



Build An Employee Travel Approval Application for Corporates (Admin)



College: LAKIREDDY BALI REDDY COLLEGE OF
ENGINEERING

Team ID: LTVIP2023TMID09672

Team Size: 5

Team Leader: KALASANI UPENDRA

Team member: MADDIREDDI RAJASEKHAR REDDY

Team member: MENDIGUDHITI PREM KUMAR

Team member: ADLA RAJU

Team member: MADDELA SRINIVASA RAO

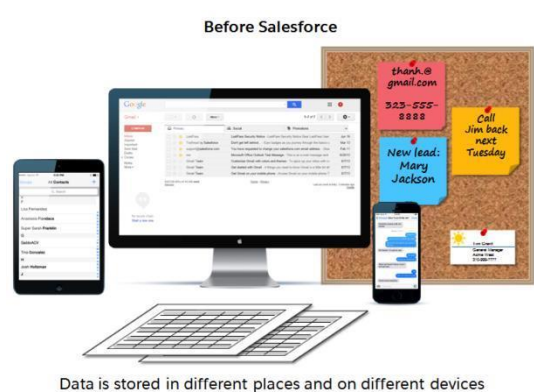
INTRODUCTION

Salesforce, Inc. Is an American cloud-based software company headquartered in San Francisco, California. It provides customer relationship management (CRM) software and applications focused on sales, customer service, marketing automation, e-commerce, analytics, and application development. Founded by former Oracle executive Marc Benioff, Salesforce quickly grew into one of the largest companies in the world, making its IPO in 2004.

Salesforce is the customer success platform, designed to help everyone to sell, service, market, analyze, and connect with customers.

Salesforce takes all of that important data and organizes it into a simple user interface. It's one place for you to:

- Manage all your contacts
- Work with your prospective customers
- Organize tasks and to-do items
- Focus on the right deals
- Collaborate with your team
- Showcase your big wins
- Close more business



SALESFORCE ADMINISTRATOR

A Salesforce Administrator solves business problems by customizing the Salesforce Platform. They build, configure, and automate technology solutions to deliver business value. Salesforce Administrators work with stakeholders to define system requirements and customize the platform. Most importantly, they enable users to get the most out of Salesforce technology.

A Salesforce Admin best understands how to make the platform work for their company's goals. Some organizations may employ just one admin; some employ many people in this role.

Core responsibilities include supporting users, managing data, maintaining security standards, and delivering actionable analytics. A Salesforce Administrator's colleagues can rely on them to:

Maintain the platform

Make it as easy as possible for users of any technical level to use Salesforce

Stay current on the platform's new tools, capabilities, and updates

Core skills Admins should strive to develop to be successful include:

- Product Management
- User Management
- Data Management
- Security
- Business Analysis
- Automating Processes
- Analyzing Data
- Problem-Solving
- Communication
- Learner Mindset
- Attention to Detail

PROJECT INTRODUCTION

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 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.

This project includes,

1. Real-Time Salesforce Project
2. Object & Relationship in Salesforce

Some of the important elements used in Salesforce to implement this project are,

1. OBJECT

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

1. Standard Objects: Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.
2. Custom Objects: Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization. They are the heart of any application and provide a structure for sharing data.

2. TAB

Tabs in Salesforce help users view the information briefly. It displays the data of objects and other web content in the application.

There are mainly 4 types of tabs:

- (A) Standard Object Tabs: Standard object tabs display data related to standard objects.
- (B) Custom Object Tabs: Custom object tabs display data related to custom objects.

(C) Web Tabs: Web Tabs display any external Web-based application or Web page in a Salesforce tabs.

(D) Visualforce Tabs: Visualforce Tabs display data from a Visualforce Page.

3. LIGHTNING APP

Apps in Salesforce are a group of tabs that help the application function by working together as a unit. It has a name, a logo, and a particular set of tabs. The simplest app usually has just two tabs.

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

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

4. FIELDS AND RELATIONSHIPS

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

5. USERS

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

6. USE CUSTOMIZATION

Customization 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.

7. DATA IMPORT

Data Import lets you upload data from external sources and combine it with data you collect via Analytics. You can then use Analytics to organize and analyze all of your data in ways that better reflect your business.

The Data Import Wizard is a Tool that makes it easy to import data for many standard Salesforce objects, including accounts, contacts, leads, solutions, campaign members, and person accounts. You can also import data for custom objects.

In order to complete this milestone, you need to create a CSV file and give them the data given in the picture below. After that from these CSV files we will import data for Department & Travel Approval (Custom Object).

8. VALIDATION RULE

It can contain a formula or expression that evaluates the data in one or more fields & returns a value of true or false. Validation Rules also include an error message to display to the user when the rule returns a value true due to an invalid value/data.

9. REPORTS

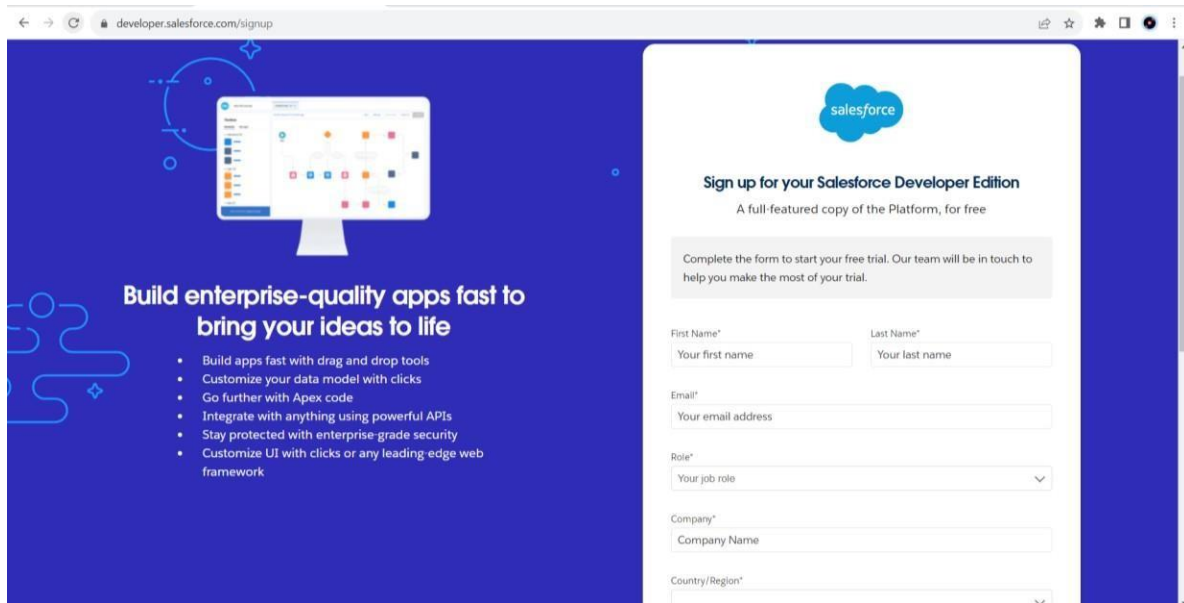
Reports in Salesforce is a list of records that meet a particular criterion which gives an answer to a particular question. These records are displayed as a table that can be filtered or grouped based on any field.

