



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

Go to the root folder
npm run dev



Presented by

TeamId: LTVIP2023TMID06090

Team Leader: Devireddy Vaishnavi(208x1a0513@khitguntur.ac.in)

Member 1: Pavuluri.Lavanya(208x1a4255@khitguntur.ac.in)

Member 2: Mondeddu Sandeepreddy(208x1a4252@khitguntur.ac.in)

Member 3: sk.NInure Musabbir(208x1a4239@khitguntur.ac.in)

Member 4.BurugubandVenkatanagavardhan(208x1a0104@khitguntur.ac.in)

INTRODUCTION

Overview:

Overview: The "Creation of an Application for School Management - Admin" project aims to develop a comprehensive and user-friendly web or mobile application that will streamline and enhance the administrative tasks and processes within a school environment. The application is primarily designed to cater to the needs of school administrators, helping them manage various administrative functions efficiently and effectively. This project intends to leverage technology to simplify the management of student information, staff data, resources, schedules, communication, and other vital aspects of school administration.

Purpose:

User Authentication and Access Control: Implement a secure login system to ensure that only authorized personnel can access the application. Different levels of access permissions can be defined based on roles such as administrators, teachers, staff, etc.

Student Information Management: Provide a centralized database to store and manage student records, including personal details, attendance, academic performance, medical information, and more. Enable easy retrieval and updates of student information.

Staff Management: Create a platform for managing staff information, including teachers, administrative staff, and other employees. Keep track of their roles, contact information, schedules, and professional development.

LITERATURE SURVEY

Existing Problem:

Manual and Tedious Processes: Many schools still rely on manual methods for managing administrative tasks such as student record keeping, attendance tracking, and scheduling. This can lead to errors, inefficiencies, and consume a significant amount of time and resources.

Disparate Data Sources: Schools often have data stored across various systems, spreadsheets, and physical files, making it difficult to access and consolidate information efficiently. This can hinder quick decision-making and lead to data inconsistencies.

Communication Gaps: Traditional communication methods like paper notices or emails can result in communication gaps between administrators, teachers, staff, and parents. Important announcements might not reach the intended recipients in a timely manner.

Limited Data Analysis: Without a centralized system for data collection and analysis, schools struggle to gain insights into student performance, attendance trends, and resource utilization. This lack of data-driven decision-making can hinder academic progress.

Complex Scheduling: Creating and managing class schedules, teacher assignments, and room allocations can be intricate and prone to errors, especially in institutions with a large number of courses and staff members.

Proposed Solution:

Centralized School Management Platform: Develop a web or mobile application that serves as a centralized hub for all administrative tasks. This platform will house modules for student information, faculty management, attendance tracking, scheduling, communication, reporting, and more.

User-Friendly Interface: Design an intuitive and user-friendly interface that requires minimal training for administrators to navigate and utilize the application's features effectively.

Role-Based Access Control: Implement a role-based access control system that ensures different user roles (administrators, teachers, staff) have appropriate access to different sections of the application.

Comprehensive Student Information System: Create a module to manage student records, including personal details, attendance, academic performance, and medical information. Administrators can easily update and retrieve student information

System Architecture and Design:

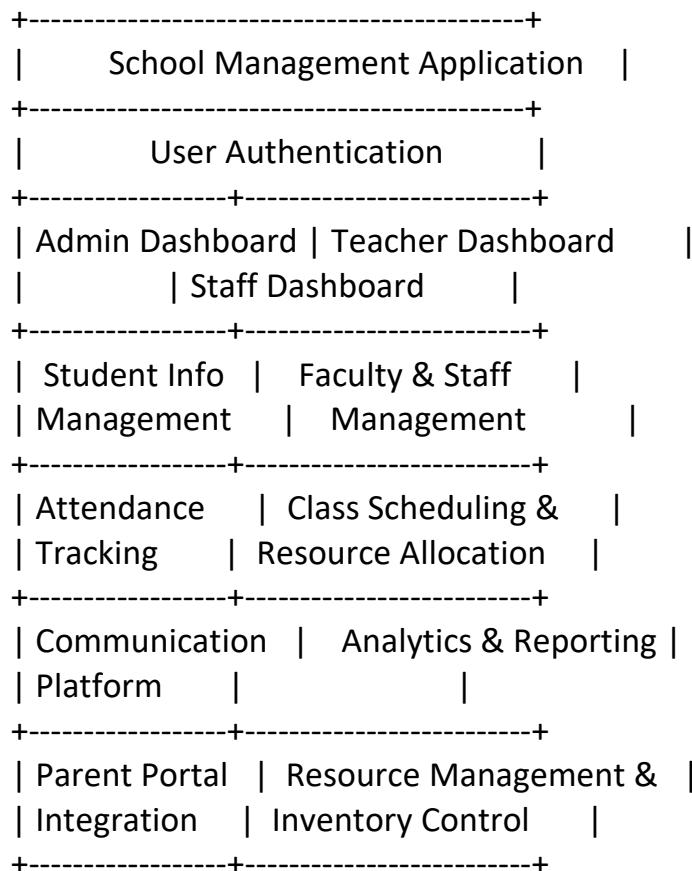
1. Choose a modern web or mobile application development framework to ensure scalability and cross-platform compatibility.
2. Design a user-friendly and intuitive interface for easy navigation and adoption.
3. Implement a cloud-based architecture for seamless access and data storage.

2. User Authentication and Access Control:

1. Develop a secure login system with multi-level authentication for administrators, teachers, staff, and other authorized personnel.
2. Assign role-based access control to ensure appropriate data access.

THEORITICAL ANALYSIS

Block Diagram:



User Authentication: Handles user login and access control, allowing different user roles to access specific dashboards.

Admin, Teacher, Staff Dashboards: Unique dashboards for administrators, teachers, and staff, each providing tailored functionalities and data access.

Student Info Management: Manages student profiles, academic records, attendance, and health data.

Faculty & Staff Management: Stores faculty and staff details, roles, contact information, and schedules.

Attendance Tracking: Records and monitors student attendance, generating notifications for absentees.

Class Scheduling & Resource Allocation: Manages class schedules, teacher assignments, and resource allocation.

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:

User Authentication: Handles user login and access control, allowing different user roles to access specific dashboards.

Admin, Teacher, Staff Dashboards: Unique dashboards for administrators, teachers, and staff, each providing tailored functionalities and data access.

Student Info Management: Manages student profiles, academic records, attendance, and health data.

Faculty & Staff Management: Stores faculty and staff details, roles, contact information, and schedules.

Attendance Tracking: Records and monitors student attendance, generating notifications for absentees.

