Garage Management System

A PROJECT REPORT

Submitted by

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Mentored by

Dr. MANIVANNAN M.E.., PhD,

In partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

PARK COLLEGE OF TECHNOLOGY COIMBATORE-641659

ANNA UNIVERSITY: CHENNAI – 600 025

NOV/DEC 2024

BONAFIDE CERTIFICATE

Certified that this Project Work report of “ **Garage Management System**” is the Bonafide work of “ **DHIVYADHARSHINI S (712321104003), JANANI M (712321104004)**” who carried out the project work under my supervision.

……………………….	...…………………...
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Submitted for the ANNA UNIVERSITY practical examination project viva-voice held on

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INTERNAL EXAMINER	**EXTERNAL EXAMINER**

ACKNOWLEDGEMENT

First and foremost, we praise and thank God and our parents, from the bottom of our heart, for bestowing His benediction on us throughout the course of this project.

We wish to express our sincere thanks to our beloved Chairman **Dr. P. V. Ravi, Ph.D., MISTE,** for providing an opportunity to work on this project.

We would like to express our deep sense of gratitude to the Chief Executive Officer **Dr. Anusha Ravi., B.E., M.S.(USA), Ph.D.,** for her valuable support and encouragement. We extend sincere thanks to our Principal **Dr. K KUMARESAN M.E., Ph.D.,** for supporting and encouraging us to carry out our project.

We express gracious thanks to our beloved Head of the Department, **Dr. MANIVANNAN M.E.., PhD,**
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TABLE OF CONTENTS

ABSTRACT

The Garage Management System (GMS) in Salesforce is a state-of-the-art platform designed to revolutionize the operations of automotive service centers. By leveraging Salesforce's advanced CRM capabilities, the system integrates critical aspects such as customer management, service scheduling, inventory control, billing, and analytics.This system addresses the growing demands for operational efficiency and personalized customer service in the automotive industry. By automating routine tasks, reducing manual errors, and enabling real-time communication, GMS helps garages focus on delivering superior customer experiences. Additionally, its integration with third-party applications allows businesses to expand capabilities and maintain a competitive edge.This cloud-based solution enhances efficiency, customer satisfaction, and scalability, providing garages with the tools needed to thrive in a competitive market.

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Garage Management System

PROJECT OVERVIEW

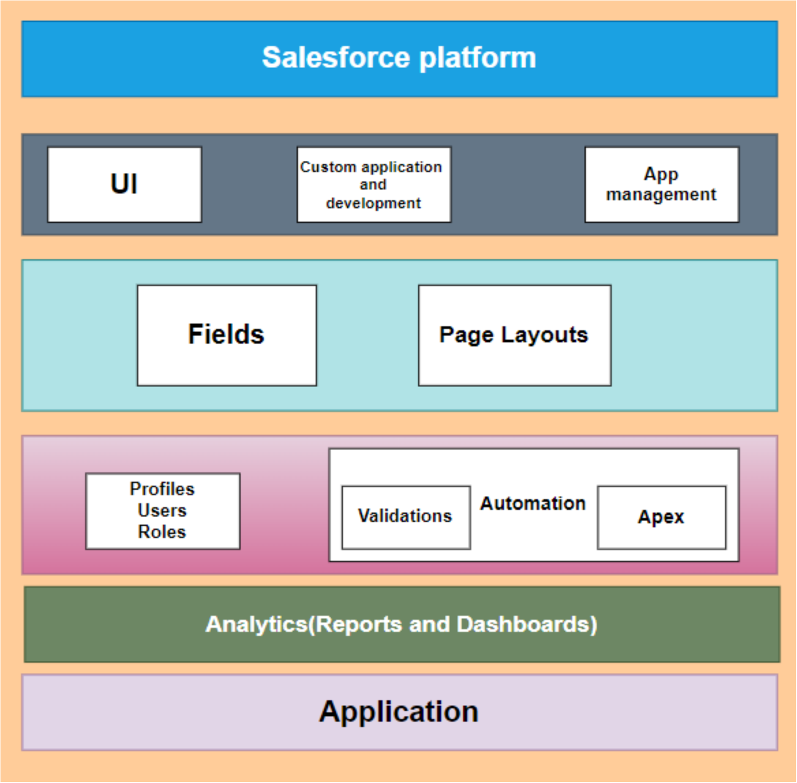
Introduction:

In today's fast-paced automotive industry, garages face challenges such as maintaining customer satisfaction, optimizing resources, and ensuring seamless operations. The Garage Management System built on Salesforce addresses these challenges by providing an integrated platform for managing all aspects of a garage's operations.

Description:

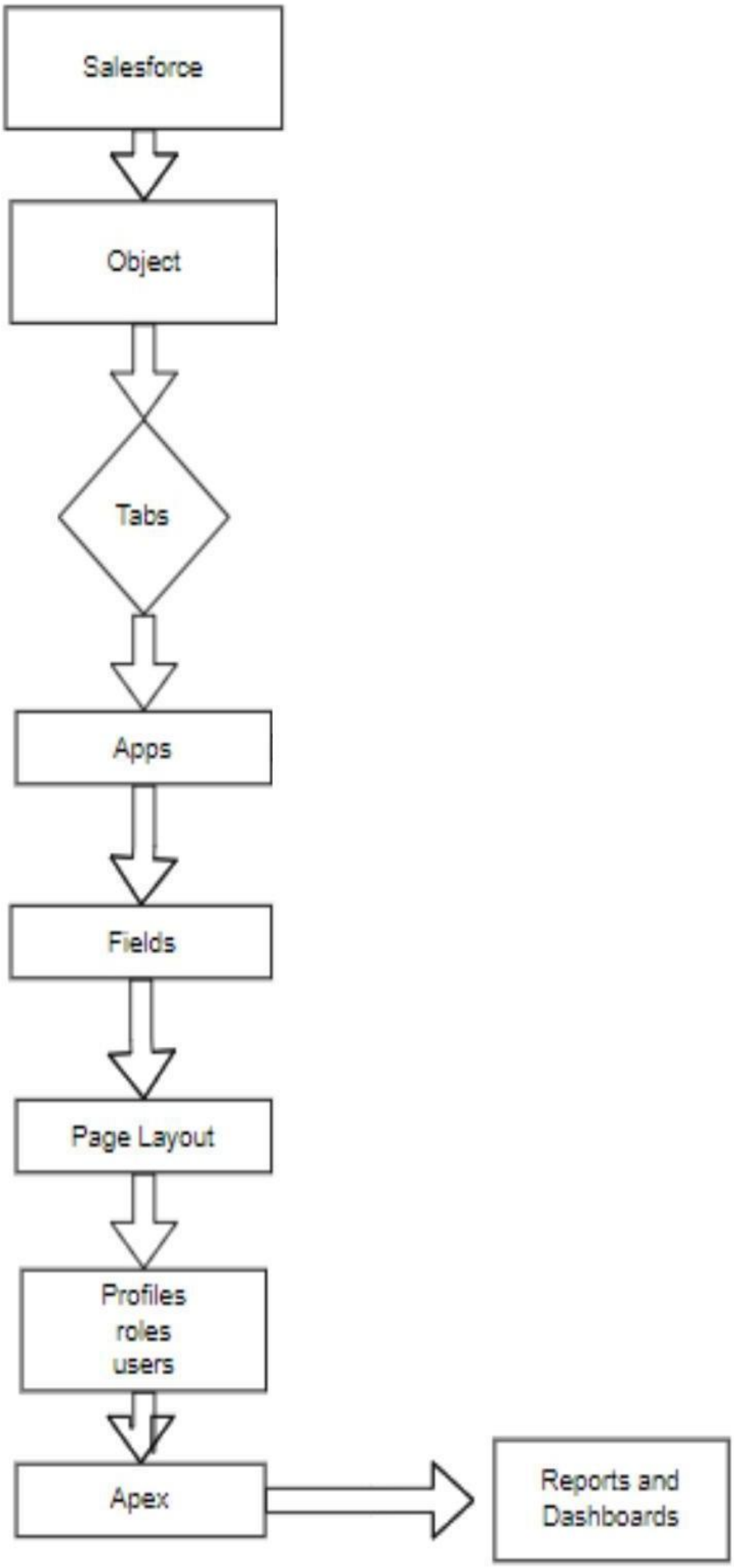
The Garage Management System is a valuable tool for automotive repair facilities, helping them deliver top-notch service, increase operational efficiency, and build lasting customer relationships. With its user-friendly interface and powerful features, GMS empowers garages to thrive in a competitive market while ensuring a seamless and satisfying experience for both customers and staff.

Technical Architecture:



OBJECTIVES

Project Flow



Goals:

1. Create Custom Objects
2. Tabs
3. Create Fields and Relationships
4. Create the Lightning App
5. Record Insertion
6. Create Flows
7. Apex Triggers
8. Asynchronous Apex

System Requirements:

- Windows 8 machine
- Install with two web browser. Bandwidth of 30mbps

Project scope:

This project involves developing a Garage Management System(GMS) for specifically tailored for automotive service center operations. The application aims to streamline various processes, enhance customer engagement, and improve operational efficiency for Garage Management.

1. **Stakeholders**:
    - Garage Owners/Managers (management team).
    - Technicians/staff.
    - Vendors/Suppliers
    - Customers/visitors of the garage.

2. **Project team:**
    - Project Manager for oversees timelines,scope and budgets.
    - Salesforce developer for customize and integrate the system.
    - Business analytics for define workflows and align with business needs.

In-scope Functionality:

- **Customer Management :** Centralized customer profiles, service reminders, and feedback tracking.
- **Appointment Scheduling :** Real-time booking, technician assignment, and customer notifications.
- **Inventory Management :** Stock tracking, low-stock alerts, and supplier integration.
- **Billing and Invoice :** Automated invoicing, payment gateway integration, and tax compliance.
- **Analytics and Reporting :** Dashboards for KPIs, customizable reports, and predictive analytics.
- **Workflow Administration :** Service reminders, inventory updates, and task assignments.
- **Multi - Device Access :** Cloud-based, mobile-friendly system for anytime, anywhere access.
- **Integration :** Seamless connection with accounting software and third-party tools.
- **Access Control :** Role-based permissions and audit trails
- **Marketing Tools :** Promotional campaigns and loyalty program management.

Out-Scope Functionality:

- **Mobile App Development :** Creating a standalone mobile app for customer use.
- **Advanced Billing and Payment Integration :** Integrating with third-party billing systems or complex payment gateways outside of the basic invoice features.
- **Custom Reports and Dashboards :** Complex or highly customized reporting tools, if standard Salesforce reports are sufficient.
- **Advanced AI Features :** Implementing advanced machine learning algorithms or predictive analytics for car repair issues beyond standard service scheduling.
- **Integration with Non-Salesforce CRMs :** Integrating the system with other CRM platforms or third-party software outside of the Salesforce ecosystem.
- **Vehicle Telematics Integration :** Integrating with external telematics systems or sensors for real-time vehicle diagnostics.
- **Customer Training:** Extensive training for end-users on Salesforce features or other tools, unless included in the scope.
- **Long-term Support and Maintenance:** Post-launch support, unless specified in the contract or project timeline.

TECHNICAL REQUIREMENT

Salesforce Org configuration

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.

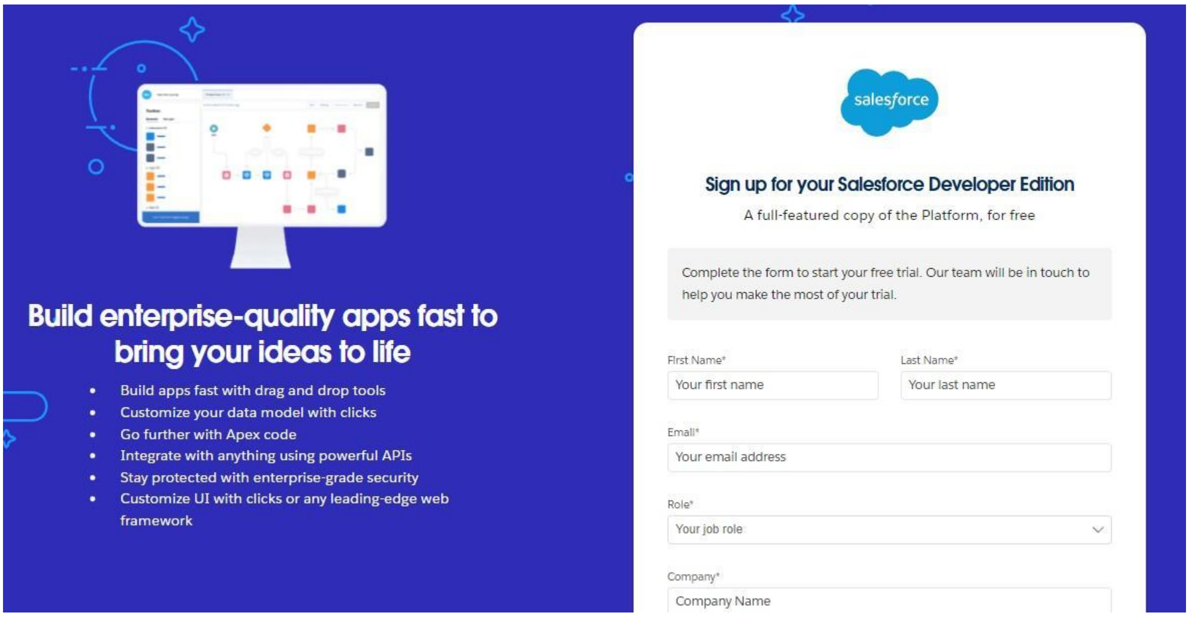
Salesforce has everything you need to run your business from anywhere. Using standard products and features, you can manage relationships with prospects and customers, collaborate and engage with employees and partners, and store your data securely in the cloud.

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

Activity 1: Creating Developer Account

Creating a developer org in salesforce.

1. Go to https://developer.salesforce.com/signup
2. On the sign up form, enter the following details :



Build enterprise-quality apps fast to bring your ideas to life

- 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
- Customize UI with clicks or any leading-edge web framework

salesforce

Sign up for your Salesforce Developer Edition

A full-featured copy of the Platform, for free

Complete the form to start your free trial. Our team will be in touch to help you make the most of your trial.

First Name*: Your first name

Last Name*: Your last name

Email*: Your email address

Role*: Your job role

Company*: Company Name

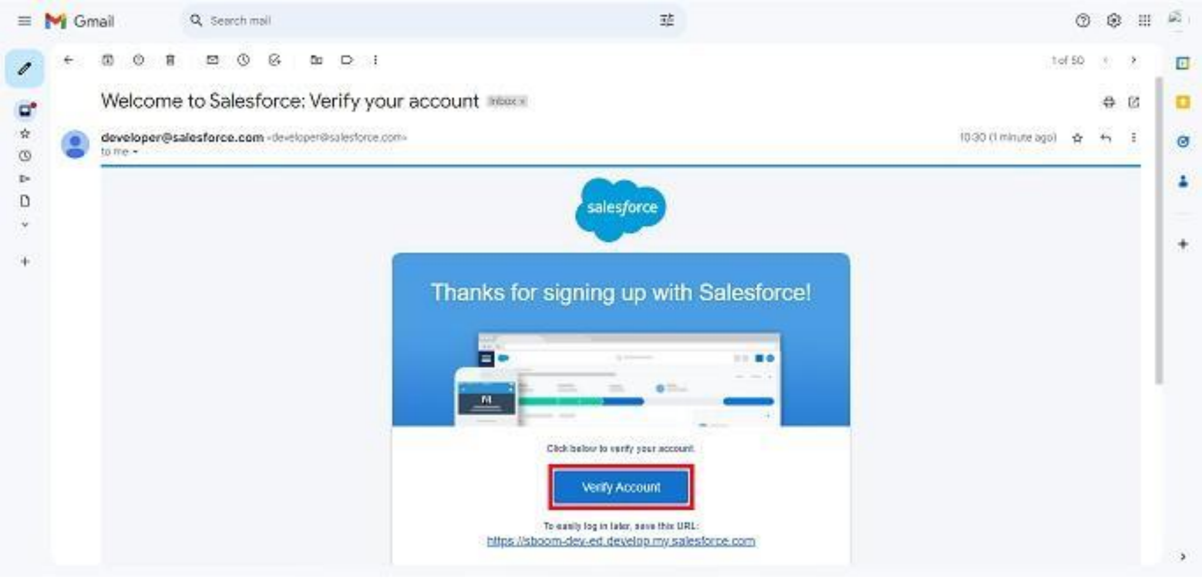
5) County : India
6) Postal Code : pin code
7) Username : should be a combination of your name and company

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

Click on sign me up after filling these.

Activity 2: Account Activation

1. 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.



Welcome to Salesforce: Verify your account

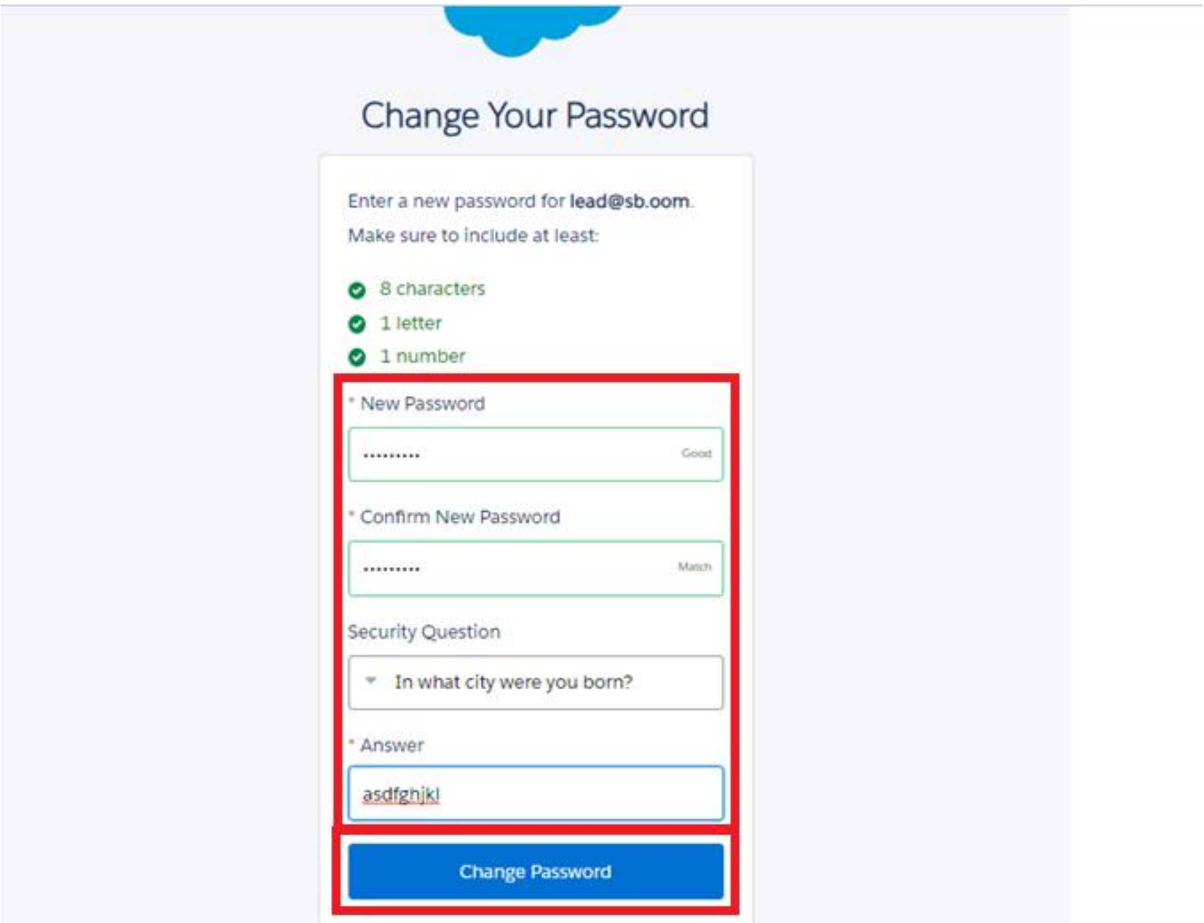
developer@salesforce.com <developer@salesforce.com>
to me
10:30 (1 minute ago)

Thanks for signing up with Salesforce!

Click below to verify your account.

To easily log in later, save this URL:
https://sboom-dev-ed.develop.my.salesforce.com

2. Click on Verify Account
3. Give a password and answer a security question and click on change password



Change Your Password

Enter a new password for **lead@sb.oom**.
Make sure to include at least:

- ✓ 8 characters
- ✓ 1 letter
- ✓ 1 number

* New Password

••••••••• Good

* Confirm New Password

••••••••• Match

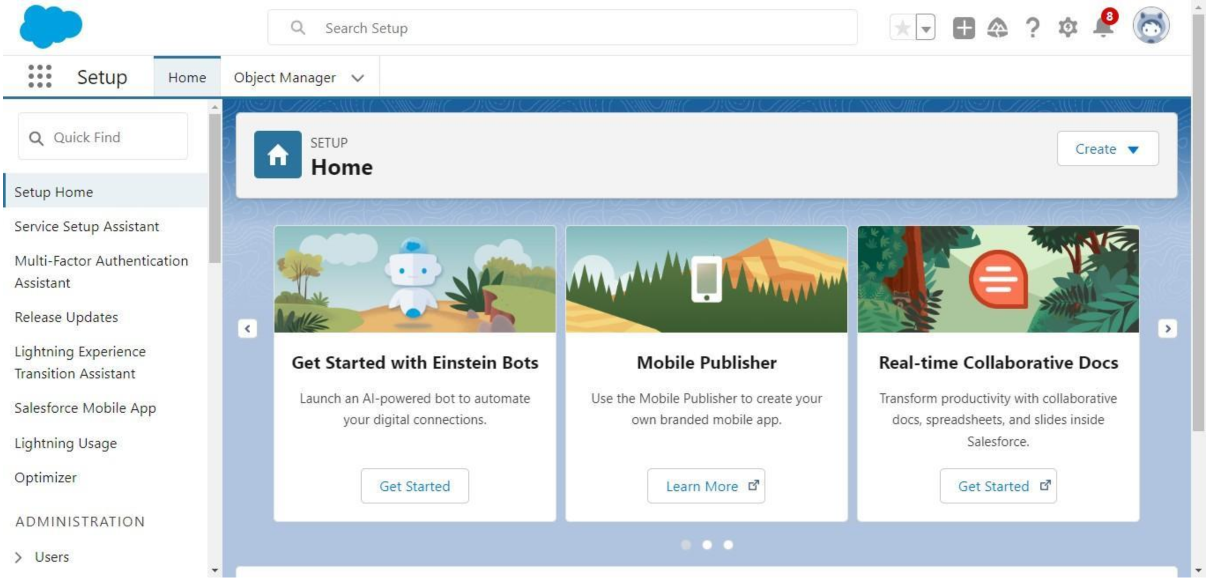
Security Question

In what city were you born?

* Answer

asdfghjkl

4. Then you will redirect to your salesforce setup page



Get Started with Einstein Bots
Launch an AI-powered bot to automate your digital connections.
Get Started

Mobile Publisher
Use the Mobile Publisher to create your own branded mobile app.
Learn More

Real-time Collaborative Docs
Transform productivity with collaborative docs, spreadsheets, and slides inside Salesforce.
Get Started

CUSTOM OBJECTS

What Is an Object?

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

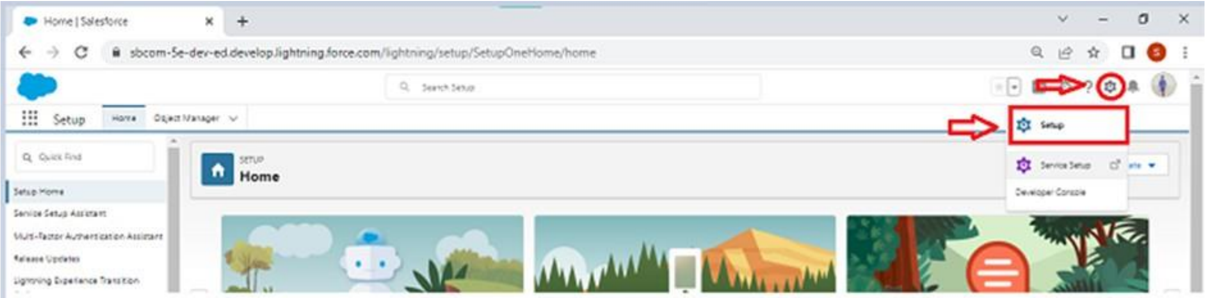
Salesforce objects are of two types:

Standard Objects: Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.

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.

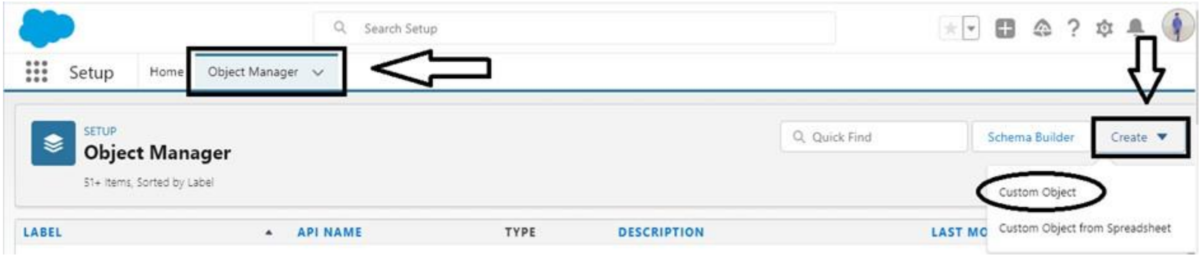
To Navigate to Setup page:

Click on gear icon → click setup.



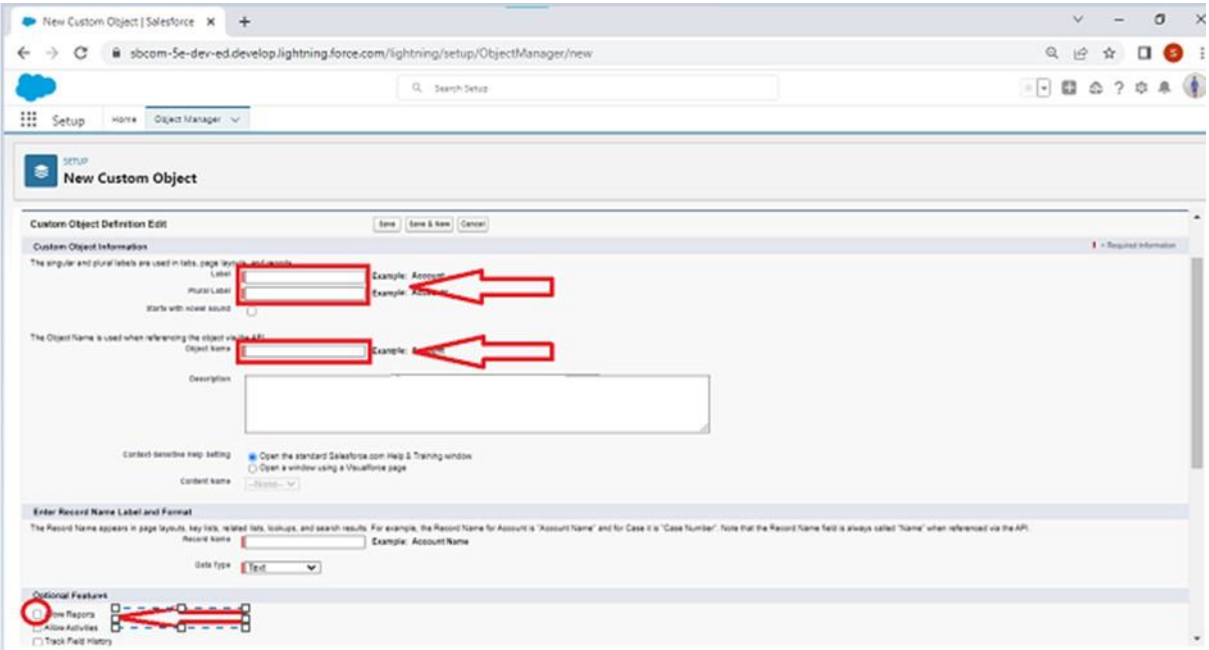
To create an object:

1.From the setup page → Click on Object Manager → Click on Create → Click on Custom Object.



2.On Custom object defining page:

3.Enter the label name, plural label name, click on Allow reports, Allow search.



New Custom Object | Salesforce

sbcom-5e-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/new

SETUP

New Custom Object

Custom Object Definition Edit

Custom Object Information

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

Label: Example: Account

Plural Label: Example: Accounts

Starts with vowel sound □

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

Object Name: Example: Account

Description

Context-Sensitive Help Setting ● Open the standard Salesforce.com Help & Training window ○ Open a window using a Visualforce page

Content Name: --None--

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name: Example: Account Name

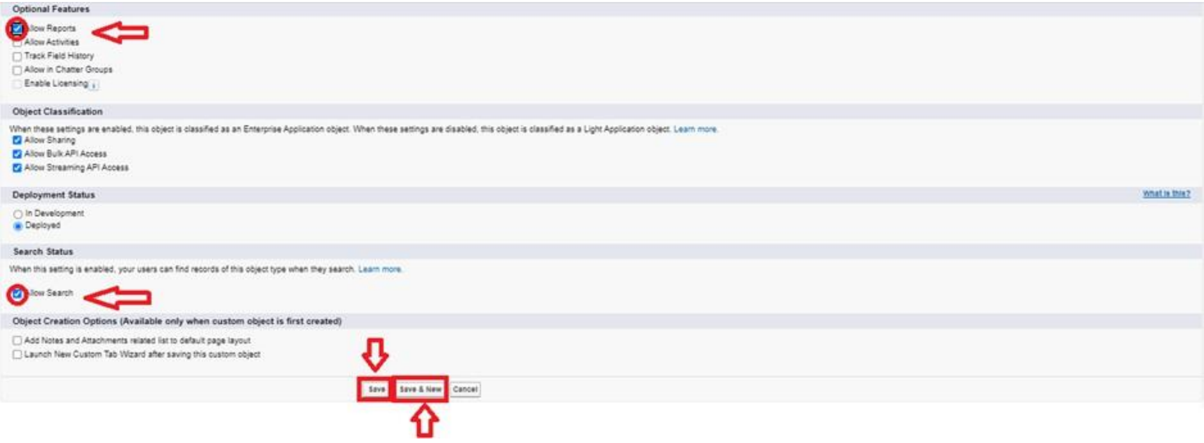
Data Type: Text

Optional Features

□ Allow Reports

□ Allow Activities

□ Track Field History



Optional Features

☑ Allow Reports

□ Allow Activities

□ Track Field History

□ Allow in Chatter Groups

□ Enable Licensing

Object Classification

When these settings are enabled, this object is classified as an Enterprise Application object. When these settings are disabled, this object is classified as a Light Application object. Learn more.

☑ Allow Sharing

☑ Allow Bulk API Access

☑ Allow Streaming API Access

Deployment Status

○ In Development

● Deployed

Search Status

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

☑ Allow Search

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

4.Click on Save.

Create Customer Details Object:

To create an object:

1.From the setup page → Click on Object Manager → Click on Create → Click on Custom Object.

1.Enter the label name→ Customer Details

2.Plural label name→ Customer Details

3.Enter Record Name Label and Format

- Record Name : Customer Name
- Data Type : Text

2.Click on Allow reports and Track Field History,

3.Allow search → Save.

Create Appointment Object:

To create an object:

1.From the setup page → Click on Object Manager → Click on Create → Click on Custom Object.

1.Enter the label name→ Appointment

2.Plural label name→ Appointments

3.Enter Record Name Label and Format

- Record Name : Appointment Name
- Data Type : Auto Number
- Display Format : app-{000}
- Starting Number : 1

2.Click on Allow reports and Track Field History,

3.Allow search → Save.

Create Service records Object:

To create an object:

1.From the setup page → Click on Object Manager → Click on Create → Click on Custom Object.

1.Enter the label name→ Service records

2.Plural label name→ Service records

3.Enter Record Name Label and Format

- Record Name : Service records Name
- Data Type : Auto Number
- Display Format : ser-{000}
- Starting Number : 1

2.Click on Allow reports and Track Field History,

3.Allow search → Save.

Create Billing details and feedback Object:

To create an object:

1.From the setup page → Click on Object Manager → Click on Create → Click on Custom Object.

1.Enter the label name→ Billing details and feedback

2.Plural label name→ Billing details and feedback

3.Enter Record Name Label and Format

- Record Name : Billing details and feedback Name
- Data Type : Auto Number
- Display Format : bill-{000}
- Starting Number : 1

2.Click on Allow reports and Track Field History,

3.Allow search → Save.

SYSTEM DESIGN

Tabs

What is Tab :

A tab is like a user interface that is used to build records for objects and to view the records in the objects.

Types of Tabs:

Custom Tabs

Custom object tabs are the user interface for custom applications that you build in salesforce.com. They look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

Web Tabs

Web Tabs are custom tabs that display web content or applications embedded in the salesforce.com window. Web tabs make it easier for your users to quickly access content and applications they frequently use without leaving the salesforce.com application.

Visualforce Tabs

Visualforce Tabs are custom tabs that display a Visualforce page. Visualforce tabs look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

Lightning Component Tabs

Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app.

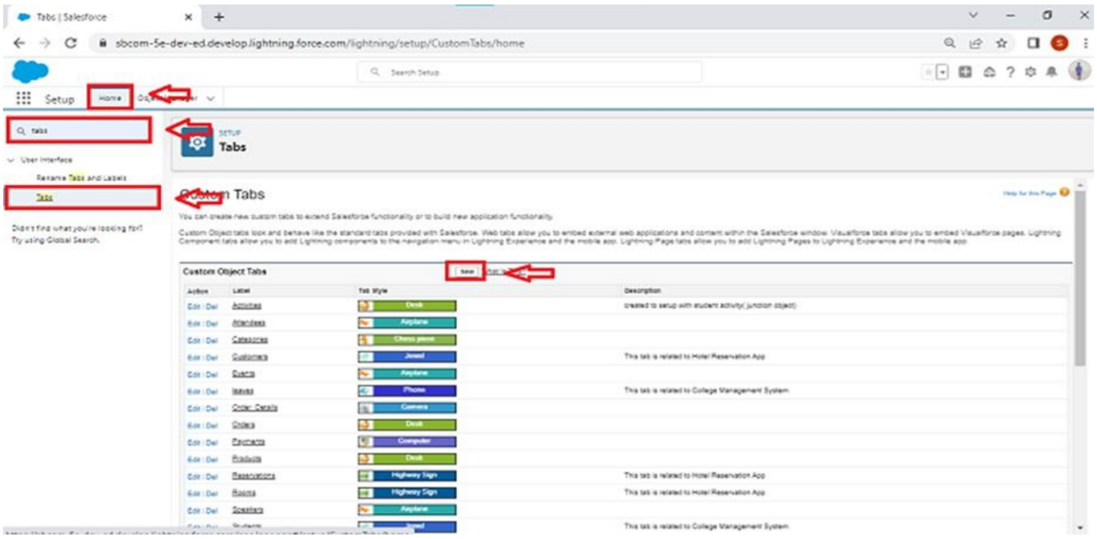
Lightning Page Tabs

Lightning Page Tabs let you add Lightning Pages to the mobile app navigation menu. Lightning Page tabs don't work like other custom tabs. Once created, they don't show up on the All Tabs page when you click the Plus icon that appears to the right of your current tabs. Lightning Page tabs also don't show up in the Available Tabs list when you customise the tabs for your apps.

