

# **CREATION OF AN APPLICATION FOR SCHOOL MANAGEMENT - DEVELOPER - (SHORT-TERM)**

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**Team Size :** 4

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The project aim is to provide real-time knowledge for all the students who have basic knowledge of Salesforce and Looking for a real-time project. This project will also help those professionals who are in cross-technology and want to switch to Salesforce. With the help of this project they will gain knowledge and can include it into their resume as well.

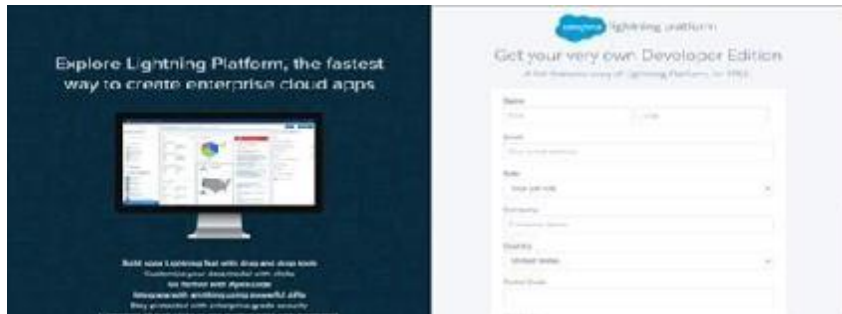
## **Introduction**

1. Go to [developer.salesforce.com](https://developer.salesforce.com)
2. Click on sign up.
3. On the sign up form, enter the following details
  - a. First name & Last name
  - b. Email
  - c. Role - Developer
  - d. Company - College Name
  - e. Country - India
  - f. Postal Code - pin code

g. Username- should be a combination of your name and company

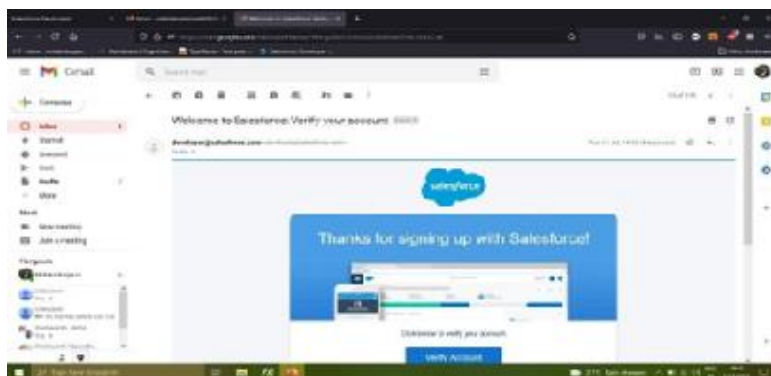
This need not be an actual email id, you can give anything in the format username@organization.com

Click on sign up after filling these.



## Account Activation

Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account. The email may take 5-10mins, as

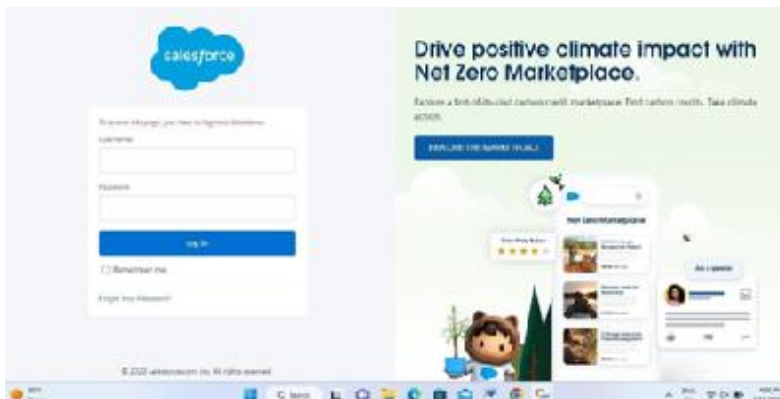


## Login To Your Salesforce Account

1. Go to salesforce.com and click on login.
2. Enter the username and password that you just created.
3. After login this is the home page which you will see.



