

UNIVERSITY COLLEGE OF ENGINEERING, NAGERCOIL
NAAN MUDHALVAN PROJECT REPORT
DEPARTMENT OF MECHANICAL ENGINEERING
TOPIC : BUILD A EMPLOYEE TRAVEL APPROVAL APPLICATION
FOR CORPORATES

Submitted by

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Introduction: "Building an 'Employee Travel Approval Application for Corporates' in Salesforce is a strategic initiative aimed at simplifying and enhancing the travel approval process for corporate employees and administrators. This innovative solution will streamline travel requests, automate approval workflows, ensure compliance with corporate policies, and provide real-time visibility into travel expenses. By leveraging the power of Salesforce, our project seeks to improve the overall efficiency and experience of corporate travel management while enabling data-driven decision-making."

Milestone – 01: Create a Developer Org

1. Go to developers.salesforce.com/
2. Click on sign up.
3. On the sign up form, enter the following details :
 - a. First name & Last name – **ARUNRAJ & V**
 - b. Email – arunrajvelu5025@gmail.com
 - c. Role : **Developer**
 - d. Company : **UNIVERSITY COLLEGE OF ENGINEERING, NAGERCOIL**
 - e. County : **India**
 - f. Postal Code : **629004**
 - g. Username : arunraj@company.sandbox

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← → ↻ developer.salesforce.com/signup

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First Name* ARUNRAJ Last Name* V