To Create a Custom Tab

Create a Customer Details Tab :

1.Go to setup page → type Tabs in Quick Find bar → click on tabs → New (under custom object tab)



Tabs | Salesforce

sbcom-5e-dev-ed.develop.lightning.force.com/lightning/setup/CustomTabs/home

Setup Home

tabs

User Interface

Rename Tabs and Labels

Tabs

Didn't find what you're looking for? Try using Global Search.

SETUP

Tabs

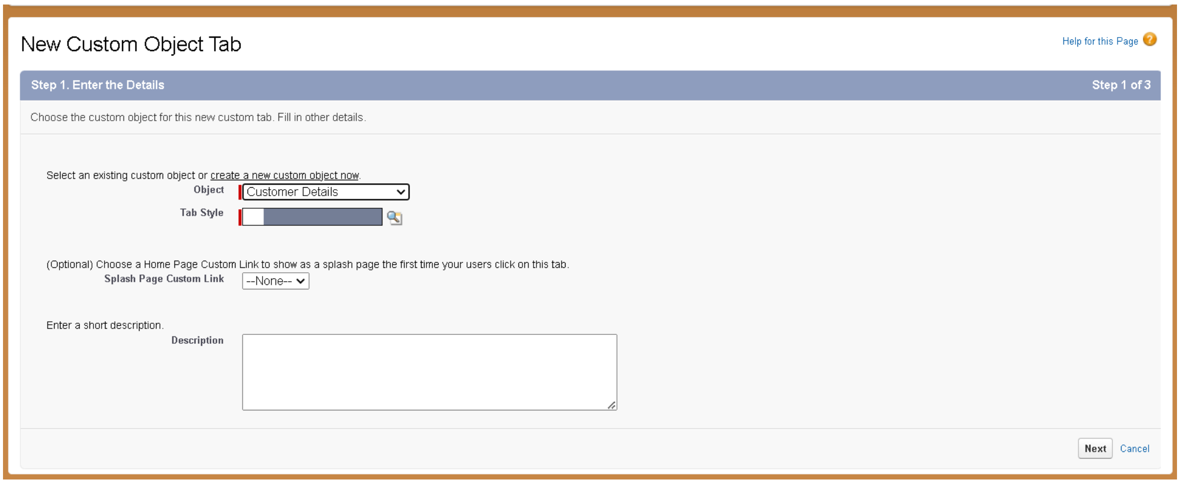
Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.

Custom Object Tabs New

Action	Label	Tab Style	Description
Edit | Del	Activities	Desk	created to setup with student activity(junction object)
Edit | Del	Attendees	Airplane	
Edit | Del	Categories	Chess piece	
Edit | Del	Customers	Jewel	This tab is related to Hotel Reservation App
Edit | Del	Events	Airplane	
Edit | Del	Leaves	Phone	This tab is related to College Management System
Edit | Del	Order Details	Camera	
Edit | Del	Orders	Desk	
Edit | Del	Payments	Computer	
Edit | Del	Products	Desk	
Edit | Del	Reservations	Highway Sign	This tab is related to Hotel Reservation App
Edit | Del	Rooms	Highway Sign	This tab is related to Hotel Reservation App
Edit | Del	Speakers	Airplane	
Edit | Del	Students	Jewel	This tab is related to College Management System



New Custom Object Tab

Help for this Page

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: Customer Details

Tab Style:

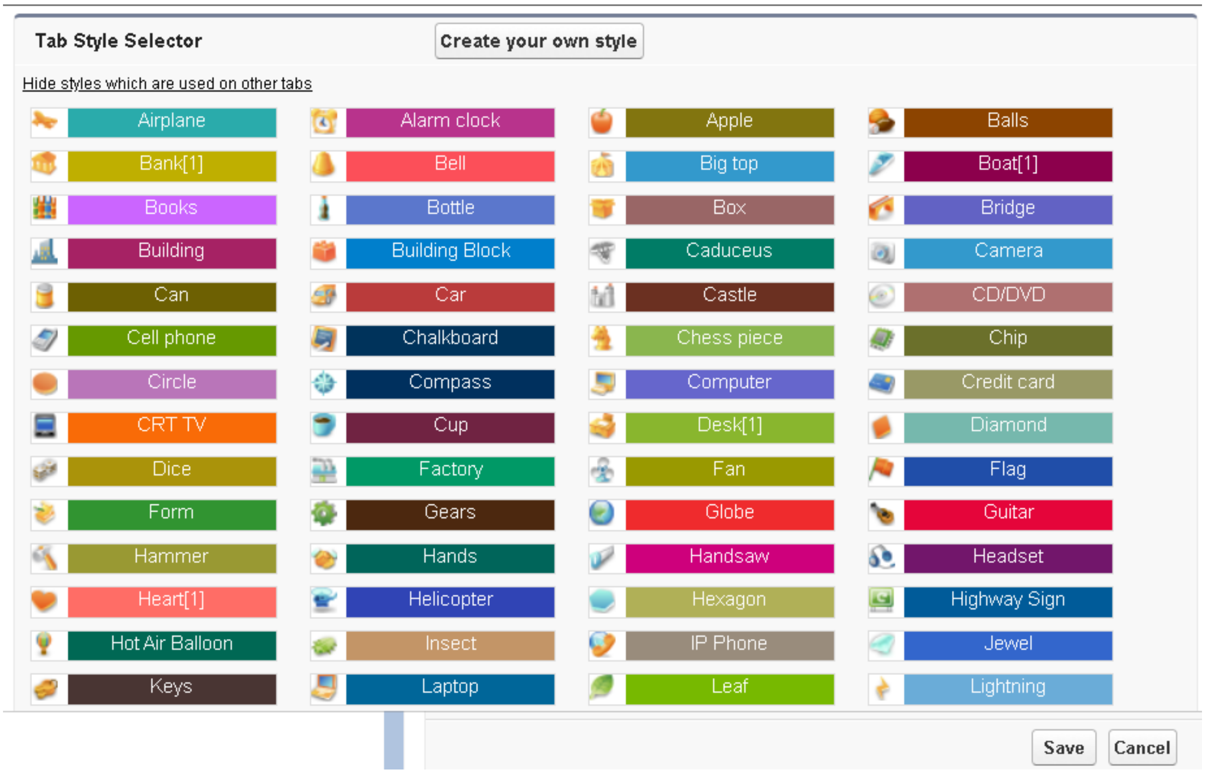
(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.

Splash Page Custom Link: --None--

Enter a short description.

Description:

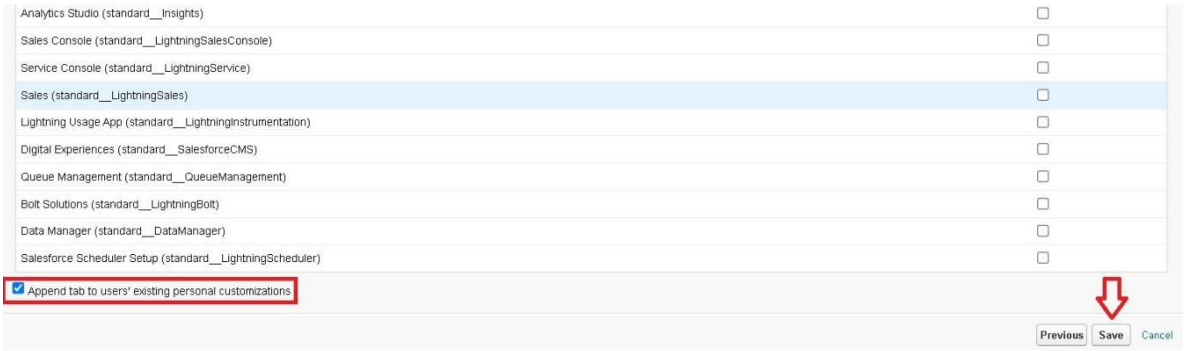
Next Cancel



Tab Style Selector | Create your own style

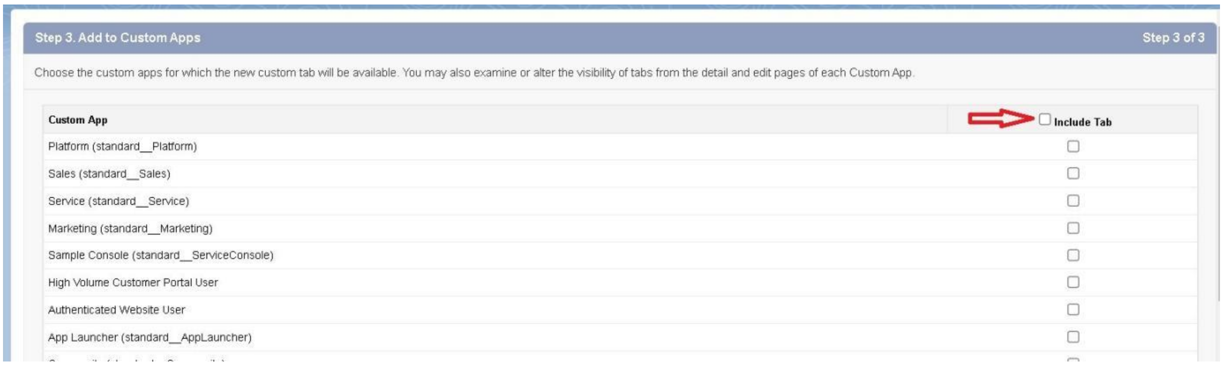
Hide styles which are used on other tabs

Airplane	Alarm clock	Apple	Balls
Bank[1]	Bell	Big top	Boat[1]
Books	Bottle	Box	Bridge
Building	Building Block	Caduceus	Camera
Can	Car	Castle	CD/DVD
Cell phone	Chalkboard	Chess piece	Chip
Circle	Compass	Computer	Credit card
CRT TV	Cup	Desk[1]	Diamond
Dice	Factory	Fan	Flag
Form	Gears	Globe	Guitar
Hammer	Hands	Handsaw	Headset
Heart[1]	Helicopter	Hexagon	Highway Sign
Hot Air Balloon	Insect	IP Phone	Jewel
Keys	Laptop	Leaf	Lightning



Analytics Studio (standard__Insights)	□
Sales Console (standard__LightningSalesConsole)	□
Service Console (standard__LightningService)	□
Sales (standard__LightningSales)	□
Lightning Usage App (standard__LightningInstrumentation)	□
Digital Experiences (standard__SalesforceCMS)	□
Queue Management (standard__QueueManagement)	□
Bolt Solutions (standard__LightningBolt)	□
Data Manager (standard__DataManager)	□
Salesforce Scheduler Setup (standard__LightningScheduler)	□

☑ Append tab to users' existing personal customizations



Step 3. Add to Custom Apps | Step 3 of 3

Choose the custom apps for which the new custom tab will be available. You may also examine or alter the visibility of tabs from the detail and edit pages of each Custom App.

Custom App	□ Include Tab
Platform (standard__Platform)	□
Sales (standard__Sales)	□
Service (standard__Service)	□
Marketing (standard__Marketing)	□
Sample Console (standard__ServiceConsole)	□
High Volume Customer Portal User	□
Authenticated Website User	□
App Launcher (standard__AppLauncher)	□

2.Select Object(Customer Details) → Select the tab style → Next (Add to profiles page) keep it as default → Next (Add to Custom App) uncheck the include tab .

3.Make sure that the Append tab to users' existing personal customizations is checked.

4.Click save.

Create Remaining Tabs :

- Appointments.
- Service records.
- Billing details and feedback.

Follow the same steps as Customer Details Tab Creation.

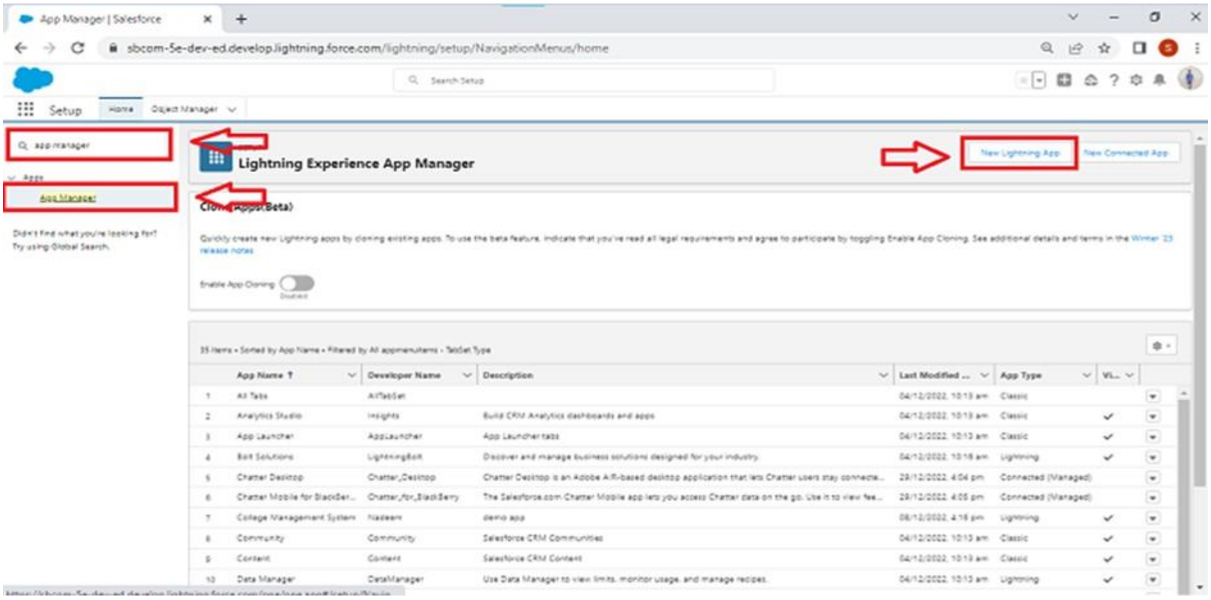
The Lightning App:

An app is a collection of items that work together to serve a particular function. In Lightning Experience, Lightning apps give your users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar.
Lightning apps let you brand your apps with a custom colour and logo. You can even include a utility bar and Lightning page tabs in your Lightning app. Members of your org can work more efficiently by easily switching between apps.

Create a Lightning App

To create a lightning app page:

1.Go to setup page → search “app manager” in quick find → select “app manager” → click on New lightning App

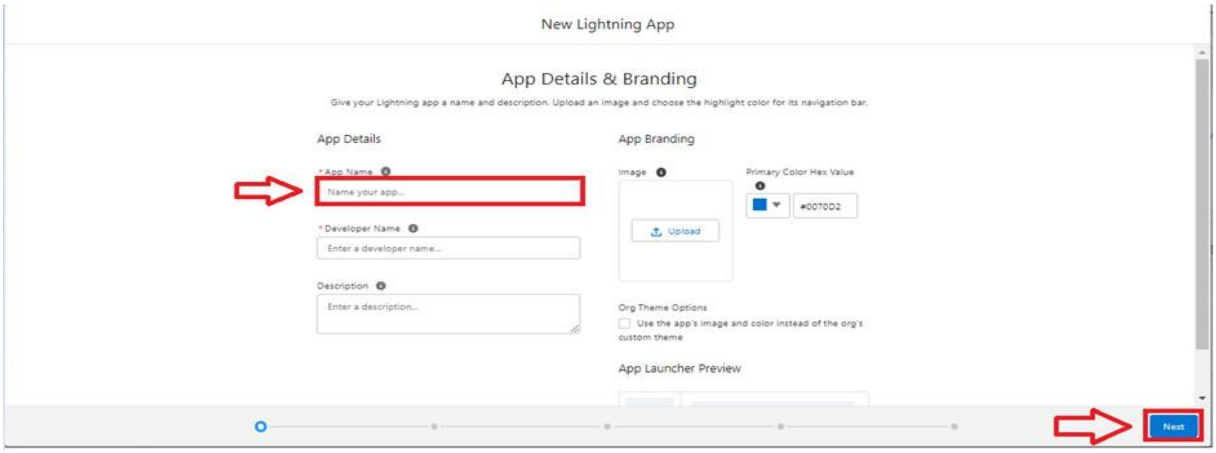

App Manager | Salesforce
sbcom-5e-dev-ed.develop.lightning.force.com/lightning/setup/NavigationMenus/home
Search Setup
Setup
Home
Object Manager
app manager
Apps
App Manager
Didn't find what you're looking for? Try using Global Search.
Lightning Experience App Manager
New Lightning App
New Connected App
Cloning Apps (Beta)
Enable App Cloning
Disabled

Quickly create new Lightning apps by cloning existing apps. To use the beta feature, indicate that you've read all legal requirements and agree to participate by toggling Enable App Cloning. See additional details and terms in the Winter '23 release notes.

35 items • Sorted by App Name • Filtered by All appmenuitems - TabSet Type

	App Name ↑	Developer Name	Description	Last Modified ...	App Type	Vi...
1	All Tabs	AllTabSet		04/12/2022, 10:13 am	Classic	
2	Analytics Studio	Insights	Build CRM Analytics dashboards and apps	04/12/2022, 10:13 am	Classic	✓
3	App Launcher	AppLauncher	App Launcher tabs	04/12/2022, 10:13 am	Classic	✓
4	Bolt Solutions	LightningBolt	Discover and manage business solutions designed for your industry.	04/12/2022, 10:16 am	Lightning	✓
5	Chatter Desktop	Chatter_Desktop	Chatter Desktop is an Adobe AIR-based desktop application that lets Chatter users stay connecte...	29/12/2022, 4:04 pm	Connected (Managed)	
6	Chatter Mobile for BlackBer...	Chatter_for_BlackBerry	The Salesforce.com Chatter Mobile app lets you access Chatter data on the go. Use it to view fee...	29/12/2022, 4:05 pm	Connected (Managed)	
7	College Management System	Nadeem	demo app	08/12/2022, 4:16 pm	Lightning	✓
8	Community	Community	Salesforce CRM Communities	04/12/2022, 10:13 am	Classic	✓
9	Content	Content	Salesforce CRM Content	04/12/2022, 10:13 am	Classic	✓
10	Data Manager	DataManager	Use Data Manager to view limits, monitor usage, and manage recipes.	04/12/2022, 10:13 am	Lightning	✓

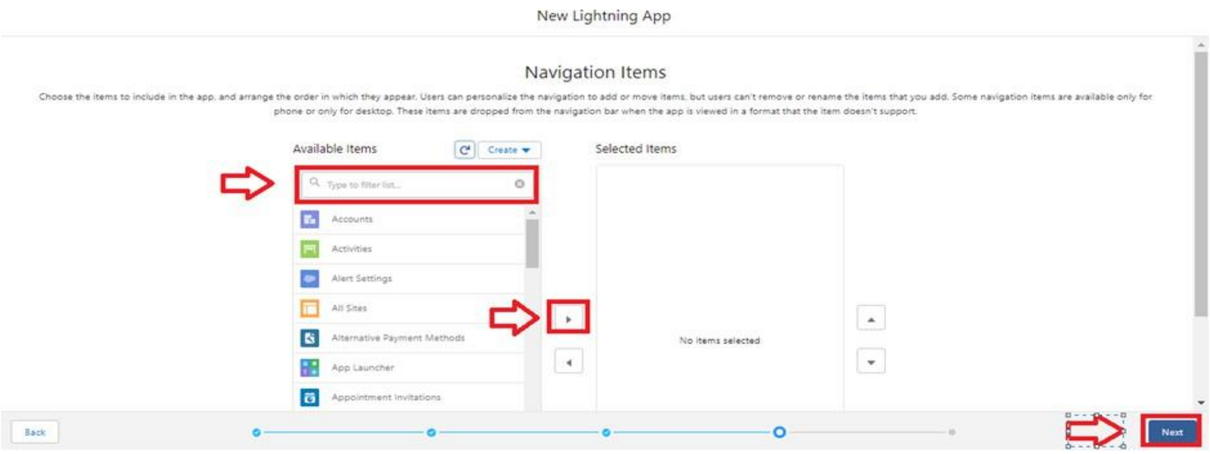
2.Fill the app name in app details as Garage Management Application →Next → (App option page) keep it as default → Next → (Utility Items) keep it as default → Next



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

□ Use the app's image and color instead of the org's custom theme

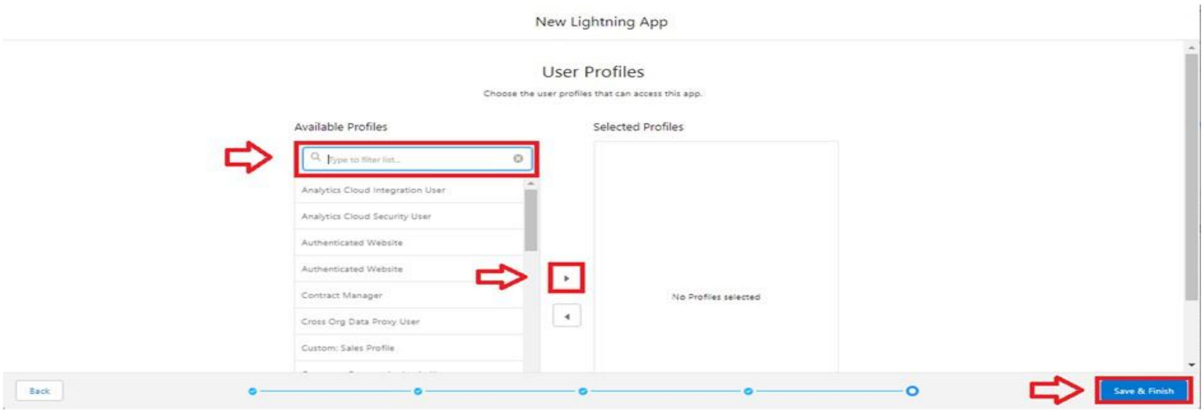
3.To Add Navigation Items : Select the items (Customer Details,Appointments, Service records, Billing details and feedback, Reports and Dashboards) from the search bar and move it using the arrow button



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.

→ Next.

4.To Add User Profiles: Search profiles (System administrator) in the search bar → click on the arrow button → save & finish.



New Lightning App

User Profiles

Choose the user profiles that can access this app.

Available Profiles

- Analytics Cloud Integration User
- Analytics Cloud Security User
- Authenticated Website
- Authenticated Website
- Contract Manager
- Cross Org Data Proxy User
- Custom: Sales Profile

Selected Profiles

No Profiles selected

Fields and Relationship

What is Fields ?

When we talk about Salesforce, Fields represent the data stored in the columns of a relational database. It can also hold any valuable information that you require for a specific object. Hence, the overall searching, deletion, and editing of the records become simpler and quicker.

Types of Fields

1.Standard Fields

2.Custom Fields

Standard Fields:

As the name suggests, the Standard Fields are the predefined fields in Salesforce that perform a standard task. The main point is that you can’t simply delete a Standard Field until it is a non-required standard field. Otherwise, users have the option to delete them at any point from the application freely. Moreover, we have some fields that you will find common in every Salesforce application. They are,

- Created By
- Owner
- Last Modified
- Field Made During object Creation

Custom Fields:

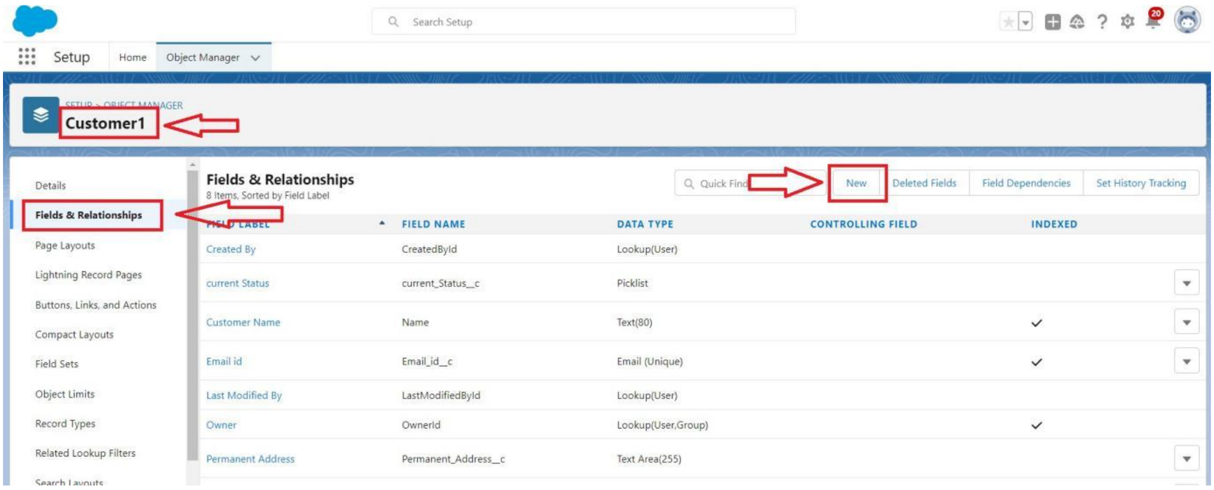
On the other side of the coin, Custom Fields are highly flexible, and users can change them according to requirements. Moreover, each organiser or company can use them if necessary. It means you need not always include them in the records, unlike Standard fields. Hence, the final decision depends on the user, and he can add/remove Custom Fields of any given form.

Creation of fields for the Customer Details object

To create fields in an object:

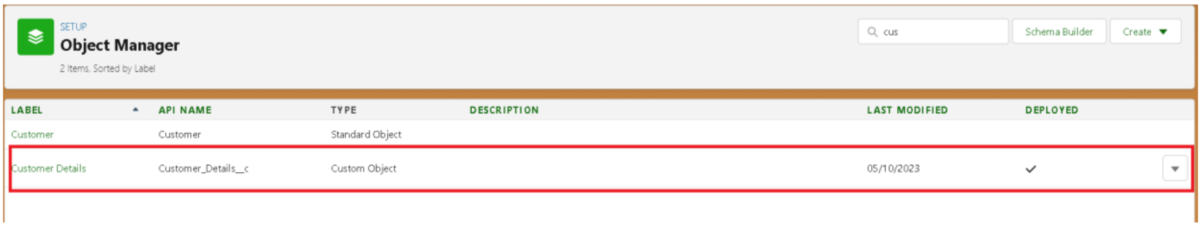
1.Go to setup → click on Object Manager → type object name(Customer Details) in search bar → click on the object.

2.Now click on “Fields & Relationships” → New



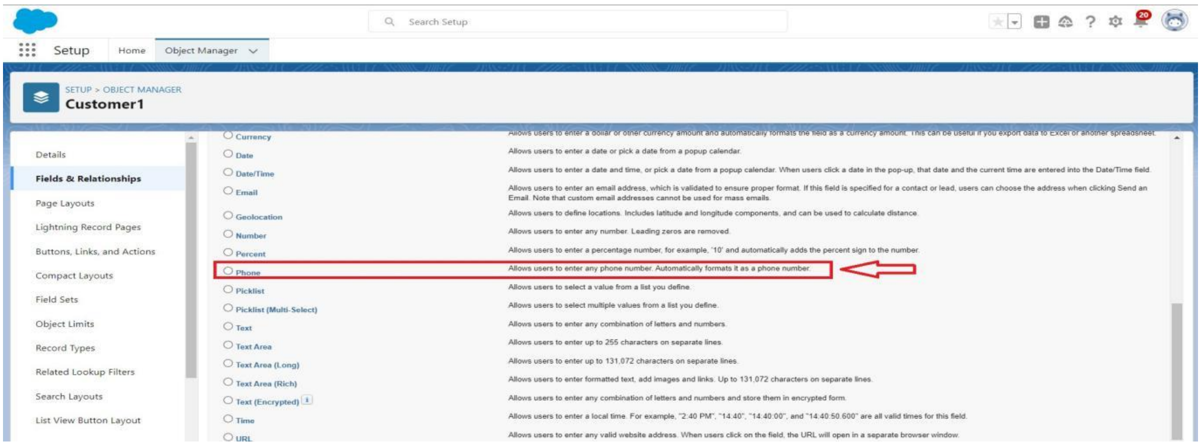
Fields & Relationships
8 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
current Status	current_Status__c	Picklist		
Customer Name	Name	Text(80)		✓
Email id	Email_id__c	Email (Unique)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Permanent Address	Permanent_Address__c	Text Area(255)		



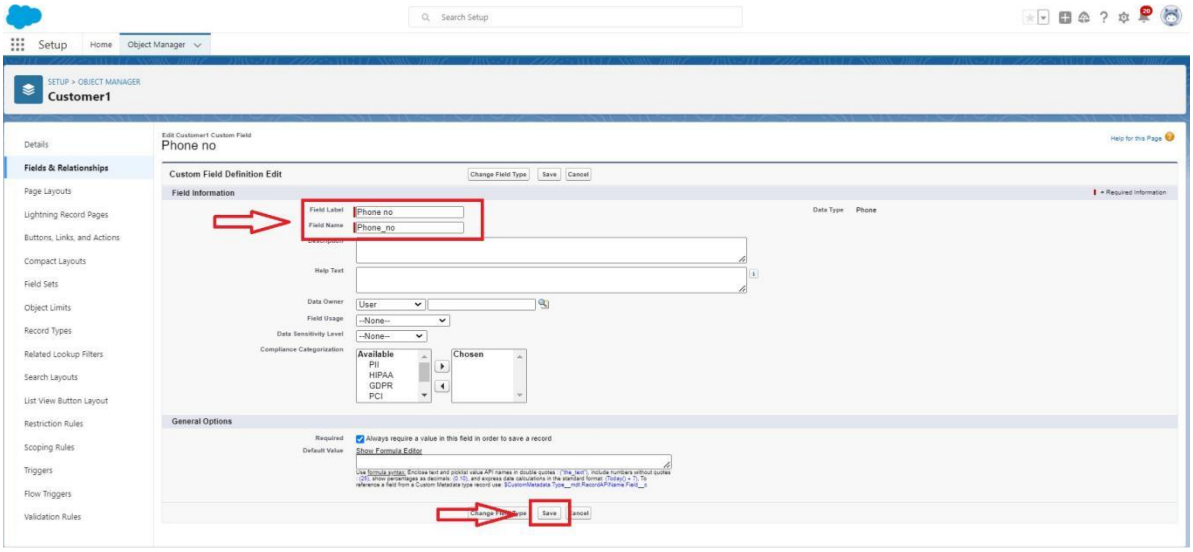
LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Customer	Customer	Standard Object			
Customer Details	Customer_Details__c	Custom Object		05/10/2023	✓

3.Select Data Type as a "Phone"



○ Currency	Allows users to enter a dollar or other currency amount and automatically formats the field as a currency amount. This can be useful if you export data to Excel or another spreadsheet.
○ Date	Allows users to enter a date or pick a date from a popup calendar.
○ Date/Time	Allows users to enter a date and time, or pick a date from a popup calendar. When users click a date in the pop-up, that date and the current time are entered into the Date/Time field.
○ Email	Allows users to enter an email address, which is validated to ensure proper format. If this field is specified for a contact or lead, users can choose the address when clicking Send an Email. Note that custom email addresses cannot be used for mass emails.
○ Geolocation	Allows users to define locations. Includes latitude and longitude components, and can be used to calculate distance.
○ Number	Allows users to enter any number. Leading zeros are removed.
○ Percent	Allows users to enter a percentage number, for example, '10' and automatically adds the percent sign to the number.
○ Phone	Allows users to enter any phone number. Automatically formats it as a phone number.
○ Picklist	Allows users to select a value from a list you define.
○ Picklist (Multi-Select)	Allows users to select multiple values from a list you define.
○ Text	Allows users to enter any combination of letters and numbers.
○ Text Area	Allows users to enter up to 255 characters on separate lines.
○ Text Area (Long)	Allows users to enter up to 131,072 characters on separate lines.
○ Text Area (Rich)	Allows users to enter formatted text, add images and links. Up to 131,072 characters on separate lines.
○ Text (Encrypted)	Allows users to enter any combination of letters and numbers and store them in encrypted form.
○ Time	Allows users to enter a local time. For example, "2:40 PM", "14:40", "14:40:00", and "14:40:50.600" are all valid times for this field.
○ URL	Allows users to enter any valid website address. When users click on the field, the URL will open in a separate browser window.

4.Click on next.



Edit Customer1 Custom Field

Phone no

Custom Field Definition Edit

Field Information

= Required Information

Field Label: Phone no

Field Name: Phone_no

Description:

Help Text:

Data Type: Phone

Data Owner: User

Field Usage: --None--

Data Sensitivity Level: --None--

Compliance Categorization: Available: PII, HIPAA, GDPR, PCI; Chosen:

General Options

Required: ☑ Always require a value in this field in order to save a record

Default Value: Show Formula Editor

Use formula syntax: Enclose text and picklist value API names in double quotes : ("the_text"), include numbers without quotes : (25), show percentages as decimals: (0.10), and express date calculations in the standard format: (Today() + 7). To reference a field from a Custom Metadata type record use: $CustomMetadata.Type__mdt.RecordAPIName.Field__c

5.Fill the Above as following:

- Field Label: Phone number

- Field Name : gets auto generated
- Click on Next → Next → Save and new

Note: Follow the above steps for the remaining field for the same object.

To create another fields in an object:

1.Go to setup → click on Object Manager → type object name(Customer Details) in search bar → click on the object.

2.Now click on “Fields & Relationships” → New

3.Select Data type as a “Email” and Click on Next

4.Fill the Above as following:

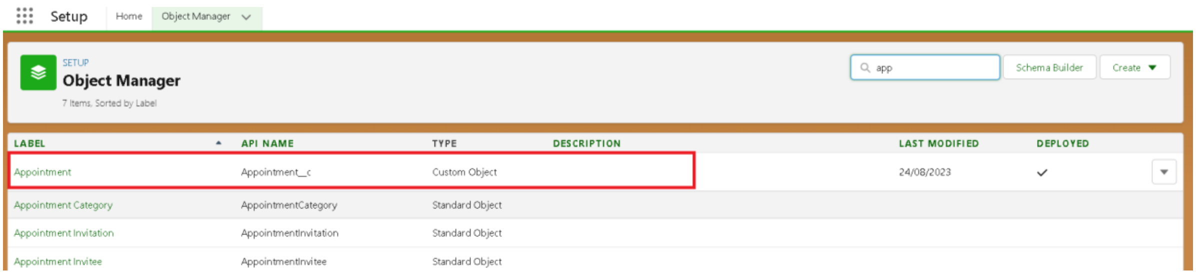
- Field Label : Gmail
- Field Name : gets auto generated

5.Click on Next → Next → Save and new.