**Salesforce Login** <https://login.salesforce.com>



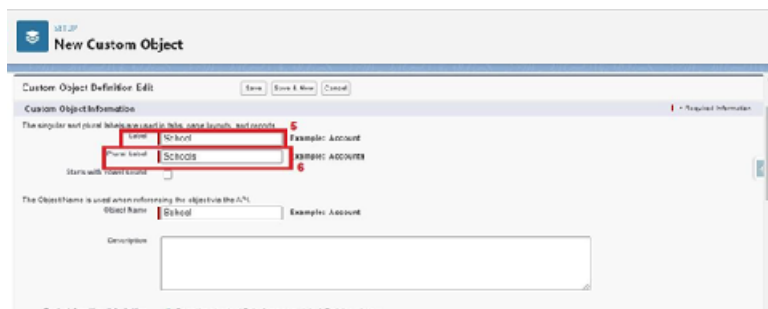
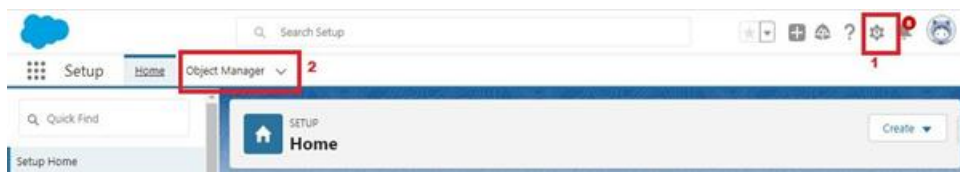
## Object

### Creation Of School Object Creation Of Objects For School Management

For this school management we need to create 3 objects School, Parents and Student. The below steps will assist you in creating those objects.

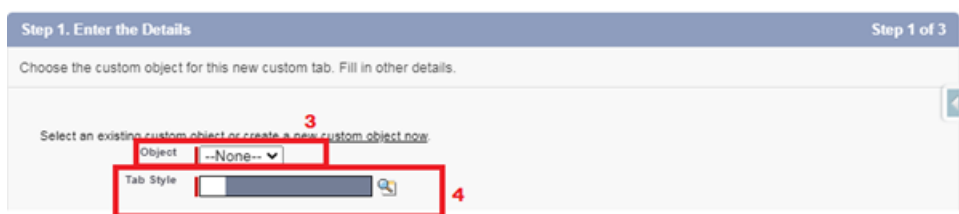
1. Click on the gear icon and then select Setup.
2. Click on the object manager tab just beside the home tab.
3. After the above steps, have a look on the extreme right you will find a Create Dropdown click on that and select Custom Object.
4. On the Custom Object Definition page, create the object as follows:
5. Label: School
6. Plural Label: Schools
7. Record Name: School Name

8. Check the Allow Reports checkbox
9. Check the Allow Search checkbox
10. Click Save.



Now create a custom tab. Click the Home tab.





## Create Student Object

1. Click on the gear icon and then select Setup.
2. Click on the object manager tab just beside the home tab
3. After the above steps, have a look on the extreme right you will find a Create Dropdown click on that and select Custom Object.
  - On the Custom Object Definition page, create the object as follows:
  - Label: Student
  - Plural Label: Students
  - Record Name: Student Name
  - Check the Allow Reports checkbox
  - Check the Allow Search checkbox
  - Click Save.

Now create a custom tab. Click the Home tab, enter Tabs in Quick Find and select Tabs. Under Custom Object Tabs, click New.

1. For Object, select Students.
2. For Tab Style, select any icon.
3. Leave all defaults as is. Click Next, Next, and Save.

## Create Parent Object

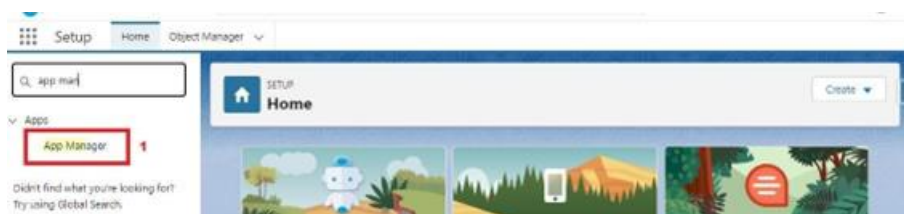
Click on the gear icon and then select Setup.