Email* Your email address

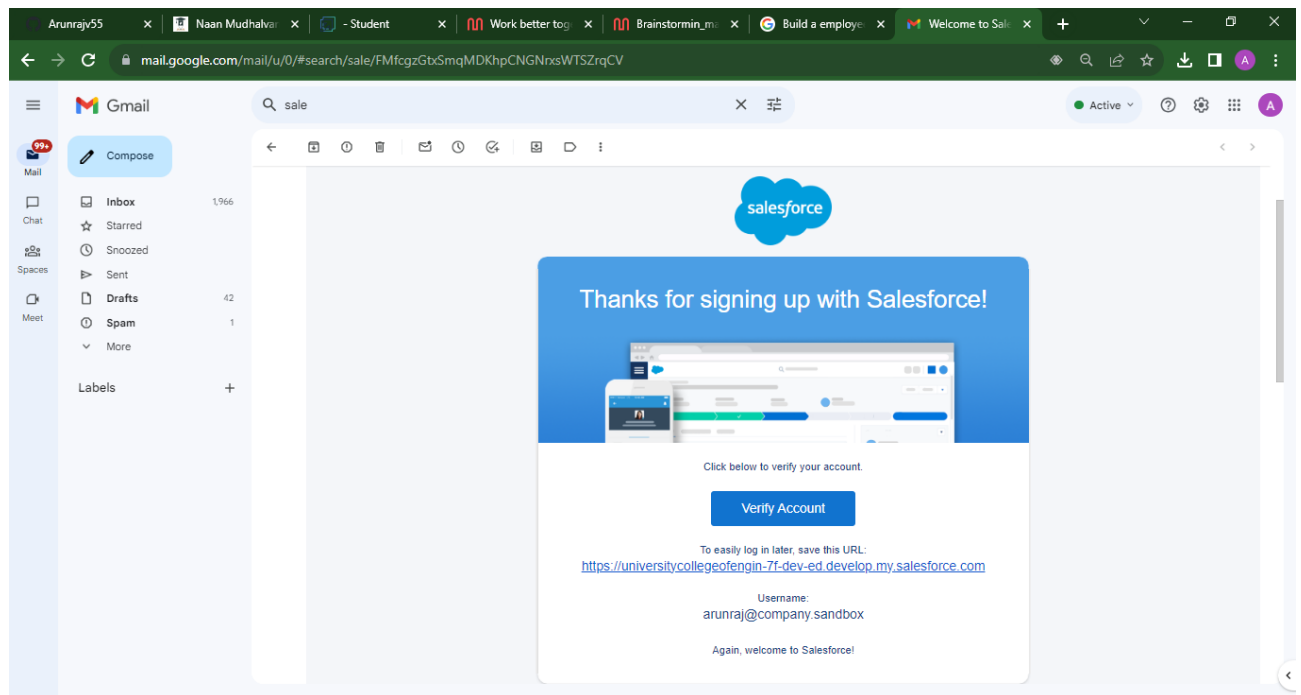
Role* Your job role

Company* Company Name

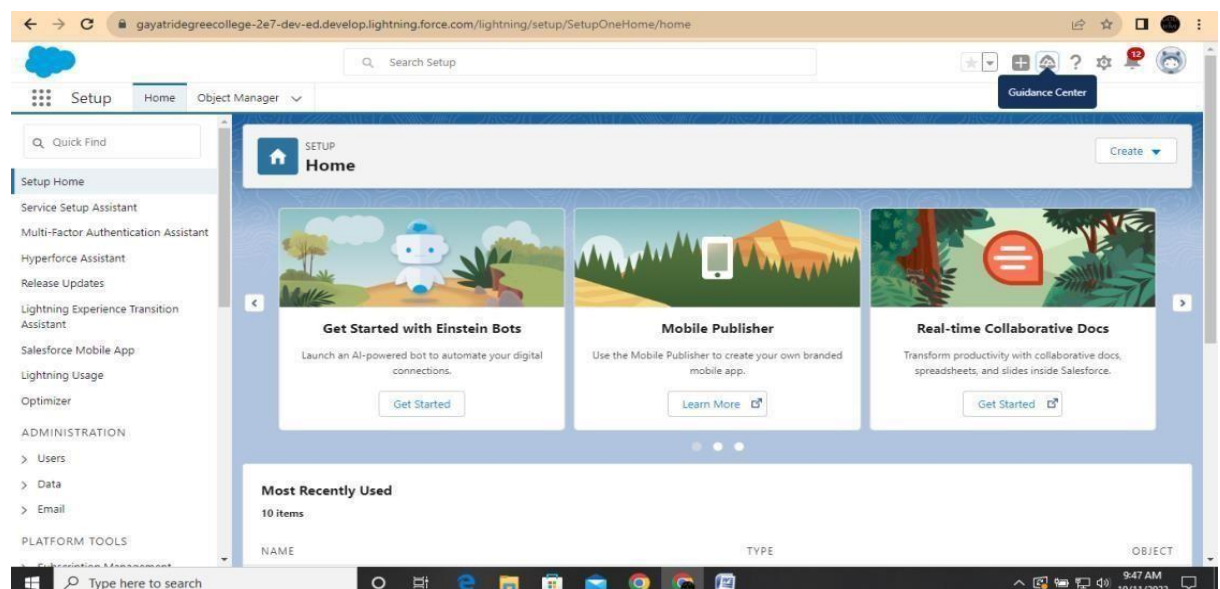
Account Activation

Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account.

The email may take 5-10mins, as



1. Login To Your Salesforce Account
2. Go to salesforce.com and click on login.
3. Enter the username and password that you just created.
4. 3.After login this is the home page which youwill see.



