

# Build An Employee Travel Approval Application For Corporates (Admin)

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.

## What you'll learn

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

## Milestone 1- Create Salesforce Org

### Introduction

Are you new to Salesforce? Not sure exactly what it is, or how to use it? Don't know where you should start on your learning journey? If you've answered yes to any of these questions, then you're in the right place. This module is for you.

Welcome to Salesforce! Salesforce is game-changing technology, with a host of productivity-boosting features, that will help you sell

smarter and faster. As you work toward your badge for this module, we'll take you through these features and answer the question, "What is Salesforce, anyway?"

## What Is Salesforce?

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

Salesforce has everything you need to run your business from anywhere. Using standard products and features, you can manage relationships with prospects and customers, collaborate and engage with employees and partners, and store your data securely in the cloud.

So what does that really mean? Well, before Salesforce, your contacts, emails, follow-up tasks, and prospective deals might have been organized something like this:

<https://youtu.be/r9EX3lGde5k>

## Creating Developer Org

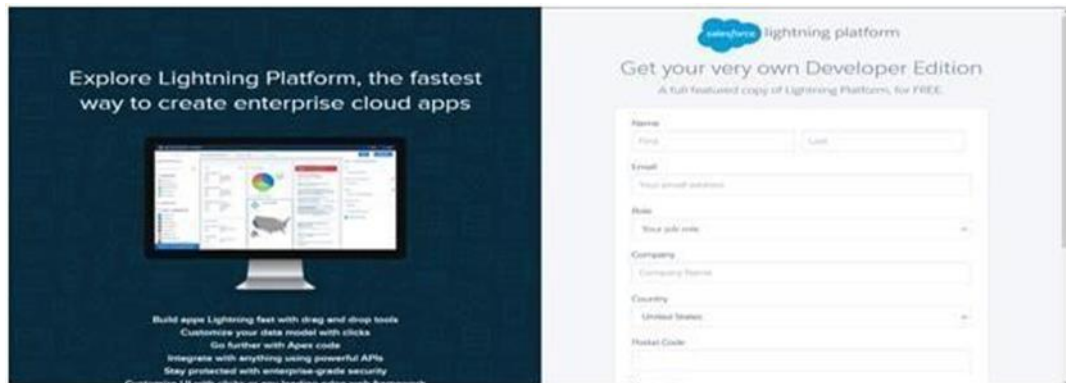
### **Creating a developer org in salesforce.**

1. Go to [developers.salesforce.com/](https://developers.salesforce.com/)
2. Click on sign up.
3. On the sign-up form, enter the following details:
  1. First name & Last name
  2. Email
  3. Role: Developer
  4. Company: College Name

5. County: India
6. Postal Code: pin code
7. Username: should be a combination of your name and company

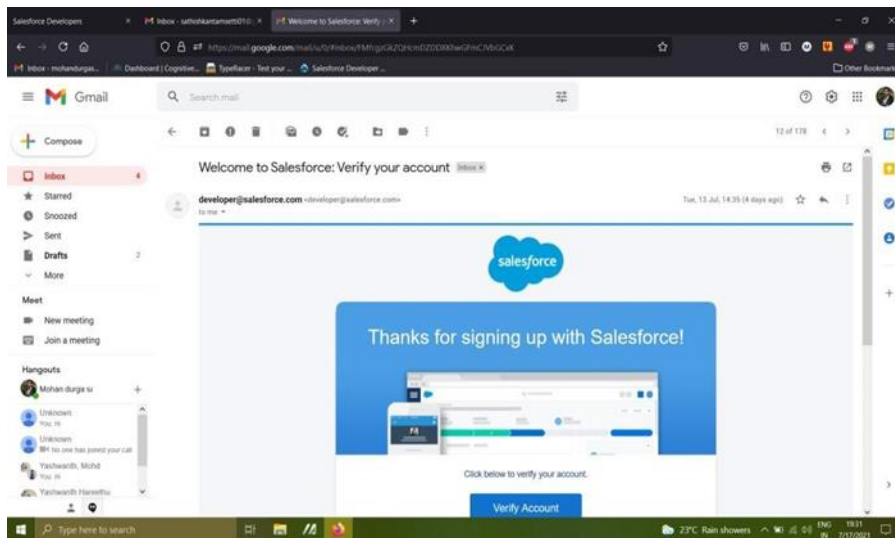
This need not be an actual email id, you can give anything in the format:  
username@organization.com

Click on sign up after filling these.



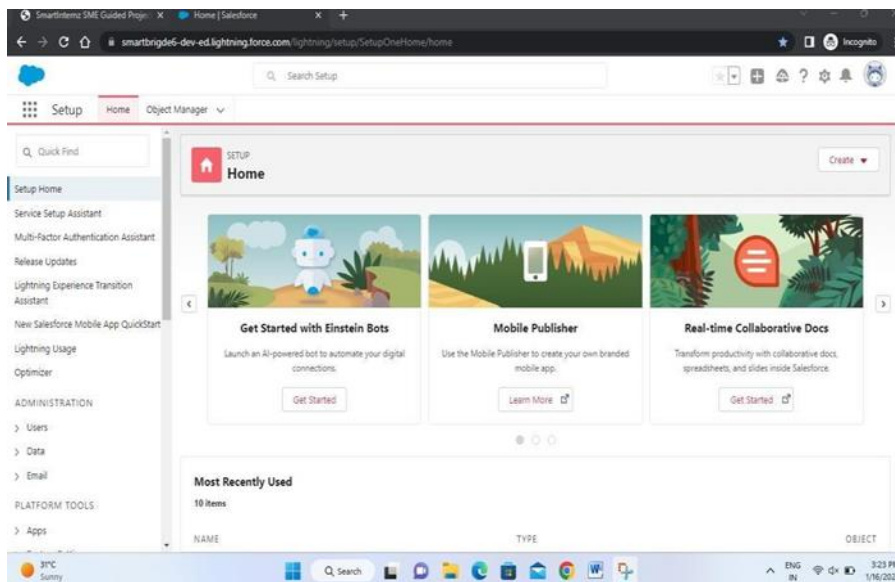
## Account Activation

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



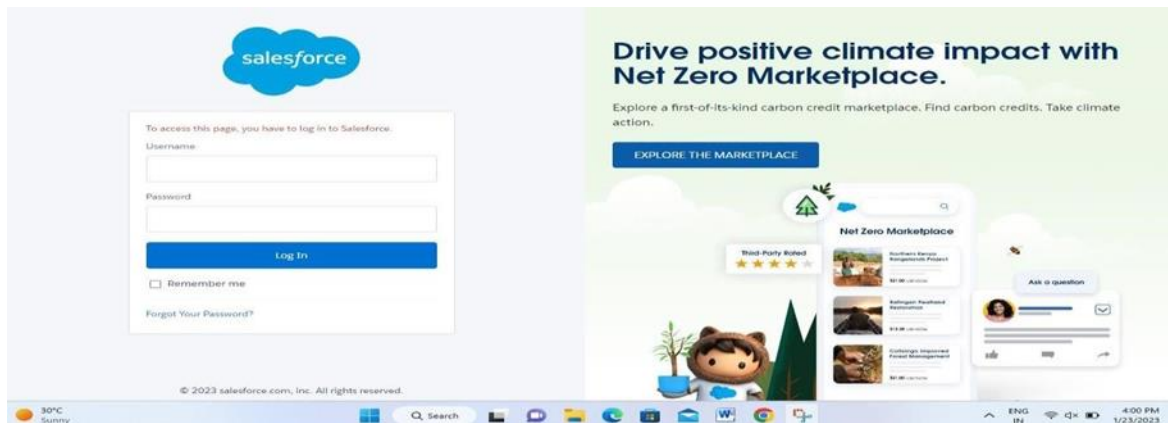
## Login To Your Salesforce Account

1. Go to [salesforce.com](https://login.salesforce.com) and click on login.
2. Enter the username and password that you just created.
3. After login this is the home page which you will see.



## Salesforce Login

<https://login.salesforce.com>



## • Object In Salesforce

- 
- Salesforce objects are database tables that permit you to store data that is specific to an organization. Salesforce objects are of two types:  
Standard  
Objects:  
Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts,

reports,  
dashboards, etc.  
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.

# . Object In Salesforce

- Salesforce objects are database tables that permit you to store data that is specific to an organization. Salesforce objects are of two types:  
Standard Objects:  
Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc. 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.

## . Creation Of Department Object For



# Travel Approval App

- 
- For this Travel Approval we need to create 5 objects **Depart  
ment,  
Employee  
Detail,  
Expense,  
Expense  
Items, and Trav  
el Approval.**  
The below steps  
will assist you in  
creating those  
objects.

Create  
Department  
Object:

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:  
Department

6. Plural  
Label: *Departm  
ents*

7. Record  
Name: *Departm  
ent Name*

8. Check the  
Allow Reports  
checkbox

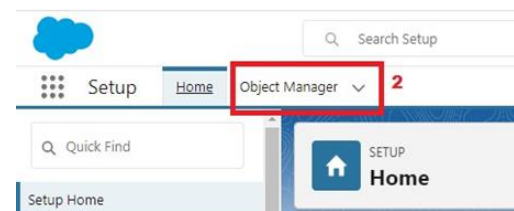
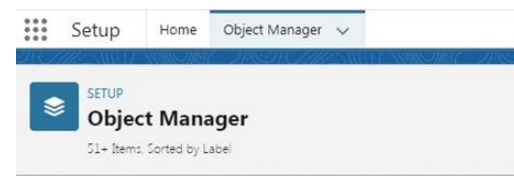
9. Check the  
Allow Search  
checkbox

10. Click Save.

In the same way  
create 4 more  
objects **Employ  
ee Detail,  
Expense,  
Expense Items,**  
and **Travel**

## Approval

- **Note –**
  1. While making Expense Object select data type “Auto Number” in “Enter Record Name Label and Format” section.
  2. While making Employee Detail Object put “Employee Name” in “Enter Record Name Label and Format” section.