10. DASHBOARDS

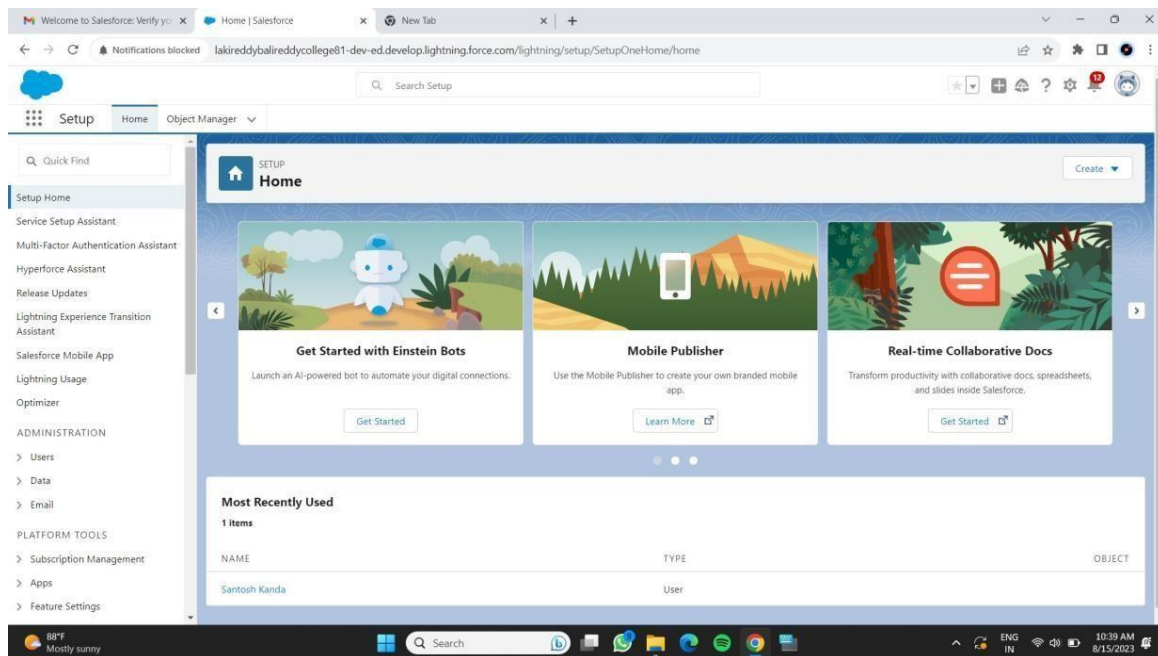
Dashboards let you curate data from reports using charts, tables, and metrics. If your colleagues need more information, then they're able to view your dashboard's data-supplying reports. Dashboard filters make it easy for users to apply different data perspectives to a single dashboard.

