Property Management Application Using Salesforce

NAAN MUDHALVAN

PROJECT REPORT

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in partialfulfilmentfor the award ofthe degree of

BACHELOR OF ENGINEERING

in

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AVS COLLEGE OF ENGINEERRING,
SALEM - 636003.

ANNA UNIVERSITY: :CHENNAI 600025

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BONAFIDE CERTIFICATE

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CHAPTER-I

PROJECT SPECIFICATION

1.1 Project Goal

Define the scope and objectives of the application. Identify key features, user roles, and data requirements.Set up Salesforce with the necessary licenses, objects, and fields. Customize Salesforce to accommodate property management data. Design a data model to represent properties, tenants, leases, and other relevant information. Define user roles and permissions to control access to data and functionality. Use Salesforce Process Builder, Flow, or Apex to automate processes like lease renewal reminders, maintenance requests, and rent payments.Create a user-friendly interface using Salesforce Lightning components and Visualforce pages to interact with property data. Integrate with other systems if needed, such as financial software for rent collection or maintenance management tools. Develop customized reports and dashboards to provide insights into property performance, occupancy rates, and financials.

Ensure the application is accessible on mobile devices for property managers on the go. Thoroughly test the application to ensure it functions as expected and is user-friendly. Train users and provide documentation to help them navigate and use the application effectively.
Deploy the application to the production environment and monitor its performance. Continuously monitor and update the application to address issues and accommodate changing requirements. Implement security measures to protect sensitive property and tenant data. Ensure the application complies with relevant legal and industry standards, especially in property management Collect feedback from users and stakeholders to make improvements and enhancements

1.2 Project scope

Record and monitor financial transactions related to property management, including rent collection, expenses, and budgeting.Generate financial reports to track property income and expenses.Set up communication tools for sending notifications to tenants and property owners.Send automated reminders for rent payments and maintenance appointments.Create custom reports and dashboards to provide insights into property performance, occupancy rates, and financial metrics. Define user roles and permissions to ensure data security and access control.Property managers, owners, and tenants may have different levels of access.lntegrate with external systems if necessary, such as accounting software, for seamless financial management.

Ensure that property managers and tenants can access the application via mobile devices for convenience.Ensure that the application complies with relevant property management and data privacy regulations.Provide training for users and create documentation to help them navigate the application. Rigorously test the application to identify and resolve bugs and issues.Plan for the deployment of the application in a production environment.Develop a maintenance plan to address future updates, bug fixes, and enhancements.Consider the potential for scaling the application to accommodate a growing number of properties and user Establish a feedback mechanism to collect input from users and stakeholders for ongoing improvements. Define a project timeline and budget to ensure the project is completed within specified constraints.

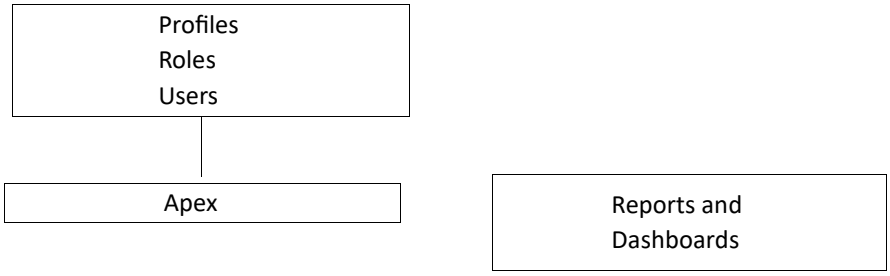
1.3 Problem Statement Definition

Problem Statement	I am (Employee)	I'm trying to	But	Because		Which makes me feel
PS	Student	I am trying to manage the students, teachears record for the short period in the way of application.	But the current process is manual, timeconsuming, and lacks transparency , resulting in delays and confusion.	Because this inefficiency way to find and track the students and teachers through the application.		ich akes me eel rustrated, anxious ften ncertain about the status of my equest,

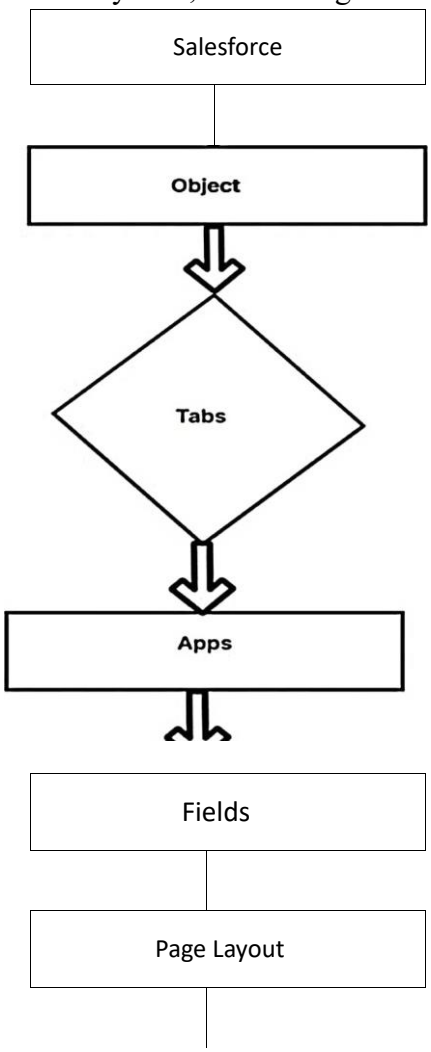
						Itimately affecting Y overall satisfaction and roductivity

1.4 Project Road Map

1.4.1 Data Flow Diagram



A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



s.N0	Component	Description	Technology

1.	User Interface	Lightning Components: Use Salesforce Lightning components to design the user interface for employees, managers, and administrators. Custom Pages: Create custom Visualforce pages for more tailored and complex UI elements	Salesforce

1.4.2 Technical Archictecture

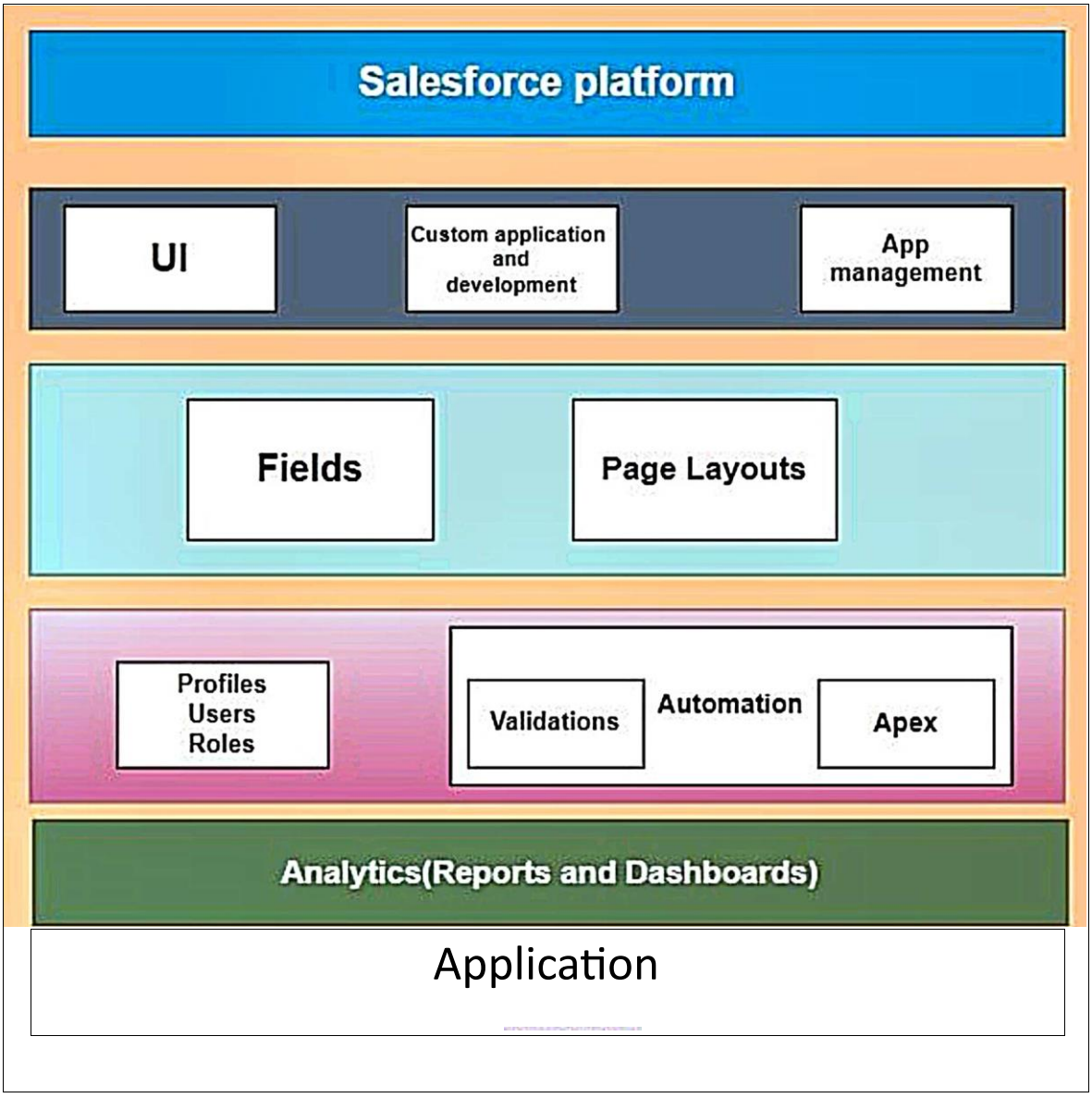


TABLE-I: Component and Technologies:

2.	Data Model	Custom Objects: Define custom objects in Salesforce to represent entities like travel requests, expenses, and approvals. Master-Detail and Lookup Relationships: Establish relationships between objects to maintain data integrity. Custom Fields: Create custom fields to capture specific information, such as parents, students, and teachers.	Salesforce

3.	Workflow Automation	Approval Processes: Implement Salesforce Approval Processes to automate and streamline the travel request approval workflow. Process Builder and Flows: Use Process Builder and Flows to automate routine tasks and send notifications.	Salesforce
4.	Reporting and Analytics	Custom Reports: Create custom reports to track travel request status, expenses, and other relevant metrics.	Salesforce
5.	Security	Role-Based Access Control (RBAC): Configure RBAC to control who can access and modify data. Data Encryption: Encrypt sensitive data both in transit and at rest. Audit Trails: Maintain audit trails to log user activities for security and compliance purposes.	Salesforce
6.	Salesforce Development	Apex: Use Salesforce's proprietary programming language, Apex, for server-side logic and data manipulation. Visualforce: Develop custom user interfaces wit Visualforce pages and components. Lightning Web Components: Create modern, component-based UIs using Lightning Web Components for a more responsive and dynamic user experience	Salesforce

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Responsive Design	Implement responsive design to adapt to various screen sizes, ensuring a consistent and visually pleasing user experience.	salesforce