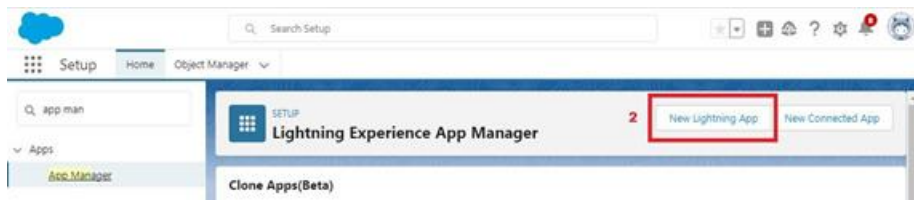
1. Click on the object manager tab just beside the home tab.
  2. After the above steps, have a look on the extreme right you will find a Create Dropdown click on that and select Custom Object.
- On the Custom Object Definition page, create the object as follows:
  - Label: Parent
  - Plural Label: Parents
  - Record Name: Parent Name
  - Check the Allow Reports checkbox
  - Check the Allow Search checkbox
  - Click Save.

## Lightning App

### Create The School Management App

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.





### 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

3 \*App Name

School Management

\*Developer Name

School\_Management

Description

#### App Branding

Image

Upload

Primary Color Hex Value

#0070C2

Next

or rename the items that you add. Some navigation items are available only on phone or only on desktop. These items are tagged with the navigation type when the app is viewed in a format that the item doesn't support.

6

#### Available Items

Create

repo

Reports

#### Selected Items

- Schools
- Students
- Parents
- Dashboards

click to add items

Back Next

### User Profiles

Choose the user profiles that can access this app.

7

#### Available Profiles

system

Salesforce All Only System Integrati...

System Administrator

#### Selected Profiles

No Profiles selected

Save & Finish

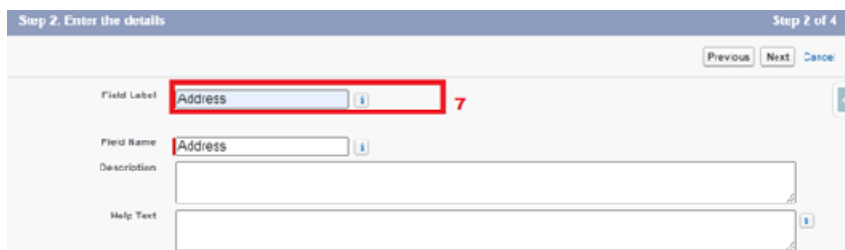
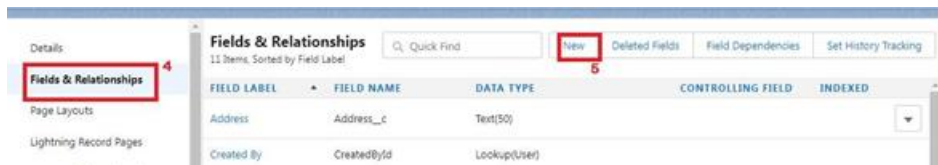
## Fields And Relationship

### Creation Of Fields For The School Objects

1. Click the gear icon and select Setup. This launches Setup in a new tab.
2. Click the Object Manager tab next to Home.
3. Select School.
4. Select Fields & Relationships from the left navigation
5. Click New
6. Select the Text Area as the Data Type, click Next.
7. For Field Label, enter Address.
8. Click Next, Next, then Save & New.
9. Follow steps 1 to 3 and create two more Text type field - District & State.
10. Create URL type field & give School website as the field label.







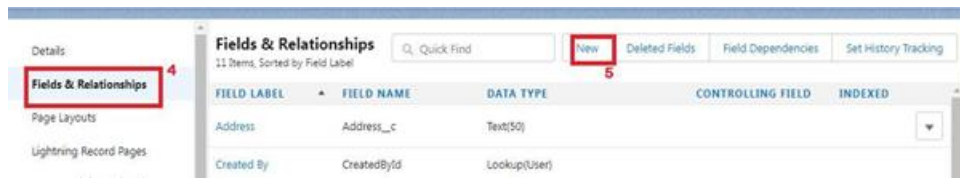
## Creation Of Fields For The Student Objects

1. Select the Phone as the Data Type, then click Next.
2. For Field Label, enter Phone Number.
3. Click Next, Next, then Save & New



**Let's create a master-detail relationship with School object**

1. Select Master-Detail Relationship as the Data Type and click Next.
2. For Related to, enter School.
3. Click Next.
4. For Field Label, enter School.
5. Click Next, Next, Next and Save.



