



DR. MGR GOVT. ARTS AND SCIENCE COLLEGE FOR WOMEN  
UG DEPARTMENT OF MATHEMATICS  
NAAN MUDHALVAN PROJECT  
III-YEAR B.Sc. MATHEMATICS

BUILD AN EMPLOYEE TRAVEL APPROVAL APPLICATION FOR CORPORATES	
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TEAM LEADER	GOMATHI.P
TEAM MEMBERS	1.HAHILA.S 2.ILAKIYA.P 3.INDHUS

# PROJECT REPORT

## 1. INTRODUCTION

### 1.1 OVERVIEW

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

In this project we will learn,

1. Real time sales force project
2. Object & relationship in salesforce

### 1.2 PURPOSE

This project helps in sending your travel approval requests to your manager in place of Emails.

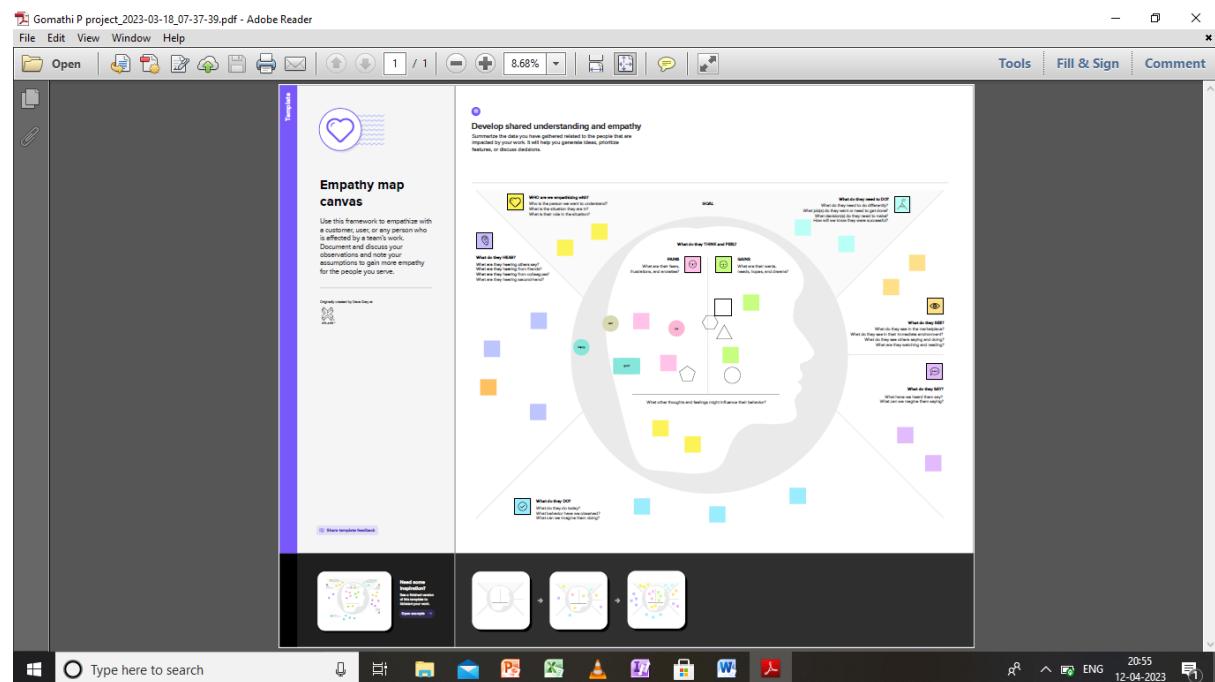
A travel request form helps gather employee trip details and allows you to reject or approve their travel and reimburse their expenses.

## TRAVEL APPROVAL SAMPLE APPLICATION

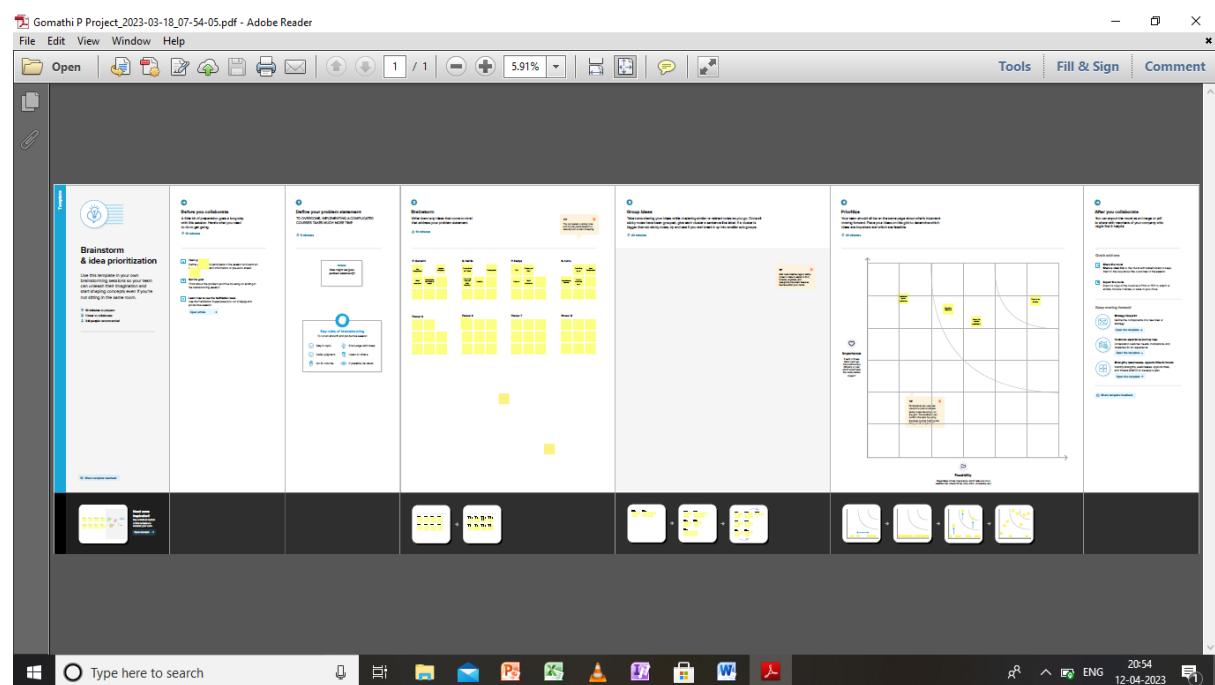
- About the sample application
- Prerequisites
- Installing the sample application
- Defining the use of an external web browser
- Starting the sample application
- Logging in as an employee for requesting a business trip
- Entering a travel request with flight and hotel information
- Adding additional expenses to your travel request
- Logging in as a manager for approving travel requests
- Approving a travel request.

## 2. PROBLEM DEFINITION & DESIGN THINKING

### 2.1 Empathy Map



### 2.2 Ideation and brainstorming map



### 3. RESULT

#### 3.1 Data model:

Object name	Fields in the object	
Account	Field label	Data type
	Travel Approval	Lookup
Account	Field label	Data type
	Expense type field	picklist

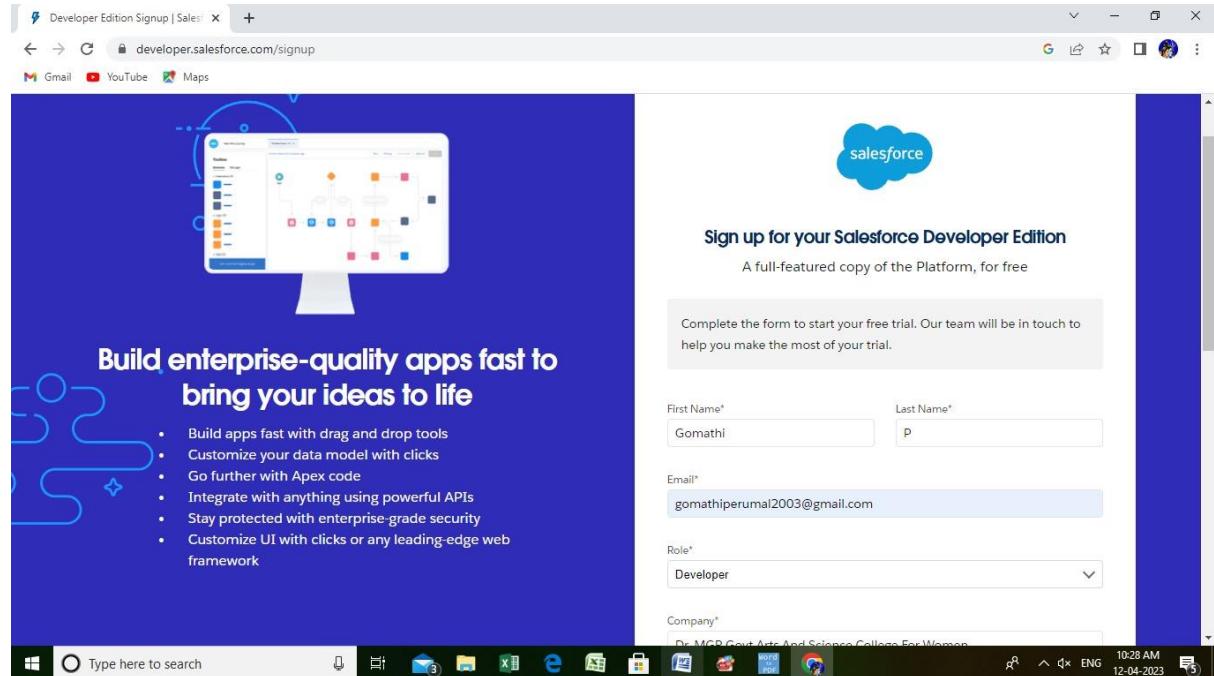
#### 3.2 Activity and screenshot

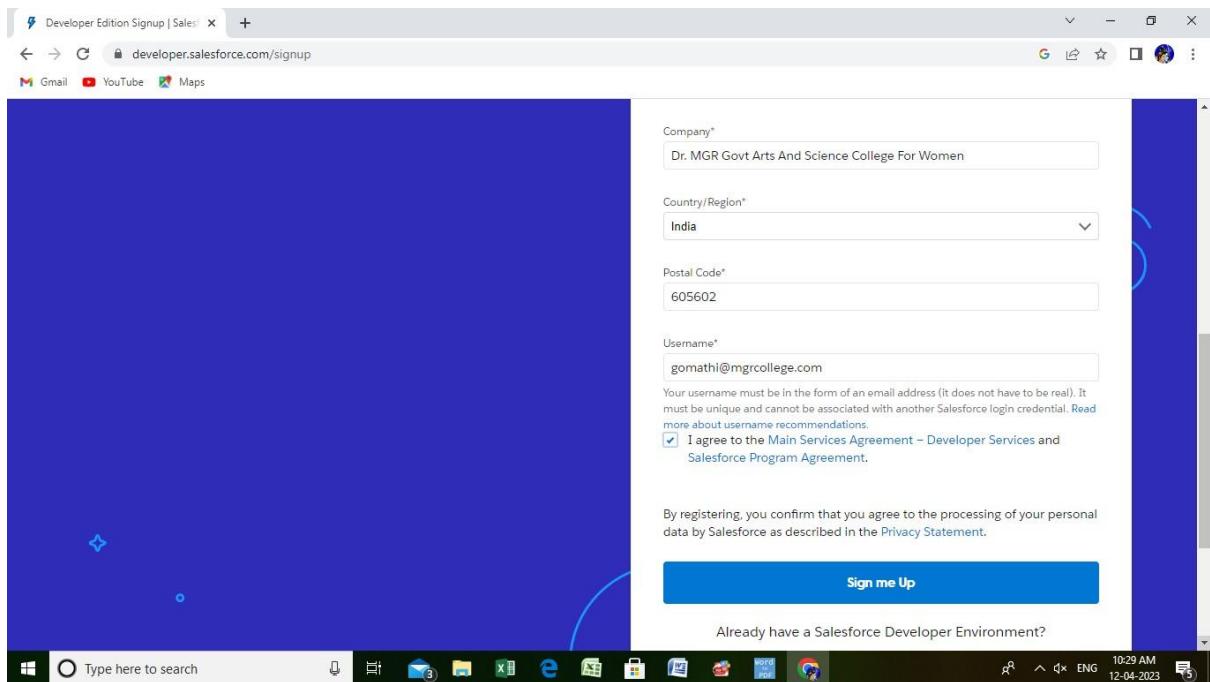
Milestone 1-create salesforce org:

Activity-1:

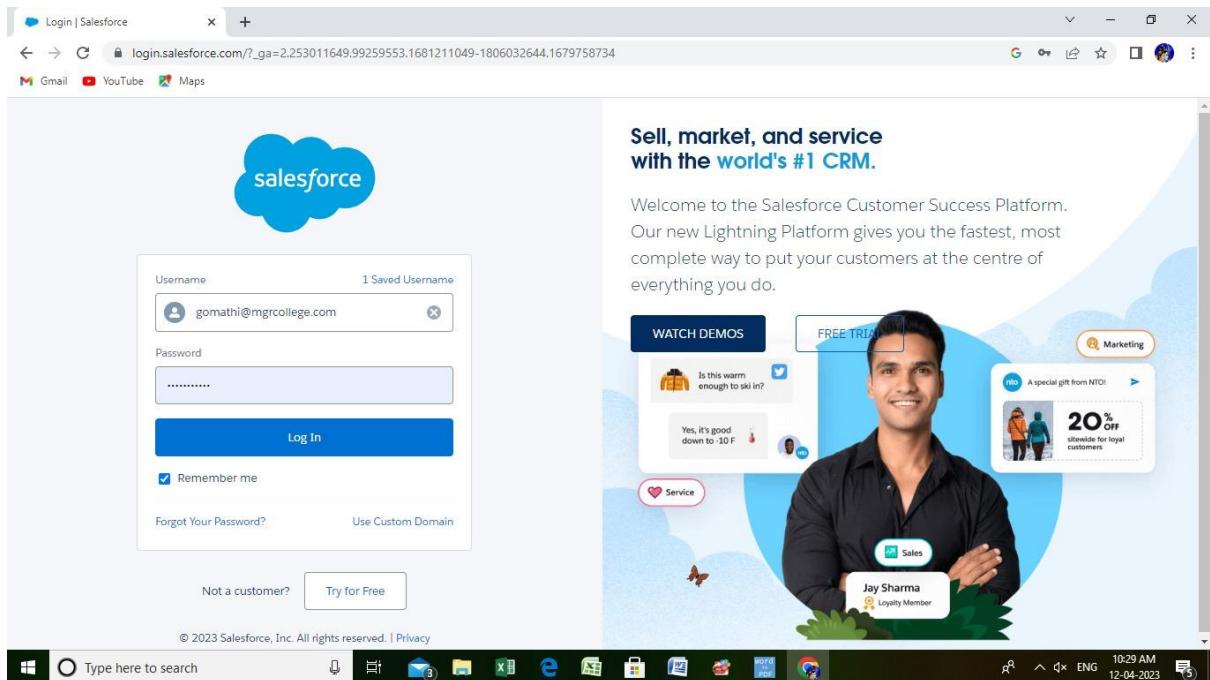
Creating developer account

Creating a developer org in salesforce.