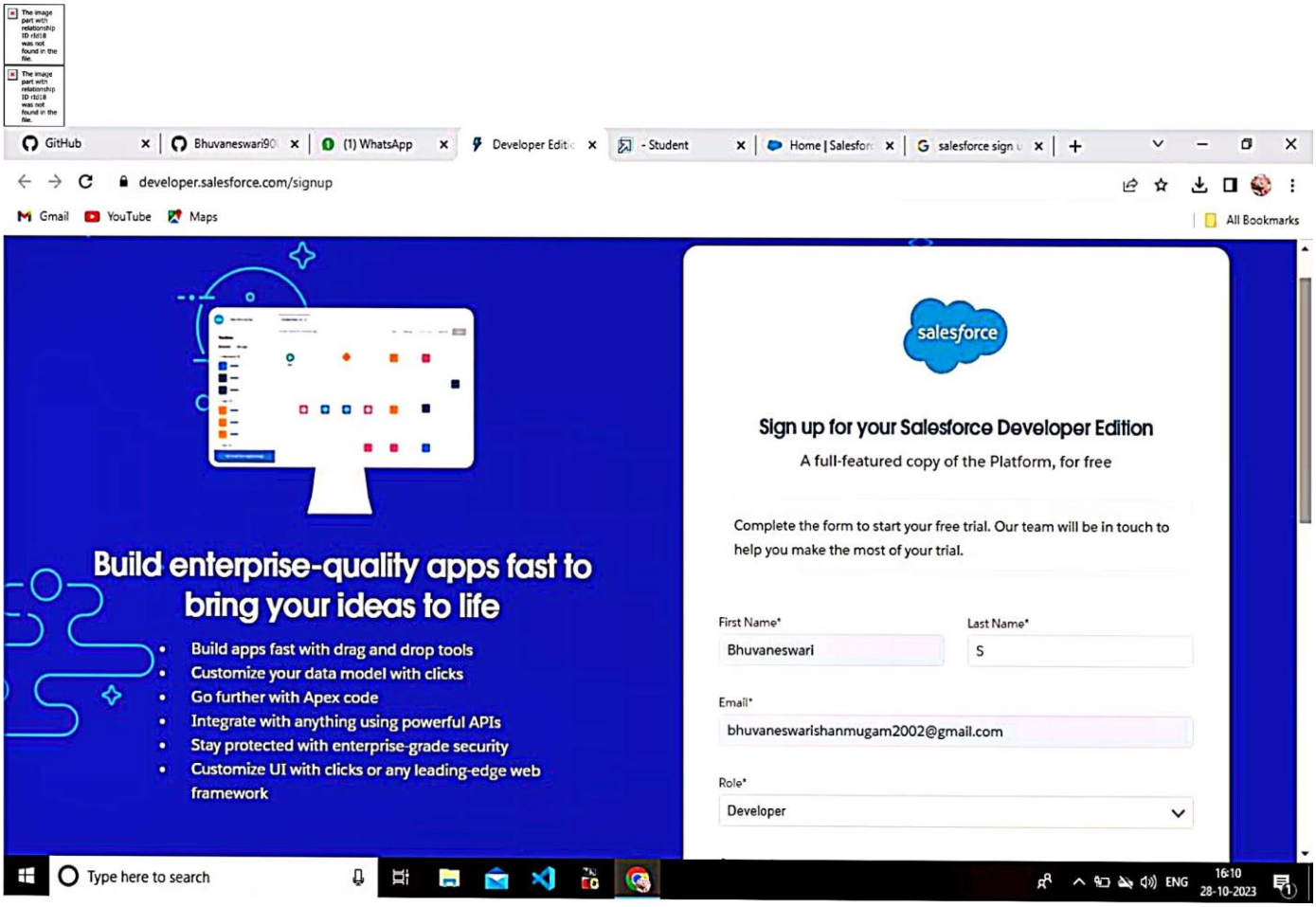
2.	Accessibility	Ensure that the application is accessible via multiple devices and browsers, catering to users on desktops, tablets, and mobile devices. This accessibility is crucial for users who need to make or approve travel requests while on the go.	salesforce
3.	Userfriendly	The application should have an intuitive and user-friendly interface to make it easy for employees, managers, and administrators to navigate and use the system without extensive training.	Salesforce
4.	Scalability	The application should be able to scale with the growing number of users and data, accommodating increasing demands without significant performance degradation.	salesforce
5.	Performance	Ensure the application's performance meets or exceeds user expectations, with rapid response times for actions such as submitting requests or generating reports.	salesforce
6.	Reporting and Analytics	Enable users to generate custom eports and access analytics tools to gain insights into travel patterns, expenses, and approval efficiency.	salesforce

CHAPTER-2

PREPARATION DATA MODELING

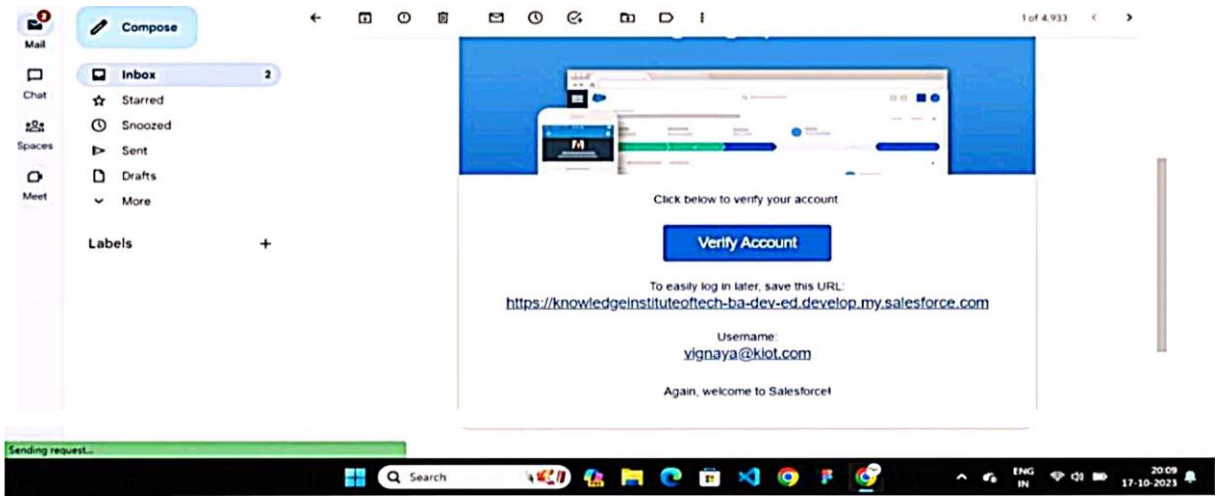
2.1 Salesforce Developer Org

In Salesforce, a Developer Sign Up or Developer Edition is a special type of Salesforce environment that is primarily used for development, testing, and learning purposes.

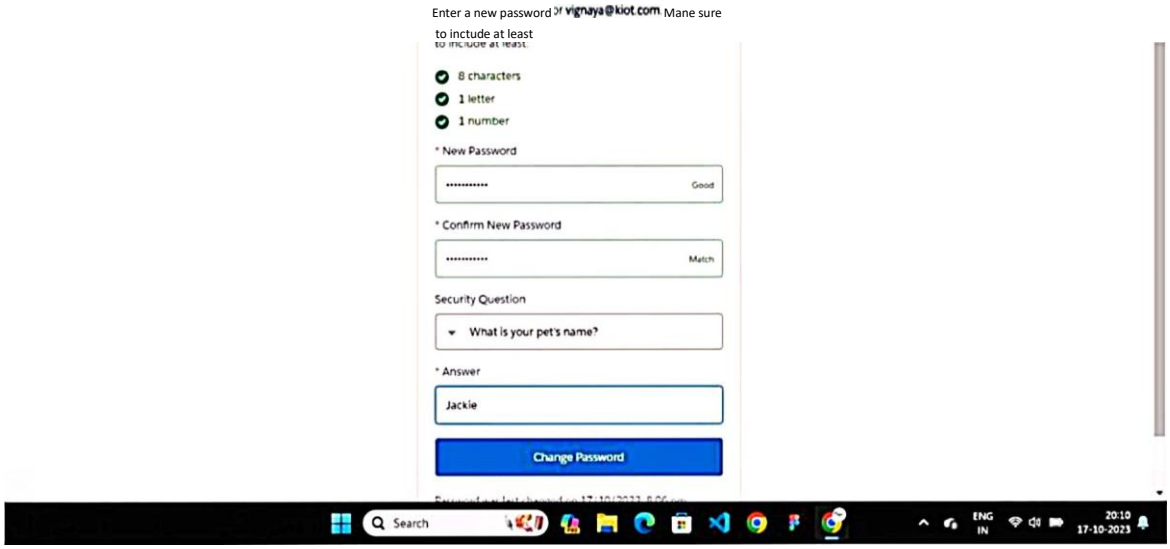


Account Activation

Activation tracks information about devices from which users have verified their identity.



Change Your Password



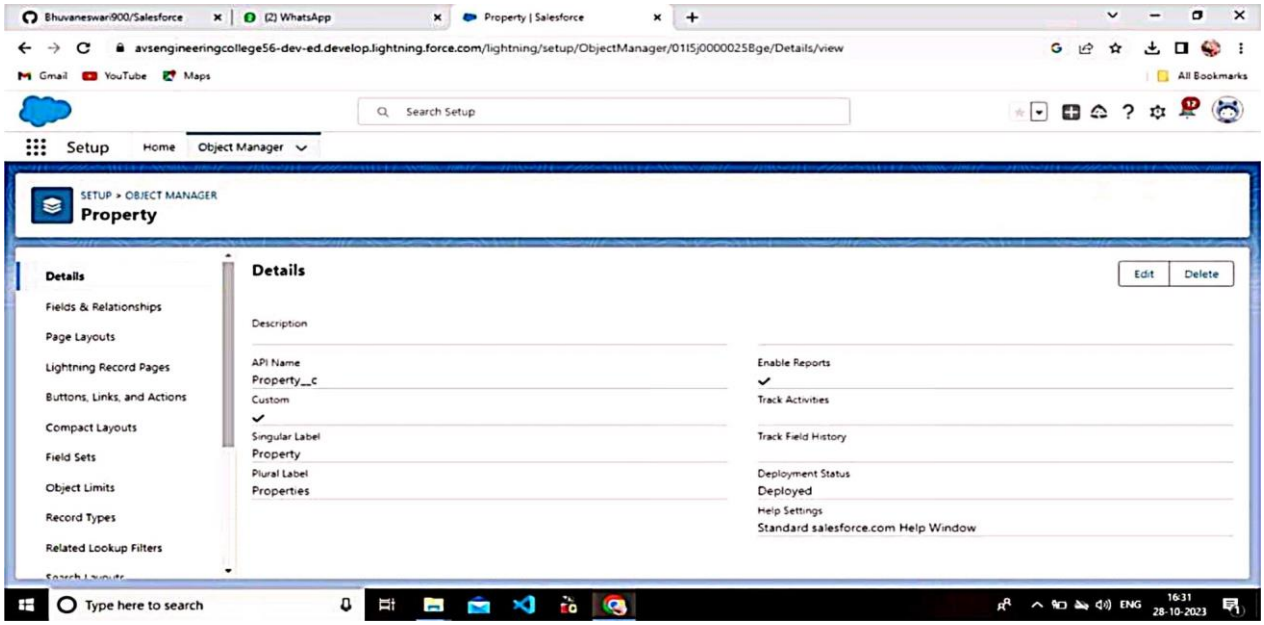
2.2 Custom Object Creation & Tabs

2.1 Custom Object Creation

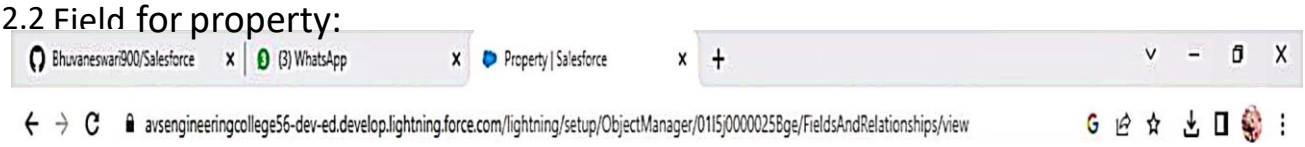
Objects are containers for your information, but they also give you special functionality.

