



Project Ready Program

Garage Management System

Project Document

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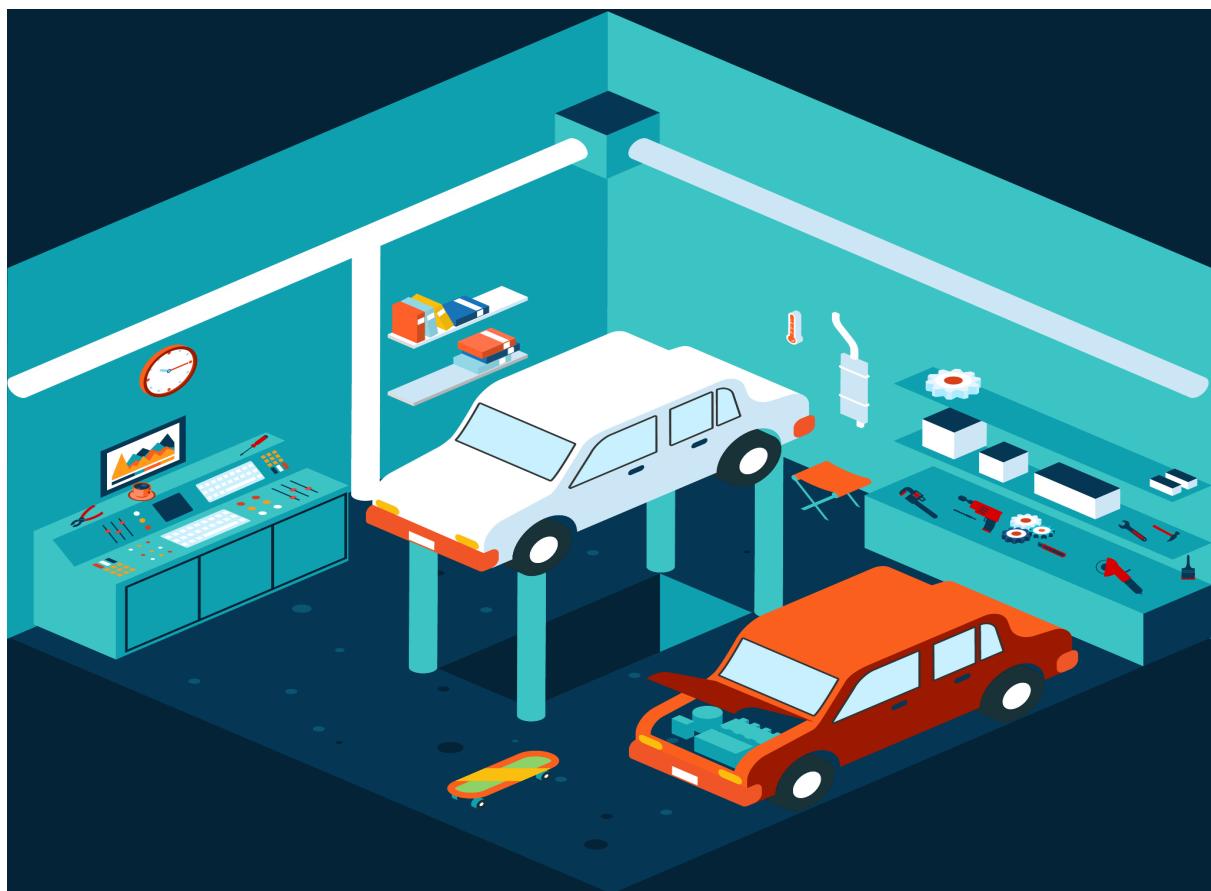
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Garage Management System

The Garage Management System (GMS) is an innovative tool tailored for automotive repair facilities, designed to streamline operations, enhance service delivery, and build strong customer relationships. Its user-friendly interface ensures ease of use for all staff members, reducing the learning curve and minimizing operational disruptions.

GMS excels in managing customer information efficiently, maintaining detailed records of interactions, service histories, and feedback. This personalization enhances customer satisfaction and fosters lasting relationships. The system's robust appointment scheduling feature includes automated reminders, ensuring organized and timely services, reducing wait times, and maximizing resource utilization.

Inventory management is another critical feature of GMS, tracking parts and supplies in real-time to prevent delays in service delivery. The system's billing and invoicing capabilities generate accurate, detailed invoices, ensuring transparency and building customer trust. Integration with various payment gateways facilitates seamless transactions and enhances customer convenience.

GMS's analytical and reporting features provide valuable insights into the garage's performance, enabling data-driven decision-making. This helps identify areas for improvement and capitalize on growth opportunities. Additionally, GMS supports marketing efforts by analyzing customer data to identify trends and preferences, enabling targeted marketing campaigns and personalized promotions.

In a competitive market, delivering exceptional service and maintaining efficient operations is paramount. GMS empowers garages to achieve these goals by providing a comprehensive solution that addresses all aspects of garage management. Whether enhancing customer relationships, optimizing resource use, or ensuring financial accuracy, GMS is a crucial asset for any automotive repair facility aiming to thrive.

Milestone 1: Salesforce

What is Salesforce?

Salesforce is a massive infrastructure of customer relationship management software products that help marketing, sales, commerce, service, and IT teams connect with their customers.

Although Salesforce started as a Software as a Service (SaaS) company, it has grown into a Platform as a Service (PaaS) company.

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.

It means that their customers can buy not only a ready-to-use Salesforce CRM system but also build their framework components (Lightning components) and custom apps on top of the Salesforce Lightning platform (Force.com), become Salesforce partners and then market these software products on its app marketplace – [AppExchange](#).

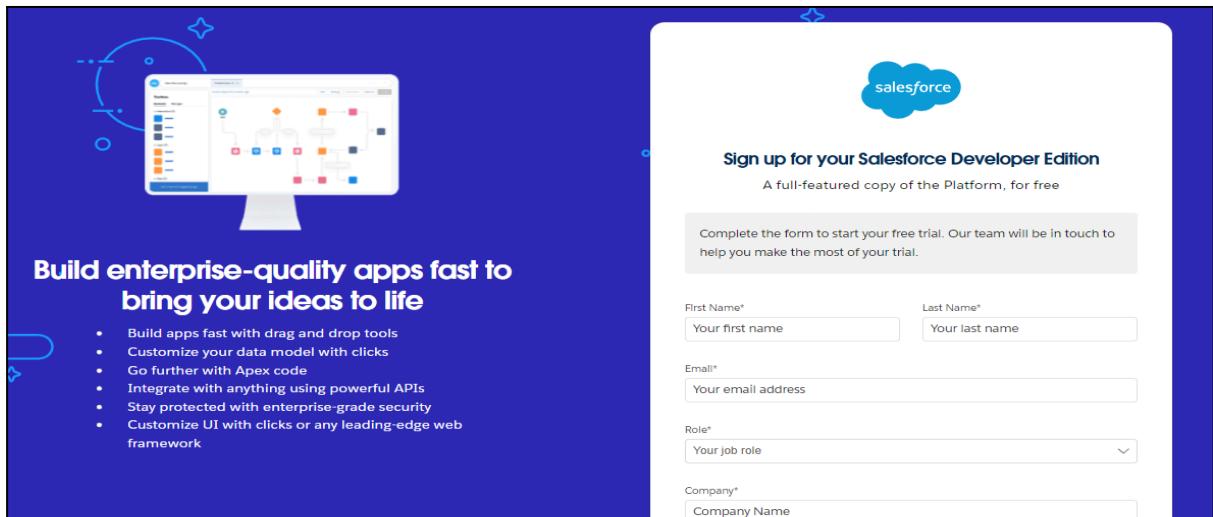
Also, Salesforce encourages users and companies to know their platform capabilities and features better and join their online training hub, [Trailhead](#) where they can get educational resources from learning modules like “[Salesforce Platform Basics](#)” or expert support from the [Trailblazer Community](#).

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

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 :



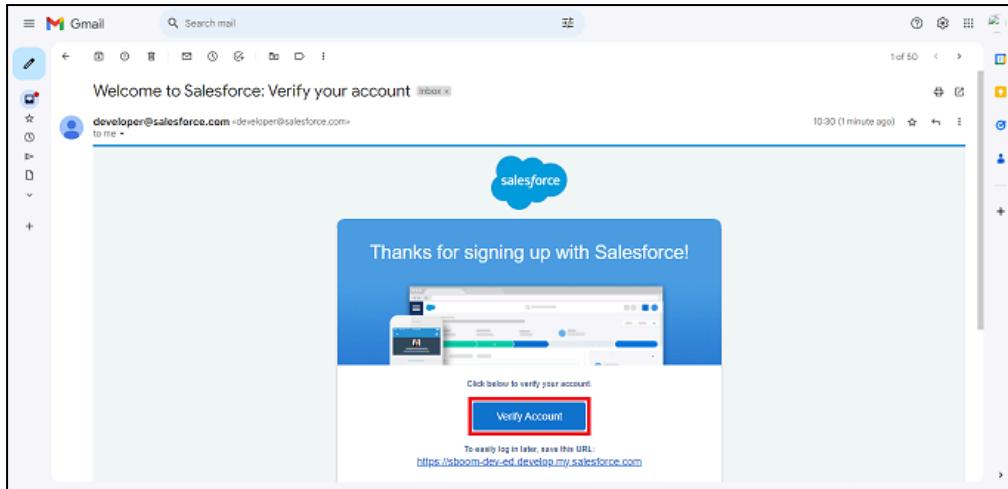
1. First name & Last name
2. Email
3. Role : Developer
4. Company : College Name
5. County : India
6. Postal Code : pin code
7. Username : should be a combination of your name and company

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

Click on sign me up after filling these.

Account Activation

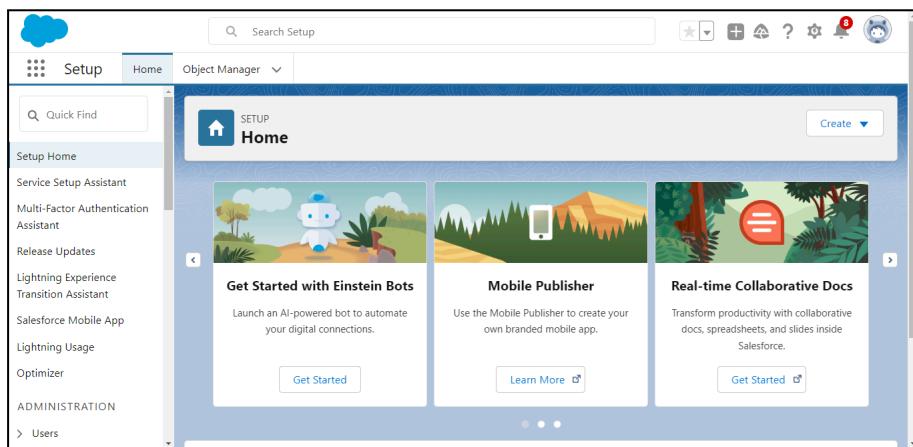
1. Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account. The email may take 5-10mins.