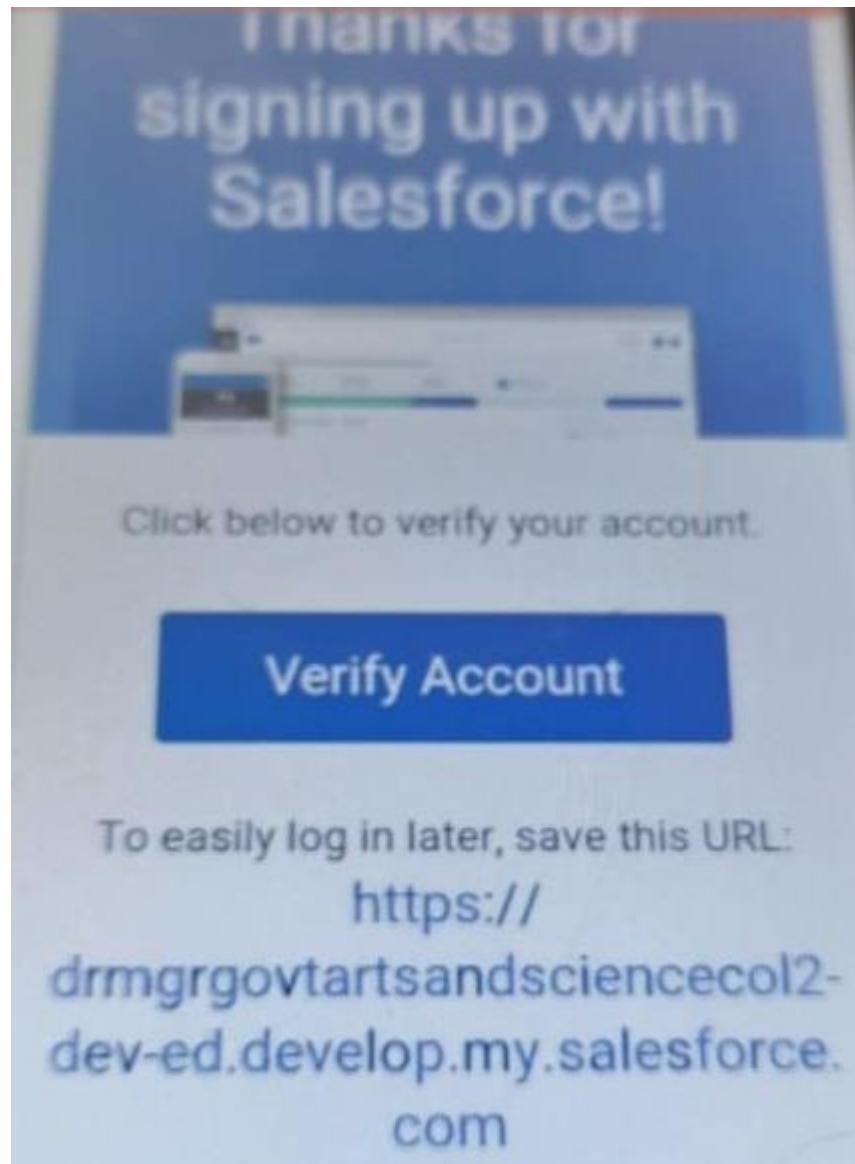


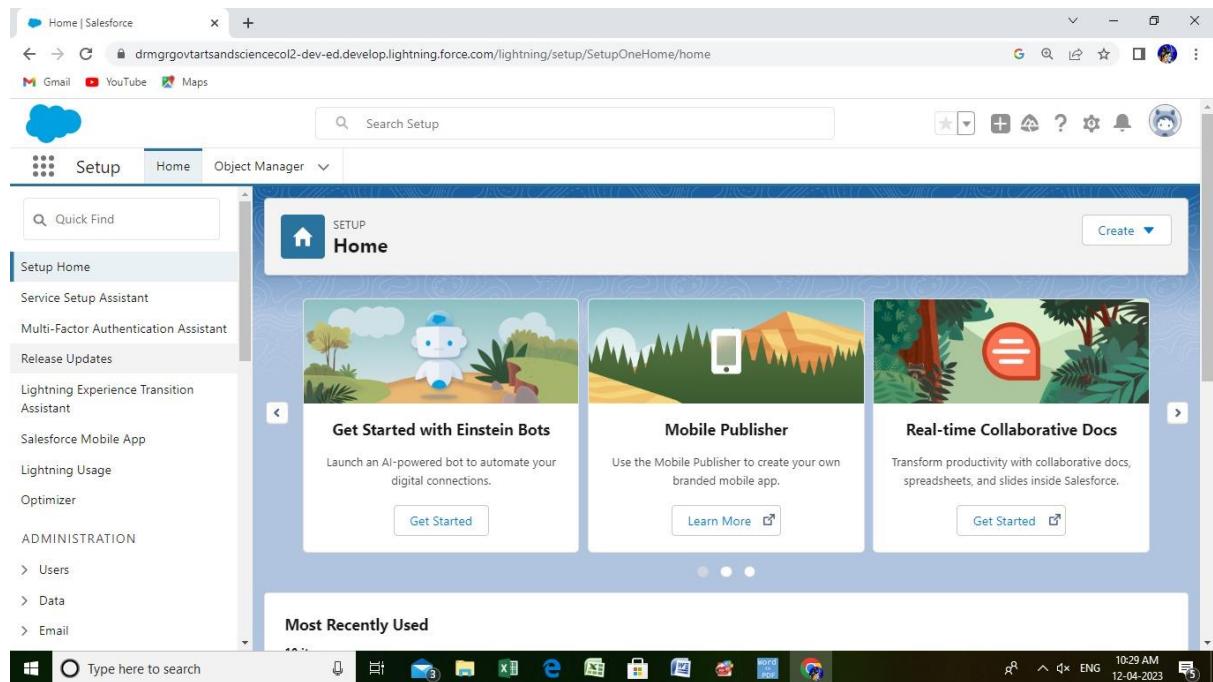
## Salesforce login



## Activity-2

Account activation

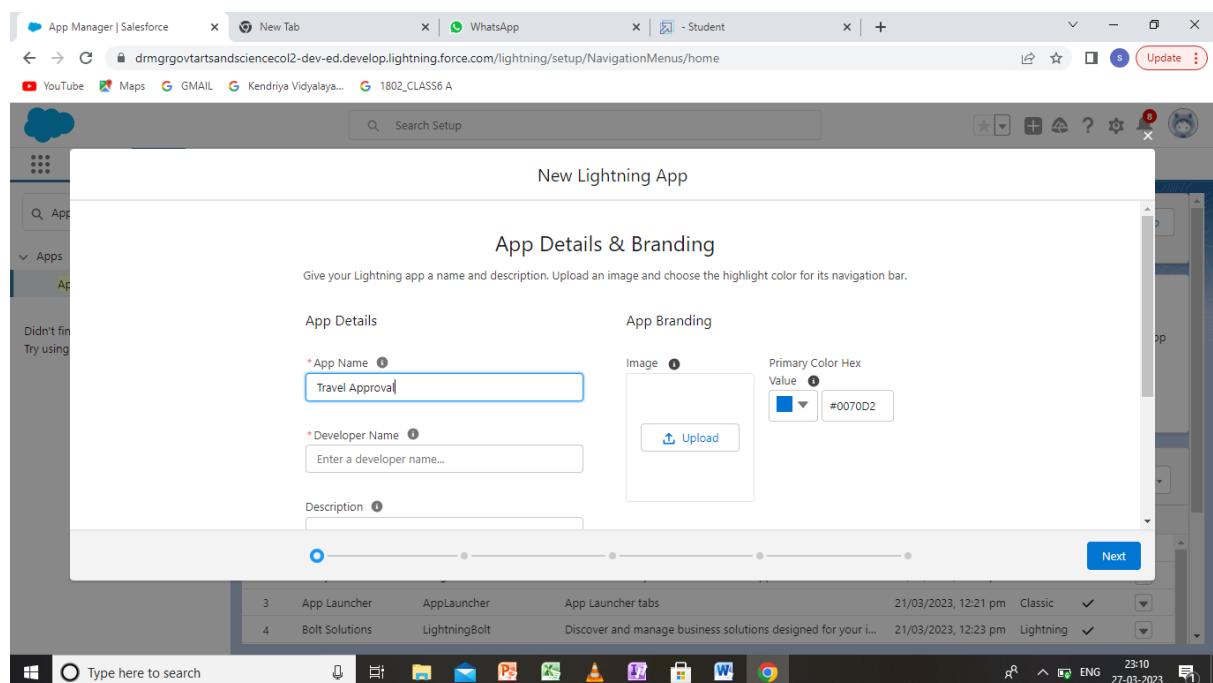


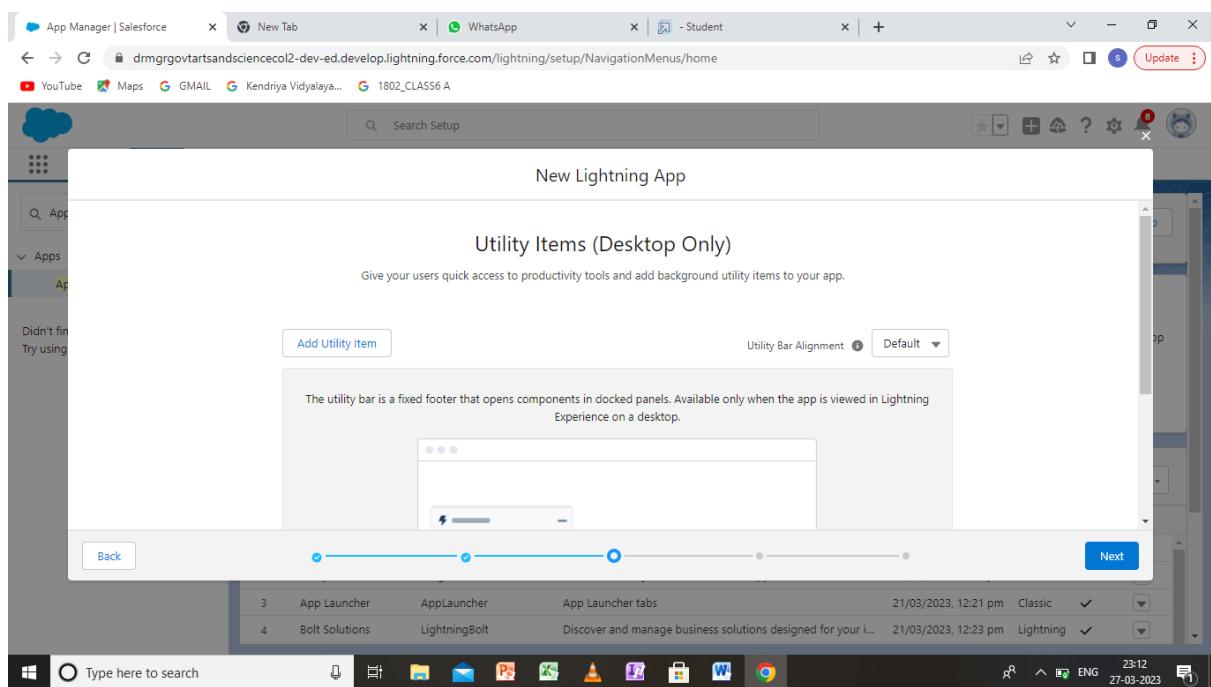
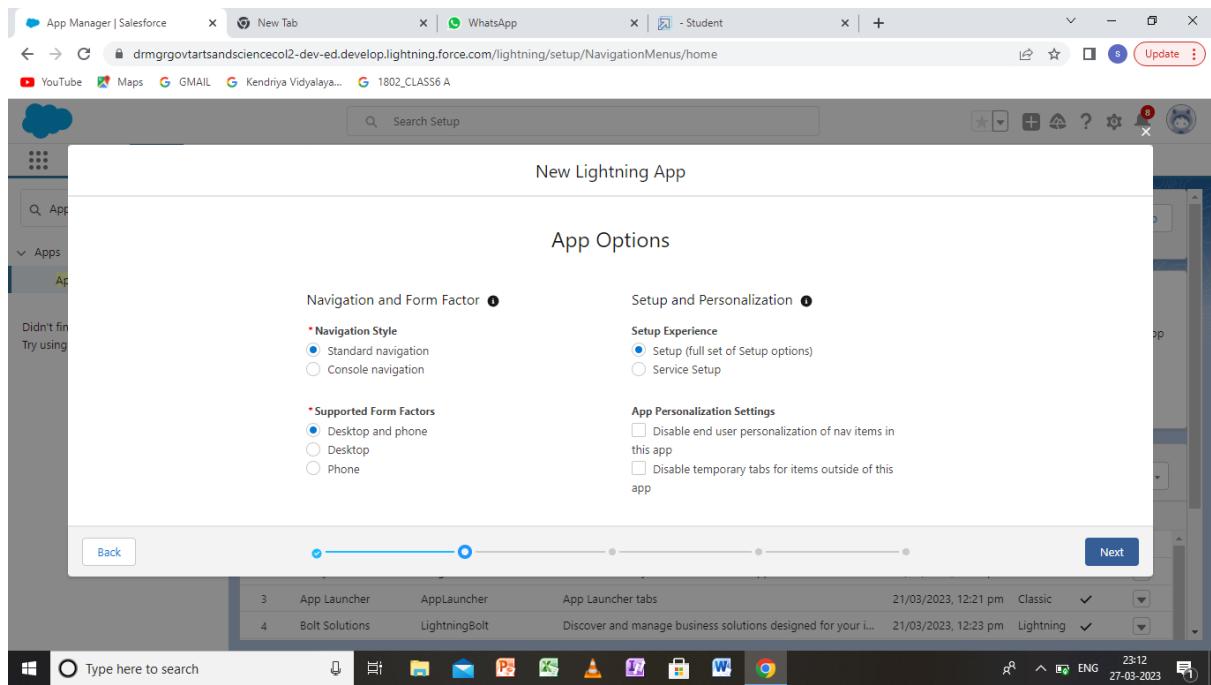


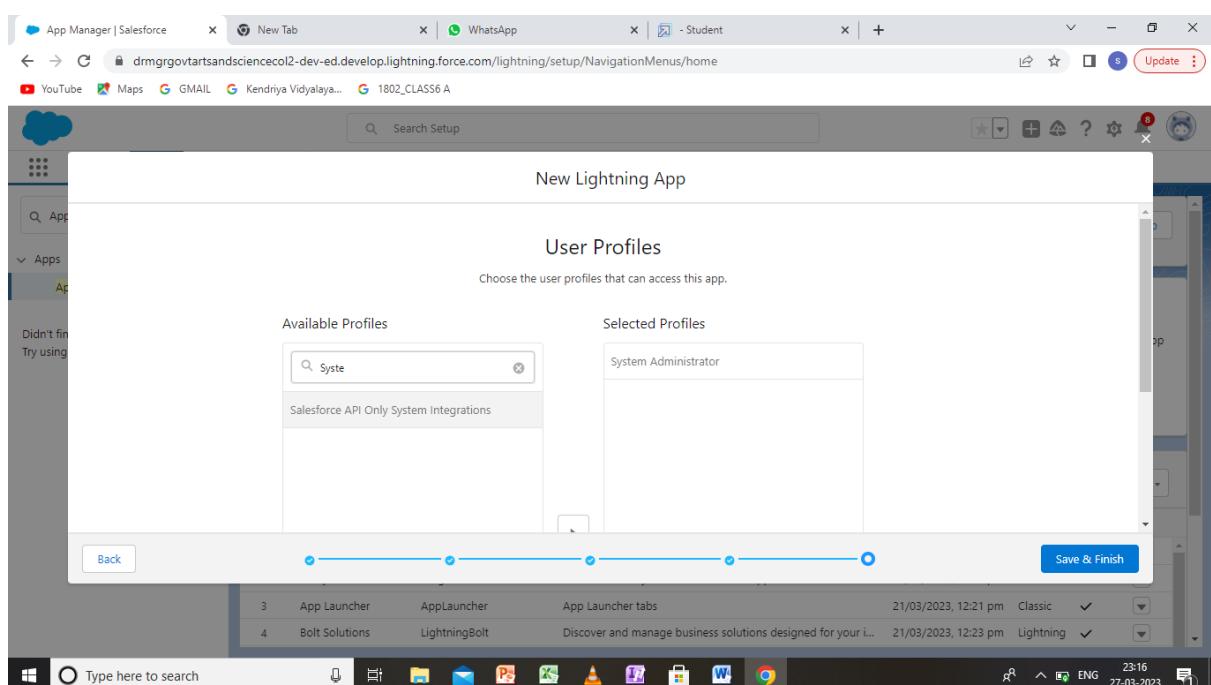
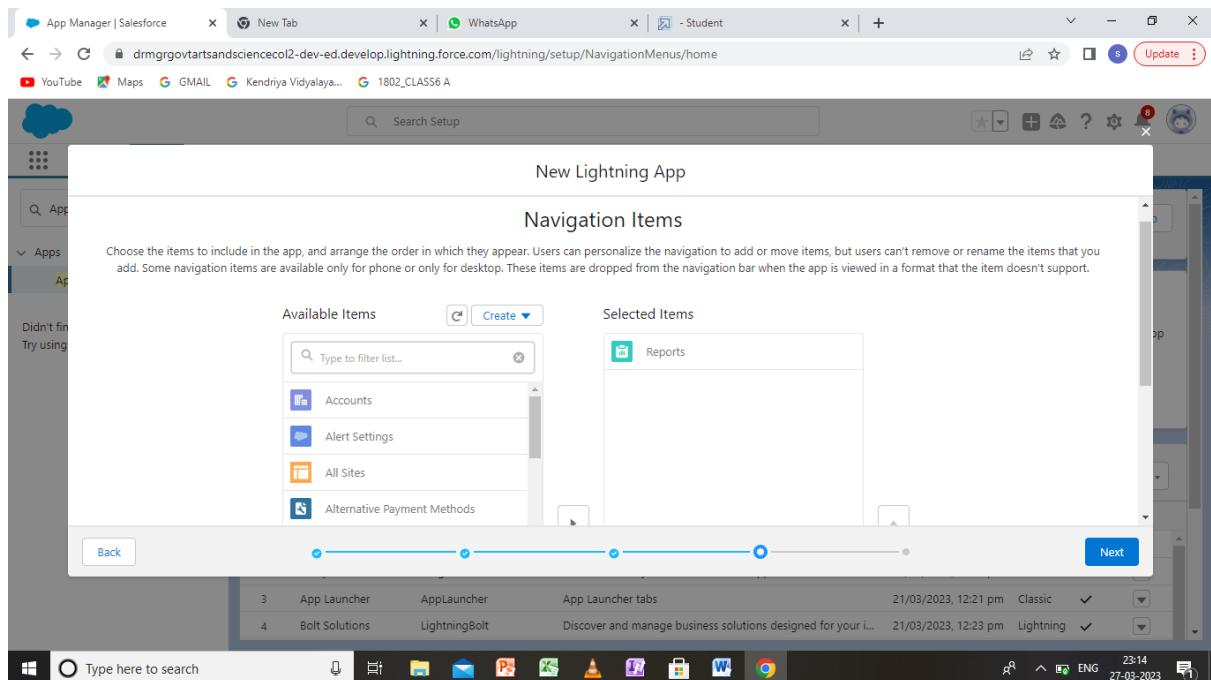
## Milestone 2 creating the application

### Activity-1

#### Create the travel application







In the new lightning app.we enter travel approval as app name.