PROJECT IMPLEMENTATION

Creation of Salesforce Org and Account Activation

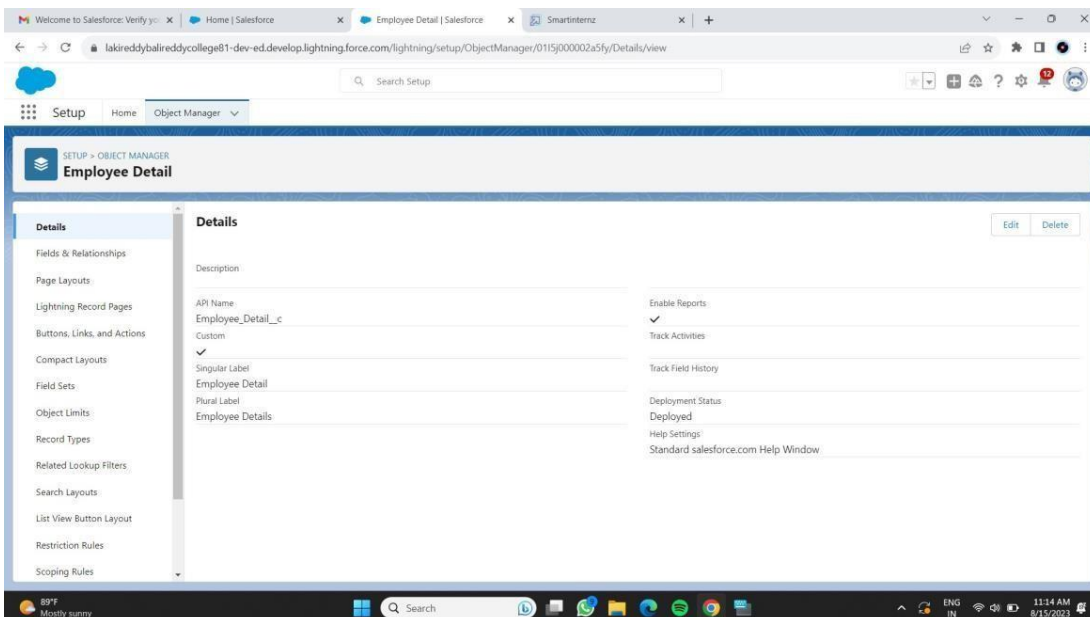
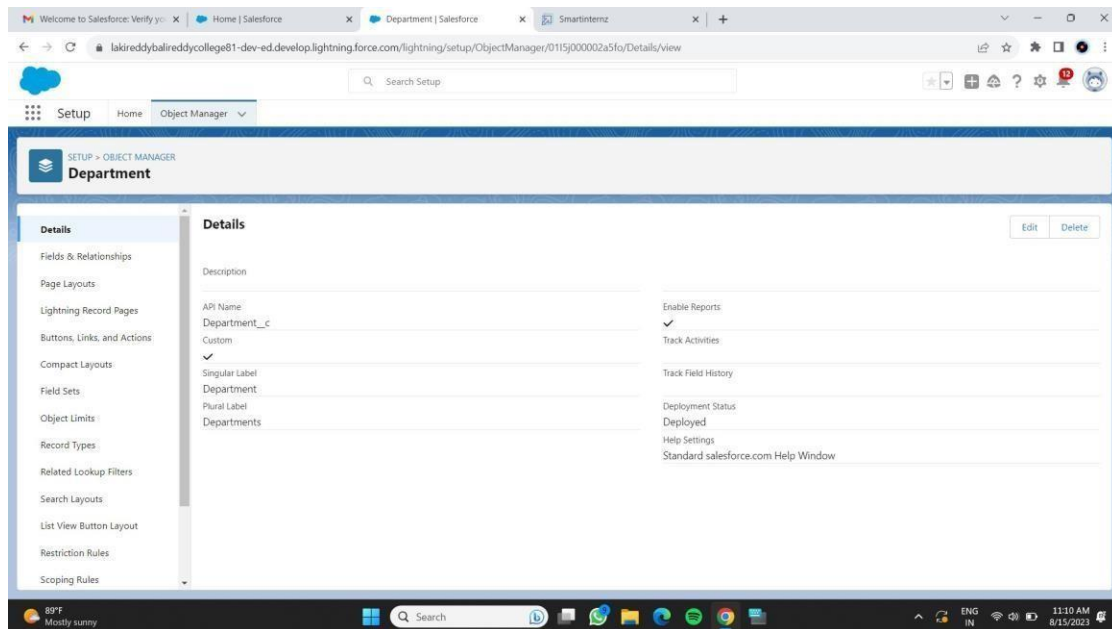


The screenshot shows the Salesforce Developer Edition sign-up page. On the left, a blue banner with a white monitor icon displays the text "Build enterprise-quality apps fast to bring your ideas to life" and a bulleted list of features: "Build apps fast with drag and drop tools", "Customize your data model with clicks", "Go further with Apex code", "Integrate with anything using powerful APIs", "Stay protected with enterprise-grade security", and "Customize UI with clicks or any leading-edge web framework". On the right, a white form titled "Sign up for your Salesforce Developer Edition" with the subtitle "A full-featured copy of the Platform, for free" contains the following fields: "First Name*" and "Last Name*" (text inputs), "Email*" (text input), "Role*" (dropdown menu with "Your job role" selected), "Company*" (text input), and "Country/Region*" (dropdown menu). The Salesforce logo is at the top of the form.



Creation of Custom Objects

For this Travel Approval we need to create 5 objects **Department**, **Employee Detail**, **Expense**, **Expense Items**, and **Travel Approval**.



← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5kQ/Details/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Expense

Details Edit Delete

Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Restriction Rules
Scoping Rules

Details

Description

API Name
Expense__c
Custom
✓
Singular Label
Expense
Plural Label
Expenses

Enable Reports
✓
Track Activities
Track Field History
Deployment Status
Deployed
Help Settings
Standard salesforce.com Help Window

89°F Mostly sunny 11:21 AM 8/15/2023

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5ka/Details/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Expense Item

Details Edit Delete

Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Restriction Rules
Scoping Rules

Details

Description

API Name
Expense_Item__c
Custom
✓
Singular Label
Expense Item
Plural Label
Expense Items

Enable Reports
✓
Track Activities
Track Field History
Deployment Status
Deployed
Help Settings
Standard salesforce.com Help Window

89°F Mostly sunny 11:23 AM 8/15/2023

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5kp/Details/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Travel Approval

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
List View Button Layout
Restriction Rules
Scoping Rules