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

A screenshot of the Salesforce "Change Your Password" page. It shows fields for "New Password" and "Confirm New Password", both of which are highlighted with a red box. Below these is a "Security Question" field set to "In what city were you born?", and an "Answer" field containing "asdfghjkl", which is also highlighted with a red box. At the bottom is a large blue "Change Password" button.

4. Then you will redirect to your salesforce setup page.



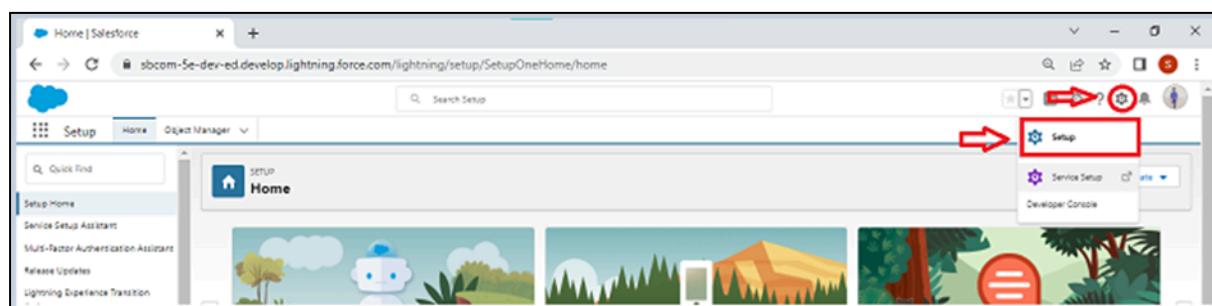
Milestone 2 : Objects

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:

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

To Navigate to Setup page:

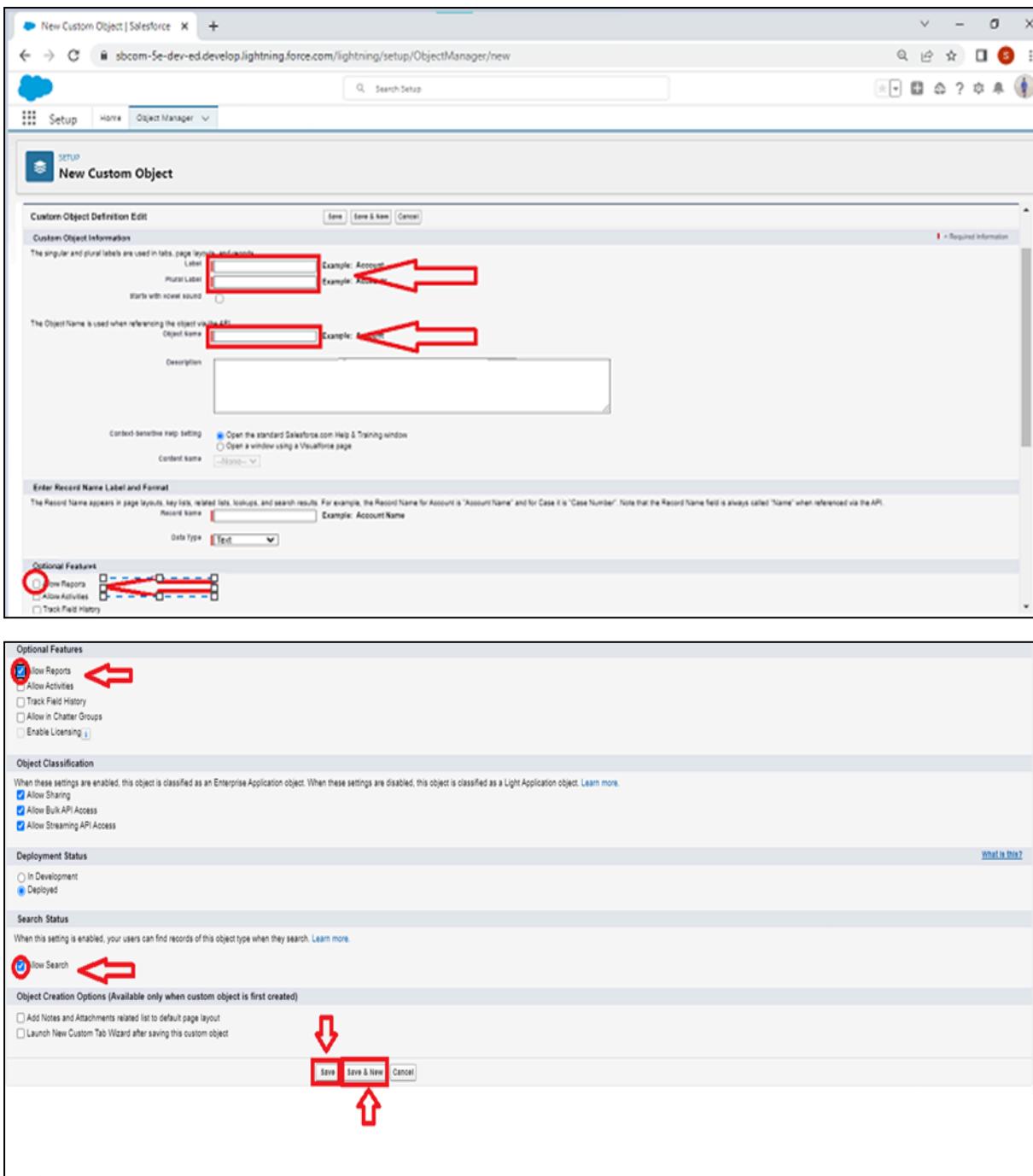


Click on gear icon ? click setup.

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





4. Click on Save.

Create Customer Details Object

To create an object:

- From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

Enter the label name >> Customer Details

Plural label name >> Customer Details
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.

Enter the label name >> Appointment
Plural label name >> Appointments
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.

Enter the label name >> Service records
Plural label name >> Service records
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.

Enter the label name >> Billing details and feedback

Plural label name >> Billing details and feedback

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,

Allow search >> Save.

Milestone 3 : 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:

1. 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.

2. 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.

3. 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.

4. Lightning Component Tabs

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

5. Lightning Page Tabs

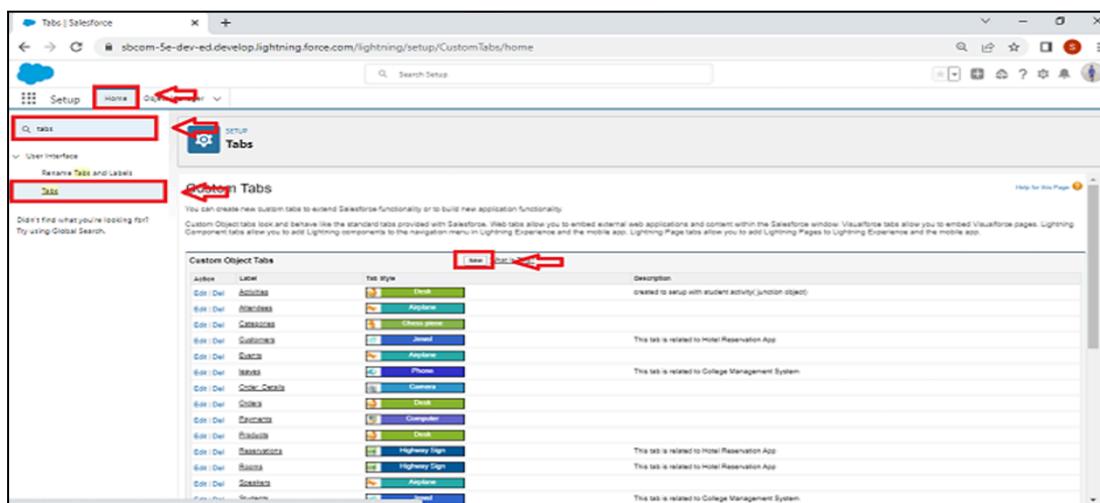
Lightning Page Tabs let you add Lightning Pages to the mobile app navigation menu.

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.

Creating a Custom Tab

To create a Tab:(Customer Details)

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



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.

New Custom Object Tab

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--

Description:

Next Cancel



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	<input type="checkbox"/> Include Tab
Platform (standard__Platform)	<input type="checkbox"/>
Sales (standard__Sales)	<input type="checkbox"/>
Service (standard__Service)	<input type="checkbox"/>
Marketing (standard__Marketing)	<input type="checkbox"/>
Sample Console (standard__ServiceConsole)	<input type="checkbox"/>
High Volume Customer Portal User	<input type="checkbox"/>
Authenticated Website User	<input type="checkbox"/>
App Launcher (standard__AppLauncher)	<input type="checkbox"/>

Analytics Studio (standard__Insights)	<input type="checkbox"/>
Sales Console (standard__LightningSalesConsole)	<input type="checkbox"/>
Service Console (standard__LightningService)	<input type="checkbox"/>
Sales (standard__LightningSales)	<input type="checkbox"/>
Lightning Usage App (standard__LightningInstrumentation)	<input type="checkbox"/>
Digital Experiences (standard__SalesforceCMS)	<input type="checkbox"/>
Queue Management (standard__QueueManagement)	<input type="checkbox"/>
Bolt Solutions (standard__LightningBolt)	<input type="checkbox"/>
Data Manager (standard__DataManager)	<input type="checkbox"/>
Salesforce Scheduler Setup (standard__LightningScheduler)	<input type="checkbox"/>
<input checked="" type="checkbox"/> Append tab to users' existing personal customizations	<input type="button" value="Save"/>

Creating Remaining Tabs

1. Now create the Tabs for the remaining Objects, they are “Appointments, Service records,Billing details and feedback”.
2. Follow the same steps as mentioned in Activity -1 .