From available utility items & available items to select department, travel approval etc..

Then we create travel approval app.

## Milestone-3

### Activity-2 Custom object creation

#### TRAVEL APPROVAL

The screenshot shows the Salesforce Object Manager interface. On the left, a sidebar lists various setup options like Buttons, Links, and Actions, Compact Layouts, Field Sets, etc. The main area displays a custom field named 'Travel Approval' for the 'Account' object. The field details are as follows:

Field Label	Travel Approval	Object Name	Account
Field Name	Travel_Approval	Data Type	Lookup
Description		Created By	Gomathi.p Gomathi.p, 21/03/2023, 9:56 pm
Help Text		Modified By	Gomathi.p Gomathi.p, 21/03/2023, 9:56 pm
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			

Below the field details, there are sections for Lookup Options, Validation Rules, and Help Text.

This screenshot shows the same custom field 'Travel Approval' for the 'Account' object, but with a different view. The 'Lookup Options' section is expanded, showing:

- Related To: Travel\_Approval
- Related List Label: Accounts
- Required:
- What to do if the lookup record is deleted?  Clear the value of this field.

Below this, the 'Validation Rules' section shows 'No validation rules defined.' and a 'New' button.

The screenshot shows the Salesforce Setup Home page. The left sidebar includes links for Setup Home, Service Setup Assistant, Multi-Factor Authentication Assistant, Release Updates, Lightning Experience Transition Assistant, Salesforce Mobile App, Lightning Usage, Optimizer, Administration (Users, Data, Email), and Platform Tools (Subscription Management). The main content area displays a table titled 'Most Recently Used' with 10 items. The table has columns for NAME, TYPE, and OBJECT. The objects listed are: College (Custom Object Definition), Attendees (Custom Object Definition), Upsell Opportunity (Custom Field Definition, Account), Travel Approval (Custom Field Definition, Account), SLA Serial Number (Custom Field Definition, Account), SLA (Custom Field Definition, Account), SLA Expiration Date (Custom Field Definition, Account), amount (Custom Field Definition, Account), Active (Custom Field Definition, Account), and Expense type field (Custom Field Definition, Account). The bottom of the screen shows the Windows taskbar with various pinned icons.

We create 3 custom objects. They are,

- Department
- Travel approval
- Expense item

Then we can allow reports, search, and launch a new tab and add this tab to the travel app.

## Milestone 4 Tab

The screenshot shows the Salesforce Tabs setup page. The left sidebar includes links for User Interface (Rename Tabs and Labels, Tabs). The main content area shows a section titled 'Custom Tabs' with a sub-section 'Custom Object Tabs'. It says you can create new custom tabs to extend Salesforce functionality or to build new application functionality. It describes Custom Object tabs, Web tabs, and Lightning Component tabs. Below this, there is a table for 'Custom Object Tabs' with columns Action, Label, Tab Style, and Description. The table contains four rows: Attendees (Bank style), events (Airplane style), speaker (Bell style), and vendor (Apple style). There is also a section for 'Web Tabs' which states 'No Web Tabs have been defined'. The bottom of the screen shows the Windows taskbar with various pinned icons.

We can create custom object tabs such as event, attendees, speaker and vendor.

## Milestone 4 Create fields & Relationships:

### Activity-1 Amount

The screenshot shows the Salesforce setup interface for creating a new field. The left sidebar has 'Fields & Relationships' selected. The main area lists several field types: Roll-Up Summary, Lookup Relationship, External Lookup Relationship, Checkbox, Currency (which is selected), and Date. The 'Currency' option is described as allowing users to enter a dollar or other currency amount and automatically formats the field as a currency amount, useful for exporting to Excel. The status bar at the bottom shows multiple screenshots and the date 27-03-2023.

The screenshot shows the configuration of the 'Amount' field. The 'Field Label' is set to 'Amount'. A note says to enter the length of the number and the number of decimal places. The 'Length' is set to 16, and 'Decimal Places' is set to 2. The 'Field Name' is also set to 'Amount'. The status bar at the bottom shows multiple screenshots and the date 27-03-2023.

The screenshot shows the Salesforce Setup interface for the Account object. The top navigation bar includes tabs for Home, Object Manager, and Setup. The main content area displays the 'Account' object details, specifically the 'Fields & Relationships' tab. Under this tab, there are sections for 'Required', 'Auto add to custom report type', and 'Default Value'. A 'Show Formula Editor' button is present, with a tooltip explaining formula syntax. The bottom right of the screen shows standard Windows taskbar icons and system status.

The screenshot shows the Salesforce Setup interface for creating a new custom field for the Account object. The top navigation bar includes tabs for Home, Object Manager, and Setup. The main content area displays the 'New Custom Field' wizard, Step 2: Enter the details. The 'Field Label' is set to 'Amount'. A note at the bottom indicates that the length and decimal places can affect the range of accepted values. The bottom right of the screen shows standard Windows taskbar icons and system status.

The screenshot shows the Salesforce Setup interface. The top navigation bar includes tabs for Home, Account, New Tab, WhatsApp, Student, Download file, perumalgomathi, Update, YouTube, Maps, GMAIL, Kendriya Vidyalaya..., and 1802\_CLASS6 A. Below the navigation is a search bar labeled "Search Setup". The main content area is titled "SETUP > OBJECT MANAGER" and "Account". It displays a "New Custom Field" configuration page. On the left, a sidebar lists "Details", "Fields & Relationships", "Page Layouts", "Lightning Record Pages", "Buttons, Links, and Actions", and "Compact Layouts". The "Fields & Relationships" section is currently selected. The right panel shows "Step 3. Establish field-level security" of "Step 3 of 4". It contains a table with the following data:

Field Label	Amount
Data Type	Currency
Field Name	Account
Description	

Buttons at the bottom of the step panel include "Previous", "Next", and "Cancel". The status bar at the bottom shows "Screenshot (59).pdf", "Screenshot (59).pdf", "Screenshot (61) (1).pdf", "Screenshot (61).pdf", "Show all", "23:35", "ENG", "27-03-2023", and a notification icon.

## Activity-2 create expense type field

The screenshot shows the Salesforce Setup interface, similar to the previous one but with a different configuration. The top navigation bar and search bar are identical. The main content area is titled "SETUP > OBJECT MANAGER" and "Account". The "Fields & Relationships" section is selected in the sidebar. The right panel displays a list of field types with their descriptions:

Field Type	Description
<input type="radio"/> Number	Allows users to enter any number. Leading zeros are removed.
<input type="radio"/> Percent	Allows users to enter a percentage number, for example, '10' and automatically adds the percent sign to the number.
<input type="radio"/> Phone	Allows users to enter any phone number. Automatically formats it as a phone number.
<input checked="" type="radio"/> Picklist	Allows users to select a value from a list you define.
<input type="radio"/> Picklist (Multi-Select)	Allows users to select multiple values from a list you define.
<input type="radio"/> Text	Allows users to enter any combination of letters and numbers.
<input type="radio"/> Text Area	Allows users to enter up to 255 characters on separate lines.
<input type="radio"/> Text Area (Long)	Allows users to enter up to 131,072 characters on separate lines.

The status bar at the bottom shows "Screenshot (59).pdf", "Screenshot (59).pdf", "Screenshot (61) (1).pdf", "Screenshot (61).pdf", "Show all", "23:36", "ENG", "27-03-2023", and a notification icon.

The screenshot shows the Salesforce Setup interface. The top navigation bar includes tabs for Home, Object Manager, and a search bar. Below the navigation is a header with a cloud icon, the word "Setup", and a "Search Setup" bar. The main content area is titled "SETUP > OBJECT MANAGER" and "Account". On the left, a sidebar lists "Fields & Relationships" under "Details" and other layout-related sections like Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, and Compact Layouts. The right side shows a configuration form for a new field. The "Field Name" is set to "Expense type" and the "Description" is "Airfare, Hotel, Rental Cars, Meals, Others". Under "Field Name", there are three checkboxes: "Display values alphabetically, not in the order entered" (unchecked), "Use first value as default value" (unchecked), and "Restrict picklist to the values defined in the value set" (checked). A "Value Set" dropdown is open, showing the value "Airfare, Hotel, Rental Cars, Meals, Others". The status bar at the bottom shows several screenshots and the system date/time.

This screenshot shows the details of the "Expense type" field that was created in the previous step. The page title is "SETUP > OBJECT MANAGER" and "Account". The main content area is titled "Expense type field" and "Back to Account Fields". It includes a "Custom Field Definition Detail" section with tabs for Edit, Set Field-Level Security, View Field Accessibility, and Where is this used?. The "Field Information" table provides the following details:

Field Label	Expense type field	Object Name	Account
Field Name	Expense_type_field	Data Type	Picklist
API Name	Expense_type_field_c		
Description			

The left sidebar shows the same layout-related sections as the previous screenshot. The status bar at the bottom shows screenshots and the system date/time.

SETUP > OBJECT MANAGER  
**Account**

Details

**Fields & Relationships**

Page Layouts  
Lightning Record Pages  
Buttons, Links, and Actions  
Compact Layouts

No validation rules defined.

**Values** Values Help (?)

Action	Values	API Name	Default	Chart Colors	Modified By
Edit	Airfare, Hotel, Rental cars ,Meals ,others	Airfare, Hotel, Rental cars ,Meals ,others	<input type="checkbox"/>	Assigned dynamically	Gomathi.p Gomathi.p, 21/03/2023, 9:43 pm

**Inactive Values** Inactive Values Help (?)

No Inactive Values values defined.

[Back To Top](#) Always show me more records per related list

Screenshot (59) (1).pdf Screenshot (59).pdf Screenshot (61) (1).pdf Screenshot (61).pdf Show all

Type here to search

SETUP > OBJECT MANAGER  
**Account**

Details

**Fields & Relationships**

Page Layouts  
Lightning Record Pages  
Buttons, Links, and Actions  
Compact Layouts

**Picklist Options**

Restrict picklist to the values defined in the value set

Controlling Field [\[New\]](#)

**Picklist Values Used**

Active and inactive picklist values 1 (1,000 max)

**Field Dependencies** Field Dependencies Help (?)

No dependencies defined.

Screenshot (59) (1).pdf Screenshot (59).pdf Screenshot (61) (1).pdf Screenshot (61).pdf Show all

Type here to search

Details

Fields & Relationships

No validation rules defined.

Action	Values	API Name	Default	Chart Colors	Modified By
Edit	Airfare, Hotel, Rental cars, Meals, others	Airfare, Hotel, Rental cars, Meals, others	<input type="checkbox"/> Assigned dynamically		Gomathi.p, Gomathi.p, 21/03/2023, 9:43 pm

Inactive Values

No Inactive Values values defined.

Always show me more records per related list

Screenshot (59).pdf Screenshot (59).pdf Screenshot (61).pdf Screenshot (61).pdf Show all

## Activity-3

### Create travel approval field

Details

Fields & Relationships

Description

API Name

Travel\_Approval\_\_c

Custom

Singular Label

Travel Approval

Plural Label

Enable Reports

✓

Track Activities

Track Field History

Deployment Status

Screenshot (59).pdf Screenshot (59).pdf Screenshot (61).pdf Screenshot (61).pdf Show all

The screenshot shows the Salesforce Setup interface. The top navigation bar has tabs for Home, New Tab, WhatsApp, Student, Download file, perumalgomathi, and Update. Below the navigation bar is a search bar labeled "Search Setup". The main area shows the "Travel Approval" object under "Object Manager". On the left, there's a sidebar with sections like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, and Compact Layouts. The main panel displays details for the "Travel\_Approval\_\_c" object, including API Name, Custom status, Singular Label (Travel Approval), Plural Label (Travel Approvals), and various settings like Enable Reports, Track Activities, and Deployment Status (Deployed). At the bottom, there are several screenshots of PDF files and a Windows taskbar.

We can create field and relationships it can store data values which are required for a particular object in a record.

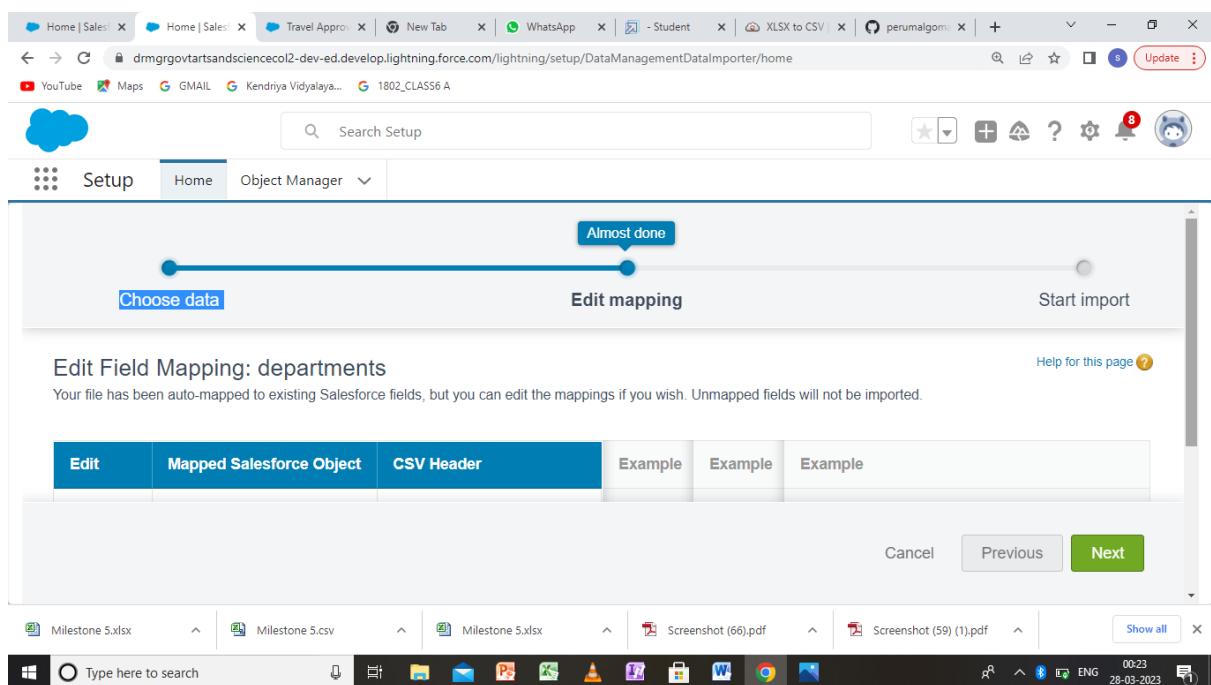
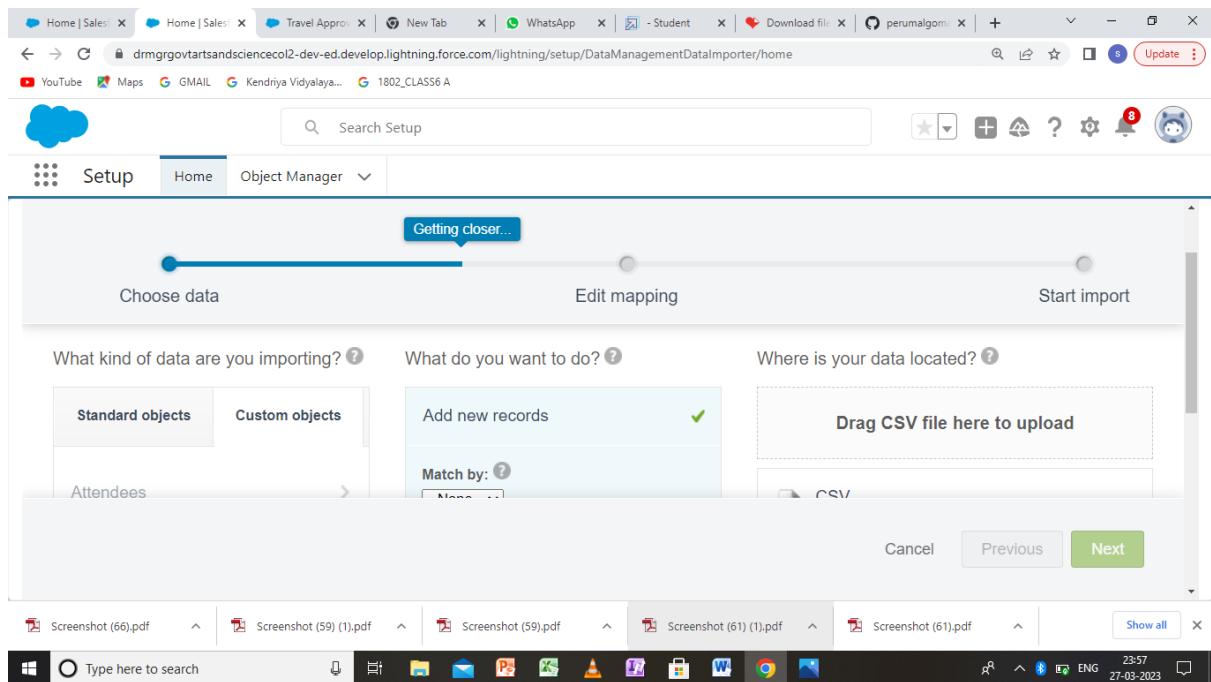
There are 2 types of fields in salesforce:

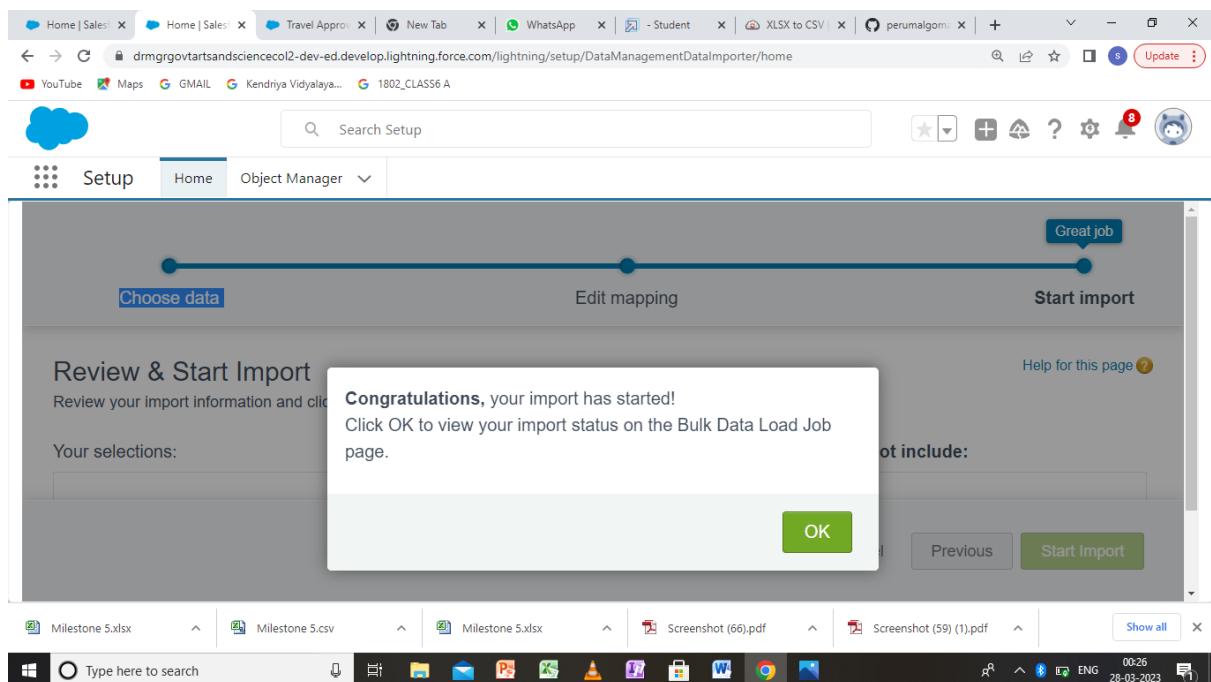
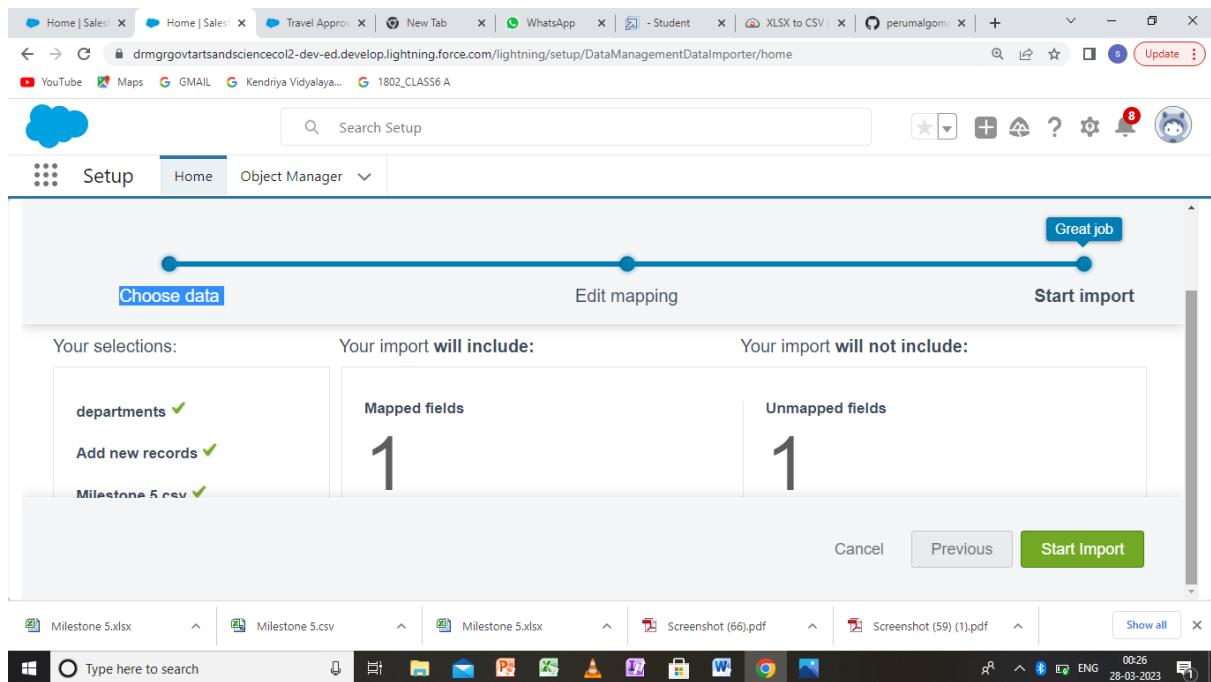
- Standard fields
- Custom fields

## Milestone 5-Import departments

### Activity-1:

The screenshot shows the Salesforce Setup interface with the "Data Import" tab selected. The main area displays the "Data Import" wizard with four steps: Pre-step: Prepare your data for import, Choose data to import, Edit field mapping, and Review and start import. A large green button labeled "Launch Wizard!" is centered between the first two steps. Below the steps, there are sections for FAQ, Data Import video series, and Additional Resources. At the bottom, there are several screenshots of PDF files and a Windows taskbar.





In import departments we go to Launch wizard and give custom object as department.

In this milestone we download the reference file of travelappworkshopfiles.zip file.

Then we reached three stages namely choose data, edit mapping and start import.

Import status comes under the page of bulk data load job.

The screenshot shows the Bulk Data Load Jobs page in the Salesforce Setup interface. The page title is "Bulk Data Load Jobs". It displays a table of "Batches" with columns: View Request, View Result, Batch ID, Start Time, End Time, Total Processing Time (ms), API Active Processing Time (ms), Apex Processing Time (ms), Records Processed, and Records Failed. One batch is listed:

View Request	View Result	Batch ID	Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	Apex Processing Time (ms)	Records Processed	Records Failed
<a href="#">View Request</a>	<a href="#">View Result</a>	7512w00000VGRXw	27/03/2023, 12:58 pm	27/03/2023, 12:58 pm	133	84	0	16	0

The browser address bar shows the URL: `drmgrgovtartsandsciencecol2-dev-ed.lightning.force.com/lightning/setup/AsyncApiJobStatus/page?address=%2F7502w00000PWulmAAD`. The system navigation bar at the bottom includes links for Milestone 5.xlsx, Milestone 5.csv, Screenshot (66).pdf, Screenshot (59) (1).pdf, and a search bar.

The screenshot shows the "Bulk Data Load Job" details page for job ID `7502w00000PWulm`. The page title is "Bulk Data Load Job Detail". It displays the following information:

Job ID	7502w00000PWulm	Job Type	Bulk V1	Status	Closed
Submitted By	<a href="#">Gomathi_p</a>	Operation	Insert	Total	133
				Processing Time (ms)	

The browser address bar shows the URL: `drmgrgovtartsandsciencecol2-dev-ed.lightning.force.com/lightning/setup/AsyncApiJobStatus/page?address=%2F7502w00000PWulmAAD`. The system navigation bar at the bottom includes links for Milestone 5.xlsx, Milestone 5.csv, Screenshot (66).pdf, Screenshot (59) (1).pdf, and a search bar.

The screenshot shows the Bulk Data Load Jobs page in the Salesforce Setup interface. The page title is "Bulk Data Load Jobs". It displays various job statistics:

End Time	27/03/2023, 12:58 pm IST	In Progress Batches	0	Processing Time (ms)	Apex Processing Time (ms)
Time to Complete ([hh:]mm:ss)	00:04	Completed Batches	1		
Object	department	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	16		
Concurrency Mode	Parallel	Records Failed	0		
API Version	57.0	Retries	0		

Below the table, there is a note: "Didn't find what you're looking for? Try using Global Search." The browser taskbar at the bottom shows several open tabs, including "Milestone 5.xlsx", "Milestone 5.csv", "Screenshot (66).pdf", and "Screenshot (59) (1).pdf".

The screenshot shows the Bulk Data Load Jobs page in the Salesforce Setup interface. The page title is "Bulk Data Load Jobs". It displays a table of batches:

Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	Apex Processing Time (ms)	Records Processed	Records Failed	Retry Count	State Message	Status
GRXw 27/03/2023, 12:58 pm	27/03/2023, 12:58 pm	133	84	0	16	0	0	Completed	Completed

Below the table, there is a note: "Didn't find what you're looking for? Try using Global Search." The browser taskbar at the bottom shows several open tabs, including "Milestone 5.xlsx", "Milestone 5.csv", "Screenshot (66).pdf", and "Screenshot (59) (1).pdf".

## Milestone 6- customize user interface

### Activity-1

#### Create user and setup approvals

The screenshot shows the Salesforce Setup interface. The left sidebar is expanded, showing sections like Users, Feature Settings, and Data.com. The main content area is titled "Users" and displays the "User Detail" for a user named "Gomathi.p Gomathi.p". The "User Detail" section includes fields for Name, Alias, Email, Username, Nickname, Title, Role, User License, Profile, Active, Marketing User, and Offline User. The "Role" field is set to "CEO". The "User License" field is set to "Salesforce". The "Profile" field is set to "System Administrator". The "Active" field has a checked checkbox. The "Marketing User" and "Offline User" fields also have checked checkboxes.

This screenshot shows the same Salesforce Setup interface as the previous one, but with several checkboxes checked in the "User Detail" section. The checked checkboxes include "Site.com Contributor User", "WDC User", "Mobile Push Registrations", "Data.com User Type", "Accessibility Mode (Classic Only)", "Debug Mode", "High-Contrast Palette on Charts", "Load Lightning Pages While Scrolling", and "Send Apex Warning Emails". The rest of the user details and sidebar are identical to the first screenshot.

The screenshot shows the Salesforce Setup interface with the 'Users' configuration page open. The left sidebar lists various setup categories like 'Permission Set Groups', 'Profiles', and 'Roles'. Under 'Users', the 'User Management Settings' section is visible. The main content area displays a table of user configuration options:

Setting	Description	Status
App Registration: One-Time Password Authenticator	[Connect]	<input checked="" type="checkbox"/>
App Registration: Salesforce Authenticator	[Connect]	<input type="checkbox"/>
Security Key (U2F or WebAuthn)	[i]	<input checked="" type="checkbox"/>
Lightning Login	[Enroll]	<input checked="" type="checkbox"/>
Temporary Verification Code (Expires in 1 to 24 Hours)	[Generate]	<input checked="" type="checkbox"/>
Load Lightning Pages While Scrolling	<input checked="" type="checkbox"/>	
Send Apex Warning Emails	<input type="checkbox"/>	
Salesforce CRM Content User	<input checked="" type="checkbox"/>	
Receive Salesforce CRM Content Email Alerts	<input checked="" type="checkbox"/>	
Receive Salesforce CRM Content Alerts as Daily Digest	<input checked="" type="checkbox"/>	
Make Setup My Default Landing Page	<input checked="" type="checkbox"/>	
Quick Access Menu	<input checked="" type="checkbox"/>	
Development Mode	<input type="checkbox"/>	
Show View State in Development Mode	<input type="checkbox"/>	

At the bottom of the page are 'Edit', 'Sharing', and 'Change Password' buttons.

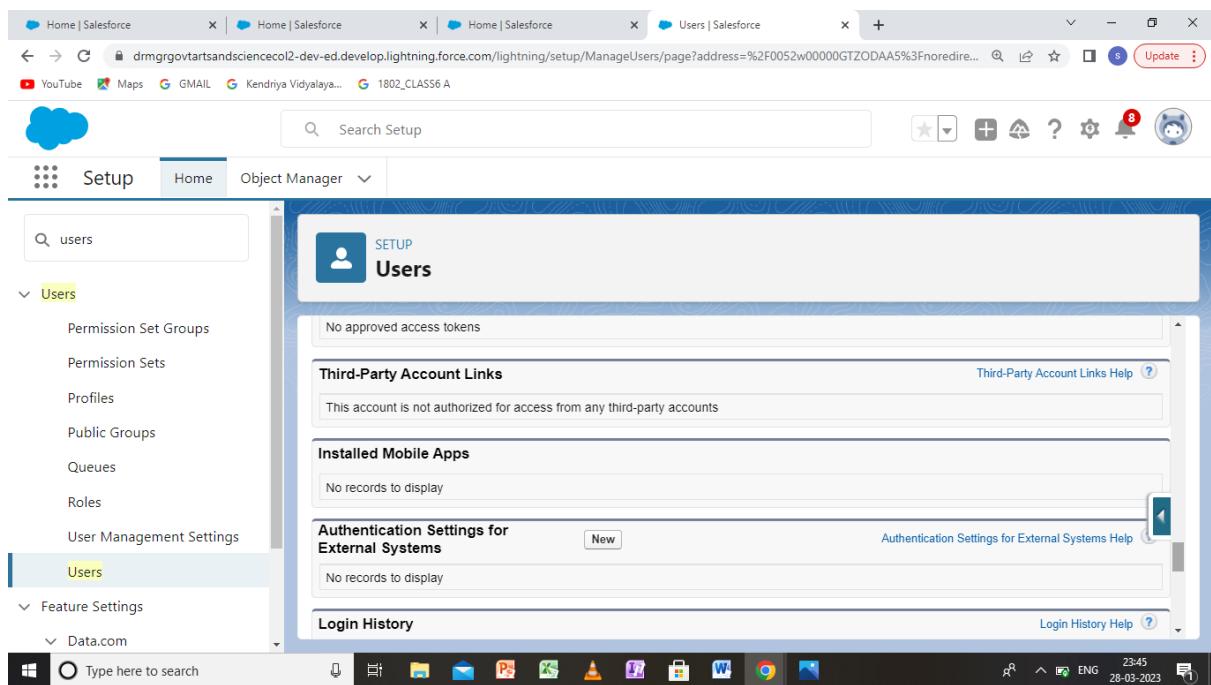
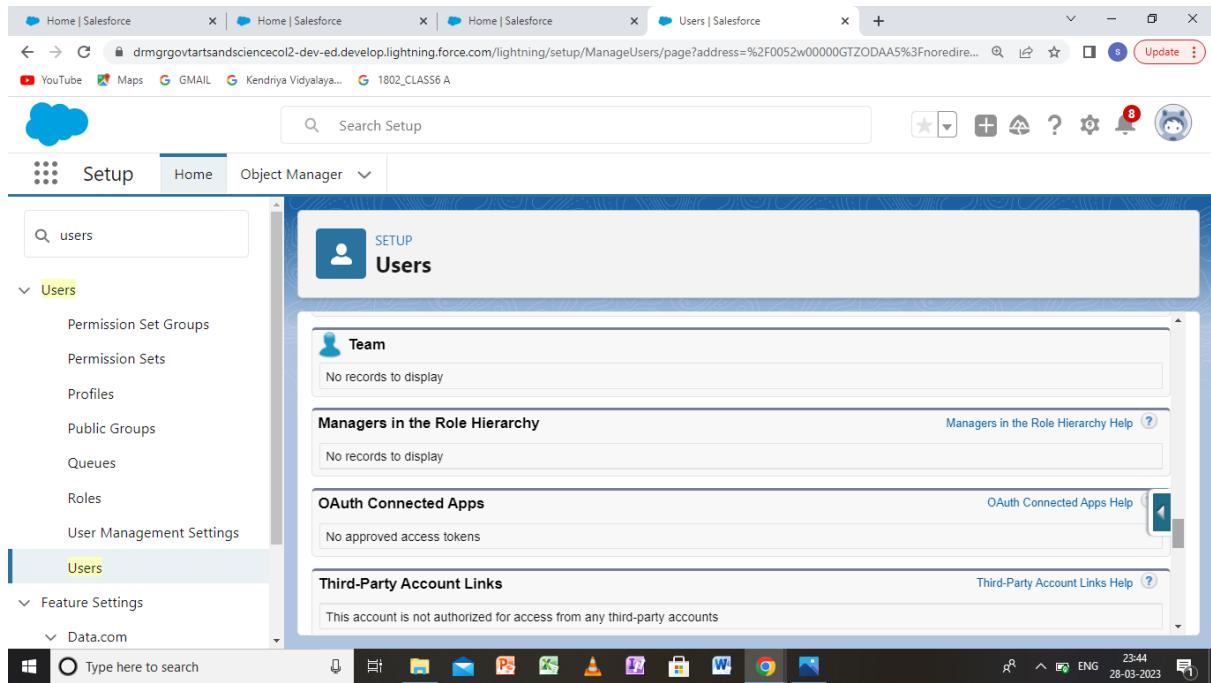
The screenshot shows the Salesforce Setup interface with the 'Users' detail page open. The left sidebar lists various setup categories. Under 'Users', the 'User Management Settings' section is visible. The main content area displays detailed information about a user:

Attribute	Value
Email Encoding	Unicode (UTF-8)
Employee Number	
Start of day	6:00 am
End of day	11:00 pm
Used Data Space	306 KB [View]
Used File Space	0 B [View]
Last Login	28/03/2023, 11:17 am
Last Password Change or Reset	21/03/2023, 12:42 pm
Failed Login Attempts	0 [i]
Created By	Gomathi p_Gomathi.p_Gomathi.p_Gomathi.p_
Created Date	21/03/2023, 12:21 pm
Modified By	Gomathi p_Gomathi.p_Gomathi.p_Gomathi.p_
Modified Date	28/03/2023, 12:13 pm

At the bottom of the page are 'Edit', 'Sharing', and 'Change Password' buttons.

The screenshot shows the Salesforce Setup interface with the 'Users' tab selected. In the sidebar, 'Permission Set Groups', 'Permission Sets', 'Profiles', 'Public Groups', 'Queues', 'Roles', and 'User Management Settings' are listed under 'Users'. Under 'Feature Settings', 'Data.com' is shown. The main content area displays 'Permission Set Assignments' with one record: 'Experience Profile Manager' assigned on 21/03/2023. It also shows sections for 'Activation Required', 'Permission Set Group Assignments', and 'Permission Set License Assignments', all currently empty.

The screenshot shows the Salesforce Setup interface with the 'Users' tab selected. The sidebar includes 'Permission Set Groups', 'Permission Sets', 'Profiles', 'Public Groups', 'Queues', 'Roles', and 'User Management Settings' under 'Users', and 'Data.com' under 'Feature Settings'. The main content area displays 'Personal Groups' (empty), 'Public Group Membership' (empty), 'Queue Membership' (empty), and a 'Team' section which is collapsed.



We can create customize user interface in users give our email address.

Give First name and last name and give role as CEO, profile as admin, license as salesforce.

Then we select user account.

## Milestone 7 – Use Customization

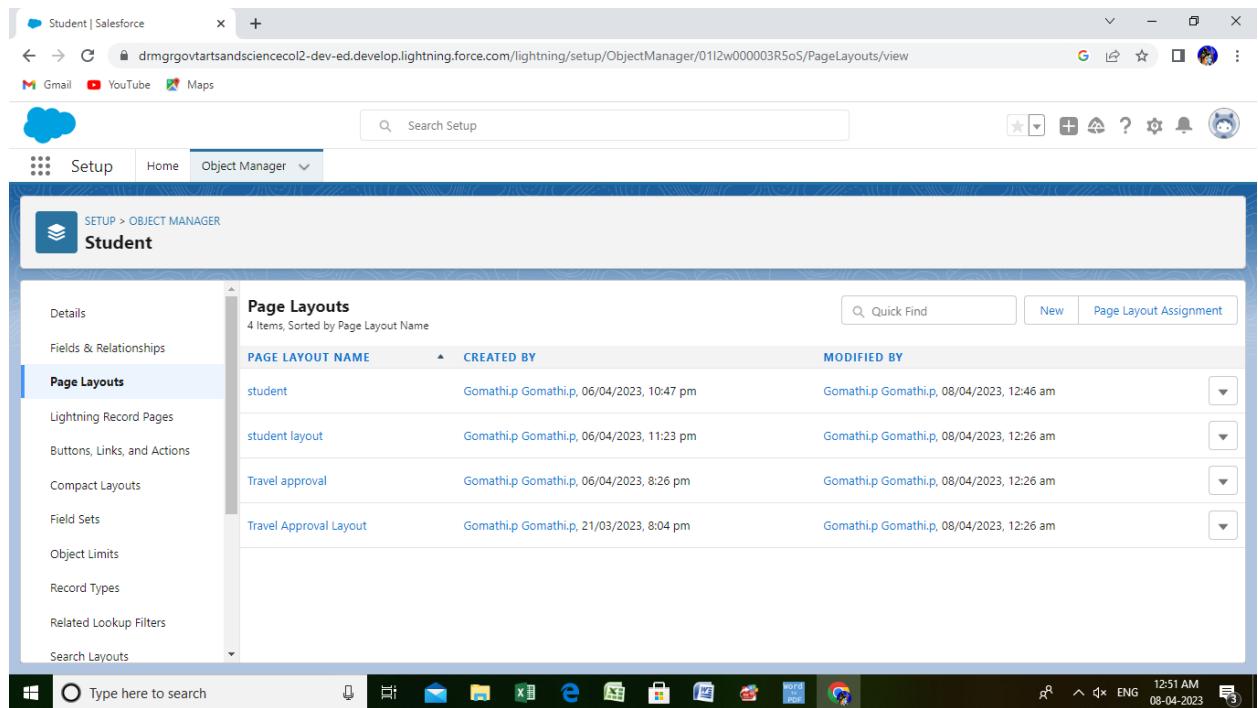
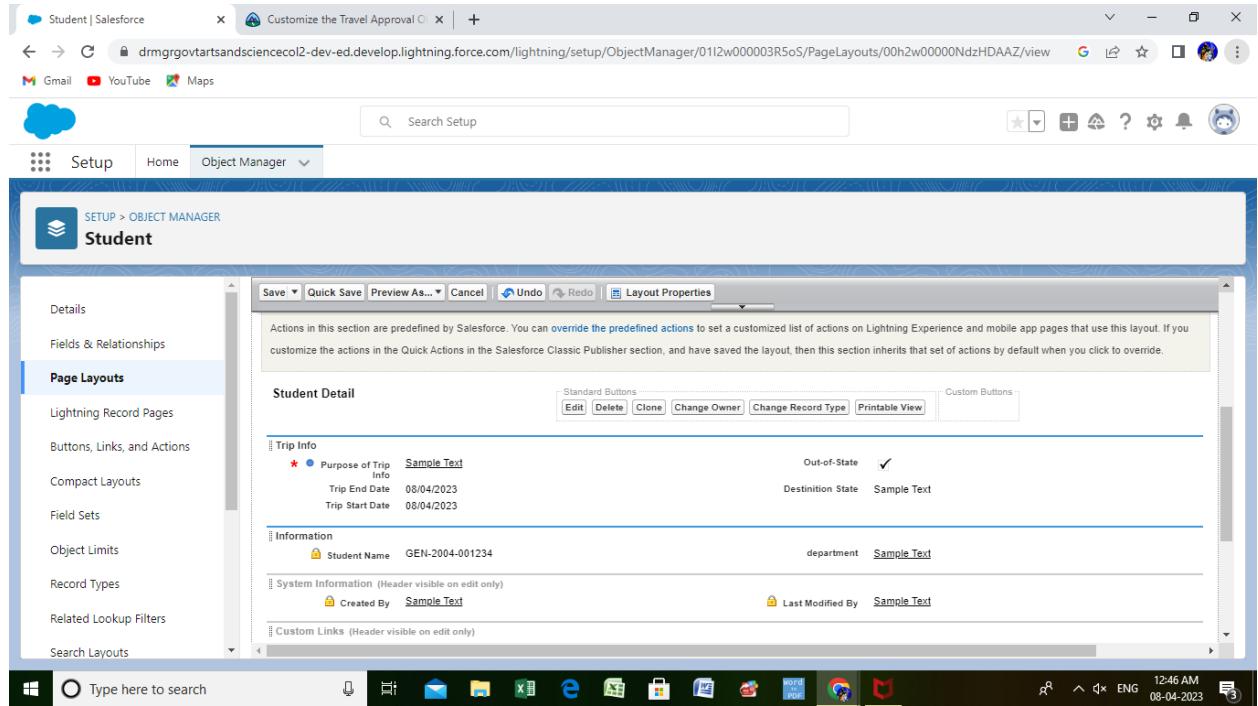
### Activity – 1:

#### Customize Travel Approval Object Page layout

The screenshot shows the Salesforce Object Manager interface for the 'Student' object. The left sidebar lists various customization options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main pane displays the 'Fields & Relationships' section, which lists nine items sorted by Field Label. The fields are:

Field Name	Type	Description
Destination State	Text(2)	
Last Modified By	Lookup(User)	
Out-of-State	Checkbox	
Purpose of Trip Info	Master-Detail(Data Use Purpose)	
Student Name	Auto Number	
Trip End Date	Date	
Trip Start Date	Date	

The screenshot shows the Salesforce Object Manager interface for the 'Student' object, specifically the 'Page Layouts' section. The left sidebar lists: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main pane shows the 'Page Layouts' configuration screen. At the top, there are buttons for Save, Quick Save, Preview As..., Cancel, Undo, Redo, and Layout Properties. Below these are sections for Fields, Buttons, Quick Actions, Mobile & Lightning Actions, Expanded Lookups, Related Lists, and Report Charts. The 'Fields' section is expanded, showing fields like Section, Destination State, Student Name, Last Modified By, Trip End Date, Out-of-State, Created By, Trip Start Date, and Purpose of Trip Info. Below the fields, there are two sections: 'Trip Info' and 'Information'. The 'Trip Info' section contains fields for Purpose of Trip Info (with a red asterisk), Trip End Date (08/04/2023), Trip Start Date (08/04/2023), and Out-of-State (checkbox checked). The 'Information' section contains fields for Last Modified By and Destination State, both set to Sample Text.

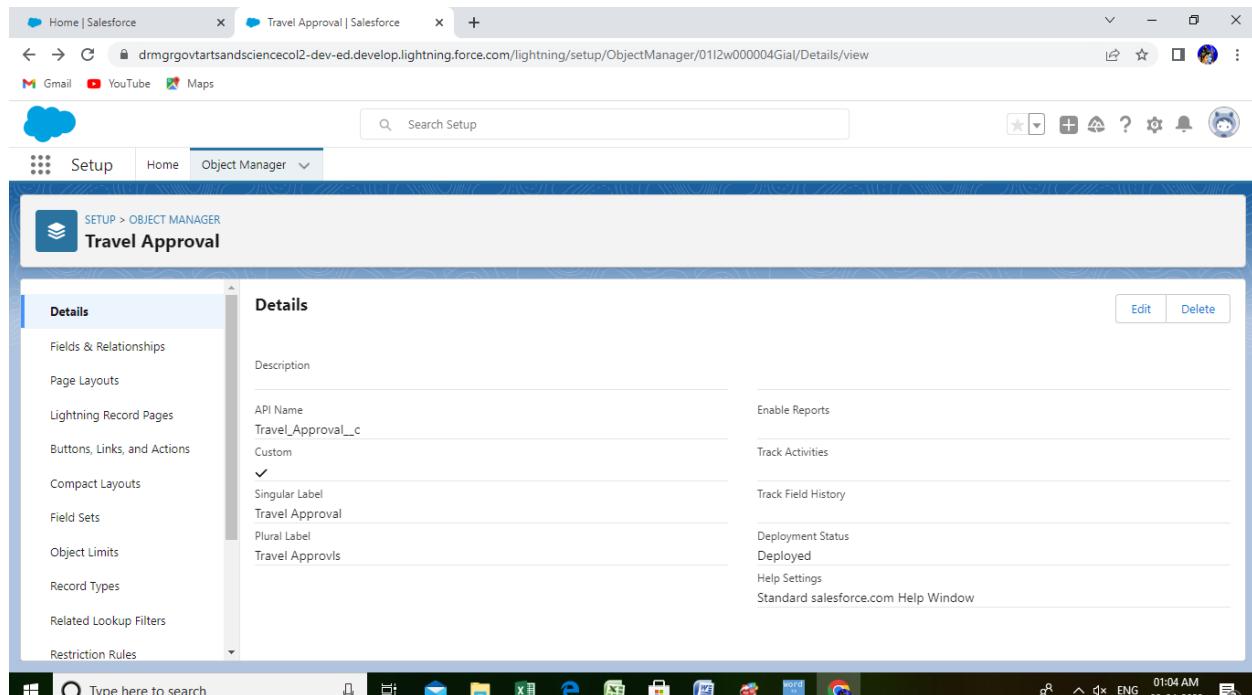


We can create use customization which refers to custom software development and coding to add robust features to your CRM platform. These features can be integrated with your business to have a scalable impact.

## Milestone 8 – Add Business Logic To Travel App

### Activity 1:

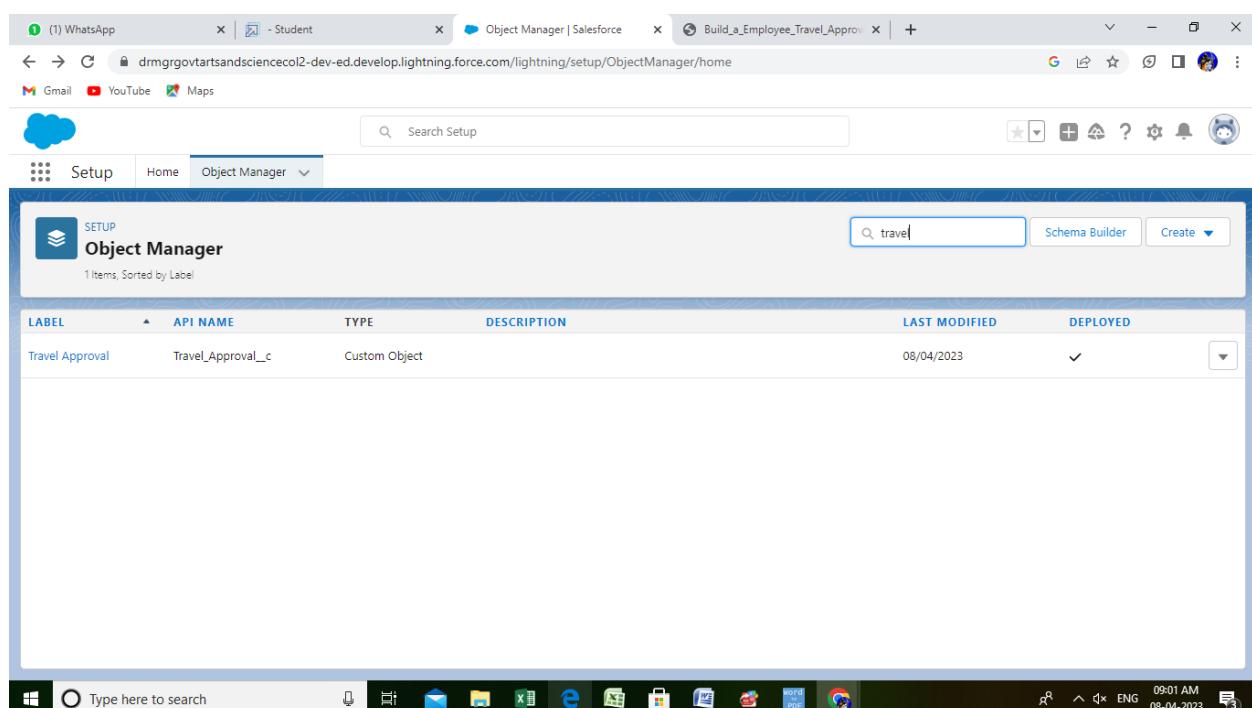
#### Create Validation Rule



The screenshot shows the Salesforce Object Manager interface. A new object named "Travel Approval" has been created. The details pane shows the following configuration:

- Description:** (empty)
- API Name:** Travel\_Approval\_\_c
- Custom:** (selected)
- Singular Label:** Travel Approval
- Plural Label:** Travel Approvals
- Enable Reports:** (unchecked)
- Track Activities:** (unchecked)
- Track Field History:** (unchecked)
- Deployment Status:** Deployed
- Help Settings:** Standard salesforce.com Help Window

The sidebar on the left lists various object settings: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Restriction Rules.