The singular and plural labels are used in tabs, page layouts, and reports.

5 Label  Example:

6 Plural Label  Example:

Starts with vowel sound ☐

The Object Name is used when referencing the object via the API.

Object Name  Example:

Description

Context-Sensitive Help Setting ☒ Open the standard Salesforce.com Help & T   
 ☐ Open a window using a Visualforce page

Content Name

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. The Record Name field is always called "Name" when referenced via the API.

7 Record Name  Example:

Optional Features

☒ Allow Reports 8

☐ Allow Activities

☐ Track Field History

☐ Allow in Chatter Groups

☐ Enable Licensing [i](#)

Search Status

When this setting is enabled, your users can find records of this object type when they search.

☒ Allow Search 9

Object Creation Options (Available only when custom object is first created)

☐ Add Notes and Attachments related list to default page layout

☐ Launch New Custom Tab Wizard after saving this custom object

10

## • What Is A Tab?

- Tabs in Salesforce help users view the information at a glance. 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 displays data related to custom objects.

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

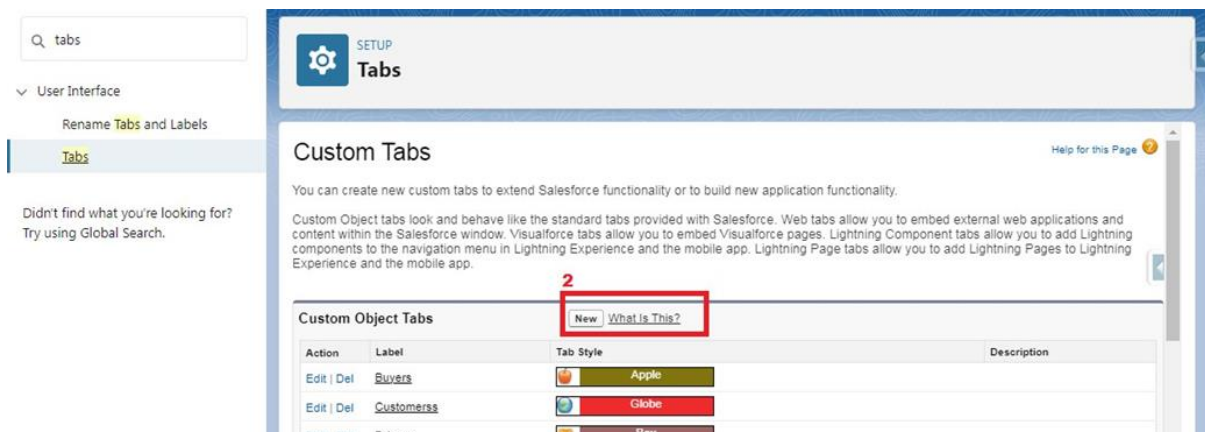
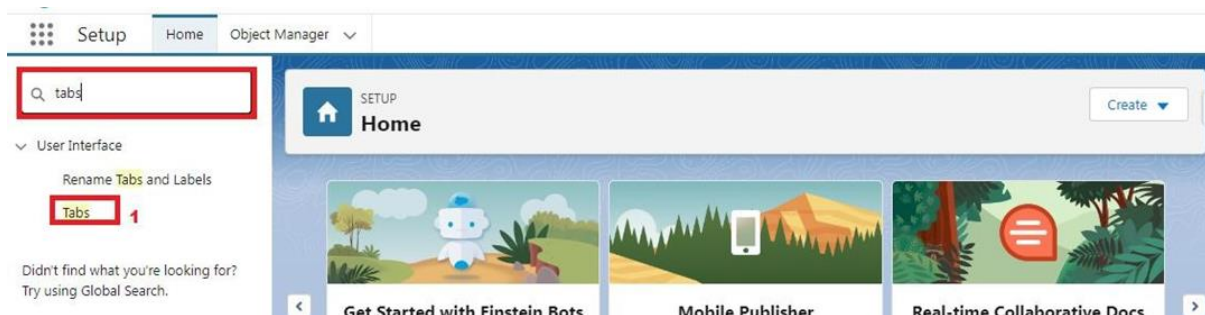
(D) Visualforce Tabs: Visualforce Tabs display data from a

- Visualforce Page.

# Custom Tab Creationcustom Tab Creation

**Now create a custom tab. Click the Home tab.**

1. Enter Tabs in Quick Find and select Tabs.
2. Under Custom Object Tabs, click New.
3. For Object, select Department.
4. For Tab Style, select any icon.
5. Leave all defaults as is. Click Next, Next, and Save
6. In the same way create Tabs for all Custom Objects - Employee Detail, Expense, Expense Items, Travel Approval.



Step 1. Enter the Details Step 1 of 3

Choose the custom object for this new custom tab. Fill in other details.

Select an existing custom object or create a new custom object now.

Object --None--

Tab Style

## Lightning App

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

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.

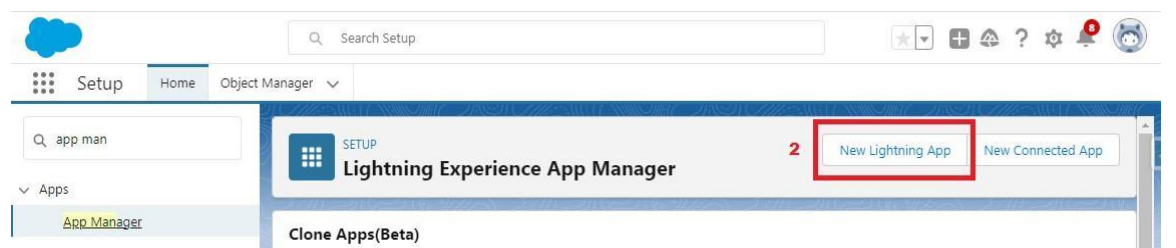
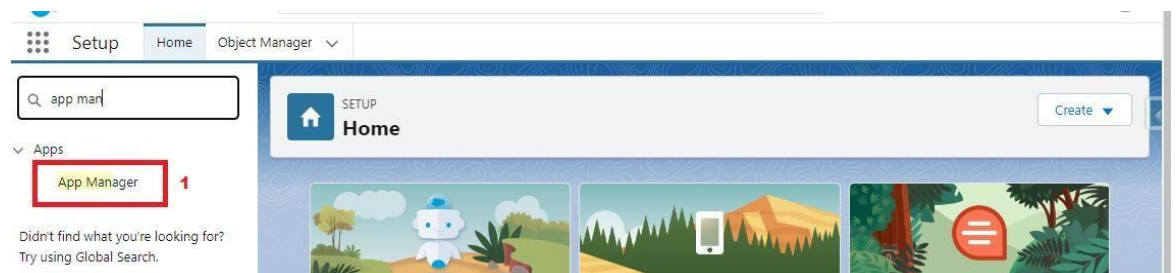
Note: The description, Logo, and Label of the standard app cannot be altered.

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.

Note: Logos for Custom Apps can be changed.

# Create the Travel Approval app

1. From Setup, enter App Manager in the Quick Find and select App Manager.
2. Click New Lightning App.
3. Enter **Travel Approval** as the App Name, then click Next
4. Under App Options, leave the default selections and click Next.
5. Under Utility Items, leave as is and click Next.
6. From Available Items, select **Department, Employee Detail, Expense, Expense Items, Travel Approval, Reports, and Dashboards** and move them to **Selected Items**. Click Next.
7. From Available Profiles, select **System Administrator** and move it to **Selected Profiles**. Click Save & Finish.





## App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

**3**

App Details

\* App Name ⓘ  
Travel Approval

\* Developer Name ⓘ  
Travel\_Approval\_

App Branding

Image ⓘ  

Upload

Primary Color Hex Value ⓘ  

■

#0070D2

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

**6**

Available Items

↺ Create ▼

DAS

Dashboards

Selected Items

Departments

Employee Details

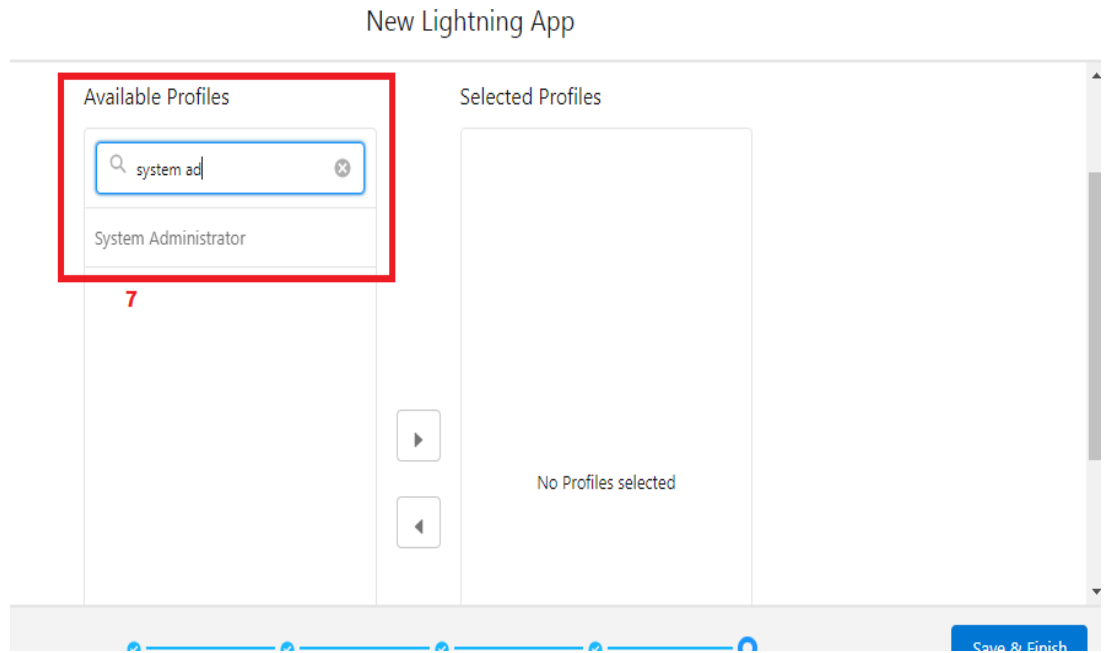
Expenses

Expense Items

Reports

▶

click here to add items



To verify your changes, click the App Launcher, type Travel Approval and select the Travel Approval app.