Details

Description

API Name
Travel_Approval__c

Custom

✓

Singular Label
Travel Approval

Plural Label
Travel Approvals

Enable Reports
✓

Track Activities

Track Field History

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Edit Delete

89°F Mostly sunny

Search

ENG IN 11:24 AM 8/15/2023

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/home

Setup Home Object Manager

SETUP
Object Manager
50+ Items, Sorted by Last Modified

Quick Find Schema Builder Create

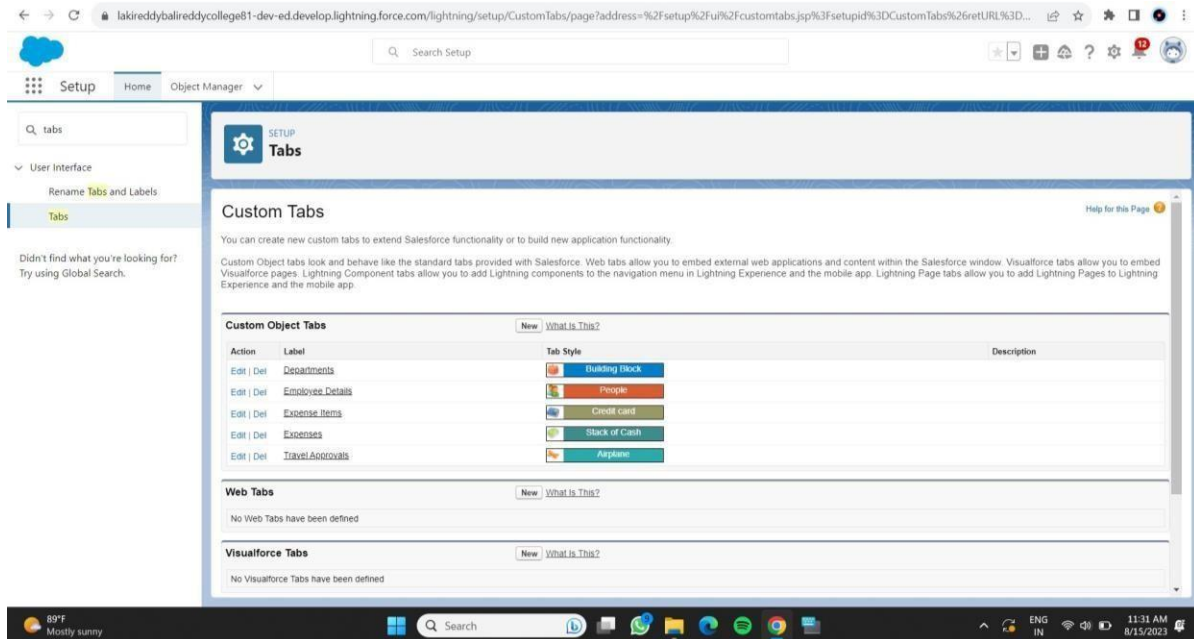
LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Travel Approval	Travel_Approval__c	Custom Object		15/08/2023	✓
Expense Item	Expense_Item__c	Custom Object		15/08/2023	✓
Expense	Expense__c	Custom Object		15/08/2023	✓
Employee Detail	Employee_Detail__c	Custom Object		15/08/2023	✓
Department	Department__c	Custom Object		15/08/2023	✓
Work Type Group Member	WorkTypeGroupMember	Standard Object			
Work Type Group	WorkTypeGroup	Standard Object			
Work Type	WorkType	Standard Object			
Work Step Template	WorkStepTemplate	Standard Object			
Work Step	WorkStep	Standard Object			
Work Plan Template Entry	WorkPlanTemplateEntry	Standard Object			
Work Plan Template	WorkPlanTemplate	Standard Object			