Milestone 4 : 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:

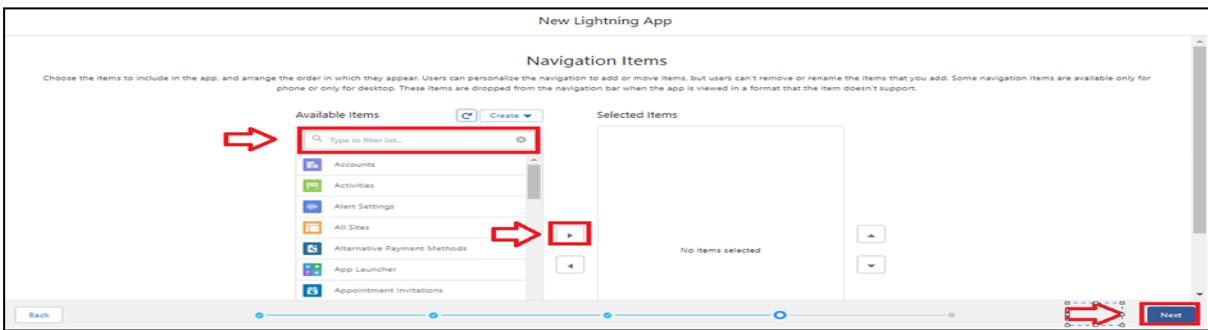
1. Go to setup page >> search “app manager” in quick find >> select “app manager” >> click on New lightning App.

The screenshot shows the Salesforce App Manager interface. At the top, there's a search bar and a 'New Lightning App' button. On the left, there are navigation links for 'Setup', 'Home', and 'Object Manager'. Below these, there are sections for 'App Manager' and 'App Libraries'. A red box highlights the 'App Manager' link. In the center, there's a section titled 'Lightning Experience App Manager' with a sub-section 'Clone Apps(Beta)'. Another red box highlights the 'Clone Apps(Beta)' link. To the right, there's a 'New Lightning App' button with a red arrow pointing to it. The main area displays a list of existing apps, with columns for 'App Name', 'Developer Name', 'Description', 'Last Modified', 'App Type', and 'Actions'. A third red box highlights the 'New Lightning App' button at the bottom of the list.

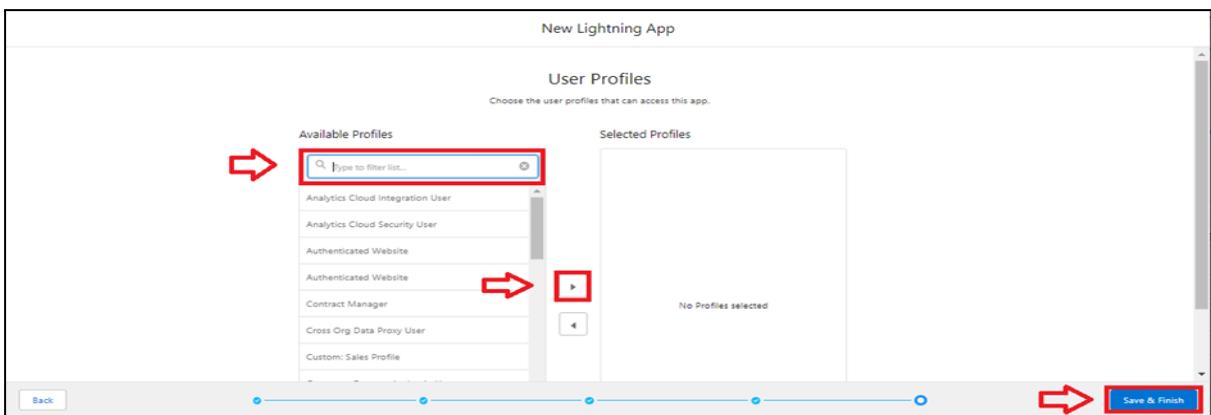
2. Fill the app name in app details as Garage Management Application >> Next >> (App option page) keep it as default >> Next >> (Utility Items) keep it as default >> Next.

The screenshot shows the 'New Lightning App' configuration page. It has two main sections: 'App Details' and 'App Branding'. In the 'App Details' section, there's a field for 'App Name' with the placeholder 'Name your app...' and a 'Developer Name' field with the placeholder 'Enter a developer name...'. A red arrow points to the 'App Name' field. In the 'App Branding' section, there's a 'Primary Color Hex Value' field set to '#0070D2' with a color swatch. There's also an 'Image' upload field and an 'Org Theme Options' checkbox. At the bottom, there's an 'App Launcher Preview' and a 'Next' button with a red arrow pointing to it.

3. To Add Navigation Items:



4. 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 >> Next.
5. To Add User Profiles:



Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.

Milestone 5 : 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

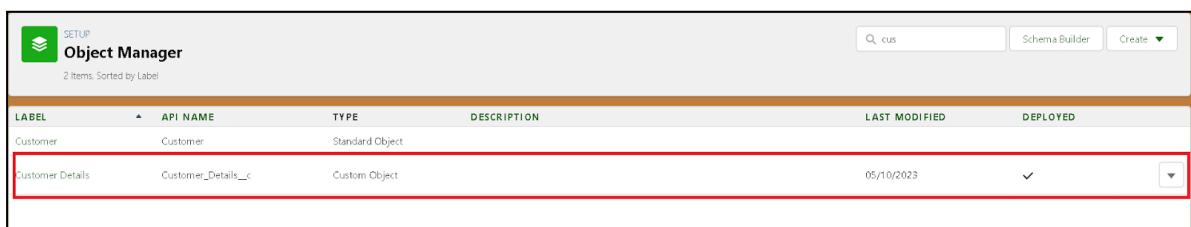
Custom Fields:

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

1. 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.



The screenshot shows the Salesforce Object Manager interface. At the top, there's a search bar with the text 'cus' and a 'Create' button. Below the header, a table lists objects. The 'Customer' object is listed first, and the 'Customer Details' object is highlighted with a red border. The table columns are labeled: LABEL, API NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. The 'Customer' row shows 'Customer' in the Label column and 'Customer' in the API Name column. The 'Customer Details' row shows 'Customer Details' in the Label column and 'Customer_Details__c' in the API Name column. The 'Customer' object is a 'Standard Object' and was last modified on 05/10/2023. The 'Customer Details' object is a 'Custom Object' and was last modified on 05/10/2023.

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

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

Customer1

Fields & Relationships

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)		
Phone no	Phone_no__c	Phone		

3. Select Data Type as a “Phone”

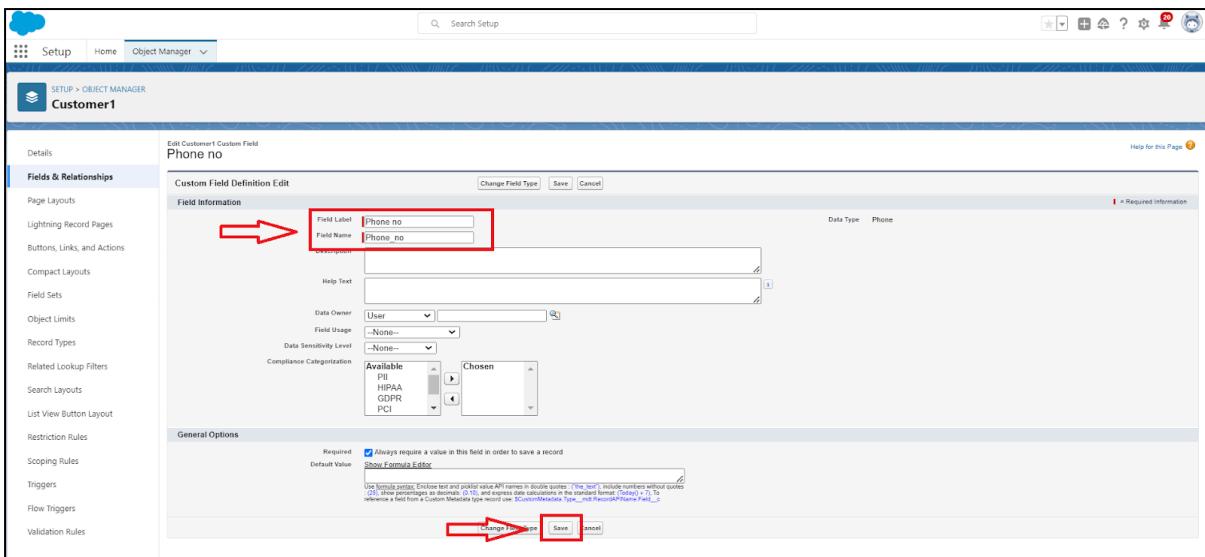
Customer1

Fields & Relationships

- Currency
- Date
- Date/Time
- Email
- Geolocation
- Number
- Percent
- Phone
- Picklist
- Picklist (Multi-Select)
- Text
- Text Area
- Text Area (Long)
- Text Area (Rich)
- Text (Encrypted) (1)
- Time
- URL

Allows users to enter any phone number. Automatically formats it as a phone number.

4. Click on next.



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.

2. 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
 - Click on Next >> Next >> Save and new

Creation of Lookup Fields

Creation of Lookup Field on Appointment Object :

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

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.

Note: Make sure you complete Activity 4 Before continuing.

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	<input checked="" type="checkbox"/> Always require a value in this field in order to save a record		
What to do if the lookup record is deleted?	<input type="radio"/> Clear the value of this field. You can't choose this option if you make this field required. <input checked="" type="radio"/> 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

Optional, 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															
<table border="1"> <tr> <td>Field</td> <td>Operator</td> <td>Value / Field</td> </tr> <tr> <td>Appointment: Appointment Date</td> <td>less than</td> <td>Field</td> </tr> <tr> <td>And</td> <td>Value</td> <td>Appointment: Created Date</td> </tr> <tr> <td colspan="3">Begin typing to search for a field... <input type="text"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/></td> </tr> <tr> <td colspan="3">Add Filter Logic...</td> </tr> </table>			Field	Operator	Value / Field	Appointment: Appointment Date	less than	Field	And	Value	Appointment: Created Date	Begin typing to search for a field... <input type="text"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/>			Add Filter Logic...		
Field	Operator	Value / Field															
Appointment: Appointment Date	less than	Field															
And	Value	Appointment: Created Date															
Begin typing to search for a field... <input type="text"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/>																	
Add Filter Logic...																	

Filter Type **Required**. The user-entered value must match filter criteria.
 Optional. The user can remove the filter or enter values that don't match criteria.

If it doesn't, display this error message on save:
 

Reset to default message

Lookup Window Text

Active Enable this filter. 