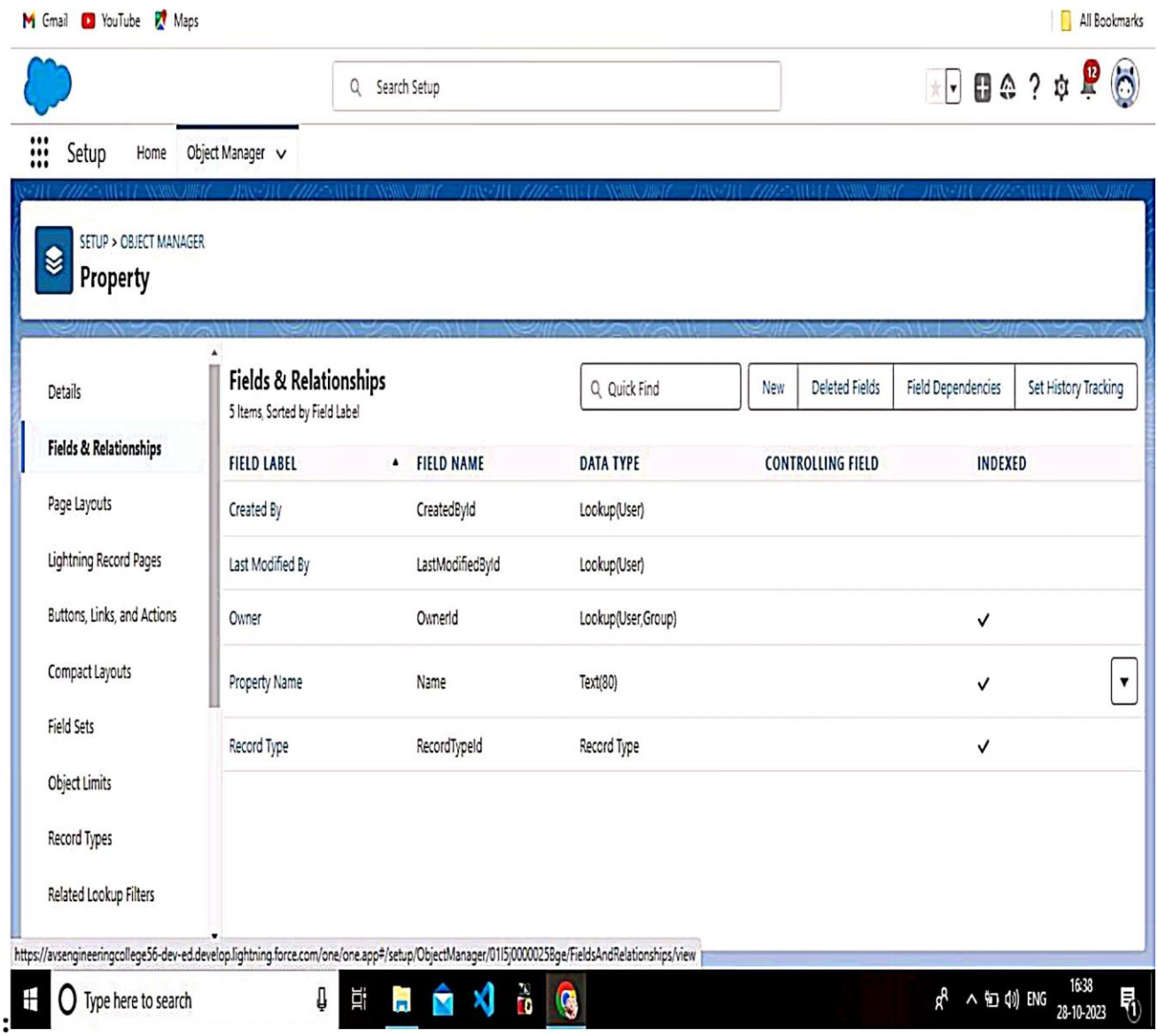
Custom objects are create to store information that's specific to your company or industry.

Custom Objects in Property management application:



2.2 Field for property:

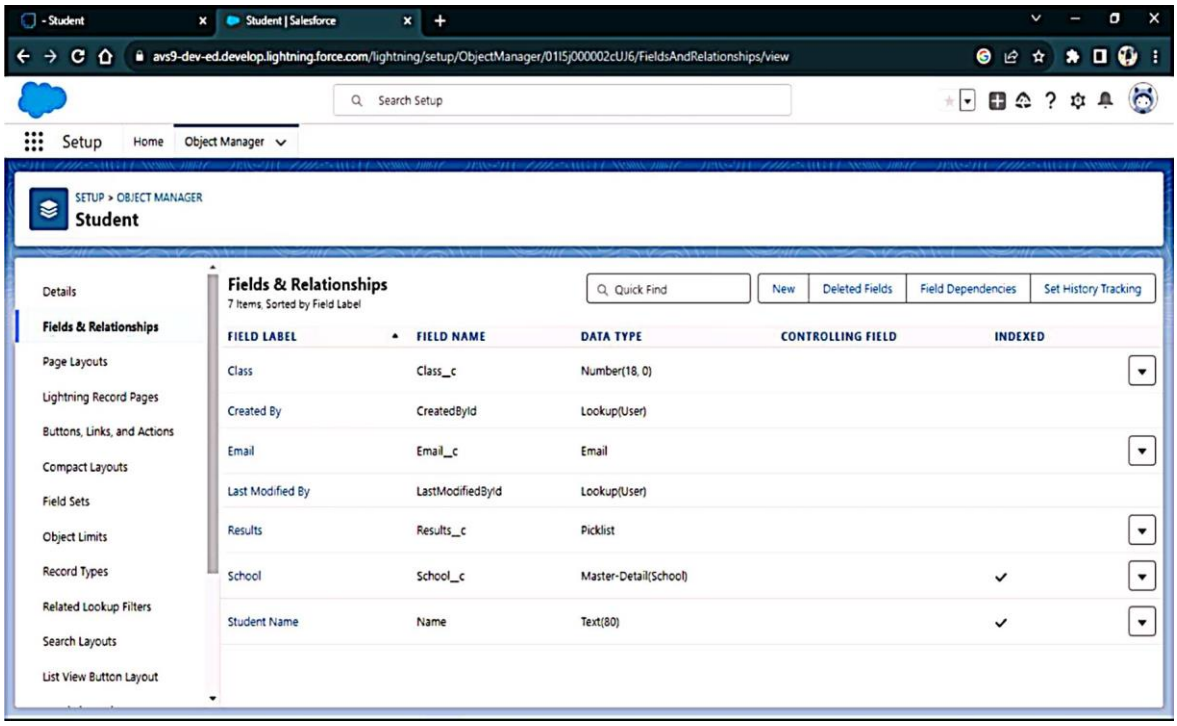




2 Objects are containers for your information, but they also give you special functionality.

Custom objects are create to store information that's specific to your company or industry.

Custom Objects in LOAN.



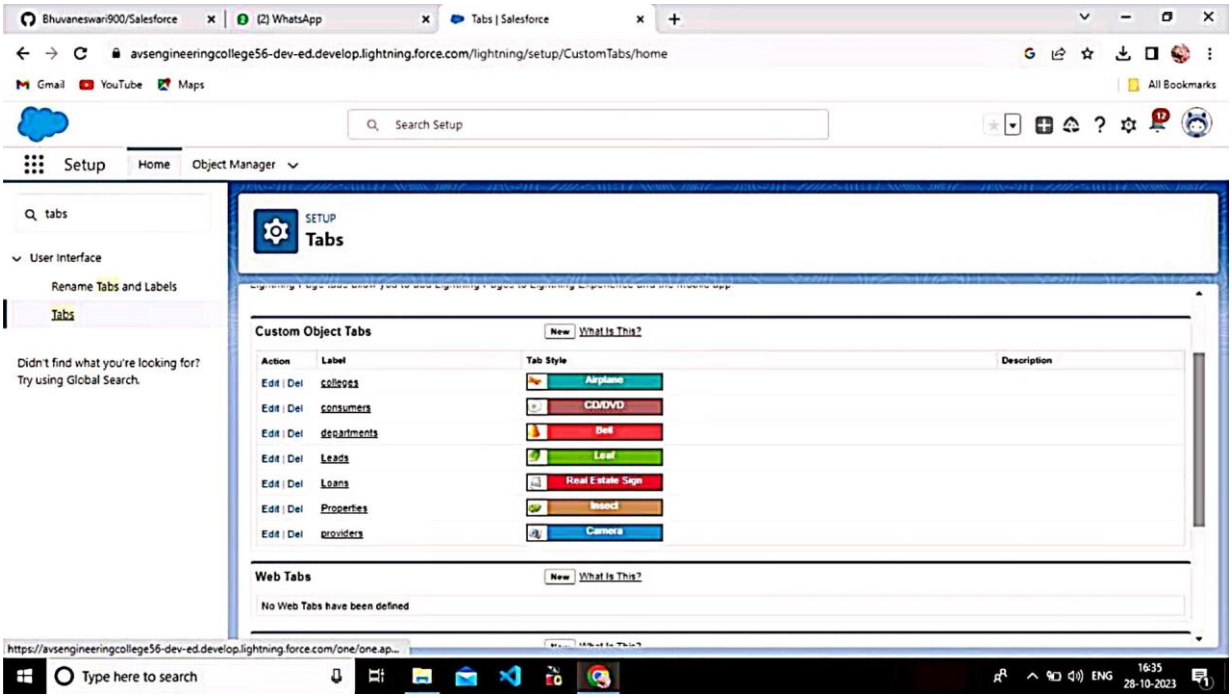
2.3 TABS:

FIELD LABEL

Last Modified By

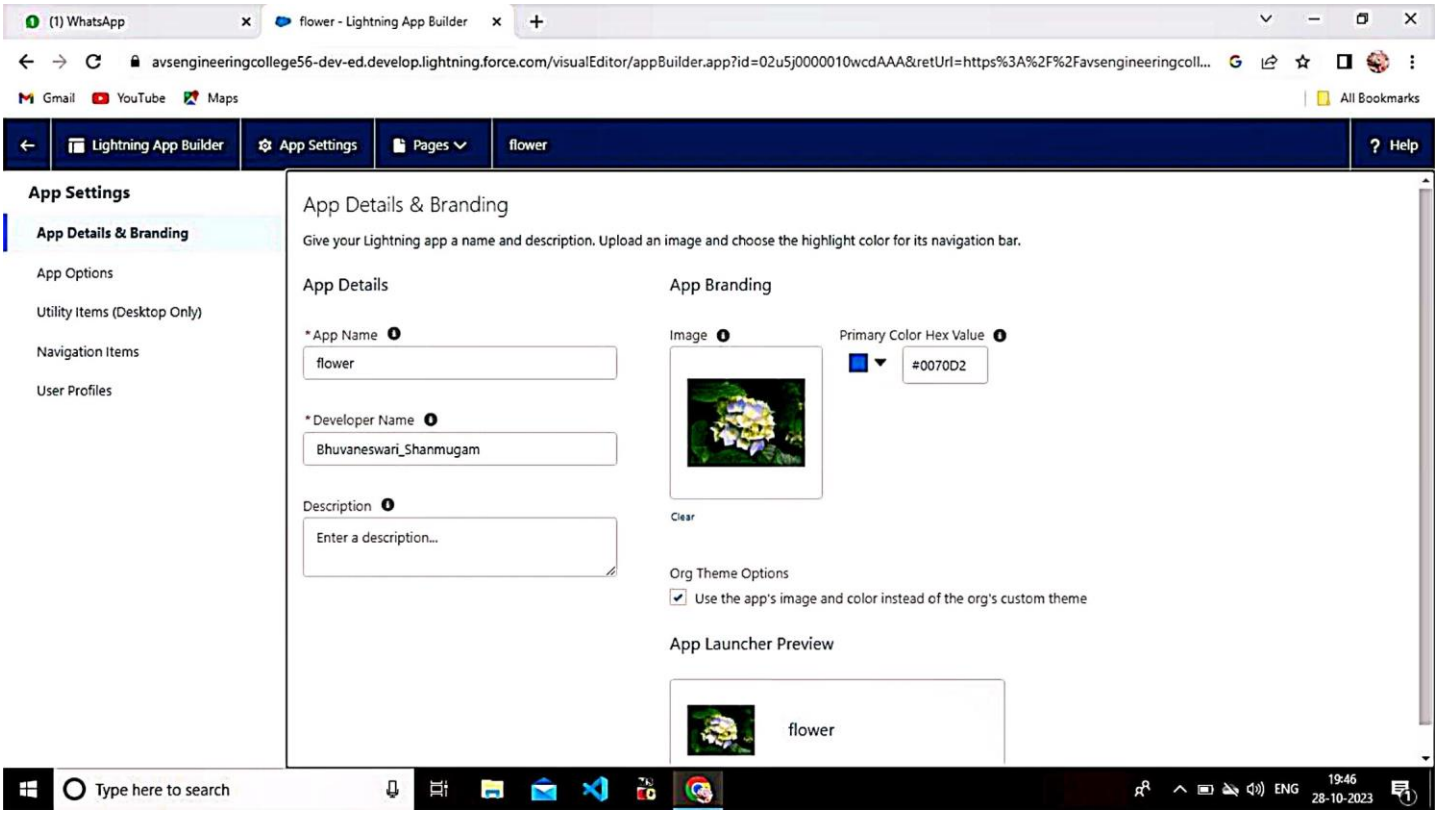
Student Name

Proprty


Bhuvaneswari900/Salesforce
(2) WhatsApp
Tabs | Salesforce
avsengineeringcollege56-dev-ed.develop.lightning.force.com/lightning/setup/CustomTabs/home
Gmail
YouTube
Maps
All Bookmarks
Search Setup
Setup
Home
Object Manager
tabs
User Interface
Rename Tabs and Labels
Tabs
Didn't find what you're looking for?
Try using Global Search.
SETUP
Tabs
Custom Object Tabs
New
What Is This?
Action
Label
Tab Style
Description
Edit | Del
colleges
Airplane
consumers
CD/DVD
departments
Bell
Leads
Leaf
Loans
Real Estate Sign
Properties
Insect
providers
Camera
Web Tabs
New
What Is This?
No Web Tabs have been defined
Type here to search
ENG
16:35
28-10-2023