### Let's create a Pick-List field:

1. From Setup, click Object Manager and select Student.
2. Click Fields & Relationships, then New.
3. Select Picklist as the Data Type and click Next.
4. For Field Label enter Results.
5. Select Enter values, with each value separated by a new line and enter these values:
6. Pass
7. Fail
8. Click Next, Next, then Save & New

### Let's create a Number field:

Note- Follow above steps 1 to 5 to create field and then follow below steps

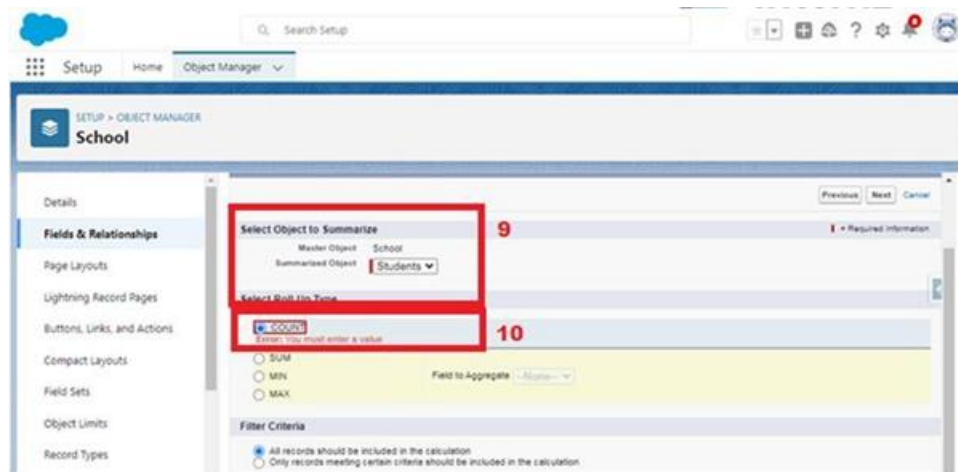
1. Select the Number as the Data Type, then click Next.
2. For Field Label, enter Class.
3. Click Next, Next, then Save & New
4. Follow steps 1 through 3 and create one more number field with Marks as the field labels.



### Let's create Roll-up summary fields on School Object to calculate the number of students

1. Click gear icon Select Setup, This launches Setup in a new tab.

2. click Object Manager
3. Select School.
4. Click Fields & Relationships
5. Click New.
6. Select the Roll-up summary field as data type
7. Enter the field label as Number of students
8. Click Next
9. Then select the master object summarized as students
10. Select count as roll-up and then click Next, Next and save.



### Create one more rollup summary field-

- From Setup, click Object Manager and select School.
- Click Fields & Relationships, then New.
- Select the Roll-up summary field as data type
- Enter the field label as Highest Marks
- Click Next
- Then select the master object summarized as students and then select Max as roll-up and then select Marks as field to aggregate.
- click Next, Next and save.

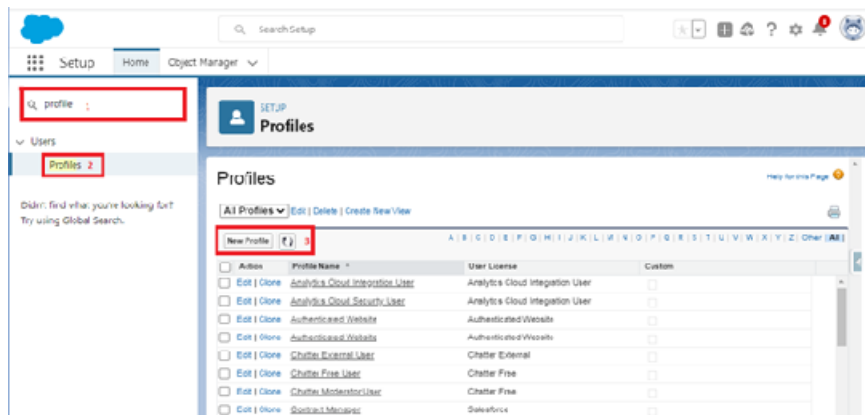
## Creation Of Fields For The Parent Objects

- Select the Text Area as the Data Type, then click Next.
- For Field Label, enter Parent Address.
- Click Next, Next, then Save & New.
- Select the Phone as the Data Type, then click Next.
- For Field Label, enter Parent Number.
- Click Next, Next, then Save & New

## **Profile**

### **Creation On Profile**

- From Setup enter Profiles in the Quick Find box
- Select Profiles.
- Click new, From the list of profiles, find Standard User (profile to clone)
- For Profile Name, enter School Profile
- Click Save.
- While still on the School profile page, then click Edit.
- Scroll down to Custom Object Permissions and Give view all access permissions.