Note:

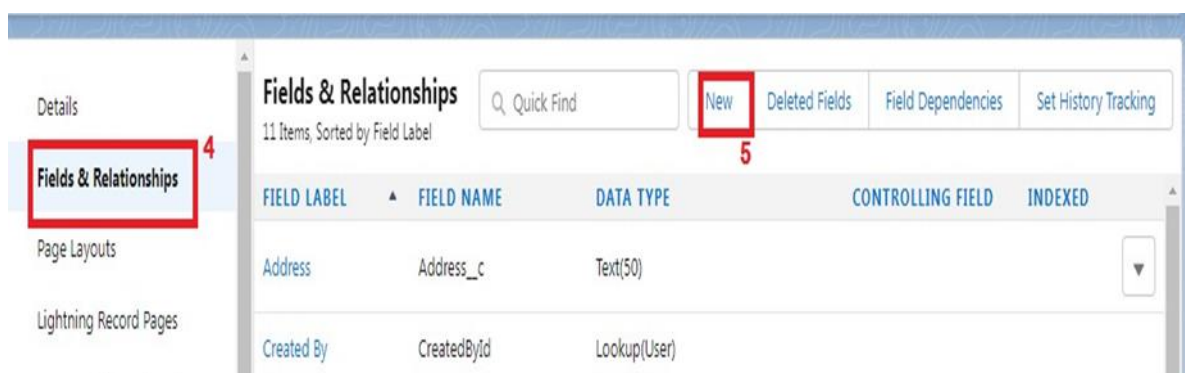
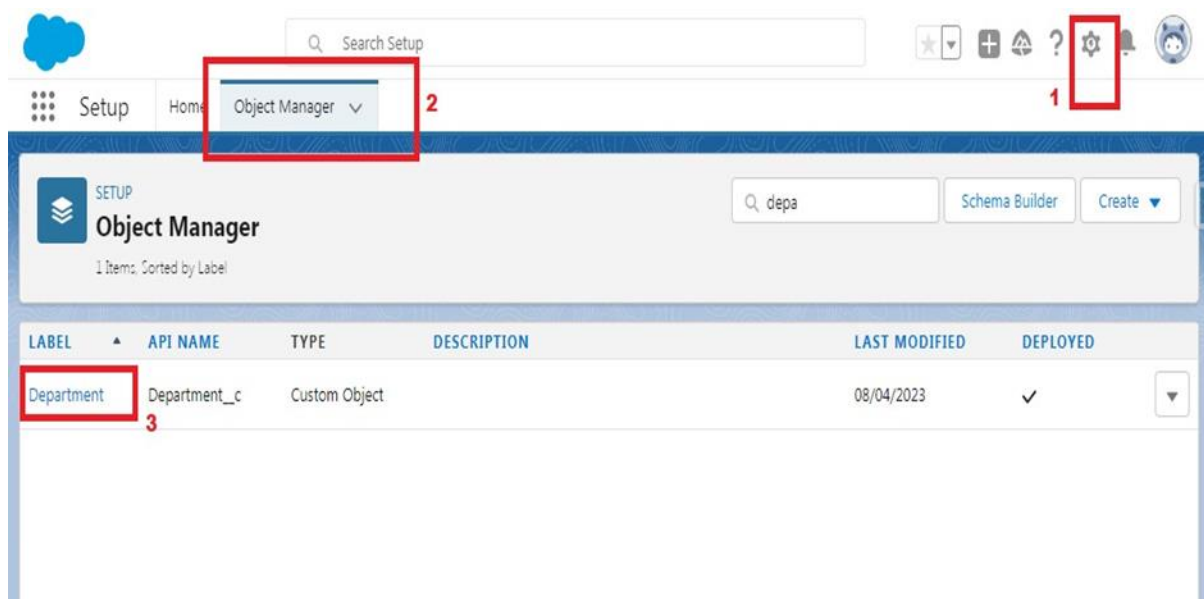
App Launcher-Displays available apps.

App Name-Displays the current selected app.

## Creation Of Fields For The Department Object:

1. Click the gear icon and select Setup. This launches Setup in a new tab.
2. Click the Object Manager tab next to Home.
3. Select Department
4. Select Fields & Relationships from the left navigation
5. Click New

6. Select the Text as the Data Type, click Next.
7. For Field Label, enter Department Code and enter 5 in Length.
8. Click Next, Next, then Save & New.
9. Follow above steps and create two more Text type field - District & State.
10. Also, Provide Length 40 for both District and State field.
11. Create URL type field & give "School website" as the field label.



Field Properties dialog box showing the selection of the 'Text' data type. The 'Text' option is highlighted with a red box and a red number 6. The list of options includes Number, Percent, Phone, Picklist, Picklist (Multi-Select), Text, Text Area, Text Area (Long), Text Area (Rich), Text (Encrypted), Time, and URL. Each option has a corresponding description of its functionality.

Step 2. Enter the details dialog box. The 'Field Label' field is highlighted with a red box and a red number 7. The 'Field Label' is 'Department Code', 'Length' is '5', 'Field Name' is 'Department\_Code', and 'Description' is empty. The 'Help Text' field is also empty.

Now let's create the other fields and we must choose the data types of the fields carefully.  
Let's have a look at it.

These are fields and their data types we need to create and make one by one –

NOTE- See activity 2, 3, 4 below to create a lookup field, Roll-up summary field & Picklist field

Object Name	Field Name	Data Type
1. Employee Detail-	Date of Birth	Date
	Gender	Picklist (Male, Female)

(Department)	Department	Lookup
	(See activity 2 to create lookup)	
	Employee Id	Text (Length - 12)
2. Expense- Detail)	Employee	Lookup (Employee
	Total Item	Rollup summary
(Expense Item)		
3. Expense Item -	Expense	Master Detail (Expense)
	Expense Type	Pick List (Values are-
Transport, Hotel, Meal, Others)		
	Amount	Currency
4. Travel Approval-	Employee Name	Lookup (Employee
	Detail)	
	Department	Lookup (Department)
	Destination state	Text (Length – 40)
	Purpose of trip	Text (Length – 256)
	Trip start date	Date
	Trip End date	Date
	Status	Picklist (Values are-
	Approved, Rejected)	

NOTE- Make Trip Start Date and Trip End Date field required when making these field

# Lookup Relationship With Department

Let's create a Lookup relationship with Department object on Employee Detail object Follow steps 1 to 5 of field creation then follow below steps.

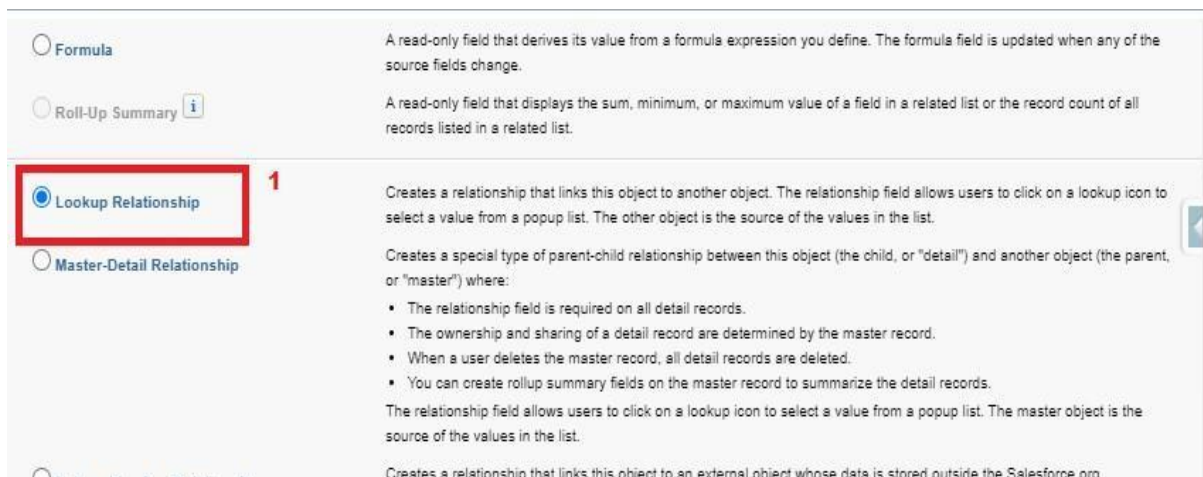
Select look up Relationship as the Data Type and click Next.

For Related to, enter Department.


Click Next.

For Field Label, enter Department.

Click Next, Next, Next and Save.