2.4 Create the lightning app:

An app is a collection of items that work together to serve a particular function.ln ligtning experience lightning apps give your users access to set of objects,tabs,and other items all in one



App Options

Utility Items (Desktop Only)

App Details

App Branding

Proprty

*App Name O Image O Primary Color Hex Value O

Navigation Items

flower

User Profiles

*Developer Name O

Bhuvaneswari_Shanmugam

Description o Clear

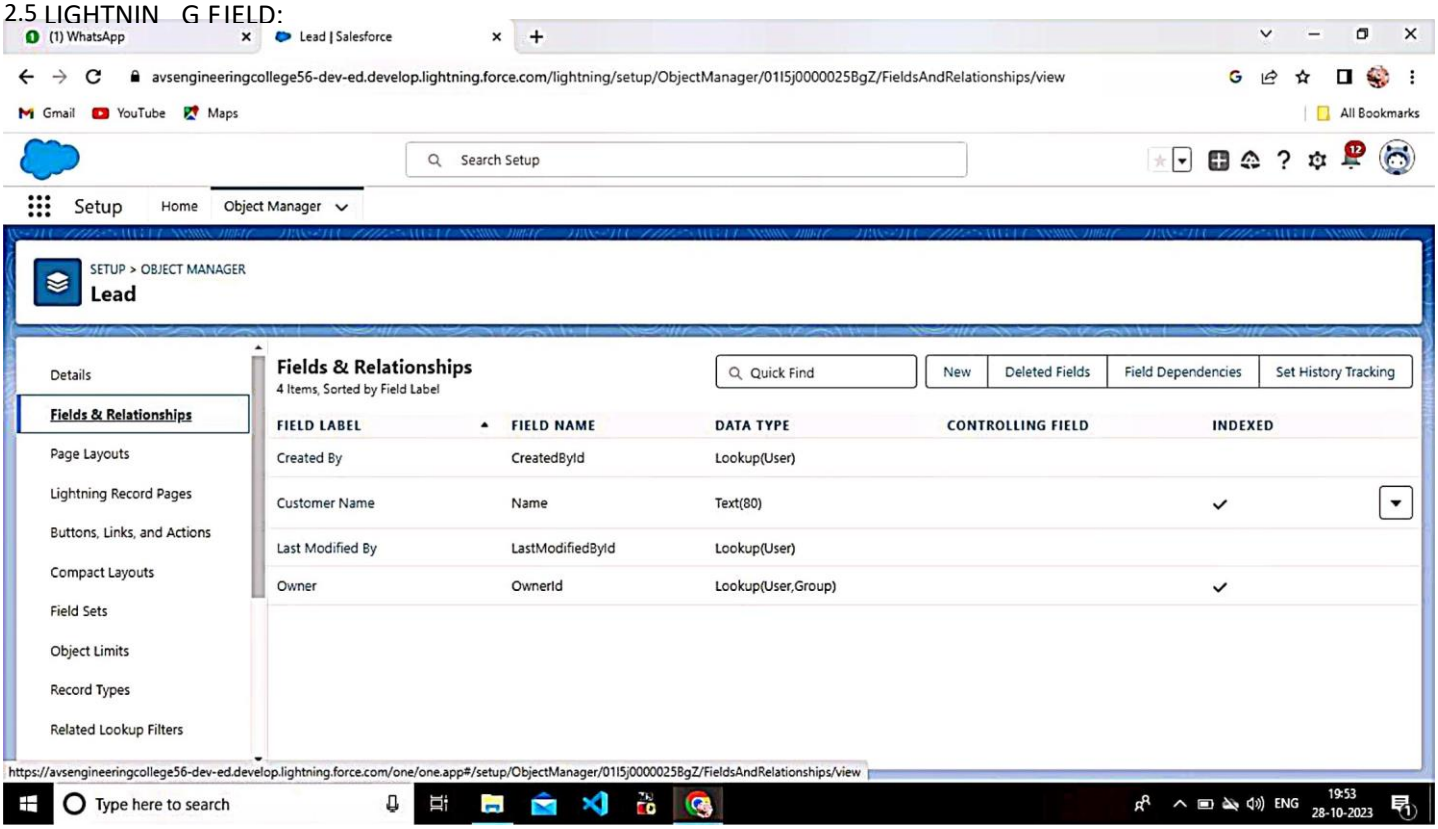
Enter a description„.

Org Theme Options

•[4] Use the app'S image and color instead of the org's custom theme

App Launcher Preview

2.5 LIGHTNIN G FIELD:



FIELD LABEL FIELD NAME DATA TYPE CONTROLLING FIELD INDEXED

Proprty

Created By	Created Byld	Lookup(User)
Customer Name	Name	Text(80)
Last Modified By	LastModifiedByld	Lookup(User)
	Ownerld	Lookup(User,Group)

SETUP > OBJECT MANAGER

Property

Save • Quick Save Preview Cancel 0 LJndo Redo

Field. Q Quick Find Field Name

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links. and Actions

compact Layouts

Field sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Buttons Section Created By Laon Amount price

Quick Actions Blank Spao• Name Last Modified By Property Name

Moble & Lightning Actions City Lead Id Label: L•st Modified By

Expanded Lookups Industrial Type' Lookup

Related Lists This item Is currently In use (Clio

Report Charts to

customize the actions in the Quick Actions in the Salesforce Classic Publisher section. and have saved the layout. then this section inhert. that set of actions by defaun when you click to overrße.

Property Detail Stsndard eut!ons Custom Buttons

Edit Delete) Clone Change Owner Change Record Printa View Sharing Sharing H ierarchy