Milestone – 02: objects creation

Object – Travel Approval

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

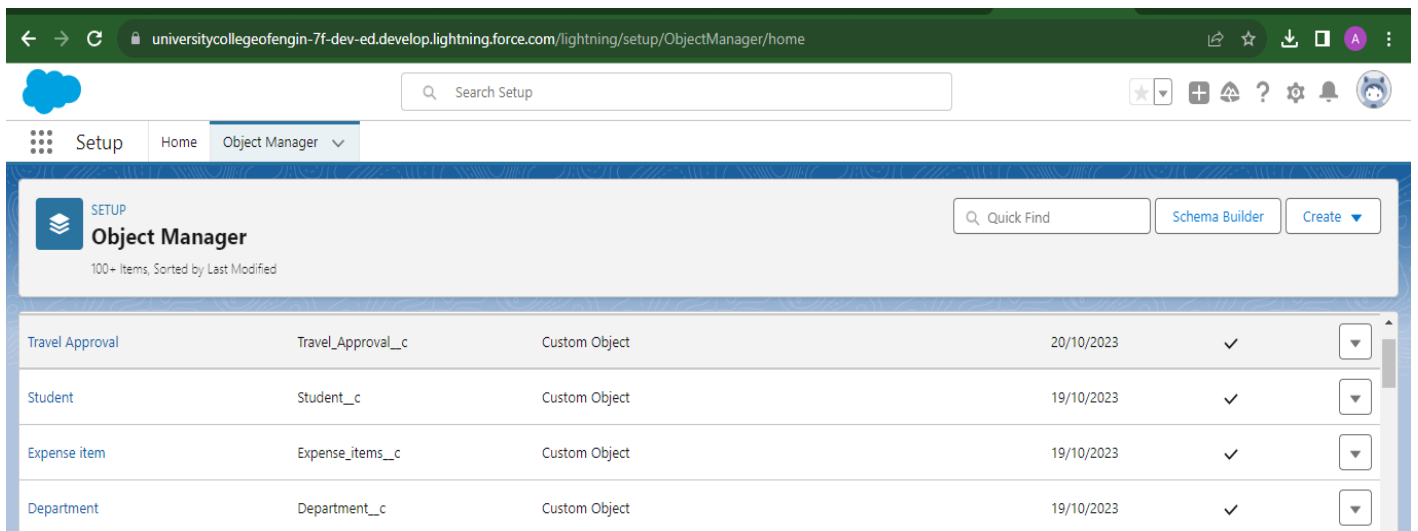
Object – Department

1. Click on the gear icon and then select Setup.
2. Click on the object manager tab just beside the home tab.
3. After the above steps, have a look on the extreme right you will find a Create Drop down click on that and select Custom Object
4. On the Custom Object Definition page, create the object as follows:
5. Label: Visa Slot
6. Plural Label: **Department**
7. Record Name: **Department Number**(Auto Number)
8. Check the Allow Reports checkbox
9. Check the Allow Search checkbox
10. Click Save.

Object – Expense item

1. Click on the gear icon and then select Setup.

2. Click on the **object manager** tab just beside the home tab.
3. After the above steps, have a look on the extreme right you will find a Create Drop down click on that and select Custom Object.
4. On the Custom Object Definition page, create the object as follows:
5. Label: **Expense item**
6. Plural Label: **Expense item**
7. Record Name: **Expense item name** (Auto Number)
8. Check the Allow Reports check box
9. Check the Allow Search check box
10. Click Save



The screenshot shows the Salesforce Object Manager interface. The browser address bar indicates the URL: `universitycollegeofengin-7f-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/home`. The page header includes the Salesforce logo, a search bar labeled "Search Setup", and navigation tabs for "Setup", "Home", and "Object Manager". Below the header, the "Object Manager" section displays "100+ Items, Sorted by Last Modified". A table lists several custom objects:

Object Name	API Name	Object Type	Last Modified	Status	Actions
Travel Approval	Travel_Approval__c	Custom Object	20/10/2023	✓	⌵
Student	Student__c	Custom Object	19/10/2023	✓	⌵
Expense item	Expense_Items__c	Custom Object	19/10/2023	✓	⌵
Department	Department__c	Custom Object	19/10/2023	✓	⌵

