



PROJECT TITLE : CREATION OF AN APPLICATION FOR SCHOOL MANAGEMENT – ADMIN



Presented by

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4.Maddu Ramya	-	https://www.salesforce.com/trailblazer/s208x1a05f2
5.Chalamalasetty Keerthana	-	https://trailblazer.me/id/s208x1a05d61
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INTRODUCTION

Overview:

The project "Creation of an Application for School Management - Admin" in Salesforce aims to develop a comprehensive and customizable cloud-based solution for managing various administrative tasks in educational institutions. Leveraging Salesforce's powerful platform and tools, the application will streamline and automate administrative processes, improving efficiency and data management.

Purpose:

- 1.The project aims to develop an application for school management that automates administrative tasks, enhancing efficiency and reducing manual effort.
- 2.It centralizes student, teacher, and staff information, ensuring better data management and accuracy in records.
- 3.The application fosters seamless communication between teachers, parents, students, and administrators through announcements and notifications.
- 4.It simplifies attendance tracking, academic performance monitoring, and examination/result management for teachers and administrators.
- 5.The application provides valuable reports and analytics to aid data-driven decision-making for improved school performance and resource management.

LITERATURE SURVEY

Existing Problem:

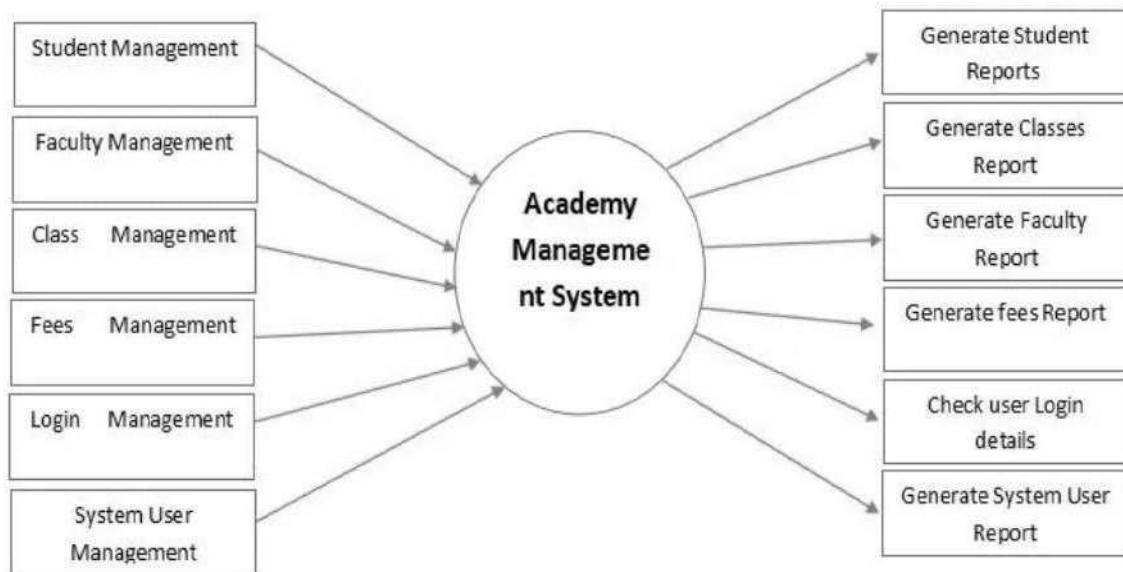
- 1.The existing problem with the creation of an application for school management is the lack of a unified and efficient system to handle various administrative tasks.
- 2.Many schools still rely on manual processes, spreadsheets, and disparate software, leading to inefficiencies, data inconsistencies, and communication gaps.
- 3.This fragmented approach often results in difficulties in tracking attendance, managing student information, generating accurate reports, and ensuring smooth communication among teachers, parents, and administrators.
4. The absence of a comprehensive and user-friendly school management application hampers the overall efficiency and effectiveness of school operations.

Proposed Solution:

- 1.The proposed solution to suggest is to develop a comprehensive cloud-based school management application with an intuitive interface, automation features, and seamless integration.
2. It will facilitate efficient attendance tracking, academic management, and communication among teachers, parents, students, and administrators.
3. The application will provide valuable insights through analytics and reports, ensuring data-driven decision-making.
4. With robust security measures and customization options, schools can enhance overall efficiency and productivity, creating a more streamlined and effective learning environment.

THEORITICAL ANALYSIS

Block Diagram:



Hardware and Software Designing:

In the Salesforce platform, the School Management Application would be developed as a cloud-based software solution, which means most of the hardware requirements would be taken care of by Salesforce itself. However, there are still some essential hardware and general requirements to consider:

1. Hardware Requirements

2. Salesforce Platform Requirements

- Salesforce Account
- Edition
- Licenses

3. Salesforce Limits and Allocations

- API Limits
- Data Storage
- Custom Objects and Fields

4. Security and Compliance

- Data Privacy
- User Authentication

5. Customization and Development

- Development Environment
- Integration Requirements

6. User Training and Support

- User Training
- Technical Support

PROCESS AND RESULTS

1. Creating Developer Org:

Creating a developer org in salesforce

- Go to developer.salesforce.com
- Click on sign up.
- On the sign up form, enter the following details
 - First name & Last name
 - Email
 - Role – Administrator
 - Company - College Name
 - Country – India
 - Postal Code - pin code
 - Username- should be a combination of your name and company

