Only'. The 'Allow reparenting' checkbox is unchecked.

5) Create a Pick – List Field:



The screenshot shows the Salesforce Object Manager setup page. The user is navigating through the 'Object Manager' section. On the left, there's a sidebar with links like 'Auto Number', 'Checkbox', 'Currency', 'Date', 'Date/Time', 'Email', 'Number', 'Percent', 'Phone', 'Picklist' (which is selected), 'Picklist (Multi-Select)', 'Text', 'Text Area', 'Text Area (Long)', 'Time', and 'URL'. To the right of the sidebar, detailed descriptions for each field type are provided. At the bottom right of the main content area, there are 'Next' and 'Cancel' buttons.

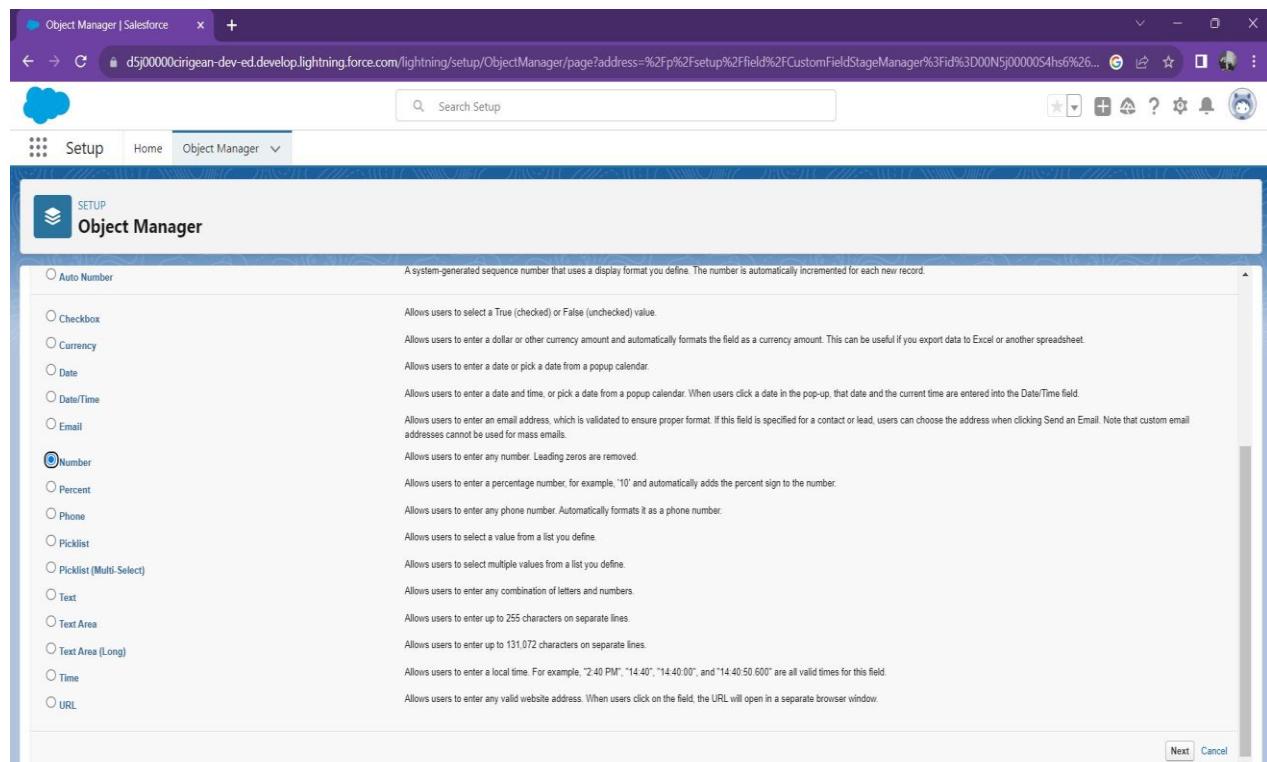


The screenshot shows the 'Edit student Custom Field Results' page. The left sidebar lists 'Fields & Relationships' under 'student'. The main form is titled 'Custom Field Definition Edit' and contains the following fields:

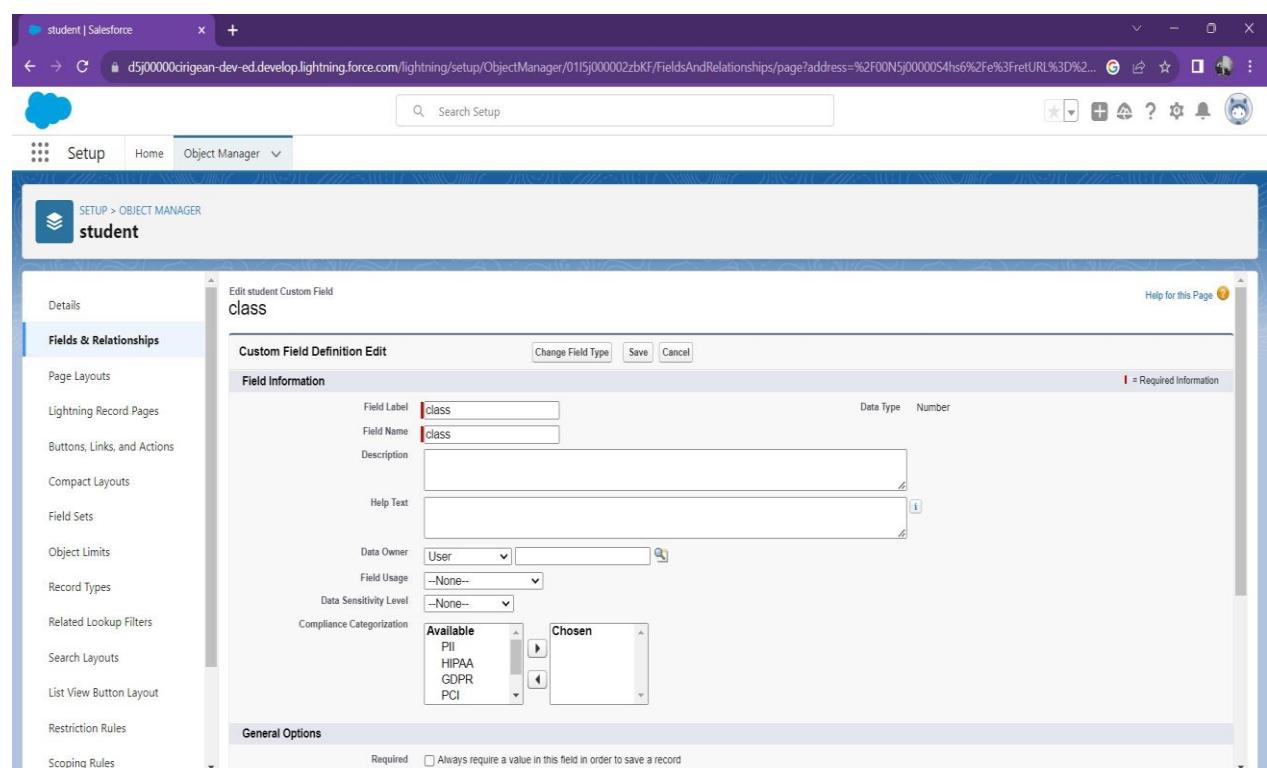
- Field Label:** Results
- Field Name:** Results
- Description:** (empty)
- Help Text:** (empty)
- Data Owner:** User
- Field Usage:** --None--
- Data Sensitivity Level:** --None--
- Compliance Categorization:** A grid showing 'Available' items (PII, HIPAA, GDPR, PCI) being moved to the 'Chosen' column.