Class Scheduling & Resource Allocation: Manages class schedules, teacher assignments, and resource allocation.

Analytics and Reporting:

1. Implement data analytics modules using visualization libraries (e.g., Chart.js, D3.js).
2. Generate dynamic reports and graphs based on attendance, student performance, and resource utilization data.

Security and Privacy:

1. Implement robust authentication mechanisms (JWT, OAuth) to ensure secure user access.
2. Apply encryption for sensitive data stored in the database.
3. Regularly audit and update security patches to prevent vulnerabilities.

Hardware Requirements:

- 1.Client Devices: Users will need computers, laptops, or mobile devices with internet connectivity to access the application.
- 2.Internet Connection: A stable and reliable internet connection is necessary for seamless access to the Salesforce platform and the application.

Salesforce Platform Requirements:

- 1.Salesforce Account: You will need a Salesforce account to develop and host the application.
- 2.Edition: The edition of Salesforce used will depend on the requirements and complexity of the application. Options include Salesforce Essentials, Professional, Enterprise, or Unlimited editions.
- 3.Licenses: Sufficient user licenses must be available for administrators, teachers, students, and parents, as per the number of users who will access the application.

Salesforce Limits and Allocations:

- 1.API Limits: The application's integration with external systems may require consideration of API limits imposed by Salesforce.
- 2.Data Storage: Depending on the volume of data, you may need to ensure sufficient data storage is available in your Salesforce org.
- 3.Custom Objects and Fields: If the application involves custom objects and fields, ensure that they fit within Salesforce's object and field limits.

Security and Compliance:

- 1.Data Privacy: Implement proper security measures to ensure data privacy and comply with relevant regulations, such as GDPR (General Data Protection Regulation).
- 2.User Authentication: Enable secure login mechanisms like multi-factor authentication to protect user accounts.

Customization and Development:

- 1.Development Environment: Use a suitable development environment to build custom Visualforce pages, Lightning components, and Apex classes to tailor the application to your specific needs.
- 2.Integration Requirements: Determine the need for integrating with other systems and ensure compatibility and security.

User Training and Support:

- 1.User Training: Provide training and documentation to users to ensure they understand how to use the application effectively.

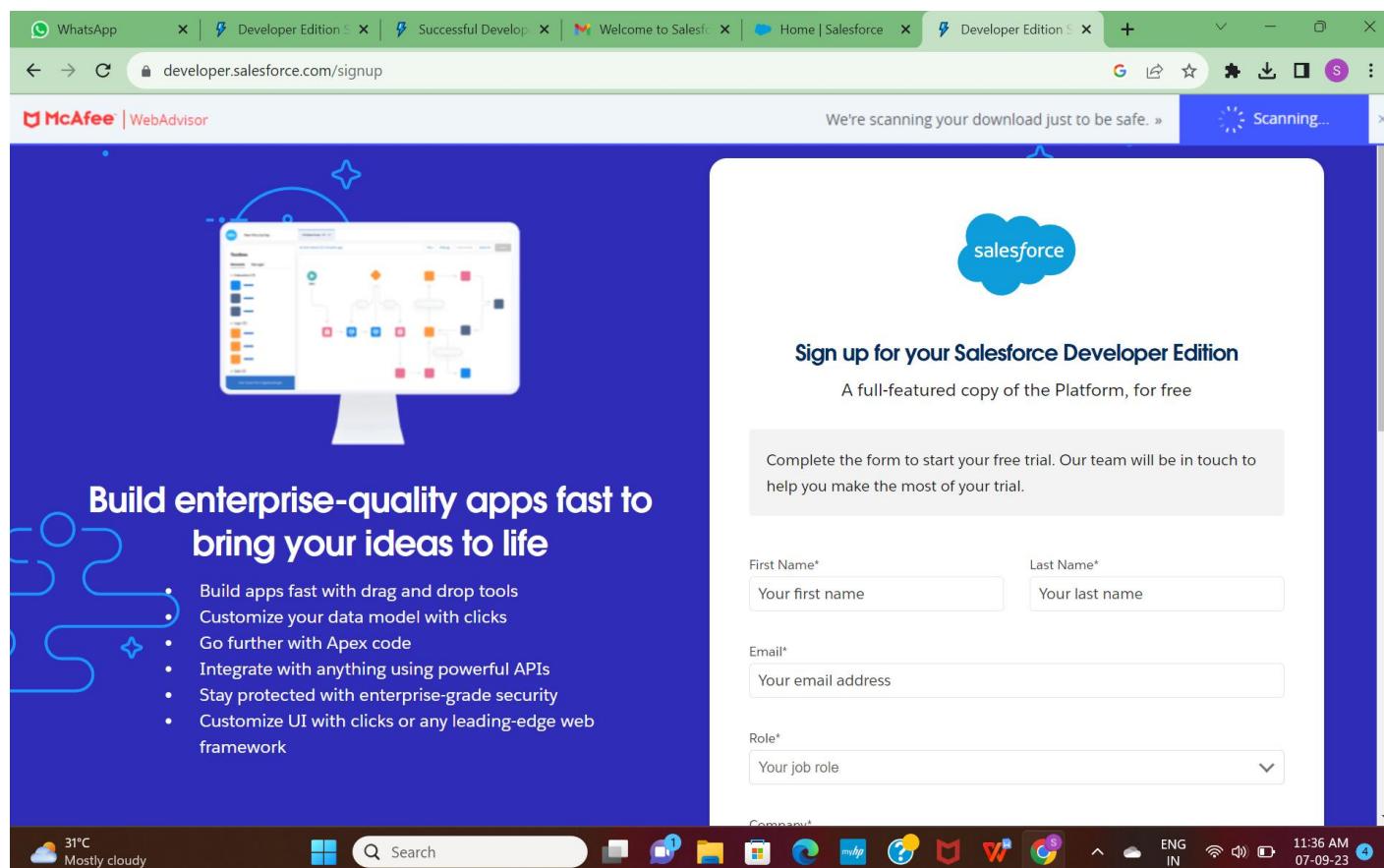
2. Technical Support: Have a support mechanism in place to address any issues or queries that users may encounter.