[Change Field Type](#) [Save](#) [Cancel](#)

10. Error Message : Value does not match the criteria.
11. Enable the filter by click on Active.
12. Next >> Next >> Save.

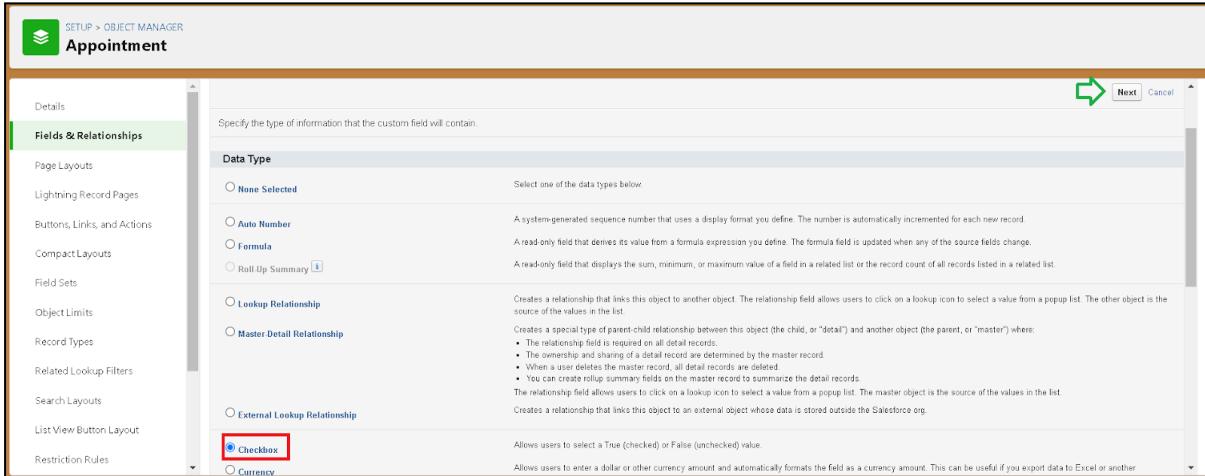
Creation of Lookup Field on Billing details and feedback Object :

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.



4. Give the Field Label : Maintenance service
5. Field Name : is auto populated
6. Default value : unchecked

The screenshot shows the 'New Custom Field' configuration page for the 'Appointment' object. It's Step 2 of 4. The 'Field Label' is set to 'Maintenance service'. The 'Default Value' is set to 'Unchecked' (radio button selected). The 'Field Name' is 'Maintenance_service'. The 'Description' and 'Help Text' fields are empty. A green arrow points to the 'Unchecked' radio button. At the bottom, there are checkboxes for 'Auto add to custom report type' and 'Add this field to existing custom report types that contain this entity'.

7. Click on next >> next >> save.

Creation of Another Checkbox Field on Appointment Object :

1. Repeat the steps form 1 to 3.
2. Give the Field Label : Repairs
3. Field Nme : is auto populated
4. Default value : unchecked

5. Click on next >> next >> save.
6. Follow the same and create another checkbox with given names
7. Give the Field Label : Replacement Parts
8. Field Nme : is auto populated
9. Default value : unchecked
10. 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 click 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

Field Name

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

[Previous](#) [Next](#) [Cancel](#)



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

Step 2. Enter the details Step 2 of 4

Field Label

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 Number of digits to the left of the decimal point

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

Field Name

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.

Appointment
New Custom Field

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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Analytics Cloud Security User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Authenticated Website	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Authenticated Website	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Contract Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cross Org Data Proxy User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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 field as Required and Unique.

Step 2. Enter the details Step 2 of 4

Field Label [i](#)

Please enter the maximum length for a text field below.
Length

Field Name [i](#)

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 entry [i](#)

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 and Unique.
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

Field Label Field Name 

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.

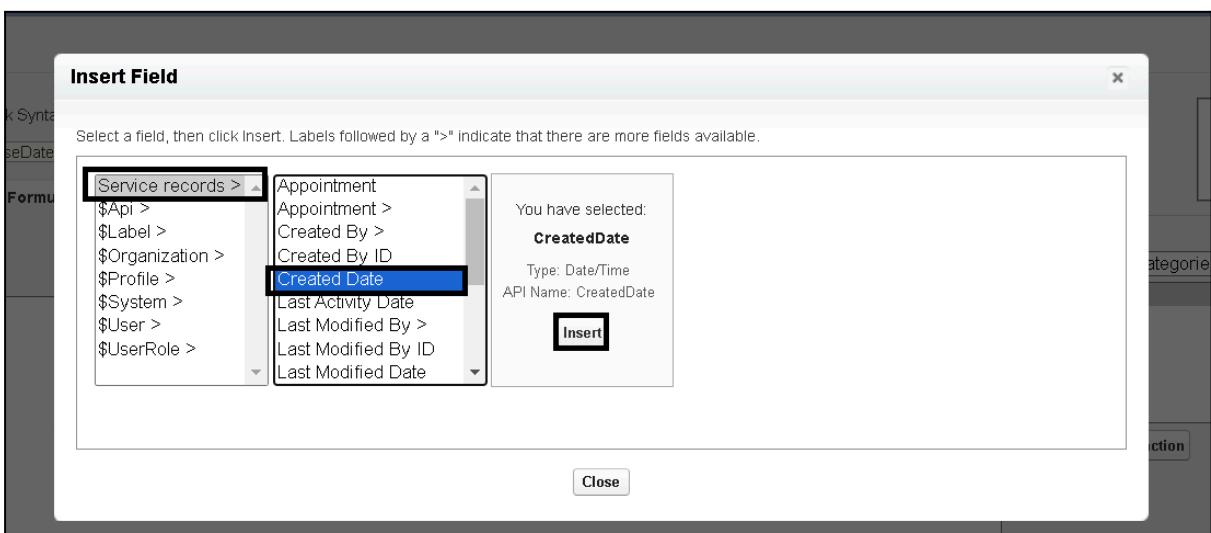
Checkbox Calculate a boolean value
Example: `TODAY() > CloseDate`

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 datetime, for example, by adding a number of hours or days to another datetime.
Example: `Next = NOW() + 1`

5. Insert field formula should be : CreatedDate



Step 3. Enter formula

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...](#)

Simple Formula Advanced Formula

Functions

`service_date (Date) =  CreatedDate`

 Quick Tips

- Getting Started
- Operators & Functions

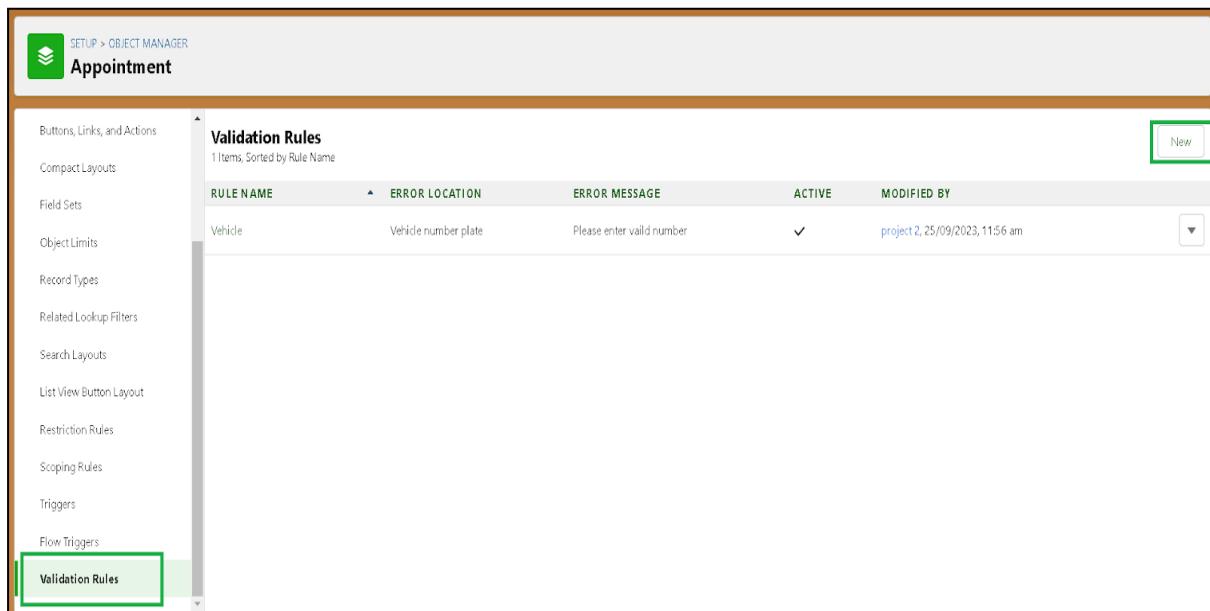
6. click “Check Syntax” .
7. Click next >> next >> Save.

Milestone 6: 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.



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}"))

Validation Rule Edit

Save Save & New Cancel

Rule Name: Vehicle

Active:

Description: vehicle

Error Condition Formula

Example: Discount_Percent_c>0.30 More Examples...

Display an error if Discount is more than 30%

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

Insert Field Insert Operator 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

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

Check Syntax

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

Error Message

Example: Discount percent cannot exceed 30%

This message will appear when Error Condition formula is true

Error Message: Please enter valid 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

Save Save & New Cancel

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

- Go to the setup page >> click on object manager >> From drop down click edit for Billing details and feedback object.
- Click on the validation rule >> click New.
- Enter the Rule name as “ rating_should_be_less_than_5”.
- 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.

Milestone 7: 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.

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

Matching Rule
New Matching Rule

Step 1: Select object Step 1 of 2

Select the object to which this matching rule applies.

Object: Customer Details

Next **Cancel**

Up

Next **Cancel**

4. Give the Rule name : Matching customer details
 5. Unique name : is auto populated
 6. Define the matching criteria as
 7. Field Matching Method
- | | |
|-----------------|-------|
| 1. Gmail | Exact |
| 2. Phone Number | Exact |
8. Click save.
 9. After Saving Click on Activate.

Rule Details

Object: Customer Details
Rule Name: matching Customer data
Unique Name: matching_Customer_det
Description:

Matching Criteria

Tell the rule which fields to compare and how.

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

Add Filter Logic... **Save** **Cancel**

Matching Rule
matching Customer details

Matching Rule Detail

Object: Customer Details	Edit Delete Clone Activate
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: project2, 25/09/2023, 10:15 am	Modified By: project2, 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.