At the bottom, there are 'General Options' and buttons for 'Required' and 'Save'.

6) Create a Number field:



The screenshot shows the Salesforce Setup interface under the Object Manager. A modal window titled "Object Manager" is open, displaying a list of field types. The "Number" option is selected, highlighted with a blue border. Other options like Auto Number, Checkbox, Currency, Date, etc., are also listed with their descriptions. At the bottom right of the modal, there are "Next" and "Cancel" buttons.



The screenshot shows the Salesforce Setup interface under the Object Manager. A modal window titled "Edit student Custom Field class" is open, showing the "Custom Field Definition Edit" screen. The "Field Information" section is visible, with "Field Label" set to "class", "Field Name" set to "class", and "Data Type" set to "Number". The "Available" section of the "Compliance Categorization" dropdown includes "Pii", "HIPAA", "GDPR", and "PCI", while "Chosen" only contains "Chosen". The "General Options" section at the bottom has a "Required" checkbox unchecked and a note about always requiring a value. On the left, a sidebar lists various customization options like Page Layouts, Lightning Record Pages, and Field Sets.

7) Create Roll-up summary fields on School Object to calculate the number of students:

The screenshot shows the Salesforce Setup interface for the 'school' object. On the left, a sidebar lists various setup options under 'Fields & Relationships'. The main panel displays the 'Edit school Custom Field Number of student' screen. The 'Field Information' section includes the following details:

- Field Label: Number of student
- Field Name: Number_of_student
- Description: (empty)
- Help Text: (empty)
- Data Owner: User
- Field Usage: -None-
- Data Sensitivity Level: -None-
- Compliance Categorization:
 - Available: PII, HIPAA, GDPR, PCI
 - Chosen: PCI

The screenshot shows the 'Roll-Up Summary Options' configuration for the 'Number of student' field. The configuration includes:

- Data Type: Roll-Up Summary
- Calculation Options:
 - Automatic calculation (Recommended)
 - Force a mass recalculation of this field
- Select Object to Summarize:
 - Master Object: school
 - Summarized Object: students
- Select Roll-Up Type:
 - COUNT
 - SUM
 - MIN
 - MAX
- Field to Aggregate: -None-
- Filter Criteria:
 - All records should be included in the calculation
 - Only records meeting certain criteria should be included in the calculation

CHAPTER - 6

CREATION ON PROFILE

Creation on profile:

Profile:

A profile is a group/collection of settings and permissions that define what a user can do in sales force. A profile controls “Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visual force page access, Page layouts, Record Types, Login hours & Login IP ranges.

The screenshot shows the Salesforce Setup interface for managing Profiles. The top navigation bar includes tabs for 'Setup', 'Home', and 'Object Manager'. On the left, a sidebar has sections for 'Users' and 'Profiles', with 'Profiles' currently selected. The main content area is titled 'Profiles' and displays a table of existing profiles. The columns are 'Action', 'Profile Name', 'User License', and 'Custom'. The table lists profiles like 'Analytics Cloud Integration User', 'Authenticated Website', 'Chatter External User', etc., with various license types and custom status. Navigation buttons at the bottom include 'Page 1 of 2'.

Action	Profile Name	User License	Custom
<input type="checkbox"/>	Edit Clone Analytics Cloud Integration User	Analytics Cloud Integration User	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Analytics Cloud Security User	Analytics Cloud Integration User	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Authenticated Website	Authenticated Website	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Authenticated Website	Authenticated Website	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Chatter External User	Chatter External	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Chatter Free User	Chatter Free	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Chatter Moderator User	Chatter Free	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Contract Manager	Salesforce	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Cross Org Data Proxy User	XOrg Proxy User	<input type="checkbox"/>
<input type="checkbox"/>	Edit Del ... Custom Marketing Profile	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Edit Del ... Custom Sales Profile	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Edit Del ... Custom Support Profile	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Edit Clone Customer Community Login User	Customer Community Login	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Customer Community Plus Login User	Customer Community Plus Login	<input type="checkbox"/>
<input type="checkbox"/>	Edit Clone Customer Community Plus User	Customer Community Plus	<input type="checkbox"/>

The screenshot shows the Salesforce Setup interface under the Profiles category. On the left, there's a sidebar with a search bar and navigation links for Users and Profiles. The main content area is titled "Profiles". It displays several sections: "Communication Subscription Consents", "Communication Subscription Timings", "Contacts", "Contact Point Addresses", "Contact Point Consents", "Contact Point Emails", "Locations", "Party Consents", "Push Topics", "Sellers", "Streaming Channels", and "User External Credentials". Below these is a "Custom Object Permissions" section with tables for "domains" and "Employee_names". Further down are "Session Settings" (Session Times Out After: 2 hours of inactivity, Session Security Level Required at Login: None) and "Password Policies" (User passwords expire in: 90 days, Enforce password history: 3 passwords remembered).

The screenshot shows the "Profile Edit" page for the "JSON" profile. At the top, it says "Profile Edit" and "Json". There are tabs for "Save", "Save & New", and "Cancel". The "Profile Edit" section includes fields for "Name" (set to "Json"), "User License" (set to "Salesforce Platform"), "Description", and a "Custom Profile" checkbox which is checked. The "Custom App Settings" section lists "Analytics Studio (standard__Insights)" and "App Launcher (standard__AppLauncher)" with checkboxes for "Visible" and "Default". The "Service Provider Access" and "Tab Settings" sections are also present.

CHAPTER - 7

CREATING A USER

Creating a User:

1. From Setup, in the Quick Find box, enter Users.
2. Select Users.
3. Click New User.
4. Enter the user's name Parents and (Your) email address and a unique username in the form of an email address.
5. By default, the username is the same as the email address.
6. Select a User License as sales force.
7. Select a profile as a School profile.
8. Check Generate new password and notify the user immediately to have the user's login name and a temporary password emailed to your email.
9. Similarly follow the above steps and create 2 users as Teachers and principals.