The screenshot displays the Salesforce field creation interface. On the left, there are four radio button options: 'Formula', 'Roll-Up Summary', 'Lookup Relationship', and 'Master-Detail Relationship'. The 'Lookup Relationship' option is selected and highlighted with a red rectangular box. A red number '1' is positioned to the right of this box. To the right of the options, there are descriptive text blocks for each type. The 'Lookup Relationship' description states: 'Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.' Below this, there is a section for 'Master-Detail Relationship' which includes a list of characteristics: 'The relationship field is required on all detail records.', 'The ownership and sharing of a detail record are determined by the master record.', 'When a user deletes the master record, all detail records are deleted.', and 'You can create rollup summary fields on the master record to summarize the detail records.'

<input type="radio"/> Formula	A read-only field that derives its value from a formula expression you define. The formula field is updated when any of the source fields change.
<input type="radio"/> Roll-Up Summary 	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.
<input checked="" type="radio"/> Lookup Relationship <span style="border: 2px solid red; padding: 2px;">1</span>	Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.
<input type="radio"/> Master-Detail Relationship	Creates a special type of parent-child relationship between this object (the child, or "detail") and another object (the parent, or "master") where: <ul style="list-style-type: none"><li>• The relationship field is required on all detail records.</li><li>• The ownership and sharing of a detail record are determined by the master record.</li><li>• When a user deletes the master record, all detail records are deleted.</li><li>• You can create rollup summary fields on the master record to summarize the detail records.</li></ul> The relationship field allows users to click on a lookup icon to select a value from a popup list. The master object is the source of the values in the list.
<input type="radio"/> External Relationship	Creates a relationship that links this object to an external object whose data is stored outside the Salesforce org.

**Step 2. Choose the related object** Step 2

Previous Next Cancel

Select the other object to which this object is related. 2

Related To Department ▼

Previous Next Cancel

**Step 3. Enter the label and name for the lookup field** Step 3 of 6

Previous Next Cancel

4

Field Label Department ⓘ

Field Name Department ⓘ

Description

Help Text  ⓘ

Employee Detail Help for this Page ?

**New Relationship**

**Step 6. Add custom related lists** Step 6 of 6

Previous Save & New Save Cancel

5

Field Label	Department
Data Type	Lookup
Field Name	Department
Description	

Specify the title that the related list will have in all of the layouts associated with the parent.


Related List Label Employee Details

**Let's create a master-detail relationship on Expense Item object**  
**Follow steps 1 to 5 of field creation then follow below steps.**  
**Select Master-Detail Relationship as the Data Type and click**  
**Next.**  
**For Related to, enter Expense.**  
**Click Next.**  
**For Field Label, enter Expense.**

**Click Next, Next, Next and Save.**

☐ Formula

source fields change.

☐ Roll-Up Summary 

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.

☐ Lookup Relationship

Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.


☒ Master-Detail Relationship

Creates a special type of parent-child relationship between this object (the child, or "detail") and another object (the parent, or "master") where:

- The relationship field is required on all detail records.
- The ownership and sharing of a detail record are determined by the master record.
- When a user deletes the master record, all detail records are deleted.
- You can create rollup summary fields on the master record to summarize the detail records.

The relationship field allows users to click on a lookup icon to select a value from a popup list. The master object is the source of the values in the list.

SETUP > OBJECT MANAGER

 Expense Item

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

Expense Item

New Relationship

Help for this Page 

Step 2. Choose the related object

Step 2 of 6

Previous Next Cancel

Select the other object to which this object is related.

Related To: Event

Previous Next Cancel



# Roll Up Summary Fields On Expense Object

**Let's create Roll-up summary fields on Expense Object to calculate the expense**

1. Click the gear icon Select Setup, This launches Setup in a new tab.
2. click Object Manager
3. Select Expense.
4. Click Fields & Relationships
5. Click New.

**Select the Roll-up summary field as the data type  
Enter the field label as Total Expense**

**Click Next**

**Then select the master object summarized as Expense items**

**Select Sum as roll-up and Field to aggregate Amount then click  
Next, Next and save.**

Cloud logo

Search Setup

Setup Home Object Manager 2

1

Object Manager

2 Items, Sorted by Label

Search expense Schema Builder Create

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Expense 3	Expense_c	Custom Object		08/04/2023	✓
Expense Item	Expense_Item_c	Custom Object		08/04/2023	✓

Details

Fields & Relationships 4

Page Layouts

Lightning Record Pages

Fields & Relationships

11 Items, Sorted by Field Label

Quick Find New 5 Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address_c	Text(50)		
Created By	CreatedById	Lookup(User)		

Data Type

☐ None Selected Select one of the data types below.

☐ Auto Number A system-generated sequence number that uses a display format you define. The number is automatically incremented for each new record.

☐ Formula 6 A read-only field that derives its value from a formula expression you define. The formula field is updated when any of the source fields change.

☒ Roll-Up Summary 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.

☐ Lookup Relationship Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.

☐ Master-Detail Relationship Creates a special type of parent-child relationship between this object (the child, or "detail") and another object (the parent, or "master") where:

- The relationship field is required on all detail records.
- The ownership and sharing of a detail record are determined by the master record.
- When a user deletes the master record, all detail records are deleted.
- You can create rollup summary fields on the master record to summarize the detail records.

The relationship field allows users to click on a lookup icon to select a value from a popup list. The master object is the source of the values in the list.

☐ External Lookup Relationship Creates a relationship that links this object to an external object whose data is stored outside the Salesforce org.

Step 2. Enter the details Step 2 of 5

Previous Next Cancel

7

Field Label  [i](#)

Field Name  [i](#)

Description

Help Text  [i](#)

Auto add to custom report type ☒ Add this field to existing custom report types that contain this entity [i](#)

Select Object to Summarize ! = Required Information

Master Object Expense

Summarized Object  [i](#)

9

Select Roll-Up Type

10

☐ COUNT

☒ SUM

☐ MIN

☐ MAX

Field to Aggregate

Filter Criteria

☒ All records should be included in the calculation

☐ Only records meeting certain criteria should be included in the calculation

Previous Next Cancel

## Pick List Field

### Let's create a Pick-List field:

- 1) From Setup, click Object Manager and select Expense Item.
- 2) Click Fields & Relationships, then New.
- 3) Select Picklist as the Data Type and click Next.
- 4) For Field Label enter Expense Type

5) Select Enter values, with each value separated by a new line, and enter these values:

- Hotel
- Meal
- others

Click Next, Next, then Save & New

Search Setup

Setup Home Object Manager 1b

1a

SETUP Object Manager  
2 Items, Sorted by Label

exp Schema Builder Create

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Expense	Expense__c	Custom Object		08/04/2023	✓
Expense Item	Expense_Item__c	Custom Object		08/04/2023	✓

1c

SETUP > OBJECT MANAGER  
Expense Item

Details 2a

Fields & Relationships

6 Items, Sorted by Field Label

Quick Find New 2b Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(10, 8)		
Created By	CreatedById	Lookup(User)		

**Fields & Relationships**

- ☐ Date/Time
- ☐ Email
- ☐ Geolocation
- ☐ Number
- ☐ Percent
- ☐ Phone
- ☒ **Picklist** **3**
- ☐ Picklist (Multi-Select)
- ☐ Text

**Expense Item**

**Step 2. Enter the details**

Field Label: **Expense Type** **4**

Values: ☐ Use global picklist value set ☒ **Enter values, with each value separated by a new line** **5**

**Transport**  
**Hotel**  
**Meal**  
**others** **6,7,8,9**

☐ Display values alphabetically, not in the order entered  
☐ Use first value as default value  
☒ **Restrict picklist to the values defined in the value set**

Field Name: **EX**

Description:

**Next** **10**

## Import Departments

**NOTE-** Before creating the application download this zip file from URL given below

<https://developer.salesforce.com/files/TravelAppWorkshopFiles.zip>

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)

#### 1.CSV file Name- Department\_CSV

	A	B
1	Department Name	Department code
2	Office of Communications and Media	O001
3	Disability Determination Bureau	D001
4	Division of Disability and Rehabilitative Services	D002
5	Technology	T001

# 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.

## creating A User In Salesforce

1.From Setup, in the Quick Find box, enter Users.

**2.Select Users.**

**3.Click New User.**

**4.Enter the First Name Travel Approval and Last Name manager and (Your) email** address and a unique username in the form of an email address. By default, the username is the same as the email address.

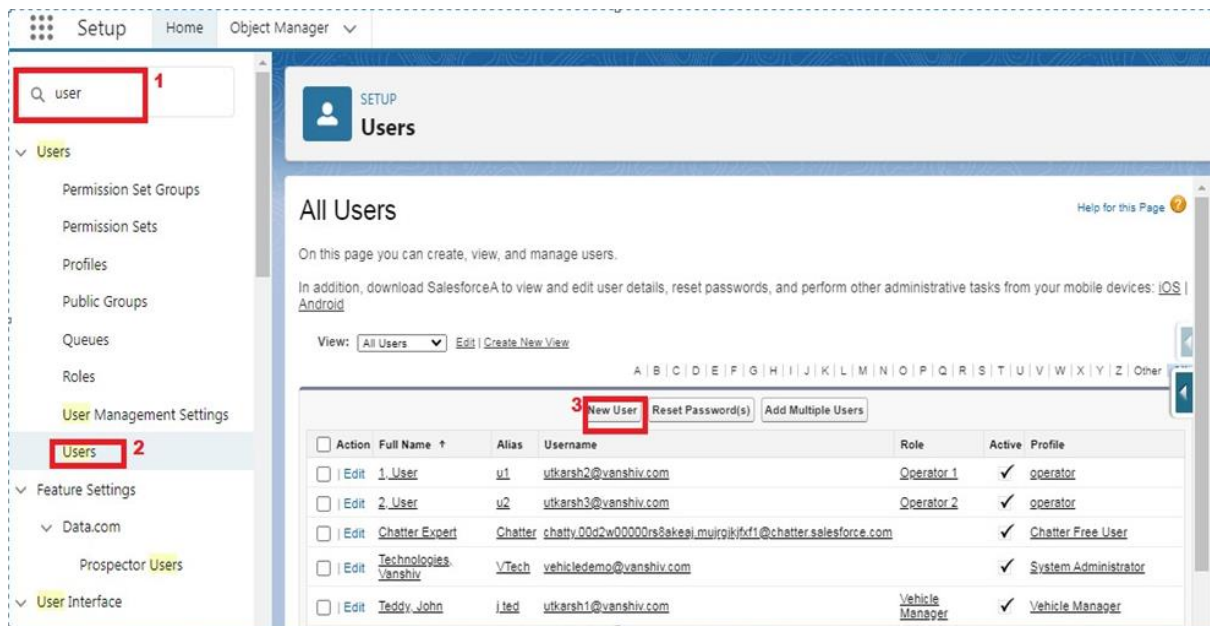
5.Select a User License as Salesforce.