Rule Name	Description	Matching Rule	Active	Last Modified By	Last Modified Date
Customer Detail duplicate		Matching Customer details	<input type="checkbox"/>	02	10/02/2023
Standard Account Duplicate Rule	Identify accounts that duplicate other accounts	Standard Account Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Standard Contact Duplicate Rule	Identify contacts that duplicate other contacts and leads	Standard Lead Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Standard Lead Duplicate Rule	Identify leads that duplicate other leads and contacts	Standard Lead Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Customer Details		Standard Contact Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Environment		Standard Lead Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Individual		Standard Contact Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Laptop		Standard Lead Matching Rule	<input checked="" type="checkbox"/>	02	24/08/2023
Lead		Standard Contact Matching Rule	<input checked="" type="checkbox"/>	02	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.

Milestone 8: 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.

2. Custom Profiles:

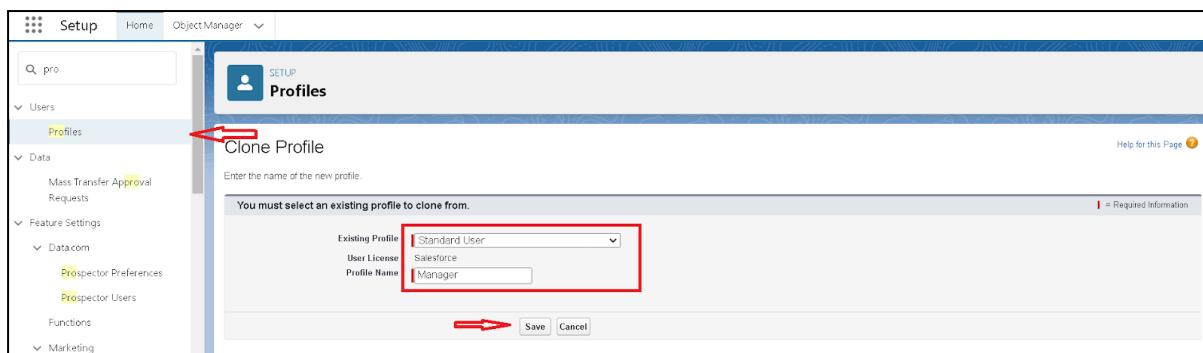
Custom ones defined by us.

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

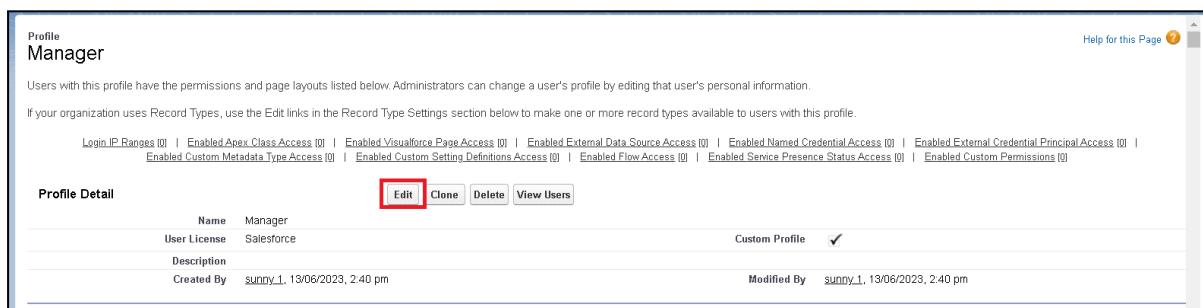
Manager Profile

To create a new profile:

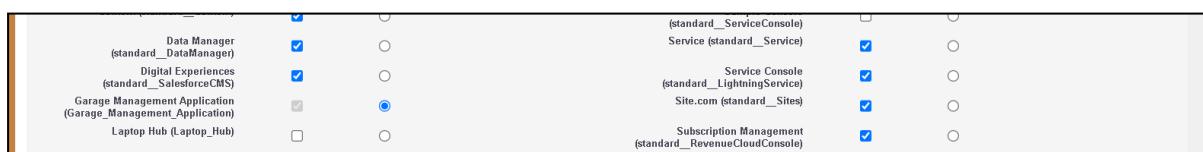
1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Standard User) >> enter profile name (Manager) >> Save.



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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Billing details and feedback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Customer Details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Environments	<input type="checkbox"/>								
Laptops									
Service records		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing details and feedback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laptops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service records	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SessionData	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. And click save.

Mailstone 9: 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.

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

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

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.

The screenshot shows a hierarchical list of roles under the 'Thesmartbridge' organization. At the top is 'Add Role'. Below it is 'CEO' with 'Edit | Del | Assign' options. Under 'CEO' is another 'Add Role' button. Following are 'CFO', 'COO', and 'Manager'. 'Manager' has its own 'Add Role' button highlighted with a red box. Below 'Manager' are 'SVP, Customer Service & Support', 'SVP, Human Resources', and 'SVP, Sales & Marketing', each with their own 'Add Role' button. At the bottom left is a 'Collapse All' link, and at the bottom right is an 'Expand All' link.

```

    graph TD
        AddRole[Add Role] --> CEO[CEO]
        CEO --> AddRoleCEO[Add Role]
        CEO --> CFO[CFO]
        CEO --> COO[COO]
        CEO --> Manager[Manager]
        Manager --> AddRoleManager[Add Role]
        Manager --> SVP_CSS[SVP, Customer Service & Support]
        Manager --> SVP_HR[SVP, Human Resources]
        Manager --> SVP_Sales[SVP, Sales & Marketing]
        SVP_CSS --> AddRoleCSS[Add Role]
        SVP_HR --> AddRoleHR[Add Role]
        SVP_Sales --> AddRoleSales[Add Role]
    
```

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

Milestone 10: 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

New User

User Edit

Save Save & New Cancel

General Information

First Name	Niklaus
Last Name	Mikaelson
Alias	nmika
Email	
Username	Mikaelson@Niklaus
Nickname	nik
Title	
Company	
Department	
Division	

Required Information

Role	Manager
User License	Salesforce
Profile	Manager
Active	<input checked="" type="checkbox"/>
Marketing User	<input type="checkbox"/>
Offline User	<input type="checkbox"/>
Knowledge User	<input type="checkbox"/>
Flow User	<input type="checkbox"/>
Service Cloud User	<input type="checkbox"/>
Site.com Contributor User	<input type="checkbox"/>
Site.com Publisher User	<input type="checkbox"/>
WDC User	<input type="checkbox"/>
Data.com User Type	--None--

3. Save.

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.

Minilestone 11: 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.
2. Give the Label as “sales team”.
3. Group name is autopopulated.

The screenshot shows the 'Public Groups' page in the Salesforce setup. On the left, there's a sidebar with a search bar and dropdown menus for 'Users' and 'Public Groups'. The main area has a title 'Public Groups' with a subtitle explaining what a public group is. Below that is a table with columns for 'Label', 'Group Name', 'Created By', and 'Created Date'. A note at the bottom says 'No records to display'.

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.

The screenshot shows the 'Group Information' dialog box for creating a new public group. It has fields for 'Label' (Sales Team) and 'Group Name' (Sales_Team). There's a checkbox for 'Grant Access Using Hierarchies'. Below these are two lists: 'Available Members' (containing various roles like Customer Support, Director, Marketing, etc.) and 'Selected Members' (containing 'Role: Sales person'). Buttons for 'Add' and 'Remove' are between the lists. At the bottom is a button for 'Add to Delegated Administration Groups'.

Milestone 12: 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.

Role Hierarchy:

Salesforce uses a role hierarchy to determine record access.

Users at higher levels in the hierarchy have greater access to records owned by or shared with users lower in the hierarchy.

The role hierarchy is often used in combination with OWD settings to grant different levels of access.

Profiles and Permission Sets:

Profiles and permission sets allow administrators to specify object-level and field-level permissions for users.

Profiles are typically used to grant general object and field access, while permission sets can be used to extend those permissions to specific users.

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:

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.

The screenshot shows the 'Sharing Settings' page in Salesforce Setup. The 'Service records' row in the main table has its 'OWD' dropdown set to 'Private', which is highlighted with a red box. Other objects like Work Plan Template, Work Step Template, Work Type, etc., have their OWD settings listed. Below the table are sections for 'User Visibility Settings' and 'Other Settings'. At the bottom are 'Save' and 'Cancel' buttons, with 'Save' also highlighted with a red box.

3. Click on save and refresh.
4. Scroll down a bit, Click new on Service records sharing Rules.
- 5.

The screenshot shows the 'Service records Sharing Rules' page. At the top, there's a header with 'Service records Sharing Rules', a 'New' button (which is highlighted with a red arrow), and 'Recalculate' and 'Service records Sharing Rules Help' buttons. Below the header, it says 'No sharing rules specified.'

6. Give the Label name as “ Sharing setting”
7. Rule name is auto populated.
8. In step 3 : Select which records to be shared, members of “ Roles ” >> “ Sales person”
9. In step 4: share with, select “ Roles ” >> “ Manager ”
10. In step 5 : Change the access level to “ Read / write ”.
11. Click on save.

The screenshot shows the 'Sharing Settings' configuration page in Salesforce. It consists of five main steps:

- Step 1: Rule Name**: Fields include Label ('sharing settings'), Rule Name ('sharing_settings'), and Description.
- Step 2: Select your rule type**: Rule Type is set to 'Based on record owner'.
- Step 3: Select which records to be shared**: Service records owned by members of 'Roles' (selected) and 'Sales person'.
- Step 4: Select the users to share with**: Share with 'Roles' (selected) and 'Manager'.
- Step 5: Select the level of access for the users**: Access Level is set to 'ReadWrite'.

Milestone 13: 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.