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatty.00d5j00000cirgean.pw9ormxbash48@chatter.salesforce.com			✓ Chatter Free User
<input type="checkbox"/> Edit	M. Dinesh	DM	dinesh8338@gmail.com			✓ System Administrator
<input type="checkbox"/> Edit	M. Dinesh	amohan	2k20n4@kiot.ac.in			✓ Standard Platform User
<input type="checkbox"/> Edit	User_Integration	Integ	integration@0005j00000cirgean.com			✓ Analytics Cloud Integration User
<input type="checkbox"/> Edit	User_Security	sec	insightssecurity@00d5j00000cirgean.com			✓ Analytics Cloud Security User

The screenshot shows the Salesforce Setup interface with the following details:

- Page Title:** Users | Salesforce
- URL:** d5j00000cirgean-dev-ed.lightning.force.com/lightning/setup/ManageUsers/home
- Left Sidebar:** A navigation menu under "User Management Settings" with the "Users" option selected.
- Header:** Includes a search bar labeled "Search Setup" and various setup icons.
- Section Header:** "All Users" with a "Help for this Page" link.
- Text:** "On this page you can create, view, and manage users." and "In addition, download SalesforceA to view and edit user details, reset passwords, and perform other administrative tasks from your mobile devices: [iOS](#) | [Android](#)".
- View Options:** "View: All Users" dropdown, "Edit", and "Create New View".
- Table:** A list of users with columns: Action, Full Name, Alias, Username, Role, Active, and Profile. The table includes rows for Chatter_Expert, K_Json11, M_Dinesh, User_Integration, and User_Security.
- Bottom Navigation:** Buttons for "New User", "Reset Password(s)", and "Add Multiple Users".
- Page Footer:** Alphabetical links from A to Z and an "All" button.

CHAPTER - 8

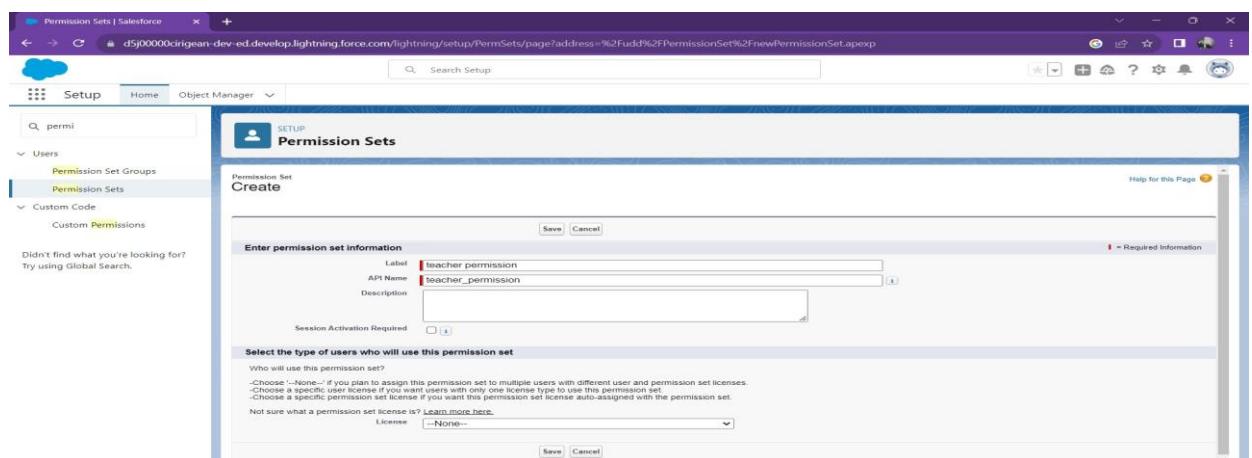
PERMISSION SETS

Permission Sets

A permission set is a collection of settings and permissions that give users access to various tools and functions. Permission sets extend users' functional access without changing their profiles.

1) Create A Permission Set:

1. From Setup, enter Permission Sets in the Quick Find box, then select Permission Sets.
2. Click New.
3. Give the name of the Permission set name as teacher permission.
4. Under the object settings give the view create and edit permissions to all 3 custom objects (By click open the object)
5. Click on manage assignment
6. Click on add assignment.
7. Click on Teacher (user), Next, Assign.



The screenshot shows the Salesforce 'Permission Sets' interface. In the top left, it says 'Permission Sets | Salesforce'. The URL is 'd5j00000cirigean-dev-ed.lightning.force.com/lightning/setup/PermSets/0PS5j00000866NW/PermissionSetAssignment/new'. The page title is 'PERMISSION SET <TEACHER PERMISSION> > MANAGE ASSIGNMENT EXPIRATION' under 'teacher permission'. On the left, there's a sidebar with 'Setup' selected, followed by 'Home' and 'Object Manager'. A search bar at the top right says 'Search Setup'. The main content area has a heading 'Select Users to Assign' and a sub-section 'All Users'. It lists five users: Chatter Expert, Dinesh M, Dinesh M, Integration User, and Json11 K. Each user has a checkbox next to their name, which is checked for all. To the right of each user is their role and profile. At the bottom left is a 'Cancel' button, and at the bottom right is a 'Next' button.

Create A Another Permission Set:

Permission sets 2:

1. From Setup, enter Permission Sets in the Quick Find box, then select Permission Sets.
2. Click New.

Principal permission:

The screenshot shows the 'Permission Sets' section of the Salesforce Setup. A search bar at the top left contains 'perm'. The sidebar on the left has 'Users' expanded, with 'Permission Sets' selected. The main area is titled 'Permission Set Create' and contains fields for 'Label' (Principal permission) and 'API Name' (Principal_permission). A 'Description' field is empty. Below these, a 'Session Activation Required' checkbox is unchecked. A note below says 'Who will use this permission set?' followed by three options: '-Choose -None-' (selected), 'Choose a specific user license if you want users with only one license type to use this permission set.', and 'Choose a specific permission set license if you want this permission set license auto-assigned with the permission set.' A 'License' dropdown is set to '-None--'. At the bottom are 'Save' and 'Cancel' buttons.

The screenshot shows the 'PERMISSION SET /PRINCIPAL PERMISSION > MANAGE ASSIGNMENT EXPIRATION' page. The sidebar on the left has 'Users' expanded, with 'Permission Sets' selected. The main area is titled 'Select Users to Assign' and shows a table of 'All Users'. The table includes columns for 'Full Name', 'Alias', 'Username', 'Role', 'Active', and 'Profile'. Five users are listed: Chatter Expert (Chatter Free User), Dinesh M (System Administrator), amohan (Standard Platform User), Integration User (Analytics Cloud Integration User), and Json11 K (Director, Direct Sales). Each user has a checked 'Active' checkbox. A 'Search this list...' input field is at the top right, and a 'Next' button is at the bottom right.