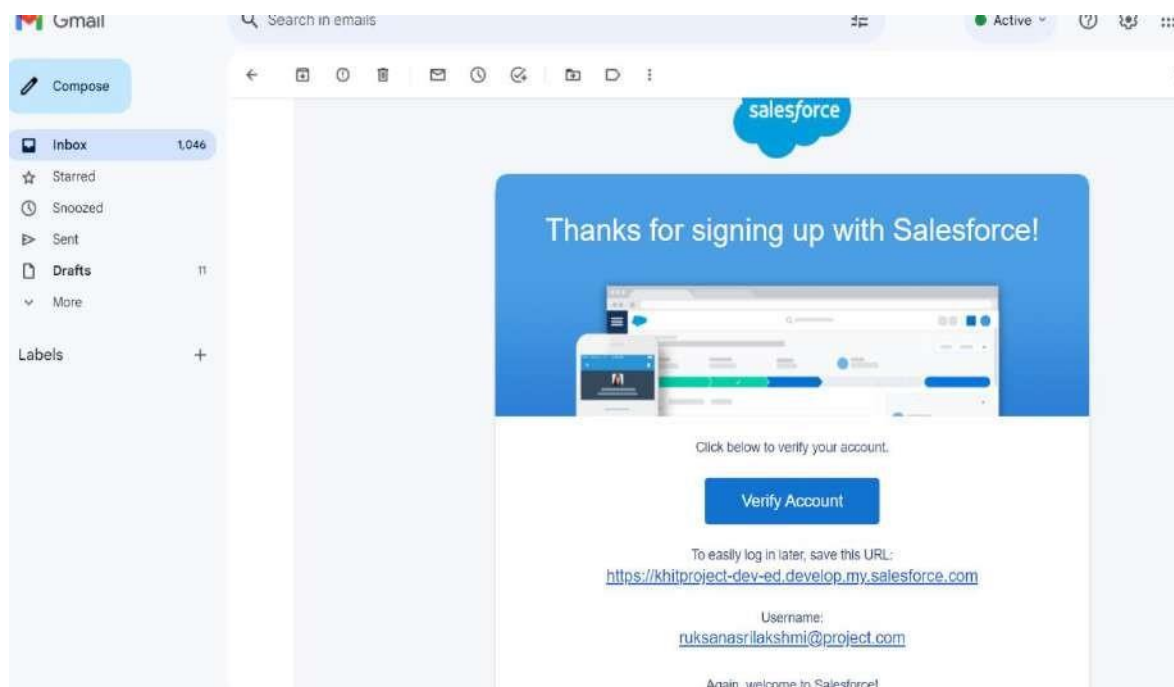
The screenshot shows the Salesforce Developer Edition Sign-up page. The left side features a blue background with the text "bring your ideas to life" and a list of benefits: "Build apps fast with drag and drop tools", "Customize your data model with clicks", "Go further with Apex code", "Integrate with anything using powerful APIs", "Stay protected with enterprise-grade security", and "Customize UI with clicks or any leading-edge web framework". The right side contains the sign-up form with the following fields and values:

Field	Value
First Name*	Shaik
Last Name*	Ruksana
Email*	208x1a05g1@khitguntur.ac.in
Role*	Administrator
Company*	KHITProject
Country/Region*	India
Postal Code*	522004
Username*	ruksanasnilakshmi@project.com

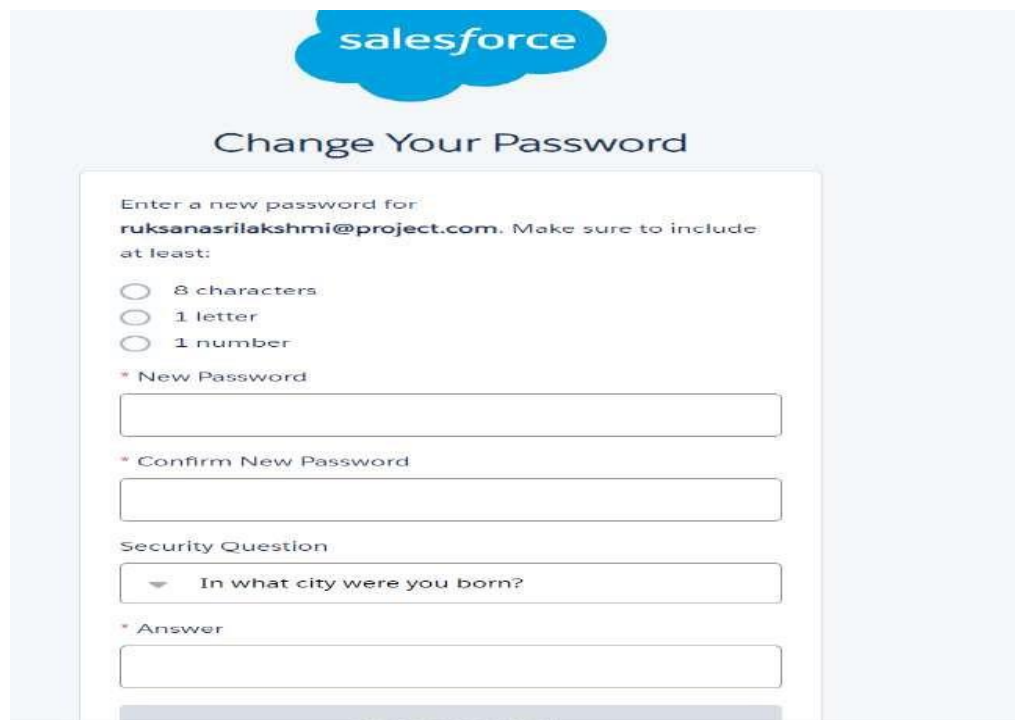
Below the form, there is a checkbox for "I agree to the Main Services Agreement – Developer Services and Salesforce Program Agreement." which is checked. At the bottom, there is a checkbox for "Yes, I would like to receive marketing communications regarding Salesforce products, services and events. I can unsubscribe at any time." which is unchecked. The browser's address bar shows "developer.salesforce.com/signup". The Windows taskbar at the bottom shows the date as 05-08-2023 and the time as 19:02.

2.Account Activation:

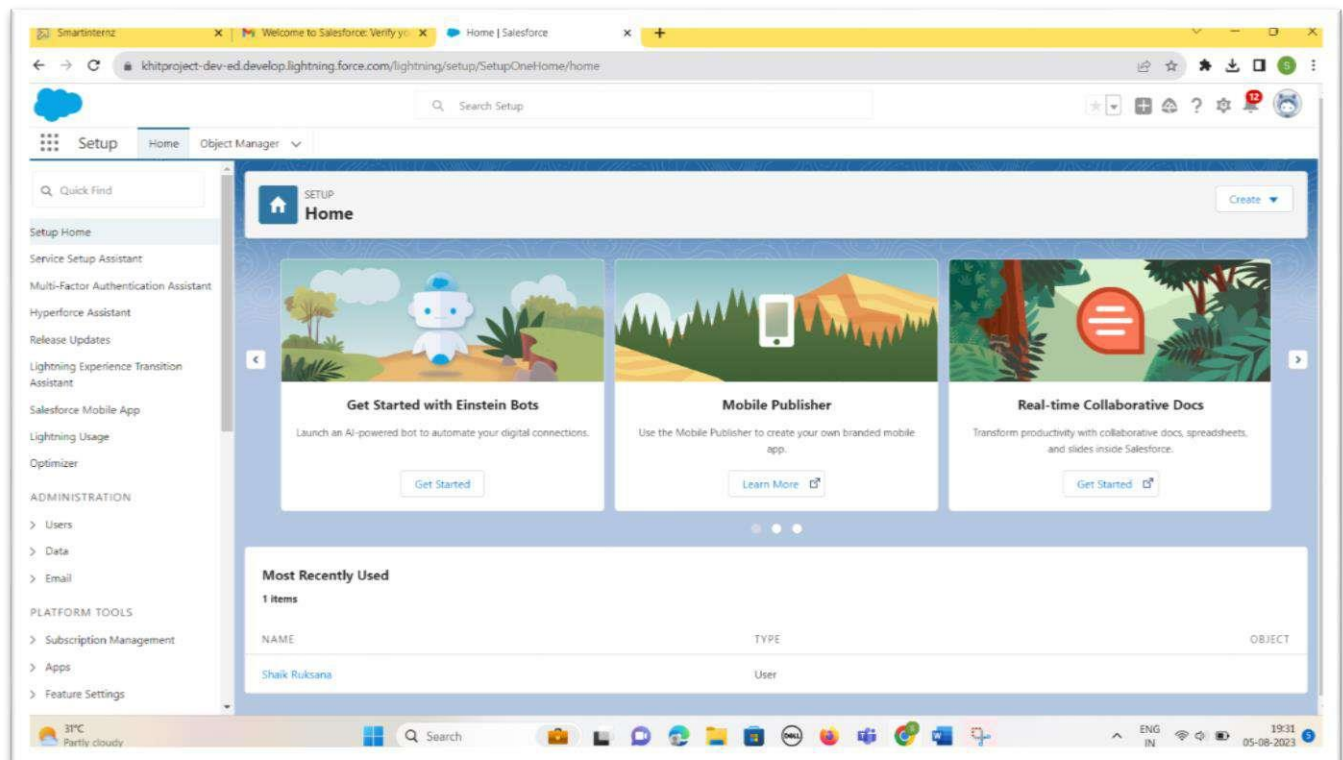
We have to verify our email to activate the account. So, click on verify account to activate the Salesforce Account



After verifying, it asks to set up the password including a security question like below:

A screenshot of the Salesforce "Change Your Password" setup screen. The screen has a blue header with the Salesforce logo. The main heading is "Change Your Password". Below this, it says "Enter a new password for **ruksanasrilakshmi@project.com**. Make sure to include at least:" followed by three radio button options: "8 characters", "1 letter", and "1 number". There are two required password fields: "New Password" and "Confirm New Password". Below these is a "Security Question" section with a dropdown menu showing "In what city were you born?". There is also an "Answer" field. At the bottom, there is a "Change Password" button.

After setting the password, the page redirects to the Salesforce Setup Page where we are going to do each and every step regarding our project. It looks like this.



Here's a brief introduction to the key components of the Salesforce setup page:

1.Home: The central hub for Salesforce administrators to access and manage all setup options.

2.Object Manager: Customize and manage standard and custom objects, defining data structure and relationships.

3.App Launcher: Easily switch between Salesforce apps and custom-built applications.

3.OBJECT

Salesforce objects are database tables that permit you to store data that is specific to an organization. Salesforce objects are of two types:

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

- ❖ 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.

Coming to our project we have to create three custom objects:

- 1.School Object
- 2.Student Object
- 3.Parent Object

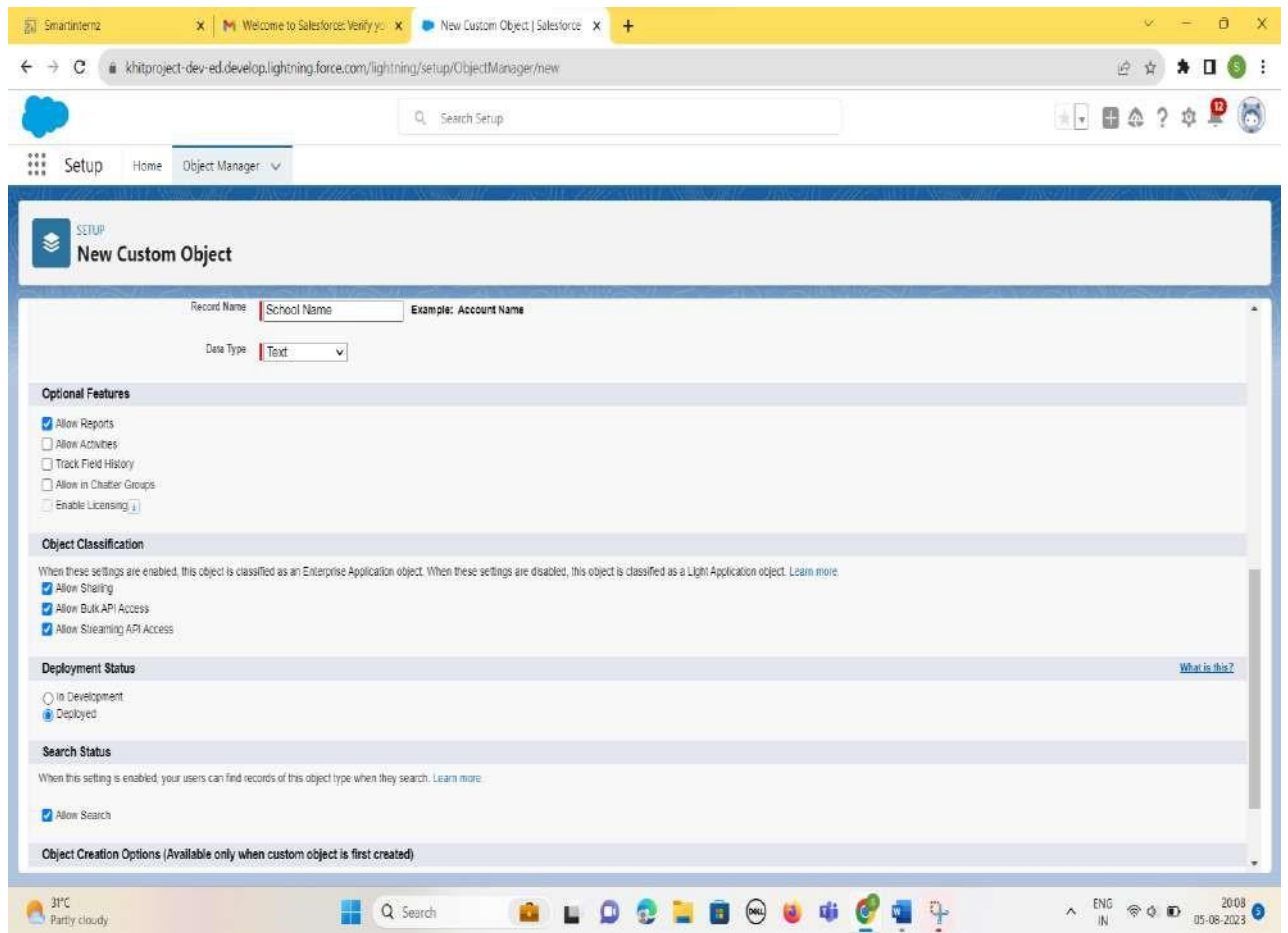
Goto Object Manager and select Custom Object New and Create three objects
First Object – School