## Clone Profile

[Help for this Page](#)

Enter the name of the new profile.

You must select an existing profile to clone from. ! = Required Information

Existing Profile:

User License:

Profile Name:  4

5

**Custom Object Permissions** 7

	Basic Access				Data Administration			Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All		Read	Create	Edit	Delete	View All	Modify All
Customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Users

### 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. By default, the username is the same as the email address.
5. Select a User License as salesforce.

6. NOTE- As Salesforce license can only be used by 2 Users at a time in Dev Org, so If you don't find salesforce license then deactivate a user who has salesforce license or change the license type from Salesforce to any other.
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.

**New User** Help for this Page

**User Edit** Save Save & New Cancel

**General Information** ! = Required Information

First Name

Last Name

Alias

Email

Username

Nickname

Title

Role

User License

Profile

Active ☒

Marketing User ☐

Offline User ☐

Knowledge User ☐

# Permission Sets

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.

Q. permis

Users

Permission Set Groups

Permission Sets

Custom Code

Custom Permissions

Didn't find what you're looking for? Try using Global Search.

## SETUP Permission Sets

On this page you can create, view, and manage permission sets.

In addition, you can use the SalesforceA mobile app to assign permission sets to a user. Download SalesforceA from the App Store or Google Play.

All Permission Sets | Edit | Delete | Create New View

New

Action	Permission Set Label	Description	License
<input type="checkbox"/>	Buyer	Allows access to the store. Lets users see p...	82B Buyer Permission Set One Seat
<input type="checkbox"/>	Buyer/Manager	Includes all Buyer capabilities, and allows a...	82B Buyer Manager Permission Set One Seat
<input type="checkbox"/>	CRM User	Denotes that the user is a Sales Cloud or S...	CRM User

## SETUP Permission Sets

Save Cancel

### Enter permission set information

Label teacher permission

API Name teacher\_permission

Description

Session Activation Required ☐

### Select the type of users who will use this permission set

Who will use this permission set?

- Choose "--None--" if you plan to assign this permission set to multiple users with different user and permission set licenses.
- Choose a specific user license if you want users with only one license type to use this permission set.
- Choose a specific permission set license if you want this permission set license auto-assigned with the permission set.

Not sure what a permission set license is? [Learn more here.](#)

License --None--

Save Cancel

## SETUP Permission Sets

Find Settings... Clone Delete Edit Properties Manage Assignments

### Permission Set Overview

Description	API Name
teacher_permission	teacher_permission

License

Session Activation Required ☐

Created By Vanghi Technologies, 04/04/2023, 4:35 pm

Last Modified By Vanghi Technologies, 04/04/2023, 4:35 pm

### Apps

**Assigned Apps**  
Settings that specify which apps are visible in the app menu.

**Assigned Connected Apps**  
Settings that specify which connected apps are visible in the app menu.

**Object Settings**  
Permissions to access objects and fields, and settings such as tab availability.

**App Permissions**  
Permissions to perform app-specific actions, such as "Manage Call Centers".

**Apex Class Access**  
Permissions to execute Apex classes.

## SETUP Permission Sets

Available Visible

☐ ☐

### Object Permissions

Permission Name	Enabled
Read	<input checked="" type="checkbox"/>
Create	<input checked="" type="checkbox"/>
Edit	<input checked="" type="checkbox"/>
Delete	<input type="checkbox"/>
View All	<input type="checkbox"/>
Modify All	<input type="checkbox"/>