Milestone – 03: Creation of Tabs

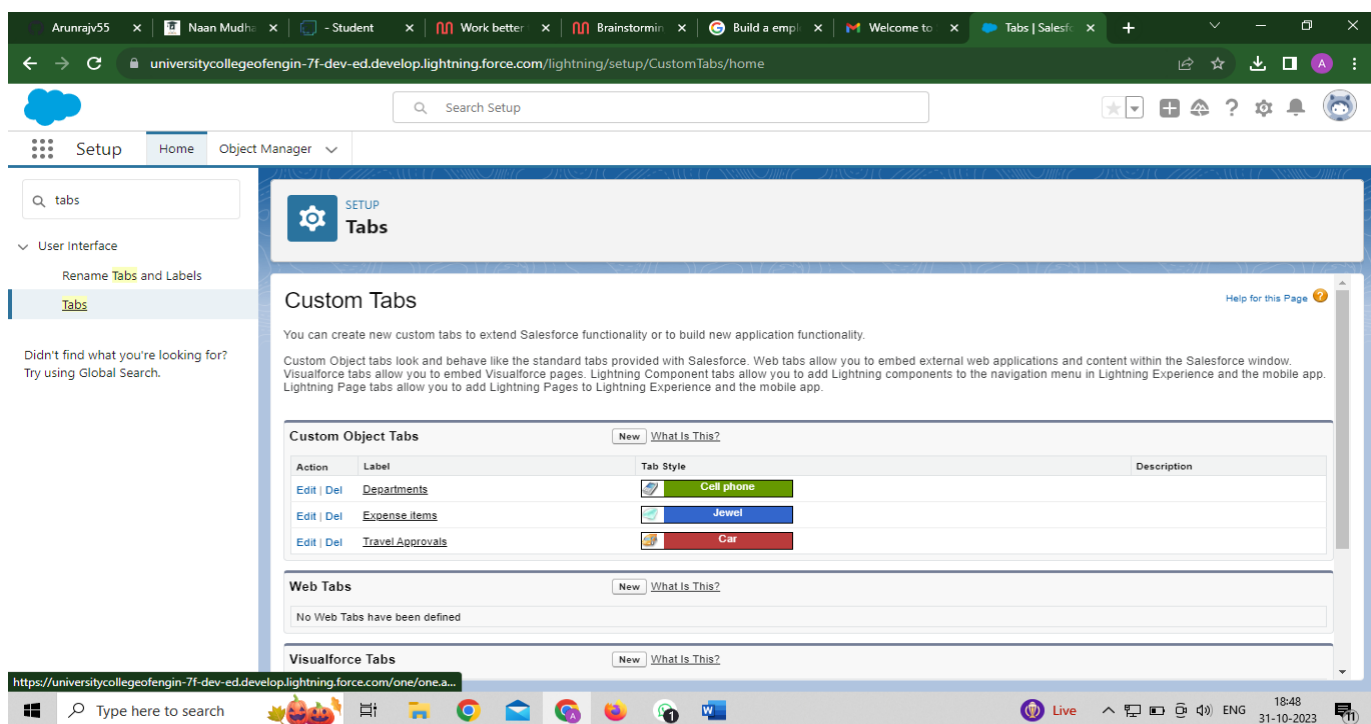
Tab- Departments

1. Navigate to setup and home
2. Enter Tabs in Quick Find Box and select Tabs
3. Under Custom Object Tabs, click New
4. For Object, select **Department**
5. For Tab Style, select any icon
6. Leave all defaults as is. Click Next, Next, and Save **Tab – department**
1. Navigate to setup and enter Tabs in Quick Find and select Tabs. Under Custom Object Tabs, click New.

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

Tab – Travel Approval

1. Navigate to setup and enter Tabs in Quick Find and select Tabs Under Custom Object Tabs, click New
2. For Object, select **Travel Approval**
3. For Tab Style, select any icon
4. Leave all defaults as is. C Next, Next, and Save



Milestone -04 : Relationships Between Two Objects

Relationship Creation

1. Fields Creation: **Travel Approval**
2. Navigate to setup
3. Click on Object Manager and search and select Visa Slot object
4. Select Fields & Relations and click New.
5. Select Data Type: **Text(45)**, next.
6. Related to: **Travel Approval**, next.
7. Label: **Department**
8. Child Relationship Name: Department, next.
9. Next, next and save.