PROCESS AND RESULTS

1. Creating Developer Org:

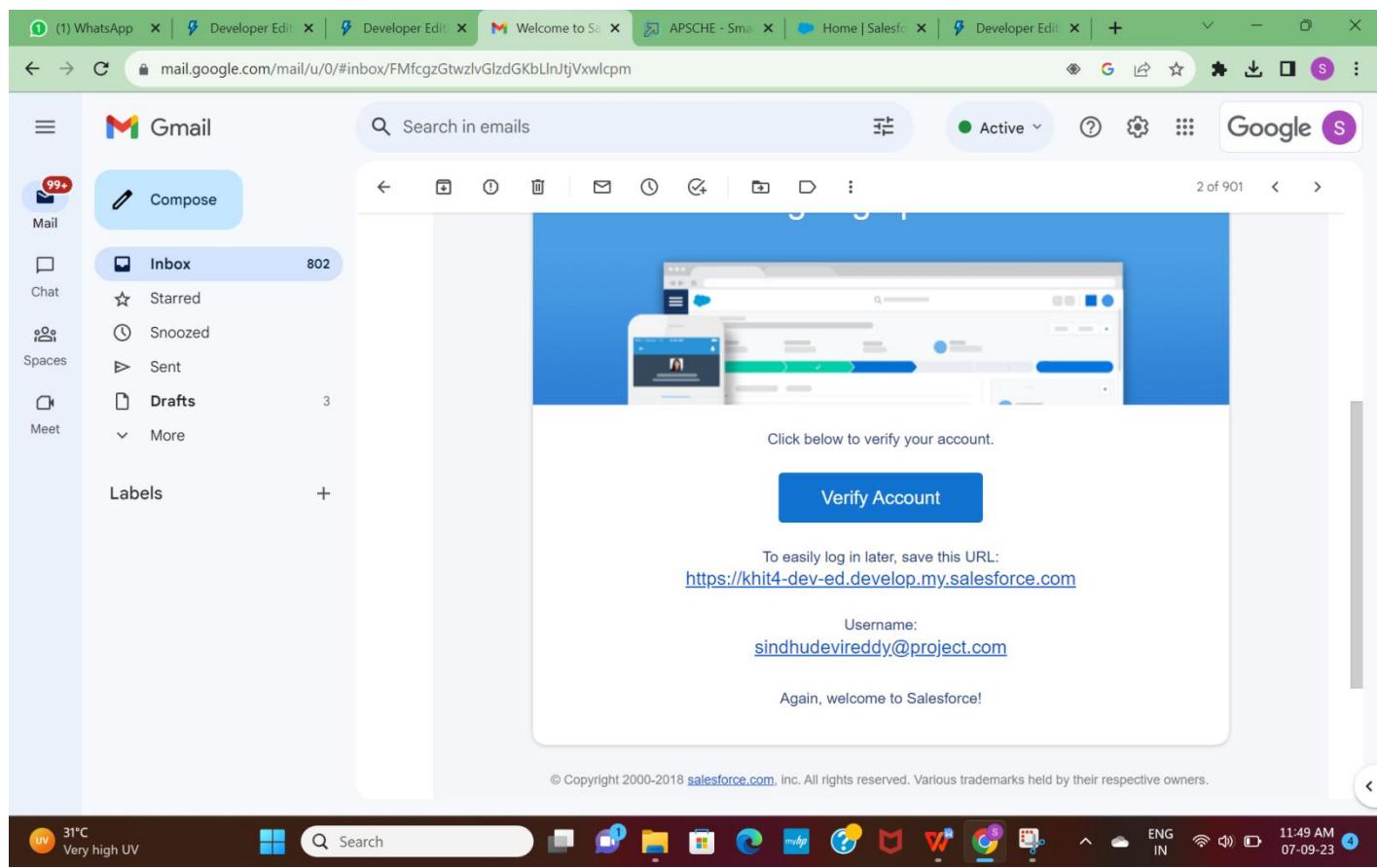
Creating a developer org in salesforce

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



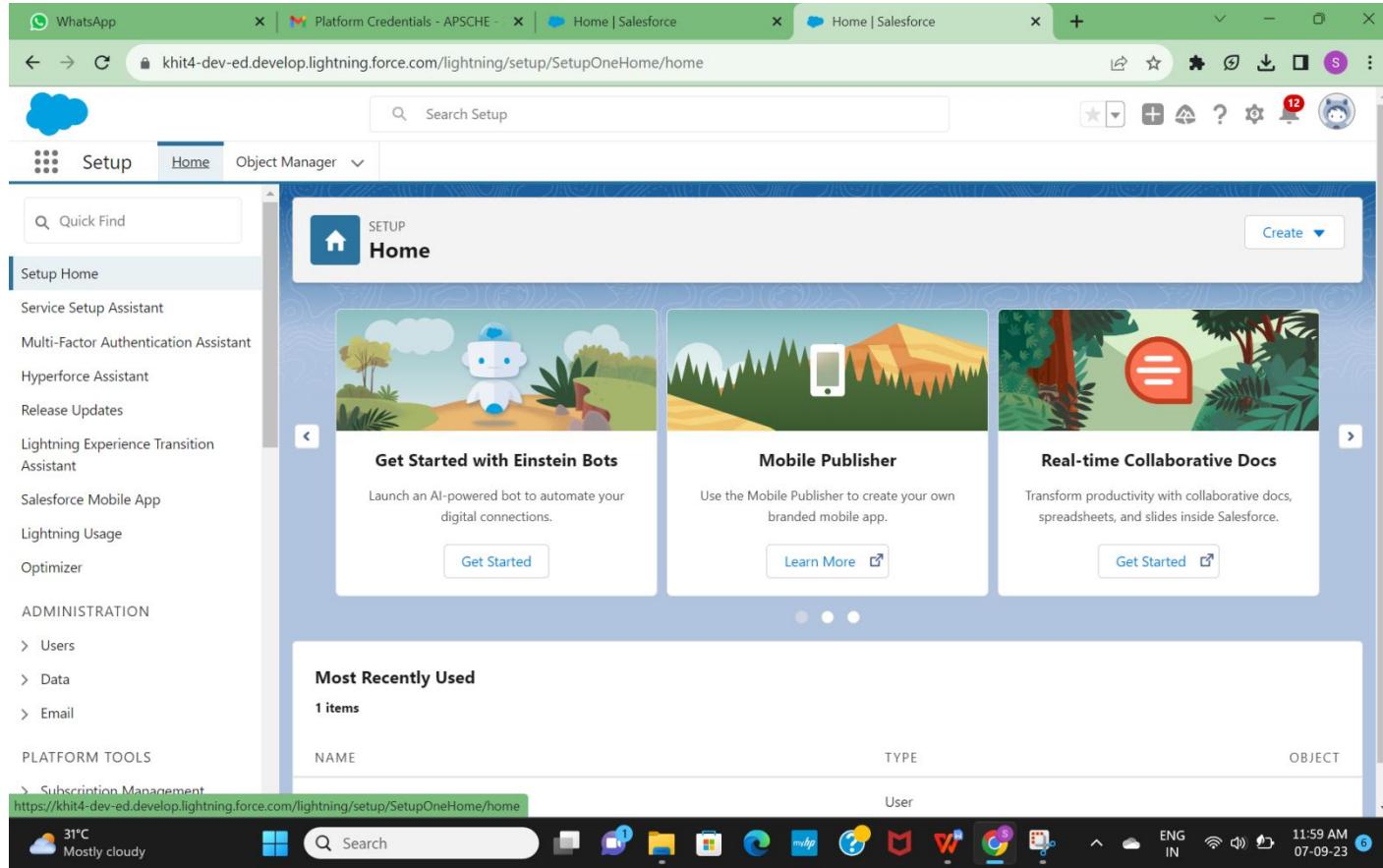
2. Account Activation:

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:

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 shows the Salesforce Setup interface with the 'Object Manager' tab selected. A modal window titled 'New Custom Object' is open. The 'Custom Object Definition Edit' section contains fields for 'Label' (School), 'Plural Label' (Schools), and 'Object Name' (School). Other visible fields include 'Description' (empty) and 'Starts with vowel sound' (unchecked). A note at the top states: 'Permissions for this object are disabled for all profiles by default. You can enable object permissions in permission sets or by editing custom profiles.' Buttons for 'Save', 'Save & New', and 'Cancel' are at the top right of the modal. The background shows the standard Salesforce navigation bar with tabs like 'Setup', 'Home', and 'Object Manager'.

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.

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

- Header:** The top navigation bar includes tabs for WhatsApp, Platform Credentials - APSCHE, Home | Salesforce, and Tabs | Salesforce.
- Left Sidebar:** A sidebar titled "Setup" contains a search bar and sections for "User Interface" (with "Rename Tabs and Labels" and "Tabs" selected), and a global search bar with the query "tabs".
- Current Page:** The main content area is titled "Custom Tabs" under the "SETUP" tab. It includes a help link "Help for this Page ?".
- Content:** The page provides information about creating new custom tabs to extend Salesforce functionality. It lists four types of tabs:
 - Custom Object Tabs:** Shows one entry for "Schools" with a "Car" icon.
 - Web Tabs:** States "No Web Tabs have been defined".
 - Visualforce Tabs:** States "No Visualforce Tabs have been defined".
 - Lightning Component Tabs:** No entries are listed.

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

The screenshot shows the Salesforce Setup interface with the 'Custom Tabs' page open. The page has a search bar at the top and a sidebar on the left with categories like 'User Interface' and 'Tabs'. The main content area is titled 'Custom Tabs' and contains three sections: 'Custom Object Tabs', 'Web Tabs', and 'Visualforce Tabs'. The 'Custom Object Tabs' section lists three tabs: 'Parents' (Bottle tab style), 'Schools' (Car tab style), and 'Students' (Credit card tab style). The 'Web Tabs' and 'Visualforce Tabs' sections are currently empty.

Action	Label	Tab Style	Description
Edit Del	Parents	Bottle	
Edit Del	Schools	Car	
Edit Del	Students	Credit card	

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.

Salesforce Home Page

The screenshot shows the Salesforce Setup Home page. The top navigation bar includes tabs for WhatsApp, Platform Credentials - APSCHE, Home | Salesforce, and Home | Salesforce. The main search bar contains "Search Setup". The left sidebar has a "Setup" icon and links for "Home" and "Object Manager". A search bar in the sidebar shows "app manager". The main content area features a "Home" section with three cards: "Get Started with Einstein Bots", "Mobile Publisher", and "Real-time Collaborative Docs". Below this is a "Most Recently Used" section showing a single item: "Students" (Custom Tab Definition). The bottom of the screen shows a Windows taskbar with various icons and system status.

SETUP

Home

Object Manager

Search Setup

app manager

Setup

Home

Object Manager

Didnt find what you're looking for?
Try using Global Search.

Get Started with Einstein Bots

Launch an AI-powered bot to automate your digital connections.

Get Started

Mobile Publisher

Use the Mobile Publisher to create your own branded mobile app.

Learn More

Real-time Collaborative Docs

Transform productivity with collaborative docs, spreadsheets, and slides inside Salesforce.

Get Started

Most Recently Used

7 items

NAME	TYPE	OBJECT
Students	Custom Tab Definition	Student

Cloud icon

31°C
Mostly cloudy

Search

Cloud icon

ENG IN

12:14 PM
07-09-23

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 <small>i</small> <input type="text" value="Name your app..."/>	Image <small>i</small> <input type="file" value="Upload"/>
* Developer Name <small>i</small> <input type="text" value="Enter a developer name..."/>	Primary Color Hex Value <small>i</small> <input type="color" value="#0070D2"/> #0070D2
Description <small>i</small> <input type="text" value="Enter a description..."/>	Org Theme Options <input type="checkbox"/> Use the app's image and color instead of the