Creation of Lookup Fields:

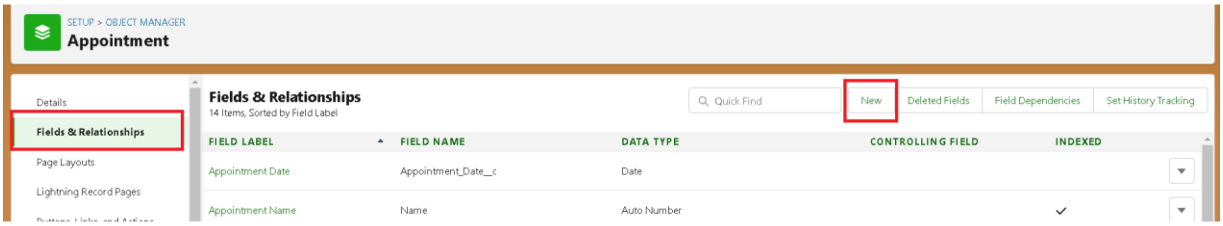
Creation of Lookup Field on Appointment Object :

1.Go to setup → click on Object Manager → type object name(Appointment) in the search bar → click on the object.



LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Appointment	Appointment__c	Custom Object		24/08/2023	✓
Appointment Category	AppointmentCategory	Standard Object			
Appointment Invitation	AppointmentInvitation	Standard Object			
Appointment Invitee	AppointmentInvitee	Standard Object			

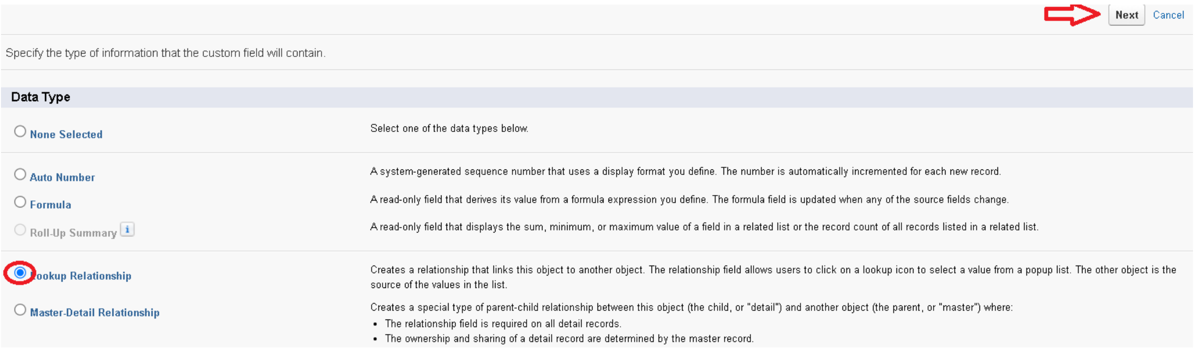
2.Now click on “Fields & Relationships” → New



Fields & Relationships
14 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Appointment Date	Appointment_Date__c	Date		
Appointment Name	Name	Auto Number		✓

3.Select “Look-up relationship” as data type and click Next.



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

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	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.

4.Select the related object “ Customer Details” and click next.

5.Next → Next → Save.

Creation of Lookup Field on Service records Object :

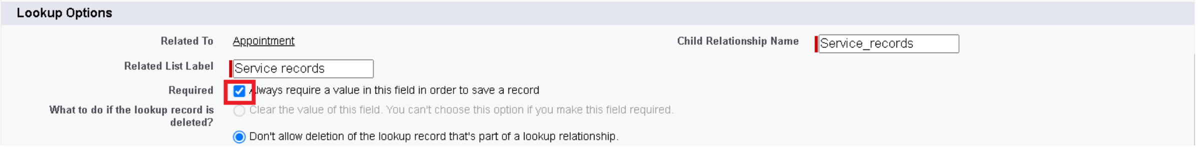
1.Go to setup → click on Object Manager → type object name(Service records) in search bar → click on the object.

2.Now click on “Fields & Relationships” → New

3.Select “Look-up relationship” as data type and click Next.

4.Select the related object “ Appointment ” and click next.

5.Make it a required field so click on Required.



Lookup Options

Related To: Appointment

Child Relationship Name: Service_records

Related List Label: Service records

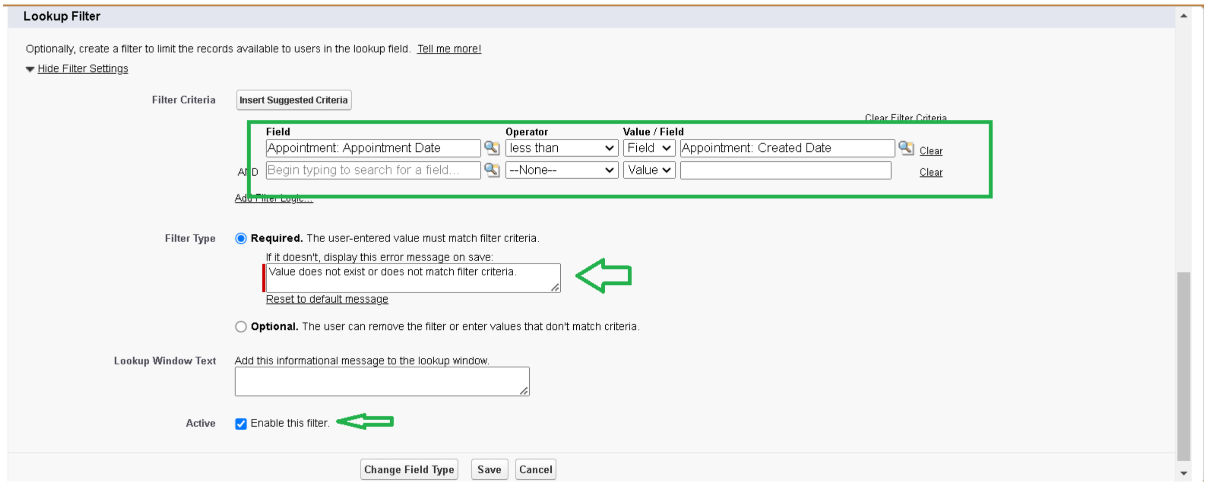
Required: ☑ Always require a value in this field in order to save a record

What to do if the lookup record is deleted?
○ Clear the value of this field. You can't choose this option if you make this field required.
● Don't allow deletion of the lookup record that's part of a lookup relationship.

6.Scroll down for Lookup Filter and click on Show filter settings.

7.Now add the filter criteria.

8.Field : Appointment: Appointment Date → Operator : less than →select field → Appointment: Created Date
9.Filter type should be Required.



Lookup Filter

Optionally, create a filter to limit the records available to users in the lookup field. Tell me more!

Hide Filter Settings

Filter Criteria: Insert Suggested Criteria

Clear Filter Criteria

	Field	Operator	Value / Field		
	Appointment: Appointment Date	less than	Field	Appointment: Created Date	Clear
AND	Begin typing to search for a field...	--None--	Value		Clear

Add Filter Logic...

Filter Type: ● **Required.** The user-entered value must match filter criteria.
If it doesn't, display this error message on save:
Value does not exist or does not match filter criteria.
Reset to default message

○ **Optional.** The user can remove the filter or enter values that don't match criteria.

Lookup Window Text: Add this informational message to the lookup window.

Active: ☑ Enable this filter.

10.Error Message : Value does not match the criteria.

11.Enable the filter by click on Active.

12.Next → Next → Save.

Creation of Lookup Field on Billing details and feedback Object :

1.Go to setup → click on Object Manager → type object name(Billing details and feedback) in search bar → click on the object.

2.Now click on “Fields & Relationships” → New

3.Select “Look-up relationship” as data type and click Next.

4.Select the related object “ Service records” and click next.

5.Next → Next → Save & new.

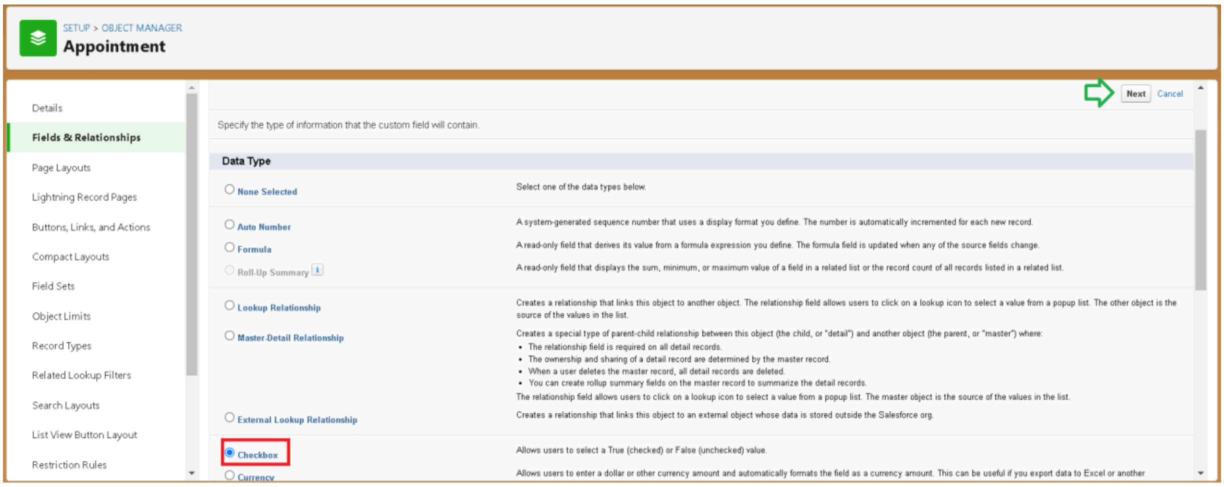
Creation of Checkbox Fields:

Creation of Checkbox Field on Appointment Object :

1.Go to setup → click on Object Manager → type object name(Appointment) in search bar → click on the object.

2.Now click on “Fields & Relationships” → New

3.Select “Check box” as data type and click Next.



SETUP > OBJECT MANAGER

Appointment

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

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 — 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.

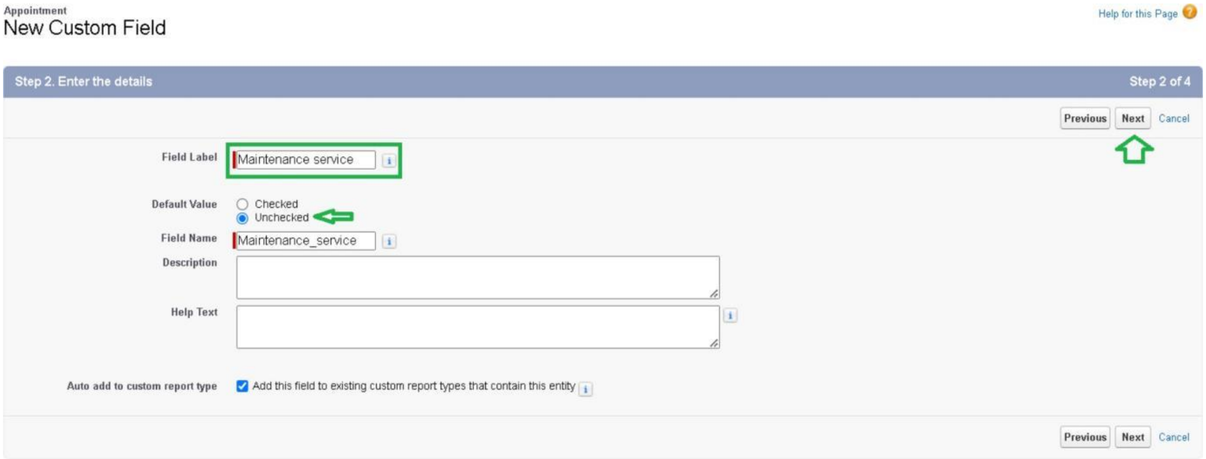
● Checkbox — Allows users to select a True (checked) or False (unchecked) value.

○ Currency — Allows users to enter a dollar or other currency amount and automatically formats the field as a currency amount. This can be useful if you export data to Excel or another

4.Give the Field Label : Maintenance service

5.Field Name : is auto populated

6.Default value : unchecked



Appointment

New Custom Field

Step 2. Enter the details — Step 2 of 4

Field Label: Maintenance service

Default Value: ○ Checked ● Unchecked

Field Name: Maintenance_service

Description:

Help Text:

Auto add to custom report type: ☑ Add this field to existing custom report types that contain this entity

7.Click on next → next → save.

Creation of Another Checkbox Fields on Appointment Object :

8.Repeat the steps form 1 to 3.

9.Give the Field Label : Repairs

10.Field Nme : is auto populated

11.Default value : unchecked

12.Click on next → next → save.

13.Follow the same and create another checkbox with given names

14.Give the Field Label : Replacement Parts

15.Field Nme : is auto populated

16.Default value : unchecked

17.Click on next → next → save.

Creation of Checkbox Field on Service records Object :

1.Go to setup → click on Object Manager → type object name(Service records) in search bar → click on the object.

2.Now click on "Fields & Relationships" → New.

3.Select "Check box" as data type and click Next.

4.Give the Field Label : Quality Check Status

5.Field Nme : is auto populated

6.Default value : unchecked

7.Click on next → next → save

Creation of date Fields:

Creation of Date Field on Appointment Object :

1.Go to setup → click on Object Manager → type object name(Appointment) in the search bar → click on the object.

2.Now click on “Fields & Relationships” → New.

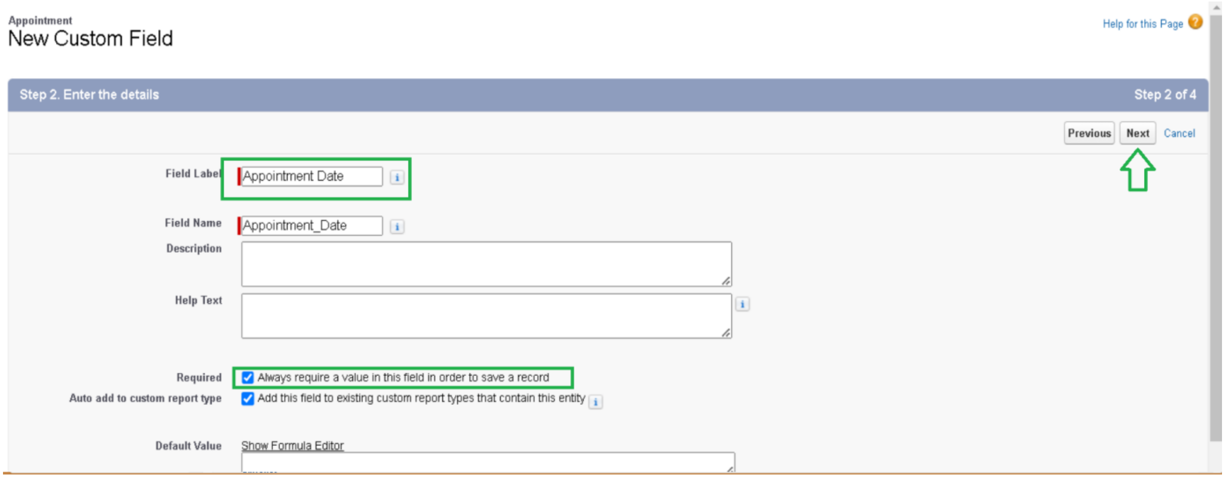
3.Select “Date” as data type and click Next.

4.Give the Field Label : Appointment Date

5.Field Nme : is auto populated

6.Make it as a Required field by clicking on the Required option.

7.Click on next → next → save.



Appointment

New Custom Field

Step 2. Enter the details

Step 2 of 4

Field Label: Appointment Date

Field Name: Appointment_Date

Description:

Help Text:

Required: ☑ Always require a value in this field in order to save a record

Auto add to custom report type: ☑ Add this field to existing custom report types that contain this entity

Default Value:

Creation of Currency Fields:

Creation of Currency Field on Appointment Object :

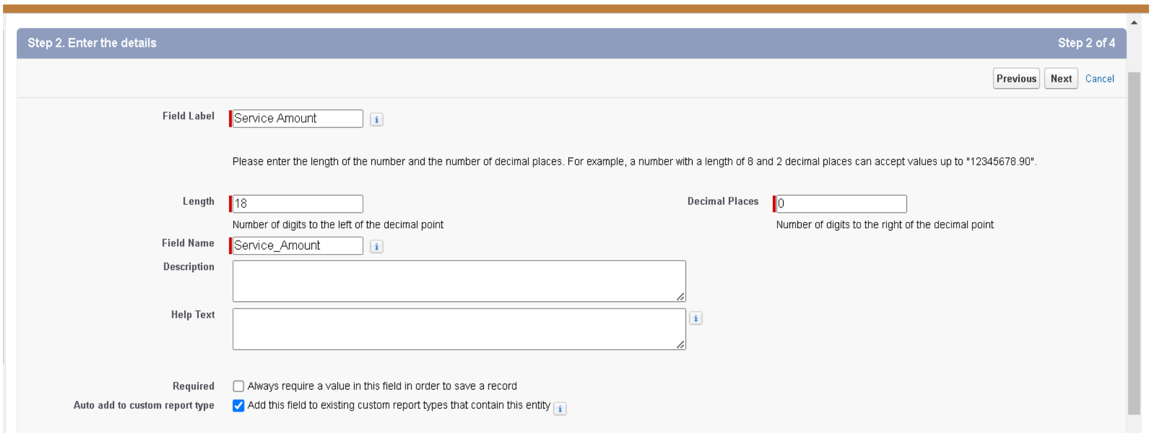
1.Go to setup → click on Object Manager → type object name(Appointment) in the search bar → click on the object.

2.Now click on “Fields & Relationships” → New.

3.Select “Currency” as data type and click Next.

4.Give the Field Label : Service Amount

5.Field Nme : is auto populated



Field Label: Service Amount

Please enter the length of the number and the number of decimal places. For example, a number with a length of 8 and 2 decimal places can accept values up to "12345678.90".

Length: 18
Number of digits to the left of the decimal point

Decimal Places: 0
Number of digits to the right of the decimal point

Field Name: Service_Amount

Description:

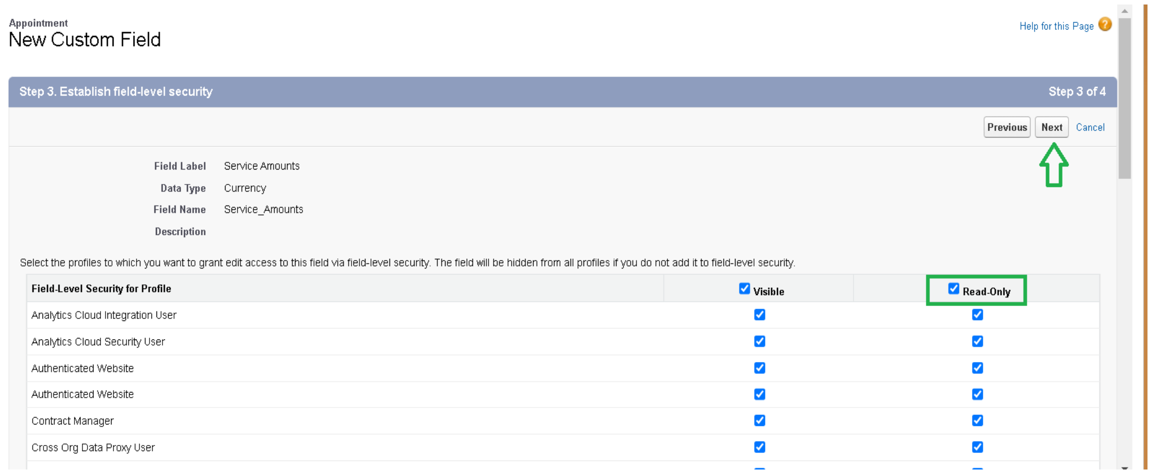
Help Text:

Required: □ Always require a value in this field in order to save a record

Auto add to custom report type: ☑ Add this field to existing custom report types that contain this entity

6.Click on next

7.Give read only for all the profiles in field level security for profile.



Step 3. Establish field-level security — Step 3 of 4

Field Label: Service Amounts

Data Type: Currency

Field Name: Service_Amounts

Description:

Select the profiles to which you want to grant edit access to this field via field-level security. The field will be hidden from all profiles if you do not add it to field-level security.

Field-Level Security for Profile	☑ Visible	☑ Read-Only
Analytics Cloud Integration User	☑	☑
Analytics Cloud Security User	☑	☑
Authenticated Website	☑	☑
Authenticated Website	☑	☑
Contract Manager	☑	☑
Cross Org Data Proxy User	☑	☑

8.Click on next → save.

Creation of Currency Field on Billing details and feedback Object :

1.Follow the same steps as mentioned above in Billing details and feedback Object.

2.Change the label name as mentioned.

3.Give the Field Label : Payment Paid

4.Field Nme : is auto populated

Creation of Text Fields:

1.Go to setup → click on Object Manager → type object name(Appointment) in the search bar → click on the object.

2.Now click on “Fields & Relationships” → New.

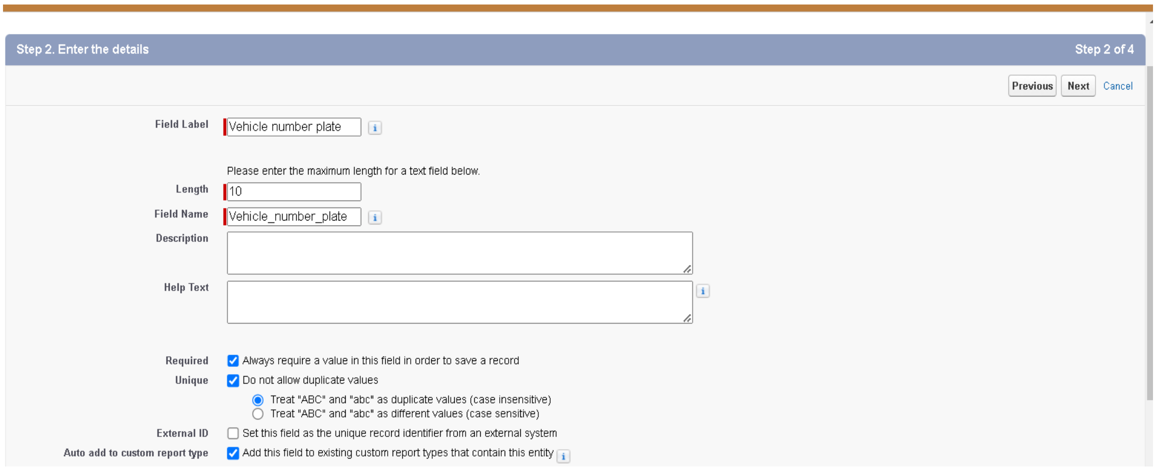
3.Select “Text” as data type and click Next.

4.Give the Field Label : Vehicle number plate

5.Field Name : is auto populated

6.Length : 10

7.Make the field as Required and Unique.



Field Label: Vehicle number plate

Please enter the maximum length for a text field below.

Length: 10

Field Name: Vehicle_number_plate

Description:

Help Text:

Required ☑ Always require a value in this field in order to save a record

Unique ☑ Do not allow duplicate values

● Treat "ABC" and "abc" as duplicate values (case insensitive)

○ Treat "ABC" and "abc" as different values (case sensitive)

External ID □ Set this field as the unique record identifier from an external system

Auto add to custom report type ☑ Add this field to existing custom report types that contain this entity

8.Click on next → next → save.

Creation of Text Fields in Billing details and feedback object :

1.Go to setup → click on Object Manager → type object name(Billing details and feedback) in search bar → click on the object.

2.Now click on “Fields & Relationships” → New.

3.Select “text” as data type and click Next.

4.Give the Field Label : Rating for service

5.Field Name : is auto populated

6.Length : 1

7.Make field as Required .

8.Click on next → next → save

Creation of Picklist Fields:

Creation of Picklist Fields in Service records object :

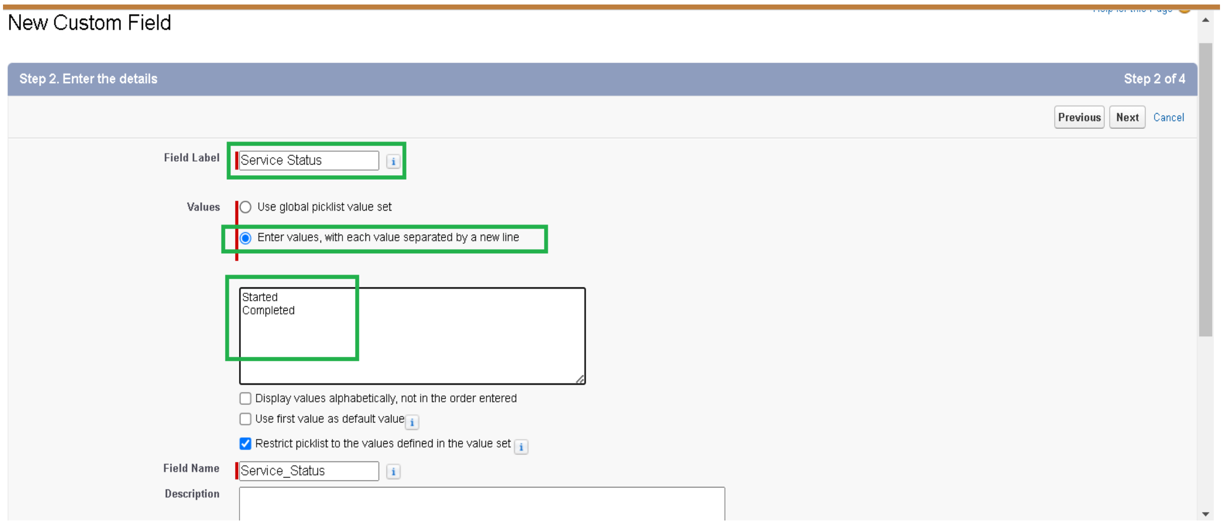
1.Go to setup → click on Object Manager → type object name(Service records) in search bar → click on the object.

2.Click on fields & relationship → click on New.

3.Select Data type as “Picklist” and click Next.

4.Enter Field Label as “Service Status”, under values select “Enter values, with each value separated by a new line" and enter values as shown below.

5.The values are: Started, Completed.



New Custom Field

Step 2. Enter the details — Step 2 of 4

Field Label: Service Status

Values:
○ Use global picklist value set
● Enter values, with each value separated by a new line

Started
Completed

□ 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: Service_Status

Description:

6.Click Next.

7.Next → Next → Save.

Creation of Picklist Fields in Billing details and feedback object :

1.Go to setup → click on Object Manager → type object name(Billing details and feedback) in search bar → click on the object.

2.Click on fields & relationship → click on New.

3.Select Data type as “Picklist” and click Next.

4.Enter Field Label as “Payment Status”, under values select “Enter values, with each value separated by a new line" and enter values as shown below.

5.The values are: Pending, Completed.

6.Click Next.

7.Next → Next → Save.

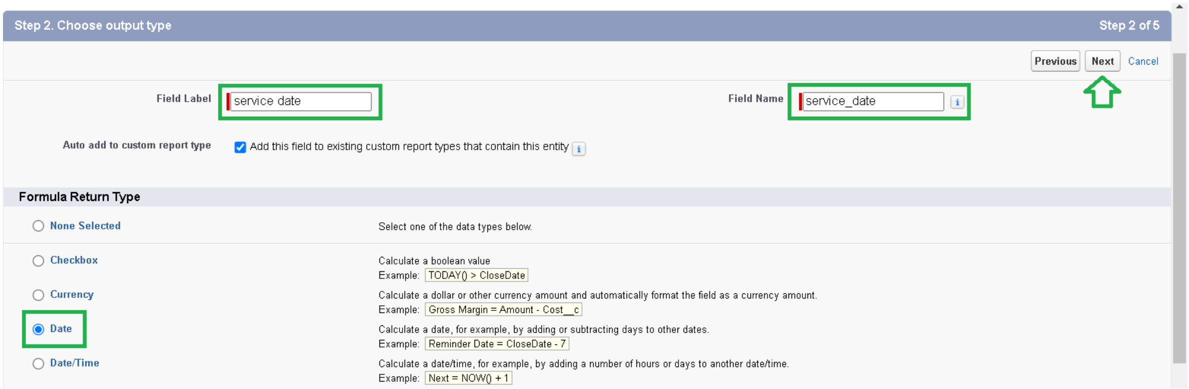
Creating Formula Field in Service records Object

1.Go to setup → click on Object Manager → type object name(Service records) in search bar → click on the object.

2.Click on fields & relationship → click on New.

3.Select Data type as “Formula” and click Next.

4.Give Field Label and Field Name as “service date” and select formula return type as “Date” and click next.



Step 2. Choose output type

Step 2 of 5

Field Label: service date

Field Name: service_date

Auto add to custom report type ☑ Add this field to existing custom report types that contain this entity

Formula Return Type

○ None Selected — Select one of the data types below.

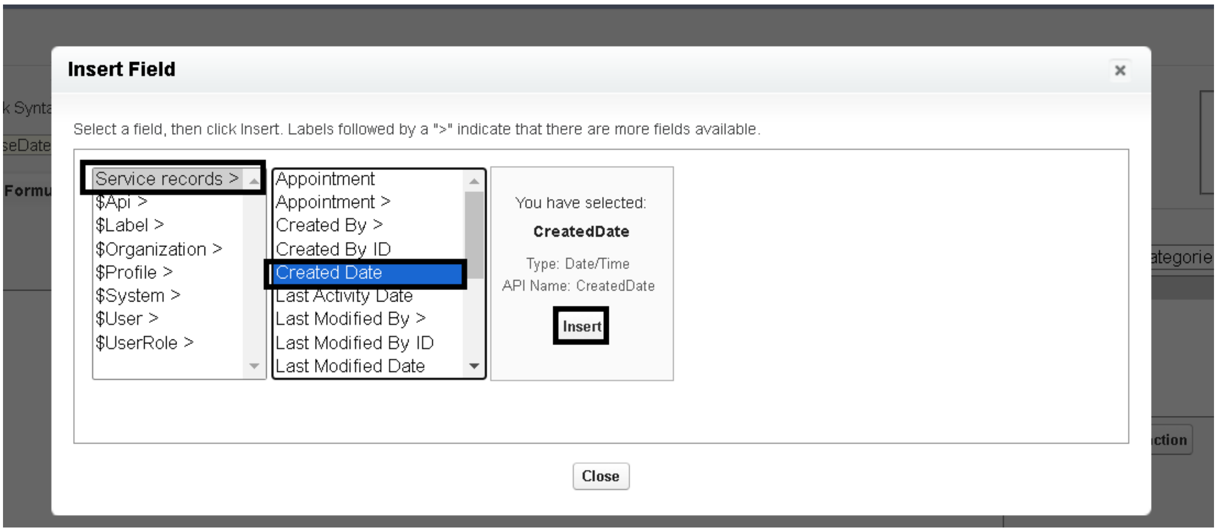
○ Checkbox — Calculate a boolean value
Example: TODAY() > CloseDate

○ 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: Reminder Date = CloseDate - 7

○ Date/Time — Calculate a date/time, for example, by adding a number of hours or days to another date/time.
Example: Next = NOW() + 1

5.Insert field formula should be : CreatedDate



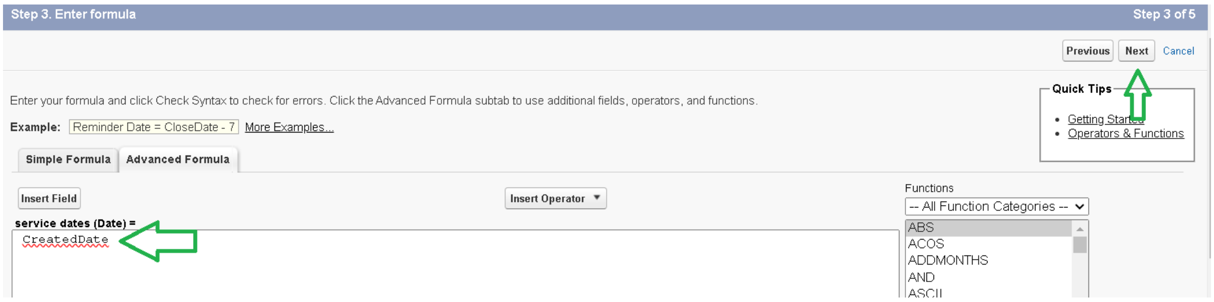
Insert Field

Select a field, then click Insert. Labels followed by a ">" indicate that there are more fields available.

Service records >
$Api >
$Label >
$Organization >
$Profile >
$System >
$User >
$UserRole >

Appointment
Appointment >
Created By >
Created By ID
Created Date
Last Activity Date
Last Modified By >
Last Modified By ID
Last Modified Date

You have selected:
CreatedDate
Type: Date/Time
API Name: CreatedDate



Step 3. Enter formula

Step 3 of 5

Enter your formula and click Check Syntax to check for errors. Click the Advanced Formula subtab to use additional fields, operators, and functions.

Example: Reminder Date = CloseDate - 7 More Examples...

service dates (Date) =

```
CreatedDate
```

Quick Tips
- Getting Started
- Operators & Functions

6.click “Check Syntax” .

7.Click next → next → Save.

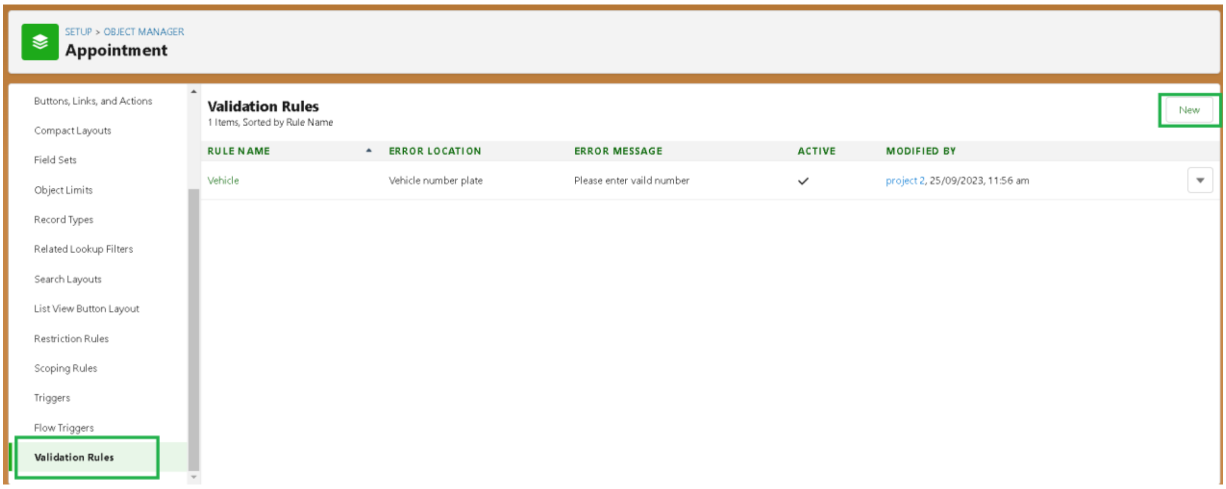
Validation rule

Validation rules are applied when a user tries to save a record and are used to check if the data meets specified criteria. If the criteria are not met, the validation rule triggers an error message and prevents the user from saving the record until the issues are resolved.