Fields & Relationships
18 Items, Sorted by Controlling Field

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(16, 2)		
Contact	Contact__c	Master-Detail(Contact)		✓
Created By	CreatedById	Lookup(User)		
Department	Department__c	Text(45)		
Destination state	Destination_state__c	Text(76)		
Expense items	Expense_items__c	Text(43)		
Expense type	Expense_type__c	Picklist		

Fields & Relationships
18 Items, Sorted by Controlling Field

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Status	Status__c	Picklist		
Status Indicator	Status_Indicator__c	Formula (Text)		
Total expense	Total_expense__c	Master-Detail(Student)		✓
Travel approval &	Travel_approval__c	Auto Number		
Travel Approval Name	Name	Text(80)		✓
Travel Approvals	Travel_Approvals__c	Formula (Currency)		
Trip end date	Trip_end_date__c	Date		
Trip start date	Trip_start_date__c	Date		

Milestone – 05 : Field creation

1. Total Expense : Master Detail
2. Trip start date : Date
3. Department : Text
4. Expense item : Text
5. Travel Approval : Formula

Field creation: Department

1. Navigate to Setup

2. Click the Object Manager next to Home Tab
3. Type Passport in Quick Find and Select it
4. Click on Fields and Relationships
5. Click New
6. Select Data Type: Text, click on next
7. Field Label: Department
8. Length: Max(45)
9. Check always requires a value to save this record
10. Click next
11. Next, Save or Save & New (if further new field will be create)

Field Creation- Expense item

1. Navigate to Setup
2. Click the Object Manager next to Home Tab
3. Type Passport in Quick Find and Select it
4. Click on Fields and Relationships
5. Click New
6. Select Data Type: Text, click on next
7. Field Label: Expense item
8. Length: 43, click on next
9. Next, Save.

Field Creation- Trip start date

1. Navigate to Setup
2. Click the Object Manager next to Home Tab
3. Type Passport in Quick Find and Select it
4. Click on Fields and Relationships
5. Click New
6. Select Data Type: Date, click on next
7. Field Label: Trip start date
8. Next, next and save

The screenshot shows the Salesforce Setup interface for the 'Department' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), 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 content area is titled 'Fields & Relationships' and shows '4 Items, Sorted by Field Label'. It includes a 'Quick Find' search bar and buttons for 'New', 'Deleted Fields', 'Field Dependencies', and 'Set History Tracking'. The table below lists the fields:

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

Fields Available On Custom Object: Travel Approval

Slot Field Name	Data Type
Location	: Text
Time	: Date & Time
Travel Approval	: Auto Number (Use in RecorName)
Travel Approval	: Formula(currency)
Status	: picklist Field

Creation Status

1. Click on Object Manager, search and select Visa Slot
2. Click Fields & Relationships and click on new.
3. Chose on picklist, next.
4. Label: Status
5. NOTE- select enter value, with each value separated by new line
6. Values: Approved
7. Cancel Reschedule
8. Next, next and save.

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Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER
Expense item

Details

Fields & Relationships

4 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Expense items Name	Name	Text(80)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User, Group)		✓

Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts

Milestone - 06 : Apps

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 Salesforce Applications:

- Standard Apps
- Custom Apps

Creation of App

- Click on setup and go to home page.
- In Quick Find Box search and select App Manager.
- Click: New Lightning App.
- App Name: **Travel Approval** and click on next.
- Navigate System: Standard Navigation Support Form Factor: Desktop and Phone Click next, next
- Move Objects from available items to selected items. (Department, Expense item, Travel, Trip start date).
- Add System Administrator profile, available profile to selected profile.
- Save & Finish

The screenshot shows the Salesforce Lightning App Builder interface. The top navigation bar includes 'Lightning App Builder', 'App Settings', 'Pages', and 'Travel Approval'. The left sidebar lists 'App Settings' with sub-items: 'App Details & Branding' (selected), 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'.