89°F Mostly sunny

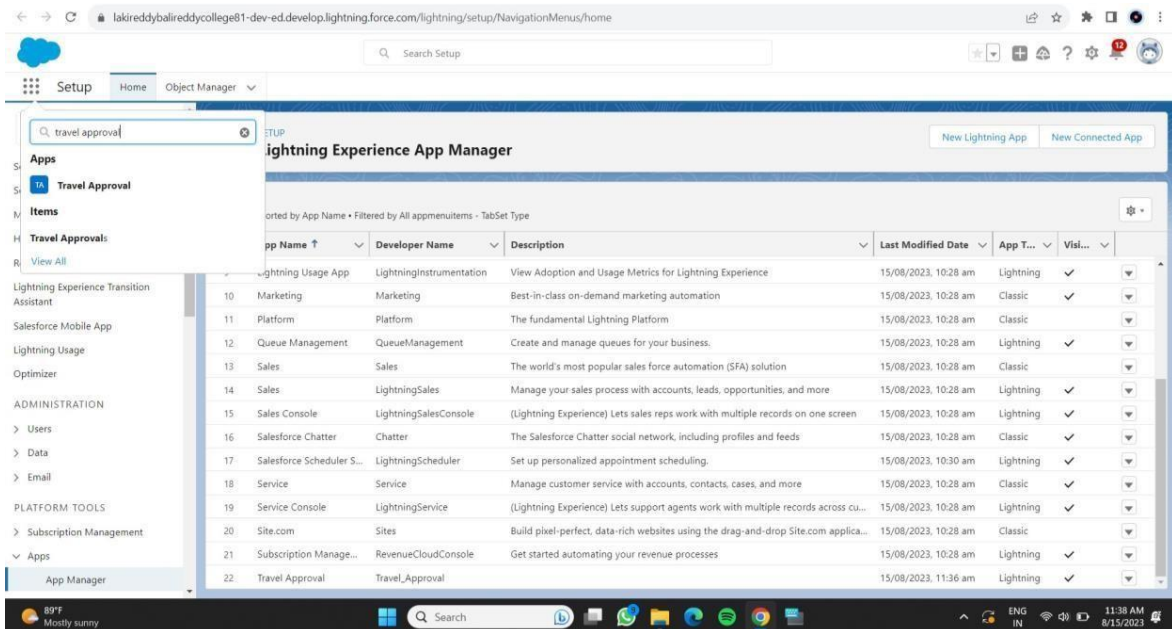
Search

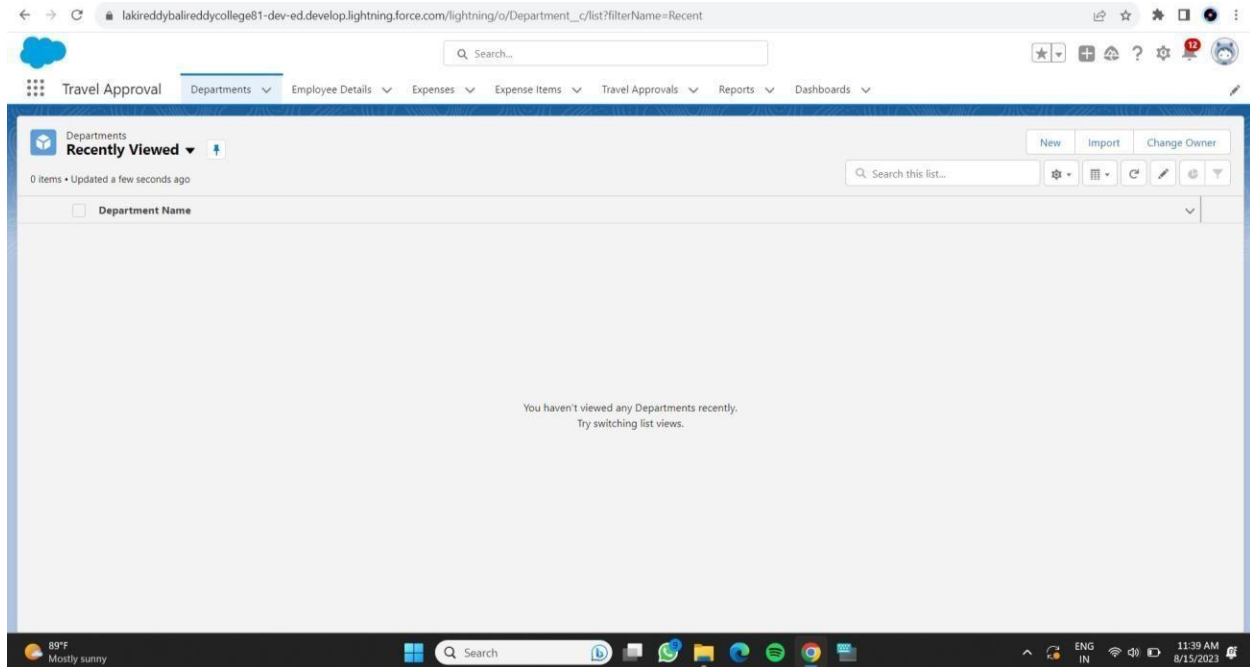
ENG IN 11:25 AM 8/15/2023

Creation of Custom Tabs



Creation of Travel Approval App (Lightning App)





Creation of Fields

Object Name	Field Name	Data Type
Department	Department Code	Text (Length - 5)
	District	Text (Length - 40)
	State	Text (Length - 40)
	School Website	URL
Employee Detail	Date of Birth	Date
	Gender	Picklist (Male, Female)
	Department	Lookup (Department)
Expense	Employee	Lookup (Employee Detail)
	Total Item	Rollup summary (Expense-Item)
Expense Item	Expense	Master Detail (Expense)
	Expense Type	Pick List (Values are - Transport, Hotel, Meal, Others)

	Amount	Currency
Travel Approval	Employee Name Department Destination State Purpose of Trip Trip Start Date Trip End Date Status	Lookup (Employee Detail) Lookup (Department) Text (Length – 40) Text (Length – 256) Date Date Picklist (Values are - Approved, Rejected)

The screenshot shows the Salesforce Setup interface for the 'Department' object. The 'Fields & Relationships' section is active, displaying a list of 8 fields sorted by label. The fields are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Department Code	Department_Code__c	Text(5)		
Department Name	Name	Text(80)		✓
District	District__c	Text(40)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
School website	School_website__c	URL(255)		
State	State__c	Text(40)		

The interface includes a left sidebar with navigation options like 'Details', 'Fields & Relationships', 'Page Layouts', etc. The top navigation bar shows 'Setup' and 'Object Manager'. The bottom status bar indicates the user is logged in as 'ENG IN' on 8/15/2023 at 11:46 AM.

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5fy/FieldsAndRelationships/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Employee Detail

Details

Fields & Relationships
8 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Date of Birth	Date_of_Birth__c	Date		
Department	Department__c	Lookup(Department)		✓
Employee Id	Employee_Id__c	Text(12)		
Employee Name	Name	Text(80)		✓
Gender	Gender__c	Picklist		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓

90°F Mostly sunny Search ENG IN 11:57 AM 8/15/2023

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5ka/FieldsAndRelationships/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Expense Item

Details

Fields & Relationships
6 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(18, 0)		
Created By	CreatedById	Lookup(User)		
Expense	Expense__c	Master-Detail(Expense)		✓
Expense Item Name	Name	Text(80)		✓
Expense Type	Expense_Type__c	Picklist		
Last Modified By	LastModifiedById	Lookup(User)		

92°F Sunny Search ENG IN 12:20 PM 8/15/2023

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5kQ/FieldsAndRelationships/view

Setup Home Object Manager

Expense

Details

Fields & Relationships 6 Items, Sorted by Field Label

Q Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Employee	Employee__c	Lookup(Employee Detail)		✓
Expense Number	Name	Auto Number		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User.Group)		✓
Total Item	Total_Item__c	Roll-Up Summary (SUM Expense Item)		

92°F Sunny 12:28 PM 8/15/2023

← → ↻ lakireddybalireddycollege81-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0115j000002a5kp/FieldsAndRelationships/view

Setup Home Object Manager

Travel Approval

Details

Fields & Relationships 11 Items, Sorted by Field Label

Q Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Department	Department__c	Lookup(Department)		✓
Destination state	Destination_state__c	Text(40)		
Employee Name	Employee_Name__c	Lookup(Employee Detail)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User.Group)		✓
Purpose of trip	Purpose_of_trip__c	Text(255)		
Status	Status__c	Picklist		
Travel Approval Name	Name	Text(80)		✓
Trip End date	Trip_End_date__c	Date		
Trip start date	Trip_start_date__c	Date		

92°F Sunny 1:05 PM 8/15/2023

Data Import

The screenshot shows the Salesforce Data Import Wizard in the 'Edit mapping' step. A progress bar at the top indicates the current step is 'Almost done'. The main content area contains a table for mapping CSV headers to Salesforce objects.

Edit	Mapped Salesforce Object	CSV Header	Example	Example	Example
Change	Department Name	Department Name	Audit Services	Contract Management	Division of Finance
Change	Department Code	Department Code	405-01	405-02	405-03

At the bottom right, there are buttons for 'Cancel', 'Previous', and 'Next'.

The screenshot shows the 'Review & Start Import' step of the Salesforce Data Import Wizard. The progress bar at the top shows the 'Start import' step is the final step. The main content area provides a summary of the import job.

Review & Start Import
Review your import information and click Start Import.

Your selections:

- Departments ✓
- Add new records ✓
- Departments.csv ✓

Your import will include:

Mapped fields: 2

Your import will not include:

Unmapped fields: 0

At the bottom right, there are buttons for 'Cancel', 'Previous', and 'Start Import'.