## Permission Sets 2

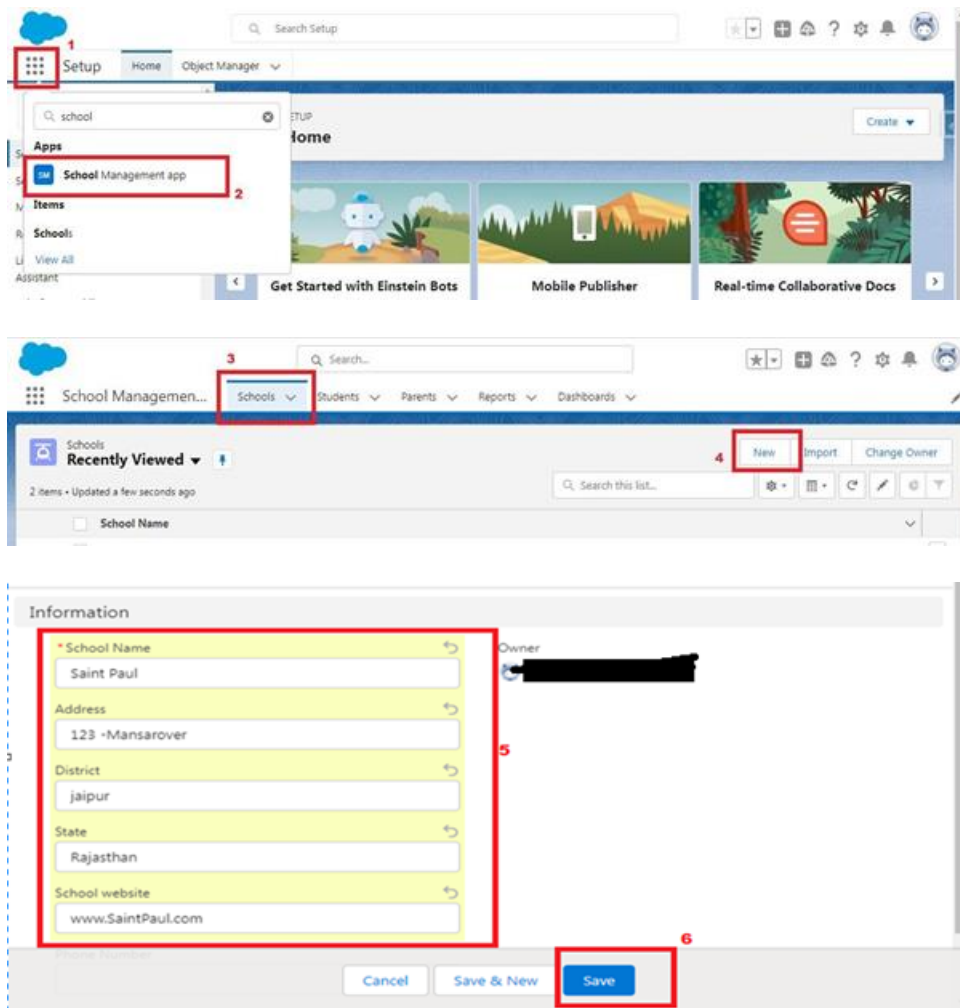
1. From Setup, enter Permission Sets in the Quick Find box, then select Permission Sets.
2. Click New.
3. Give the name of the Permission set name as Principal permission and then under the object settings give all permissions for the all 3 custom objects and assign them to the Principal user.

## User Adoption

### **Create Record (School)**

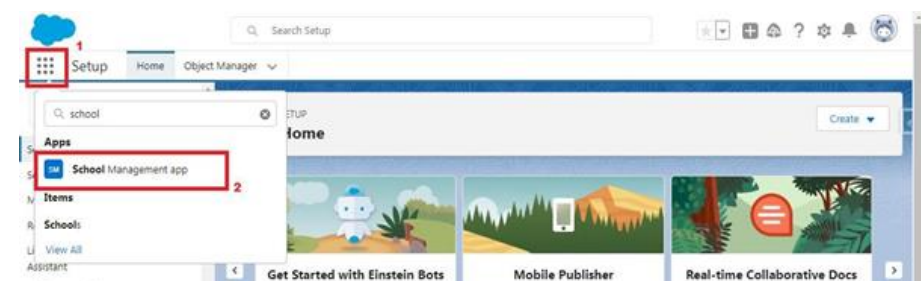
1. Click on App Launcher on left side of screen.
2. Search School Management App & click on it.
3. Click on Schools tab.
4. Click new button
5. Fill all School record details.
6. Click on Save Button