To create a validation rule to an Appointment Object

1.Go to the setup page → click on object manager → From drop down click edit for **Appointment** object.

2.Click on the validation rule → click New.



Validation Rules

1 Items, Sorted by Rule Name

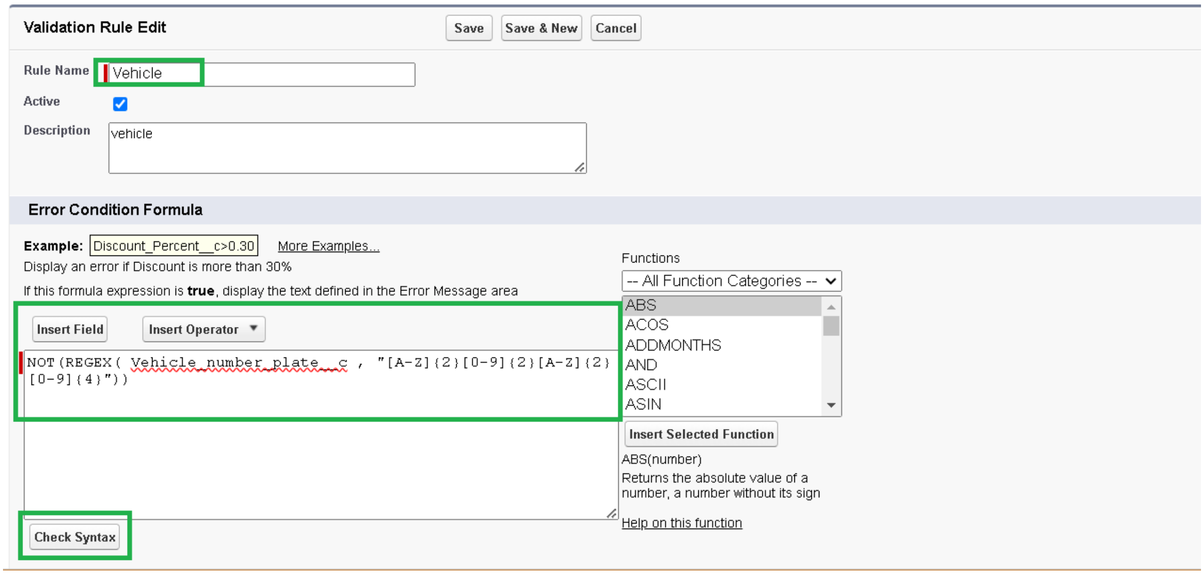
RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Vehicle	Vehicle number plate	Please enter vaild number	✓	project 2, 25/09/2023, 11:56 am

3.Enter the Rule name as “ Vehicle ”.

4.Insert the Error Condition Formula as : -

NOT(REGEX(Vehicle_number_plate c , "[A-Z]{2}[0-9]{2}[A-Z]{2}[0-9]{4}"))

5.Enter the Error Message as “Please enter vaild number ”, select the Error location as Field and select the field as “Vehicle number plate”, and click Save.



Rule Name: Vehicle

Active: ☑

Description: vehicle

Error Condition Formula

Example: Discount_Percent__c>0.30

Display an error if Discount is more than 30%

If this formula expression is **true**, display the text defined in the Error Message area

```
NOT(REGEX( Vehicle_number_plate__c , "[A-Z]{2}[0-9]{2}[A-Z]{2}[0-9]{4}"))
```

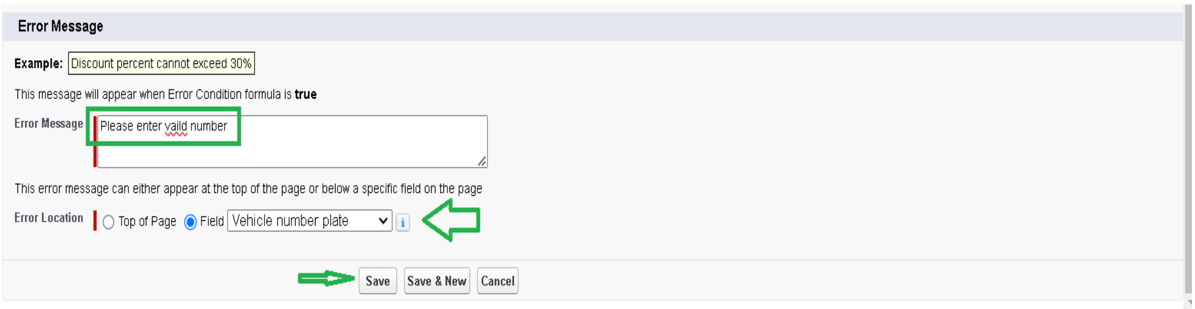
Functions: -- All Function Categories --

ABS
ACOS
ADDMONTHS
AND
ASCII
ASIN

ABS(number)

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

To create a validation rule to an Billing details and feedback Object



Example: Discount percent cannot exceed 30%

This message will appear when Error Condition formula is **true**

Error Message: Please enter vaild number

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 Vehicle number plate

1.Go to the setup page → click on object manager → From drop down click edit for **Billing details and feedback object.**

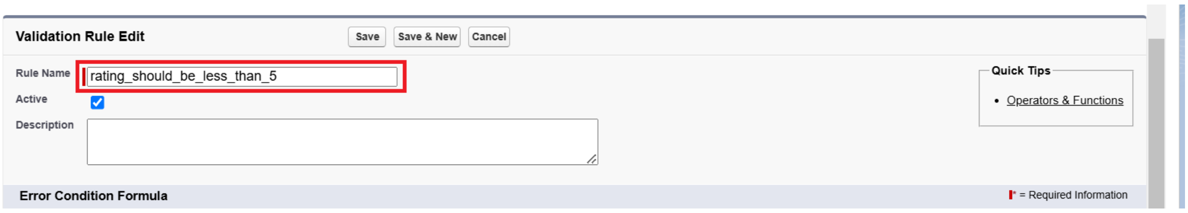
2..Click on the validation rule → click New.

3.Enter the Rule name as “ rating_should_be_less_than_5”.

4.Insert the Error Condition Formula as : -

NOT(REGEX(Rating_for_service c , "[1-5]{1}"))

5.Enter the Error Message as “rating should be from 1 to 5”, select the Error location as Field and select the field as “Rating for Service”, and click Save.



Rule Name: rating_should_be_less_than_5

Active: ☑

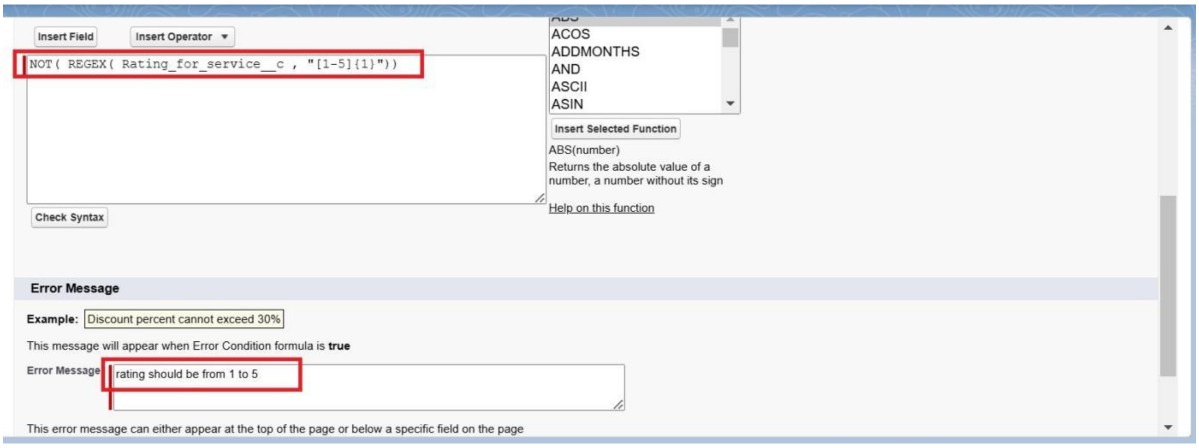
Description:

Duplicate rule

To create a matching rule to an Customer details Object

1.Go to quick find box in setup and search for matching Rule.

2.Click on matching rule → click on New Rule.



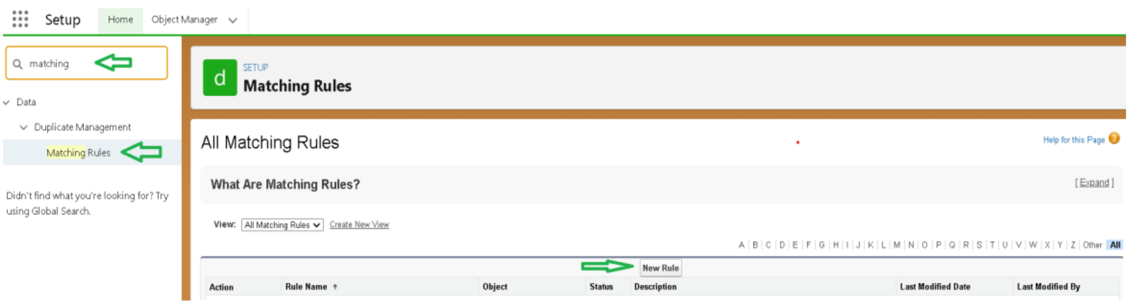
```
NOT( REGEX( Rating_for_service__c , "[1-5]{1}"))
```

Example: Discount percent cannot exceed 30%

This message will appear when Error Condition formula is **true**

Error Message: rating should be from 1 to 5

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

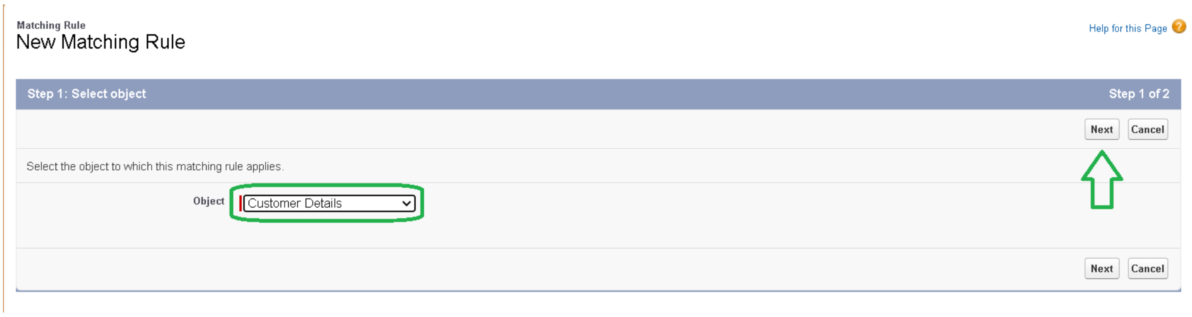


3.Select the object as Customer details and click Next.

4.Give the Rule name : Matching customer details

5.Unique name : is auto populated

6.Define the matching criteria as



Matching Rule

New Matching Rule

Help for this Page

Step 1: Select object — Step 1 of 2

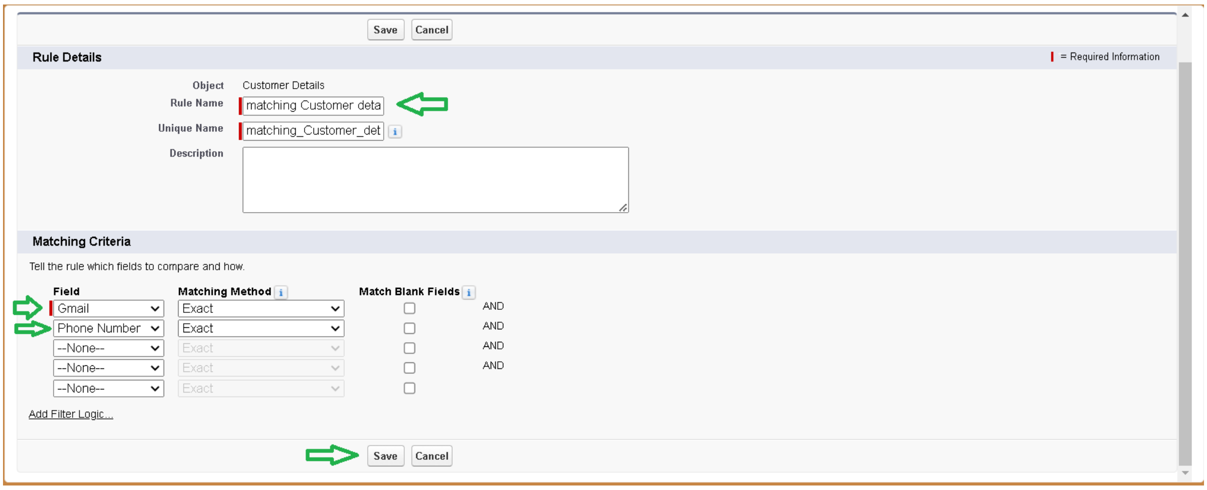
Select the object to which this matching rule applies.

Object: Customer Details

7. Field	Matching Method
1.Gmail	Exact
2.Phone Number	Exact

8.Click save.

9.After Saving Click on Activate.



Rule Details

| = Required Information

Object: Customer Details

Rule Name: matching Customer deta

Unique Name: matching_Customer_det

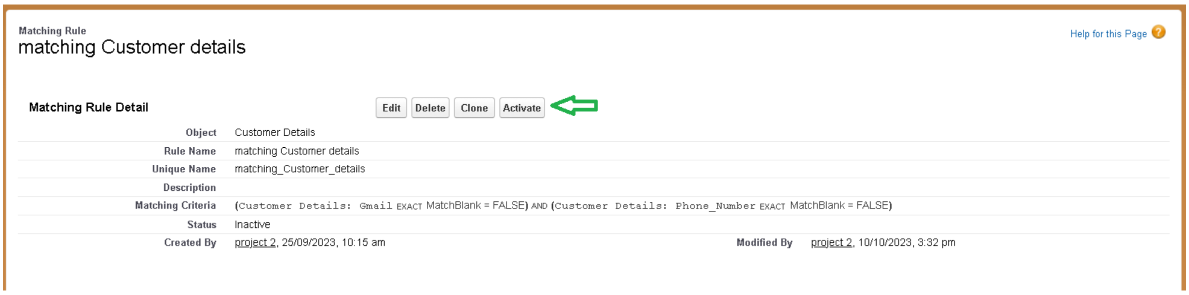
Description:

Matching Criteria

Tell the rule which fields to compare and how.

Field	Matching Method	Match Blank Fields	
Gmail	Exact	□	AND
Phone Number	Exact	□	AND
--None--	Exact	□	AND
--None--	Exact	□	AND
--None--	Exact	□	

Add Filter Logic...



Matching Rule

matching Customer details

Help for this Page

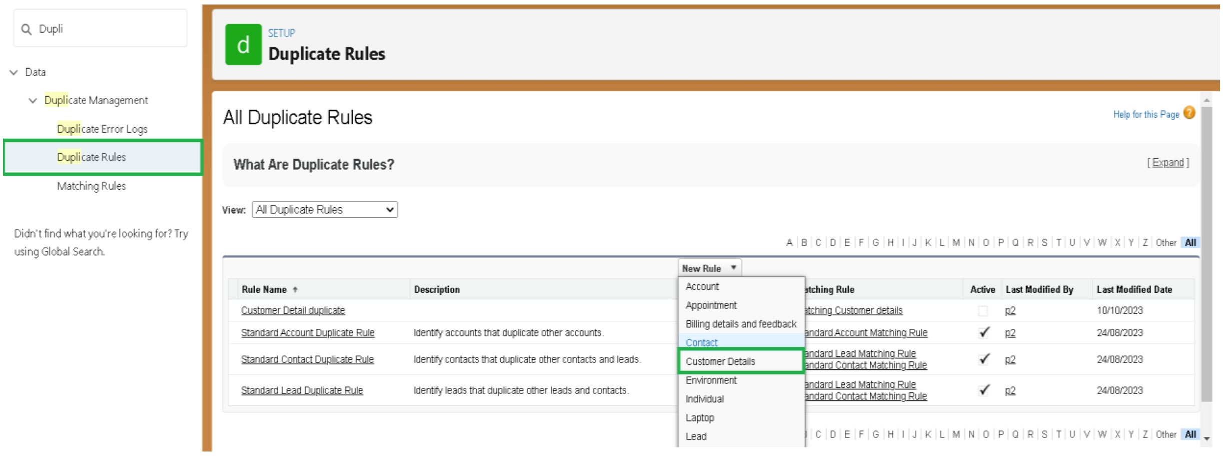
Matching Rule Detail

Object	Customer Details
Rule Name	matching Customer details
Unique Name	matching_Customer_details
Description	
Matching Criteria	(Customer Details: Gmail EXACT MatchBlank = FALSE) AND (Customer Details: Phone_Number EXACT MatchBlank = FALSE)
Status	Inactive
Created By	project 2, 25/09/2023, 10:15 am
Modified By	project 2, 10/10/2023, 3:32 pm

To create a Duplicate rule to an Customer details Object

1.Go to quick find box in setup and search for Duplicate rules.

2.Click on Duplicate rule → click on New Rule → select customer details object.



Dupli
Data
Duplicate Management
Duplicate Error Logs
Duplicate Rules
Matching Rules
Didn't find what you're looking for? Try using Global Search.
SETUP
Duplicate Rules

All Duplicate Rules

What Are Duplicate Rules? [Expand]

View: All Duplicate Rules

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 Rule ▼
Account
Appointment
Billing details and feedback
Contact
Customer Details
Environment
Individual
Laptop
Lead

Rule Name ↑	Description	atching Rule	Active	Last Modified By	Last Modified Date
Customer Detail duplicate		atching Customer details	□	p2	10/10/2023
Standard Account Duplicate Rule	Identify accounts that duplicate other accounts.	andard Account Matching Rule	✓	p2	24/08/2023
Standard Contact Duplicate Rule	Identify contacts that duplicate other contacts and leads.	andard Lead Matching Rule andard Contact Matching Rule	✓	p2	24/08/2023
Standard Lead Duplicate Rule	Identify leads that duplicate other leads and contacts.	andard Lead Matching Rule andard Contact Matching Rule	✓	p2	24/08/2023

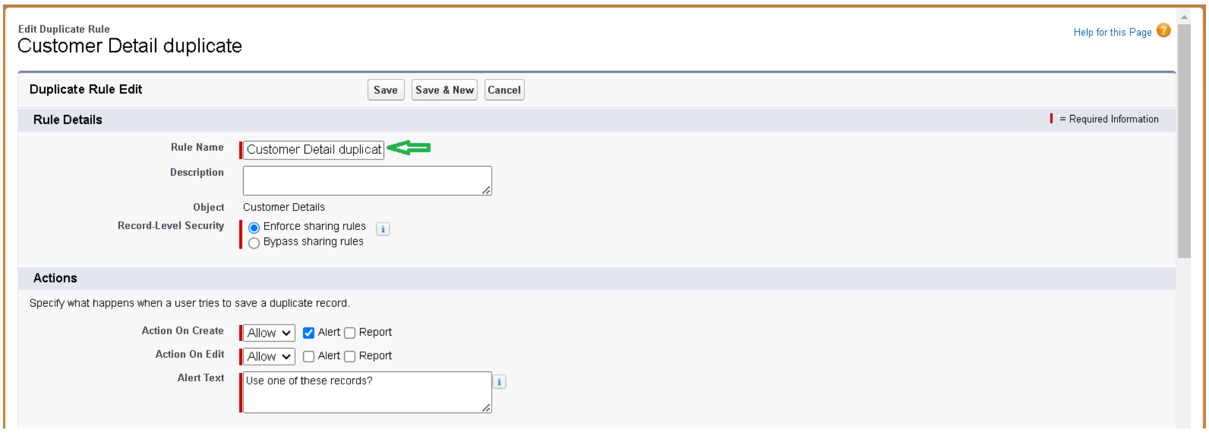
3.Give the Rule name as : Customer Detail duplicate

4.Scroll a little in Matching rule section

5.Select the matching rule : Matching customer details

6.And Click on save.

7.After saving the Duplicate Rule, Click on Activate.



Edit Duplicate Rule

Customer Detail duplicate

Duplicate Rule Edit

Rule Details

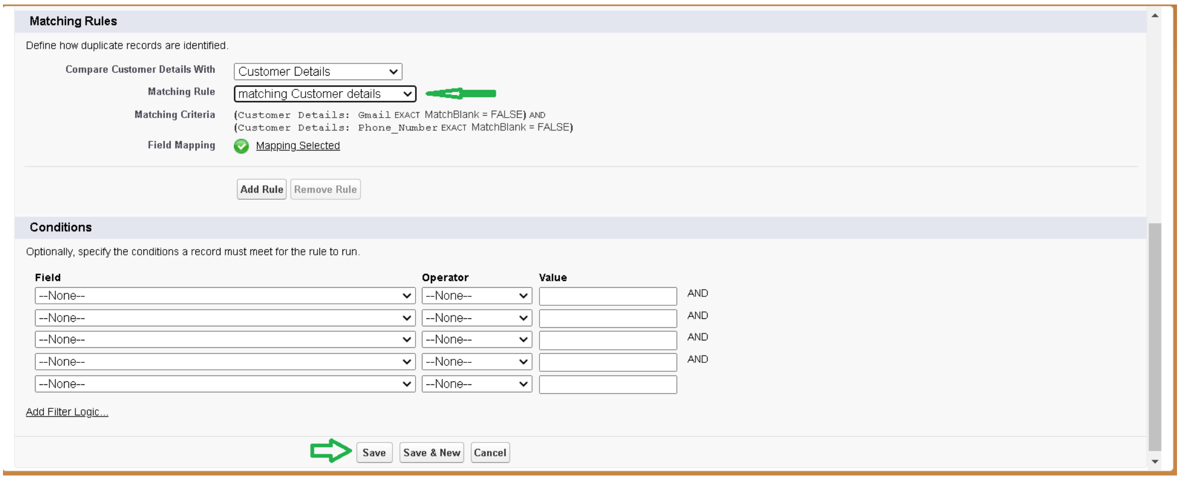
= Required Information

Rule Name	Customer Detail duplicat
Description	
Object	Customer Details
Record-Level Security	● Enforce sharing rules ○ Bypass sharing rules

Actions

Specify what happens when a user tries to save a duplicate record.

Action On Create	Allow ☑ Alert □ Report
Action On Edit	Allow □ Alert □ Report
Alert Text	Use one of these records?



Matching Rules

Define how duplicate records are identified.

Compare Customer Details With: Customer Details

Matching Rule: matching Customer details

Matching Criteria: (Customer Details: Gmail EXACT MatchBlank = FALSE) AND
(Customer Details: Phone_Number EXACT MatchBlank = FALSE)

Field Mapping: Mapping Selected

Conditions

Optionally, specify the conditions a record must meet for the rule to run.

Field	Operator	Value	
--None--	--None--		AND
--None--	--None--		AND
--None--	--None--		AND
--None--	--None--		AND
--None--	--None--		

Add Filter Logic...

Profiles

A profile is a group/collection of settings and permissions that define what a user can do in salesforce. Profile controls “Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP ranges. You can define profiles by the user's job function. For example System Administrator, Developer, Sales Representative.

Types of profiles in salesforce

1.Standard profiles:

By default salesforce provides below standard profiles.

- Contract Manager
- Read Only
- Marketing User
- Solutions Manager
- Standard User
- System Administrator.

We cannot deleted standard ones

Each of these standard ones includes a default set of permissions for all of the standard objects available on the platform.

Custom Profiles:

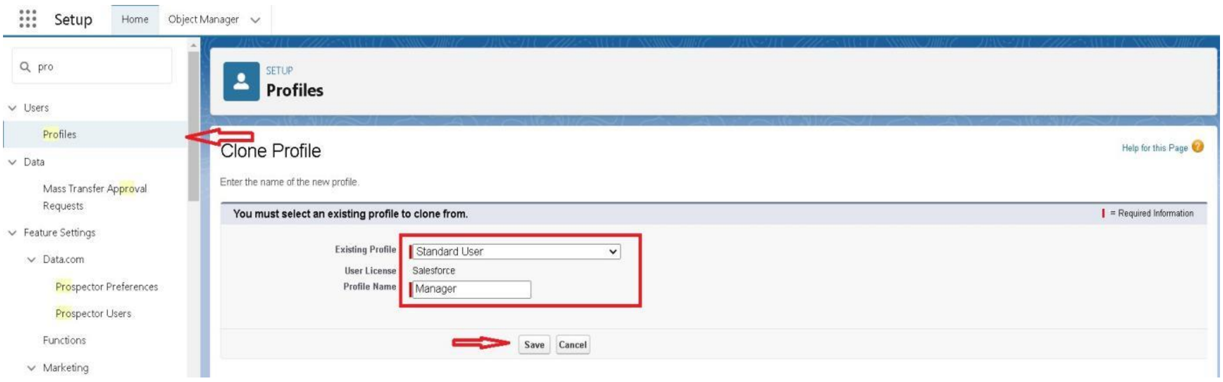
Custom ones defined by us.

They can be deleted if there are no users assigned with that particular one.

Manager Profile

To create a new profile:

1.Go to setup → type profiles in quick find box → click on profiles → clone the desired profile (Standard User) → enter profile name (Manager) → Save.



Clone Profile

Enter the name of the new profile.

You must select an existing profile to clone from.

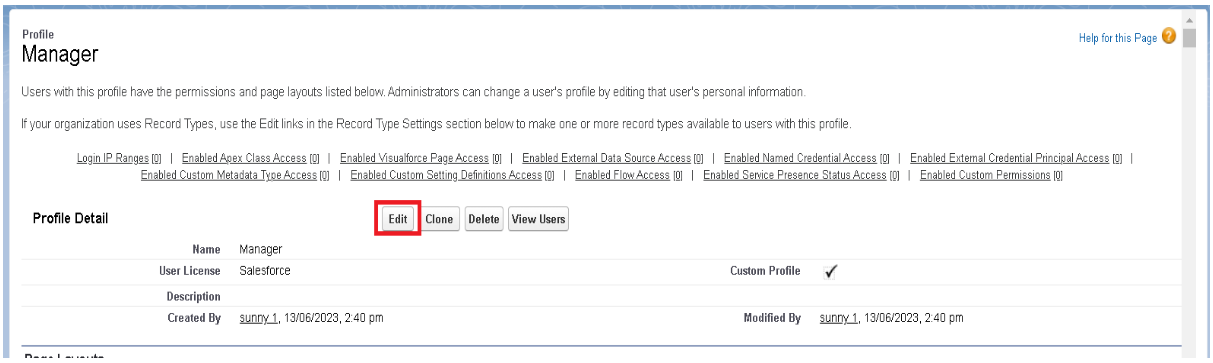
| = Required Information

Existing Profile: Standard User

User License: Salesforce

Profile Name: Manager

2.While still on the profile page, then click Edit.



Profile

Manager

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

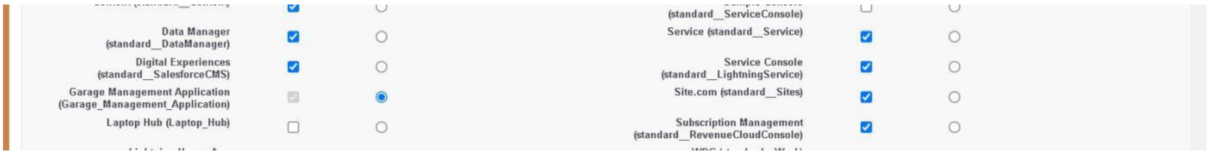
If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

Login IP Ranges [0] | Enabled Apex Class Access [0] | Enabled Visualforce Page Access [0] | Enabled External Data Source Access [0] | Enabled Named Credential Access [0] | Enabled External Credential Principal Access [0] | Enabled Custom Metadata Type Access [0] | Enabled Custom Setting Definitions Access [0] | Enabled Flow Access [0] | Enabled Service Presence Status Access [0] | Enabled Custom Permissions [0]

Profile Detail

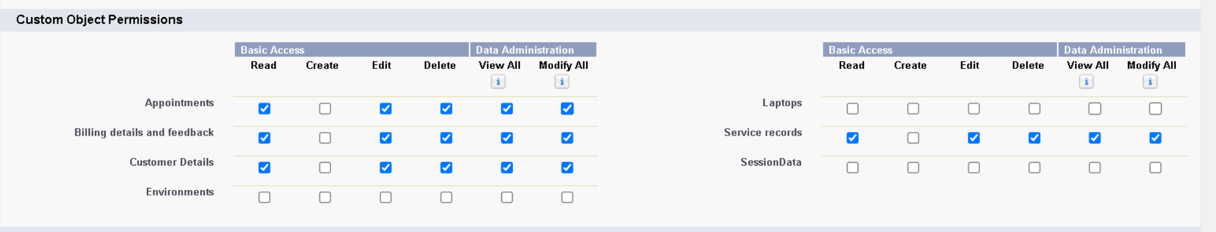
Name	Manager		
User License	Salesforce	Custom Profile	✓
Description			
Created By	sunny 1, 13/06/2023, 2:40 pm	Modified By	sunny 1, 13/06/2023, 2:40 pm

3.Select the Custom App settings as default for the Garage management.



	☑	○	(standard__ServiceConsole)	□	○
Data Manager (standard__DataManager)	☑	○	Service (standard__Service)	☑	○
Digital Experiences (standard__SalesforceCMS)	☑	○	Service Console (standard__LightningService)	☑	○
Garage Management Application (Garage_Management_Application)	☑	●	Site.com (standard__Sites)	☑	○
Laptop Hub (Laptop_Hub)	□	○	Subscription Management (standard__RevenueCloudConsole)	☑	○

4.Scroll down to Custom Object Permissions and Give access permissions for Appointments,Billing details and feedback , service records and customer details objects as mentioned in the below diagram.



Custom Object Permissions

	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Appointments	☑	□	☑	☑	☑	☑
Billing details and feedback	☑	□	☑	☑	☑	☑
Customer Details	☑	□	☑	☑	☑	☑
Environments	□	□	□	□	□	□

	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Laptops	□	□	□	□	□	□
Service records	☑	□	☑	☑	☑	☑
SessionData	□	□	□	□	□	□

5.Changing the session times out after should be “ 8 hours of inactivity”.

6.Change the password policies as mentioned :

7.User passwords expire in should be “ never expires ”.

8.Minimum password length should be “ 8 ”, and click save**.**

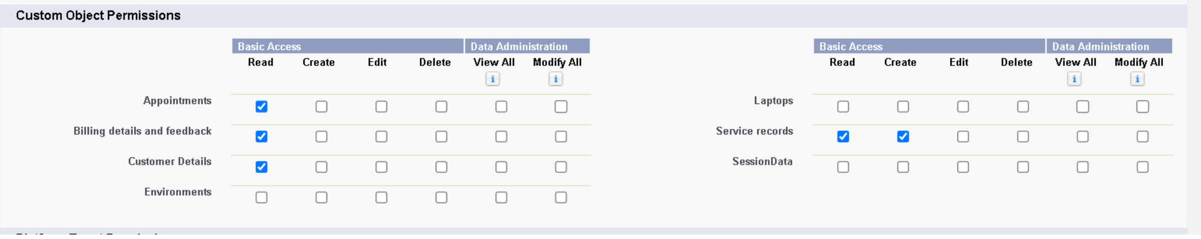
Sales Person Profile

1.Go to setup → type profiles in quick find box → click on profiles → clone the desired profile (Salesforce Platform User) → enter profile name (sales person) → Save.

2.While still on the profile page, then click Edit.

3.Select the Custom App settings as default for the Garage management.

4.Scroll down to Custom Object Permissions and Give access permissions for Appointments,Billing details and feedback , service records and customer details objects as mentioned in the below diagram**.**



Custom Object Permissions

	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Appointments	☑	☐	☐	☐	☐	☐
Billing details and feedback	☑	☐	☐	☐	☐	☐
Customer Details	☑	☐	☐	☐	☐	☐
Environments	☐	☐	☐	☐	☐	☐
Laptops	☐	☐	☐	☐	☐	☐
Service records	☑	☑	☐	☐	☐	☐
SessionData	☐	☐	☐	☐	☐	☐

5.And click save.

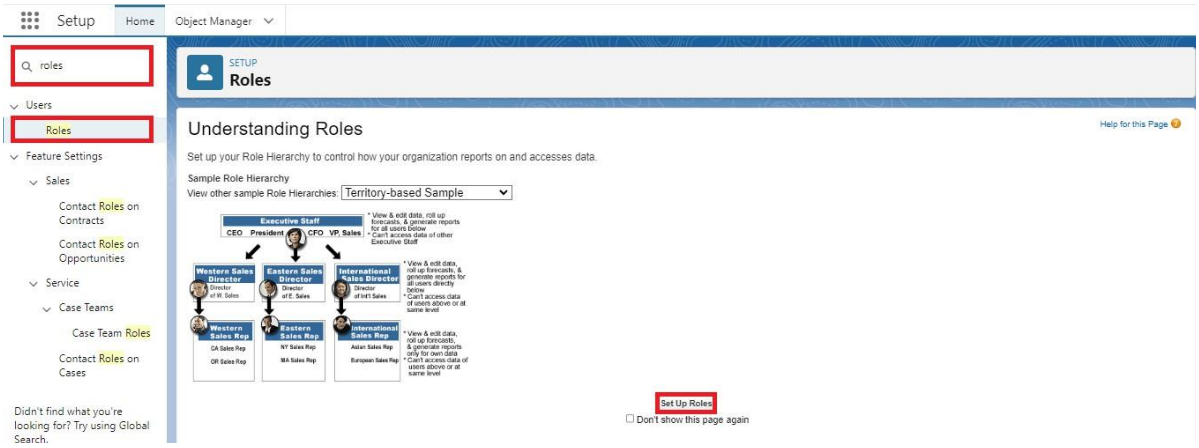
Role & Role Hierarchy

A role in Salesforce defines a user's visibility access at the record level. Roles may be used to specify the types of access that people in your Salesforce organization can have to data. Simply put, it describes what a user could see within the Salesforce organization.

Creating Manager Role

Creating Manager Role:

1.Go to quick find → Search for Roles → click on set up roles.



Understanding Roles

Set up your Role Hierarchy to control how your organization reports on and accesses data.