The screenshot shows the Salesforce Setup interface. The left sidebar has a search bar with "data import" and a list of integrations including "Data Import Wizard". The main content area is titled "Bulk Data Load Jobs" and shows details for a specific job: "Bulk Data Load Job: 7505j00000G7KeL". Below the title, it says "View the details of a bulk data load job." and provides a link to "Back to List: Bulk Data Load Jobs".

Bulk Data Load Job Detail			
Job ID	7505j00000G7KeL	Job Type	Bulk V1
Submitted By	Santosh Kanda	Operation	Insert
Start Time	15/08/2023, 2:41 pm IST	Queued Batches	0
End Time	15/08/2023, 2:41 pm IST	In Progress Batches	0
Time to Complete [hh:mm:ss]	00:00	Completed Batches	1
Object	Department	Failed Batches	0
External ID Field		Progress	100%
Content Type	CSV	Records Processed	16
Concurrency Mode	Parallel	Records Failed	16
API Version	58.0	Retries	0

On the right side of the table, there are summary statistics:

- Status: Closed
- Total Processing Time (ms): 65
- API Active Processing Time (ms): 4
- Apex Processing Time (ms): 0

Creation of User

The screenshot shows the Salesforce Setup interface for user management. The left sidebar has a search bar with "users" and a list of user management settings including "Users", "Permission Set Groups", "Permission Sets", "Profiles", "Public Groups", "Queues", "Roles", and "User Management Settings". The main content area is titled "Users" and shows details for a specific user: "User: Travel Approval manager".

Below the title, there are links for "Permission Set Assignments", "Activation Required", "Permission Set Group Assignments", "Permission Set License Assignments", "Personal Groups", "Public Group Membership", "Queue Membership", "Team", "Managers in the Role Hierarchy", "OAuth Apps", "Third-Party Account Links", "Installed Mobile Apps", "Authentication Settings for External Systems", "Login History", and "User Provisioning Accounts".

The "User Detail" section shows the following information:

- Name: Travel Approval manager
- Alias: tmana
- Email: santoshkanda022@gmail.com
- Username: tamanager@travetapp12.com
- Nickname: User16920912199908725079
- Title:
- Company:
- Department:
- Division:
- Address:
- Time Zone: (GMT+05:30) India Standard Time (Asia/Kolkata)
- Locale: English (India)
- Language: English
- Delegated Approver:
- Manager:
- Receive Approval Request Emails: Only if I am an approver
- Federation ID:
- Also Registration: One-Time Password

On the right side, there are settings for the user:

- Role: Salesforce
- User License: Standard User
- Profile: Standard User
- Active: ☒
- Marketing User: ☐
- Offline User: ☐
- Knowledge User: ☐
- Flow User: ☐
- Service Cloud User: ☐
- Site.com Contributor User: ☐
- Site.com Publisher User: ☐
- WDC User: ☐
- Mobile Push Registrations: View
- Data.com User Type: ☐
- Accessibility Mode (Classic Only): ☐
- Debug Mode: ☐
- High-Contrast Palette on Charts: ☐
- Load Lightning Pages While Scrolling: ☒

Customization of Travel Approval Object Page Layout

The screenshot shows the Salesforce Setup interface for customizing the Travel Approval object page layout. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts (selected), Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area displays the 'Layout Properties' dialog for the 'Travel Approval' object. It includes a 'Fields' list on the left and a 'Quick Find' search bar. The 'Fields' list contains items like Section, Blank Space, Destination state, Employee Name, Purpose of trip, Status, Trip start date, Created By, Last Modified By, Travel Approval Name, Department, and Owner. The 'Quick Find' search bar is set to 'Field Name'. The main area shows the layout structure with sections like 'Information (Header visible on edit only)', 'Trip info', 'System Information (Header visible on edit only)', and 'Custom Links (Header visible on edit only)'. Each section contains fields and their corresponding values, such as 'Travel Approval Name', 'Employee Name', 'Owner', 'Trip start date', 'Destination state', 'Purpose of trip', 'Status', 'Created By', and 'Last Modified By'. The bottom of the screen shows the Windows taskbar with the date and time as 3:10 PM on 8/15/2023.

Add Business Logic to Travel App

Creation of Validation Rule

The screenshot shows the Salesforce Setup interface for creating a validation rule for the Travel Approval object. The left sidebar contains a navigation menu with options like 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, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area displays the 'Travel Approval Validation Rule' page. It includes a 'Validation Rule Detail' section with fields for 'Rule Name', 'Error Condition Formula', 'Error Message', 'Description', 'Created By', and 'Modified By'. The 'Rule Name' is 'Date Validation', the 'Error Condition Formula' is 'Trip_End_date__c < Trip_start_date__c', the 'Error Message' is 'Trip end date must be the date greater than the Trip start date', the 'Description' is 'Trip end date must be the date greater than the Trip start date', the 'Created By' is 'Santosh Kanda', and the 'Modified By' is 'Santosh Kanda'. The 'Active' checkbox is checked. The bottom of the screen shows the Windows taskbar with the date and time as 3:21 PM on 8/15/2023.