**NOTE-** *In the Developer edition Salesforce license can only be used by 2 Users at a time in Dev Org, If you don't find Salesforce*

*license then deactivate a user who has Salesforce license Or change the license type from Salesforce to any other.*

6.Select a profile as Standard user.

7.Check Generate new password and notify the user immediately to have the user's login name and a temporary password emailed to your email.



User Edit

Save Save & New Cancel

General Information

I = Required Information

First Name Travel Approval

Last Name manager

Alias tmana

Email [REDACTED]

Username [REDACTED]

Nickname [REDACTED]

Title

Company

Department

Role <None Specified>

User License Salesforce

Profile Standard User

Active ☒

Marketing User ☐

Offline User ☐

Knowledge User ☐

Flow User ☐

Service Cloud ☐

## 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.

## Add Business Logic To Travel App



**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.

## Create Validation Rule

Search for the travel approval object from the object manager and open the object.

1)Click on validation rules and click new on the left corner

2)Give your rule name Date \_Validation and make sure that the rule is set to active.

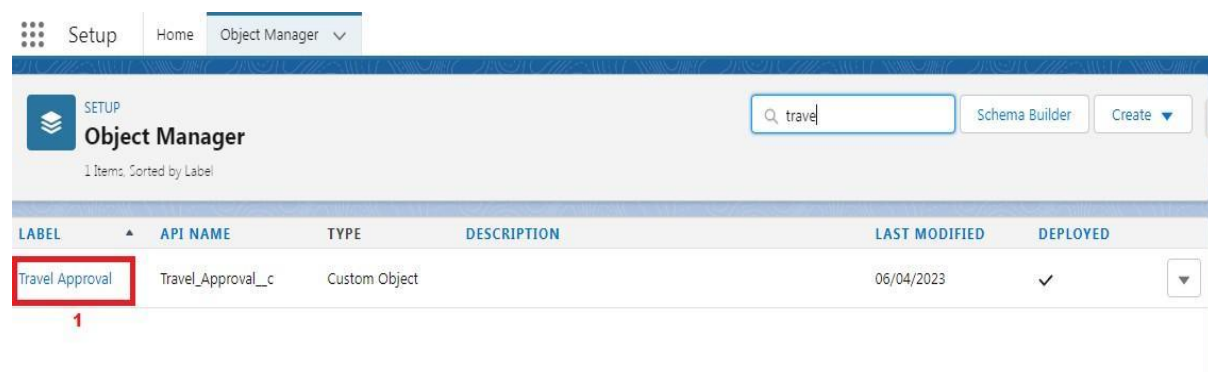
3)In the error condition formula enter  $\text{Trip\_End\_Date} < \text{Trip\_Start\_Date}$

NOTE- Make sure that there is no syntax error after you input this error condition

Give the Error message – “Trip end date must be the date greater than the Trip start date” &

For error location select the field and pick the Trip end date as the location for error.

Click save



SETUP > OBJECT MANAGER

Travel Approval

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Triggers

Flow Triggers

Validation 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

SETUP > OBJECT MANAGER

Travel Approval

ils

s & Relationships

Layouts

ning Record Pages

ns, Links, and Actions

pact Layouts

Sets

ct Limits

rd Types

ed Lookup Filters

th Layouts

low Button Layout

Validation Rule Edit

SaveSave & NewCancel

Rule Name

Date\_Validation

Active

✓

Description

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

Insert Field

Insert Operator

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

Functions

-- All Function Categories --

ABS

ACOS

ADDMONTHS

AND

ASCII

ASIN

Insert Selected Function

ABS(number)

Returns the absolute value of a number, a number without its sign

Help on this function

Check Syntax

No errors found

**Error Message**

Example:

This message will appear when Error Condition formula is true 5

Error Message

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  [i](#)

6

## Create Formulae Fields

### Create Formula Fields

- 1)First, we need to upload a zip file to your Salesforce environment that contains all the images we use. You should have 2)a file titled StatusImages.zip.
- 3)Click the setup
- 4)Click Static Resources in Quick Find & Click New.
- 5)Enter the following values for your static resource

Parameter	Value
Name	StatusImages
File	StatusImages.zip
Cache-Control	Private

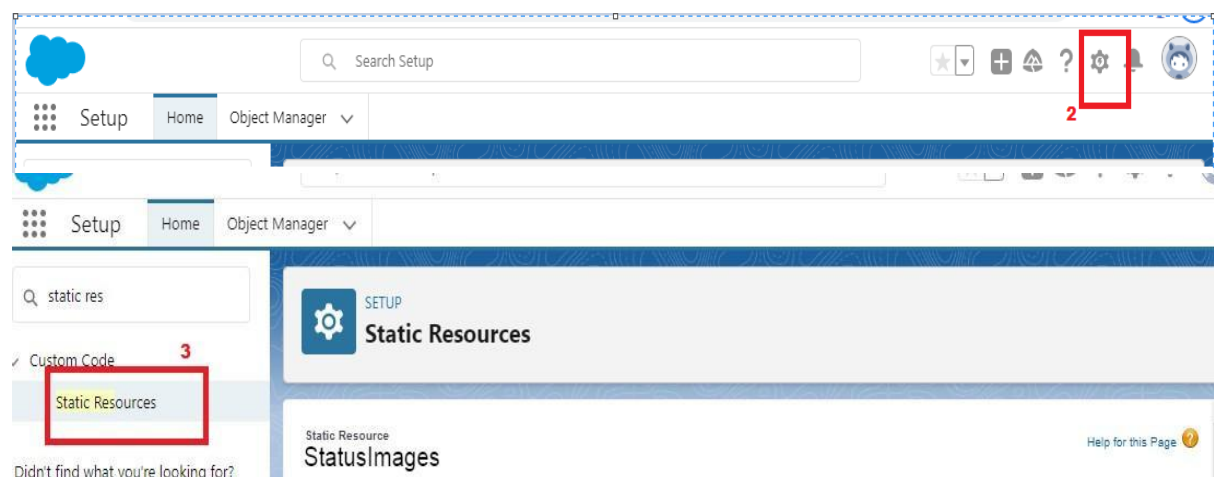
Now select the travel approval object.  
 Select Fields & Relationships, Click New  
 Select Formula data type, and Click Next.  
 Enter the following values:  
 Field Label: Status Indicator ☐

Field Name: Status\_Indicator (This automatically gets sent when you tab out of the Field Label field) ☐  
Formula Return Type: Text

Click next & Copy and paste the following formula into the formula editor.

```
IF( ISPICKVAL( Status c c, 'Approved'),  
IMAGE("/resource/StatusImages/thumbs-up.png", "Accepted", 20, 20),  
IF ( ISPICKVAL( Status c c, 'Rejected'),  
IMAGE("/resource/StatusImages/thumbs-down.png", "Rejected", 20, 20),  
IMAGE("/resource/StatusImages/draft.png", "In-Process", 20, 20)))
```

Click Next, Next, Save.



## Static Resource

[Help for this Page](#) ?

### Static Resource Edit

Save Cancel

#### Static Resource Information

! = Required Information

Name StatusImages

4

Description

File

Choose File

No file chosen

Cache Control

Private



Save Cancel



Setup

Home

Object Manager



SETUP

### Object Manager

1 Items, Sorted by Label

Q travel

Schema Builder

Create

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Travel Approval	Travel_Approval__c	Custom Object		06/04/2023	✓

5

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

### 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
Address	Address__c	Text(50)		
Created By	CreatedBy	Lookup(User)		

Next Cancel

Specify the type of information that the custom field will contain.

#### Data Type

☐ None Selected

Select one of the data types below.

☐ Auto Number

7

A system-generated sequence number that uses a display format you define. The number is automatically incremented for each new record.

☒ Formula

A read-only field that derives its value from a formula expression you define. The formula field is updated when any of the source fields change.

☐ Roll-Up Summary

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.

☐ Lookup Relationship

Creates a relationship that links this object to another object. The relationship field allows users to click on a lookup icon to select a value from a popup list. The other object is the source of the values in the list.

☐ Master Detail Relationship

Creates a special type of parent-child relationship between this object (the child, or "detail") and another object (the parent,

**Step 2. Choose output type** Step 2 of 5

**8**

Field Label  Field Name  [i](#)

Auto add to custom report type ☒ Add this field to existing custom report types that contain this entity [i](#)

**Formula Return Type**

☐ None Selected Select one of the data types below.

☐ Checkbox Calculate a boolean value  
Example: `TODAY() > CloseDate`

☐ Currency Calculate a dollar or other currency amount and automatically format the field as a currency amount.  
Example: `Gross Margin = Amount - Cost_c`

☐ Date Calculate a date, for example, by adding or subtracting days to other dates.