Sample Role Hierarchy

View other sample Role Hierarchies: Territory-based Sample

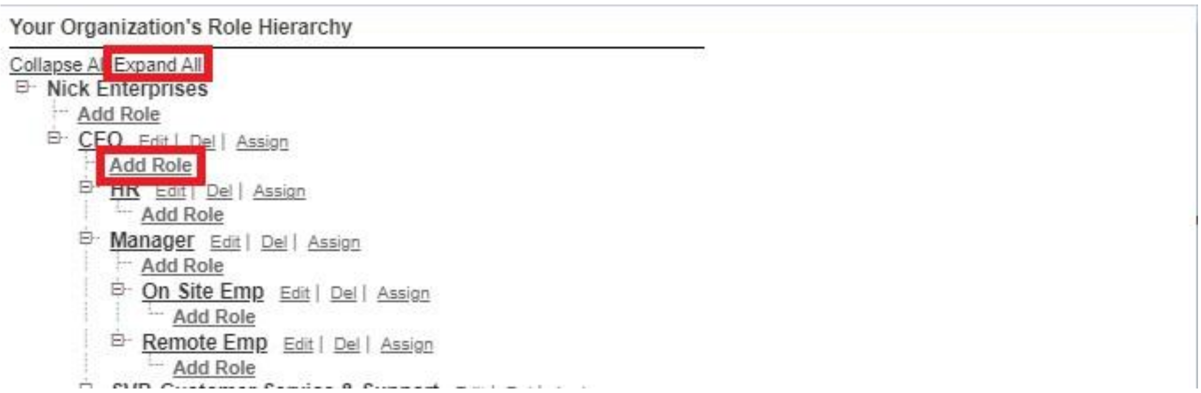
- View & edit data, roll up forecasts, & generate reports for all users below
- Can't access data of other Executive Staff

- View & edit data, roll up forecasts, & generate reports for all users directly below
- Can't access data of users above or at same level

- View & edit data, roll up forecasts, & generate reports only for own data
- Can't access data of users above or at same level

☐ Don't show this page again

2.Click on Expand All and click on add role under whom this role works

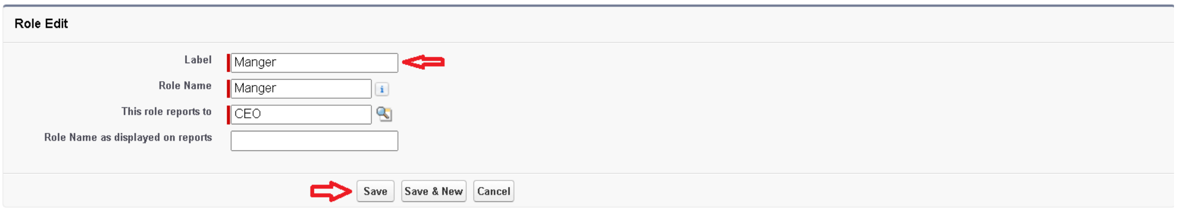


Your Organization's Role Hierarchy

Collapse All | Expand All

```
⊟ Nick Enterprises
   Add Role
  ⊟ CEO  Edit | Del | Assign
     Add Role
    ⊟ HR  Edit | Del | Assign
       Add Role
    ⊟ Manager  Edit | Del | Assign
       Add Role
      ⊟ On Site Emp  Edit | Del | Assign
         Add Role
      ⊟ Remote Emp  Edit | Del | Assign
         Add Role
    ⊟ SMB Customer Service & Support
```

3.Give Label as “Manager” and Role name gets auto populated. Then click on Save.



Role Edit

Label	Manger
Role Name	Manger
This role reports to	CEO
Role Name as displayed on reports	

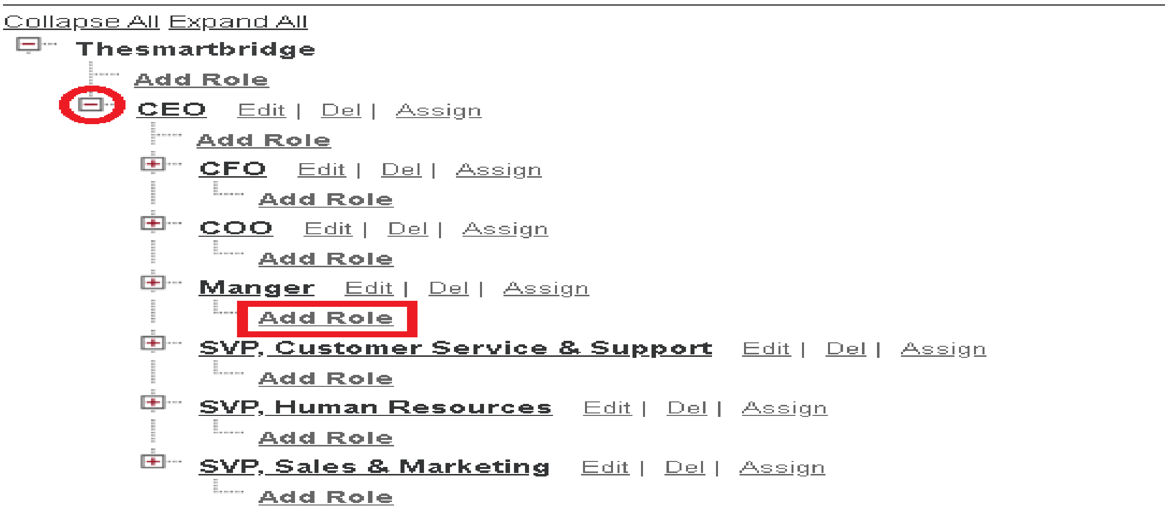
Creating another roles

Creating another two roles under manager

1.Go to quick find → Search for Roles → click on set up roles.

2.Click plus on CEO role, and click add role under manager.

3.Give Label as “sales person” and Role name gets auto populated. Then click on Save.



Users

A user is anyone who logs in to 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. The user account identifies the user, and the user account settings determine what features and records the user can access.

Create User

1.Go to setup → type users in quick find box → select users → click New user.

2.Fill in the fields

1.First Name : Niklaus

2.Last Name : Mikaelson

3.Alias : Give a Alias Name

4.Email id : Give your Personal Email id

5.Username : Username should be in this form: text@text.text

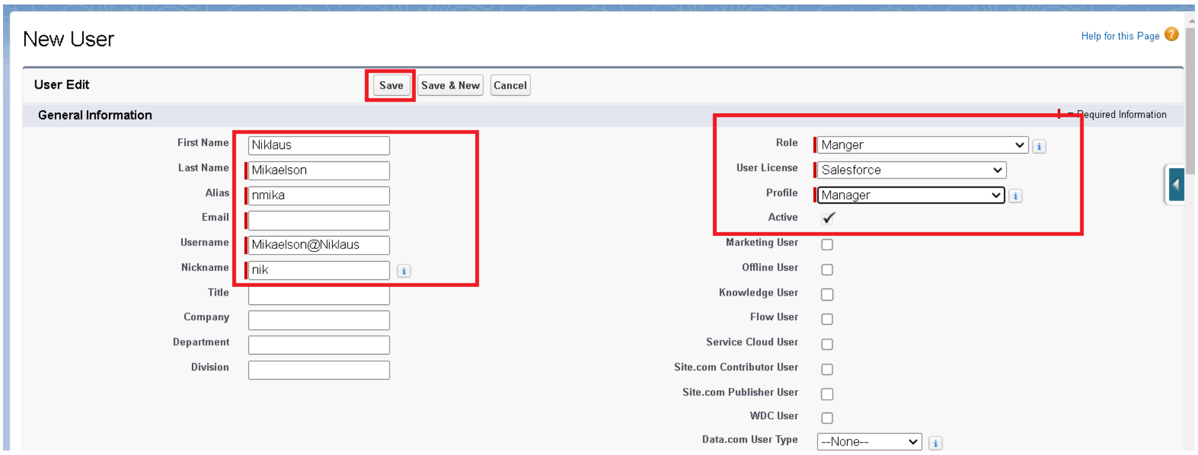
6.Nick Name : Give a Nickname

7.Role : Manager

8.User licence : Salesforce

9.Profiles : Manager

3.Save.



New User

First Name	Niklaus	Role	Manger
Last Name	Mikaelson	User License	Salesforce
Alias	nmika	Profile	Manager
Email		Active	✓
Username	Mikaelson@Niklaus	Marketing User	□
Nickname	nik	Offline User	□
Title		Knowledge User	□
Company		Flow User	□
Department		Service Cloud User	□
Division		Site.com Contributor User	□
		Site.com Publisher User	□
		WDC User	□
		Data.com User Type	--None--

creating another users

1.Repeat the steps and create another user using

1. Role : sales person

2. User licence : Salesforce Platform

3. Profile : sales person

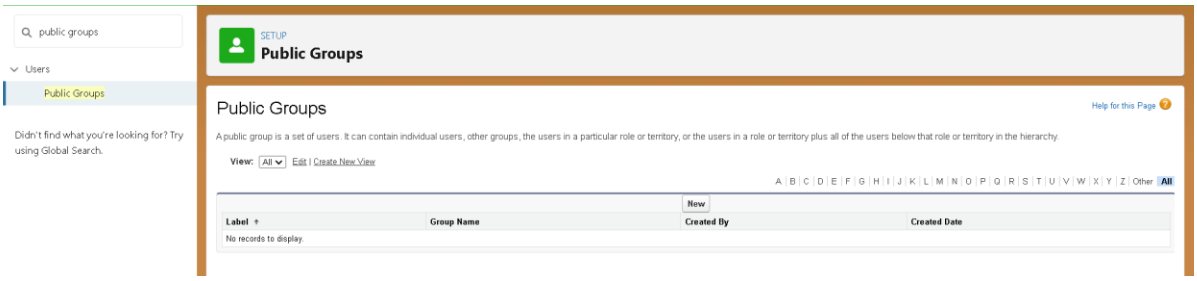
Note : create atleast 3 users with these permissions.

Public groups

Public groups are a valuable tool for Salesforce administrators and developers to streamline user management, data access, and security settings. By creating and using public groups effectively, you can maintain a secure and organized Salesforce environment while ensuring that users have appropriate access to the resources they need.

Creating New Public Group

1.Go to setup → type users in quick find box → select public groups→ click New.



public groups
Users
Public Groups
Didn't find what you're looking for? Try using Global Search.
SETUP
Public Groups
Help for this Page
View: All
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

Public Groups

A public group is a set of users. It can contain individual users, other groups, the users in a particular role or territory, or the users in a role or territory plus all of the users below that role or territory in the hierarchy.

Label ↑	Group Name	Created By	Created Date
No records to display.			

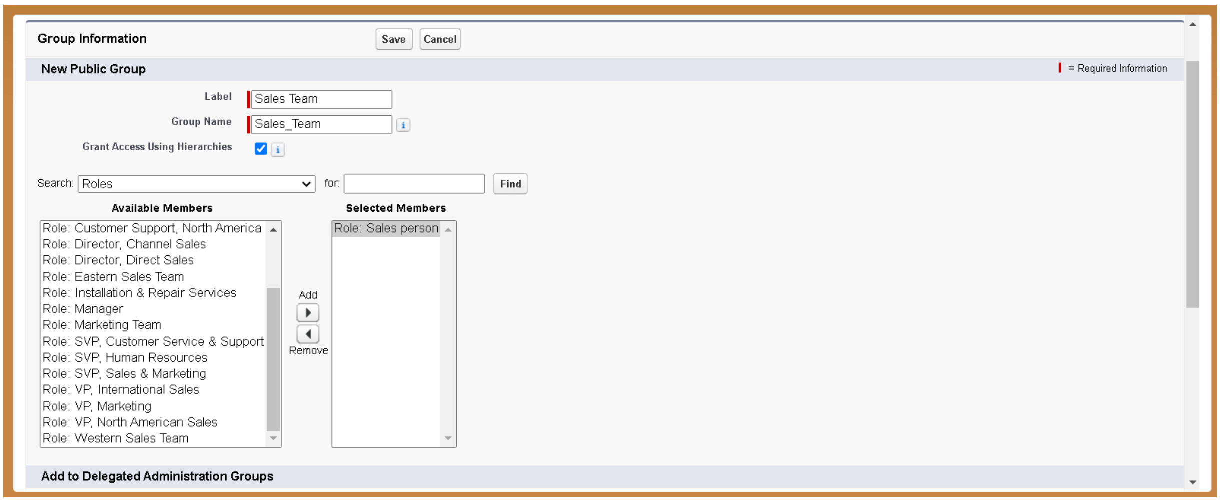
2.Give the Label as “sales team”.

3.Group name is autopopulated.

4.Search for Roles.

5.In Available Members select Sales person and click on add it will be moved to selected member.

6.Click on save.



Group Information

New Public Group

Label: Sales Team

Group Name: Sales_Team

Grant Access Using Hierarchies ☑

Search: Roles for:

Available Members

Role: Customer Support, North America
Role: Director, Channel Sales
Role: Director, Direct Sales
Role: Eastern Sales Team
Role: Installation & Repair Services
Role: Manager
Role: Marketing Team
Role: SVP, Customer Service & Support
Role: SVP, Human Resources
Role: SVP, Sales & Marketing
Role: VP, International Sales
Role: VP, Marketing
Role: VP, North American Sales
Role: Western Sales Team

Selected Members

Role: Sales person

Add to Delegated Administration Groups

Sharing Setting

Salesforce allows you to configure sharing settings to control how records are accessed and shared within your organization. These settings are crucial for maintaining data security and privacy. Salesforce provides a variety of tools and mechanisms to define and enforce sharing rules, such as:

Organization-Wide Default (OWD) Settings:

These settings define the default level of access for all objects within your Salesforce org.

OWD settings include Private, Public Read-Only, Public Read/Write, and Controlled by Parent.

OWD settings can be configured for each standard and custom object.

Sharing Rules:

Sharing rules are used to extend access to records for users who meet specific criteria. They can be used to grant read-only or read-write access to records owned by other users.

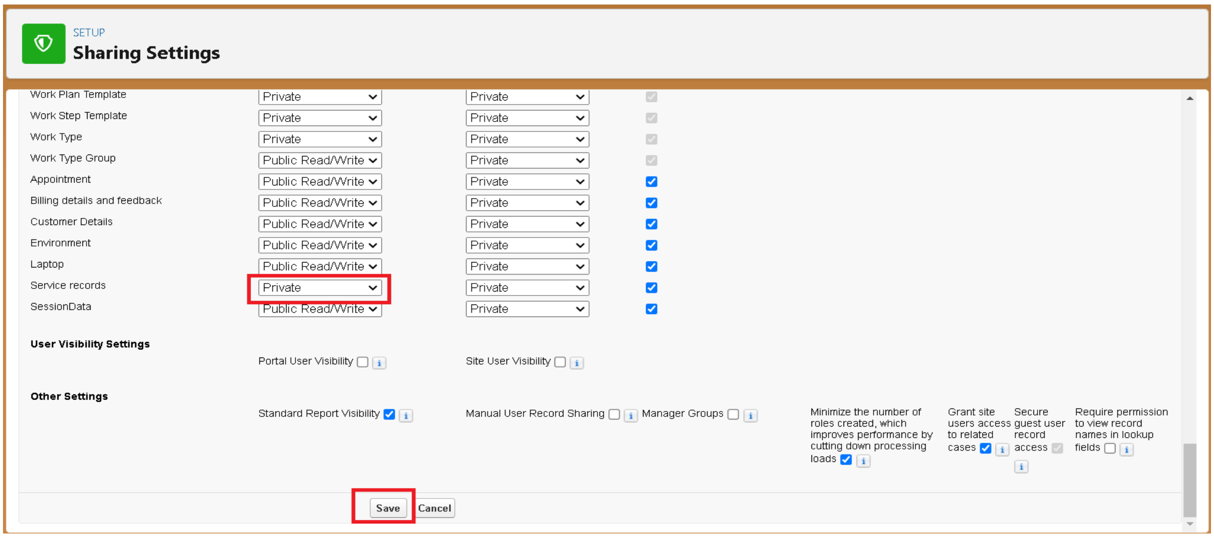
Manual Sharing:

Administrators and record owners can manually share specific records with other users or groups.

Creating Sharing settings

1.Go to setup → type users in quick find box → select Sharing Settings→ click Edit.

2.Change the OWD setting of the Service records Object to private as shown in fig.



SETUP

Sharing Settings

Work Plan Template	Private	Private	☑
Work Step Template	Private	Private	☑
Work Type	Private	Private	☑
Work Type Group	Public Read/Write	Private	☑
Appointment	Public Read/Write	Private	☑
Billing details and feedback	Public Read/Write	Private	☑
Customer Details	Public Read/Write	Private	☑
Environment	Public Read/Write	Private	☑
Laptop	Public Read/Write	Private	☑
Service records	Private	Private	☑
SessionData	Public Read/Write	Private	☑

User Visibility Settings

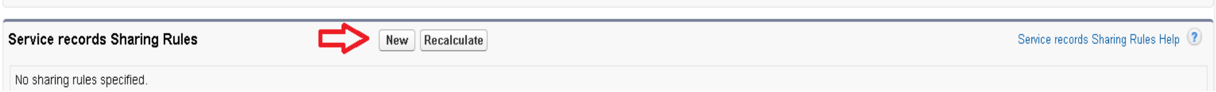
Portal User Visibility □ Site User Visibility □

Other Settings

Standard Report Visibility ☑ Manual User Record Sharing □ Manager Groups □ Minimize the number of roles created, which improves performance by cutting down processing loads ☑ Grant site users access to related cases ☑ Secure guest user record access ☑ Require permission to view record names in lookup fields □

3.Click on save and refresh.

4.Scroll down a bit, Click new on Service records sharing Rules



Service records Sharing Rules

No sharing rules specified.

5.Give the Label name as “ Sharing setting”

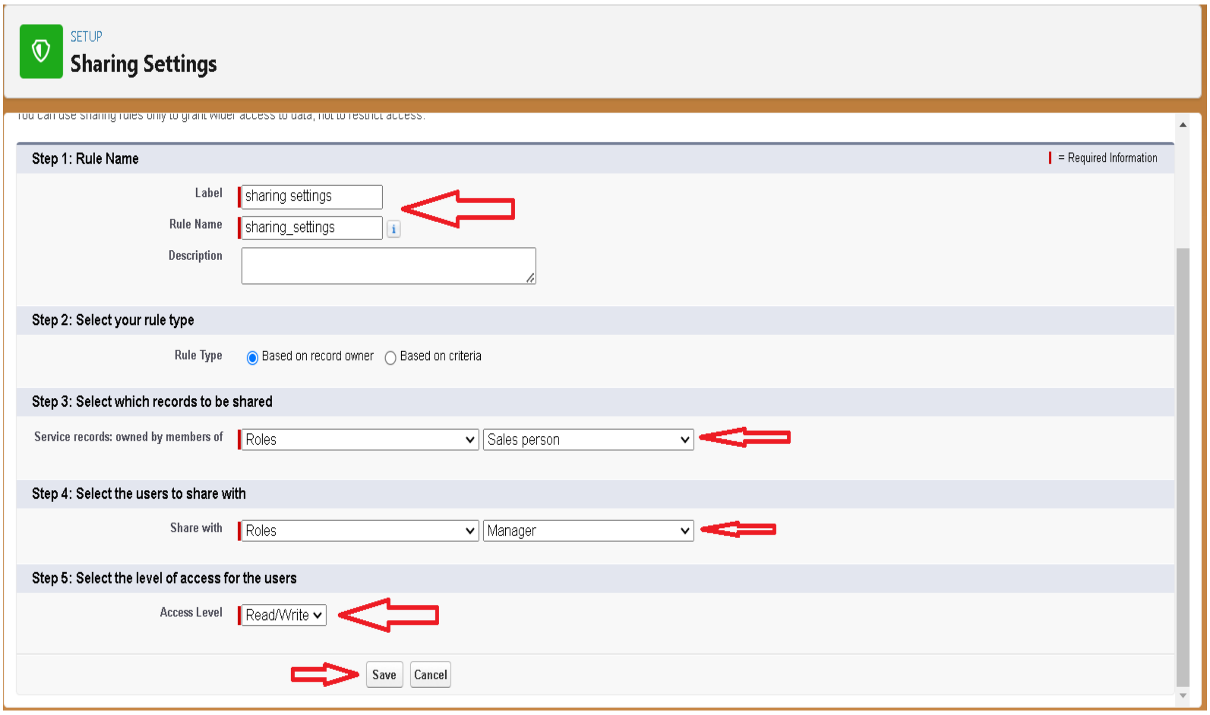
6.Rule name is auto populated.

7.In step 3 : Select which records to be shared, members of “ Roles ” >> “ Sales person”

8.In step 4: share with, select “ Roles ” >> “ Manager ”

9.In step 5 : Change the access level to “ Read / write ”.

10.Click on save.



SETUP

Sharing Settings

You can use sharing rules only to grant wider access to data, not to restrict access.

Step 1: Rule Name | = Required Information

Label: sharing settings

Rule Name: sharing_settings

Description:

Step 2: Select your rule type

Rule Type: ● Based on record owner ○ Based on criteria

Step 3: Select which records to be shared

Service records: owned by members of: Roles, Sales person

Step 4: Select the users to share with

Share with: Roles, Manager

Step 5: Select the level of access for the users

Access Level: Read/Write

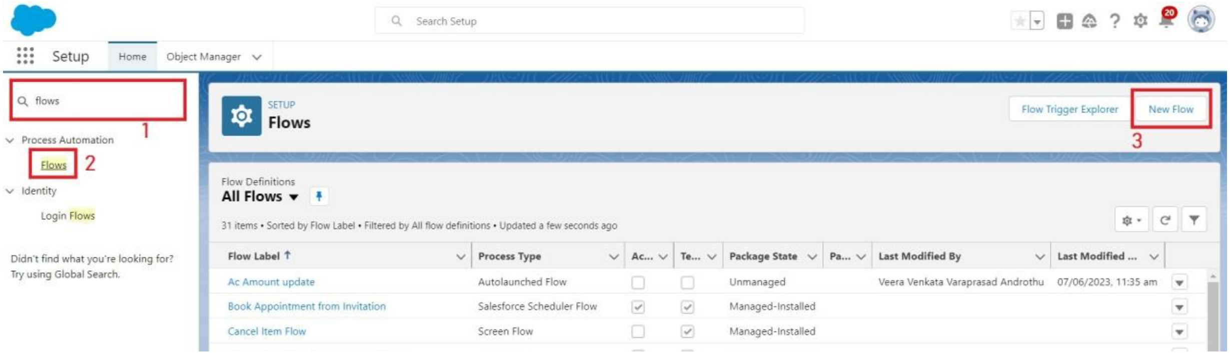
IMPLEMENTATION

Flows

In Salesforce, a flow is a powerful tool that allows you to automate business processes, collect and update data, and guide users through a series of screens or steps. Flows are built using a visual interface and can be created without any coding knowledge.

Create a Flow

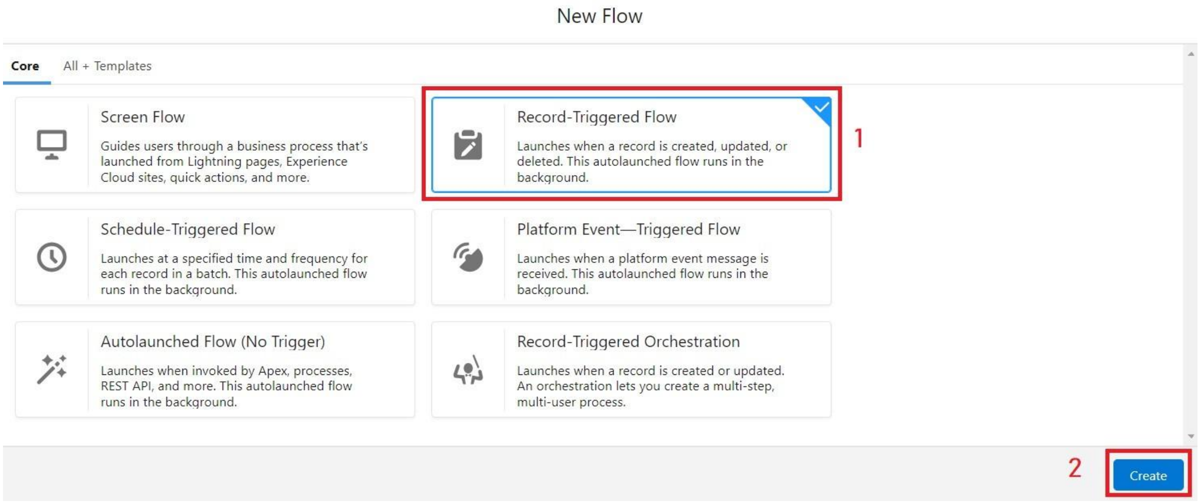
1.Go to setup → type Flow in quick find box → Click on the Flow and Select the New Flow.



31 items • Sorted by Flow Label • Filtered by All flow definitions • Updated a few seconds ago

Flow Label ↑	Process Type	Ac...	Te...	Package State	Pa...	Last Modified By	Last Modified ...
Ac Amount update	Autolaunched Flow	☐	☐	Unmanaged		Veera Venkata Varaprasad Androthu	07/06/2023, 11:35 am
Book Appointment from Invitation	Salesforce Scheduler Flow	☑	☑	Managed-Installed			
Cancel Item Flow	Screen Flow	☐	☑	Managed-Installed			

2.Select the Record-triggered flow and Click on Create.



New Flow

Screen Flow
Guides users through a business process that's launched from Lightning pages, Experience Cloud sites, quick actions, and more.

Record-Triggered Flow
Launches when a record is created, updated, or deleted. This autolaunched flow runs in the background.

Schedule-Triggered Flow
Launches at a specified time and frequency for each record in a batch. This autolaunched flow runs in the background.

Platform Event—Triggered Flow
Launches when a platform event message is received. This autolaunched flow runs in the background.

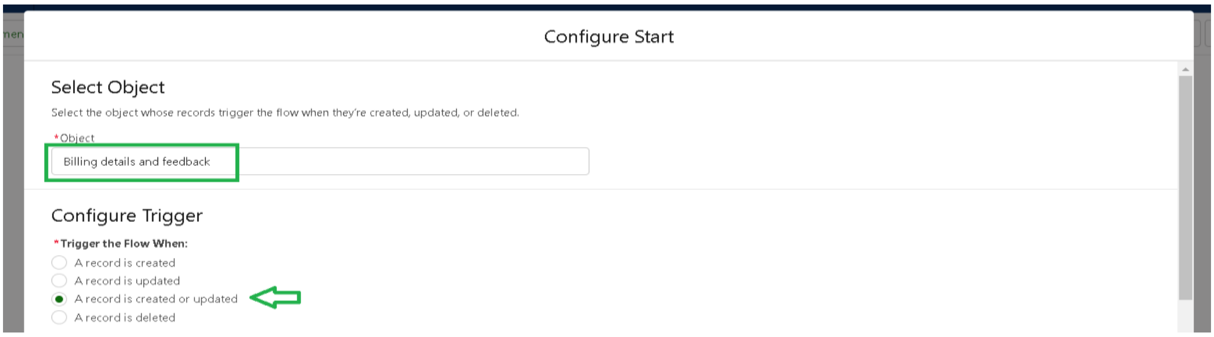
Autolaunched Flow (No Trigger)
Launches when invoked by Apex, processes, REST API, and more. This autolaunched flow runs in the background.

Record-Triggered Orchestration
Launches when a record is created or updated. An orchestration lets you create a multi-step, multi-user process.

3.Select the Object as “Billing details and feedback”in the Drop down list.

4.Select the Trigger Flow when: “A record is Created or Updated”.

5.Select the Optimize the flow for: “Actions and Related Records” and Click on Done.



Configure Start

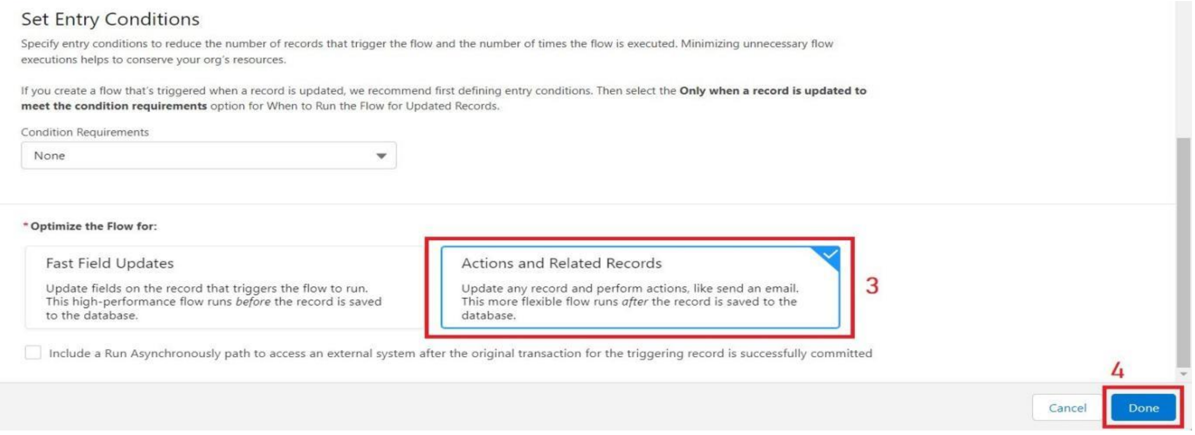
Select Object

Select the object whose records trigger the flow when they're created, updated, or deleted.

*Object: Billing details and feedback

Configure Trigger

*Trigger the Flow When:
○ A record is created
○ A record is updated
● A record is created or updated
○ A record is deleted



Set Entry Conditions

Specify entry conditions to reduce the number of records that trigger the flow and the number of times the flow is executed. Minimizing unnecessary flow executions helps to conserve your org's resources.

If you create a flow that's triggered when a record is updated, we recommend first defining entry conditions. Then select the **Only when a record is updated to meet the condition requirements** option for When to Run the Flow for Updated Records.

Condition Requirements: None

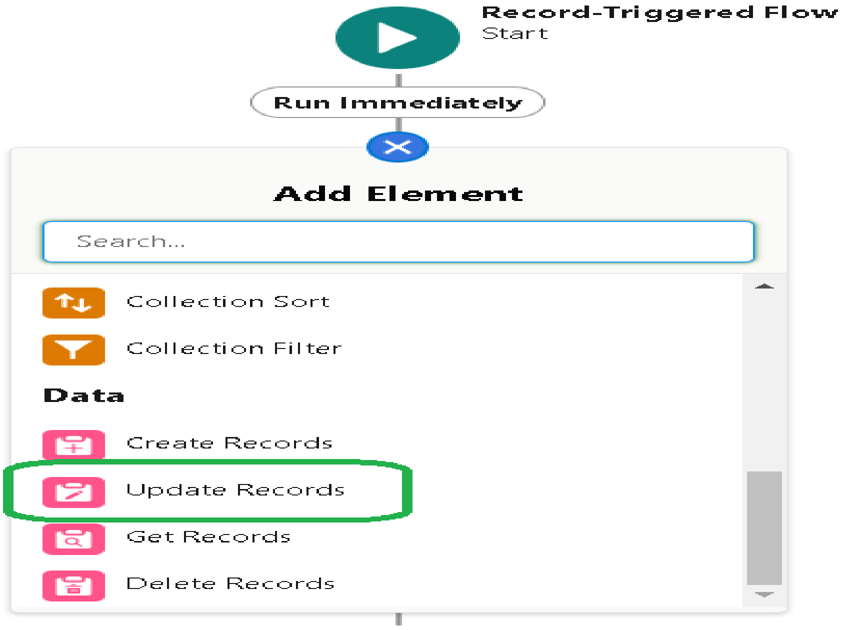
* **Optimize the Flow for:**

○ Fast Field Updates
Update fields on the record that triggers the flow to run. This high-performance flow runs *before* the record is saved to the database.

● Actions and Related Records
Update any record and perform actions, like send an email. This more flexible flow runs *after* the record is saved to the database.

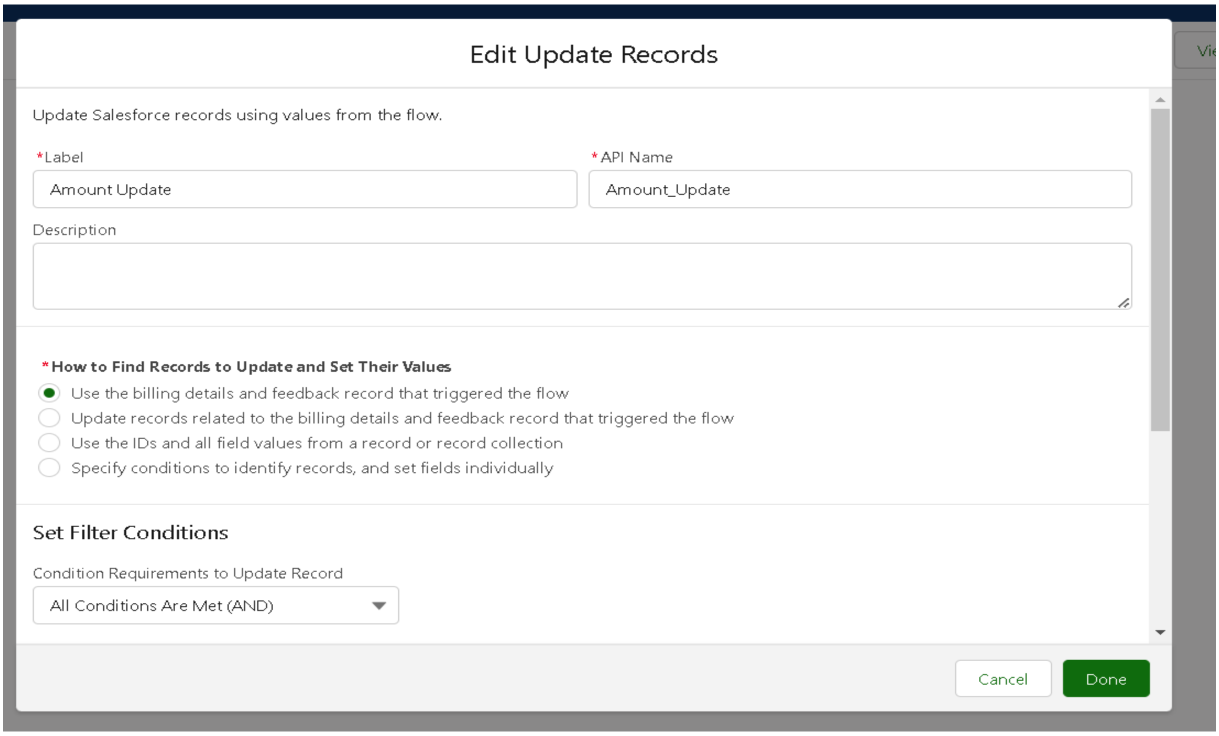
□ Include a Run Asynchronously path to access an external system after the original transaction for the triggering record is successfully committed

6.Under the Record-triggered Flow Click on "+" Symbol and In the Drop down List select the "Update records Element".



7.Give the Label Name : Amount Update

8.Api name : is auto populated



Edit Update Records

Update Salesforce records using values from the flow.