information (Header Viniblo Ott edit

* O property Marne Sa mpje Text Owner sample-lexi

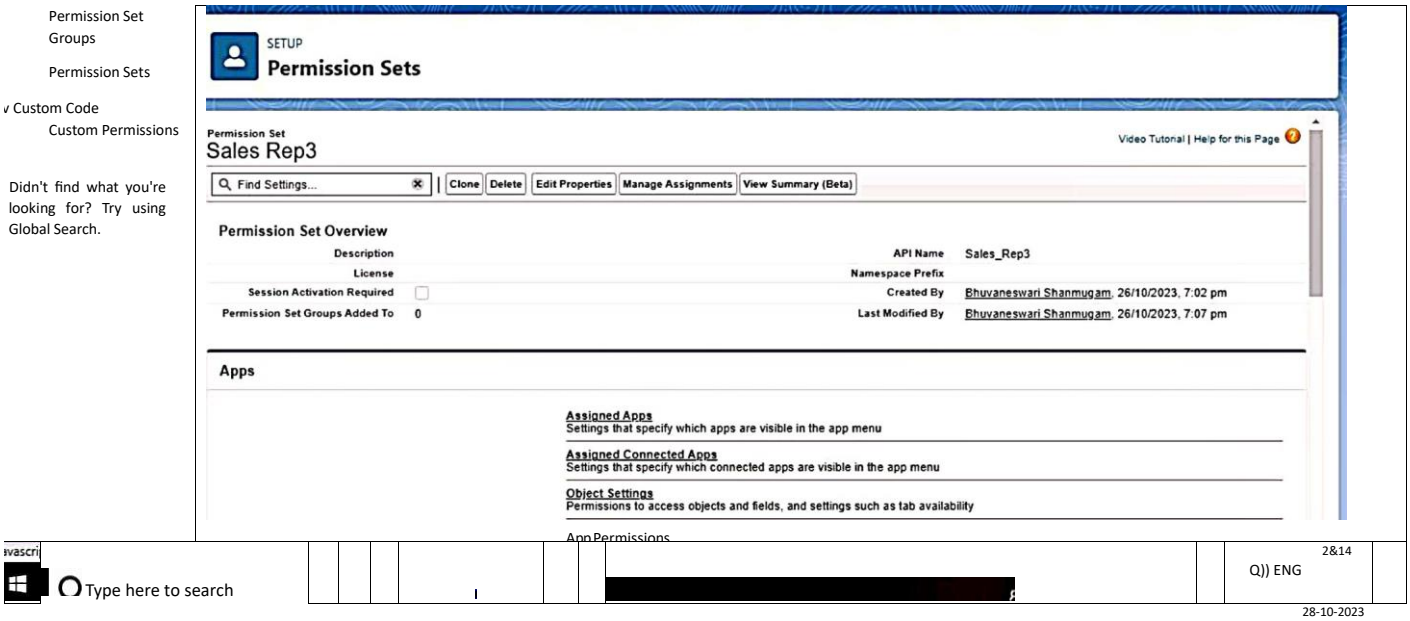
Customer Name Sample Text property

Type Sem le Text

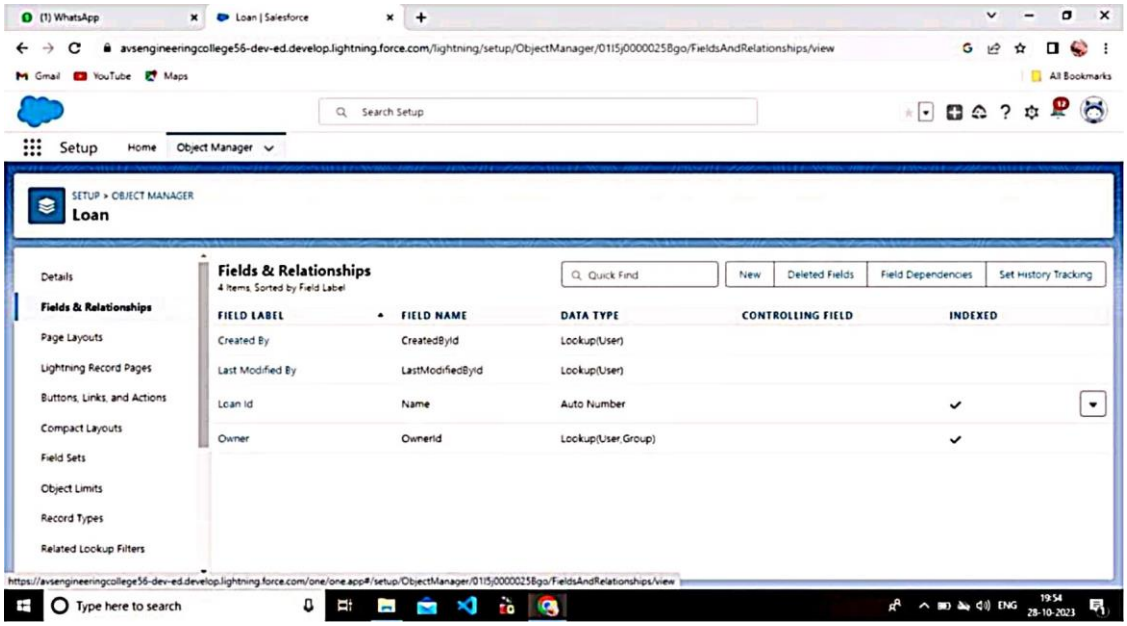
State Sample Text

City Sa mple Text

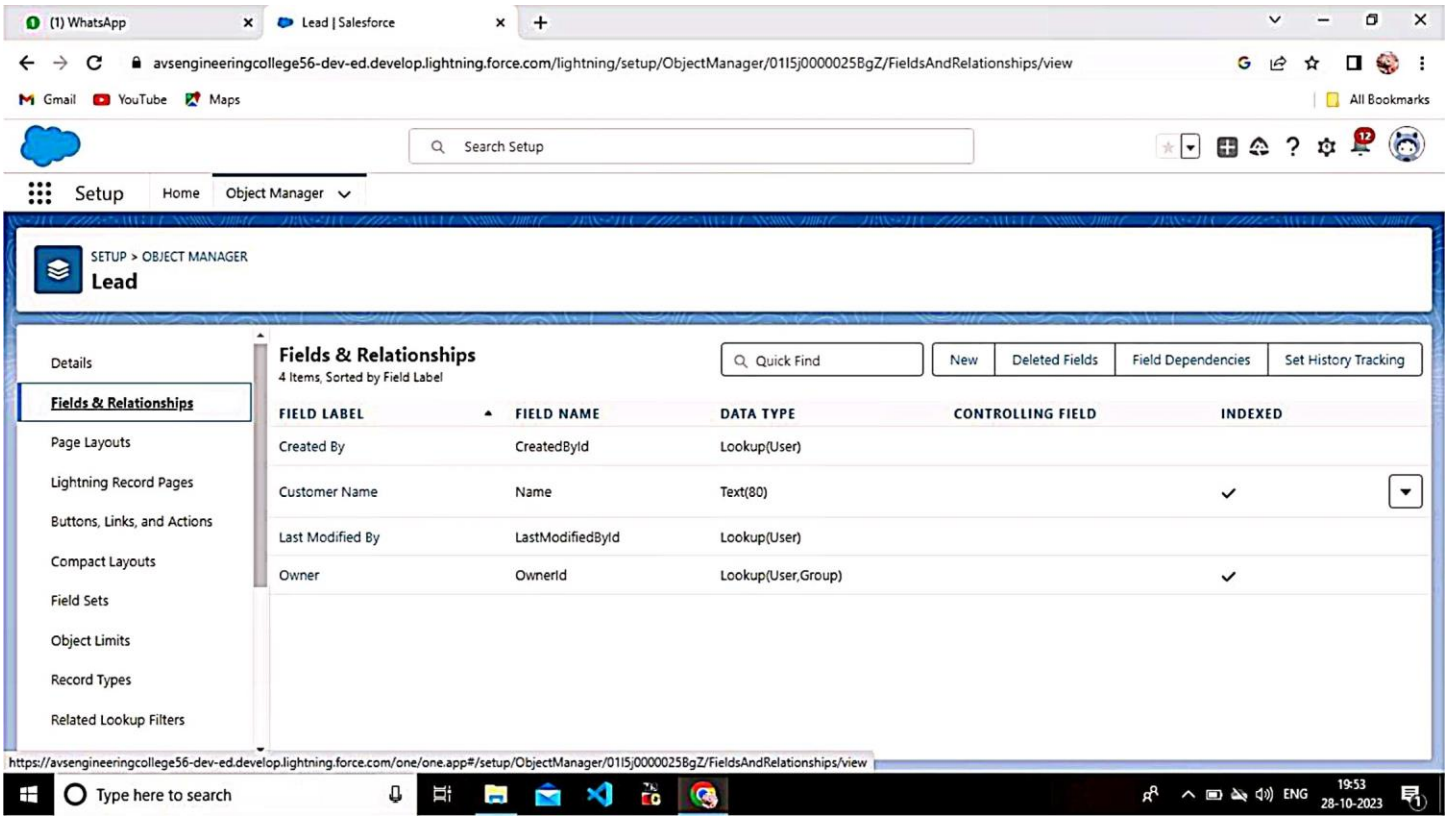
2.6 PERMISSION SET:



2.7 FIELD:



2.8 PAGE LAYOUT:

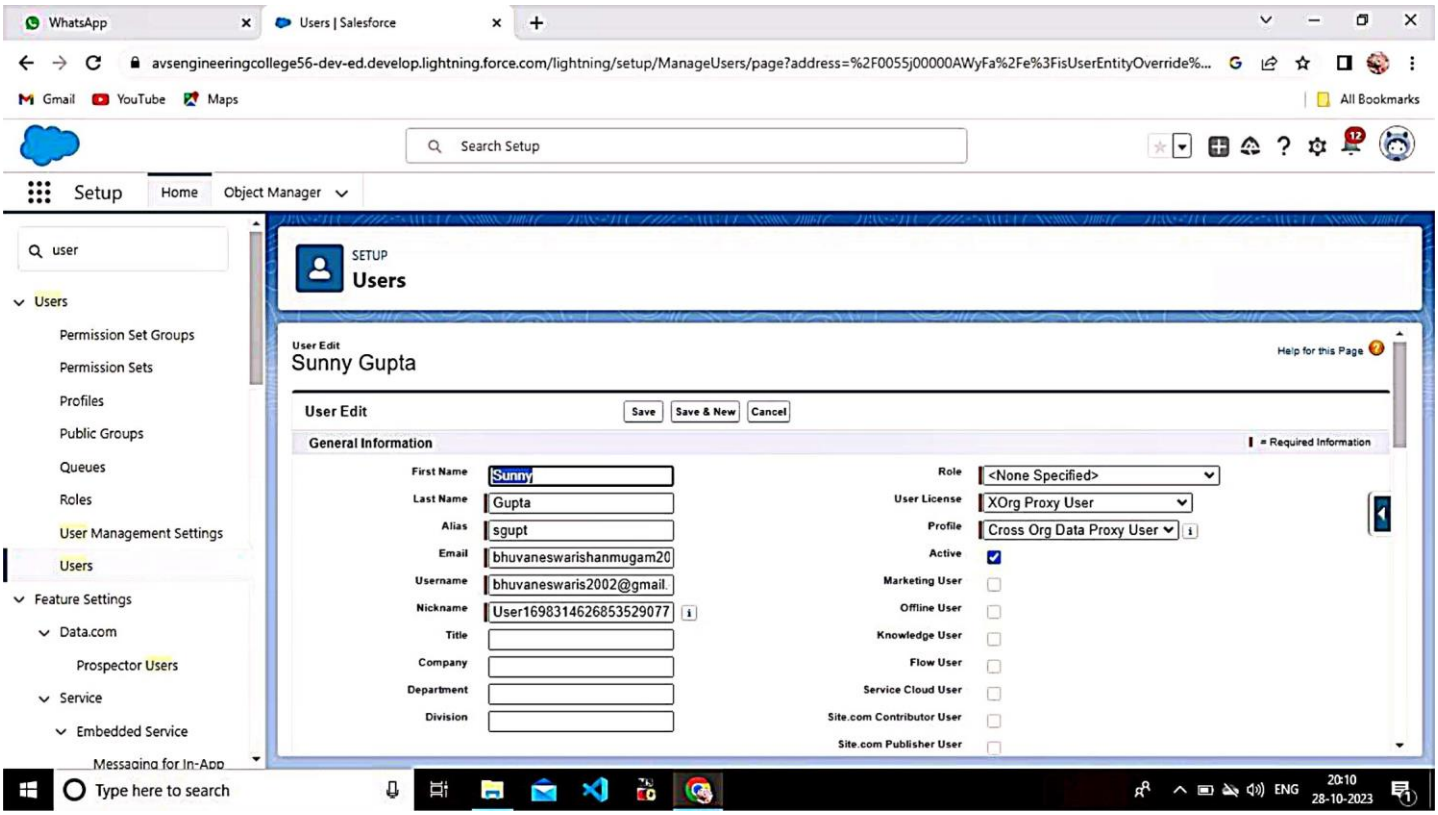


FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Customer Name	Name	Text(80)		
Last Modified By	LastModifiedById	Lookup0User)		
Owner	OwnerId	Lookup(User,Group)		