The main content area is titled 'App Details & Branding' and includes the instruction: 'Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.'

App Details

- * App Name**: Travel Approval
- * Developer Name**: Travel_Approvals
- Description**: Enter a description...

App Branding

- Image**: Upload button
- Primary Color Hex Value**: #0070D2
- Org Theme Options**: ☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview

TA Travel Approval

Milestone- 07 : User

Creation Of User

1. Navigate to setup
2. In Quick Find box select and search: User
3. Click: New user
4. Give First and Last Name
5. Enter your email in the email field
6. Enter user name, it must be unique
7. User license: salesforce platform
8. In the profile field: Standard user profile
9. Check, Generate new password and notify user immediately
10. Save

Setup Home Object Manager

Search Setup

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 and Web User

SETUP Users

All Users

On this page you can create, view, and manage users.
To get more licenses, use the Your Account app. [Let's Go](#)

View: All Users Edit Create New View

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

New User Reset Password(s) Add Multiple Users

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatty.00d5h000008no8reag_kfcepgawgqoh@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/> Edit	User Integration	integ	integration@00d5h000008no8reag.com		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sec	insightssecurity@00d5h000008no8reag.com		<input checked="" type="checkbox"/>	Analytics Cloud Security User
<input type="checkbox"/> Edit	Y. ARUNRAJ	AV	arunraj@company.sandbox		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/> Edit	Velumugan Arunraj	avelm	arunrajvelu1225@gmail.com	CEO	<input checked="" type="checkbox"/>	Standard Platform User

New User Reset Password(s) Add Multiple Users

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

Organization Wide Defaults Settings

1. Steps of OWD settings:
2. Navigate setup in Quick Find search bar
3. Type Sharing Setting and Select it.
4. Edit: Organization Wide Defaults.
5. Scroll down list and select Passport object and change the default external Access to Public Read/Write.
6. Save.

Setup Home Object Manager

Search Setup

Sharing Settings

Work Plan Private Private ☒

Work Plan Template Private Private ☒

Work Step Template Private Private ☒

Work Type Private Private ☒

Work Type Group Public Read/Write Private ☒

Department Public Read/Write Private ☒

Enhancement Request Public Read/Write Private ☒

Expense Item Public Read/Write Private ☒

Student Public Read/Write Private ☒

Travel Approval Controlled by Parent Controlled by Parent

Other Settings

Manager Groups ☐ [?](#)

Secure guest user record access ☒ [?](#)

Require permission to view record names in lookup fields ☐ [?](#)

Sharing Rules

Milestone - 08 : User Adoption

Create Record- Department

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

View Record- Department

1. Click on App Launcher on left side of screen.
2. Search Travel Approval & click on it.
3. Click on Department Tab.
4. Click on any record name. you can see the details of the Driver

View Record- Department

1. Click on App Launcher on left side of screen.
2. Search Travel Approval & click on it.
3. Click on Department Tab.
4. Click on any record name. you can see the details of the Driver

universitycollegeofengin-7f-dev-ed.develop.lightning.force.com/lightning/o/Department__c/list?filterName=Recent