The screenshot shows the Salesforce Object Manager interface with a search bar containing "travel". The results table displays one item:

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Travel Approval	Travel_Approval__c	Custom Object		08/04/2023	✓

The interface includes a toolbar at the top with icons for Home, Setup, and Object Manager, and a taskbar at the bottom with various application icons.

Screenshot of the Salesforce Setup interface showing the Object Manager for the "Travel Approval" object.

The left sidebar shows the following navigation options:

- Details
- Fields & Relationships
- Page Layouts
- Lightning Record Pages**
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters

The main "Details" tab displays the following configuration details:

- Description:** (empty)
- API Name:** Travel\_Approval\_\_c
- Custom:** (expanded)
  - Singular Label:** Travel Approval
  - Plural Label:** Travel Approvals
- Enable Reports:** (checkbox)
- Track Activities:** (checkbox)
- Track Field History:** (checkbox)
- Deployment Status:** Deployed
- Help Settings:** Standard salesforce.com Help Window

At the bottom of the page, the URL is shown as: drmgrgovtartsandsciencecol2-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01I2w000004GiaI/Details/view

Screenshot of the Salesforce Setup interface showing the Validation Rules section for the "Travel Approval" object.

The left sidebar shows the following navigation options:

- Details
- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters
- Restriction Rules

The main "Validation Rules" tab displays a table with the following columns:

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
No items to display.				

At the bottom of the page, the URL is shown as: drmgrgovtartsandsciencecol2-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01I2w000004GiaI/ValidationRules/view

Student | Salesforce

drmgrgovtartsandsciencecol2-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01Iw000003R5oS/ValidationRules/new

Gmail YouTube Maps

Setup Home Object Manager

SETUP > OBJECT MANAGER Student

**Student Validation Rule**

Define a validation rule by specifying an error condition and a corresponding error message. The error condition is written as a Boolean formula expression that returns true or false. When the formula expression returns true, the save will be aborted and the error message will be displayed. The user can correct the error and try again.

**Validation Rule Edit**

Rule Name: Trip\_end\_date\_after\_start\_date

Active:

Description: (empty)

**Error Condition Formula**

Example: Discount\_Percent\_\_c>0.30 More Examples...  
Display an error if Discount is more than 30%  
If this formula expression is true, display the text defined in the Error Message area

Functions: All Function Categories -->

ABS  
ACOS  
ADDMONTHS  
AND

Trip\_End\_Date\_\_c < Trip\_Start\_Date\_\_c

Type here to search

11:23 AM 08-04-2023

Student | Salesforce

drmgrgovtartsandsciencecol2-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01Iw000003R5oS/ValidationRules/new

Gmail YouTube Maps

Setup Home Object Manager

SETUP > OBJECT MANAGER Student

**Validation Rule Edit**

Rule Name: Trip\_End\_Date\_\_c < Trip\_Start\_Date\_\_c

Insert Field Insert Operator

ACOS  
ADDMONTHS  
AND  
ASCII  
ASIN

Insert Selected Function  
ABS(number)  
Returns the absolute value of a number, a number without its sign

Check Syntax No errors found

**Error Message**

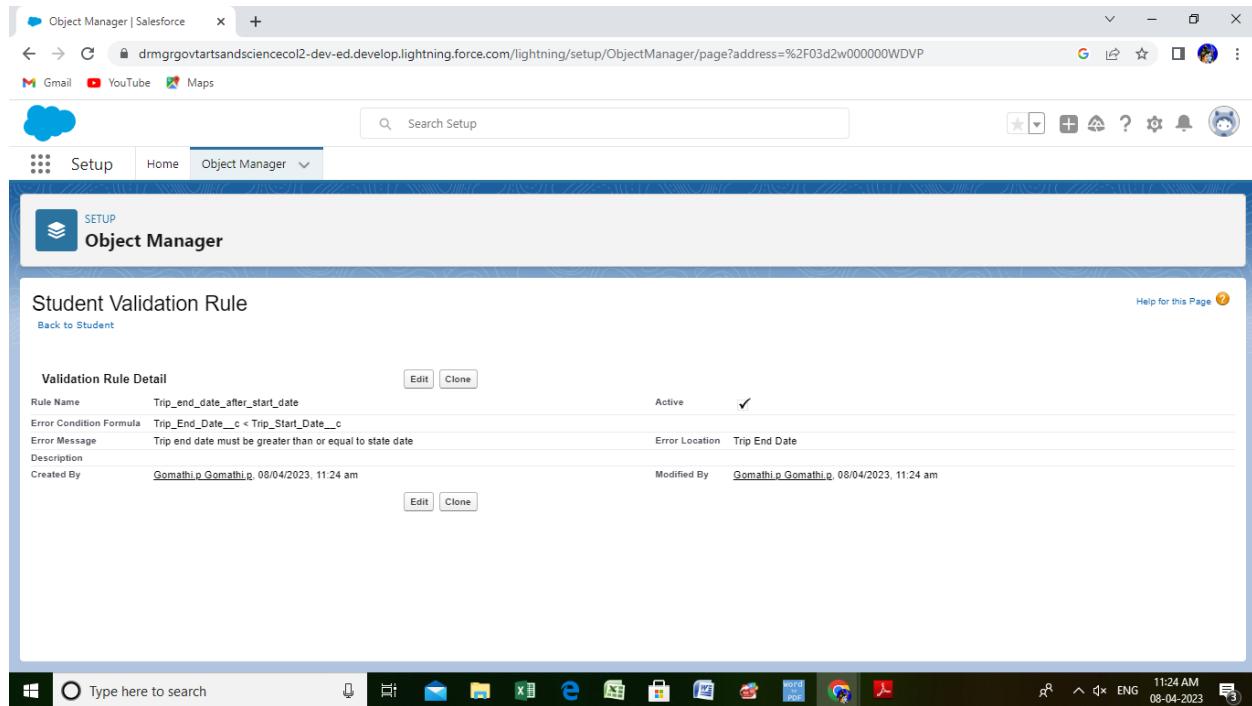
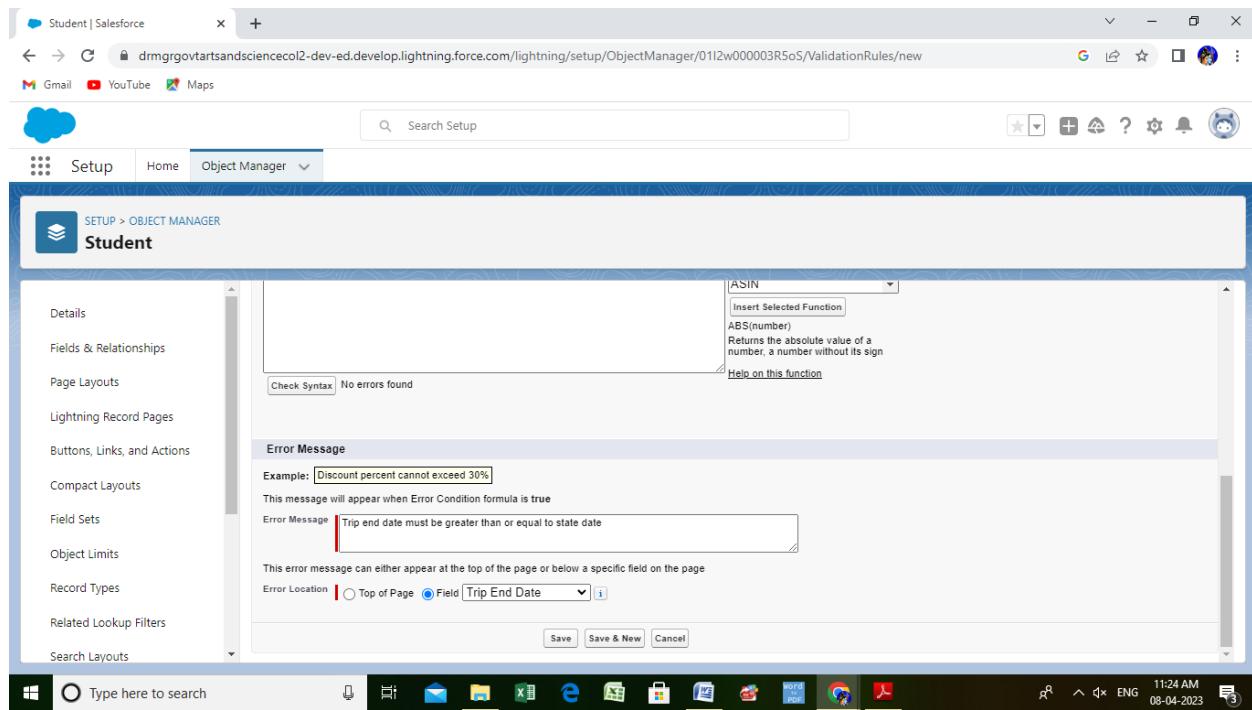
Example: Discount percent cannot exceed 30%  
This message will appear when Error Condition formula is true  
Error Message: Trip end date must be greater than or equal to state date

This error message can either appear at the top of the page or below a specific field on the page

Error Location: Top of page Field: Trip\_End\_Date

Type here to search

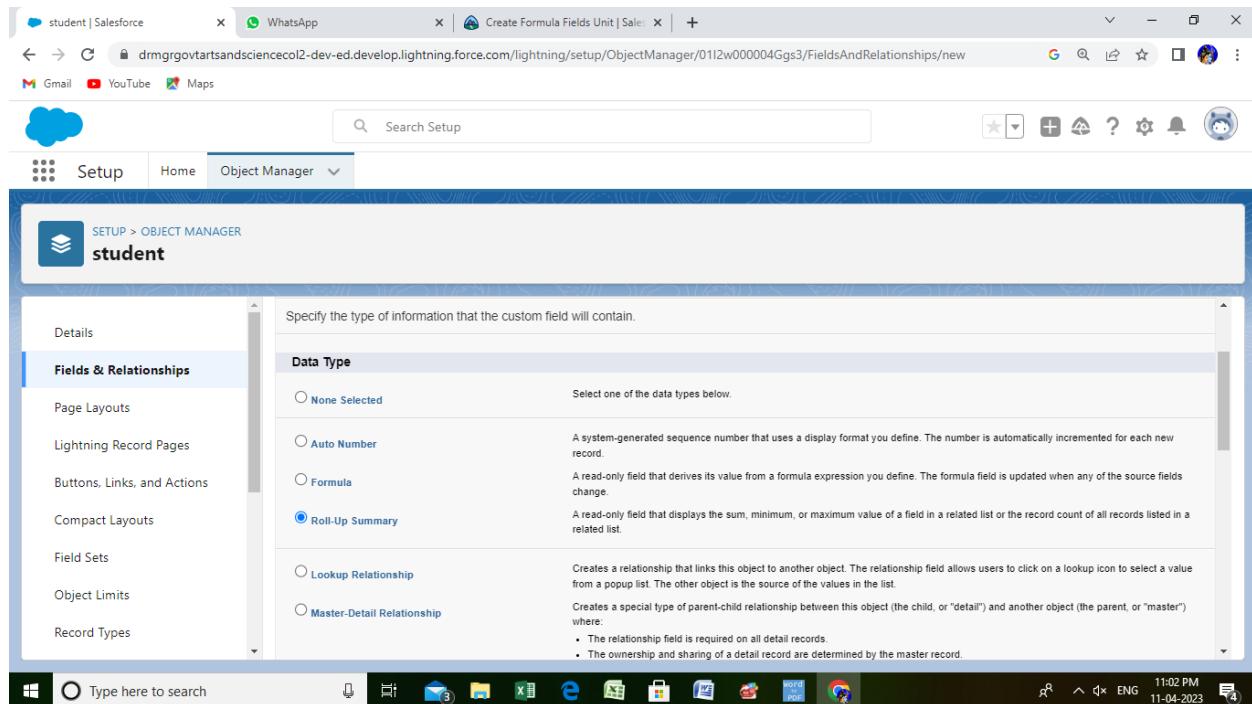
11:24 AM 08-04-2023



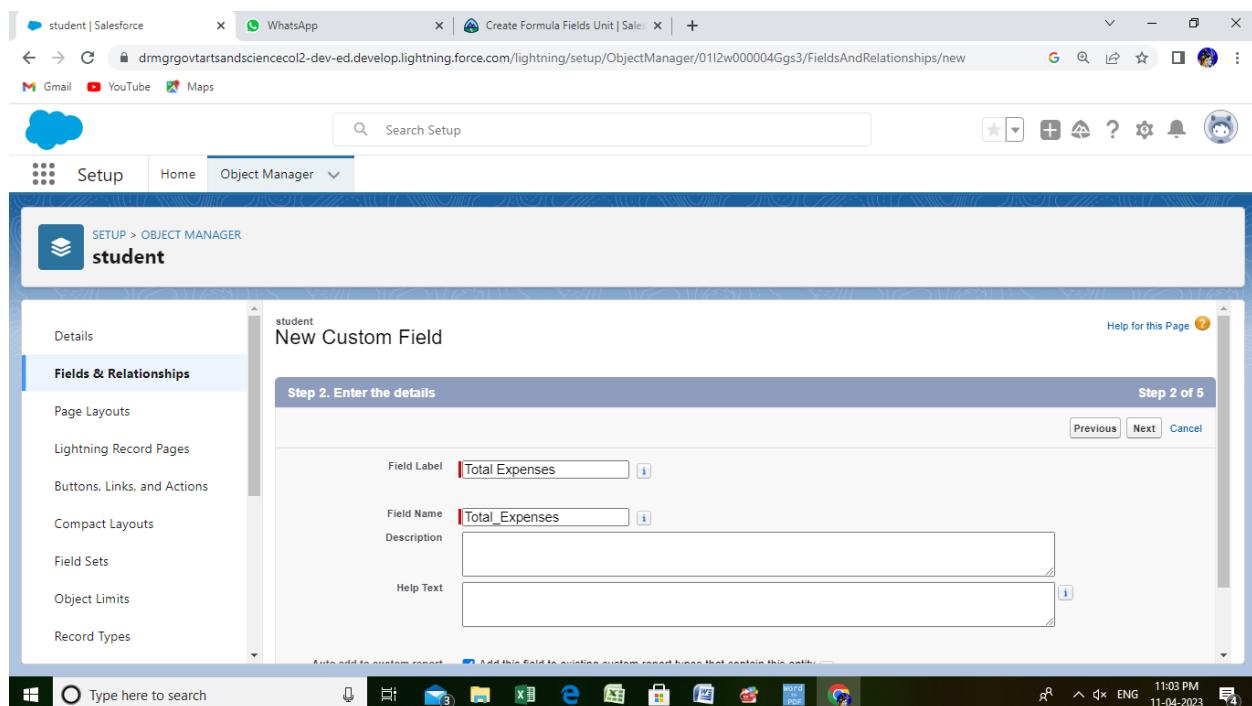
We can create Validation rule in the student object from the object manager.

## Activity-2:

### Create RollUp Summary Fields:



The screenshot shows the Salesforce Setup interface for creating a new custom field. The left sidebar lists options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types. The main area is titled 'student' and shows the 'Fields & Relationships' tab selected. Under 'Data Type', the 'Roll-Up Summary' option is selected, highlighted with a blue border. A tooltip provides a detailed description: 'A read-only field that displays the sum, minimum, or maximum value of a field in a related list or the record count of all records listed in a related list.' Other options shown include None Selected, Auto Number, Formula, Lookup Relationship, and Master-Detail Relationship.



The screenshot shows the continuation of creating a new custom field. The page title is 'student New Custom Field'. The 'Step 2. Enter the details' step is active, indicated by a blue header bar. The form fields are as follows: 'Field Label' is set to 'Total Expenses', 'Field Name' is 'Total\_Expenses', 'Description' is empty, and 'Help Text' is empty. Navigation buttons at the top right include 'Previous', 'Next', and 'Cancel'. The status bar at the bottom shows '11:02 PM 11-04-2023'.