1. Label: School
2. Plural Label: Schools
3. Record Name: School Name
4. Check the Allow Reports checkbox 5.
Check the Allow Search checkbox
6. Click Save.

The screenshot displays the 'New Custom Object' configuration page in Salesforce. The page is titled 'New Custom Object' and includes a 'Setup' navigation bar. The main section is 'Custom Object Definition Edit', which contains the following fields and options:

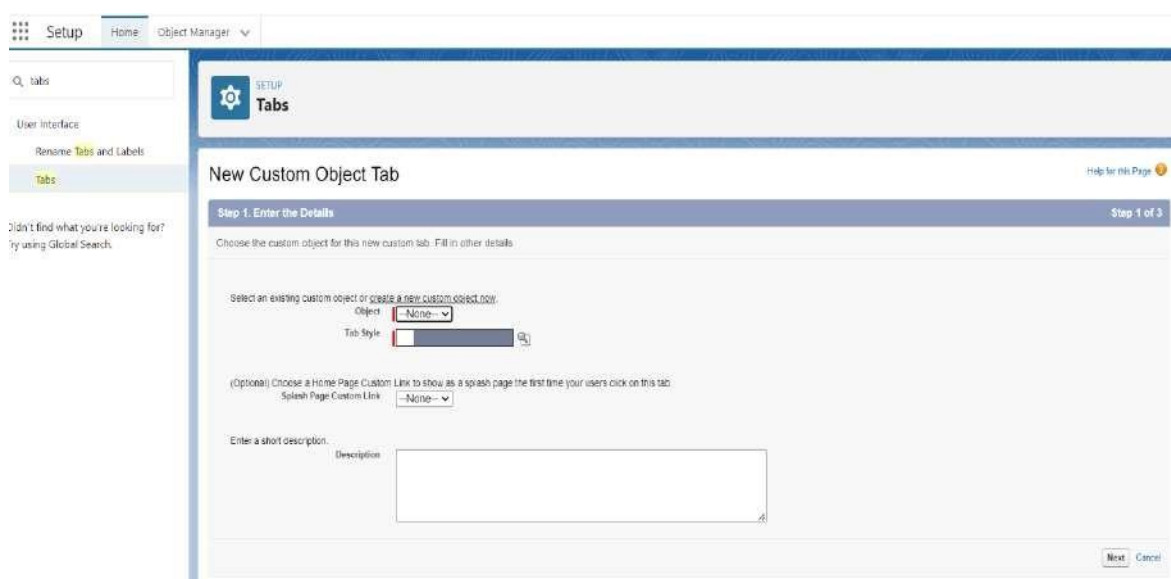
- Custom Object Information:**
 - Label:** School (Example: Account)
 - Plural Label:** Schools (Example: Accounts)
 - Starts with vowel sound:** ☐
 - Object Name:** School (Example: Account)
 - Description:** (Empty text area)
 - Context Sensitive Help Setting:** ☒ Open the standard Salesforce.com Help & Training window; ☐ Open a window using a Visualforce page
 - Context Name:** --None--

The page also includes a 'Save' button and a 'Cancel' button. A yellow banner at the top indicates that permissions for this object are disabled for all profiles by default.




Now create a custom tab. Click the Home tab.




Search for Tabs Then Click it -> Custom Tab-> New



Select Object as School. And any Tab style. Click Next, Next and then Save. It looks like this.

Custom Object Tabs			New	What Is This?
Action	Label	Tab Style		
Edit Del	<u>Schools</u>	 Building		

In the same way, we created the two Custom objects like Student Object and Parent Object and their respective tabs as below:

Custom Object Tabs			New	What Is This?
Action	Label	Tab Style		
Edit Del	<u>Parents</u>	 Telescope		
Edit Del	<u>Schools</u>	 Building		
Edit Del	<u>Students</u>	 Books		

4. Creating the 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 two types of app -

1. Standard App: Standard apps come with every occurrence of Salesforce as default. Many features like Sales, Marketing, Community, call center, content, Salesforce Chatter, App Launcher, etc are present in it.

2. Custom Apps: Custom apps are created according to need of user. Custom Apps are made by using standard and custom tabs together.

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.



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 Name ⓘ
School Management

* Developer Name ⓘ
School Management

Description ⓘ
Enter a description...

App Branding

Image ⓘ


Primary Color Hex Value ⓘ
 #0070D2

Org Theme Options
☐ Use the app's image and color instead of the org's custom theme

Progress bar with 5 steps, the first step is active.