*Label: Amount Update

*API Name: Amount_Update

Description

*How to Find Records to Update and Set Their Values

● Use the billing details and feedback record that triggered the flow

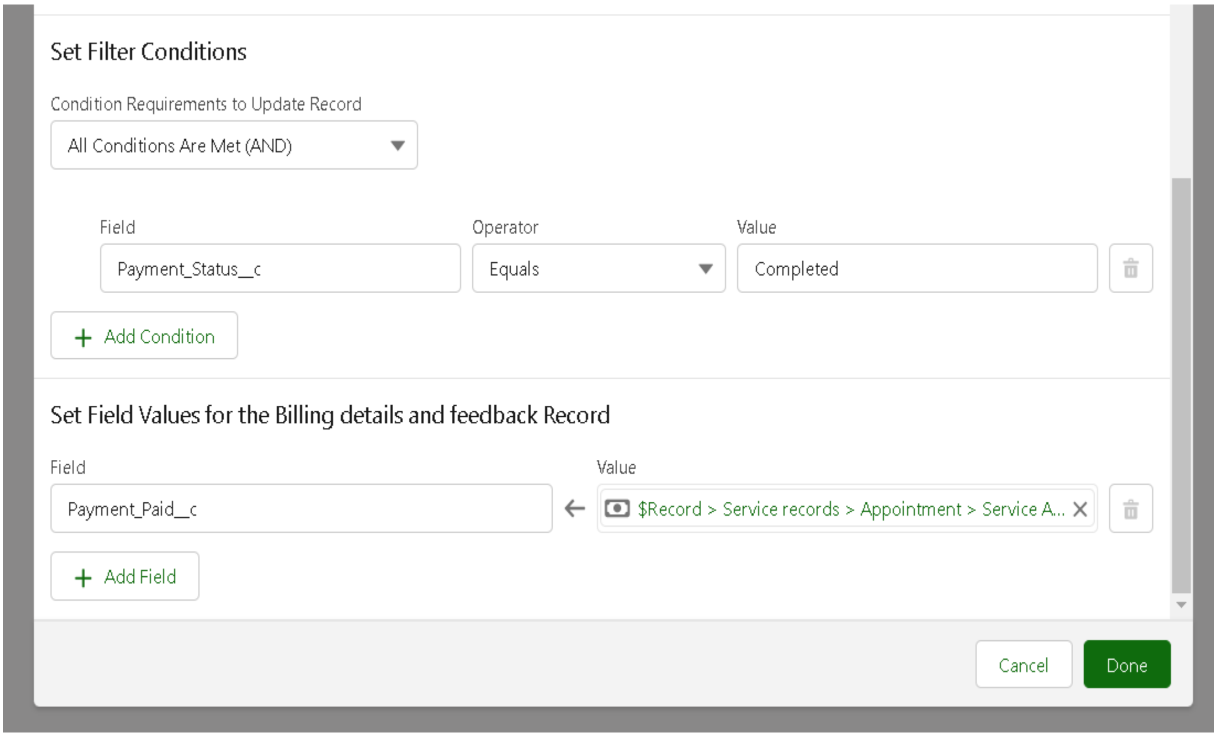
○ Update records related to the billing details and feedback record that triggered the flow

○ Use the IDs and all field values from a record or record collection

○ Specify conditions to identify records, and set fields individually

Set Filter Conditions

Condition Requirements to Update Record: All Conditions Are Met (AND)



Set Filter Conditions

Condition Requirements to Update Record: All Conditions Are Met (AND)

Field	Operator	Value
Payment_Status__c	Equals	Completed

Set Field Values for the Billing details and feedback Record

Field		Value
Payment_Paid__c	←	$Record > Service records > Appointment > Service A...

9.Set a filter condition : All Conditions are met(AND)

10.Field : Payment_Status c

11.Operator : Equals

12.Value : Completed

13.Set Field Values for the Billing details and feedback Record

14.Field : Payment_Paid c

15.Value : {!$Record.Service_records r.Appointment r.Service_Amount c}

16.Click On Done.

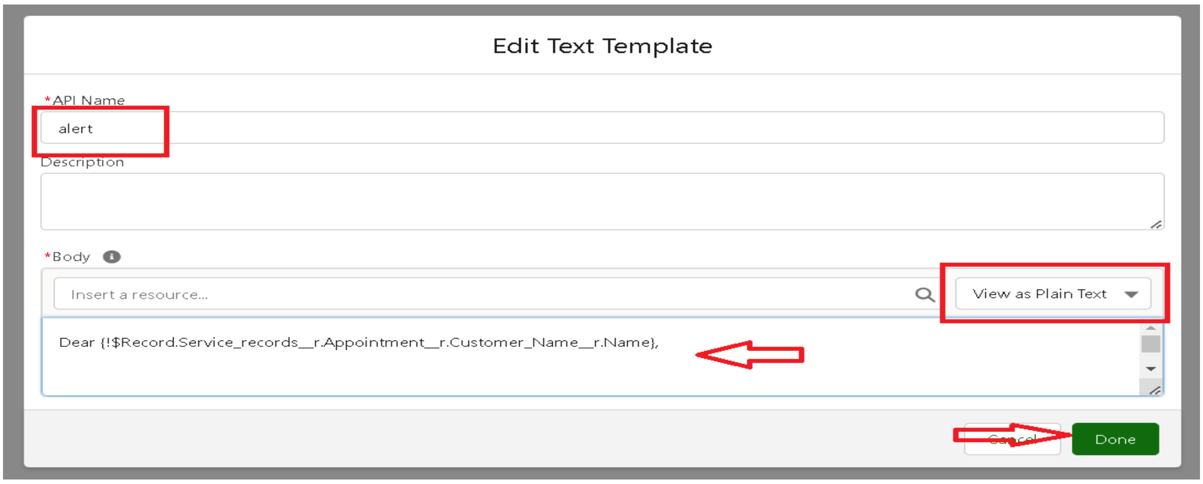
17.Before creating another Element. Create a New Resource form Toolbox form top left.

18.Click on the New Resource, And select Variable.

19.Select the resource type as text template.

20.Enter the API name as " alert".

21.Change the view as Rich Text → View to Plain Text.



alert

Dear {!$Record.Service_records__r.Appointment__r.Customer_Name__r.Name},

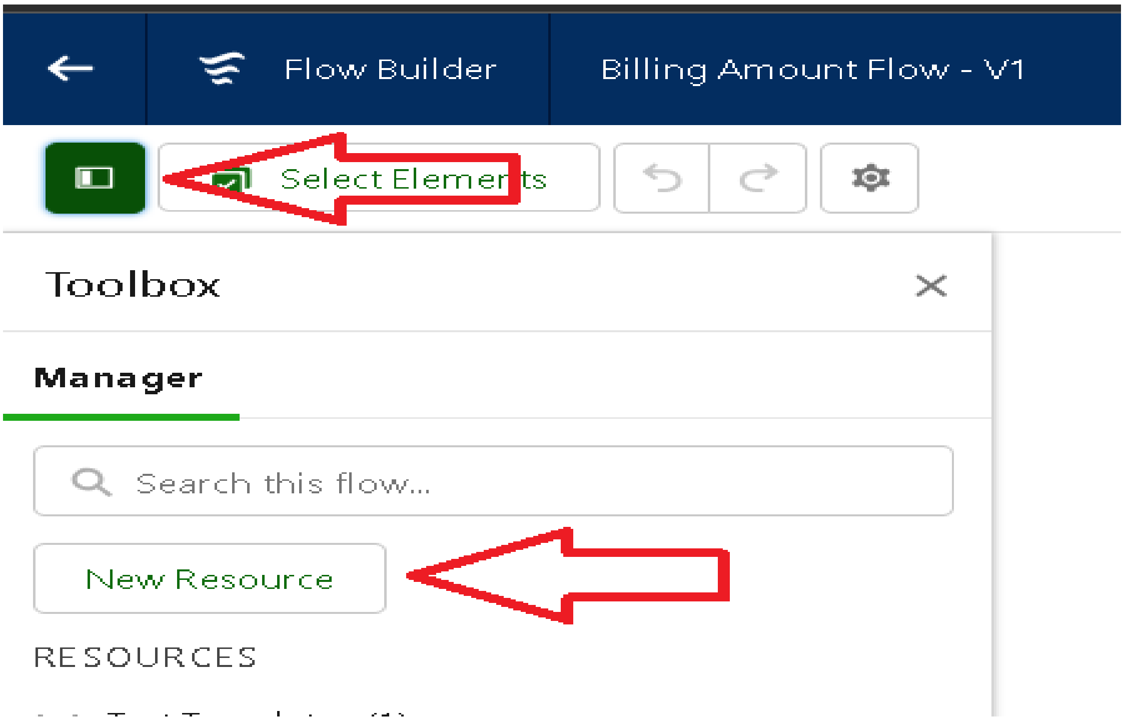
22.In body field paste the syntax that given below.

Dear

{!$Record.Service_records r.Appointment r.Customer_Name r.Name}, I hope this message finds you well. I wanted to take a moment to express my sincere gratitude for your recent payment for the services provided by our garage management team. Your prompt payment is greatly appreciated, and it helps us continue to provide top-notch services to you and all our valued customers.

Amount paid : {!$Record.Payment_Paid c} Thank you for Coming .

23.Click done.



24.Now Click on Add Element , select Action.

25.Their action bar will be opened in that search for “ send email ” and click on it.

26.Give the label name as “ Email Alert”

27.API name will be auto populated.

28.Enable the body in set input values for the selected action.

29.Select the text template that created , Body : {!alert}

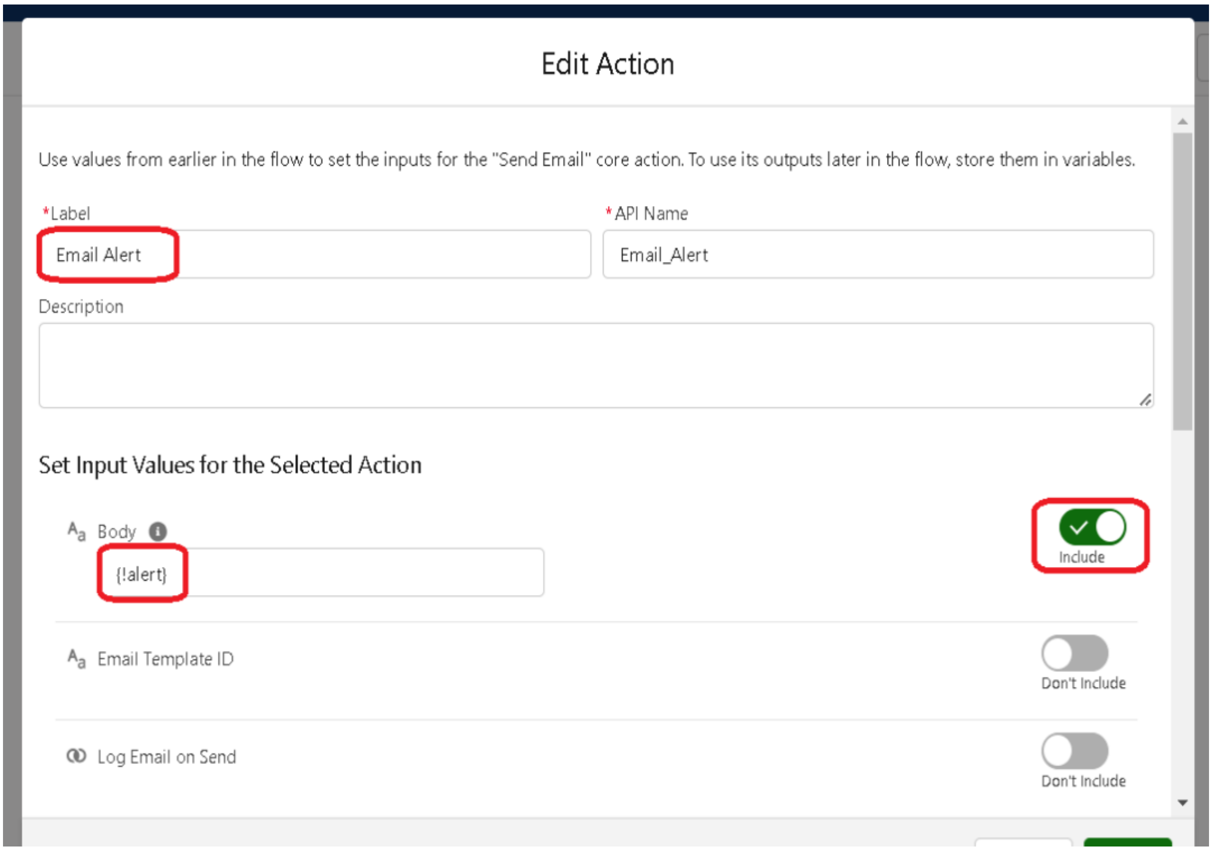
30.Include recipient address list select the email form the record.

31.RecipientAddressList:

{!$Record.Service_records r.Appointment r.Customer_Name r.Gmail c}

32.Include subject as “ Thank You for Your Payment - Garage Management”.

33.Click done.



Edit Action

Use values from earlier in the flow to set the inputs for the "Send Email" core action. To use its outputs later in the flow, store them in variables.

*Label: Email Alert

*API Name: Email_Alert

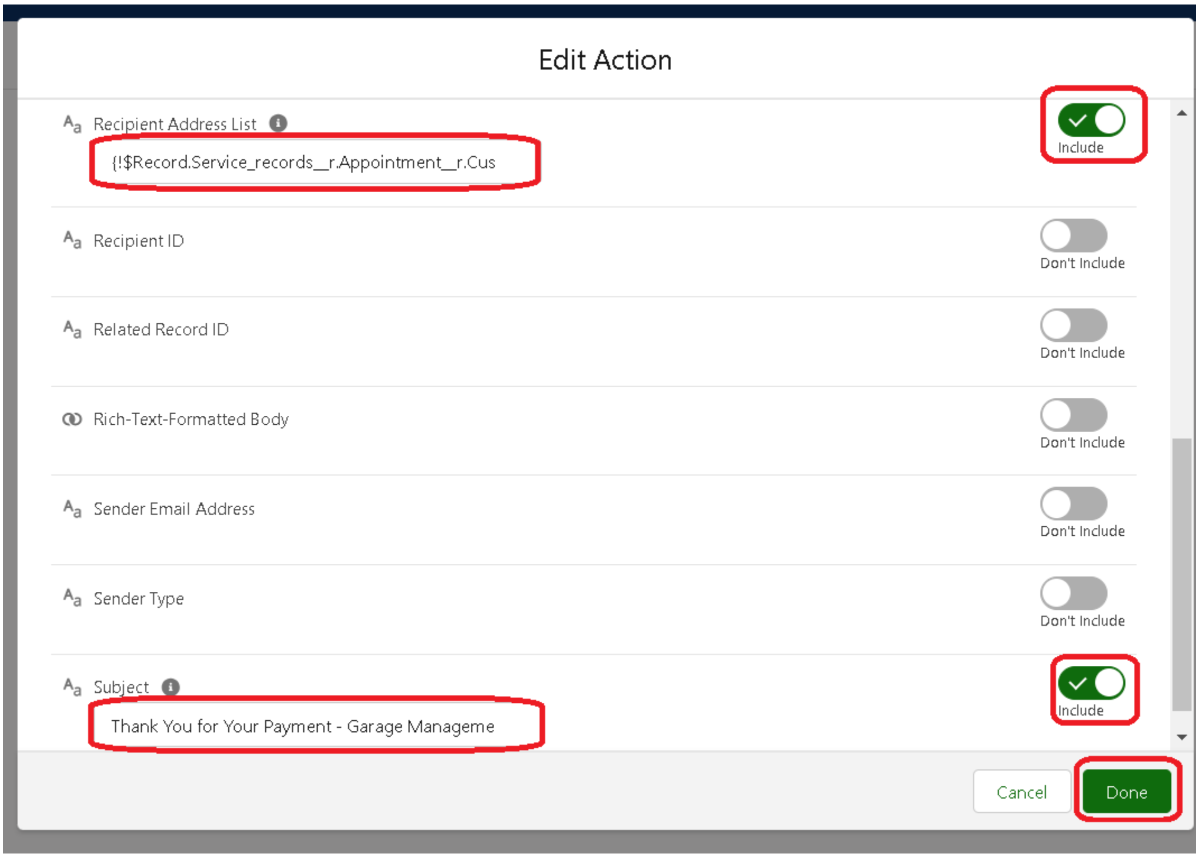
Description:

Set Input Values for the Selected Action

Body: {!alert} — Include

Email Template ID — Don't Include

Log Email on Send — Don't Include

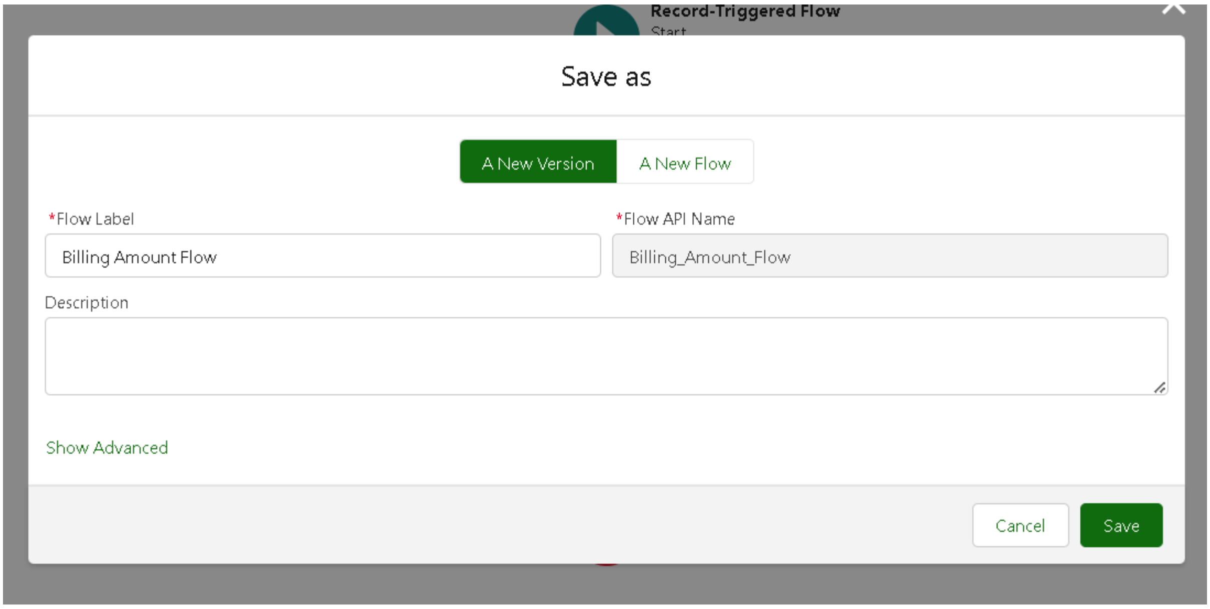


Recipient Address List
{!$Record.Service_records__r.Appointment__r.Cus

Subject
Thank You for Your Payment - Garage Manageme

34.Click on save. Give the Flow label , Flow Api name will be autopopulated.

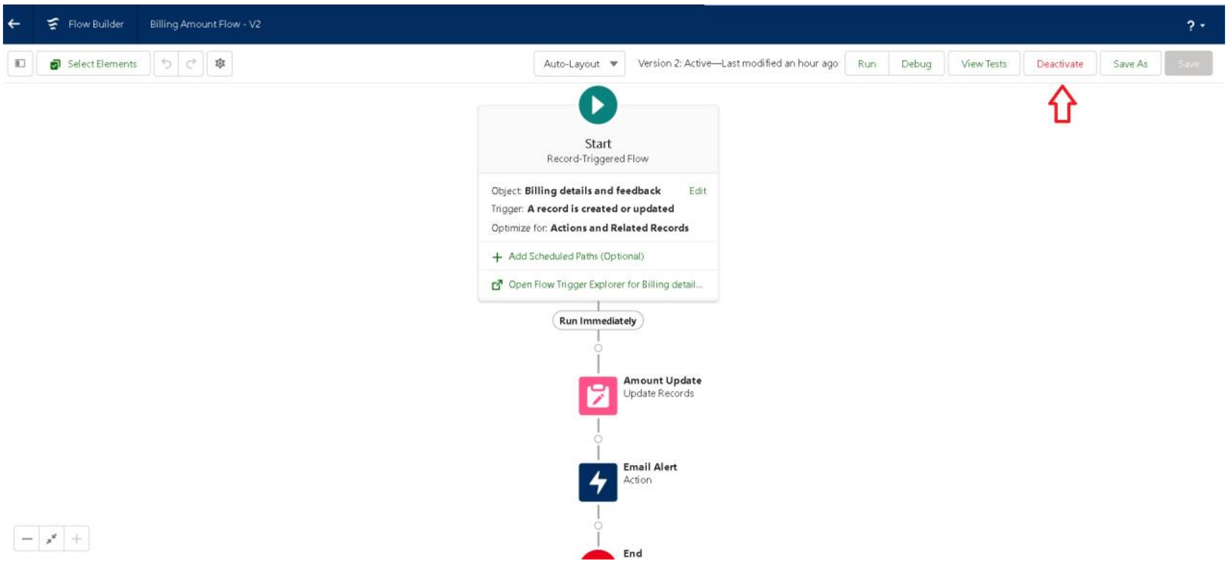
35.And click save, and click on activate.



*Flow Label
Billing Amount Flow

*Flow API Name
Billing_Amount_Flow

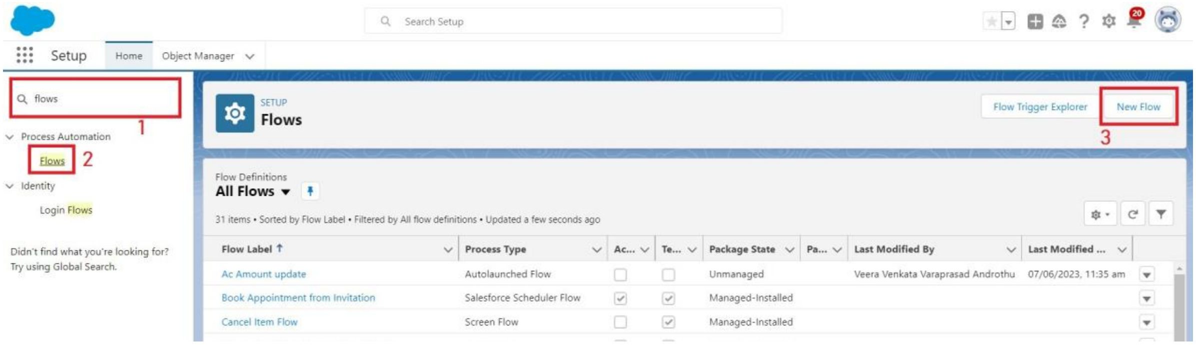
Description



Object: Billing details and feedback
Trigger: A record is created or updated
Optimize for: Actions and Related Records

Create another Flow

36.Go to setup → type Flow in quick find box → Click on the Flow and Select the New Flow.

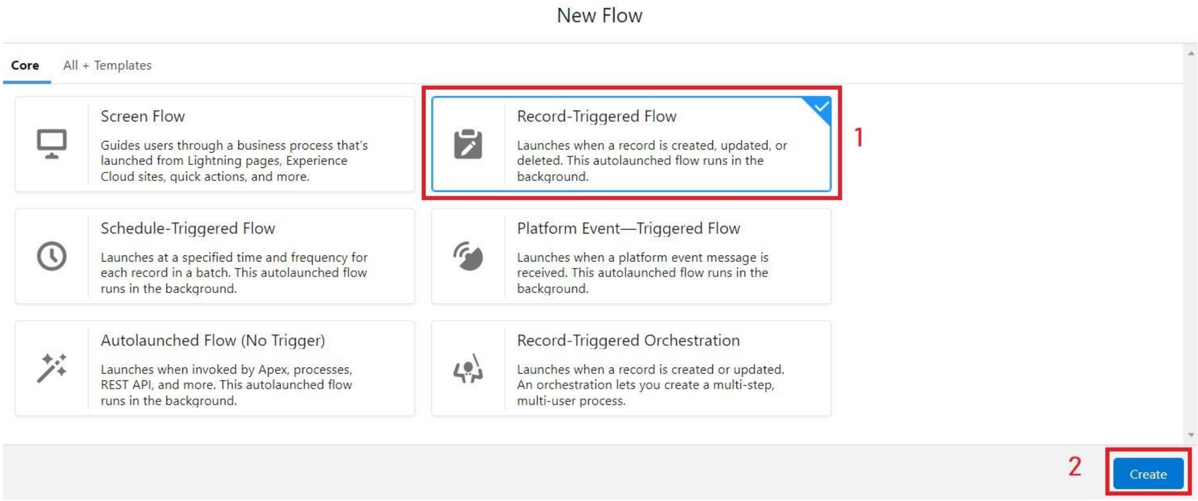


31 items • Sorted by Flow Label • Filtered by All flow definitions • Updated a few seconds ago

Flow Label	Process Type	Ac...	Te...	Package State	Pa...	Last Modified By	Last Modified ...
Ac Amount update	Autolaunched Flow	□	□	Unmanaged		Veera Venkata Varaprasad Androthu	07/06/2023, 11:35 am
Book Appointment from Invitation	Salesforce Scheduler Flow	☑	☑	Managed-Installed			
Cancel Item Flow	Screen Flow	□	☑	Managed-Installed			

37.Select the Record-triggered flow and Click on Create.

38.Select the Object as " Service records"in the Drop down list.



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Record-Triggered Orchestration
Launches when a record is created or updated. An orchestration lets you create a multi-step, multi-user process.

39.Select the Trigger Flow when: “A record is Created or Updated”.

40.Select the Optimise the flow for: “Actions and Related Records” and Click on Done.

41.Under the Record-triggered Flow Click on “+” Symbol and In the Drop down List select the “Update records Element”.

42.Set a filter condition : All Conditions are met(AND)

43.Field : Quality_Check_Status c

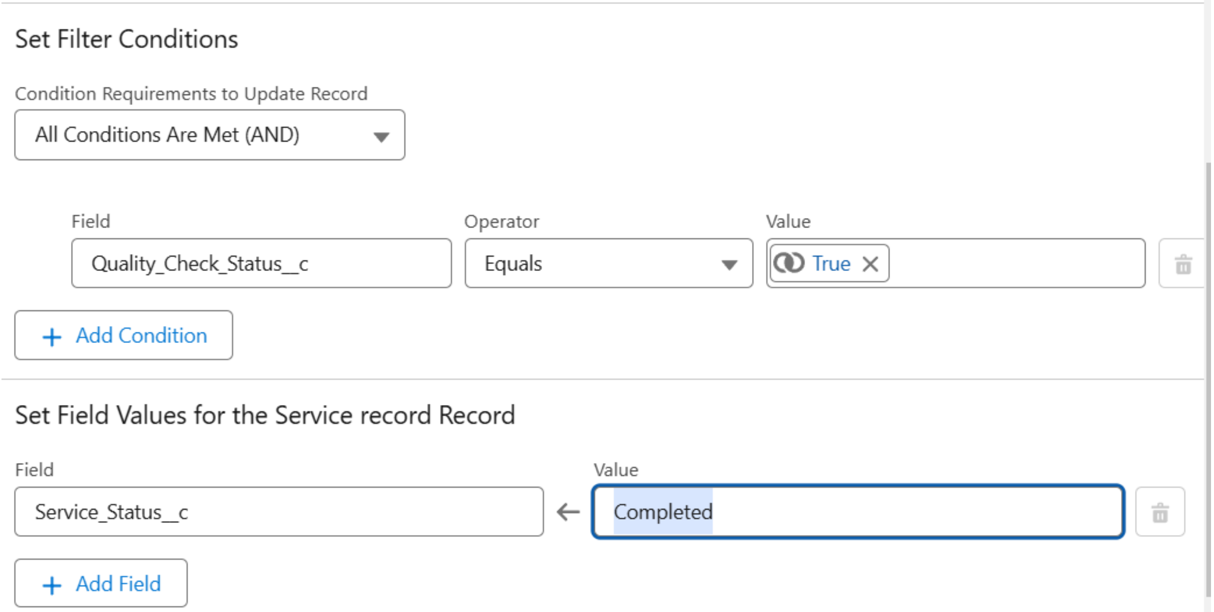
44.Operator : Equals

45.Value : True

46.And Set Field Values for the Billing details and feedback Record

47.Field : Service_Status c

48.Value : Completed



Set Filter Conditions

Condition Requirements to Update Record: All Conditions Are Met (AND)

Field	Operator	Value
Quality_Check_Status__c	Equals	True

Set Field Values for the Service record Record

Field		Value
Service_Status__c	←	Completed

49.Click On Done.

50.Click on save

51.Given the Flow label as Update Service Status , Flow Api name will be auto populated.

52.And click save, and click on activate.

Apex Code:

Apex is a strongly-typed, object-oriented programming language developed by Salesforce. It is used to execute custom business logic on the Salesforce platform. Apex is similar to Java in syntax and integrates seamlessly with Salesforce's cloud infrastructure.

Apex works directly with Salesforce objects, such as Accounts, Contacts, and Opportunities and provides access to Salesforce data and metadata using a rich set of APIs.

Apex is executed in response to events such as DML operations (insert, update, delete) or user actions (button clicks, Visualforce page requests).

Allows seamless interaction with Salesforce's database using SOQL (Salesforce Object Query Language) and SOSL (Salesforce Object Search Language).

Apex ensures code reliability with a strict type-checking mechanism during compilation and enforces user permissions and sharing rules automatically.

Apex handler

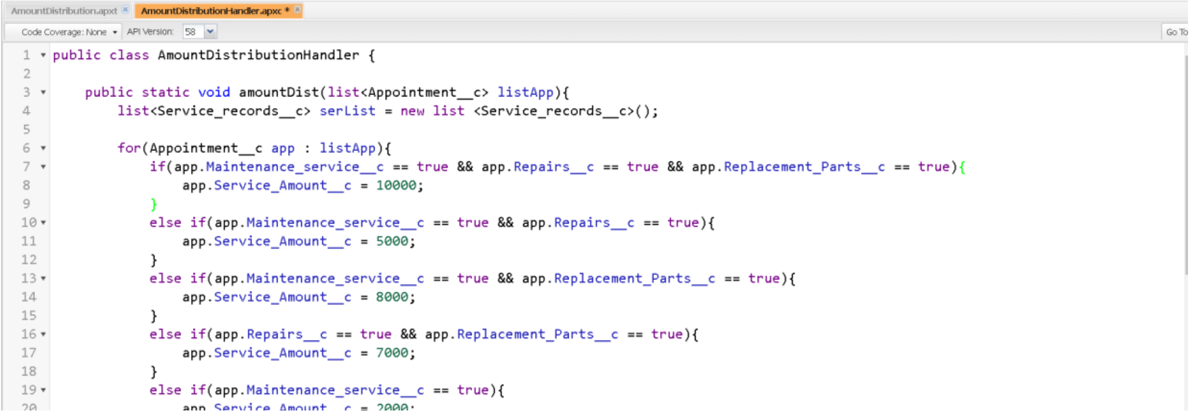
UseCase : This use case works for Amount Distribution for each Service the customer selected for there Vehicle.

1.Login to the respective trailhead account and navigate to the gear icon in the top right corner.

2.Click on the Developer console. Now you will see a new console window.

3.In the toolbar, you can see FILE. Click on it and navigate to new and create New apex class.

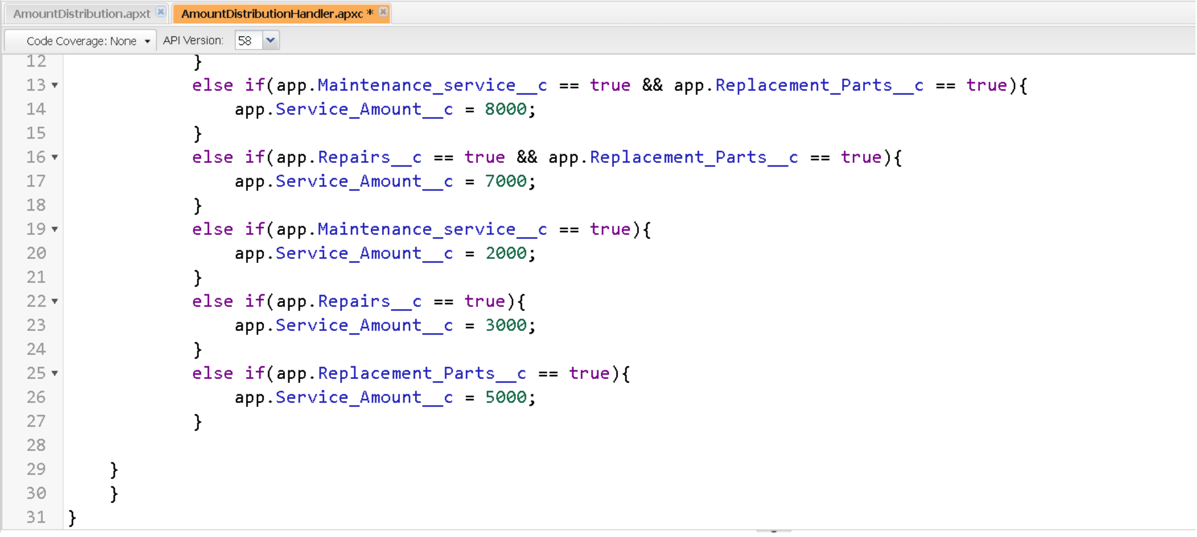
4.Name the class as “AmountDistributionHandler ”.



```
public class AmountDistributionHandler {

    public static void amountDist(list<Appointment__c> listApp){
        list<Service_records__c> serList = new list <Service_records__c>();

        for(Appointment__c app : listApp){
            if(app.Maintenance_service__c == true && app.Repairs__c == true && app.Replacement_Parts__c == true){
                app.Service_Amount__c = 10000;
            }
            else if(app.Maintenance_service__c == true && app.Repairs__c == true){
                app.Service_Amount__c = 5000;
            }
            else if(app.Maintenance_service__c == true && app.Replacement_Parts__c == true){
                app.Service_Amount__c = 8000;
            }
            else if(app.Repairs__c == true && app.Replacement_Parts__c == true){
                app.Service_Amount__c = 7000;
            }
            else if(app.Maintenance_service__c == true){
                app.Service_Amount__c = 2000;
```



```
            }
            else if(app.Maintenance_service__c == true && app.Replacement_Parts__c == true){
                app.Service_Amount__c = 8000;
            }
            else if(app.Repairs__c == true && app.Replacement_Parts__c == true){
                app.Service_Amount__c = 7000;
            }
            else if(app.Maintenance_service__c == true){
                app.Service_Amount__c = 2000;
            }
            else if(app.Repairs__c == true){
                app.Service_Amount__c = 3000;
            }
            else if(app.Replacement_Parts__c == true){
                app.Service_Amount__c = 5000;
            }

        }
    }
}
```

Apex Code:

```
public class AmountDistributionHandler {

    // Method to calculate and distribute the service amount

    public static void amountDist(List<Appointment__c> listApp) {

        // Iterate through each appointment record

        for (Appointment__c app : listApp) {

            // Check combinations of services and assign the appropriate amount

            if (app.Maintenance_service__c == true && app.Repairs__c == true &&
app.Replacement_Parts__c == true) {

                app.Service_Amount__c = 10000;

            } else if (app.Maintenance_service__c == true && app.Repairs__c == true) {
```

```
        app.Service_Amount__c = 5000;

      } else if (app.Maintenance_service__c == true && app.Replacement_Parts__c == true) {

        app.Service_Amount__c = 8000;

      } else if (app.Repairs__c == true && app.Replacement_Parts__c == true) {

        app.Service_Amount__c = 7000;

      } else if (app.Maintenance_service__c == true) {

        app.Service_Amount__c = 2000;

      } else if (app.Repairs__c == true) {

        app.Service_Amount__c = 3000;

      } else if (app.Replacement_Parts__c == true) {

        app.Service_Amount__c = 5000;

      }

    }



    // Perform a DML update to save changes to the database

    update listApp;

  }

}
```

Apex Trigger

Apex can be invoked by using triggers. Apex triggers enable you to perform custom actions before or after changes to Salesforce records, such as insertions, updates, or deletions.