Travel Approval Departments Travel Approvals Expense items Dashboards Reports

Departments Recently Viewed

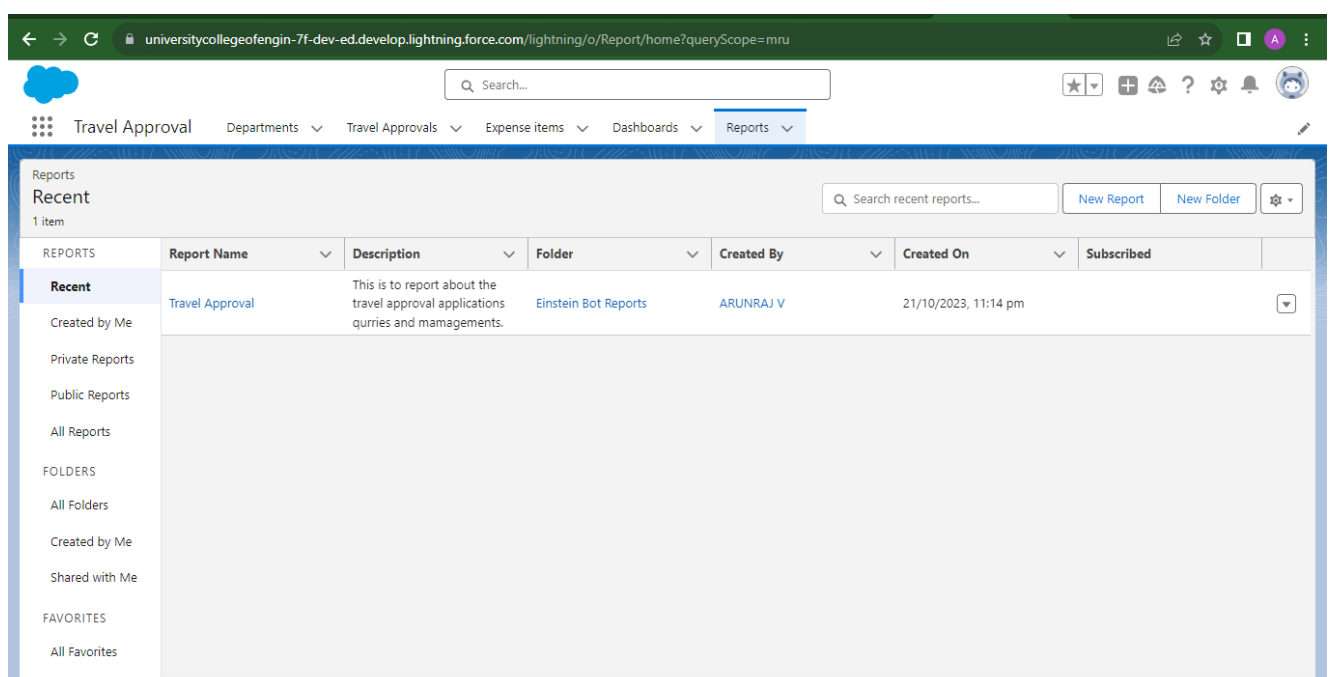
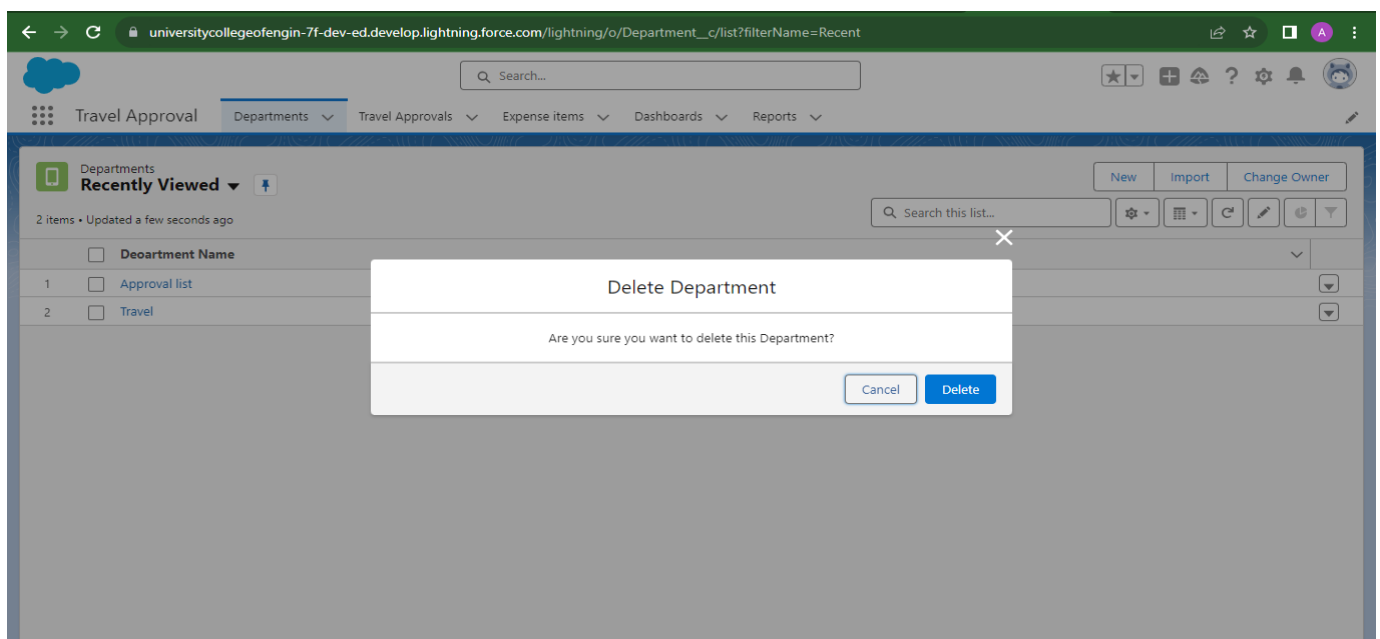
2 items • Updated a few seconds ago