Next

New Lightning App

Schools

Students

Parents

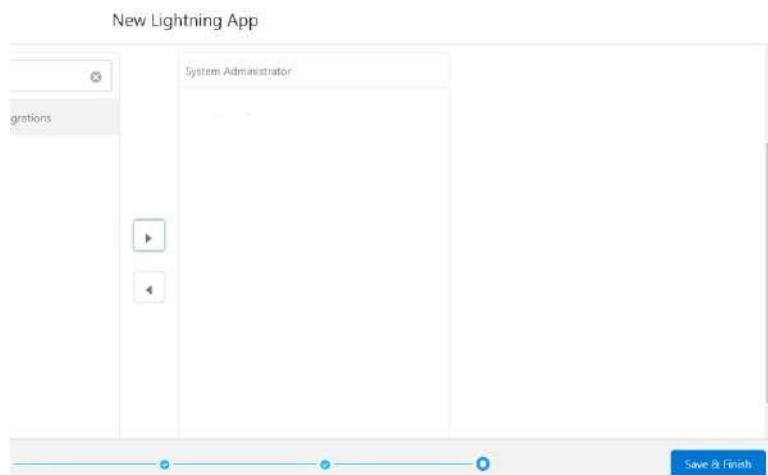
Reports

Dashboards

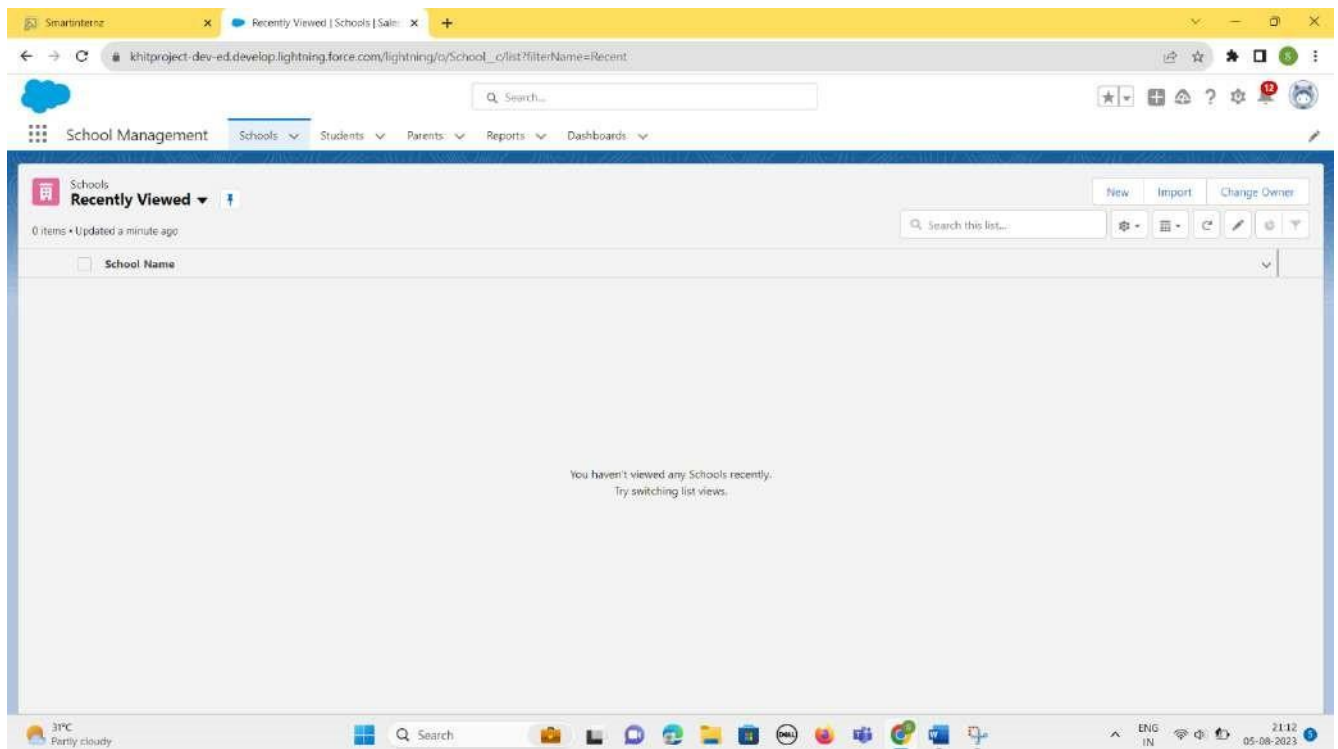
Progress bar with 5 steps, the fourth step is active.

Back

Next



If we want to check the app we have created .Goto App Launcher→Search for the School Management App→Click it. The App looks like this.



5.Fields and Relationship

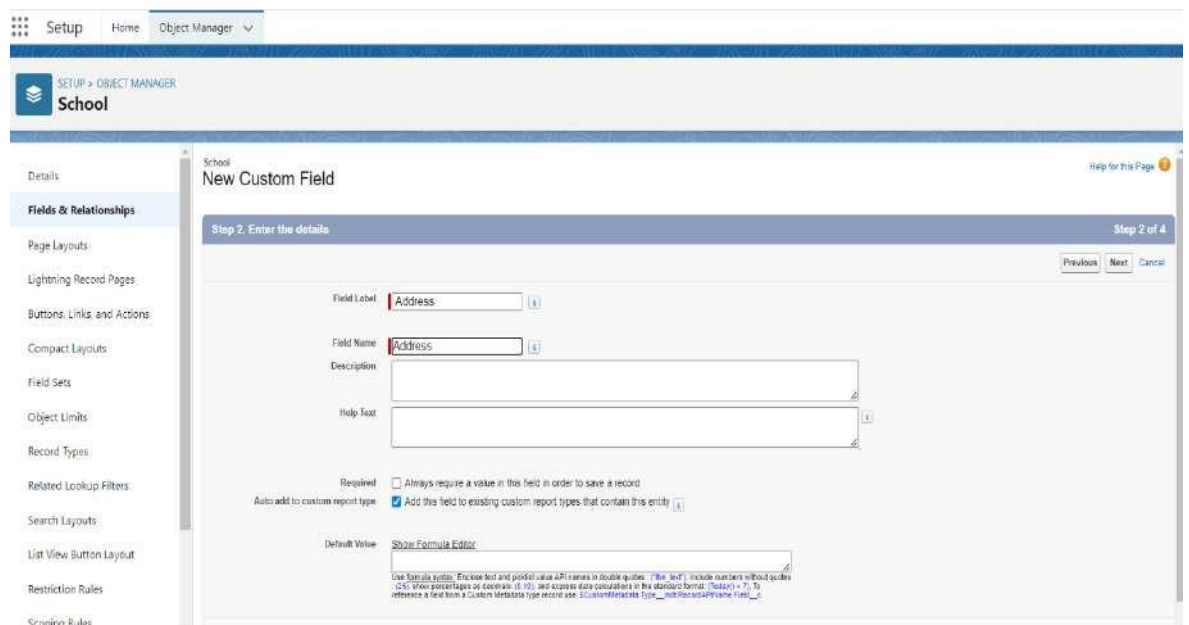
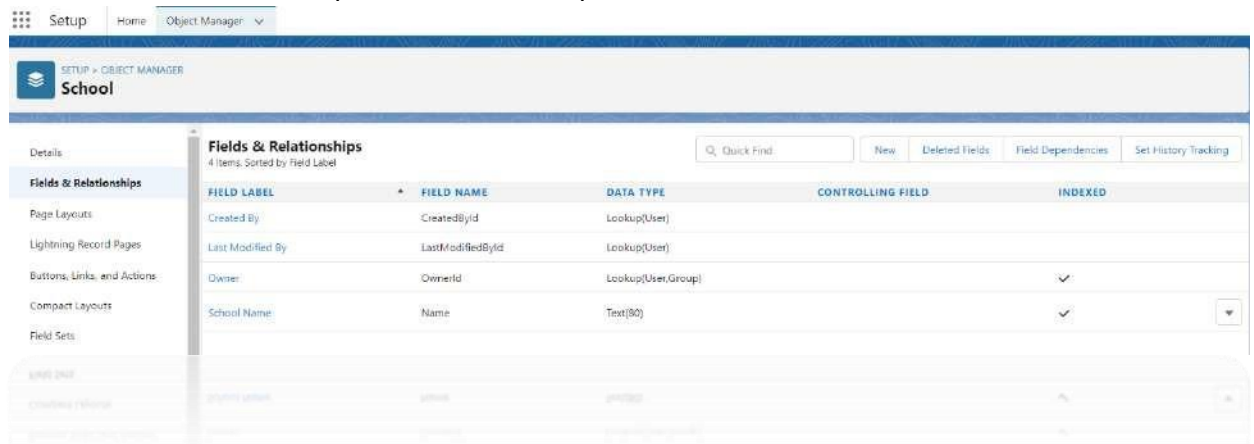
An object relationship in Salesforce is a two-way association between two objects. Relationships are created by creating custom relationship fields on an object. This is done so that when users view records, they can also see and access related data.