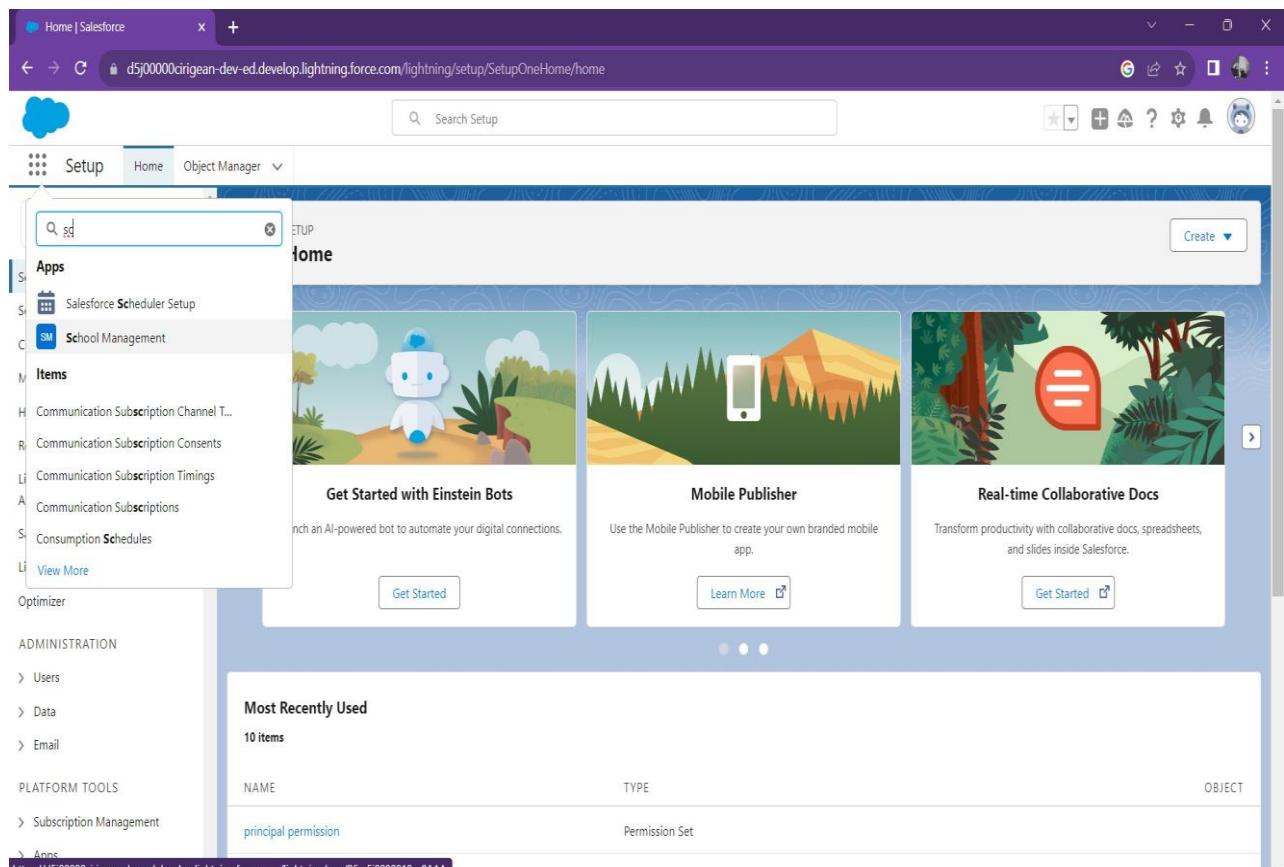
CHAPTER - 9

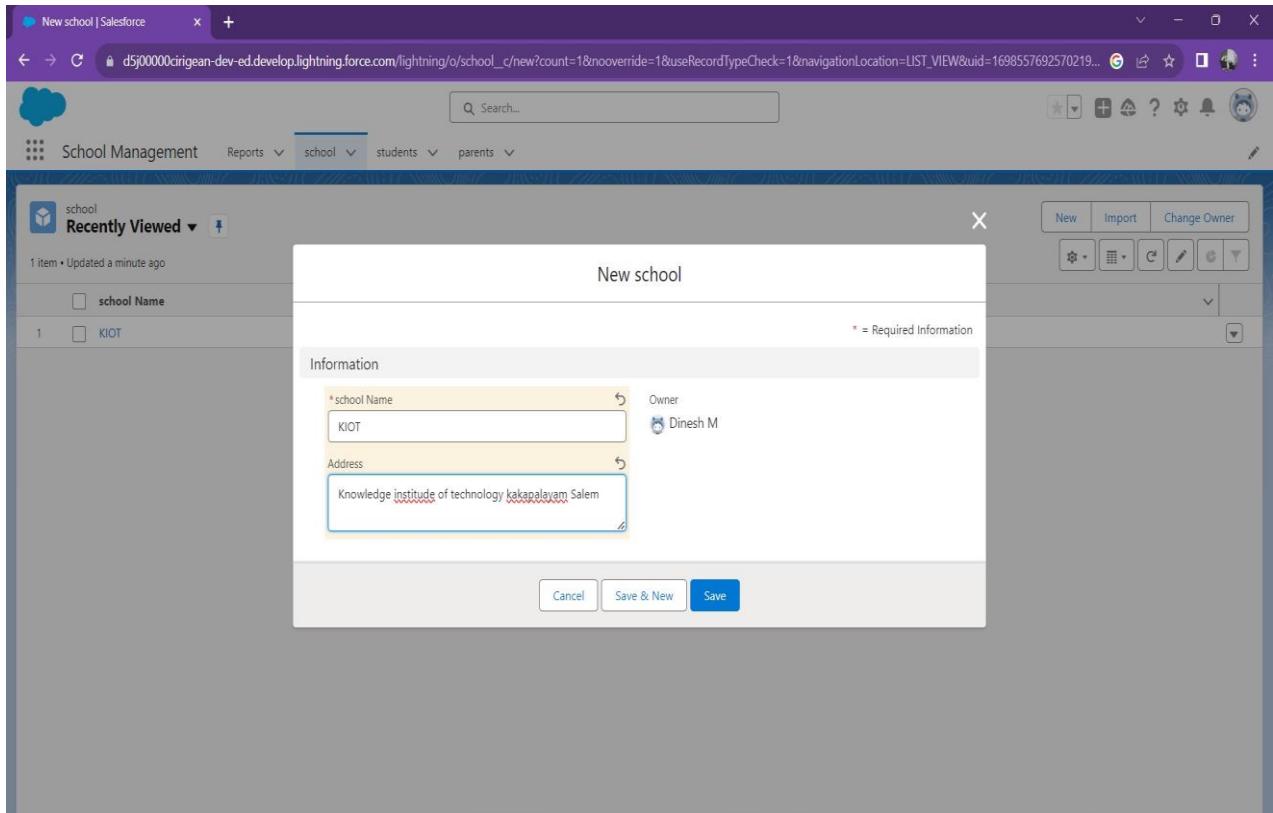
USER ADOPTION

Create Record (School)

Create Record (School):