11 Platform Platform The fundamental Lightning Platform 07/09/2023, 11:26 am Classic

12 Queue Management QueueManagement Create and manage queues for your business. 07/09/2023, 11:26 am Lightning ✓

Next

New Lightning App

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

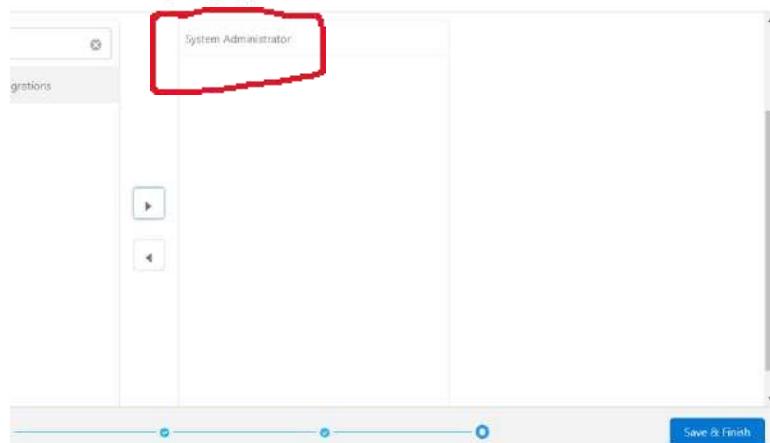
Selected Items

Back Next

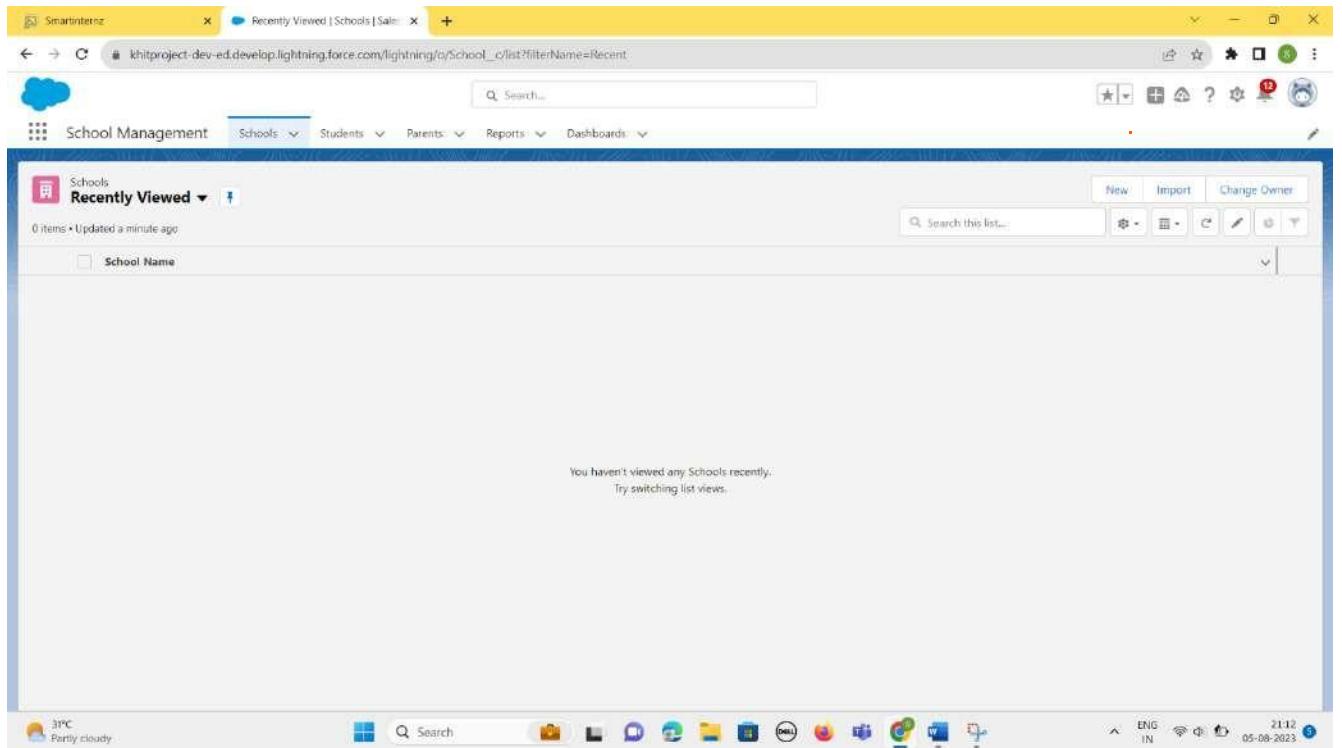
11 Platform Platform The fundamental Lightning Platform 07/09/2023, 11:26 am Classic

12 Queue Management QueueManagement Create and manage queues for your business. 07/09/2023, 11:26 am Lightning

New Lightning App



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.

The screenshot shows the Salesforce Object Manager Fields & Relationships page for the 'School' object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Field Sets. The main area displays a table titled 'Fields & Relationships' with four items. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data is as follows:

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)		✓
School Name	Name	Text(80)		✓

The screenshot shows the 'New Custom Field' creation page for the 'School' object. The left sidebar lists setup categories. The main area is titled 'Step 2. Enter the details' and shows the following fields:

- Field Label: Address
- Field Name: Address
- Description: (empty)
- Help Text: (empty)
- 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

After creating all the required fields for the School Object

The screenshot shows the Salesforce Object Manager Fields & Relationships page for the 'School' object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Field Sets. The main content area displays a table titled 'Fields & Relationships' with 7 items, sorted by Field Label. The columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The table data is as follows:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
Created By	CreatedById	Lookup(User)		
District	District__c	Text Area(255)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
School Name	Name	Text(80)		✓
State	State__c	Text Area(255)		

School website	School_website_c	URL(255)
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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

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Class	Class_c	Number(18, 0)		
Created By	CreatedBy	Lookup(User)		
Last Modified By	LastModifiedBy	Lookup(User)		
Marks	Marks_c	Number(18, 0)		
Results	Results_c	Picklist		
School	School_c	Master-Detail(School)		✓
Student Name	Name	Text(80)		✓

FIELD LABEL	FIELD NAME	DATA TYPE
Created By	CreatedBy	Lookup(User)
District	District_c	Text(15)
Highest Marks	Highest_Marks_c	Roll-Up Summary (MAX Student)
Last Modified By	LastModifiedBy	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:

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes 'SETUP > OBJECT MANAGER' and the object name 'Parent'. On the left, a sidebar lists various object settings: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types. The main content area is titled 'Fields & Relationships' and displays a table of fields. The table has columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data in the table is as follows:

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		

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.

Creation of 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.

S WhatsApp Your Platform temporary password Smartinternz Home | Salesforce khit4-dev-ed.develop.lightning.force.com/lightning/setup/SetupOneHome/home

The screenshot shows the Salesforce Setup Home page. At the top, there's a search bar with the placeholder "Search Setup". Below it, a banner highlights digital connections, branded mobile app, and spreadsheets/slides. A search bar on the left contains the text "profile". The main content area is titled "Most Recently Used" and lists 7 items. The table has columns for NAME, TYPE, and OBJECT.

NAME	TYPE	OBJECT
Students	Custom Tab Definition	Student
Student	Custom Object Definition	
Parents	Custom Tab Definition	Parent
Parent	Custom Object Definition	
Schools	Custom Tab Definition	School
School	Custom Object Definition	
Vaishnavi Devireddy	User	

At the bottom, the Windows taskbar shows various open applications like File Explorer, Edge, and Mail. The system tray indicates the date and time as 07-09-23.

The screenshot shows the "Profiles" setup page under the "SETUP" tab. It displays "Custom Object Permissions" for several objects: Incidents, Individuals, Invoices, Leads, Work Step Templates, Work Types, and Work Type Groups. The "Leads" row is selected. Below this, there are two tables for "Basic Access" and "Data Administration" permissions for Parents, Schools, and Students.