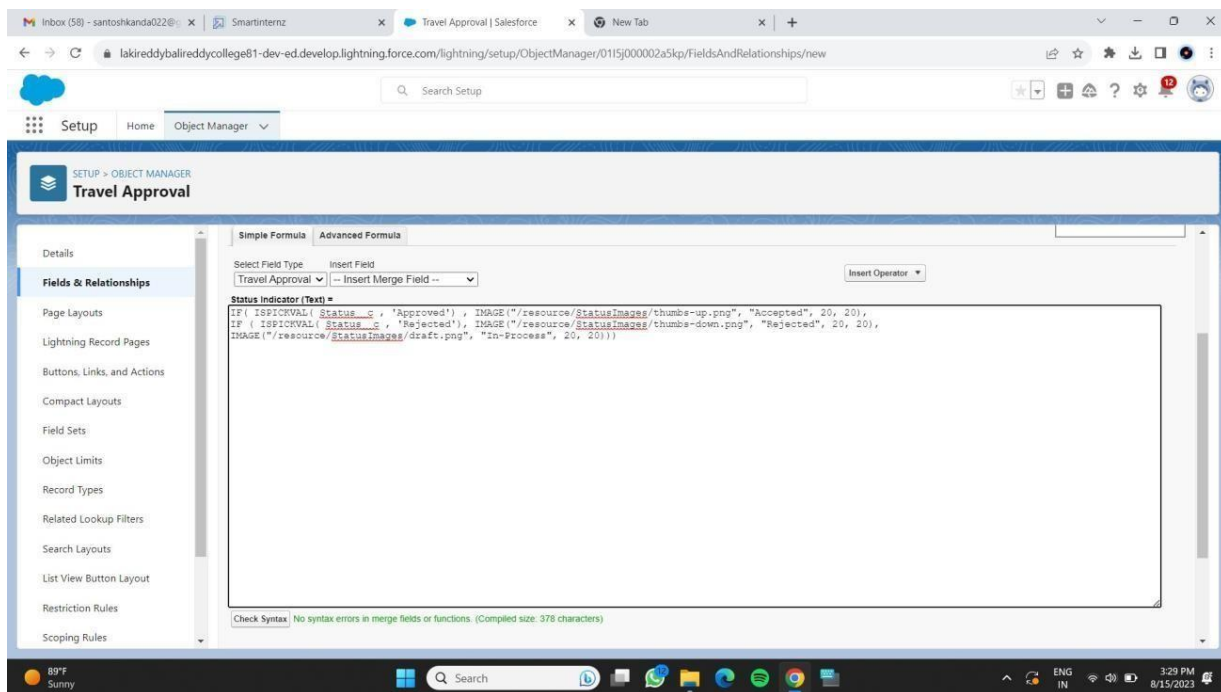
Creation of Formulae Fields

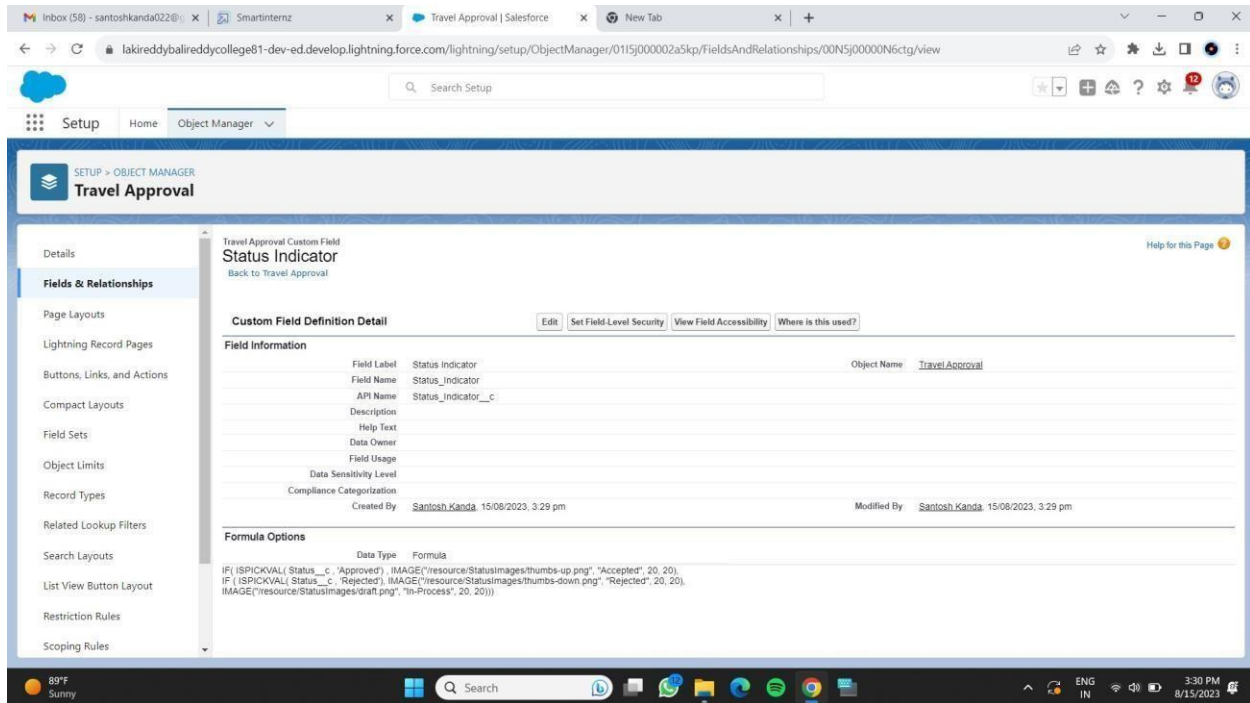
Formula: -

IF (ISPICKVAL (Status_c , 'Approved') , IMAGE("/resource/Status Images/thumbs-up.png",
"Accepted", 20, 20),