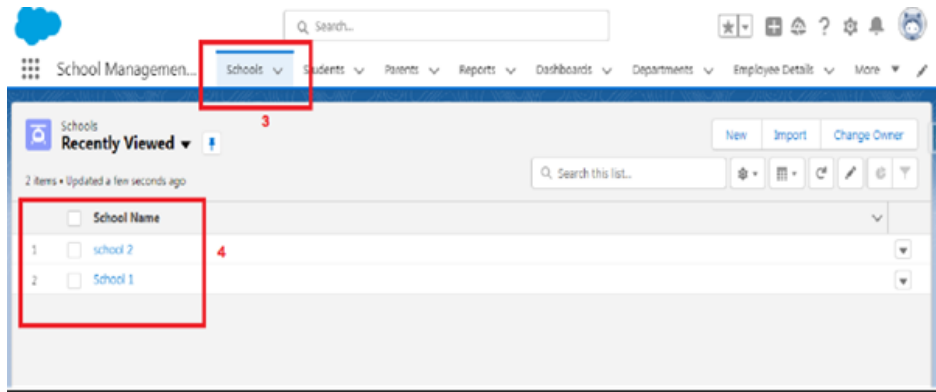




## View Record (School)

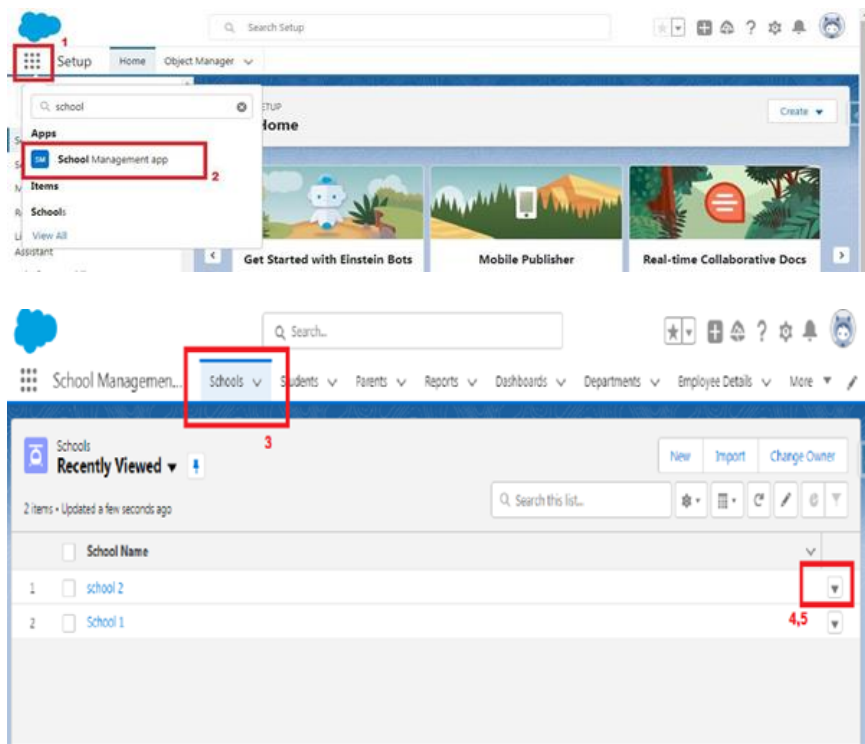
1. Click on App Launcher on left side of screen.
2. Search School Management App & click on it.
3. Click on Schools Tab.
4. Click on any record name. you can see the details of the School.





## 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.



## Reports

### 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 'School Management' app interface. The 'Reports' tab is selected in the top navigation bar. Below the navigation bar, there's a 'Reports' section with a 'Recent' list. A 'New Report' button is highlighted with a red box and a '2' label. Below this, a 'Select a Report Type' dialog is open. The 'Schools with Students' report type is selected, highlighted with a red box and a '3' label. To the right, a 'Details' panel for 'Schools with Students' is shown, with a 'Start Report' button highlighted by a red box and a '4' label. Below this, the 'New Schools with Students Report' screen is visible. The 'Save & Run' button is highlighted with a red box and a '5' label. The main content area shows a preview of the report data.

Report Name	Description	Folder	Created By	Created On	Subscribed
Opportunity Details		Private Reports		4/4/2023, 1:54 am	
Vehicle Details		Private Reports		3/4/2023, 7:12 pm	
Sample Flow Report: Screen Flows	Which flows run, what's the status of each interview, and how long do users take to complete the screens?	Public Reports	Automated Process	3/4/2023, 1:27 pm	

Report Type Name	Category
Schools	Standard
Schools with Students	Standard

School: School Name	student: student Name
school 2	Markk
school 2	Ferry
School 1	Jack

### Save Report

\* Report Name

Report Unique Name

Report Description

Cancel Save

## View Report

1. Click on App Launcher on left side of screen.
2. Search School Management App & click on it.
3. Click on Reports Tab.
4. Click on School with Students report and see records

The screenshot shows the Salesforce interface with the following elements:

- App Launcher:** Located in the top left, it shows a search for 'school' and a list of apps. The 'School Management app' is highlighted.
- Navigation Bar:** The 'Reports' tab is highlighted in the top navigation bar.
- Reports List:** A table of recent reports is shown. The 'Schools with Students Report' is highlighted.