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

The “School Profile” is created as below:

WhatsApp | Your Platform temporary password | Smartinternz | Profiles | Salesforce | khit4-dev-ed.develop.lightning.force.com/lightning/setup/EnhancedProfiles/page?address=%2F00e5j000002pp4u

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The top navigation bar includes links for WhatsApp, Your Platform temporary password, Smartinternz, and Profiles | Salesforce. The main content area is titled 'SETUP Profiles'. A search bar at the top right contains the text 'Search Setup'. On the left, a sidebar has a search field with 'profi' typed in, and categories 'Users' and 'Profiles' are listed, with 'Profiles' currently selected. The main content area is titled 'Profile School profile'. It states: 'Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.' Below this, a list of permissions is shown, followed by 'Profile Detail' sections for Name (School profile), User License (Salesforce), Description, Created By (Vaishnavi Devireddy, 07/09/2023, 12:45 pm), and Modified By (Vaishnavi Devireddy, 07/09/2023, 12:48 pm). The 'Page Layouts' section lists standard object layouts for Global, Email Application, and Home Page Layout, along with their corresponding object milestones and operating hours. At the bottom of the page, there is a green status bar with the text 'javascript:srcUp(%27%2F00e5j000002pp4u%3Fisdtpl%3Dp1%27);' and a taskbar at the bottom of the screen.

7. Users

A user is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account.

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.

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.

6. Select a profile as a School Profile.
7. Check Generate new password and notify the user immediately to have the user's login name and a temporary password emailed to your email.
8. Similarly follow the above steps and create 2 users as Teachers and principals.

The screenshot shows the Salesforce Setup interface. The left sidebar is expanded, showing sections like Permission Set Groups, Profiles, Public Groups, Queues, Roles, User Management Settings, and a prominent **Users** section which is currently selected. The main content area displays the **User Edit** screen for a new user. The user is named "Parents" with the alias "pare". The email is listed as "208xa0513@khitguntur.ac.i" and the username as "208xa0513@khitguntur.ac.i". The user is assigned to the "School profile" and has the "Salesforce" license. The "Active" checkbox is checked. The "Role" dropdown is set to "<None Specified>". The "Last Name" field contains "pare". The "Nickname" field contains "User169407148107833490". The "First Name" field is empty. The "Title" field is empty. The "Company" field is empty. The "Department" field is empty. The "Division" field is empty. The "Marketing User" checkbox is unchecked. The "Offline User" checkbox is unchecked. The "Knowledge User" checkbox is unchecked. The "Flow User" checkbox is unchecked. The "Service Cloud User" checkbox is unchecked. The "Site.com Contributor User" checkbox is unchecked. The "Site.com Publisher User" checkbox is unchecked. The "WDC User" checkbox is unchecked. The "Data.com User Type" dropdown is set to "--None--". The "Data.com Monthly Addition Limit" dropdown is set to "Default Limit (300)". The "Accessibility Mode" dropdown is empty. The top navigation bar shows tabs for WhatsApp, Your Platform temporary passwo..., Smartinternz, and Users | Salesforce. The bottom taskbar includes icons for Weather (32°C, Mostly cloudy), Search, File Explorer, Task View, Edge, Microsoft Store, and several other application icons. The system tray shows the date and time as 07-09-23 12:54 PM.

Similarly, we created two users - Teachers and Principals like below:

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatty.00d5j00000d8phgeaf.fxxp02otpnqm@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/> Edit	Devireddy_Vaishnavi	VDevi	sindhudevireddy@project.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/> Edit	Parents	pare	208xa0513@khitguntur.ac.in		<input checked="" type="checkbox"/>	School profile
<input type="checkbox"/> Edit	Principals	prin	principal208xa0513@khitguntur.ac.in		<input checked="" type="checkbox"/>	Force.com - Free User
<input type="checkbox"/> Edit	Teachers	teac	teachers208xa0513@khitguntur.ac.in		<input checked="" type="checkbox"/>	Force.com - Free User
<input type="checkbox"/> Edit	User_Integration	integ	integration@00d5j00000d8phgeaf.com		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User_Security	sec	insightssecurity@00d5j00000d8phgeaf.com		<input checked="" type="checkbox"/>	Analytics Cloud Security User

8. 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.

Permission Sets 1:

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.

Setup Home Object Manager

Q, per

Assistant

Lightning Experience Transition Assistant

Users

Permission Set Groups

Permission Sets

Help for this Page

Permission Sets

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

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

All Permission Sets | Edit | Delete | Create New View

New | | A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other All

SETUP

Permission Sets

Permission Set Create

Save Cancel

Enter permission set information

Label	teacher permission
API Name	teacher_permission
Description	<input type="text"/>
Session Activation Required	<input type="checkbox"/>

Permission Set
teacher permission

Find Settings... * | Clone | Delete | Edit Properties | Manage Assignments

Permission Set Overview > Object Settings Schools

Schools Save Cancel

Tab Settings

Available	Visible
<input type="checkbox"/>	<input type="checkbox"/>

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 SET 'TEACHER PERMISSION' > MANAGE ASSIGNMENT EXPIRATION

teacher permission

Select an Expiration Option For Assigned Users

No expiration date ?

Specify the expiration date

1 Day	1 Week	30 Days	60 Days	Custom Date
-------	--------	---------	---------	-------------

Time Zone Select a time zone...

Selected Users					
Full Name	Role	Profile	Active	User License	Expires On
Teachers	School Profile	<input checked="" type="checkbox"/>	Salesforce	Never Expires	

Cancel Assign

Permission Sets 2:

Similarly, we create another permission set that is Principal permission.

User icon SETUP

Permission Sets

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](#)

<input type="button" value="New"/>	<input type="button" value=""/>	A B C D
<input type="checkbox"/> Action	Permission Set Label ↑	Description
<input type="checkbox"/> Del Clone	Principal permission	

9.User Adoption

Create Record (School):

1.Click on App Launcher on left side of screen.