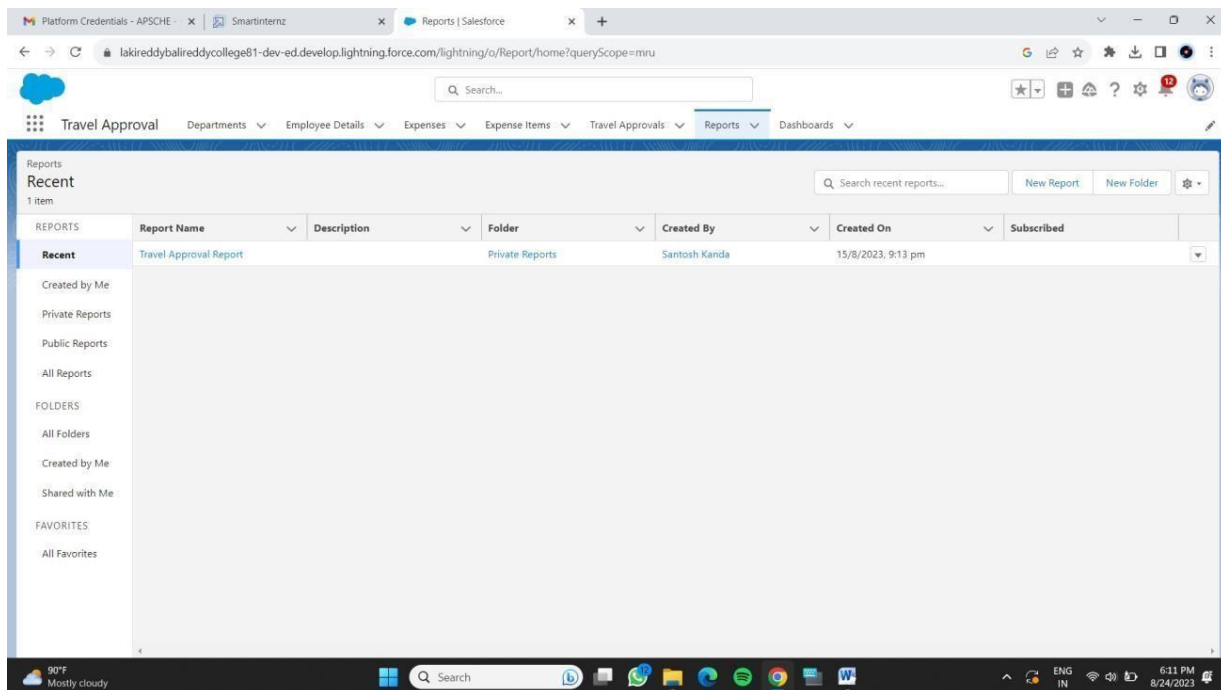
IF (ISPICKVAL(Status_c , 'Rejected'), IMAGE("/resource/Status Images/thumbs-down.png",
"Rejected", 20, 20),

IMAGE("/resource/Status Images/draft.png", "In-Process", 20, 20)))

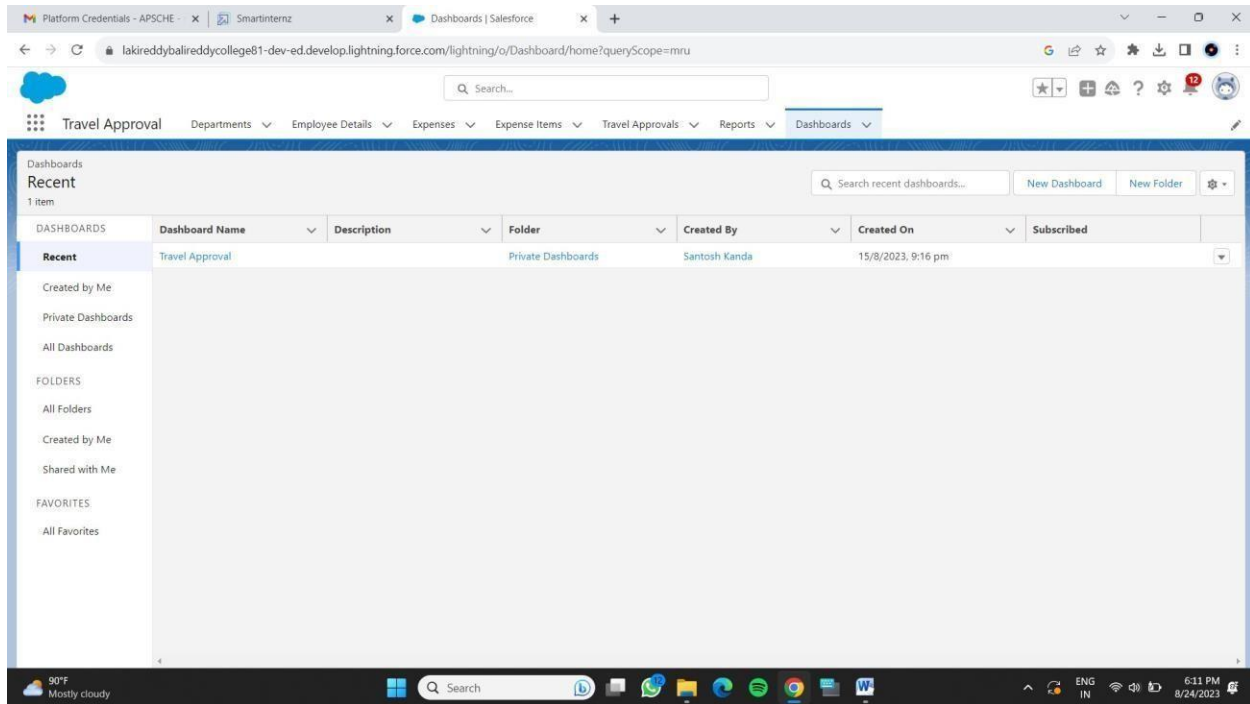




Creation of Report



Creation of Dashboard



ADVANTAGES

- The process is tedious and time-consuming task.
- Easiest way.
- Saves time for both employees and managers.
- Reduces the workload.
- The entire process is digitized and streamlined.
- Increased Transparency.
- Provides greater control and security over employee travel.

DISADVANTAGES

- The process includes too many levels of approval that makes confusing.
- Regular Maintenance.
- Internet Connection problem is there.
- Poor Connection leads to trouble and anxiety.
- Lack of leadership.
- It can be costly sometimes.
- Poor communication.

APPLICATIONS

The application ensures that travel requests comply with the company's travel policies which reduces the risk of non-complaint expenses and unnecessary travel. The application helps reduce travel costs by allowing the company to track expenses and stay within budget. This also helps the company negotiate better deals with travel vendors. The application saves time for both the employee and the travel manager by automating the travel request and approval process. This allows the HR department and travel managers to focus on more strategic tasks.

CONCLUSION

In this project, we built an Employee Travel Approval Application. An Employee Travel Approval Application is a valuable tool for corporate travel management. It streamlines the travel request and approval process, ensures policy compliance and provides transparency to all parties involved. A well-designed application can save time and money, making it an essential tool for corporate that frequently travel for business.

FUTURE SCOPE

- In future it will be really a useful one in the application of travel approval.
- It is trusted to be in future everyone will utilize this.
- The customer will set good service and make it trustworthy.
- Hope it would fulfil all the needs of the users.