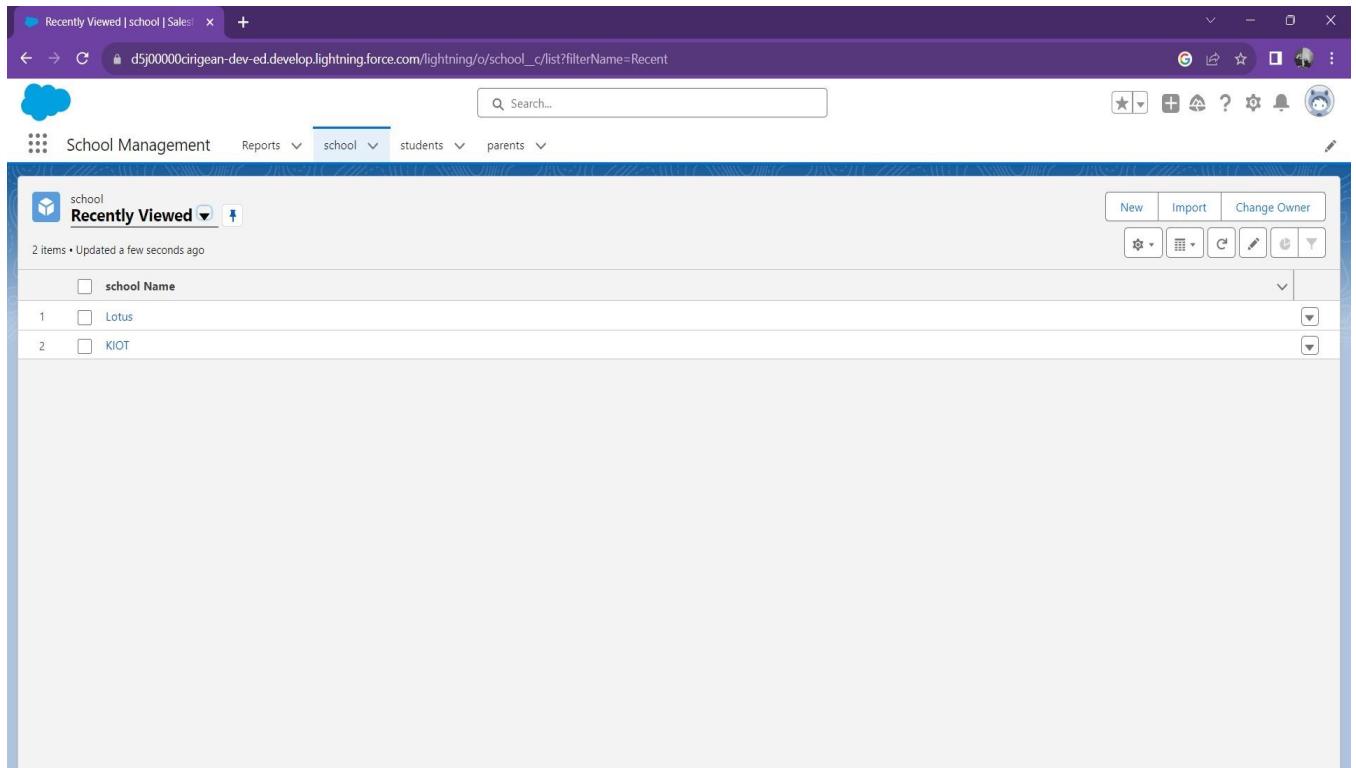
1. Click on App Launcher on left side of screen.
2. Search **School Management App** & click on it.
3. Click on **Schools** tab.
4. Click new button
5. Fill all School record details.
6. Click on Save Button





View Record (School):

1. Click on App Launcher on left side of screen.
2. Search School Management App & click on it.
3. Click on Schools Tab.
4. Click on any record name. you can see the details of the School.



Delete Record (School)

1. Click on App Launcher on left side of screen.
2. Search **School Management App** & click on it.
3. Click **on Schools Tab**.
4. Click on Arrow at right hand side on that Particular record.
5. Click delete and delete again.

The screenshot shows a Salesforce Lightning interface with the following details:

- Page Header:** Recently Viewed | school | Sales: +
- URL:** d5j00000cirigean-dev-ed.lightning.force.com/lightning/o/school_c/list?filterName=Recent
- Page Title:** School Management
- Search Bar:** Search...
- Toolbars:** New, Import, Change Owner, and other standard buttons.
- Section Header:** school Recently Viewed ▾
- List Item Count:** 2 items • Updated 2 minutes ago
- Table Headers:** school Name
- Data Rows:**
 - 1 Lotus
 - 2 KIOT
- Action Menu (for row 1):** Edit, Delete, Change Owner

CHAPTER - 10

Reports

Reports:

Reports in Salesforce is a list of records that meet a particular criterion which gives a particular question. These records are displayed as a table that can be filtered or grouped based on the report they can find any field in the report.

There are 4 types of report formats in Salesforce:

Tabular Reports:

This is the most basic report format. It just displays the row of records in a table with a grand total. While easy to set up they can't be used to create groups of data or charts and also cannot be used in Dashboards.

Summary Reports:

It is the most commonly used type of report. It allows grouping of rows of data, view subtotal, and create charts.

Matrix Report:

It is the most complex report format. Matrix report summarizes information in a grid format. It allows records to be grouped by both columns and rows.

Joined Reports:

These types of reports let us create different views of data from multiple report types. The data is joined reports are organized in blocks.

Report types:

Report type determines which set of records will be available in a report. Every report is based on a particular report type.

1. Standard Report Types:

Standard Report Types are automatically included with standard objects and also with custom objects where “AllowReports” checked.

Standard report types cannot be customized and automatically include standard and custom fields for each object within the report type. Standard report types get created when an object is created, also when a relationship is created.

Custom Report Types:

Custom Reports are created by an administrator or User with “Manage Custom Report Types” permission. Custom report types are created when standard report types cannot specify which records will be available on reports.

There are 3 types of access levels of folders:

Viewer:

With this access level, users can see the data in a report but cannot make any changes except cloning it into a new report.

Editor:

With this access level, users can view and modify the reports it contains and can also move them to/from any other folders they have access level as Editor or Manager.

Manager:

With this access level, users can do everything Viewers & Editors can do, plus they can also control other user’s access levels to this folder.

Create Report:

Reports:

1. In School Management App click Reports tab.
2. Click New Report.
3. Select the report type as School with students and parents for the report.
4. Click start report.
5. Customize your report, then save and run
6. Give report name – Schools with Students Report
7. Click Save

The screenshot shows the Salesforce Lightning interface for the 'School Management' app. The top navigation bar includes links for Reports, school, students, and parents. The main content area displays a table of recent reports. The table has columns for Report Name, Description, Folder, Created By, Created On, and Subscribed. Two reports are listed:

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	Schools with Students Report	Which flows run, what's the status of each interview, and how long do users take to complete the screens?	Private Reports	Dinesh M	29/10/2023, 11:33 am	
Created by Me	Sample Flow Report: Screen Flows	of each interview, and how long do users take to complete the screens?	Public Reports	Automated Process	22/8/2023, 10:44 am	

The left sidebar lists categories: Reports, Recent, 2 items, REPORTS, Recent, Schools with Students Report, Description, Folder, Created By, Created On, Subscribed, Created by Me, Private Reports, Public Reports, All Reports, FOLDERS, All Folders, Created by Me, Shared with Me, FAVORITES, All Favorites.

CHAPTER - 11

TRIGGERS

Triggers:

A trigger refers to an Apex code that is automatically executed before or after certain events occur in the Salesforce platform, such as when a record is inserted, updated, deleted, or undeleted. Triggers are used to get the chance for an automate business processes.

A before trigger in Salesforce is executed before the records are actually inserted, updated, or deleted in the Salesforce database. This allows the trigger to perform certain actions or validations before the data is saved to the database.