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 ”.



```
AmountDistribution.apxt | AmountDistributionHandler.apex | 
Code Coverage: None | API Version: 58 | Go To
1 * public class AmountDistributionHandler {
2
3     public static void amountDist(list<Appointment__c> listApp){
4         list<Service_records__c> serList = new list <Service_records__c>();
5
6         for(Appointment__c app : listApp){
7             if(app.Maintenance_service__c == true && app.Repairs__c == true && app.Replacement_Parts__c == true){
8                 app.Service_Amount__c = 10000;
9             }
10            else if(app.Maintenance_service__c == true && app.Repairs__c == true){
11                app.Service_Amount__c = 5000;
12            }
13            else if(app.Maintenance_service__c == true && app.Replacement_Parts__c == true){
14                app.Service_Amount__c = 8000;
15            }
16            else if(app.Repairs__c == true && app.Replacement_Parts__c == true){
17                app.Service_Amount__c = 7000;
18            }
19            else if(app.Maintenance_service__c == true){
20                app.Service_Amount__c = 2000;
21            }
22        }
23    }
24}
```

```
12     }
13     else if(app.Maintenance_service__c == true && app.Repairs__c == true &&
14             app.Replacement_Parts__c == true){
15         app.Service_Amount__c = 10000;
16     }
17     else if(app.Maintenance_service__c == true && app.Repairs__c == true){
18         app.Service_Amount__c = 5000;
19     }
20     else if(app.Maintenance_service__c == true){
21         app.Service_Amount__c = 8000;
22     }
23     else if(app.Repairs__c == true){
24         app.Service_Amount__c = 3000;
25     }
26     else if(app.Replacement_Parts__c == true){
27         app.Service_Amount__c = 2000;
28     }
29 }
30 }
```

Code:

```
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.Repairs__c == true){

        app.Service_Amount__c = 3000;

    }

    else if(app.Replacement_Parts__c == true){

        app.Service_Amount__c = 5000;

    }

}

}

}

}

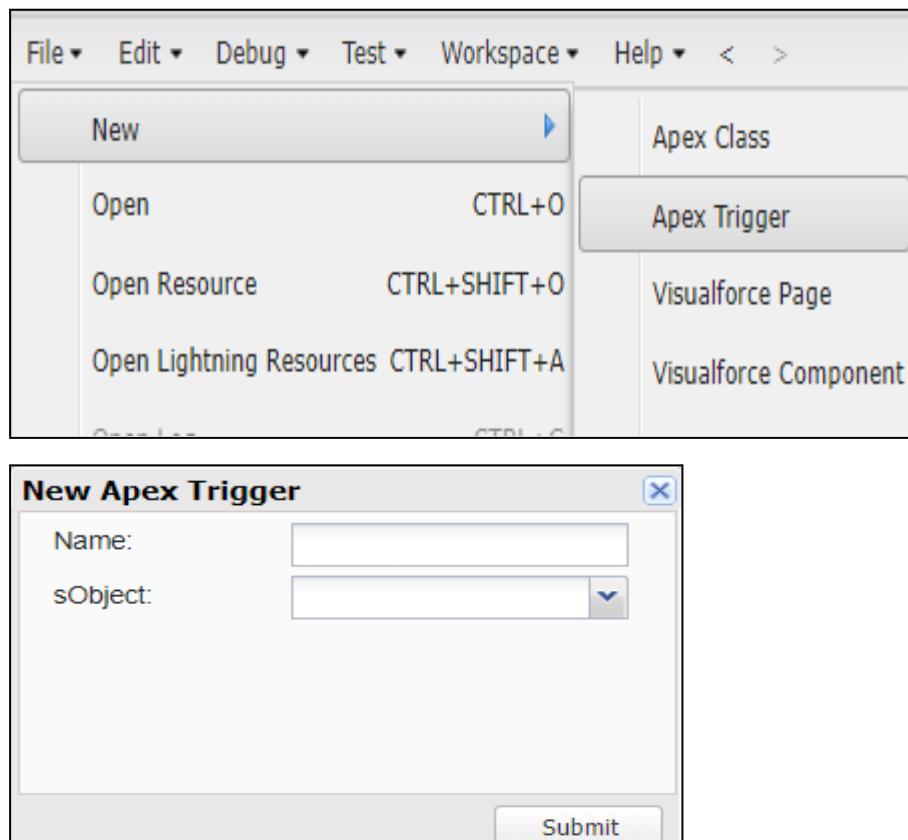
```

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 :

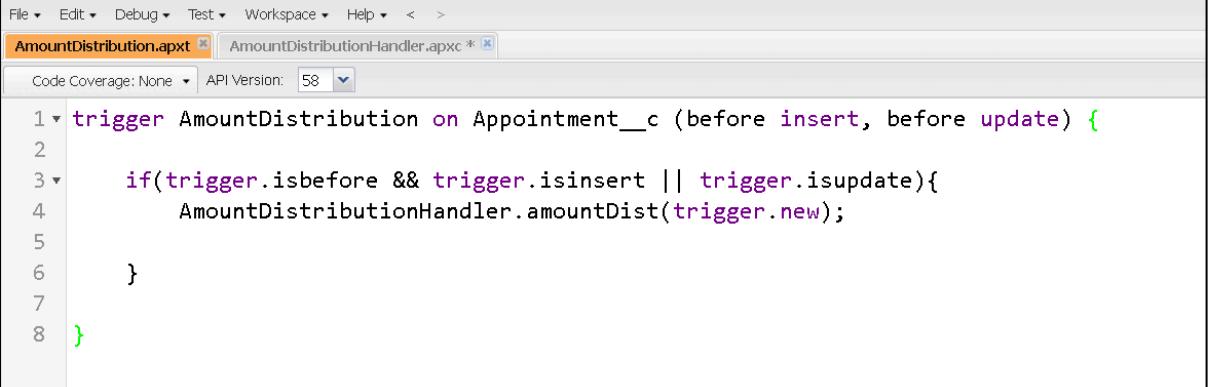
The syntax for creating trigger is :

```
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



The screenshot shows the Salesforce IDE interface with two tabs open: 'AmountDistribution.apxt' and 'AmountDistributionHandler.apxc'. The 'AmountDistribution.apxt' tab is active, displaying the following Apex trigger code:

```
trigger AmountDistribution on Appointment__c (before insert, before update) {
    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
        AmountDistributionHandler.amountDist(trigger.new);
    }
}
```

Code:

```
trigger AmountDistribution on Appointment__c (before insert, before update) {
    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
        AmountDistributionHandler.amountDist(trigger.new);
    }
}
```

Milestone 15: 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.

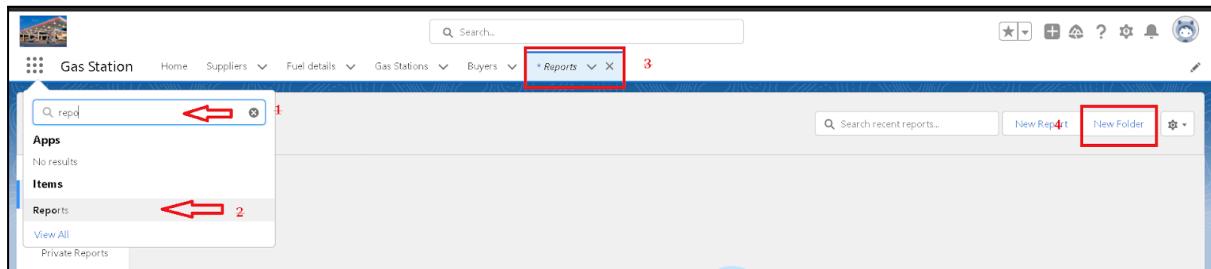
Types of Reports in Salesforce

1. Tabular
2. Summary
3. Matrix

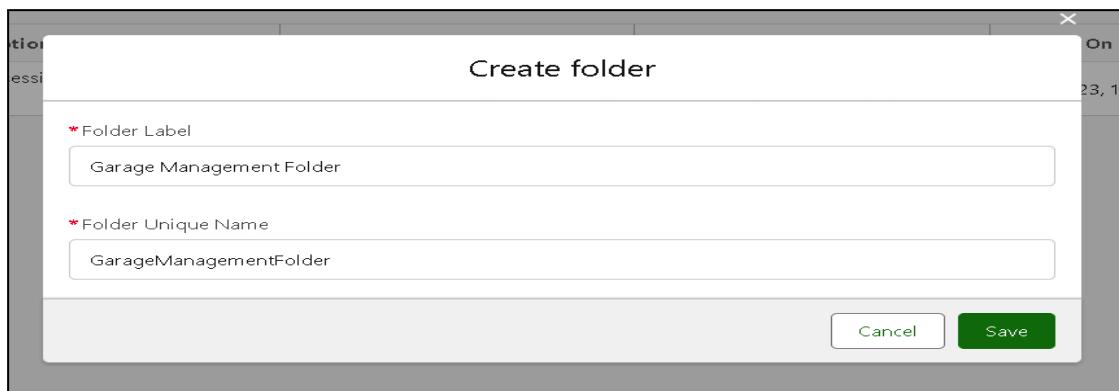
4. Joined Reports

create a report folder

1. Click on the app launcher and search for reports.
2. Click on the report tab, click on new folder.

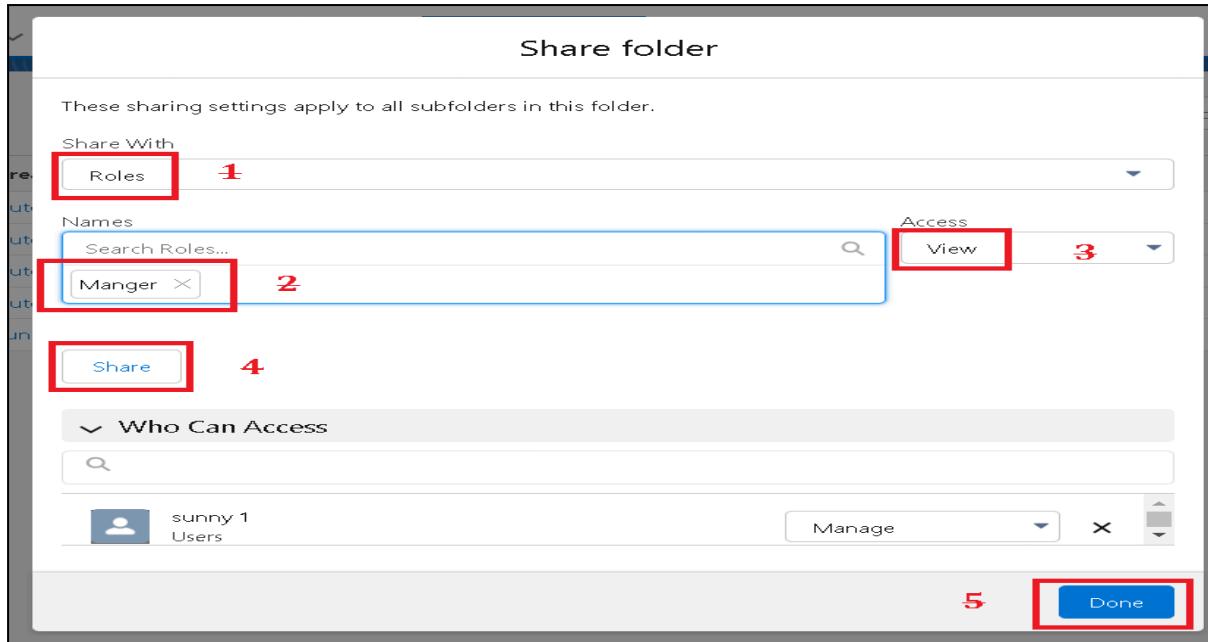


3. Give the Folder label as “Garage Management Folder”, Folder unique name will be auto populated.
4. Click save.



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.



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.

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	✓	autoprot	28/09/2023
Edit Del	Bot Metrics Hourly Summer '23	Einstein Bot metrics aggregated by hour.	Other Reports	✓	autoprot	28/09/2023
Edit Del	Screen Flows	Find out which flows get executed and how long users take to complete each flow screen.	Other Reports	✓	autoprot	24/09/2023
Edit Del	Session Metrics Summer '23	Einstein Bot session metrics	Other Reports	✓	autoprot	28/09/2023

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 “ Deployed ”, click on Next.

Report Types

Report Type Focus

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

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: Deployed

Next **Cancel**

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

Activities Appointments

Duplicate Record Items

Diagram: A Venn diagram showing two overlapping circles labeled A and B. The overlapping area is shaded grey. Below the diagram, there are two boxes labeled A and B, each containing several horizontal lines representing records.

Buttons: Previous, Save, Cancel

Step 2. Define Report Records Set

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

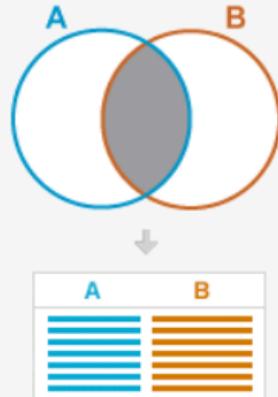
Primary Object

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.

(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.

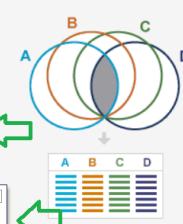
A Customer Details

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.

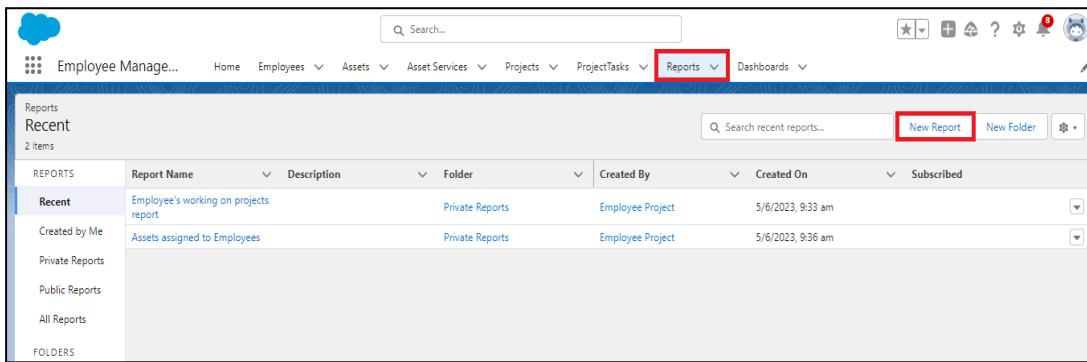
Previous Save Cancel

Create Report

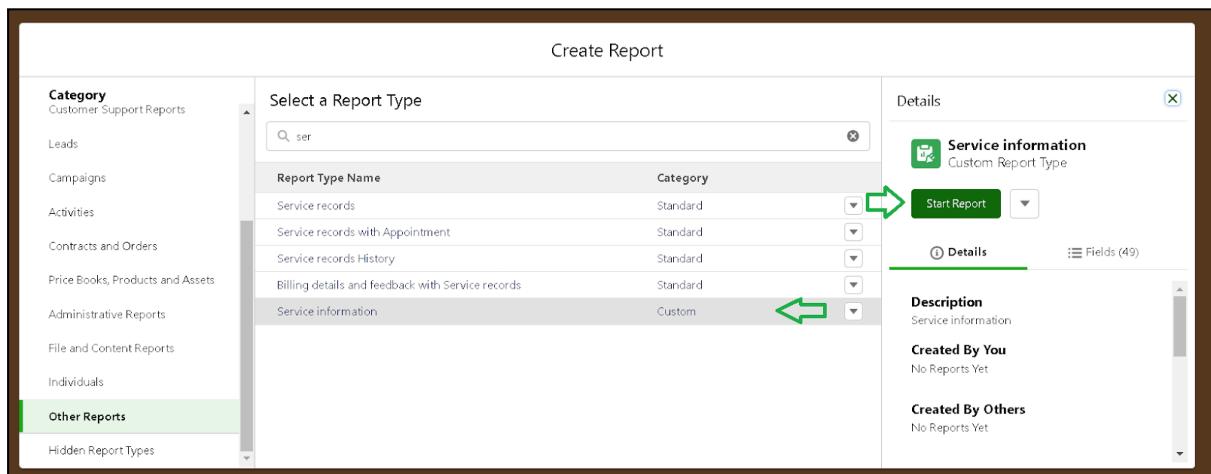
Note : Before creating report, create latest “10” records in every object.

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.



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



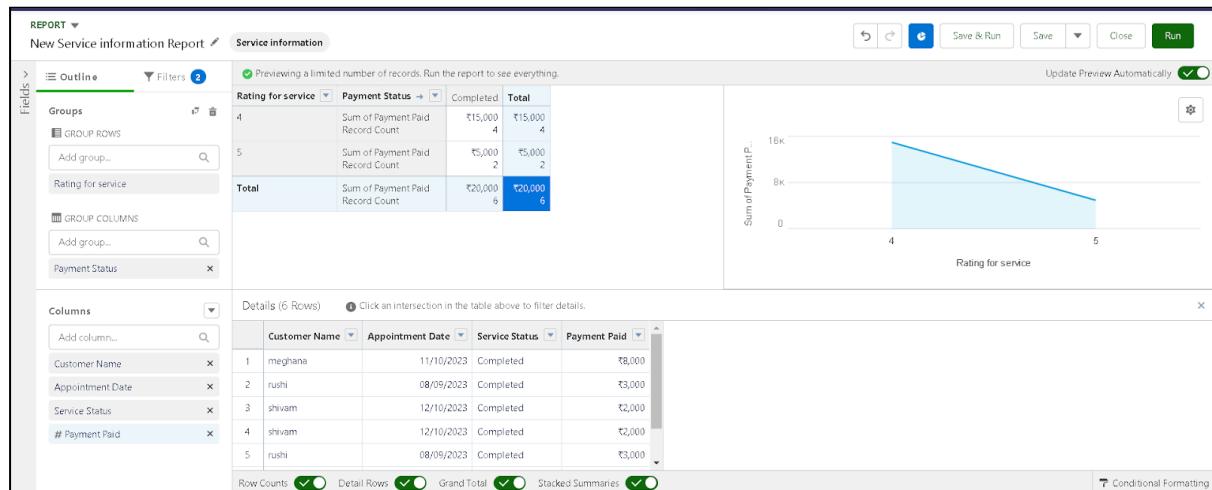
4. Their outline pane is opened already, select the fields that mentioned below in column section.
 1. Customer name
 2. Appointment Date
 3. Service Status
 4. Payment paid
5. Remove the unnecessary fields.
6. Select the fields that mentioned below in GROUP ROWS section.
 1. Rating for Service
7. Select 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.



The screenshot shows the "Save Report" dialog box with the following fields:

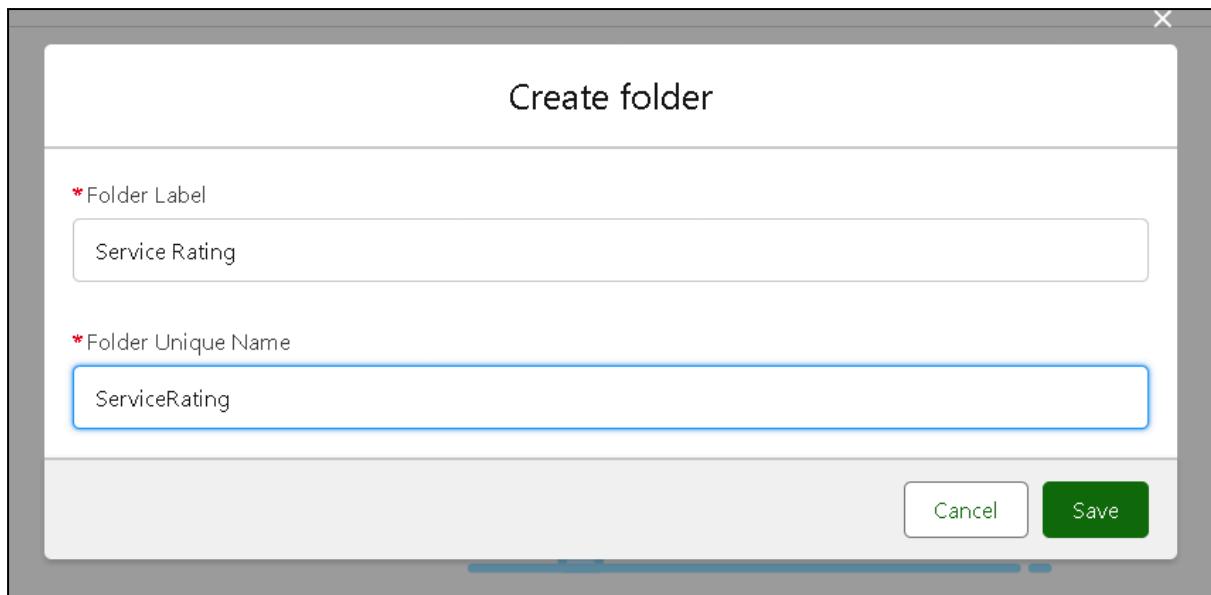
- Report Name:** New Service information Report (highlighted with a green arrow)
- Report Unique Name:** New_Service_Information_Report_oVu
- Report Description:** (Empty text area)
- Folder:** Garage Management Folder (highlighted with a green arrow)
- Buttons:** Cancel, Save

Milestone 16: 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.



6. Follow the same steps, from 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

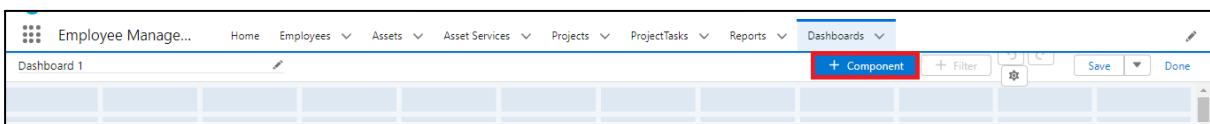
* Name
Customer review

Description

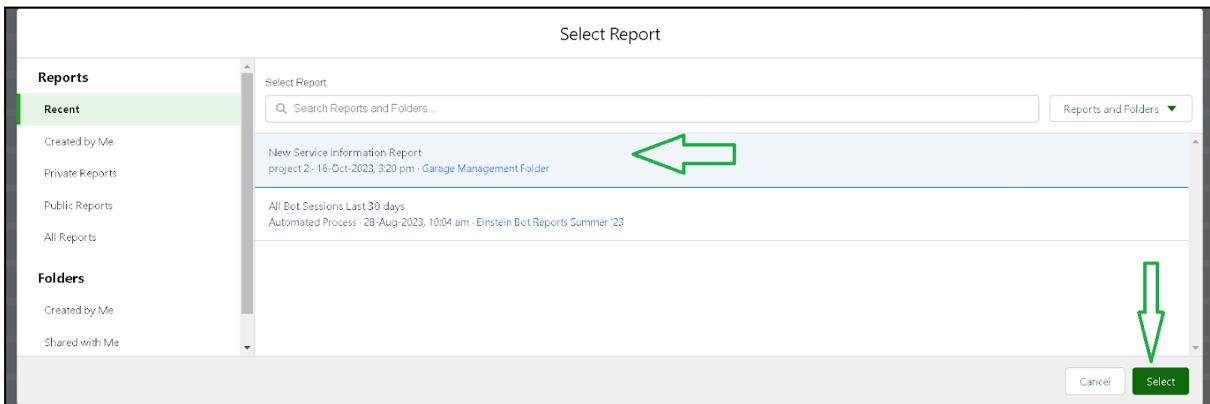
Folder
Service Rating Select Folder

Cancel Create

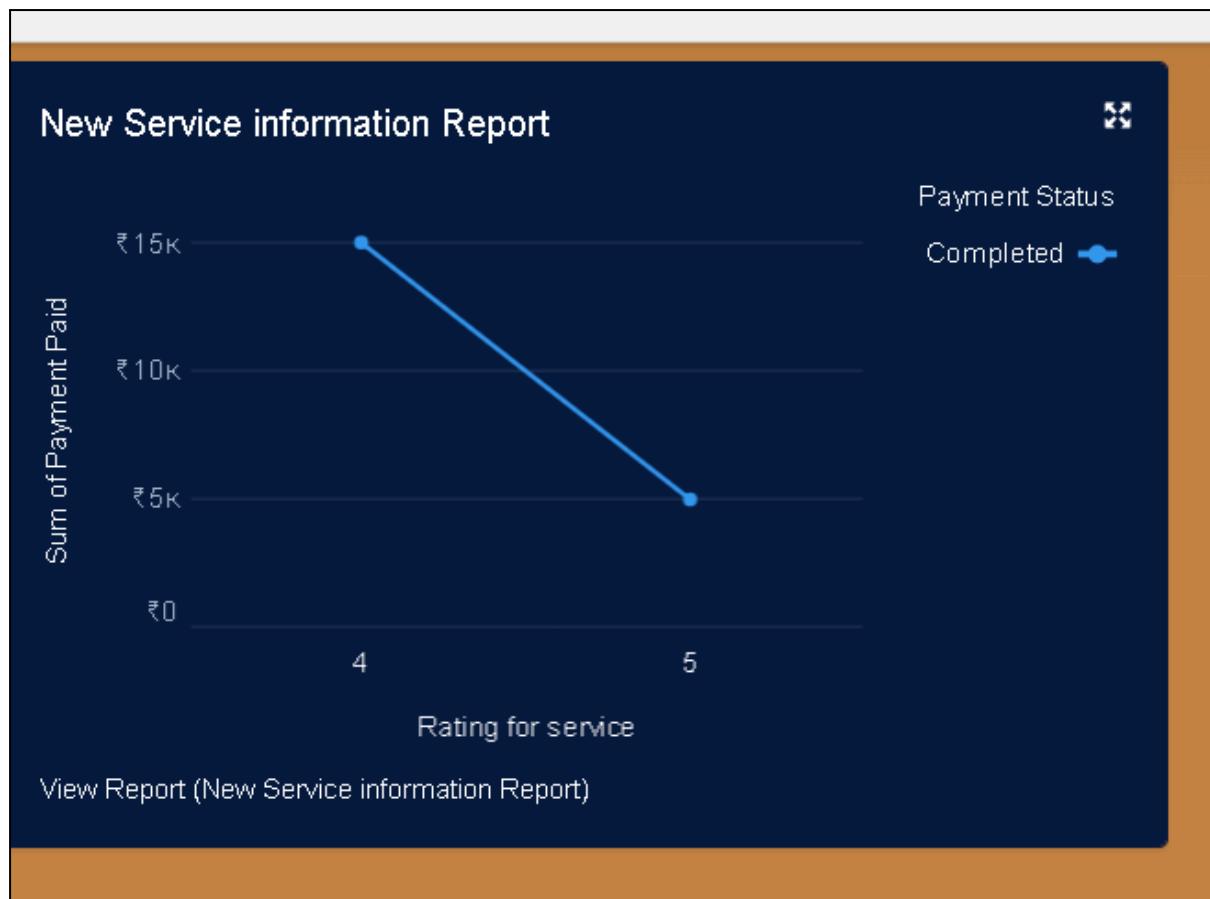
3. Select add component.



4. Select a Report and click on select.



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 Subscribe on top right.
9. Set the Frequency as “ weekly ”.
10. Set a day as monday.
11. And Click on save.

The screenshot shows the "Edit Subscription" dialog box. It includes fields for "Frequency" (set to "Weekly"), "Days" (set to "Mon"), "Time" (set to "3:00 pm"), and "Recipients" (checkbox checked for "Receive new results by email when dashboard is refreshed"). There are three green arrows: one pointing to the "Frequency" dropdown, another pointing to the "Days" dropdown, and a third pointing to the "Save" button at the bottom right.