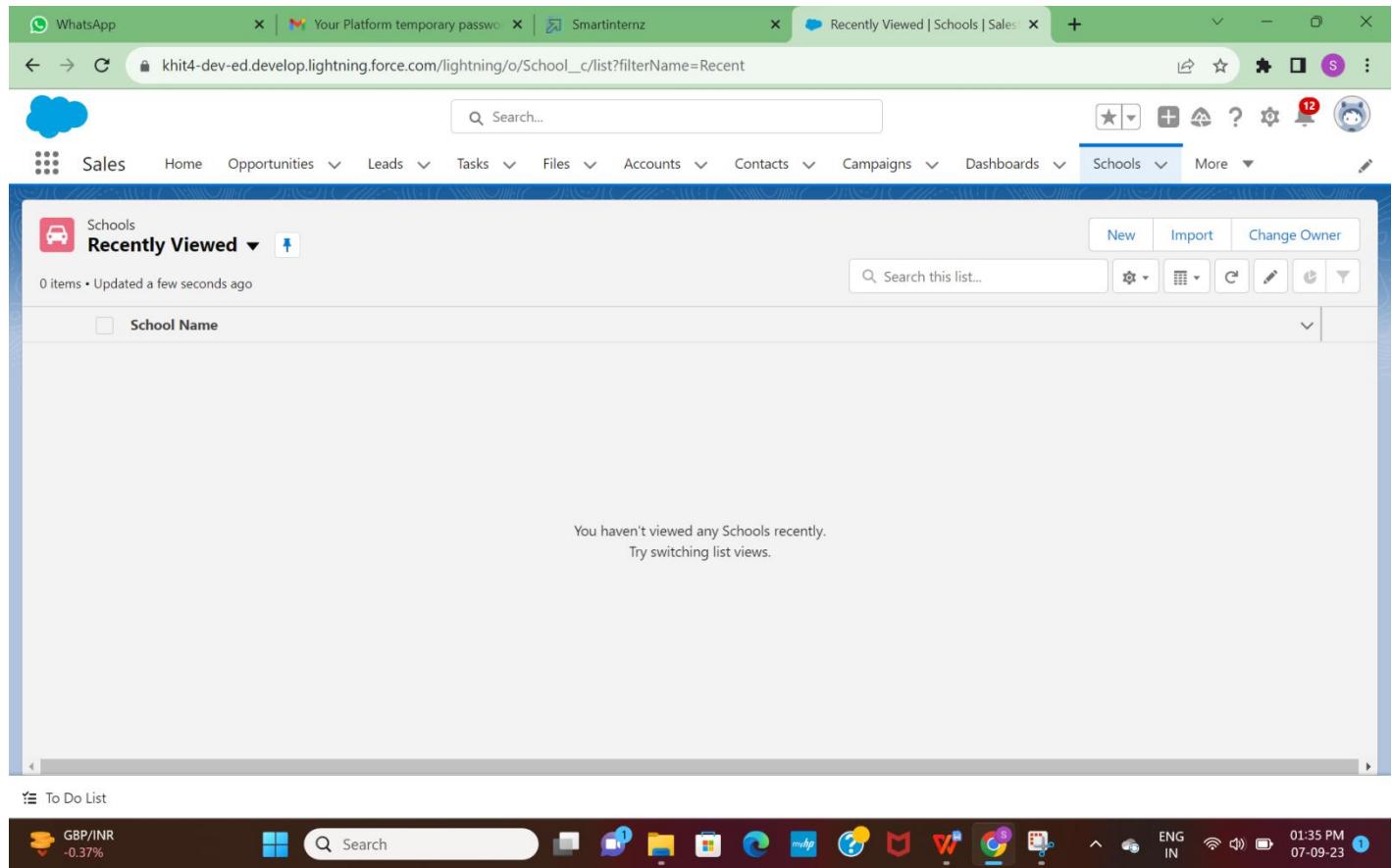
2. Search School Management App & click on it.

3. Click on Schools tab.

4. Click new button

5. Fill all School record details.

6. Click on Save Button



Clicking new, we have to fill the details of the school like School Name, Address, State, District, Phone Number, School Website.

This is displayed below:

Sales Home Opportunities

Edit Z.p.High School

* = Required Information

School Name	Z.p.High School	Owner	Vaishnavi Devireddy
Address	Seethapuram, H.M Padu Mandal		
District	Prakasam		
State	Andhra Pradesh		

Created By: Vaishnavi Devireddy, 07/09/2023, 1:40 pm Last Modified By: Vaishnavi Devireddy, 07/09/2023, 1:40 pm

Cancel Save & New Save

To Do List

33°C Mostly cloudy Search

ENG IN 01:39 PM 07-09-23

View Record (School):

Sales Home Opportunities Leads Tasks Files Accounts Contacts Campaigns Dashboards Schools More

Z.p.High School

New Contact Edit New Opportunity

School Name	Z.p.High School	Owner	Vaishnavi Devireddy
Address	Seethapuram, H.M Padu Mandal		
District	Prakasam		
State	Andhra Pradesh		

Created By: Vaishnavi Devireddy, 07/09/2023, 1:40 pm Last Modified By: Vaishnavi Devireddy, 07/09/2023, 1:40 pm

To Do List

33°C Mostly cloudy Search

ENG IN 01:39 PM 07-09-23

Delete Record (School):

School Name: Z.p.High School
Address: Seethapuram, H.M Padu Mandal
District: Prakasam
State: Andhra Pradesh
Owner: Vaishnavi Devireddy
Created By: Vaishnavi Devireddy, 07/09/2023, 1:40 pm
Last Modified By: Vaishnavi Devireddy, 07/09/2023, 1:40 pm

New Case
New Lead
Delete
Clone
Change Owner
Printable View
Sharing
Sharing Hierarchy

By Clicking it, The School named “Shalome English Medium School” will be deleted . And it is not Visible.

School "Z.p.High School" was deleted. Undo

You haven't viewed any Schools recently.
Try switching list views.

To Do List

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.

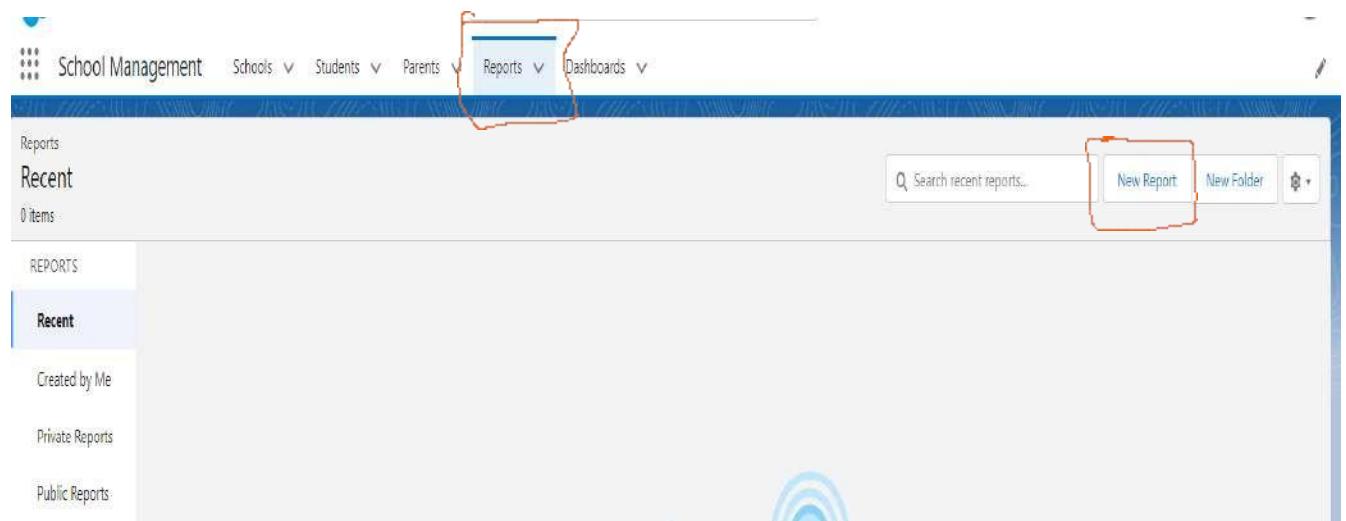
Create Report:

- 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 screenshot shows the 'Create Report' dialog box. On the left, there is a sidebar titled 'Category' with sections like 'Recently Used' and 'All'. Under 'All', items include 'Accounts & Contacts', 'Opportunities', 'Customer Support Reports', 'Leads', 'Campaigns', 'Activities', 'Contracts and Orders', 'Price Books, Products and Assets', and 'Administrative Reports'. In the center, there is a search bar with the placeholder 'Select a Report Type' and a search icon. Below the search bar is a table with columns 'Report Type Name' and 'Category'. The table contains two rows: 'Schools' (Category: Standard) and 'Schools with Students' (Category: Standard). The 'Schools with Students' row is highlighted with a red box. On the right, there is a 'Details' panel for the selected report type. It shows the report name 'Schools with Students' (Standard Report Type), a 'Start Report' button (highlighted with a red box), and a 'Fields (28)' link. Below this, there are sections for 'Created By You' (No Reports Yet) and 'Created By Others' (No Reports Yet). At the bottom, there is a section titled 'Objects Used in Report Type' with icons for 'Student' and 'User'.

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:

Save Report

* Report Name
New Schools with Students Report

Report Unique Name ⓘ

Report Description

Folder
Private Reports

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.



In this way, we have successfully created the *School Management App* and performed all the actions.

ADVANTAGES & DISADVANTAGES

Advantages:

Efficiency and Time Savings: Automation of administrative tasks like attendance tracking, record keeping, and scheduling reduces manual effort and saves time for administrators, teachers, and staff.

Improved Accuracy: Automated processes decrease the chances of human errors in data entry and management, leading to more accurate records and reports.

Centralized Data Management: The application provides a single platform for storing and accessing student information, faculty details, schedules, and resources, eliminating the need for disparate systems and physical files.

Enhanced Communication: Real-time communication tools enable seamless interaction between administrators, teachers, staff, and parents, fostering better collaboration and understanding.

Data-Driven Insights: Analytics and reporting functionalities offer insights into attendance trends, student performance, and resource utilization, empowering administrators to make informed decisions.

Better Parent Engagement: The parent portal integration allows parents to actively participate in their child's education by monitoring attendance, academic progress, and school updates.

Disadvantages:

Initial Investment: Developing, implementing, and maintaining the application requires financial resources for software development, hardware infrastructure, training, and ongoing support.

Technical Challenges: Designing, developing, and maintaining a complex application requires skilled software engineers, which could be challenging to find and hire.

Resistance to Change: Some administrators, teachers, and staff might resist transitioning from familiar manual processes to a digital system, leading to a learning curve and potential reluctance to adopt the new technology.

User Training: Introducing the application requires training for all users to ensure proper usage and maximize benefits. This can take time and resources.

Data Migration: Transitioning from existing manual or digital systems to the new application might require extensive data migration and cleaning, which could be complex and time-consuming.

Technical Issues: Like any software, the application may encounter technical glitches, bugs, or downtime, affecting the smooth operation of school administration.

Initial Cost and Investment: Developing, implementing, and maintaining the application requires financial resources for software development, hardware infrastructure, and ongoing maintenance.

Technical Challenges: Developing a complex application requires a skilled development team, and challenges may arise in terms of coding, integration, and troubleshooting.

Learning Curve: Introducing a new system may require training for administrators, teachers, and staff to adapt to the new workflow and features, which could result in a temporary decrease in efficiency during the transition.

User Resistance: Some individuals might resist using the new system due to a preference for traditional methods or a lack of comfort with technology.

APPLICATIONS

Student Record Management: The application serves as a centralized database for storing and managing student records, including personal details, academic performance, attendance history, and medical information.

Attendance Tracking: Automates the process of tracking student attendance, generating alerts for absentees, and facilitating data-driven insights into attendance trends.

Class Scheduling: Streamlines the creation and management of class schedules, assigning teachers, subjects, and classrooms efficiently.

Faculty and Staff Management: Offers a platform for managing faculty and staff details, including roles, contact information, and professional development.

Communication Hub: Facilitates real-time communication among administrators, teachers, staff, and parents through announcement boards, messaging features, and notifications.

Resource Management: Manages school resources such as textbooks, supplies, equipment, and facilities, ensuring efficient allocation and preventing shortages.

Analytics and Reporting: Generates data-driven insights and reports on student performance, attendance trends, resource utilization, and other key metrics.

Parent Engagement: Integrates a parent portal where parents can monitor their child's academic progress, attendance, and school-related updates.

Efficient Decision-Making: Provides administrators with accurate and timely data to make informed decisions about resource allocation, scheduling, and curriculum planning.

Security and Data Privacy: Ensures secure storage and management of sensitive student and staff data while complying

CONCLUSION

In conclusion, the "Creation of an Application for School Management - Admin" project represents a transformative endeavor that holds the promise of revolutionizing the landscape of school administration. By leveraging technology and innovation, this project addresses the existing challenges in educational institutions

and offers a comprehensive solution that streamlines administrative processes, enhances communication, and empowers educators, administrators, staff, and parents alike.

Throughout the course of this project, we have carefully designed and developed an advanced application that brings numerous benefits to the forefront.

FUTURE SCOPE

Mobility and Accessibility: The logical next step is the development of a dedicated mobile application, empowering administrators, teachers, and staff to access critical functions anywhere, anytime. This extension to mobile platforms offers unparalleled convenience and flexibility.

2. Harnessing AI and Predictive Insights: The integration of artificial intelligence holds immense promise. Imagine a system that not only records data but also analyzes it to predict trends, enabling proactive measures to enhance student performance and resource allocation.

3. Comprehensive Financial Management: Future iterations can encompass financial management modules, allowing efficient tracking of budgets, fee collection, and financial reporting. This addition offers a holistic approach to school administration.

4. Deeper Integration with Learning: Expanding the application's integration with Learning Management Systems (LMS) brings together administrative efficiency and teaching effectiveness. This convergence creates a comprehensive educational ecosystem.

5. IoT and Smart Environments: Integration with Internet of Things (IoT) devices introduces the concept of smart classrooms and environments. Imagine classrooms that adapt lighting, temperature, and teaching aids based on real-time needs.

THANK YOU