---

Example: `Full Name = LastName & ", " & FirstName` [More Examples](#)

Simple Formula **Advanced Formula**

Status Indicator (Text) =

```
IF (ISPICTVAL( Status_c , 'Approved'), IMAGE("/resource/StatusImages/thumb-up.png", "Accepted", 20, 20),
IF ( ISPICTVAL( Status_c , 'Rejected'), IMAGE("/resource/StatusImages/thumb-down.png", "Rejected", 20,
20), IMAGE("/resource/StatusImages/draft.png", "In-Process", 20, 20)))
```

**9**

Functions

- All Function
- ABS
- ACOS
- ADDMONTH
- AND
- ASCII
- ASIN
- 

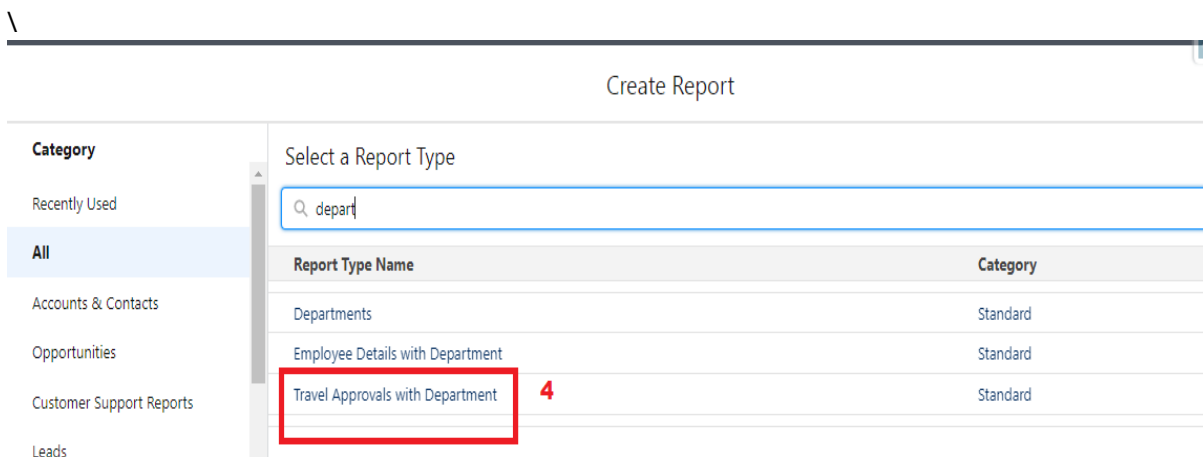
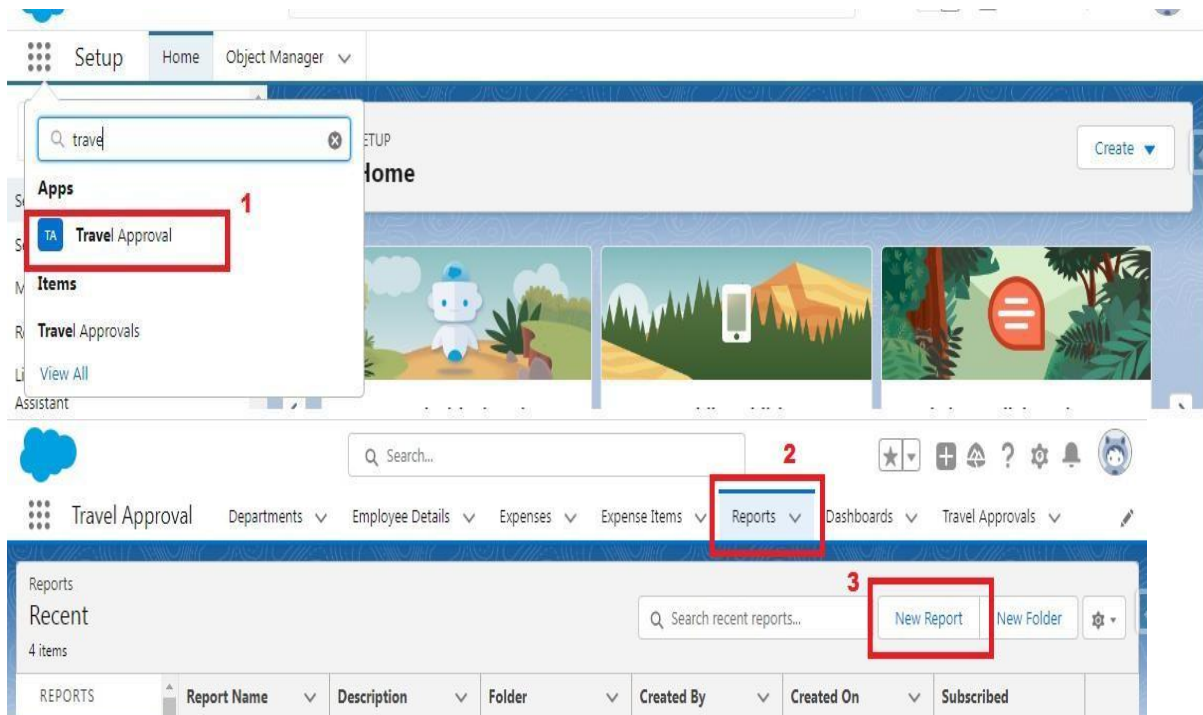
# Create Record

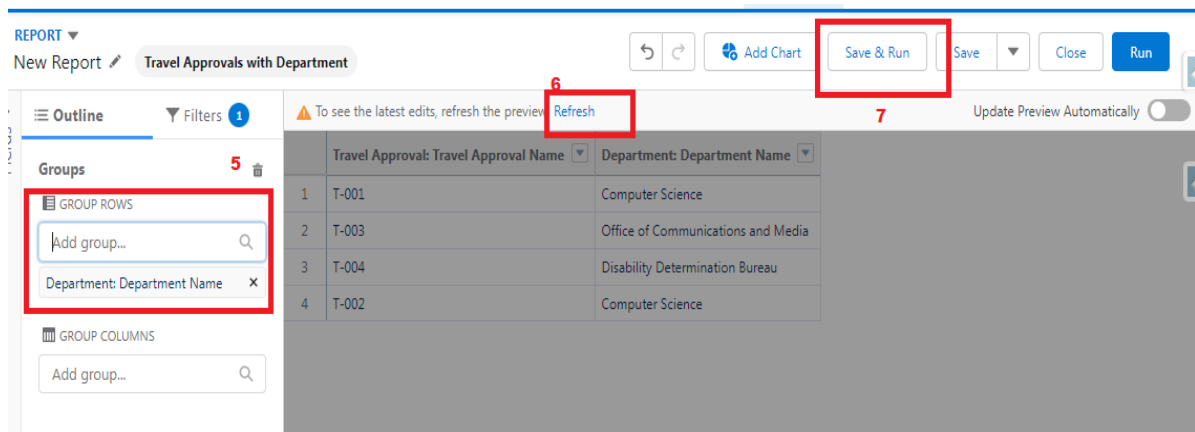
Click App Launcher and select Travel Approval App

- 1)Click reports tab
- 2)Click New Report.
- 3)Click the report type as Travel approval with Departments  
Click Start report.
- 4)Customize your report, in group rows select - Department Name
- 5)Click refresh
- 6)Click save and run

7) Give report name – Travel Approval Report

8) Click Save





### Save Report

8

\* Report Name

Travel Approval Report

Report Unique Name ⓘ

New\_Report\_iUr

Report Description

9

Cancel Save

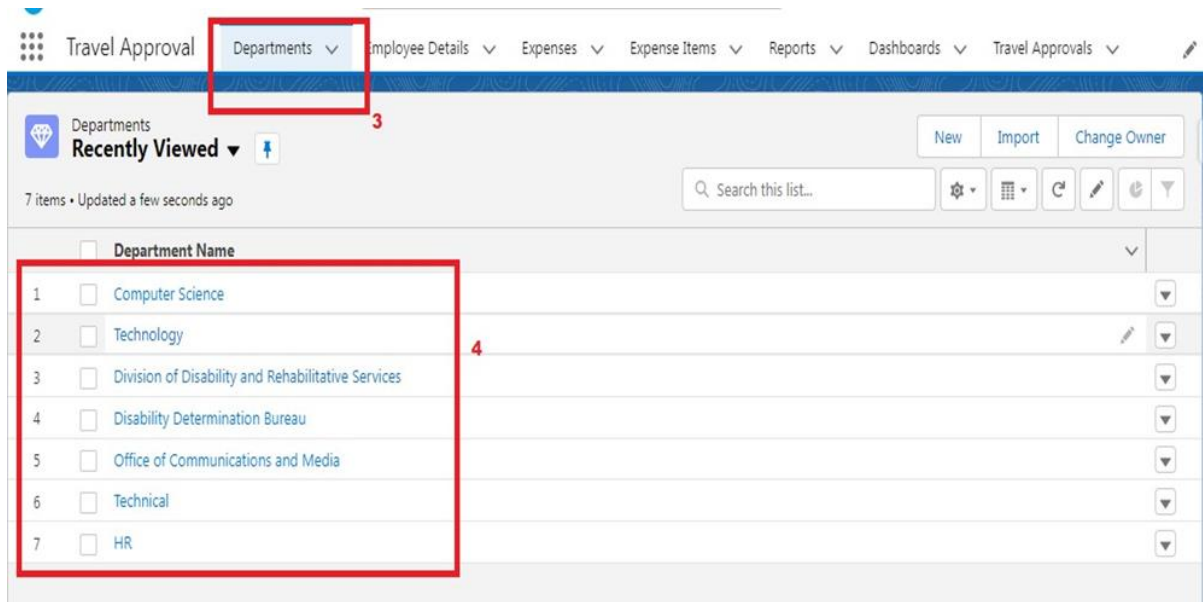
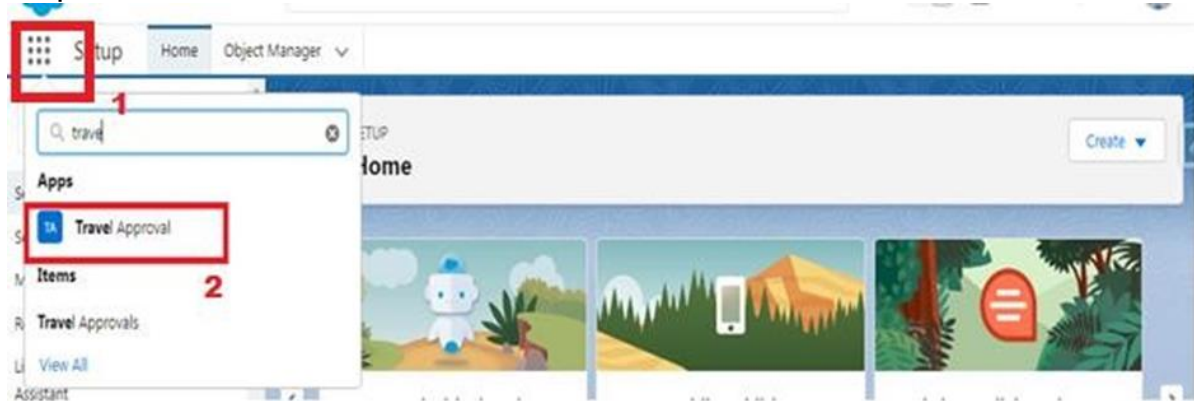
## View Record