Edit Subscription

Schedule dashboard refreshes and subscribe to receive results.

Settings

Frequency

Days

Time

Recipients

Receive new results by email when dashboard is refreshed. (i)

Send email to
Me

[Edit Recipients](#)

[Cancel](#) [Save](#)

Output:

The screenshot shows a web-based application interface for 'Garage Management'. The top navigation bar includes links for 'Appointments', 'Customer Details', 'Service records', 'Billing details and feedback', 'Dashboards', and 'Reports'. A search bar and various system icons are also present. Below the navigation, a 'Recently Viewed' section is displayed under the 'Appointments' heading. It shows a list of 9 items, each with a checkbox and a numerical index (1-9). The list is titled 'Appointment Name'.

	Appointment Name
1	<input type="checkbox"/> app-054
2	<input type="checkbox"/> app-053
3	<input type="checkbox"/> app-052
4	<input type="checkbox"/> app-051
5	<input type="checkbox"/> app-050
6	<input type="checkbox"/> app-049
7	<input type="checkbox"/> app-047
8	<input type="checkbox"/> app-046
9	<input type="checkbox"/> app-045

The screenshot shows the same 'Garage Management' application interface. This time, the 'Customer Details' section is active. A 'Recently Viewed' list is displayed, showing 9 items under the 'Customer Name' category. Each item has a checkbox and a numerical index (1-9).

	Customer Name
1	<input type="checkbox"/> Mikaelson
2	<input type="checkbox"/> kong
3	<input type="checkbox"/> gen
4	<input type="checkbox"/> gen
5	<input type="checkbox"/> remo
6	<input type="checkbox"/> anand d
7	<input type="checkbox"/> ajith
8	<input type="checkbox"/> Gowtham R
9	<input type="checkbox"/> ELANCHEZHIYAN

Billing details and feedback

Recently Viewed ▾

9 items • Updated a few seconds ago

	Billing details and feedback Name
1	bill-029
2	bill-028
3	bill-027
4	bill-026
5	bill-023
6	bill-019
7	bill-018
8	bill-017
9	bill-016

Service records

Recently Viewed ▾

9 items • Updated a few seconds ago

	Service records Name
1	ser-046
2	ser-045
3	ser-044
4	ser-043
5	ser-042
6	ser-041
7	ser-040
8	ser-039
9	ser-038

Report: Service information

New Service information Report

Sum of: Rating for service

Rating for service

Rating for service	Payment Status	Completed	Pending	Total
1	Sum of Payment Paid Record Count	₹0 0	₹8,000 1	₹8,000 1
2	Sum of Payment Paid Record Count	₹13,000 2	₹8,000 1	₹21,000 3

Rating for service

Sum of Payment Paid 10,000 (15.63% of 64k)

Details (9 Rows) Click an intersection in the table above to filter details.

	Customer Name	Appointment Date	Service Status	Payment Paid
1	remo	16/08/2024	Started	₹8,000
2	ajith	03/08/2024	Completed	₹8,000
3	kong	02/08/2024	Completed	₹5,000
4	gen	02/08/2024	Started	₹8,000
5	anand d	02/08/2024	Completed	₹5,000

Row Counts Detail Rows Grand Total Stacked Summaries

Conclusion:

The Garage Management System project has been a comprehensive and enriching experience, demonstrating the power of Salesforce in streamlining business processes and enhancing customer satisfaction. Through this project, we successfully designed and implemented a customized Salesforce solution to manage: - Customer information and appointments - Service records and billing details - Feedback and ratings Utilizing Salesforce's robust features, including custom objects, fields, validation rules, duplicate rules, profiles, and flows, we created a seamless and efficient system for garage owners to manage their business. The Garage Management System showcases our ability to apply Salesforce skills to real-world business challenges, driving process automation, data analysis, and customer relationship management. This project has not only honed our technical skills but also fostered collaboration, creativity, and problem-solving. As we conclude this project, we are confident that the Garage Management System will serve as a valuable asset for garage owners, empowering them to deliver exceptional customer experiences, drive business growth, and stay ahead in the competitive market. Thank you to our instructors, mentors, and team members for their guidance, support, and dedication throughout this project.

Thank you !