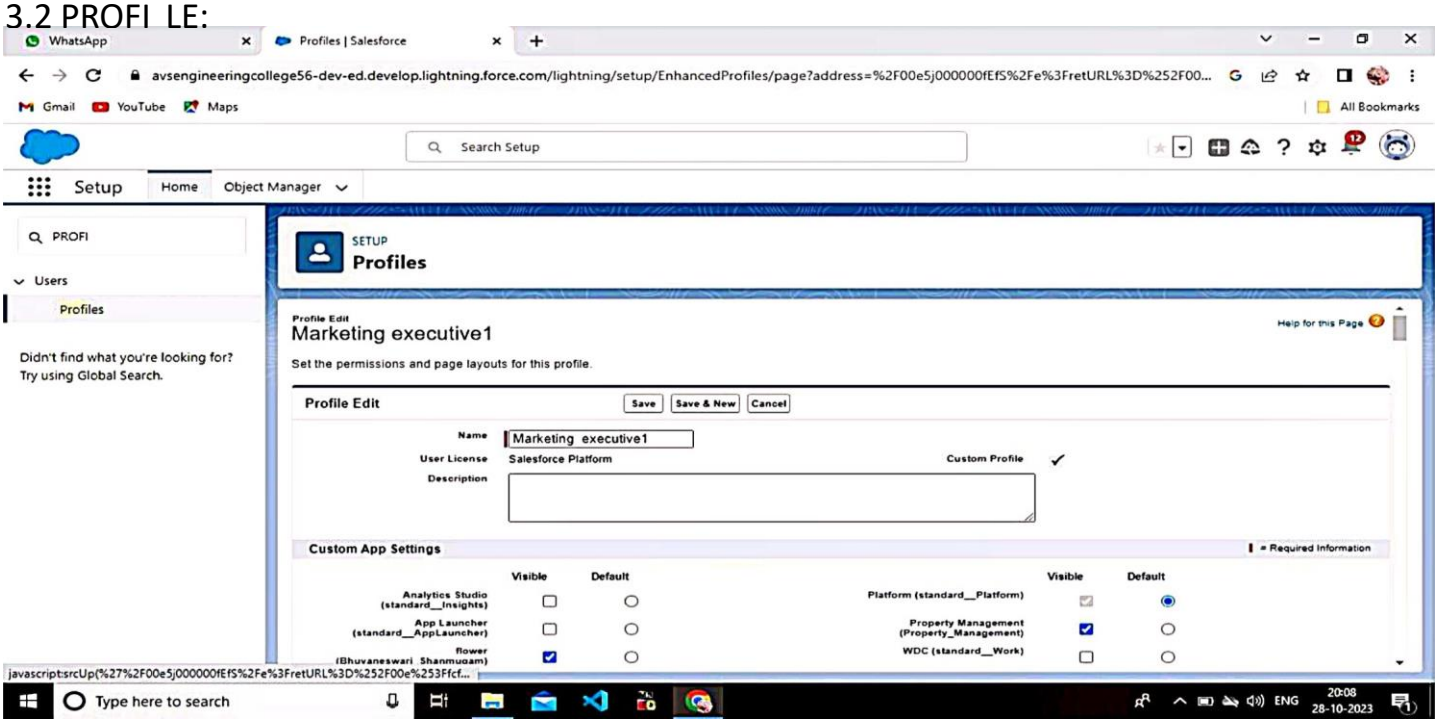
CHAPTER-3

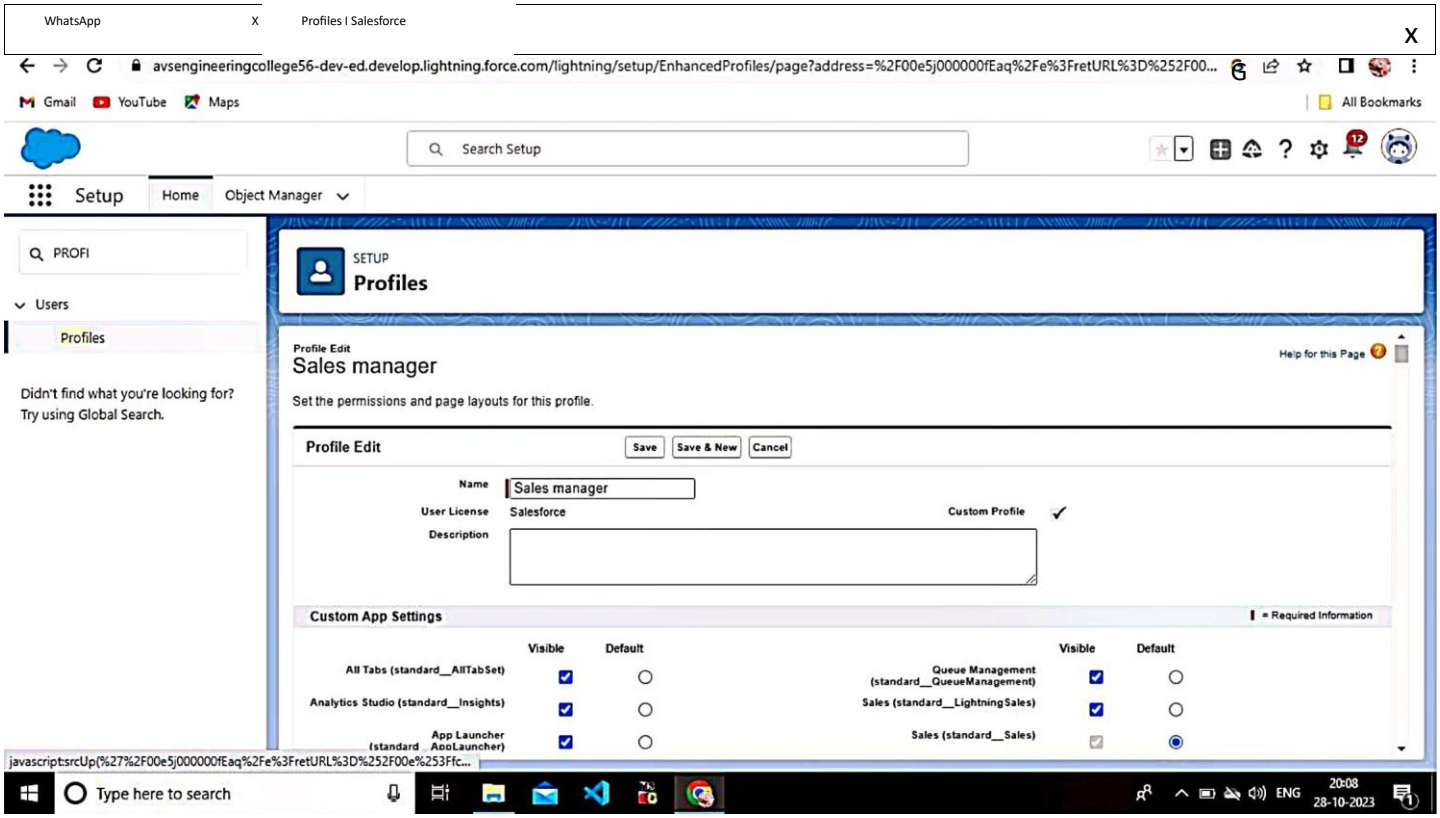
3.1 User :

Before customizing the travel app, first create a new user, Eric Executive, and set him up as manager. This involves assigning roles and profiles so that Eric has the correct permissions to approve travel requests.


WhatsApp
Users | Salesforce
avsengineeringcollege56-dev-ed.develop.lightning.force.com/lightning/setup/ManageUsers/page?address=%2F0055j00000AWyFa%2Fe%3FisUserEntityOverride%...
Gmail
YouTube
Maps
All Bookmarks
Search Setup
Setup
Home
Object Manager
user
Users
Permission Set Groups
Permission Sets
Profiles
Public Groups
Queues
Roles
User Management Settings
Users
Feature Settings
Data.com
Prospector Users
Service
Embedded Service
Messaging for In-App
SETUP
Users
User Edit
Sunny Gupta
Help for this Page
User Edit
Save
Save & New
Cancel
General Information
= Required Information
First Name
Sunny
Last Name
Gupta
Alias
sgupt
Email
bhuvaneswarishanmugam20
Username
bhuvaneswaris2002@gmail.
Nickname
User16983146268535290 77
Title
Company
Department
Division
Role
<None Specified>
User License
XOrg Proxy User
Profile
Cross Org Data Proxy User
Active
Marketing User
Offline User
Knowledge User
Flow User
Service Cloud User
Site.com Contributor User
Site.com Publisher User
Type here to search
ENG
20:10
28-10-2023

3.2 PROFI LE:

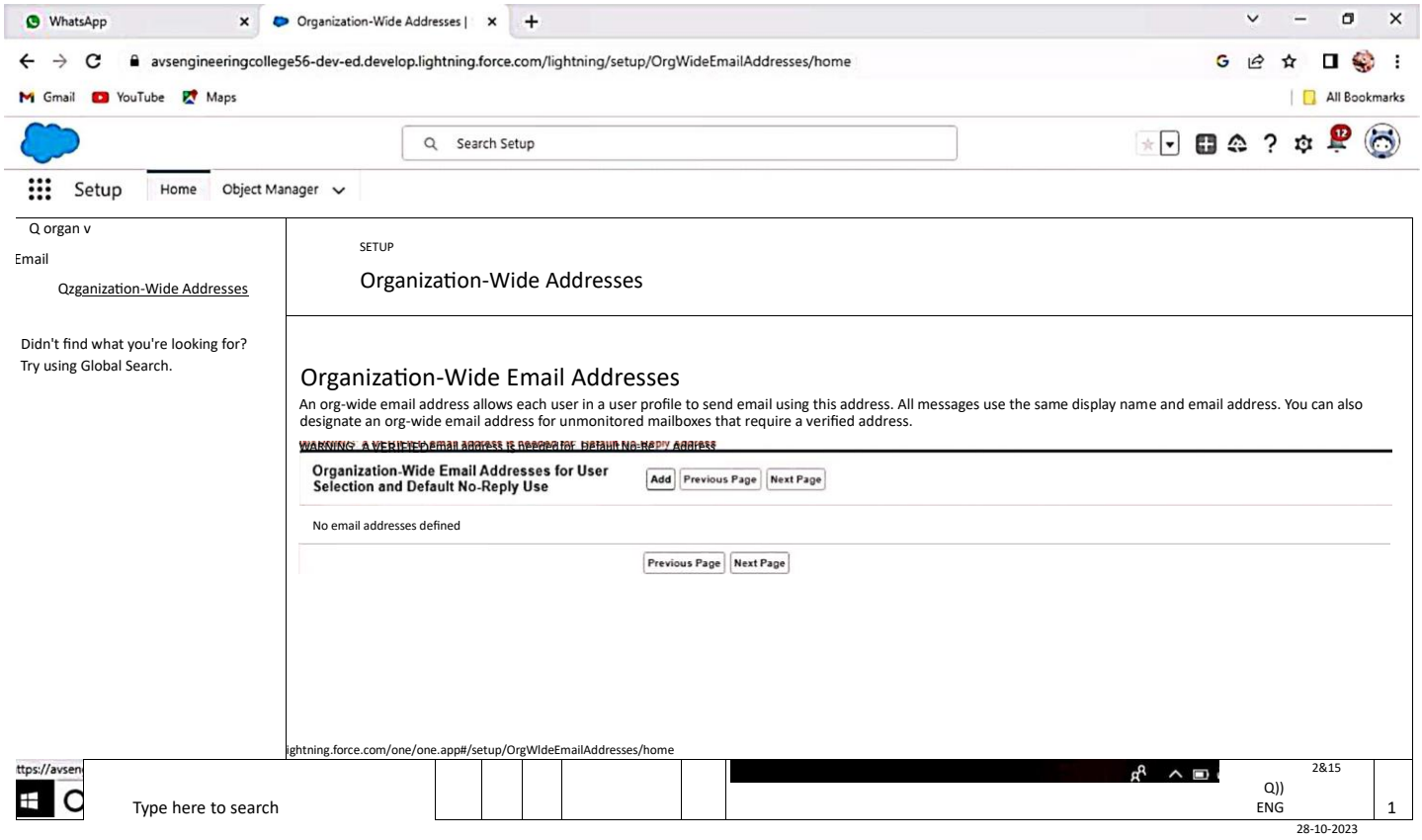




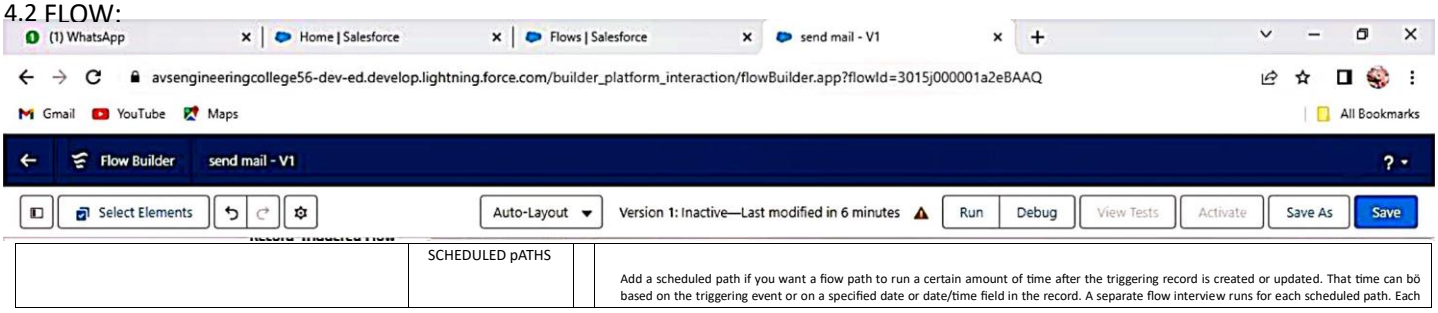
CHAPTER-4

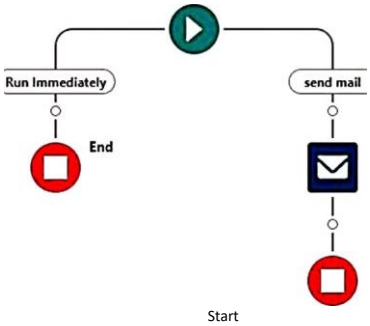
4.1 SETUP FOR OWD:

The last business rule functionality to implement before testing your application is a rule to set the Out-of-State checkbox field on the Travel Approval object if out-of-state travel has been chosen. Salesforce offers workflow capabilities that provide a declarative, drag-anddrop design environment to build our business process logic.



4.2 FLOW:





Start

Don't
Email

End

Run Immediately

send mail

scheduled path interview is queued to run at the scheduled time, but can be delayed until system resources become available. Path labels appear on connectors in the canvas.