The screenshot shows the Salesforce Setup interface for creating a formula field. The object being modified is 'student'. The 'Fields & Relationships' tab is selected. A modal window titled 'Select Object to Summarize' is open, showing the configuration for a roll-up summary field:

- Master Object: student
- Summarized Object: Students
- Roll-Up Type: SUM (selected)
- Field to Aggregate: None
- Filter Criteria: All records should be included in the calculation (selected)

At the bottom right of the modal are 'Previous', 'Next', and 'Cancel' buttons.

The screenshot shows the continuation of the formula field creation process. The 'Fields & Relationships' tab is still selected. A modal window titled 'Step 4. Establish field-level security' is open, showing the configuration for a new custom field named 'Total\_Expenses':

Field Label	Total Expenses
Data Type	Roll-Up Summary
Field Name	Total_Expenses
Description	

Below this, a table lists profiles and their security settings:

Field-Level Security for Profile	Visible	Read-Only
Analytics Cloud Integration User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Analytics Cloud Security User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

At the bottom right of the modal are 'Previous', 'Next', and 'Cancel' buttons. The top status bar shows the time as 11:05 PM and the date as 11-04-2023.

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes tabs for Travel Approval, student, Downloadable User Guides, WhatsApp, Create Formula Fields Unit, and several system icons. Below the header is a search bar labeled "Search Setup". The main content area is titled "SETUP > OBJECT MANAGER" and shows the "student" object. On the left, a sidebar lists "Fields & Relationships" sections such as Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types. The right side displays a table titled "Fields & Relationships" with the following data:

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)		✓
Record Type	RecordTypeId	Record Type		✓
student Name	Name	Text(80)		✓
Total Expenses	Total_Expenses__c	Roll-Up Summary (MAX Student)		

We can create Roll Up Summary Fields from the object manager . Select the Roll Up summary field from the following details.Then create RollUp Summary field

### Activity-3:

#### Create Formula Fields:

The screenshot shows the Salesforce Static Resources page. The top navigation bar includes tabs for Travel Approval, Static Resources, and several system icons. Below the header is a search bar labeled "Search Setup". The main content area is titled "SETUP Static Resources". A sidebar on the left shows "Custom Code" and "Static Resources". A message at the top says "Didn't find what you're looking for? Try using Global Search." The main table is titled "Static Resources" and has the following columns: Name, Namespace Prefix, Description, MIME Type, Size, Created By Alias, Created Date, Last Modified Date, and Cache Control. The table is currently empty, showing "No records to display." At the bottom of the page, there are links for "View: All" and "Create New View", along with a navigation bar for letters A-Z and a "Help for this Page" link.

The screenshot shows the Salesforce Setup interface for managing Static Resources. A search bar at the top left contains the text 'stati'. The 'Static Resources' tab is selected in the sidebar. The main content area displays a 'Static Resource Edit' form for a resource named 'StatusImages'. The form includes fields for Name (StatusImages), Description (empty), File (Choose File, StatusImage zip zip), and Cache Control (Private). Buttons for Save and Cancel are visible at the bottom right of the form.

The screenshot shows the Salesforce Setup interface for managing Static Resources. A search bar at the top left contains the text 'stati'. The 'Static Resources' tab is selected in the sidebar. The main content area displays a 'Static Resource Detail' page for a resource named 'StatusImages'. The page lists the following details:

Name	StatusImages
Namespace Prefix	
Description	
MIME Type	application/zip
Cache Control	Private
Size	57,029 bytes
	<a href="#">View file</a>
Created By	Gomathi_p_Gomathi_p, 11/04/2023, 9:34 pm
Last Modified By	Gomathi_p_Gomathi_p, 11/04/2023, 9:34 pm

Buttons for Edit, Delete, and Where is this used? are located at the top right of the detail page. A 'Show all' link is at the bottom right.

Screenshot of the Salesforce Setup interface showing the 'Object Manager' section for 'Travel Approval'. The 'Fields & Relationships' tab is selected. Under 'Data Type', the 'Formula' option is chosen, which is described as a read-only field derived from a formula expression. The status bar at the bottom shows 'Show all' and the date '11-04-2023'.

Screenshot of the Salesforce Setup interface showing the 'Object Manager' section for 'Travel Approval'. The 'Fields & Relationships' tab is selected. A new custom field is being created, titled 'New Custom Field'. Step 2 of 5, 'Choose output type', is displayed. The 'Field Label' is set to 'Status Indicator' and the 'Field Name' is 'Status\_Indicator'. The 'Formula Return Type' is set to 'Checkbox'. The status bar at the bottom shows 'Show all' and the date '11-04-2023'.

The screenshot shows the Salesforce Setup interface for the 'Travel Approval' object. The 'Fields & Relationships' tab is selected. A sidebar on the left lists options such as Details, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types. The main pane displays a list of data types with their descriptions and examples:

- None Selected
- Checkbox
- Currency
- Date
- Date/Time
- Number
- Percent
- Text**
- Time

Each data type has a detailed description and examples of how it can be used.

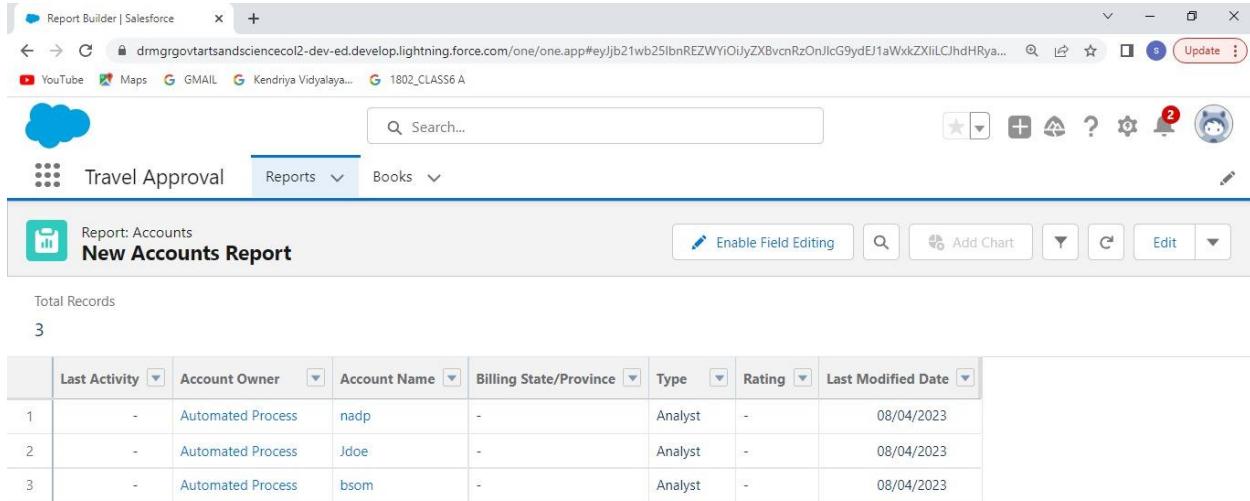
The screenshot shows the Salesforce Setup interface for the 'Travel Approval' object. The 'Fields & Relationships' tab is selected. A sidebar on the left lists options such as Details, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types. The main pane displays a formula editor with the following details:

- Example:** Full Name = LastName & " " & FirstName
- Simple Formula** tab is selected.
- Advanced Formula** tab is available.
- Select Field Type:** Travel Approval
- Insert Operator:** dropdown menu
- Status Indicator (Text):** A formula is displayed:

```
IF( ISPICKVAL( Status__c , 'Approved') , IMAGE("/resource/StatusImages/thumbs-up.png", "Accepted", 20, 20),  
IF ( ISPICKVAL( Status__c , 'Rejected'), IMAGE("/resource/StatusImages/thumbs-down.png", "Rejected", 20, 20),  
IMAGE("/resource/StatusImages/draft.png", "In-Process", 20, 20)) )
```
- Quick Tips:** Getting Started, Operators & Functions

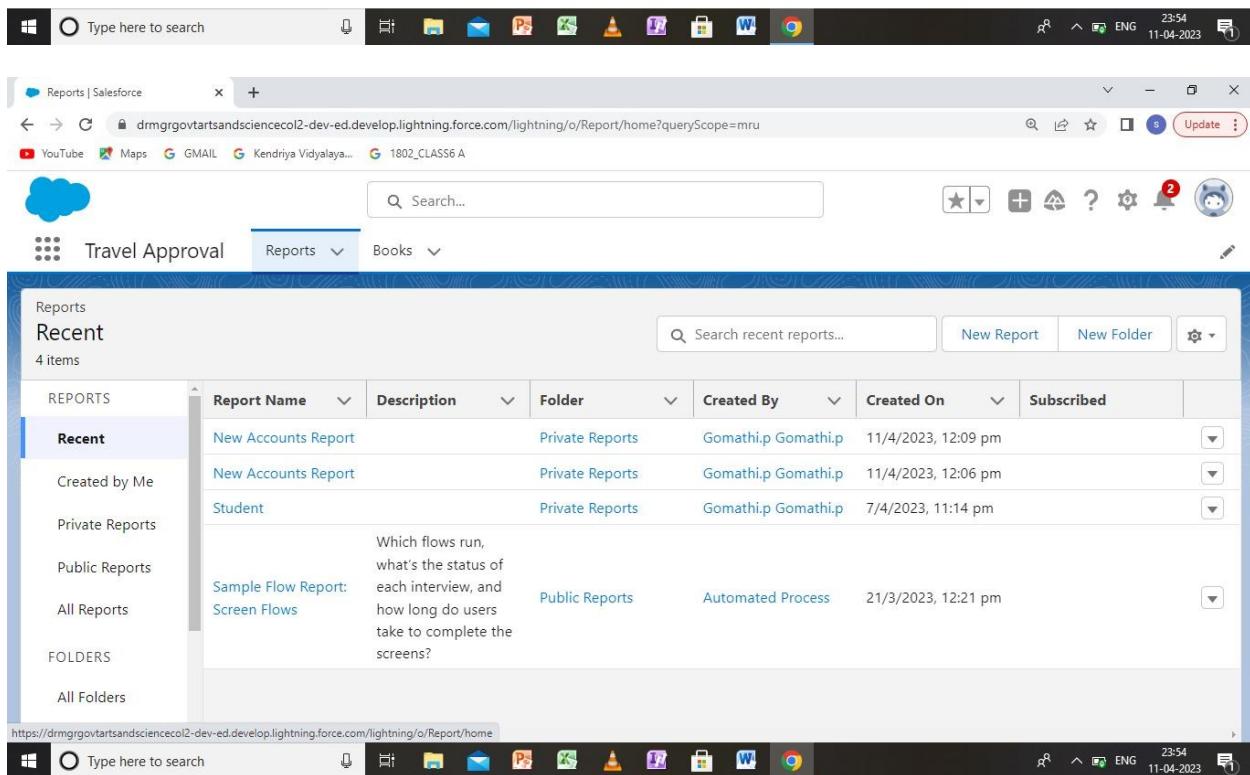
In this activity we can see the Create Formula Field from the Add Business Logic to Travel App. We can uses the 3 Activities.

## Milestone 10 – What are Reports:



The screenshot shows a Salesforce Report Builder interface. At the top, there's a navigation bar with links like YouTube, Maps, GMAIL, Kendriya Vidyalaya..., and 1802\_CLASS6 A. Below the navigation bar is a search bar and a toolbar with various icons. The main area displays a report titled "Report: Accounts New Accounts Report". The report has a table with the following data:

	Last Activity	Account Owner	Account Name	Billing State/Province	Type	Rating	Last Modified Date
1	-	Automated Process	nadp	-	Analyst	-	08/04/2023
2	-	Automated Process	Jdoe	-	Analyst	-	08/04/2023
3	-	Automated Process	bsom	-	Analyst	-	08/04/2023



The screenshot shows a Windows taskbar at the bottom of the screen with various pinned icons. Above the taskbar is a screenshot of a Salesforce Reports interface. The interface has a navigation bar with links like YouTube, Maps, GMAIL, Kendriya Vidyalaya..., and 1802\_CLASS6 A. The main area shows a "Recent" section with a list of reports:

- New Accounts Report
- New Accounts Report
- Student
- Sample Flow Report: Screen Flows

The "Sample Flow Report: Screen Flows" entry has a detailed description: "Which flows run, what's the status of each interview, and how long do users take to complete the screens?"

The screenshot shows the Salesforce Lightning interface with the Reports tab selected. The left sidebar has categories like Recent, Created by Me, Private Reports, Public Reports, and All Reports under REPORTS, and All Folders under FOLDERS. The main area displays a table of recent reports:

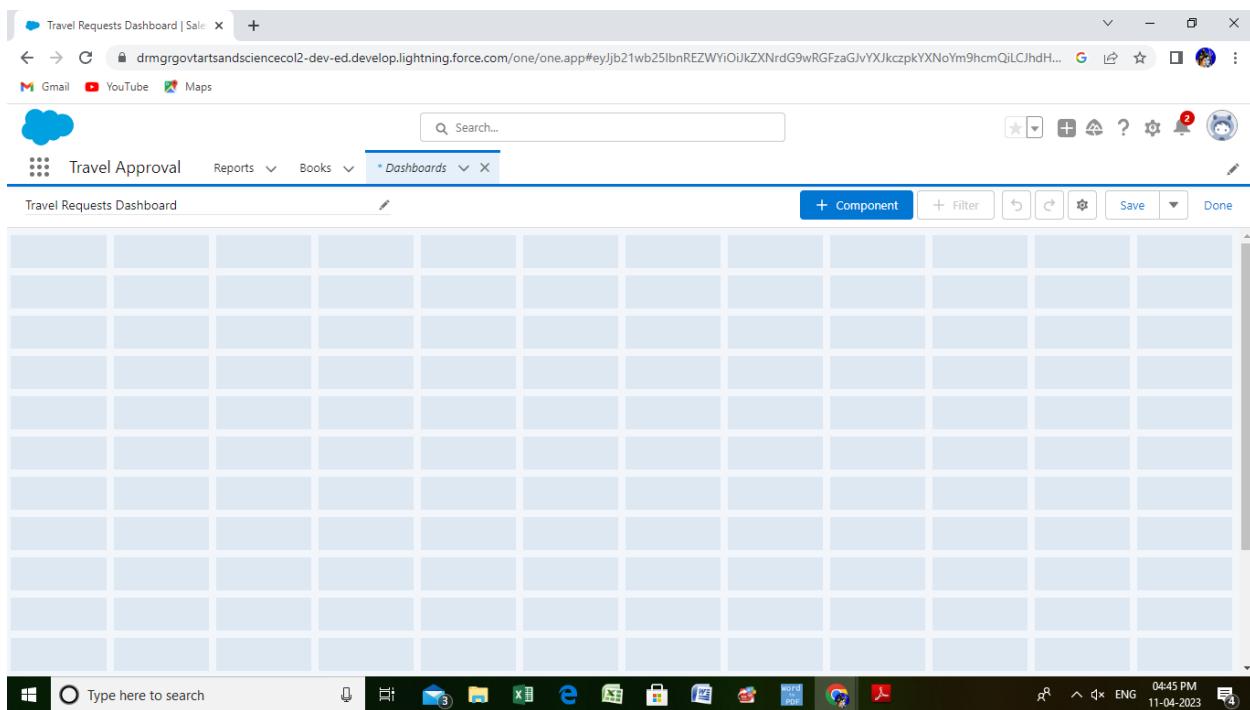
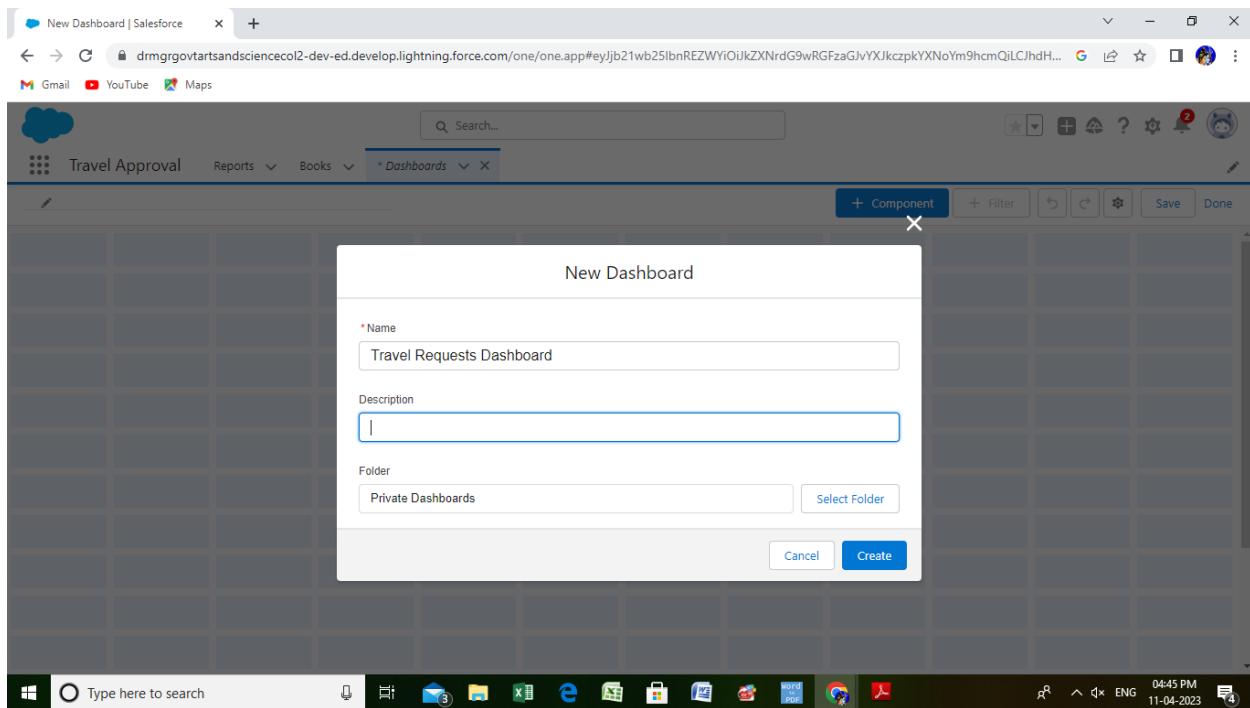
Report Name	Description	Folder	Created By	Created On	Subscribed
New Accounts Report		Private Reports	Gomathi.p Gomathi.p	11/4/2023, 12:09 pm	
New Accounts Report		Private Reports	Gomathi.p Gomathi.p	11/4/2023, 12:06 pm	
Student		Private Reports	Gomathi.p Gomathi.p	7/4/2023, 11:14 pm	
Sample Flow Report: Screen Flows	Which flows run, what's the status of each interview, and how long do users take to complete the screens?	Public Reports	Automated Process	21/3/2023, 12:21 pm	