Creation Of Fields for The School Object:

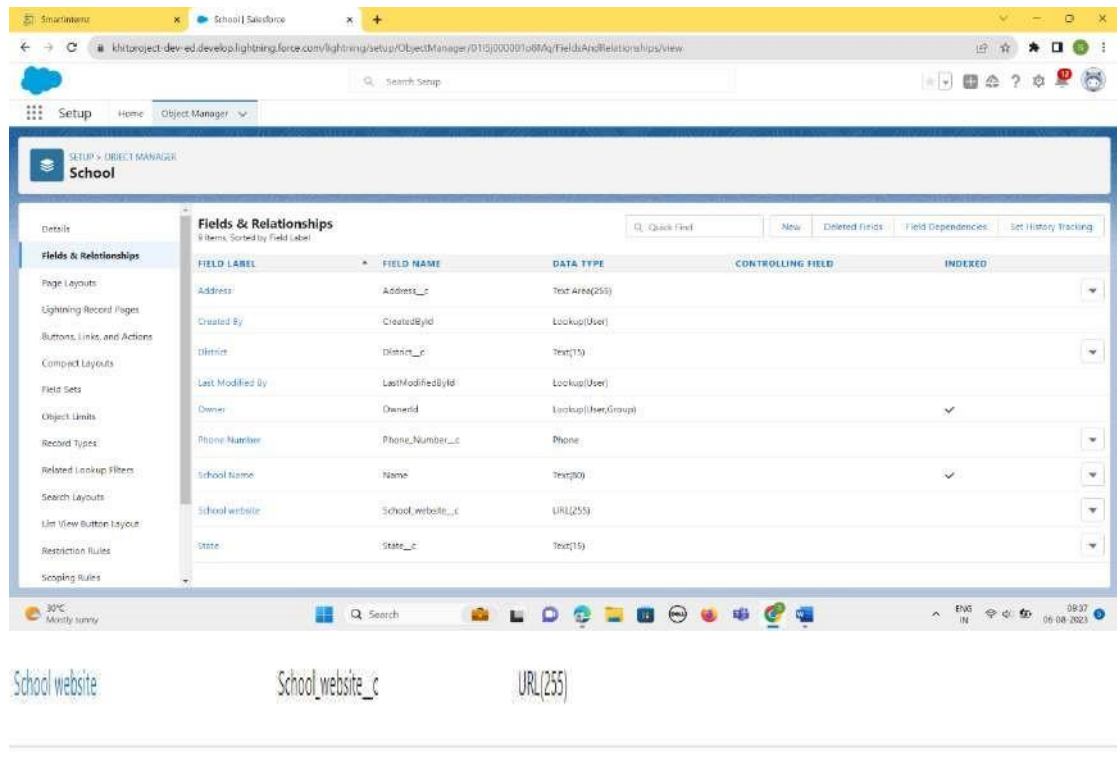
1. Click the gear icon and select Setup. This launches Setup in a new tab.
2. Click the Object Manager tab next to Home.
3. Select School.
4. Select Fields & Relationships from the left navigation

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.

We have to create 5 fields for the School Object. They are – *Address, District, State, Phone, URL* with their respective Relationships.



After creating all the required fields for the School Object



Creation Of Fields for The Student Objects:

Field 1 – Results and Relationship is of Picklist type and we have to enter the picklist values as Pass, Fail.

Field 2– Class and Relationship is of Number type

Field 3– Marks and Relationship is of Number type

Field 4– Number of Students and Relationship is of Roll-up Summary type After creating the required above fields looks like this

Setup > OBJECT MANAGER
Student

Details

Fields & Relationships
7 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Class	Class__c	Number(18, 0)		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Marks	Marks__c	Number(18, 0)		
Results	Results__c	Picklist		
School	School__c	Master-Detail(School)		✓
Student Name	Name	Text(80)		✓

Setup > OBJECT MANAGER
School

Details

Fields & Relationships
11 Items, Sorted by Field Label

Created By	CreatedById	Lookup(User)	
District	District__c	Text(15)	
Highest Marks	Highest_Marks__c	Roll-Up Summary (MAX Student)	
Last Modified By	LastModifiedById	Lookup(User)	
Number of students	Number_of_students__c	Roll-Up Summary (COUNT Student)	

Creation Of Fields for The Parent Objects:

We have to create 2 fields :

Field1 – Parent Address and relationship is of Text area Field2-

Parent Number and relationship is of Phone.