SCHEDULED PATH DETAILS

Delete Path

*Path Label

send mail

*API Name

send_mail

• Time Source

Loan c: Last Modified Date

*Offset Number

24

* Offset Options

Days Before

> Advanced

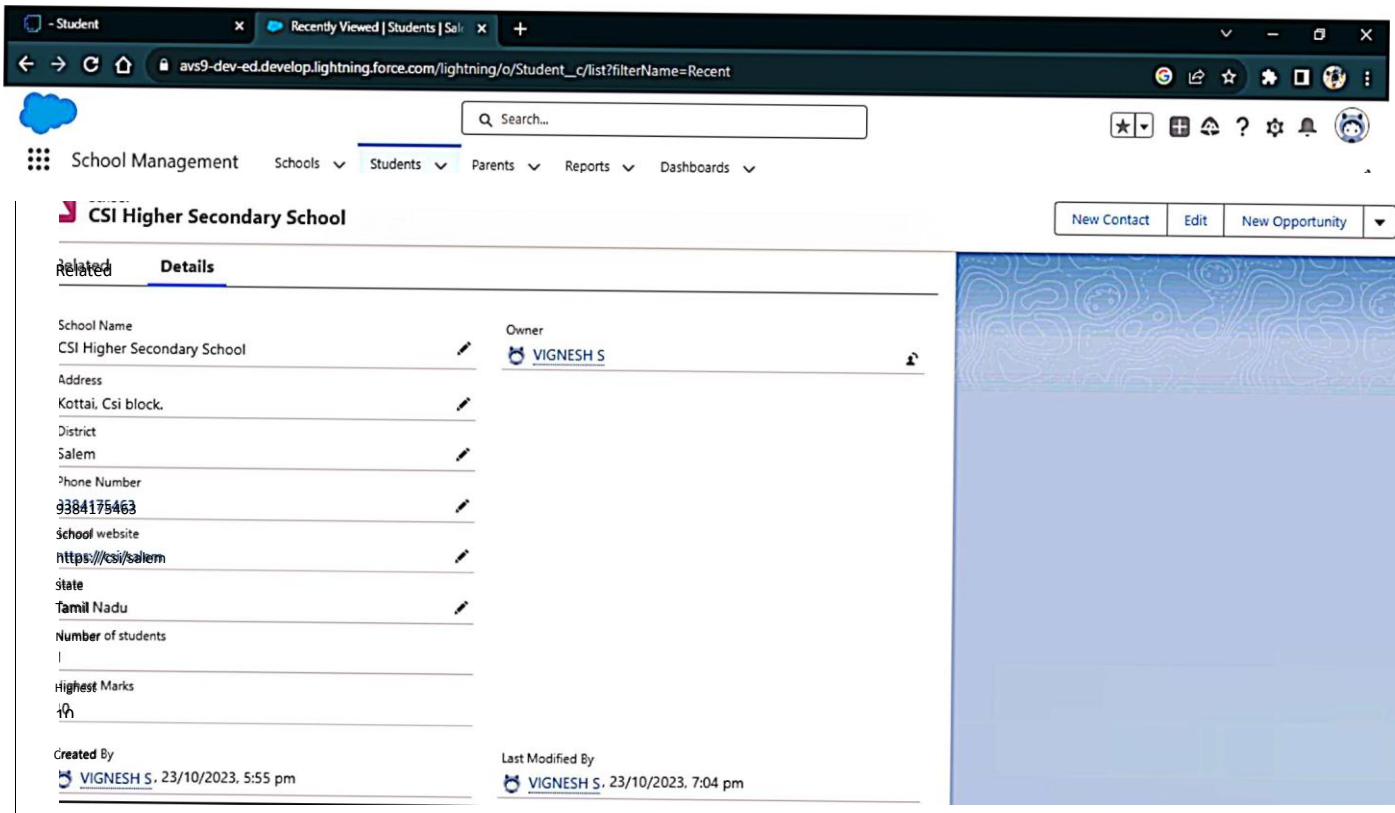
21:05

Type here to search

Q)) ENG

28-10-2023

4.3 Final Views



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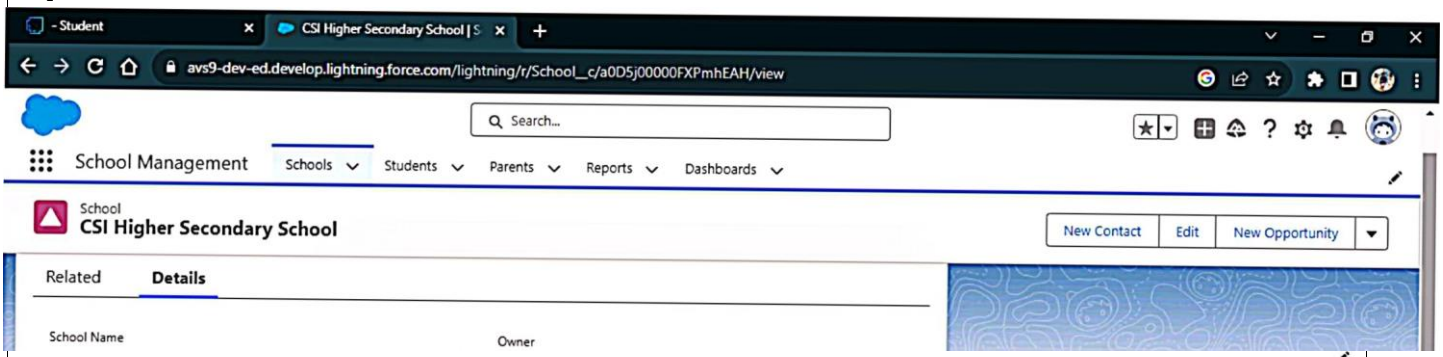


Students

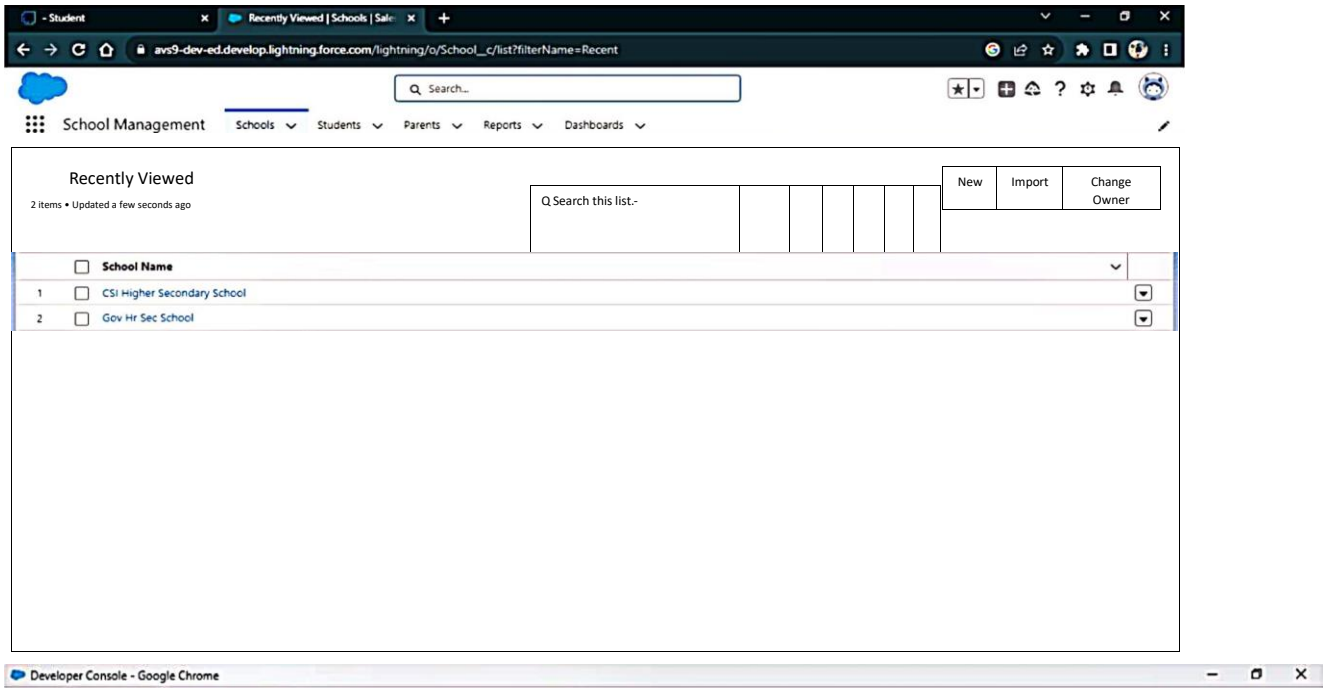
Recently Viewed

2 items • Updated a few seconds ago

New | Import

Search this list...

	C] Student Name
	Vignesh S
2	Tamilvani s


- Student
Recently Viewed | Schools | Sale
avs9-dev-ed.develop.lightning.force.com/lightning/o/School__c/list?filterName=Recent
Search...
School Management
Schools
Students
Parents
Reports
Dashboards
Recently Viewed
2 items • Updated a few seconds ago
Q Search this list.-
New
Import
Change Owner
School Name
1
CSI Higher Secondary School
2
Gov Hr Sec School
Developer Console - Google Chrome

avsengineeringcollege56-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

propTrigger.apxt *

Code Coverage: None ▾ API Version: 59 ▾ Go To

```
1  trigger propTrigger on Property__c (before update) {
2
3      if(trigger.isUpdate){
4
5          if(trigger.isBefore){
6
7  propClass.propMethod(trigger.new);
8
9      }
10
11     }
12
13     }
```

Logs | Tests | Checkpoints | Query Editor | View State | Progress | Problems

User	Application	Operation	Time ▾	Status	Read	Size

Filter: Click here to filter the log list

Type here to search

ENG 21:09 28-10-2023

CSI Higher Secondary School | S × | School | Salesforce × | - Student × | +

avs9-dev-ed.develop.lightning.force.com/lightning/r/School__c/a0D5j00000FXPmhEAH/view

Search...

School Management | Schools ▾ | Students ▾ | Parents ▾ | Reports ▾ | Dashboards ▾

School
CSI Higher Secondary School

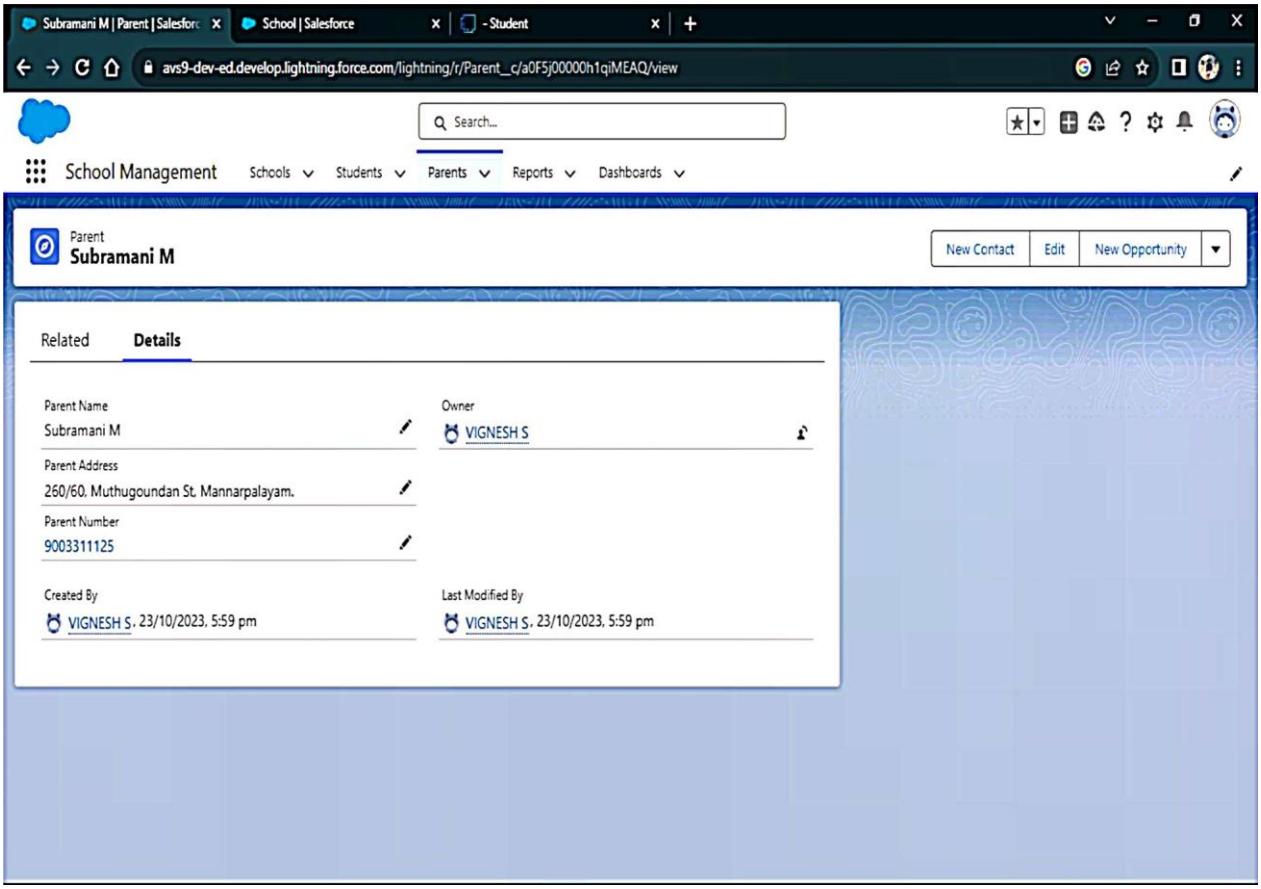
New Contact | Edit | New Opportunity ▾

Related | Details

Students (1) — New

Student Name
Vignesh S

View All



Developer Console - Google Chrome

o x

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File • Edit • Debug • Test • Workspace • Help • <