Create An Apex Trigger:

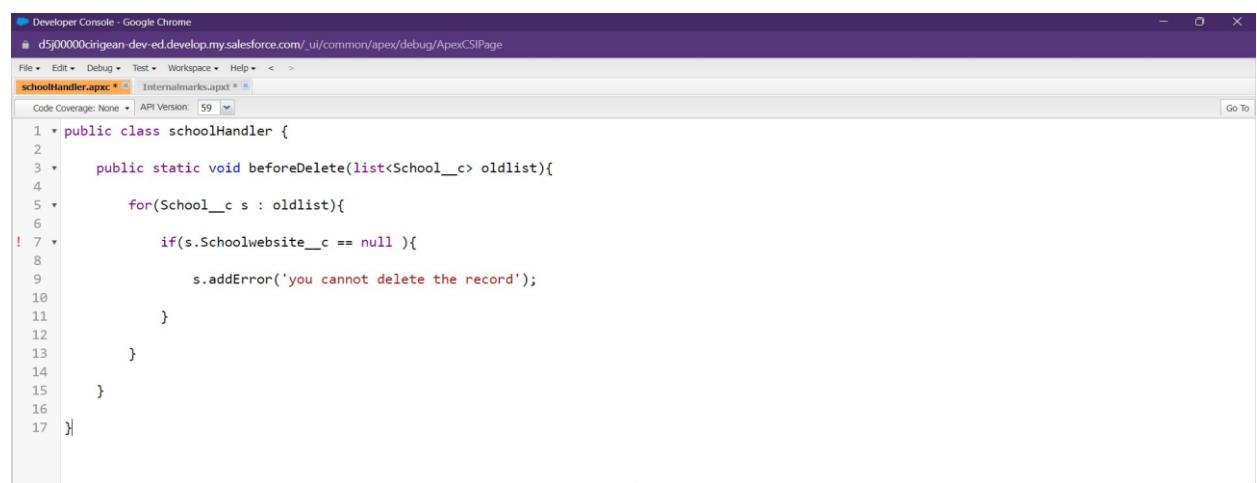
Write a trigger whenever the school website is null you should be unable to delete the record.

1. Go to the gear icon and select the developer console.
2. From the menu bar click on file and select Apex class.
3. Now give the class name as School Handler
4. Now Write the below code.

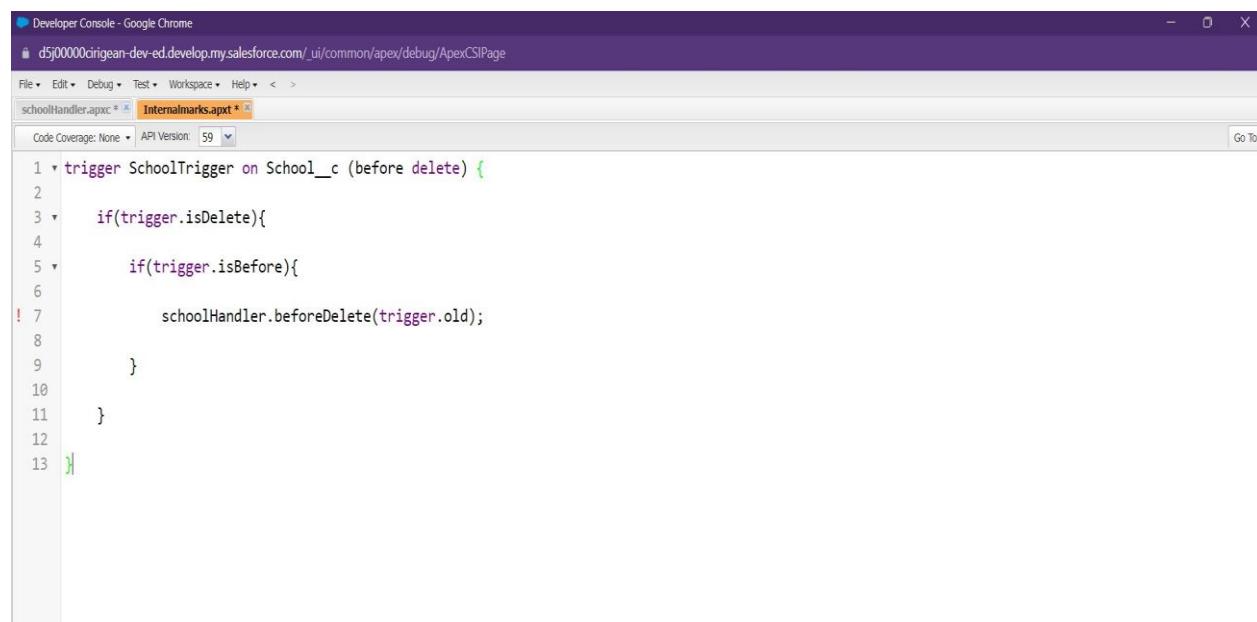
```
public class schoolHandler {  
    public static void before Delete(list<School__c> oldlist){  
        for(School__c s : oldlist){  
            if(s.Schoolwebsite__c == null ){  
                saddError('you cannot delete the record');  
            }  
        }  
    }  
}
```

1. From the menu bar click on file and select Apex trigger.
2. Now give the trigger name as Internalmarks
3. Now write the below code

```
trigger SchoolTrigger on School__c (before delete) {
    if(trigger.isDelete){
        if(trigger.isBefore){
            schoolHandler.beforeDelete(trigger.old);
        }
    }
}
```



```
Developer Console - Google Chrome
d5j00000cirgean-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage
File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
schoolHandler.apxc * Internalmarks.apxt *
Code Coverage: None API Version: 59 Go To
1 public class schoolHandler {
2
3     public static void beforeDelete(List<School__c> oldlist){
4
5         for(School__c s : oldlist){
6
7             if(s.Schoolwebsite__c == null ){
8
9                 s.addError('you cannot delete the record');
10
11         }
12     }
13 }
14
15 }
16
17 }
```



```
Developer Console - Google Chrome
d5j00000cirgean-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage
File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
schoolHandler.apxc * Internalmarks.apxt *
Code Coverage: None API Version: 59 Go To
1 trigger SchoolTrigger on School__c (before delete) {
2
3     if(trigger.isDelete){
4
5         if(trigger.isBefore){
6
7             schoolHandler.beforeDelete(trigger.old);
8
9         }
10
11     }
12
13 }
```

CHAPTER - 12

FLOWS

Flows:

Record-triggered flows are a powerful automation tool in Salesforce that can streamline business processes, reduce manual work, and improve productivity. They can be used to automate a wide range of tasks, from simple to complex, and can be tailored to meet the unique needs of your organization.