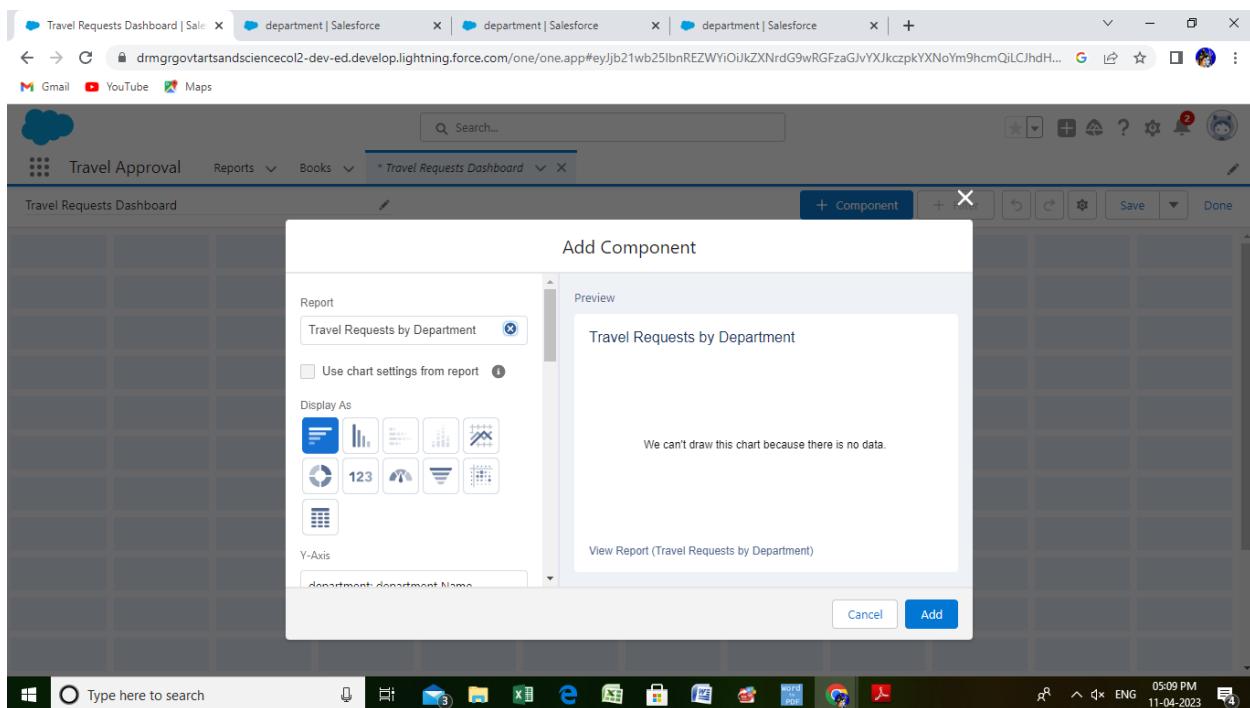
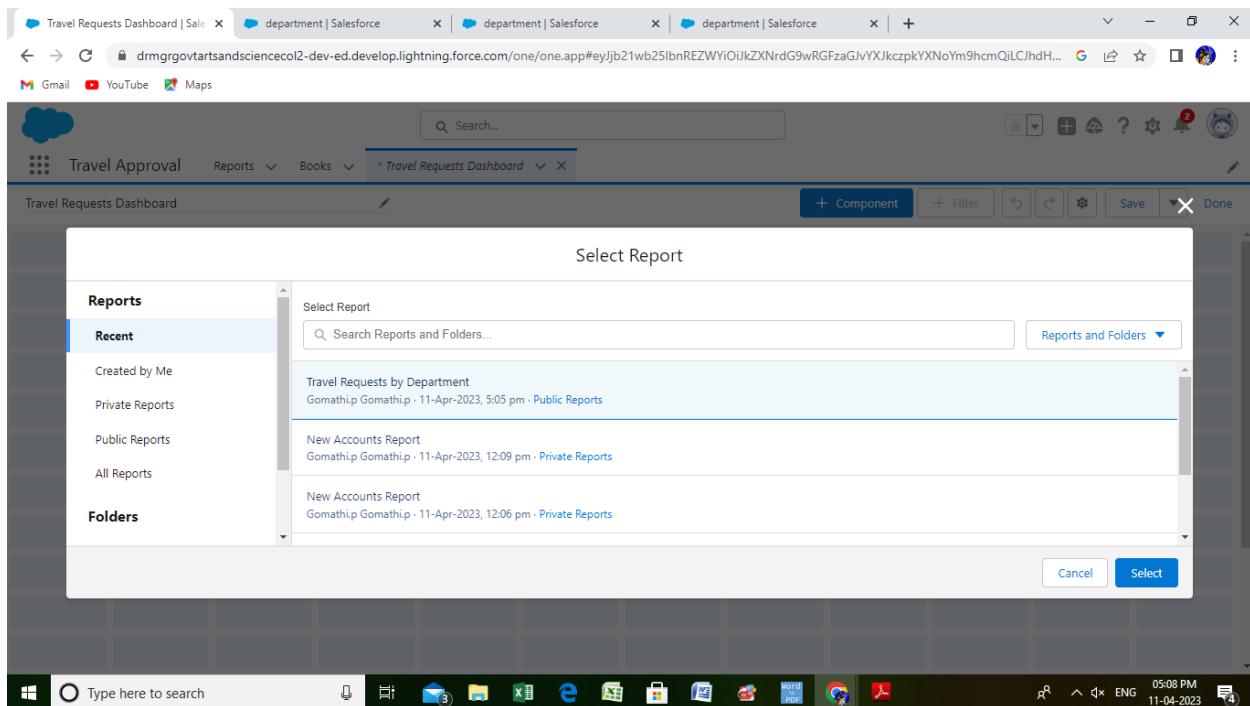
We can create reports in report tab. They are 4 types namely tabular report ,summary report, matrix report and joined report.

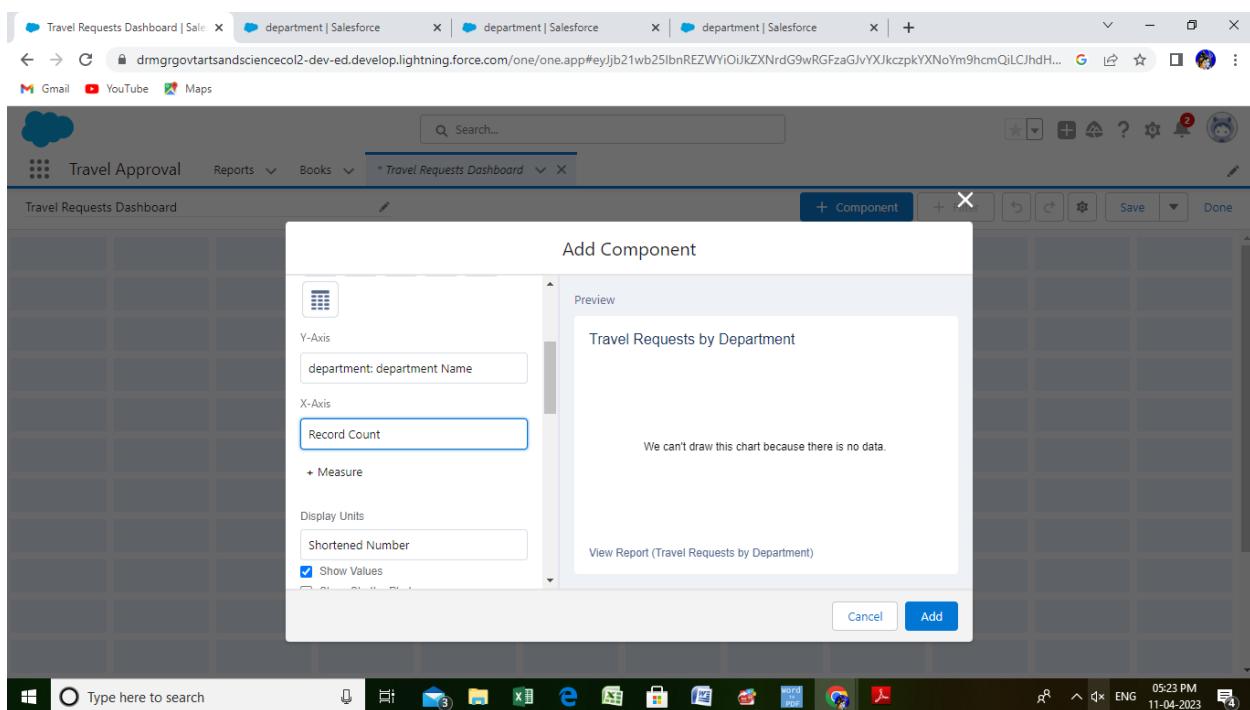
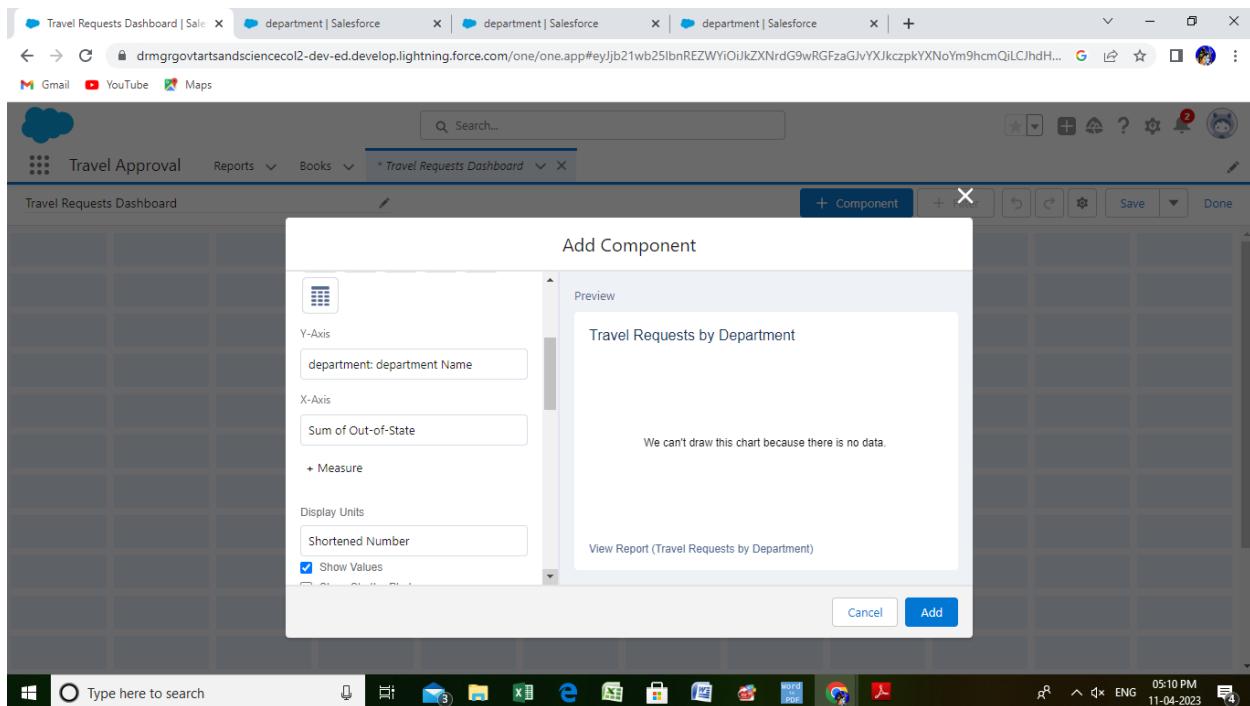
## Milestone 11- Dashboards:

### Activity:

Create Travel Approvals Dashboard:







#### 4. Trailhead Profile Public URL

Team Lead – <https://trailblazer.me/id/gperumal17>

Team Member 1 - <https://trailblazer.me/id/shahila2>

Team Member 2 – <https://trailblazer.me/id/iprakash10>

Team Member 3- <https://trailblazer.me/id/indhs6>

### **Advantages & Disadvantages:**

Due to a rapid boom in technology and evolution in business ventures, one has to international corporate travel around the world. Some choose to go on their own and some opt for corporate travel consultant or corporate business travel for assistance to have a comfortable and safe trip.

The motivation can be either incentives, promotion or just traveling but what was once called a business travel, is now more or less a fun solo vacation. The travel expense is mostly covered, the hotel stay is paid for, and all the meals are paid for. However, there is more to traveling than expenses and money.

Here are a few benefits of traveling for work

Meeting new people: On a business trip, it is hard to expect anything because it is a new country, a new language, a new world altogether. It might get a little complicated with the whole new atmosphere, but eventually, you will start meeting so many people with different backgrounds which will provide a sense of oneness

even on a business trip. It might as well help you form a long-lasting relationship with a stranger in some other country.

Limited expense traveling: When people get a chance to travel for work, it is mostly an all expense vacation, especially on business. Expenses covered would include the hotel costs, all the meals ((breakfast, lunch, and dinner) for a period of time. Not many get an all-expense business trip, but you are one such executive, cheers.

Unfortunately, with the benefits come the downsides. Work can get to you; time and money can bother you; jetlags, unhealthy food and stay, just to name a few can get on your nerves when everything is on a tight schedule.

Here are a few disadvantages of traveling:

Sleeping: Jetlags can be one of the reasons, but not everyone is blessed to sleep everywhere and anywhere. Staying awake in the hotel room is one of the common traits of a business traveler. Be it a for a short or long business trip, it does take some time to get accustomed to the time zones.

Stay: Unless and until the business trip is planned through a corporate travel consultant, finding the right hotel room will be a challenge.

From a travel perspective, the benefits by far outweigh the downsides. But again it depends on where, why and how you are traveling to other countries. Although, if you are offered an all-expense paid opportunity to travel for a week or two, I'd recommend taking advantage of the opportunity.

## **Applications:**

This tutorial explains how to use the travel approval sample application.

The Travel Support System (this is the name that you can see on the screen when executing the application) is a small sample application for NaturalONE. As a sample application, its focus is to show NaturalONE functionality rather than being a full-fledged travel support application.

The Travel Support System (TSS) allows you to request and approve business trips. Flights, hotels and even more external information such as cell phone expenses or car rentals can be entered with the trip request. For the destination, weather information can be queried. A manager can do both, request own trips as well as approve trips that have been requested by employees. After the manager has approved single or multiple requests, the manager can print an itinerary or receive the itinerary as a PDF file.

## **Conclusion:**

In this project we learnt about,

- To create custom objects
- To create field and relationships
- To create tabs
- To create import departments
- To create customize user interface
- Use customization
- To create validation rule
- Roll up summary fields

- Reports and dashboards

## **Future Scope:**

The Scope of Travel agencies in the future is likely to change due to several factors, including the ongoing covid 19 pandemic and the growth of online travel booking platform .

Many travel agencies have had to adapt their business models to focus on online bookings virtual tours, and some have closed permanently.

However there is still a market for travel agencies that specialize in niche areas, such as luxury travel or adventure travel.

According to international data corporation , the salesforce economy is set to create 1.9 million direct and indirect job by 2024 .

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