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



## Department

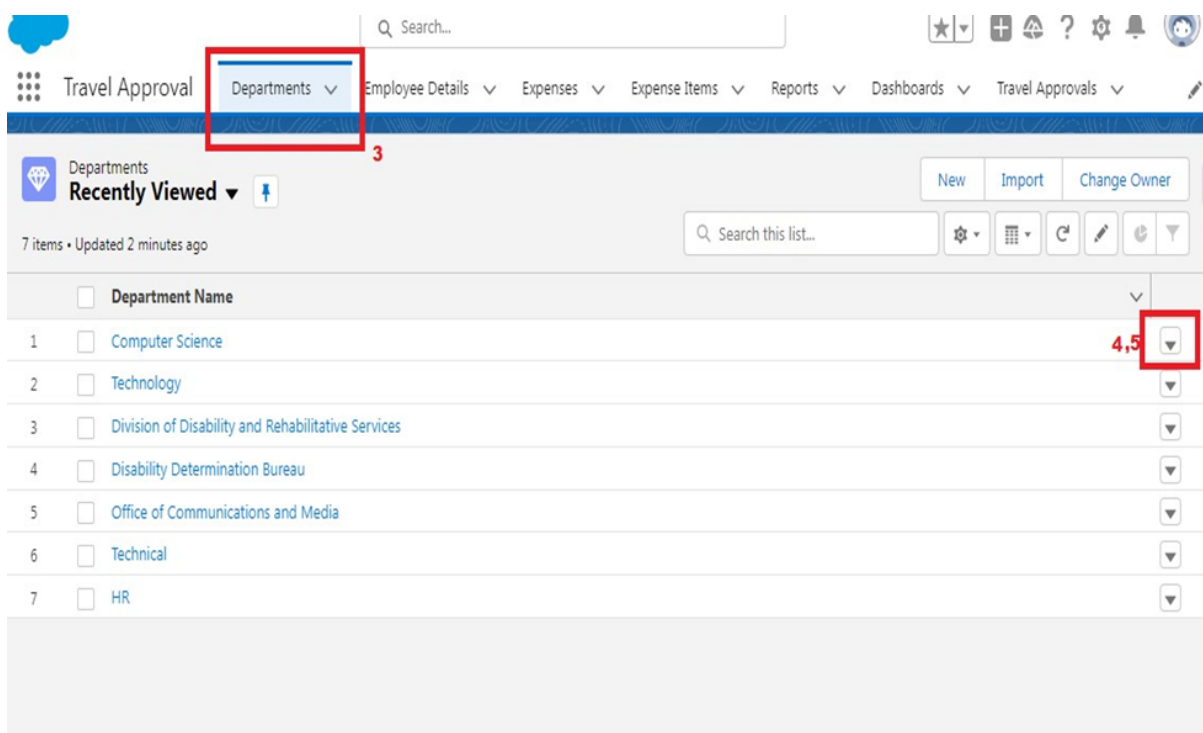
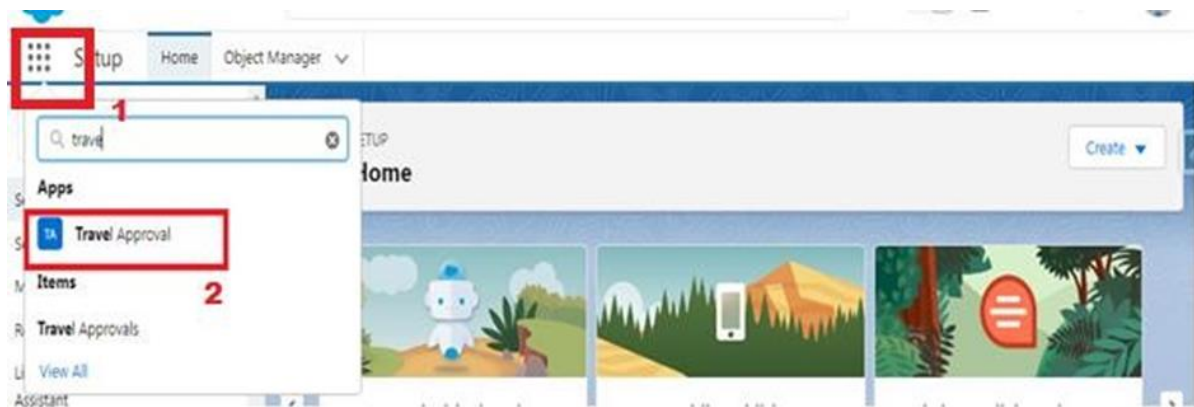


## Delete Record

Delete Record (Department):

1. Click on App Launcher on the left side of the screen.
2. Search Travel Approval & click on it.
3. Click on Department Tab.
4. Click on Arrow at the right-hand side on that particular record.

5. Click delete and delete again.



## What Are 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.

There are 4 types of report formats in Salesforce:

#### 1.Tabular Reports:

This is the most basic report format. It just displays the row of records in a table with a grand total. While easy to set up they can't be used to create groups of data or charts and also cannot be used in Dashboards. They are mainly used to generate a simple list or a list with a grand total.

#### 2.Summary Reports:

It is the most commonly used type of report. It allows grouping of rows of data, view subtotal, and create charts.

#### 3.Matrix Report:

It is the most complex report format. Matrix report summarizes information in a grid format. It allows records to be grouped by both columns and rows. It can also be used to generate dashboards. Charts can be added to this type of report.

#### 4.Joined Reports:

These types of reports let us create different views of data from multiple report types. The data in joined reports are organized in blocks. Each block acts as a subreport with its own fields, columns, sorting, and filtering. They are used to group and show data from multiple report types in different views.

Report types:

Report type determines which set of records will be available in a report. Every report is based on a particular report type. The report type is selected first when we create a report. Every report type has a primary object and one or more related objects. All these objects must be linked together either directly or indirectly.

- A report type cannot include more than 4 objects.
- Once a report is created its report type cannot be changed.

There are 2 types of report types:

### 1. Standard Report Types:

Standard Report Types are automatically included with standard objects and also with custom objects where “Allow Reports” is checked.

Standard report types cannot be customized and automatically include standard and custom fields for each object within the report type. Standard report types get created when an object is created, also when a relationship is created.

Note: Standard report types always have inner joins.

### 2. Custom Report Types:

Custom report types are reporting templates created to streamline the reporting process. Custom Reports are created by an administrator or User with “Manage Custom Report Types” permission. Custom report types are created when standard report types cannot specify which records will be available on reports.

In custom report types we can specify objects which will be available in a particular report. The primary object must have a relationship with other objects present in a report type either directly or indirectly.

There are 3 types of access levels of folders:

#### 1. Viewer:

With this access level, users can see the data in a report but cannot make any changes except cloning it into a new report.

#### 2. Editor:

With this access level, users can view and modify the reports it contains and can also move them to/from any other folders they

have access level as Editor or Manager.

### 3.Manager:

With this access level, users can do everything Viewers & Editors can do, plus they can also control other user's access levels to this folder.

Also, users with Manager Access levels can delete the report.