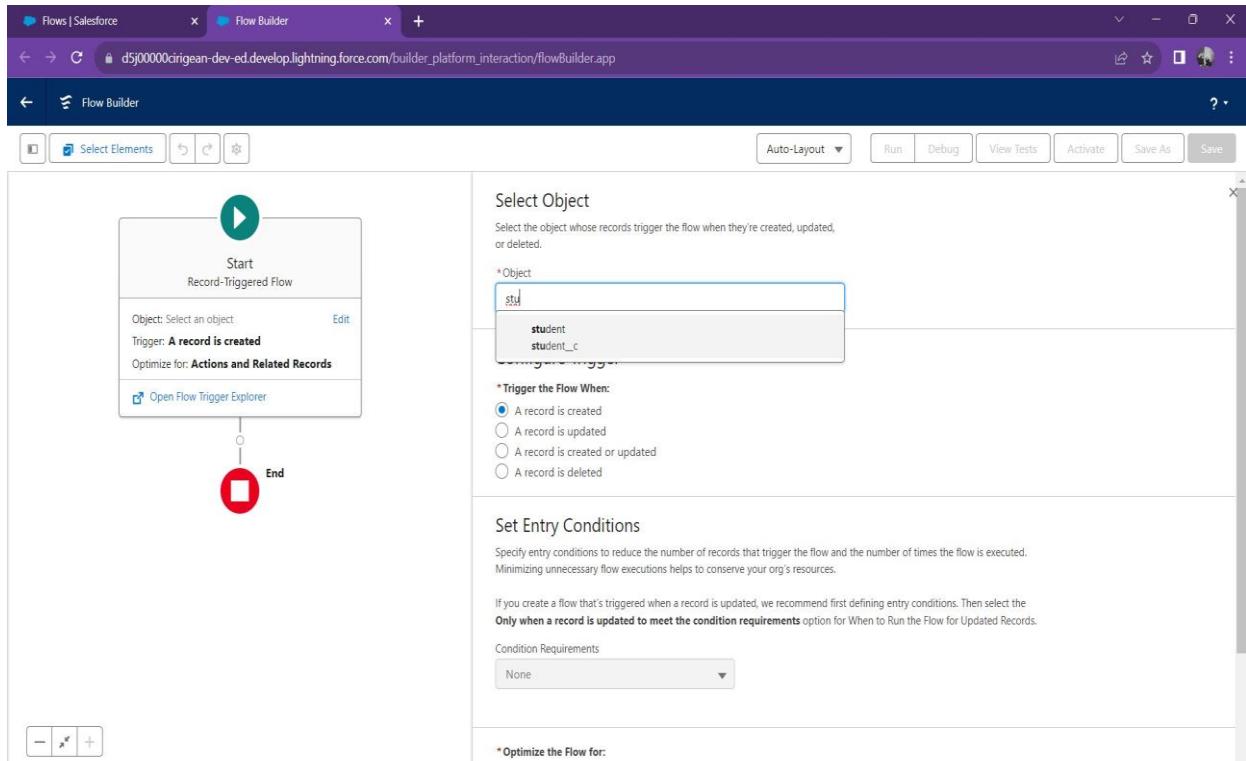
Create Flow

Create a record triggered flow whenever a student record is created it must send the email to the student about their welcome. Click on the Gear icon and select setup the search icon for the Quick find Box enter flow and select the flows Click on New flow and Select Record triggered Flows.

The screenshot shows the Salesforce Setup interface with the 'Flows' tab selected. The left sidebar contains various setup categories like Service Setup Assistant, Commerce Setup Center, and Administration. The main area displays a table titled 'Flow Definitions' with 37 items. The columns include 'Flow Label', 'Process Type', 'Active', 'Tem...', 'Package State', 'Pack...', 'Last M...', and 'Last Modified Date'. The table lists flows such as 'Basic Approval Request', 'Book Appointment from Invitation', 'Cancel Item Flow', etc.

Flow Label	Process Type	Active	Tem...	Package State	Pack...	Last M...	Last Modified Date
Basic Approval Request	Flow Orchestration for CMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Book Appointment from Invitation	Salesforce Scheduler Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Cancel Item Flow	Screen Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Change Case Owner to Incident Owner	Screen Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Close Change Request & Related Issues	Screen Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
CMS: Check Whether Any Step is Completed	Evaluation Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
CMS: Notify Content Author	Screen Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
CMS: Review Content	Screen Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
CMS: Submit Content for Review	Screen Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
CMS: Withdraw Review Request	Screen Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Contact Form	Screen Flow	<input type="checkbox"/>	<input type="checkbox"/>	Unmanaged	Dinesh M	01/10/2023, 11:29 am	
Create a Case	Screen Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Create Order Summary Flow	Autolaunched Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			

The screenshot shows the Flow Builder interface with the 'New Flow' screen. The left sidebar has 'Toolbox' and 'Elements' tabs. The main area shows a grid of flow types under the 'Core' category. The 'Record-Triggered Flow' box is highlighted with a blue border and a checkmark icon. Other options include 'Screen Flow', 'Schedule-Triggered Flow', 'Platform Event—Triggered Flow', 'Autolaunched Flow (No Trigger)', and 'Record-Triggered Orchestration'. A 'Create' button is located at the bottom right of the grid.



Enter the following details:

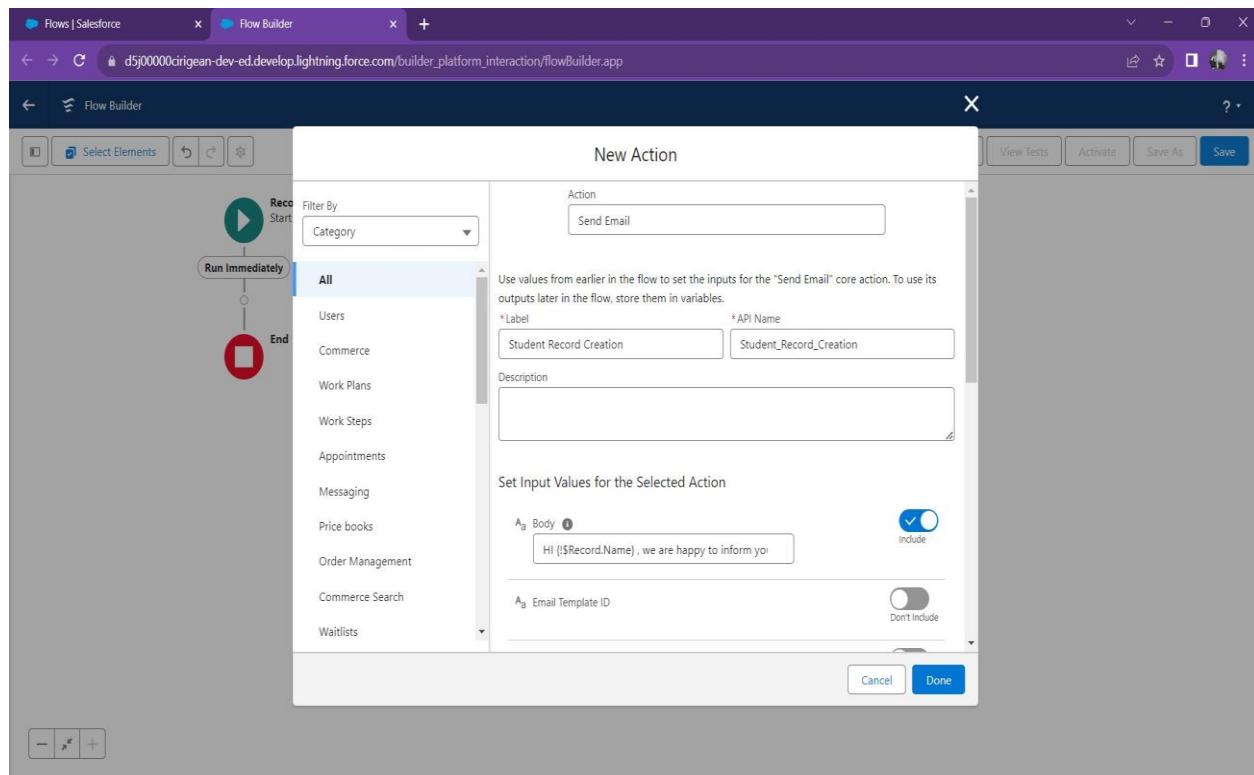
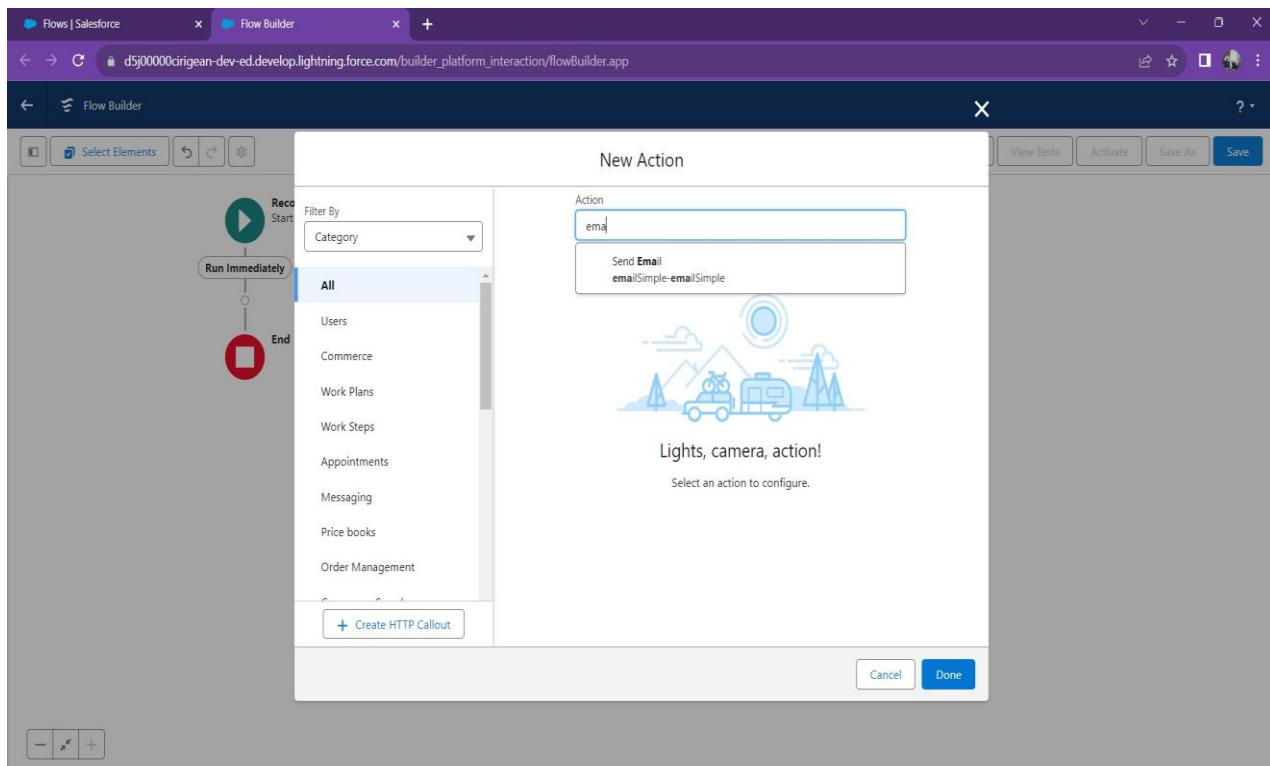
Label: Student Record Creation

Api Name: Student_Record_Creation(Auto-pupulated)

Body: Hi {!\$Record.Name} , we are happy to inform you that you have joined in our {!\$Record.school__r.Name}.

Subject: Record Creation

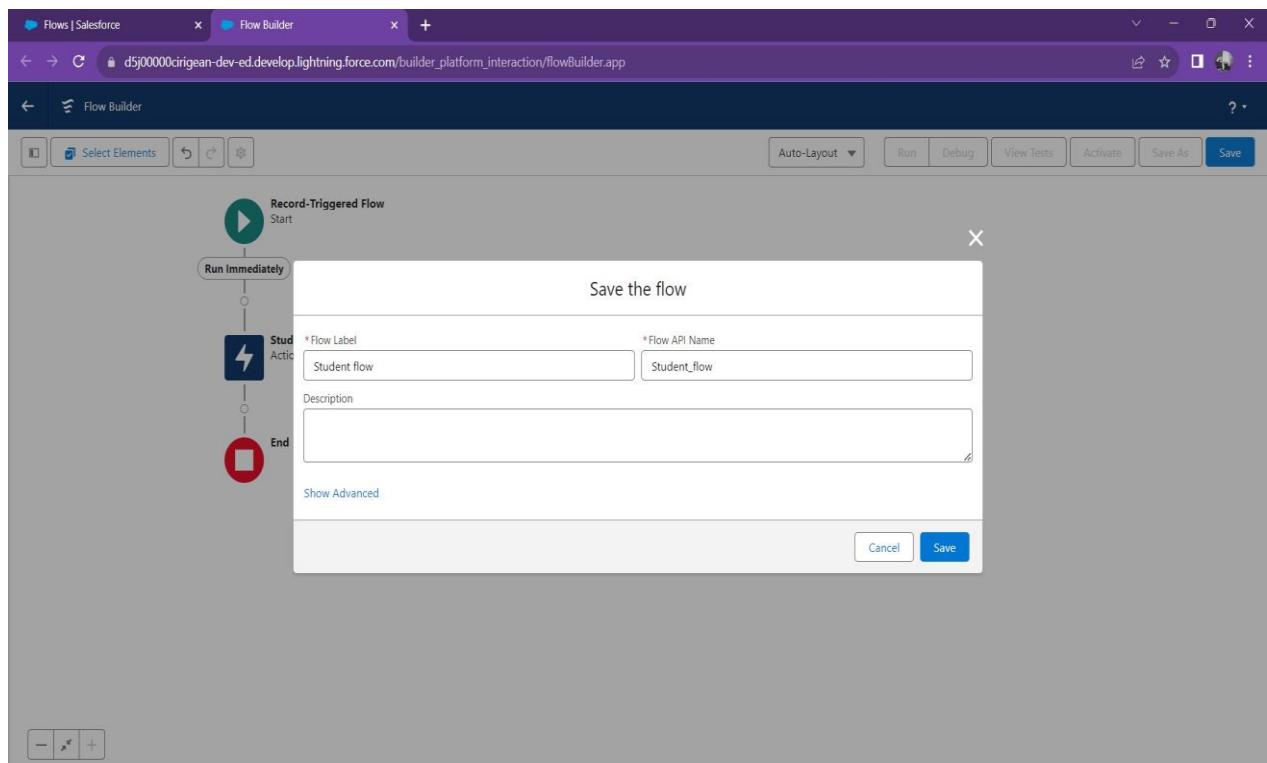
Recipient email Address: {!\$Record.Email__c}



Click on done and Click on save

Flow label: Student flow

Flow API Name: Student_flow and then click Activate.



CHAPTER - 13

GITHUB & PROJECT VIDEO DEMO LINK

GitHub: <https://github.com/DineshMohan0/naanmudhalvan-salesforce-NM2023TMID02149-kiot>

Video Demo Link: https://drive.google.com/file/d/1FV21H3xyMpuks2-NmBhTGar1TXsfg7Hi/view?usp=drive_link