A trigger is Apex code that executes before or after the following types of operations:

- insert
- update
- delete
- merge
- upsert
- undelete

For example, you can have a trigger run before an object's records are inserted into the database, after records have been deleted, or even after a record is restored from the Recycle Bin.

You can define triggers for top-level standard objects that support triggers, such as a Contact or an Account, some standard child objects, such as a CaseComment, and custom objects. To define a trigger, from the object management settings for the object whose triggers you want to access, go to Triggers.

There are primarily two types of Apex Triggers:

Before Trigger: This type of trigger in Salesforce is used either to update or validate the values of a record before they can be saved into the database. So, basically, the before trigger validates the record first and then saves it. Some criteria or code can be set to check data before it gets ready to be inserted into the database.

After Trigger: This type of trigger in Salesforce is used to access the field values set by the system and affect any change in the record. In other words, the after trigger makes changes to the value from the data inserted in some other record.

Trigger Handler :

How to create a new trigger :

1.While still in the trailhead account, navigate to the gear icon in the top right corner.

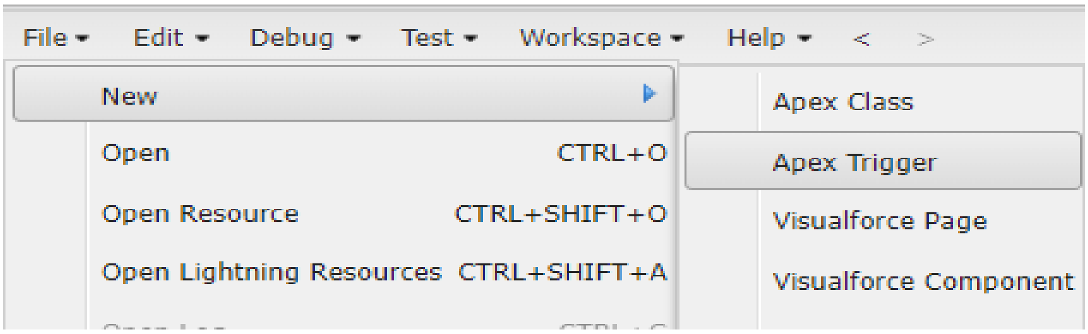
2.Click on developer console and you will be navigated to a new console window.

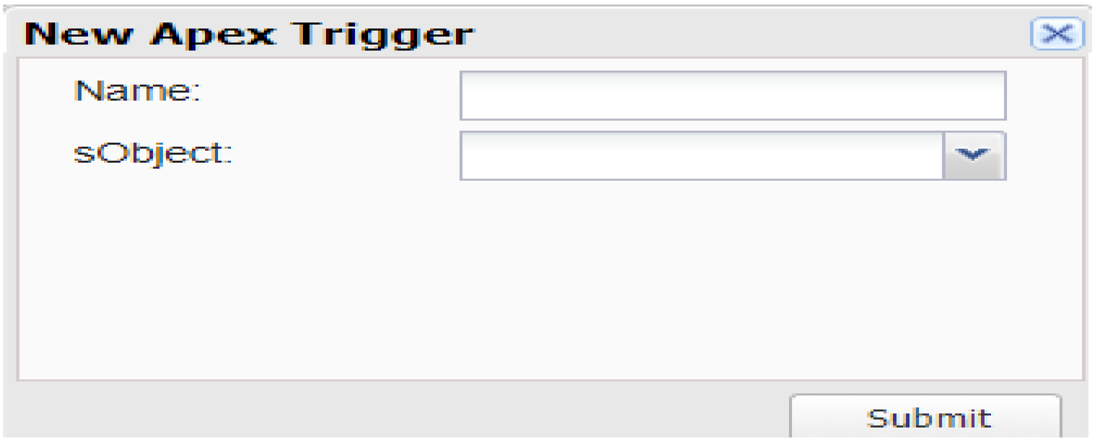
3.Click on File menu in the tool bar, and click on new→ Trigger.

4.Enter the trigger name and the object to be triggered.

5.Name : AmountDistribution

6.sObject : Appointment _c





Syntax For creating trigger :

The syntax for creating trigger is :

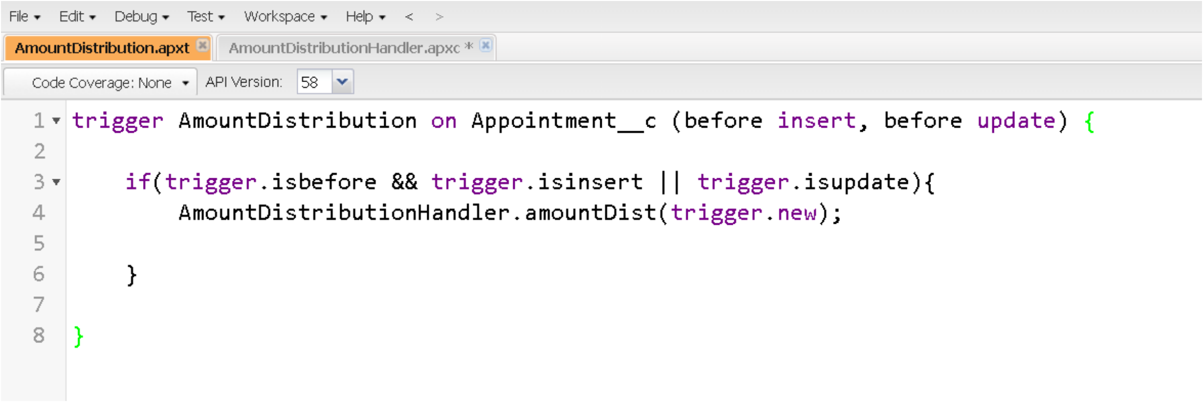
Trigger [trigger name] on [object name](Before/After event)

{

}

In this project , trigger is called whenever the particular records sum exceed the threshold i.e minimum business requirement value. Then the code in the trigger will get executed.

1.Handler for the Appointment Object



```
trigger AmountDistribution on Appointment__c (before insert, before update) {

    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
        AmountDistributionHandler.amountDist(trigger.new);

    }

}
```

Trigger Code:

```
trigger AmountDistribution on Appointment  c (before insert, before update) {



if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
AmountDistributionHandler.amountDist(trigger.new);

}

}
```

MAINTENANCE AND SUPPORTS

Maintenance Strategy

User Adoption

creating record

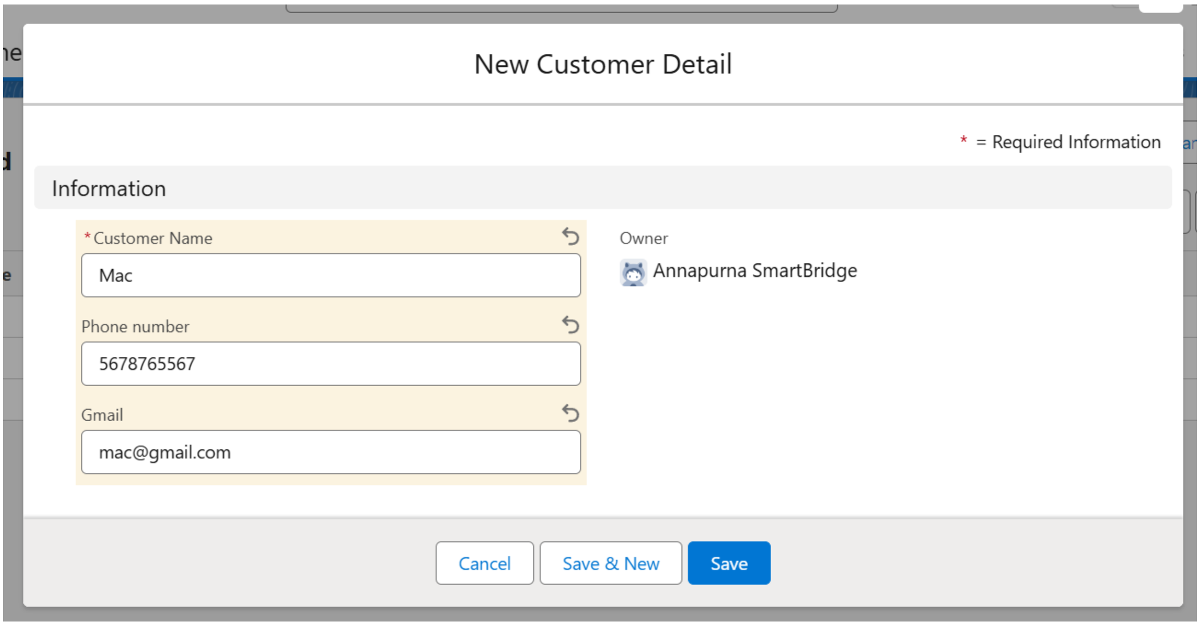
To create a record in the follow objects follow these steps

1.Click on the app launcher located at the left side of the screen.

2.Search for “ Garage Management” and click on it.

3.Click on the “ Consumer details tab”.

4.Click on new and fill the details as shown below figs, and click save.



New Customer Detail

* = Required Information

Information

*Customer Name: Mac

Phone number: 5678765567

Gmail: mac@gmail.com

Owner: Annapurna SmartBridge

Now, Create the Appointment Record

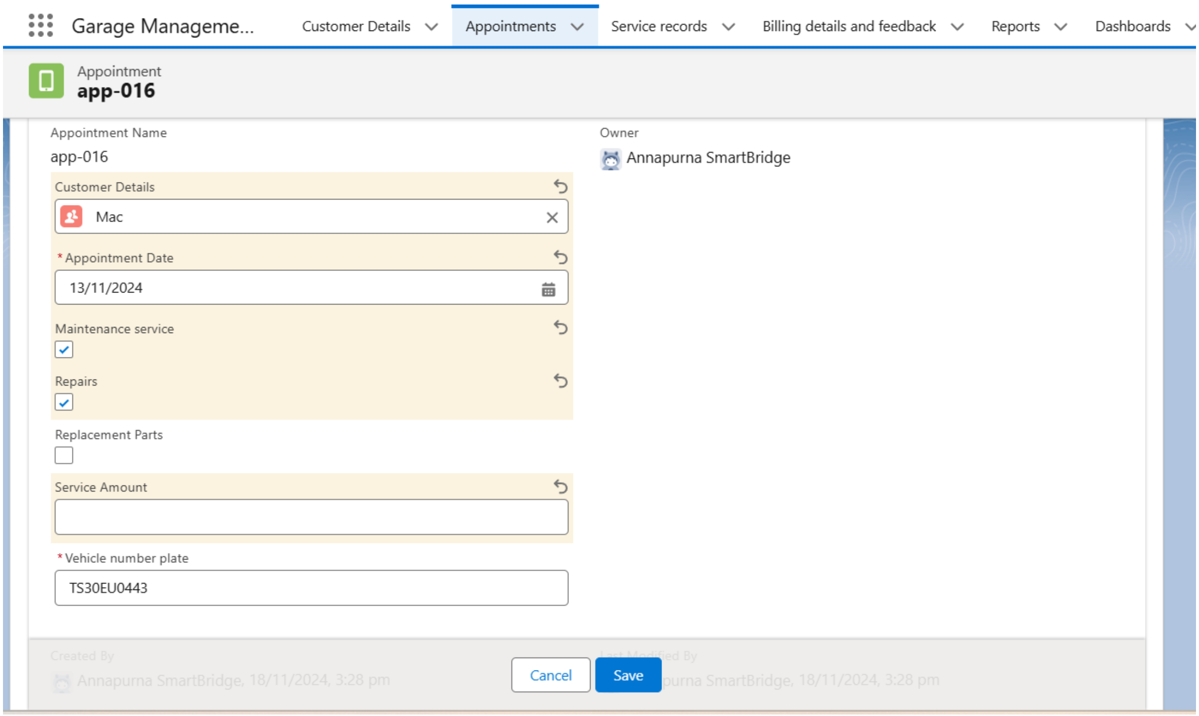
1.Click on the “Appointment tab”.

2.Enter the customer details as created, while entering Appointment Date enter the date less than the created date.

3.Match the validation while entering the vehicle number plate.

4.Select the services you need.

5.Click on save to see the Service Amount.



Appointment Name
app-016

Owner
Annapurna SmartBridge

Customer Details
Mac

* Appointment Date
13/11/2024

Maintenance service
☑

Repairs
☑

Replacement Parts
☐

Service Amount

* Vehicle number plate
TS30EU0443

Created By
Annapurna SmartBridge, 18/11/2024, 3:28 pm

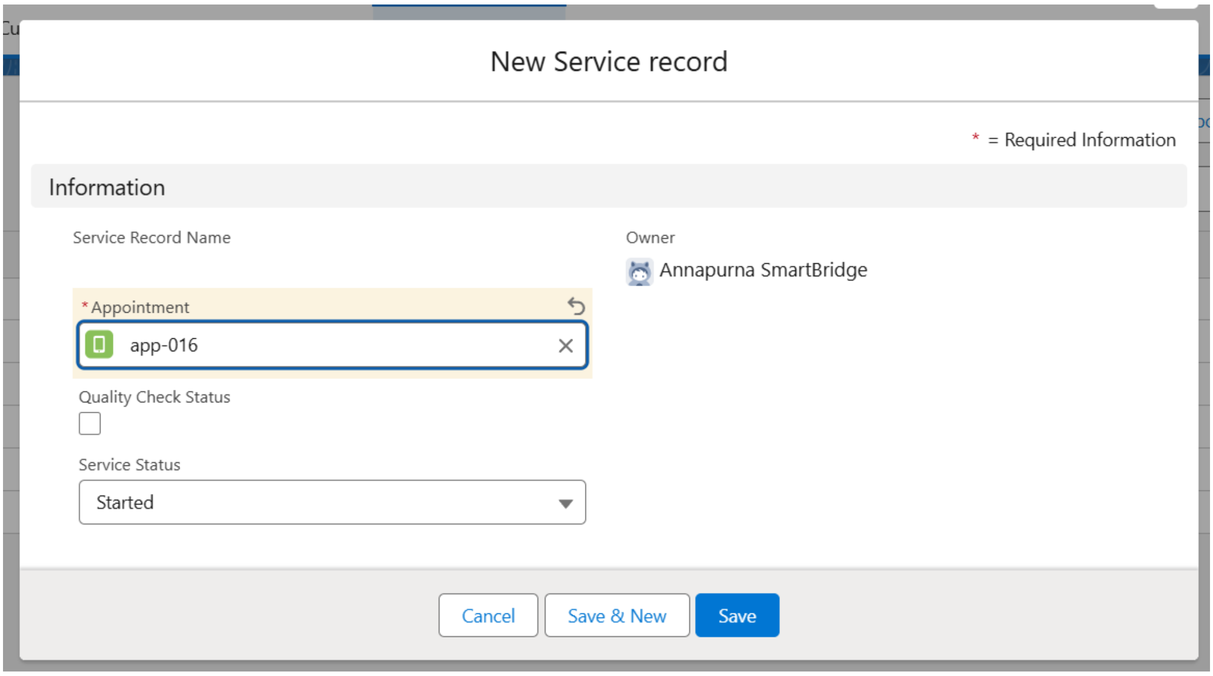
Last Modified By
purna SmartBridge, 18/11/2024, 3:28 pm

Now, Create a service Record

1.Click on the “Service record tab”.

2.Enter the Appointment, and started is selected as default.

3.Click on save.



New Service record

* = Required Information

Information

Service Record Name

Owner

Annapurna SmartBridge

*Appointment

app-016

Quality Check Status

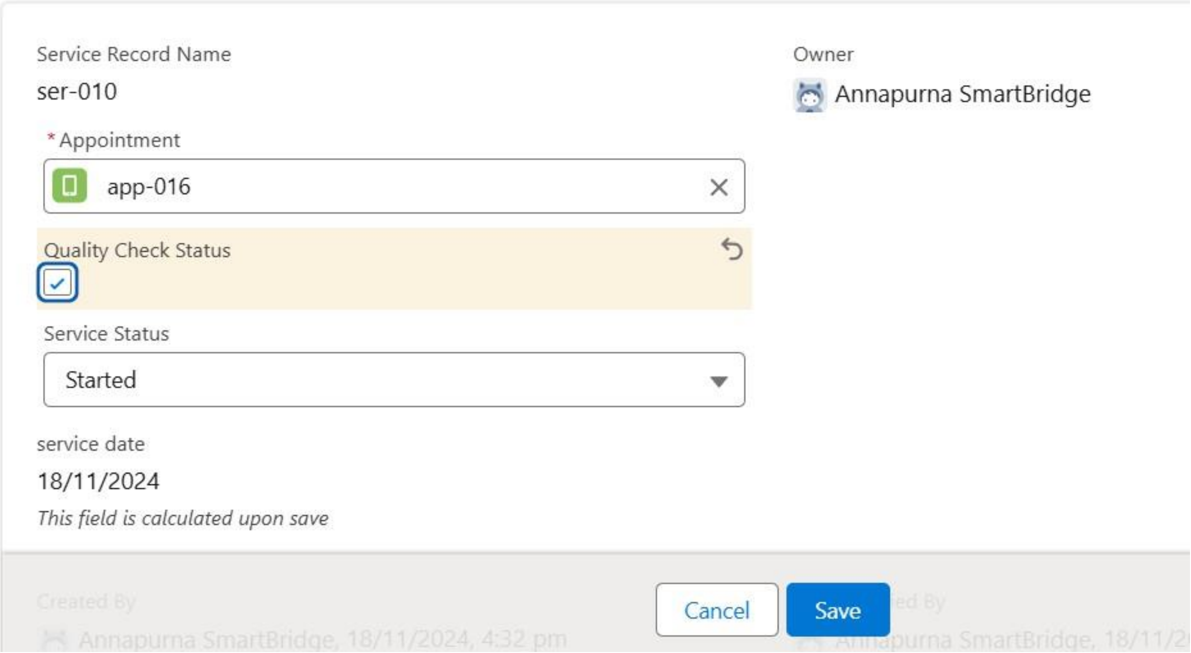
□

Service Status

Started

4.Open the record and click on Quality check status as true.

5.Click on save.



Service Record Name

ser-010

Owner

Annapurna SmartBridge

*Appointment

app-016

Quality Check Status

☑

Service Status

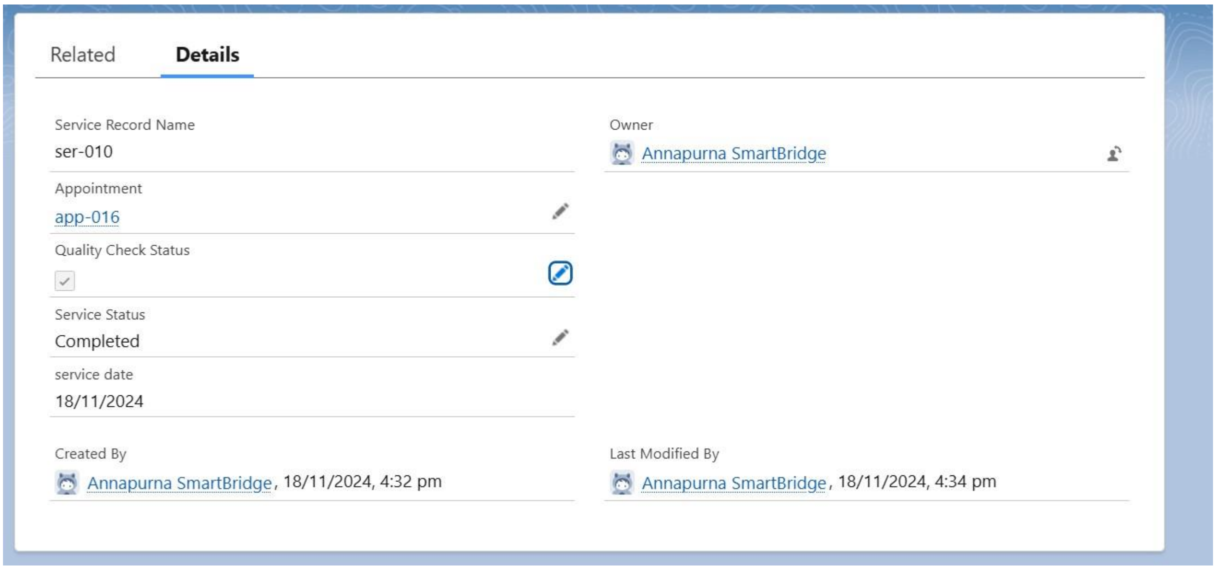
Started

service date

18/11/2024

This field is calculated upon save

6.Now automatically Service status will be moved to completed.



Service Record Name
ser-010

Owner
Annapurna SmartBridge

Appointment
app-016

Quality Check Status
☑

Service Status
Completed

service date
18/11/2024

Created By
Annapurna SmartBridge, 18/11/2024, 4:32 pm

Last Modified By
Annapurna SmartBridge, 18/11/2024, 4:34 pm

Reports

Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

Types of Reports in Salesforce

1.Tabular

2.Summary

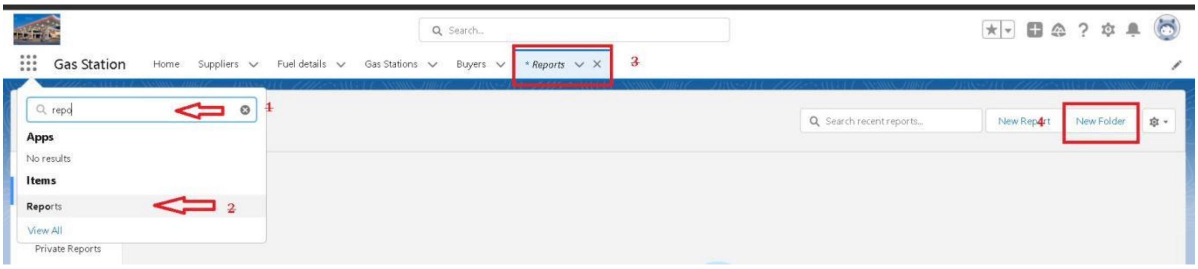
3.Matrix

4.Joined Reports

create a report folder

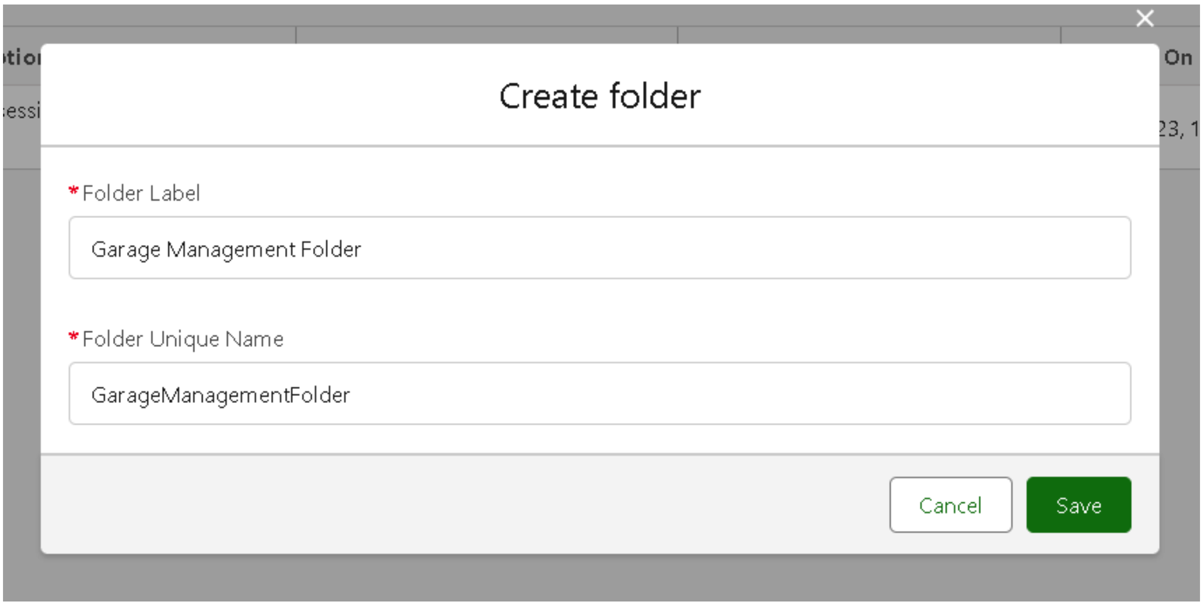
1.Click on the app launcher and search for reports.

2.Click on the report tab, click on new folder.



3.Give the Folder label as “Garage Management Folder”, Folder unique name will be auto populated.

4.Click save.


Create folder

*Folder Label

Garage Management Folder

*Folder Unique Name

GarageManagementFolder

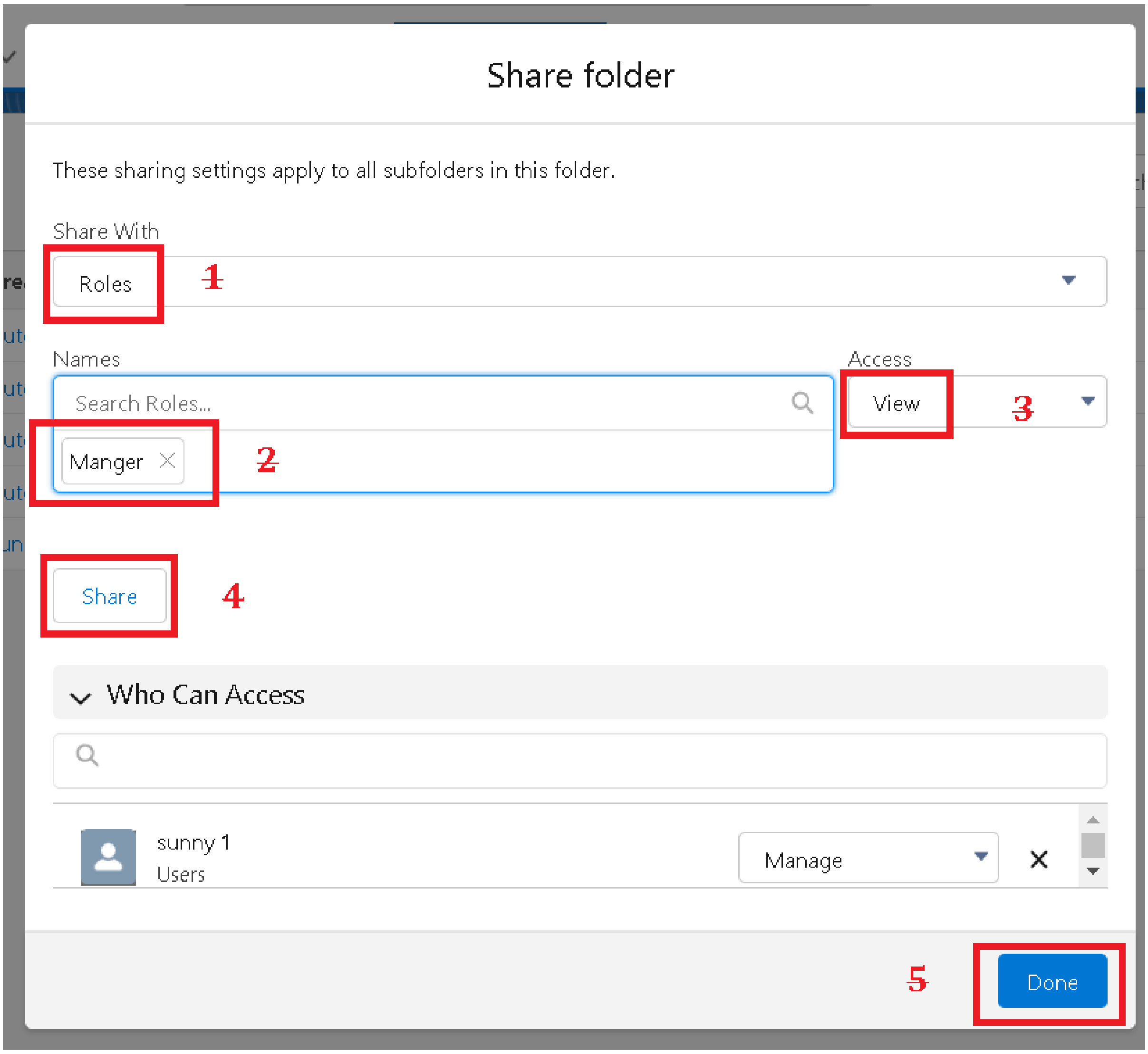
Sharing a report folder

1.Go to the app → click on the reports tab.

2.Click on the All folder , click on the Drop down arrow for Garage Management folder, and Click on share.

3.Select the share with as “roles”, in name field search for “manager”, give “view” as access for that role.

4.Then click share, and click on Done.



Share folder

These sharing settings apply to all subfolders in this folder.

Share With: Roles

Names: Search Roles... — Manger

Access: View

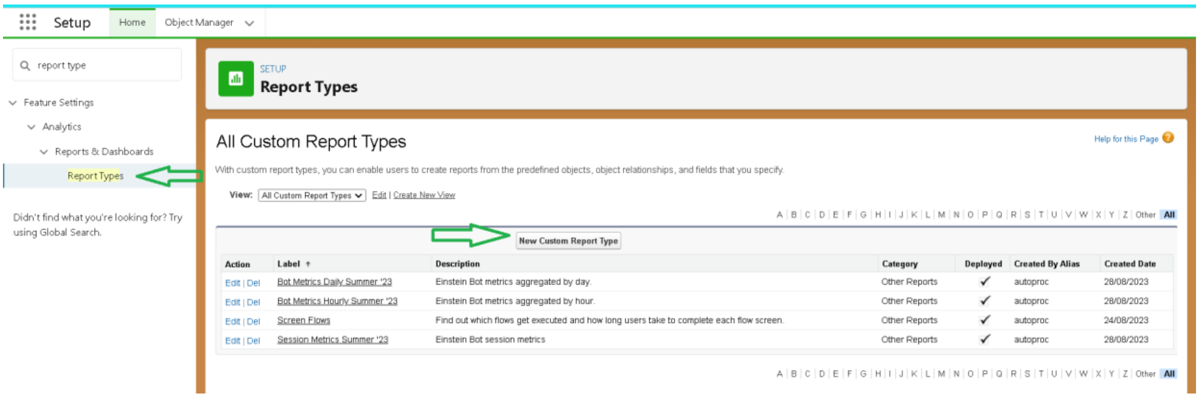
Who Can Access

sunny 1 Users	Manage	×

Create Report Type

1.Go to setup → type users in quick find box → select Report Type→ click on Continue.

2.Click on new custom report type.



report type

Didn't find what you're looking for? Try using Global Search.

All Custom Report Types

With custom report types, you can enable users to create reports from the predefined objects, object relationships, and fields that you specify.

View: All Custom Report Types | Edit | Create New View

Action	Label ↑	Description	Category	Deployed	Created By Alias	Created Date
Edit | Del	Bot Metrics Daily Summer '23	Einstein Bot metrics aggregated by day.	Other Reports	✓	autoproc	28/08/2023
Edit | Del	Bot Metrics Hourly Summer '23	Einstein Bot metrics aggregated by hour.	Other Reports	✓	autoproc	28/08/2023
Edit | Del	Screen Flows	Find out which flows get executed and how long users take to complete each flow screen.	Other Reports	✓	autoproc	24/08/2023
Edit | Del	Session Metrics Summer '23	Einstein Bot session metrics	Other Reports	✓	autoproc	28/08/2023

3.Select the Primary object as “ Customer details” .

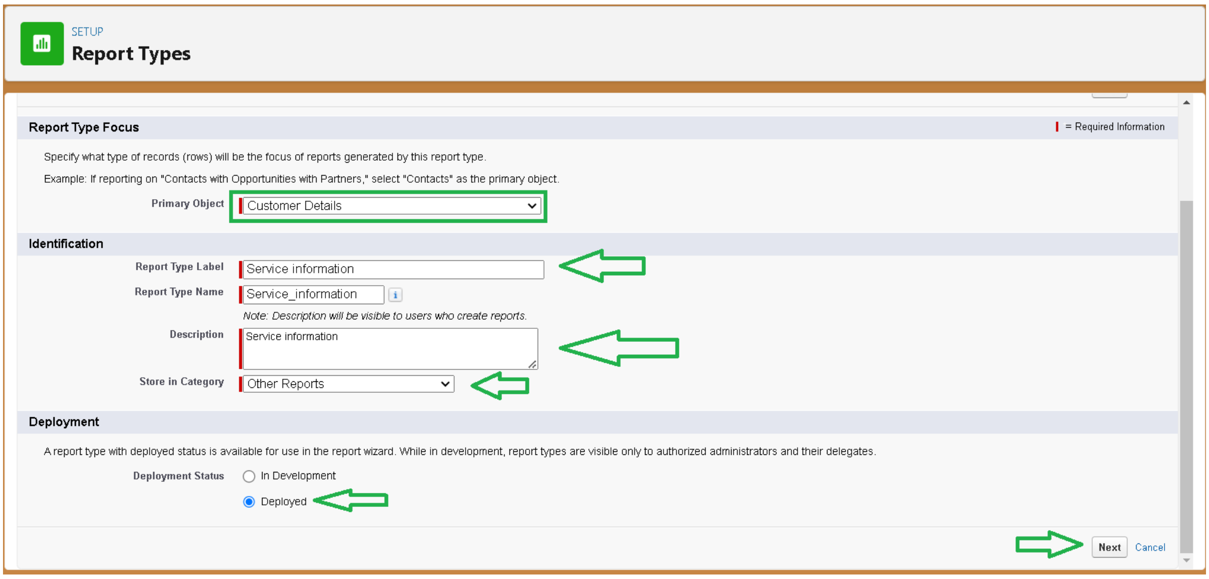
4.Give the Report type Label as “ Service information ”

5.Report type Name is autopopulated.