From this milestone we are going to import the data and create the reports and dashboards for data visualization in the application

## What Are Reports?

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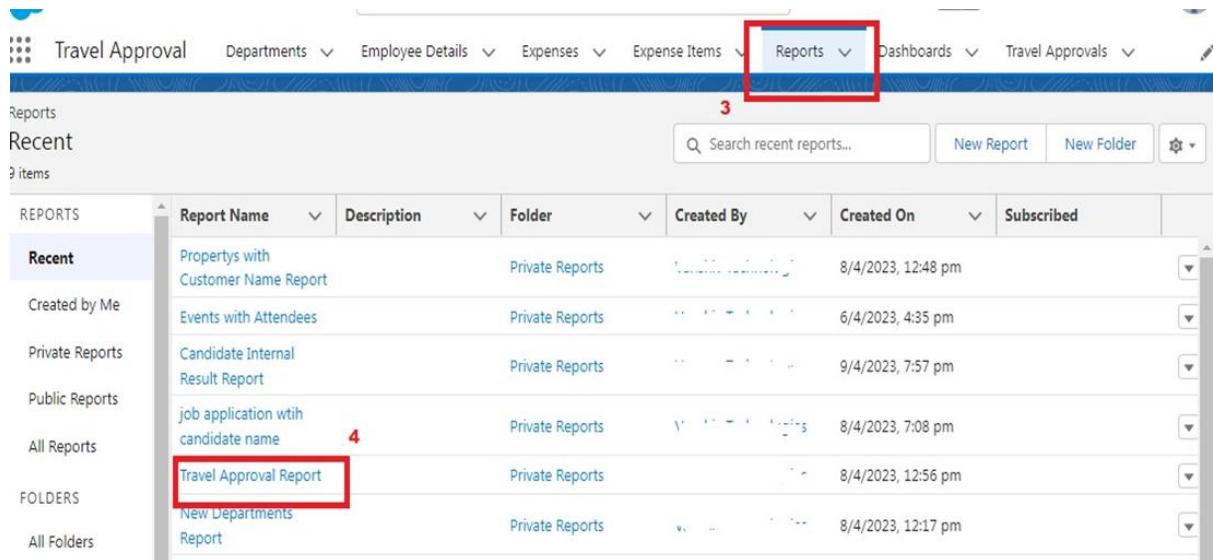
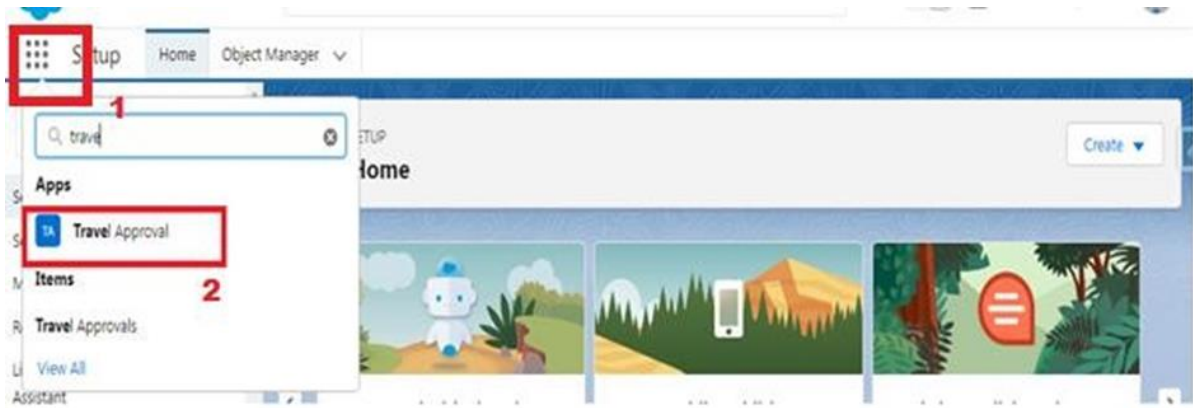
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From this milestone we are going to import the data and create the reports and dashboards for data visualization in the application

## **View Report**

- 1.Click on App Launcher on left side of screen.
- 2.Search Travel Approval App & click on it.
- 3.Click on Reports Tab.
- 4.Click on Travel Approval Report and see records.



## 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.



# Create Dashboard

Click on the Dashboards tab from the travel approval application,

Click on a new dashboard

Give name- Travel Approval

Click Create

Give your dashboard a name and click on +component,  
select the Travel Approval Report that you created.

For the data visualization select any of the chart, table etc as your wish.

Click add

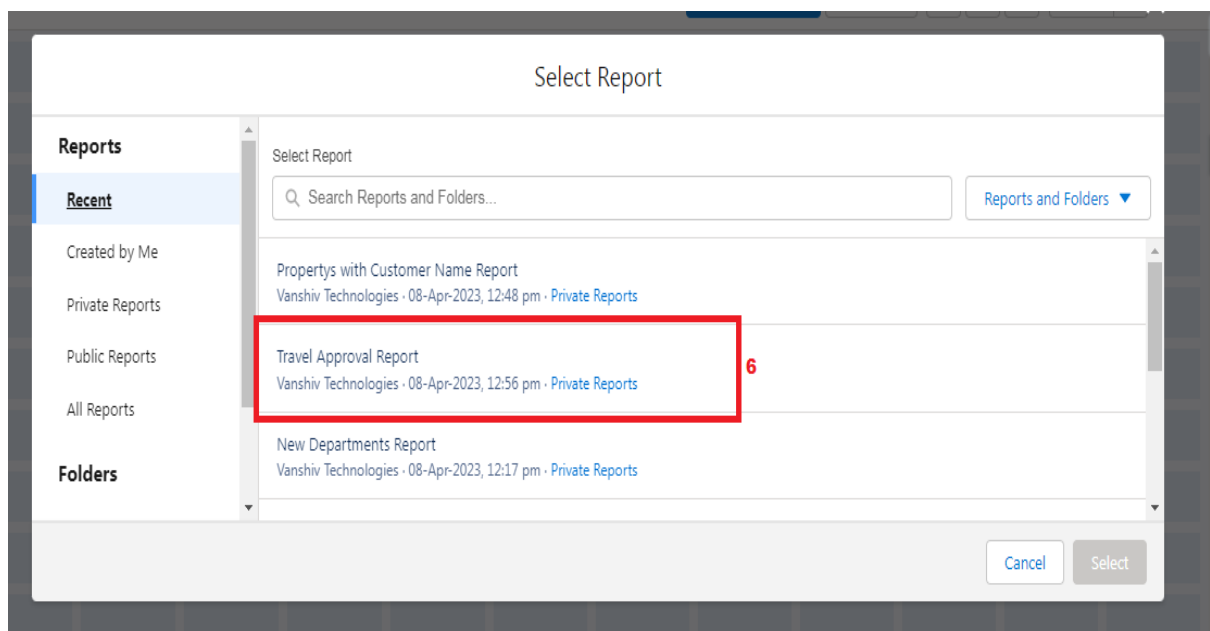
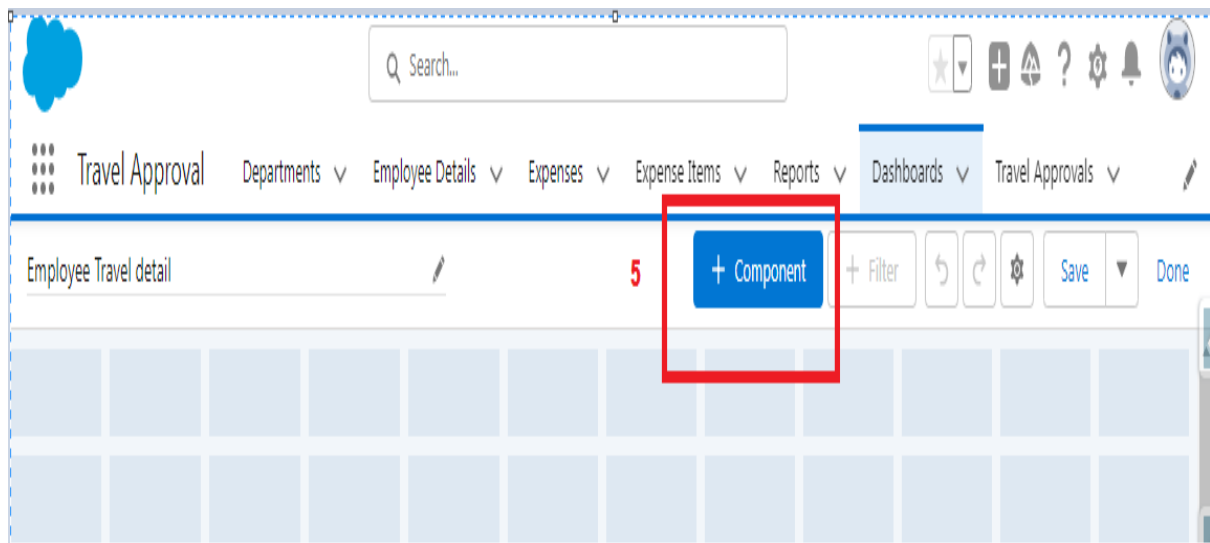
Click save.

The screenshot shows the 'New Dashboard' form in the Travel Approval application. The form is titled 'New Dashboard' and contains the following fields:

- Name:** A text input field with the label '\* Name' and a red asterisk. It contains the text 'Travel Approval'. This field is highlighted with a red box and labeled '3'.
- Description:** A text input field with the label 'Description'.
- Folder:** A dropdown menu with the label 'Folder'. It currently shows 'Private Dashboards'. This field is highlighted with a red box and labeled '4'.

At the bottom right of the form, there are two buttons: 'Cancel' and 'Create'. The 'Create' button is highlighted with a red box and labeled '4'.

Above the form, the 'Dashboards' tab in the top navigation bar is highlighted with a red box and labeled '1'. The 'New Dashboard' button in the top right corner of the dashboard area is highlighted with a red box and labeled '2'.



## Add Component

Report

Travel Approval Report

☐ Use chart settings from report

Display As

X-Axis

Department: Department Name

Preview

Travel Approval Report

Record Count

Department	Record Count
Comp...	2
Disabil...	1
Office ...	1

Department: Department Name

View Report (Travel Approval Report)

Cancel Add

Travel Approval

+ Component + Filter Save Done

Travel Approval Report

Record Count

Department	Record Count
Computer S...	2
Disability De...	1
Office of Co...	1

Department: Department Name

View Report (Travel Approval Report)

## View Dashboard

1. Click on App Launcher on left side of screen.
2. Search Travel Approval App & click on it.

3. Click on Dashboard Tab.

4. Click on Travel Approval and see graph view of records