After creating the above two fields, it looks like this:

6.Profile

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

SETUP > OBJECT MANAGER
Parent

Details

Fields & Relationships
6 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User/Group)		✓
Parent Address	Parent_Address__c	Text Area(255)		
Parent Name	Name	Text(80)		✓
Parent Number	Parent_Number__c	Phone		

Creation On Profile:

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

SmartInternz x Profiles | Salesforce x +

khilproject-dev-ed.develop.lightning.force.com/lightning/setup/enhancedProfiles/home

Setup Home Object Manager

Search Setup

Hyperforce Assistant

Users

Profiles

Data

Mass Transfer Approval Requests

Feature Settings

Data.com

Prospector Preferences

Prospector Users

Functions

Marketing

Lead Processes

Sales

Products

Asset Settings

Product Schedules

Settings

SETUP Profiles

Profiles

All Profiles Edit Delete Create New View

New Profile

Action	Profile Name	User License	Custom
<input type="checkbox"/> Edit Clone	Salesforce API Only System Integrations	Salesforce Integration	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Silver Partner User	Silver Partner	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Solution Manager	Salesforce	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Standard Platform User	Salesforce Platform	<input type="checkbox"/>
<input type="checkbox"/> Edit Clone	Standard User	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit Clone	System Administrator	Salesforce	<input type="checkbox"/>

1-6 of 6 0 Selected

48 - 4 Profiles, About 4 MB

Page 1 of 1

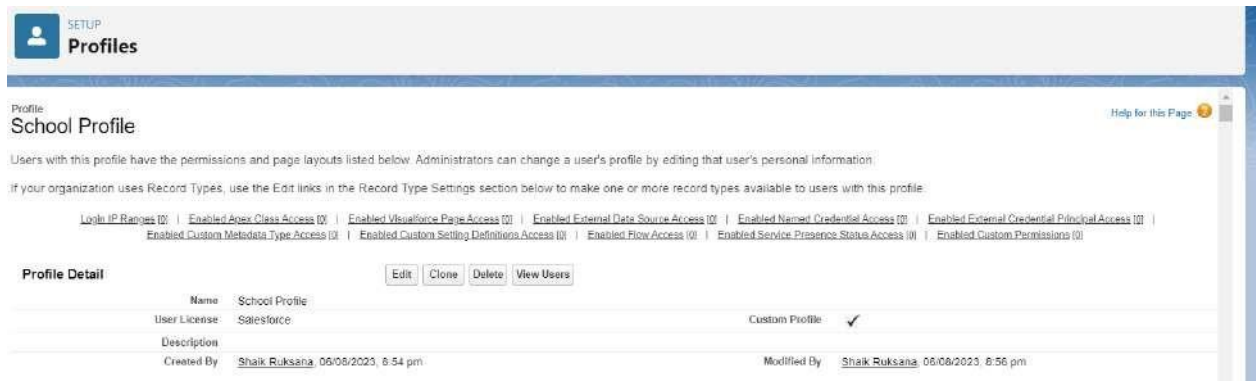
33°C Partly cloudy

Search

ENG IN

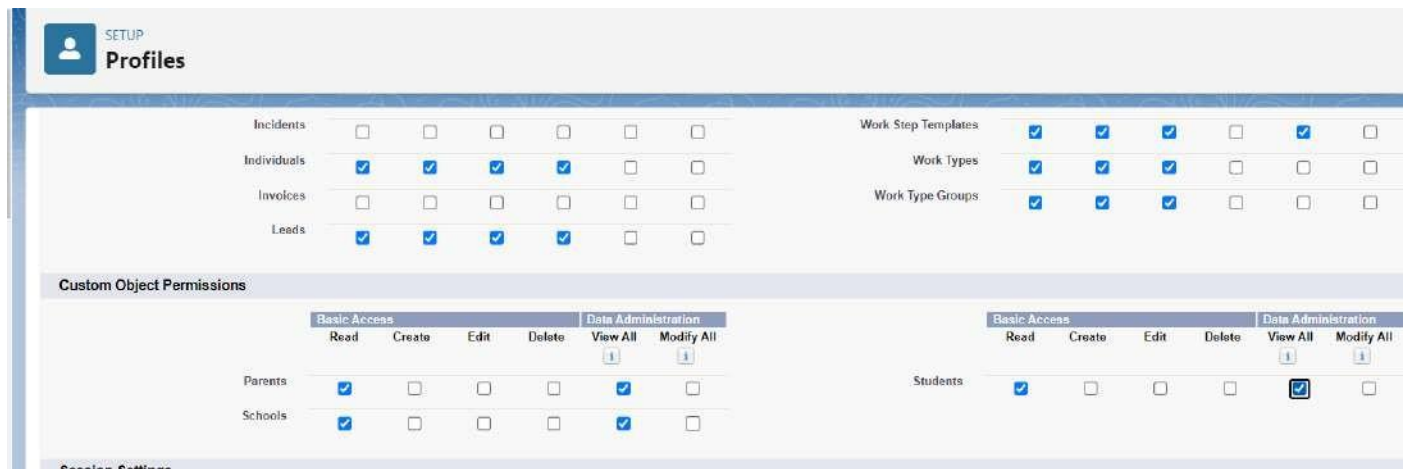
20:54 06-08-2023

The “School Profile” is created as below:



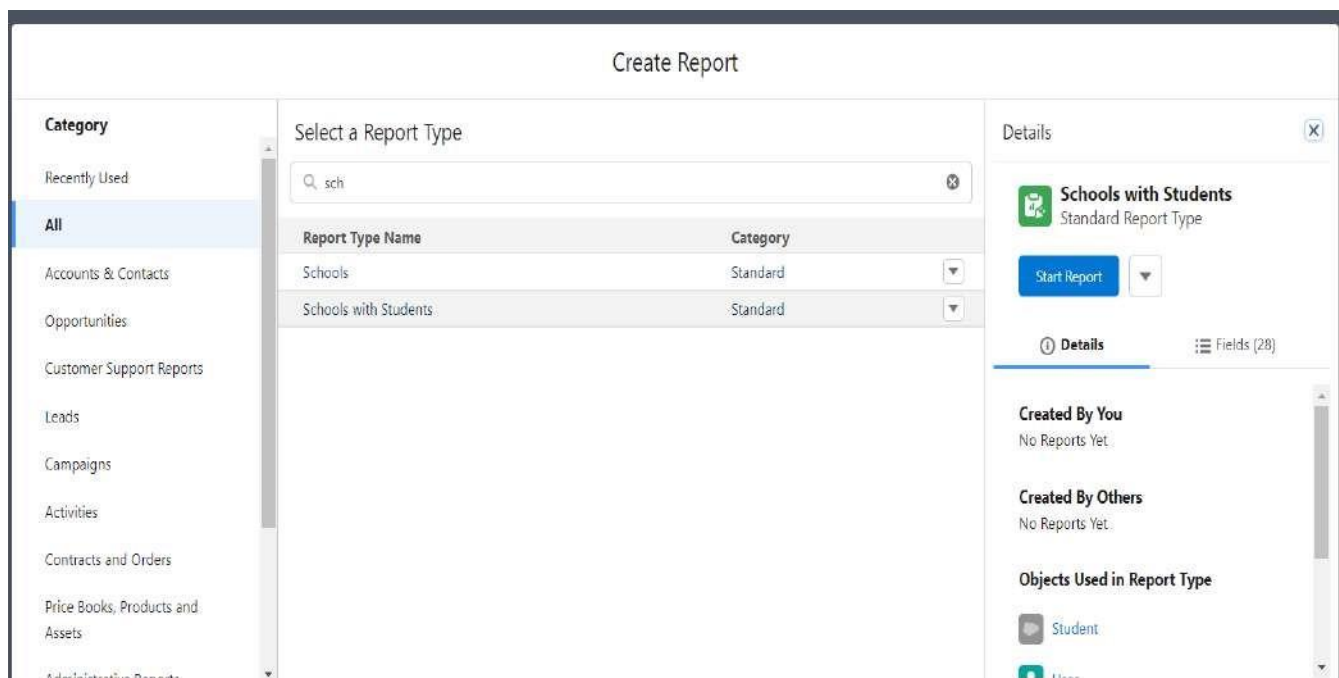
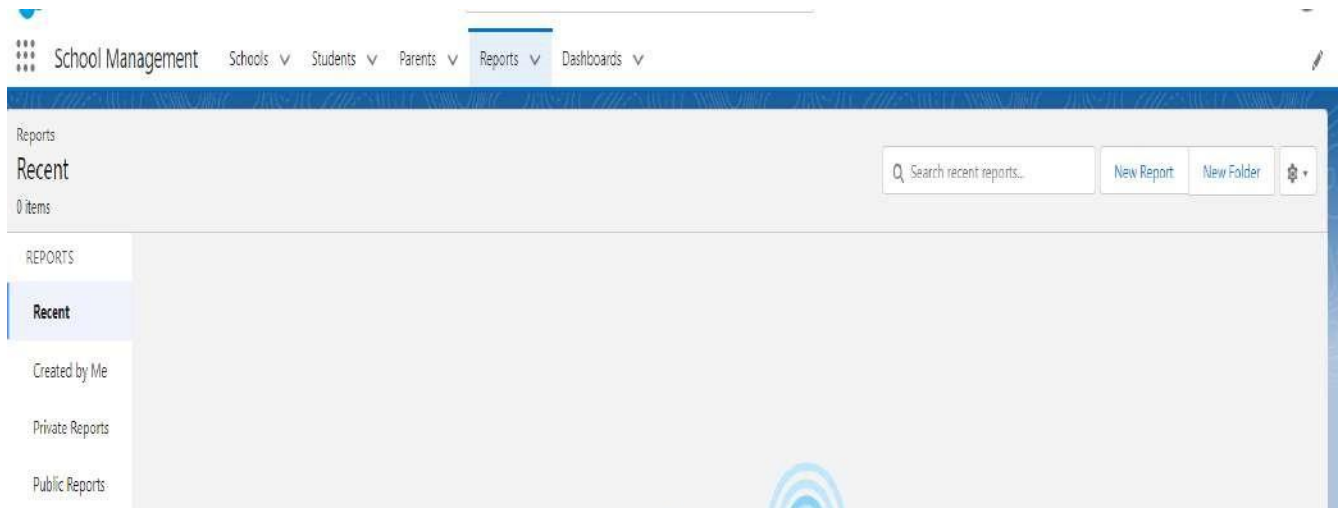
10.Reports

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



Create Report:

- 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 following is the format of the Report for the school:

It contains *Outlines* and *Filters*

In Outlines tab we have- Group Rows, Group Columns.

In the Columns Tab, we have Columns like *School: School Name*, *Student: Student Name*

Now we have to save the report with the Report Name – “*Schools with Students Report*”.

Click save & run at the top and save it as below:

ADVANTAGES & DISADVANTAGES

Advantages:

- 1.Cloud-based
- 2.Integrated Ecosystem
- 3.Customizability
- 4.User-Friendly Interface
- 5.Security

and Compliance **Disadvantages:**

- 1.Cost
- 2.Learning Curve
- 3.Dependency on Salesforce
- 4.API Limitations
- 5.Data Ownership
- 6.Offline Access
- 7.Limited Customization in Low-Code Solutions

APPLICATIONS

- 1.Schools and K-12 Institutions
- 2.Colleges and Universities
- 3.Online Learning Platforms
4. Tutoring Centres and Coaching Institutes
5. Non-Profit Educational Initiatives
- 6.Training and Development Programs
7. Vocational Institutes
8. Special Education Programs
9. After-School Programs
10. Language Schools

CONCLUSION

In conclusion, the School Management Application developed on the Salesforce platform offers a comprehensive and efficient solution to streamline administrative tasks and improve communication within educational institutions. Through a user-friendly interface and automation features, the application simplifies attendance tracking, academic management, and examination processes.

FUTURE SCOPE

The School Management Application in Salesforce has a promising future scope, with several potential enhancements and improvements that can be implemented to further enhance its functionality and impact. Some future enhancements include:

- 1.Mobile Application
- 2.Artificial Intelligence Integration
- 3.Learning Management System (LMS) Integration
- 4.Parent-Teacher Conference Scheduling
- 5.Alumni Management
- 6.Financial Aid and Scholarship Management
- 7.Classroom IoT Integration
- 8.Gamification and Rewards
- 9.Virtual Reality (VR) and Augmented Reality (AR) Support
- 10.Predictive Analytics for Student Success
- 11.Multilingual Support
- 12.Voice Assistant Integration

THANK YOU