6.Keep the Description as same.

7.Select Store in Category as “ other Reports ”

8.Select the deployment status as “ Depolyed ”, click on Next.


SETUP

Report Types

Report Type Focus

= Required Information

Specify what type of records (rows) will be the focus of reports generated by this report type.

Example: If reporting on "Contacts with Opportunities with Partners," select "Contacts" as the primary object.

Primary Object: Customer Details

Identification

Report Type Label: Service information

Report Type Name: Service_information

Note: Description will be visible to users who create reports.

Description: Service information

Store in Category: Other Reports

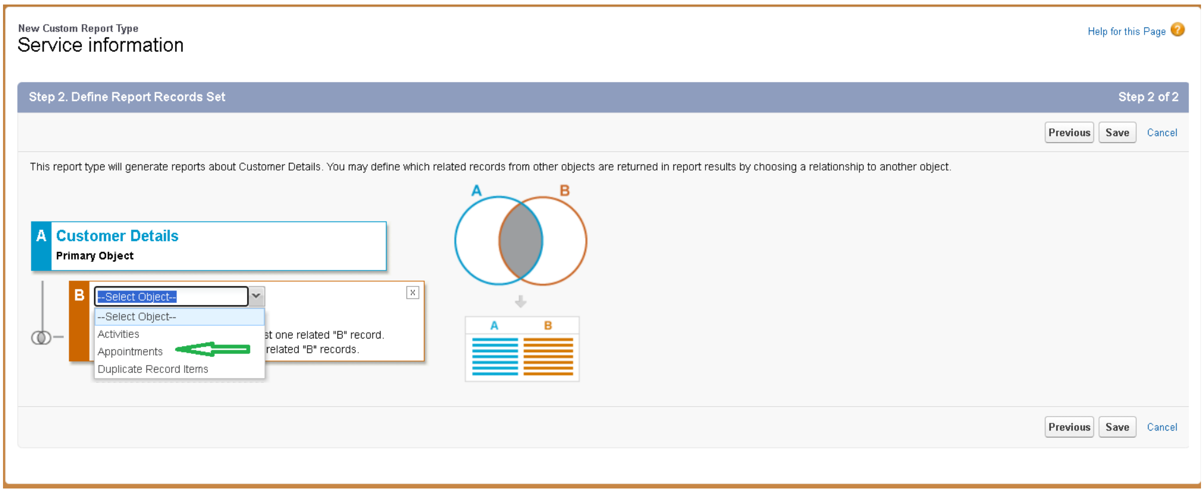
Deployment

A report type with deployed status is available for use in the report wizard. While in development, report types are visible only to authorized administrators and their delegates.

Deployment Status: ○ In Development ● Deployed

9.now , Click on Related object box.

10.Click on Select Object, choose Appointment Object as shown in fig.


New Custom Report Type

Service information

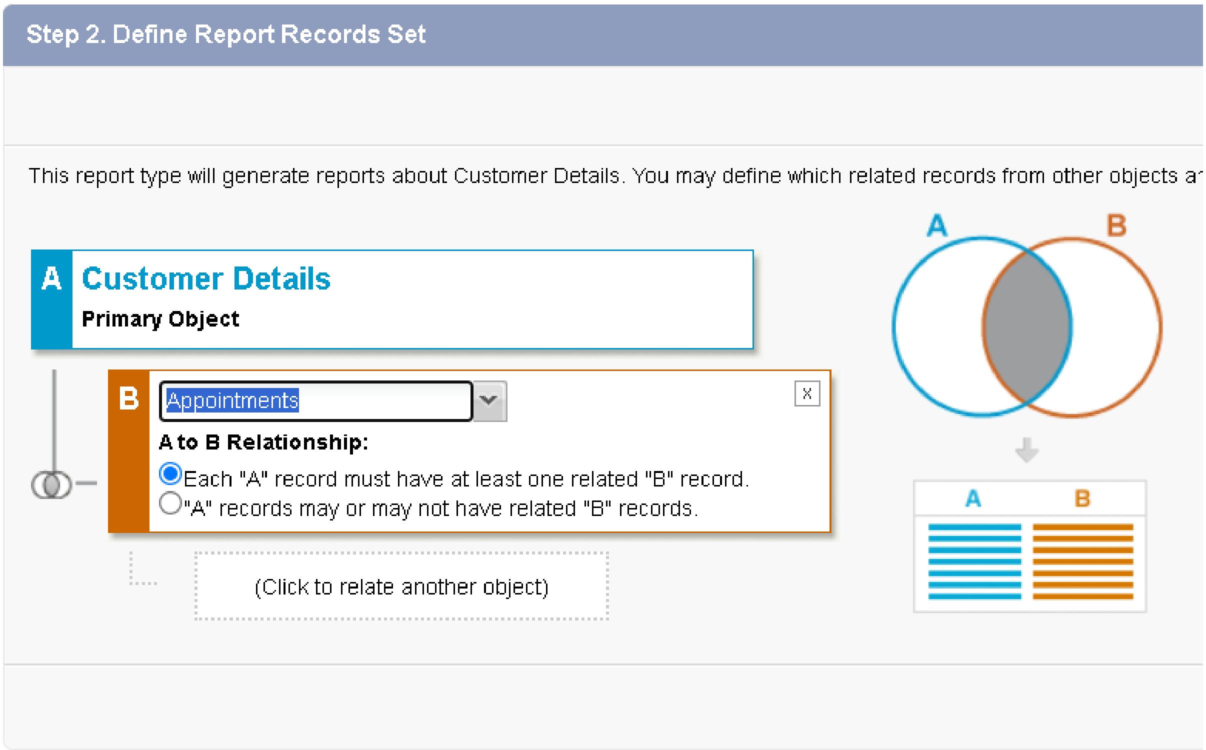
Step 2. Define Report Records Set — Step 2 of 2

This report type will generate reports about Customer Details. You may define which related records from other objects are returned in report results by choosing a relationship to another object.

A Customer Details
Primary Object

B --Select Object--

st one related "B" record.
related "B" records.



Step 2. Define Report Records Set

This report type will generate reports about Customer Details. You may define which related records from other objects a

A Customer Details

Primary Object

B Appointments

A to B Relationship:

● Each "A" record must have at least one related "B" record.

○ "A" records may or may not have related "B" records.

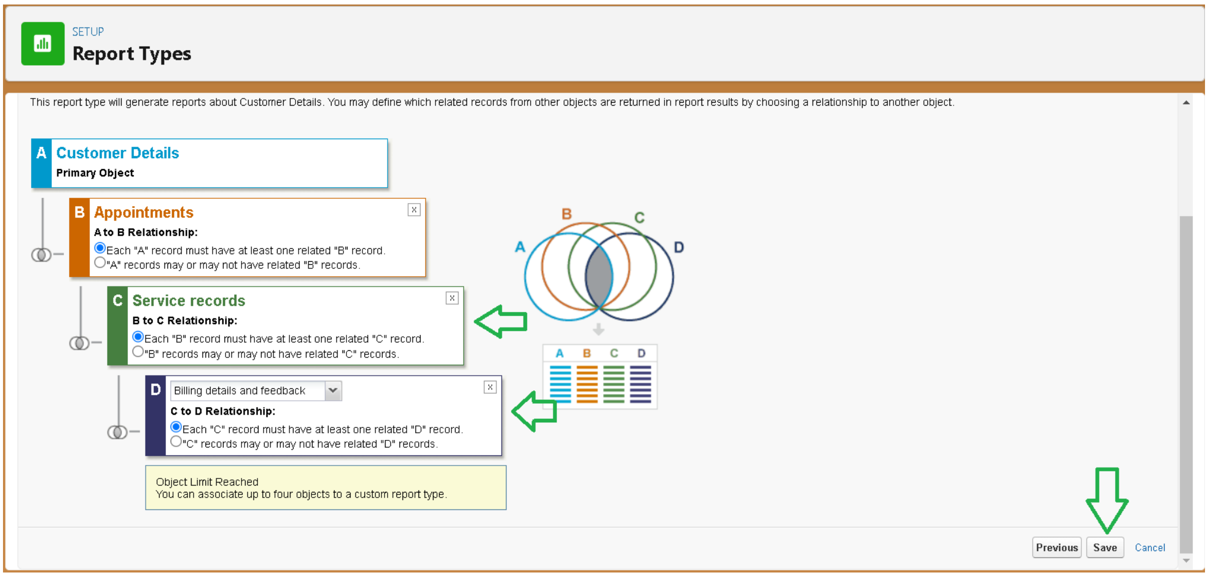
(Click to relate another object)

11.Again Click to relate another object.

12.And select the related object as “ service records”.

13.Repeat the process and select the related object as “ Billing details and feedback”.

14.And click on save.



SETUP

Report Types

This report type will generate reports about Customer Details. You may define which related records from other objects are returned in report results by choosing a relationship to another object.

A Customer Details

Primary Object

B Appointments

A to B Relationship:

● Each "A" record must have at least one related "B" record.

○ "A" records may or may not have related "B" records.

C Service records

B to C Relationship:

● Each "B" record must have at least one related "C" record.

○ "B" records may or may not have related "C" records.

D Billing details and feedback

C to D Relationship:

● Each "C" record must have at least one related "D" record.

○ "C" records may or may not have related "D" records.

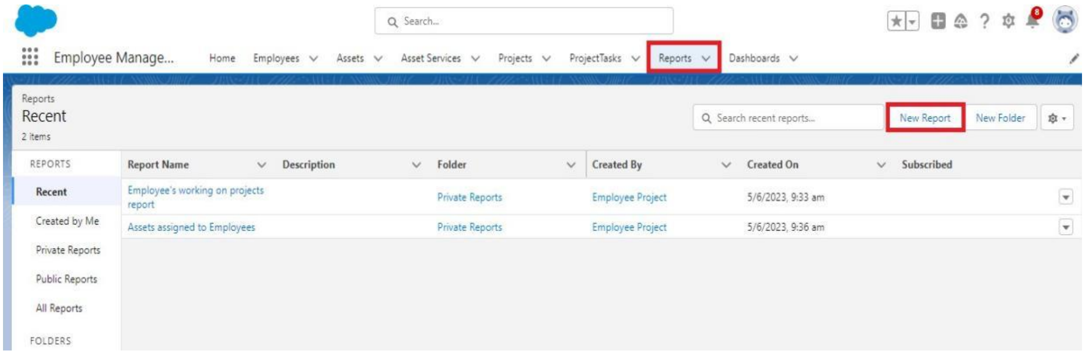
Object Limit Reached
You can associate up to four objects to a custom report type.

Create Report

Note : Before creating report, create latest “10” records in every object. Try to fill every field in each record for better experience.

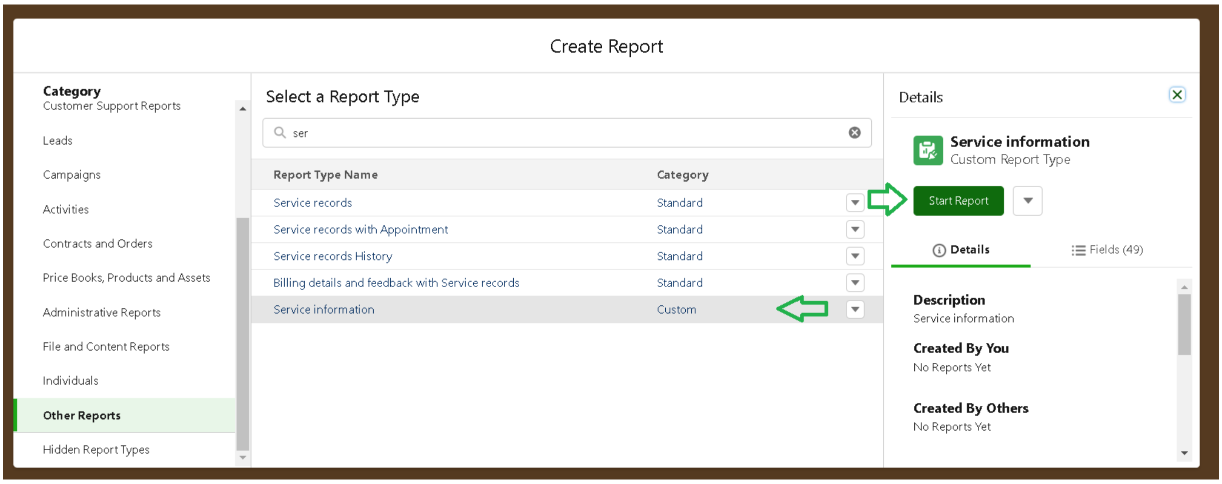
1.Go to the app → click on the reports tab

2.Click New Report.



Report Name	Description	Folder	Created By	Created On	Subscribed
Employee's working on projects report		Private Reports	Employee Project	5/6/2023, 9:33 am	
Assets assigned to Employees		Private Reports	Employee Project	5/6/2023, 9:36 am	

3.Select the Category as other reports, search for Service Information, select that report, click on it. And click on start report.



Report Type Name	Category
Service records	Standard
Service records with Appointment	Standard
Service records History	Standard
Billing details and feedback with Service records	Standard
Service information	Custom

Service information
Custom Report Type

Description
Service information

Created By You
No Reports Yet

Created By Others
No Reports Yet

4.Their outline pane is opened already, select the fields that are mentioned below in the column section.

1.Customer name

2.Appointment Date

3.Service Status

4.Payment paid

5Remove the unnecessary fields.

6.Select the fields that mentioned below in GROUP ROWS section.

1.Rating for Service

7.Select the fields that mentioned below in GROUP ROWS section.

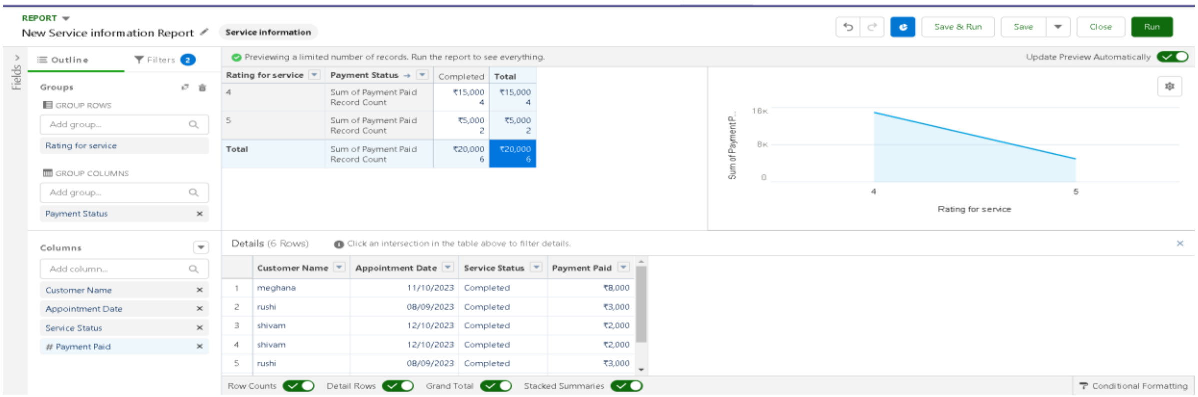
1.Payment Status

8.Click on Add Chart , Select the Line Chart.

9.Click on save, Give the report Name : New Service information Report

10.Report unique Name is auto populated.

11.Select the folder the created and Click on save



New Service information Report

Service information

Groups

GROUP ROWS: Rating for service

GROUP COLUMNS: Payment Status

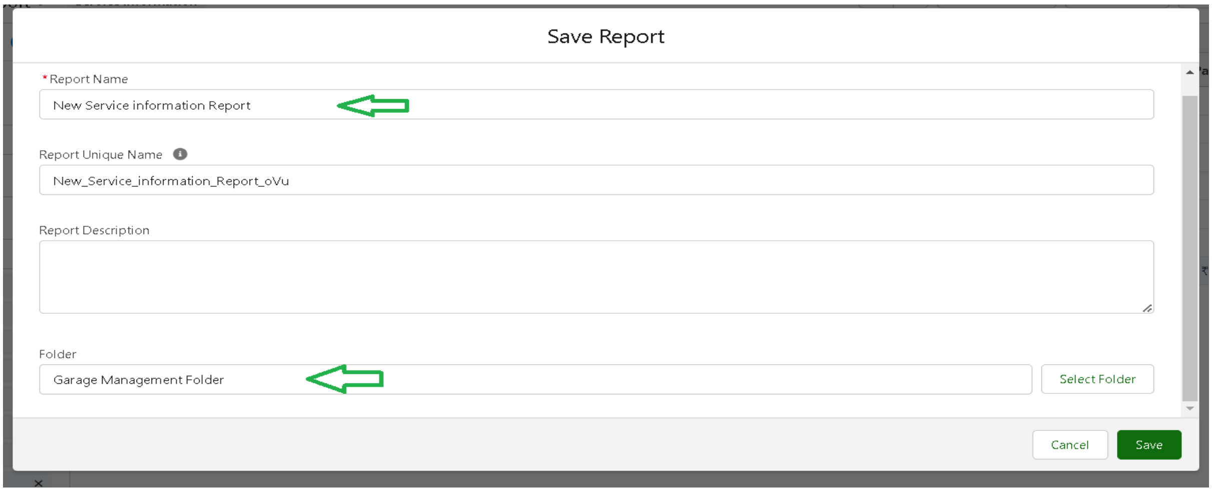
Columns: Customer Name, Appointment Date, Service Status, # Payment Paid

Previewing a limited number of records. Run the report to see everything.

Rating for service	Payment Status →	Completed	Total
4	Sum of Payment Paid Record Count	₹15,000 4	₹15,000 4
5	Sum of Payment Paid Record Count	₹5,000 2	₹5,000 2
Total	Sum of Payment Paid Record Count	₹20,000 6	₹20,000 6

Details (6 Rows) Click an intersection in the table above to filter details.

	Customer Name	Appointment Date	Service Status	Payment Paid
1	meghana	11/10/2023	Completed	₹8,000
2	rushi	08/09/2023	Completed	₹3,000
3	shivam	12/10/2023	Completed	₹2,000
4	shivam	12/10/2023	Completed	₹2,000
5	rushi	08/09/2023	Completed	₹3,000



Save Report

*Report Name: New Service information Report

Report Unique Name: New_Service_information_Report_oVu

Report Description:

Folder: Garage Management Folder

Dashboards

Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.

Create Dashboard Folder

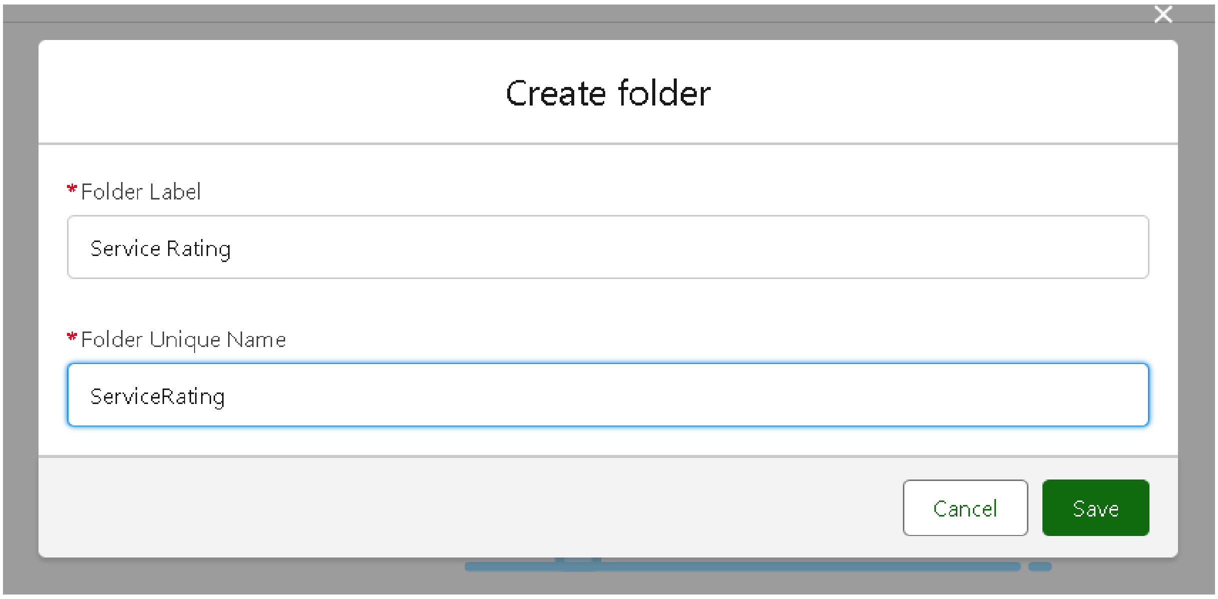
1.Click on the app launcher and search for dashboard**.**

2.Click on dashboard tab.

3.Click new folder, give the folder label as " Service Rating dashboard".

4.Folder unique name will be auto populated.

5.Click save.



Create folder

*Folder Label

Service Rating

*Folder Unique Name

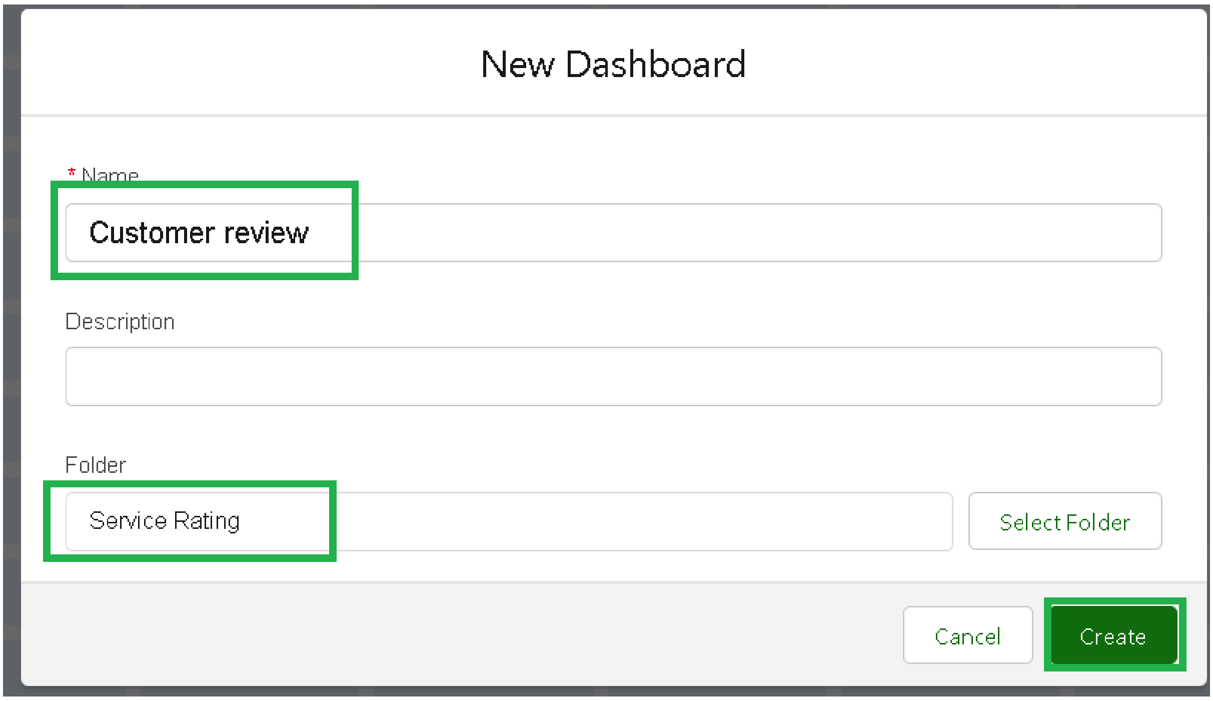
ServiceRating

6.Follow the same steps, form milestone 15, and activity 2, and provide the sharing settings for the folder that just created.

Create Dashboard

1.Go to the app → click on the Dashboards tabs.

2.Give a Name and select the folder that created, and click on create.



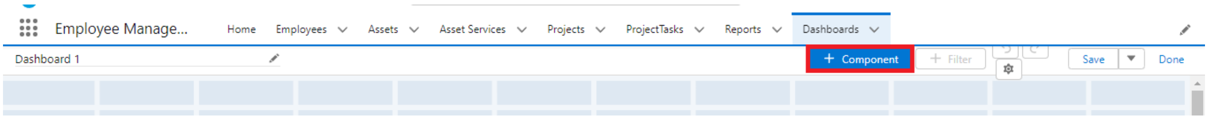
New Dashboard

* Name: Customer review

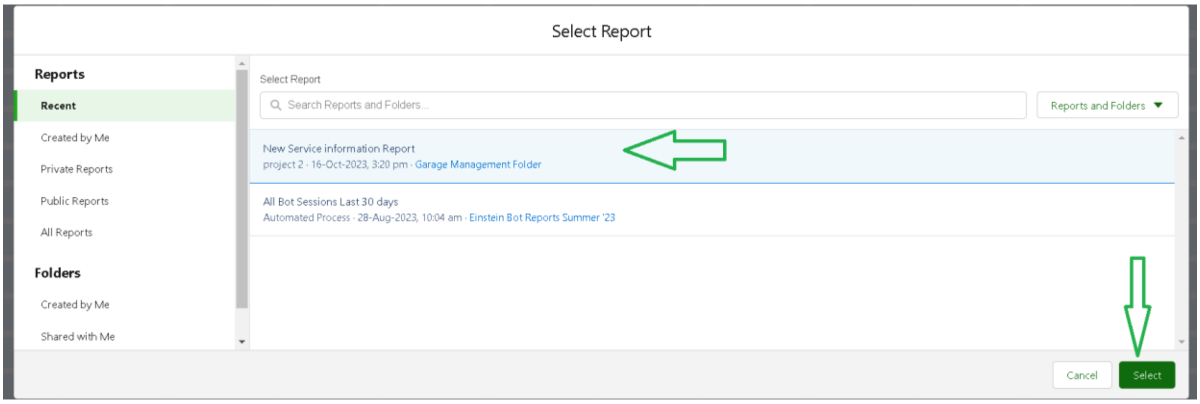
Description:

Folder: Service Rating

3.Select add component.



4.Select a Report and click on select.



Select Report

Select Report

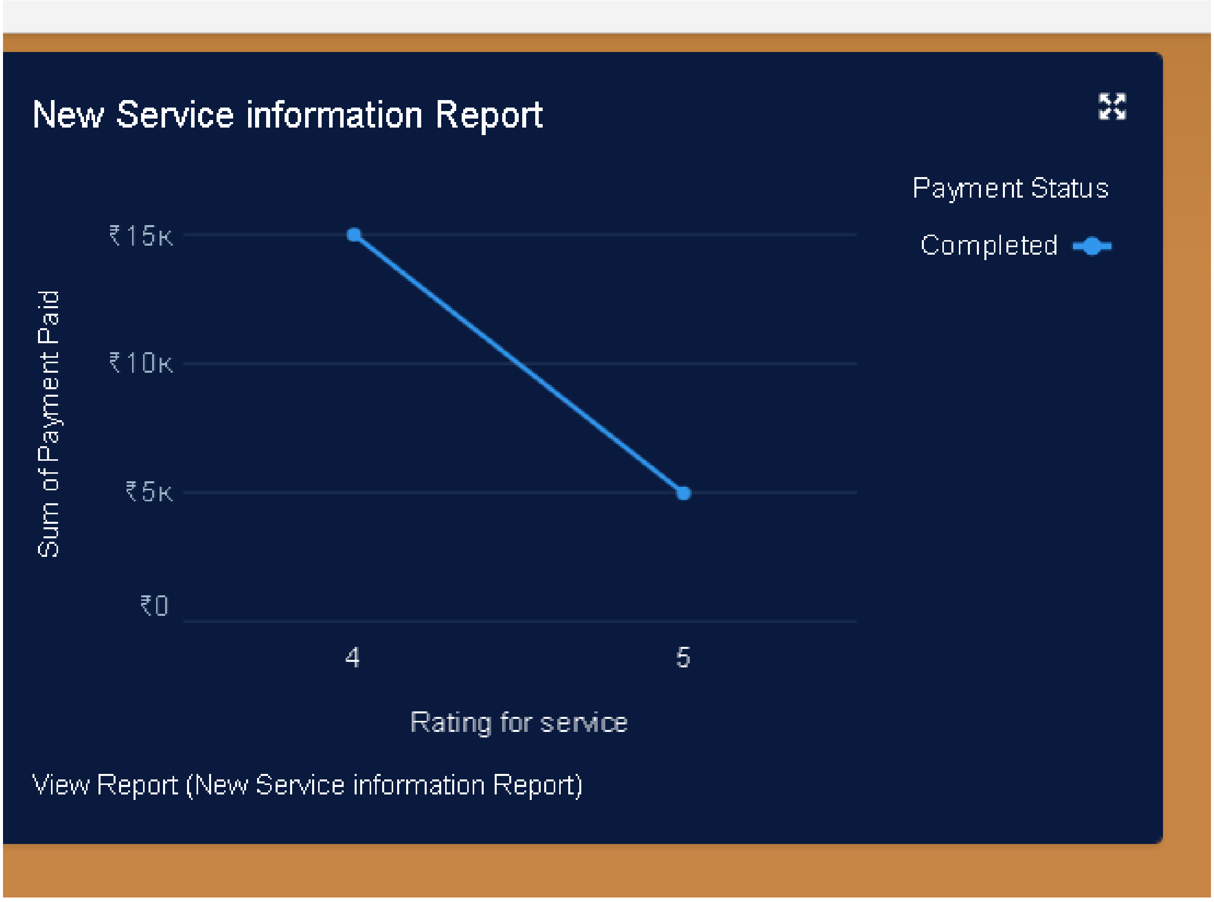
New Service information Report
project 2 · 16-Oct-2023, 3:20 pm · Garage Management Folder

All Bot Sessions Last 30 days
Automated Process · 28-Aug-2023, 10:04 am · Einstein Bot Reports Summer '23

5.Select the Line Chart. Change the theme.

6.Click Add then click on Save and then click on Done.

7.Preview is shown below.

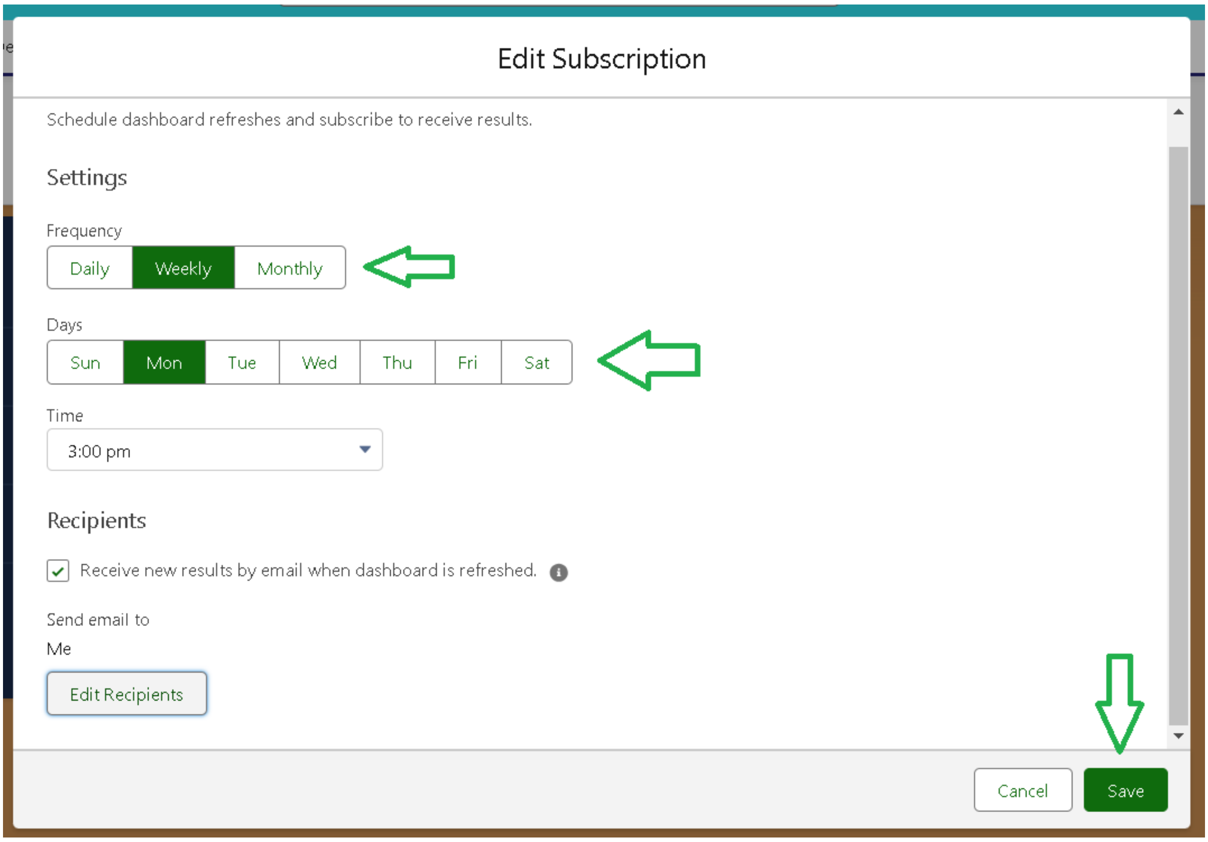


8.After that Click on Subcribe on top right.

9.Set the Frequency as “ weekly ”.

10.Set a day as monday.

11.And Click on save.



Edit Subscription

Schedule dashboard refreshes and subscribe to receive results.

Settings

Frequency

Daily | Weekly | Monthly

Days

Sun | Mon | Tue | Wed | Thu | Fri | Sat

Time

3:00 pm

Recipients

☑ Receive new results by email when dashboard is refreshed.

Send email to

Me

APPENDICES

Conclusion

The Garage Management System built on Salesforce provides a comprehensive, scalable, and efficient solution for modernizing automotive service center operations. By leveraging Salesforce's powerful features and custom Apex logic, the system streamlines processes such as appointment scheduling, inventory management, billing, and customer communication. This ensures enhanced operational efficiency, improved customer satisfaction, and better resource utilization. The implementation of this system positions garages for long-term growth and competitiveness in an evolving market.With automation at its core, the system reduces manual errors, optimizes resource utilization, and enhances customer satisfaction by offering personalized and timely services. Real-time data insights enable informed decision-making, driving operational excellence and strategic growth. Furthermore, the cloud-based nature of Salesforce ensures that the system remains scalable, secure, and accessible from anywhere, making it a future-proof investment for garages of all sizes.The Garage Management System not only streamlines daily operations but also strengthens customer relationships through proactive communication and seamless service delivery. By adopting this system, automotive businesses can achieve higher efficiency, improved profitability, and a significant competitive edge in the market. Its potential for integration with third-party tools and evolving capabilities makes it an indispensable tool for long-term business success.