propTrigger.apxt * propClass.apxt *

Code Coverage: None API Version: 59 Go To

```
public class propClass {

    for(Property__c prop:propVar){

        if (prop.Create_Property_Type__c== 'Residential'){

            prop.Commercial__c='shop';

        }else{


        }

        }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size

Filter Click here to filter the log list

Type here to search

ENG 21:10 28-10-2023

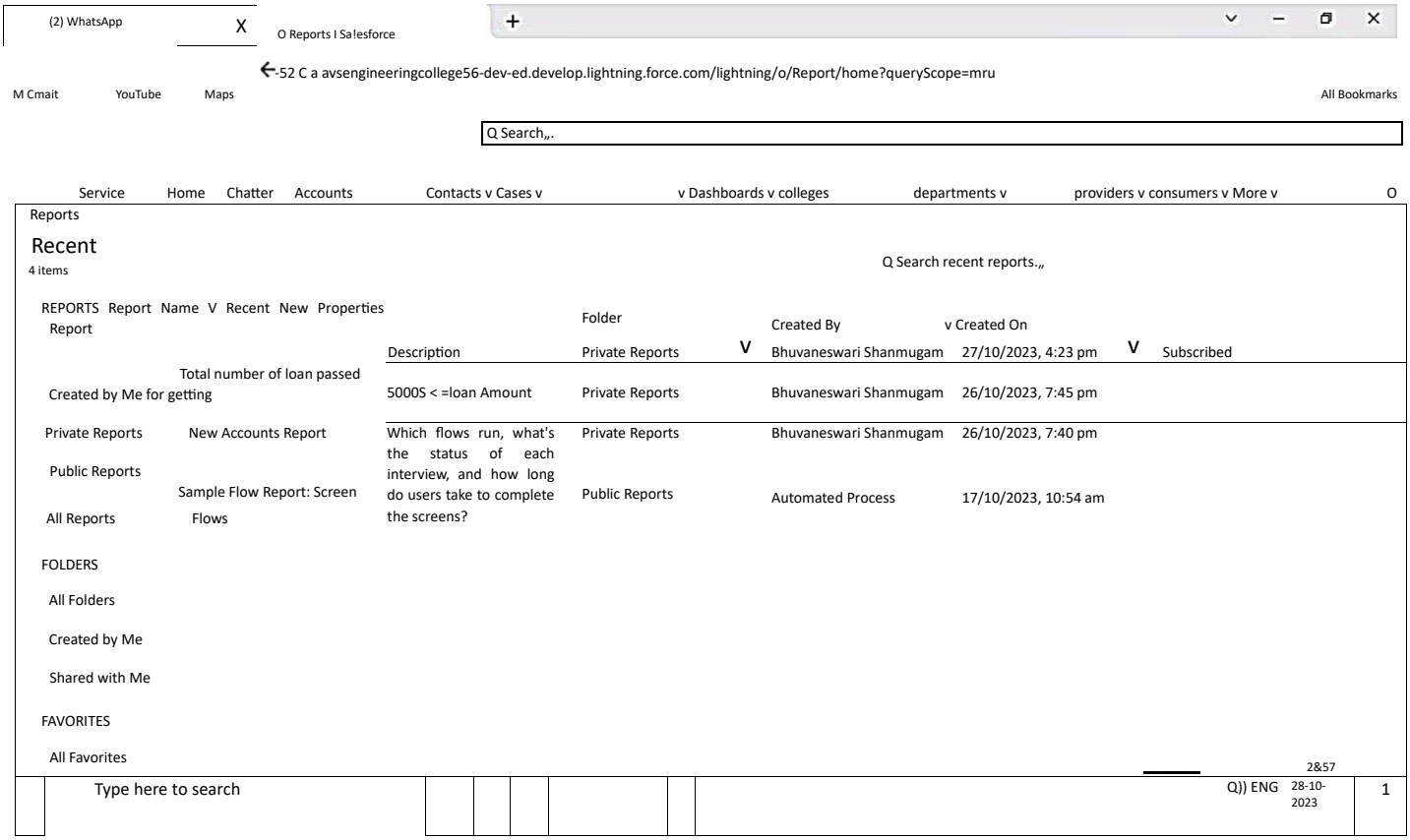
CHAPTER-5

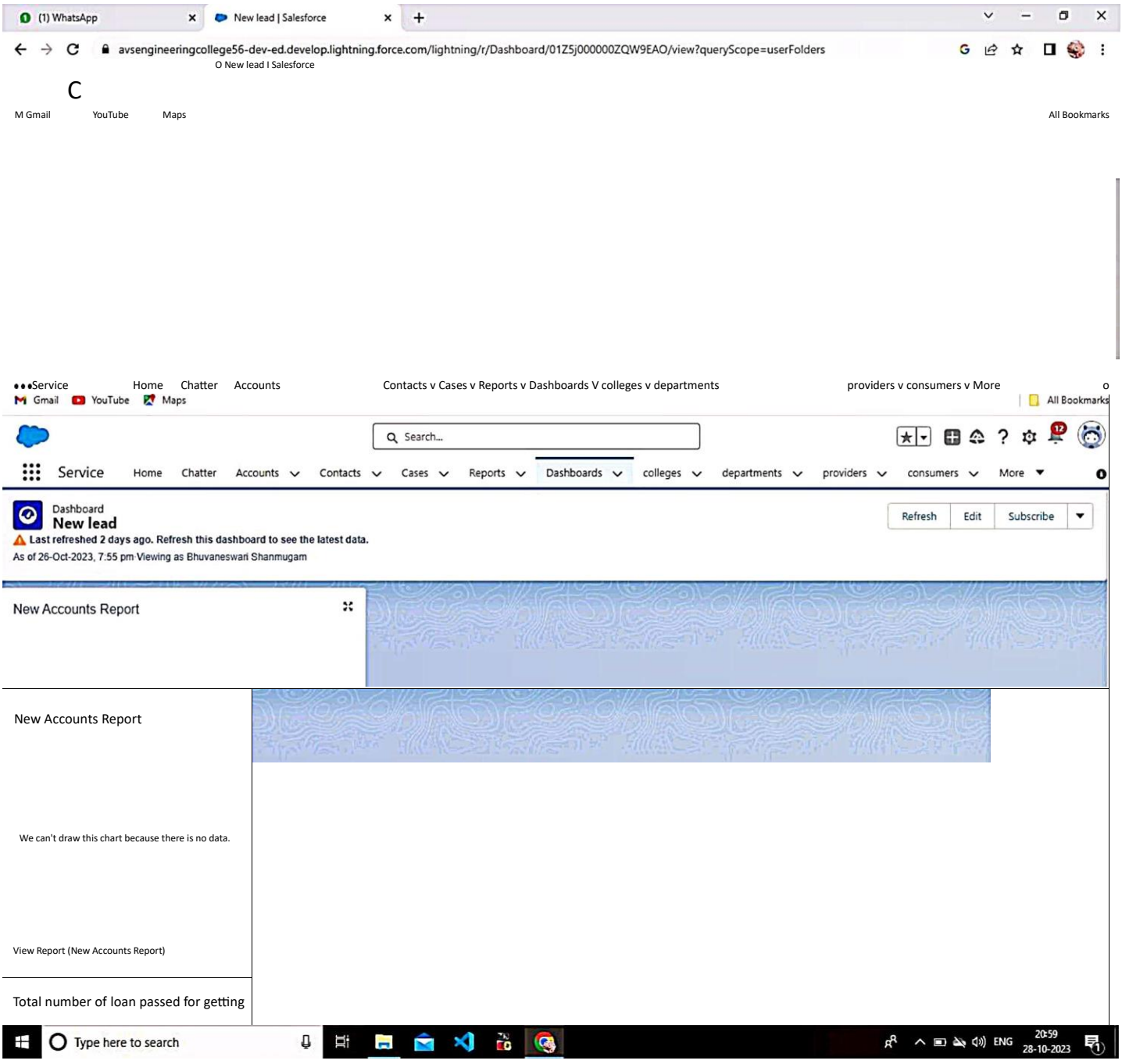
REPORTS & DASHBOARD

5.1Reports

A Salesforce report is a list of data generated based on filter criteria. Salesforce Reports helped us predict trends and gives us the advantage to increase profits.

The report builder provides a drag-and-drop interface to easily build and customize your reports.




(1) WhatsApp
New lead | Salesforce
avsengineeringcollege56-dev-ed.develop.lightning.force.com/lightning/r/Dashboard/01Z5j000000ZQW9EAO/view?queryScope=userFolders
O New lead I Salesforce
C
M Gmail
YouTube
Maps
All Bookmarks
•••Service
Home
Chatter
Accounts
Contacts v Cases v Reports v Dashboards V colleges v departments
providers v consumers v More
o
Gmail
YouTube
Maps
All Bookmarks
Search...
Service
Home
Chatter
Accounts
Contacts
Cases
Reports
Dashboards
colleges
departments
providers
consumers
More
Dashboard
New lead
Refresh
Edit
Subscribe
Last refreshed 2 days ago. Refresh this dashboard to see the latest data.
As of 26-Oct-2023, 7:55 pm Viewing as Bhuvaneswari Shanmugam
New Accounts Report
New Accounts Report
We can't draw this chart because there is no data.
View Report (New Accounts Report)
Total number of loan passed for getting
Type here to search
ENG
20:59
28-10-2023

CHAPTER-6

CONCLUSION

the conclusion of a property management application using Salesforce project would summarize achievements, highlight benefits like improved efficiency, address challenges and solutions, include user feedback, mention lessons learned, discuss future enhancements, acknowledge contributions, and emphasize the project's significance in enhancing property management processes.

In building an employee travel approval application, it's essential to engage relevant stakeholders, including HR, finance, and IT teams, to ensure that the application aligns with organizational goals and requirements. Furthermore, thorough testing and training should be conducted to guarantee a smooth and successful implementation.

By addressing these key points and creating a tailored school management application thataligns with the unique needs and policies of the corporate, organizations can enhance their travel management processes, improve cost control, and provide a more satisfying experiencefor employees and travel administrators alike.

CHAPTER-7

PROJECT DEMONSTRATION

Github:

https://github.com/Harish6379/Naanmudhalvan-salesforce-NM2023TMID01395-kiot

Demo Link:

https://drive.google.com/file/d/1hbA9Fp4ibHZgm1 tXGoPAczh2-Y8vlz7/view?usp=drivesdk