Search this list...

	<input type="checkbox"/> Department Name	
1	<input type="checkbox"/> Approval list	
2	<input type="checkbox"/> Travel	

Delete Records- Passport

1. Click on App Launcher on left side of screen.
2. Search Travel Approval & click on it.
3. Click on Department Tab.
4. Click on Arrow at right hand side on that Particular record.
5. Click delete and delete again.



Milestone - 10 : Dashboards

Creation Of Dashboard

1. Click on the App launcher left on screen and search for dashboards.
2. Select New Dashboard
3. Name the Dashboard: **Dashboard**
4. Select Create option
5. Click on Add Component
6. Select Dashboard Locations
7. Click Select
8. Select the Donut Chart to display a section
9. Value: Record count
10. Sliced By: **Location**
11. Leave the default values
12. Click on Add
13. Save the Dashboard and Done

View Dashboard

1. Click on App Launcher on left side of screen.
2. Search Travel Approval & click on it.
3. Click on Dashboard Tab.
4. Click on Dashboard Location see graph view of records

Milestone – 11: Apex Triggers

Write A Trigger-1

1. Click on Set up Gear at drop down list you can find developer console click on that.
2. At the left side top you can find the option new click on that and then apex trigger.
3. Give the name as **TravelApproval**
4. And S object has Travel Approvel object
5. Scenario - **You cannot delete active Records**

```
trigger TravelRequestTrigger on Travel_Request__c (after insert) {  
    // List to store the travel request records that meet certain criteria  
    List<Travel_Request__c> eligibleRequests = new List<Travel_Request__c>();  
  
    for (Travel_Request__c request : Trigger.new) {  
        // Example criteria: Only process requests with a certain type  
        if (request.Request_Type__c == 'Business Trip') {  
            eligibleRequests.add(request);  
        }  
    }  
  
    // Perform actions on eligible travel requests  
    if (!eligibleRequests.isEmpty()) {  
        // Your custom logic here, e.g., sending email notifications or updating related records  
        for (Travel_Request__c eligibleRequest : eligibleRequests) {  
            // Perform actions, for instance, send an email notification to the approver  
            // Note: Make sure to implement appropriate handling and error checks.  
        }  
    }  
}
```