Report Name	Description	Folder	Created By	Created On	Subscribed
<b>Schools with Students Report</b>		Private Reports	Varshiv Technologies	14/4/2023, 5:55 pm	
Properties with Customer Name Report		Private Reports	Varshiv Technologies	8/4/2023, 12:48 pm	
Events with Attendees		Private Reports	Varshiv Technologies	6/4/2023, 4:35 pm	
Candidate Internal Result Report		Private Reports	Varshiv Technologies	9/4/2023, 7:57 pm	
Job application with					

# Triggers

## Write A Trigger

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

Go to the gear icon and select the developer console.  
From the menu bar click on file and select Apex class.  
Now give the class name as schoolHandler  
Now Write the below code

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

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

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

# Flows

## 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 Gear icon and select setup

In 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. The 'Setup' tab is active. In the left sidebar, the 'Flows' link under 'Process Automation' is highlighted. The main content area shows the 'Flows' page with a table of flow definitions. The 'New Flow' button is highlighted in the top right corner.

Flow Label	Process Type	Act...	Te...	Package State	Pac...	Last Modified By	Last Modified D...
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			
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			
Create Process Exception Flow	Autolaunched Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Discount Flow	Screen Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Even Exchange Flow	Screen Flow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Generate Appointment Invitation	Salesforce Scheduler Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			
Inbound Cancel Appointment	Salesforce Scheduler Flow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Managed-Installed			

The 'New Flow' dialog box is shown. It contains several options for creating a new flow. The 'Record-Triggered Flow' option is highlighted with a red box. The 'Create' button is visible at the bottom right.

Icon	Flow Type	Description
	Screen Flow	Guides users through a business process that's launched from Lightning pages, Experience Cloud sites, quick actions, and more.
	Record-Triggered Flow	Launches when a record is created, updated, or deleted. This autolaunched flow runs in the background.
	Schedule-Triggered Flow	Launches at a specified time and frequency for each record in a batch. This autolaunched flow runs in the background.
	Autolaunched Flow (No Trigger)	Launches when invoked by Apex, processes, REST API, and more. This autolaunched flow runs in the background.
	Platform Event—Triggered Flow	Launches when a platform event message is received. This autolaunched flow runs in the background.
	Record-Triggered Orchestration	Launches when a record is created or updated. An orchestration lets you create a multi-step, multi-user process.

In the search bar type student and click done.

Configure Start

Select Object

Select the object whose records trigger the flow when they're created, updated, or deleted.

\* Object

Search objects...

A value is required.

Configure Trigger

Trigger the Flow When:

- ☒ A record is created
- ☐ A record is updated
- ☐ A record is created or updated
- ☐ A record is deleted

Set Entry Conditions

Cancel Done

Select (+)

type action and type email as follows.

New Action

Filter By

Category

All

Users

Commerce

Group

Work Plans

Work Steps

Notifications

Sales leads

Action

email

Send Email

emailSimple-emailSimple

Lights, camera, action!

Select an action to configure.

Cancel Done

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}

### New Action

Filter By  
Category ▼

All  
Users  
Commerce  
Group  
Work Plans  
Work Steps  
Notifications  
Sales leads

Action  
Send Email

Use values from earlier in the flow to set the inputs for the "Send Email" core action. To use its outputs later in the flow, store them in variables.

\* Label  
\* API Name

Description

Set Input Values

A<sub>3</sub> \* Body

Cancel Done

### New Action

Notifications  
Sales leads  
Appointments  
Task  
Price books  
+ Create HTTP Callout (Beta)

Set Input Values

A<sub>3</sub> \* Body  
Enter value or search resources...

A<sub>3</sub> Subject  
Enter value or search resources...

A<sub>3</sub> Recipient Email Addresses (collection) Don't Include

A<sub>3</sub> Recipient Email Addresses (comma-separated) Include

Rich-Text-Formatted Body

Cancel Done

click on done and Click on save  
Flow label:Student flow  
Flow API Name:Student\_flow  
and then click Activate.

### Save the flow

\* Flow Label  
Flow API Name

Description

Show Advanced

Cancel Save