Salesforce Virtual Internship Program
SmartInternz

A CRM APPLICATION FOR WHOLESALE RICE MILL

NAME : Kancharla Sneha Deepthi
E-MAIL : 322103310097@gvpce.ac.in
COLLEGE NAME : GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING

Project Title : A CRM APPLICATION FOR WHOLESALE RICE MILL

1. Project Overview

This project focuses on developing a **CRM solution for wholesale rice mills** to track daily rice production, sales, and generate detailed reports for owners. By leveraging **Salesforce CRM**, the goal is to enhance **efficiency, data accuracy, and reporting clarity** to support operational growth.

Features

1. **Reports & Dashboards:** Daily insights on production, sales, revenue, and customer trends.
2. **Roll-Up Summary Field:** Summarizes data, e.g., total rice supplied by suppliers.
3. **Cross-Object Formula Field:** Calculates total cost (quantity × price/kg) for transactions.
4. **Validation Rules:** Ensures data integrity using checks like `ISBLANK`.
5. **Permission Sets:** Role-based access:
    - Owner: Full access.
    - Employer: Worker-level access only.

This solution optimizes rice mill operations and supports data-driven growth.

2.Objectives

Business Goals

1. **Enhance Operational Efficiency:**
   Automate daily tracking of rice production, sales, and reporting to minimize manual effort and reduce errors.
2. **Improve Decision-Making:**
   Provide actionable insights through detailed dashboards and analytics to optimize production and sales strategies.
3. **Ensure Secure Data Management:**
   Implement role-based access to protect sensitive information and maintain data integrity.
4. **Increase Customer Satisfaction:**
   Track customer trends to offer personalized services and improve the overall buying

experience.

Specific Outcomes

1. **Daily Reports and Dashboards:**
    - Generate reports on rice production, sales, revenue, and customer trends.
    - Deliver insights to owners in a visually accessible format.
2. **Integrated Data Summaries:**
    - Use roll-up summary fields to aggregate data like total rice supplied or sold.
3. **Accurate Cost Calculations:**
    - Implement cross-object formula fields for real-time payment computations (e.g., quantity × price/kg).
4. **Data Validation:**
    - Ensure complete and accurate data entry using validation rules like `ISBLANK`.
5. **Role-Based Access:**
    - Define roles (Owner, Employer, Worker) to control data visibility and maintain security.

These objectives align to streamline rice mill operations, enhance productivity, and deliver value-driven results.

3. Salesforce Key Features and Concepts Utilized

1. **Reports and Dashboards:**
    - Customizable daily reports for production, sales, and revenue.
    - Visual dashboards for real-time insights and trend analysis.
2. **Roll-Up Summary Fields:**
    - Aggregates child-object data (e.g., total rice supplied) to parent records in master-detail relationships.
    - Supports functions like COUNT, SUM, MIN, and MAX.
3. **Cross-Object Formula Fields:**
    - Dynamically calculates values (e.g., quantity × price/kg) using fields from related objects.
    - Provides accurate payment details on a single record.
4. **Validation Rules:**
    - Ensures data integrity by enforcing conditions (e.g., `ISBLANK` for mandatory fields).
    - Displays error messages for invalid or incomplete entries.
5. **Permission Sets and Role Hierarchies:**

- Implements **Organization-Wide Defaults (OWD)** to restrict baseline access.
- Defines roles for secure data access:
  - **Owner:** Full access to all records.
  - **Employer:** Access limited to worker records.

6. **Automation and Efficiency:**
   - Streamlines workflows by reducing manual tasks through automated calculations and data summaries.

These Salesforce features enable a robust, secure, and efficient CRM system tailored to the unique needs of the rice mill.

4. Detailed Steps to Solution Design

1)Objects: Salesforce objects are database tables that permit you to store data that is specific to an organization.

Creation of Objects

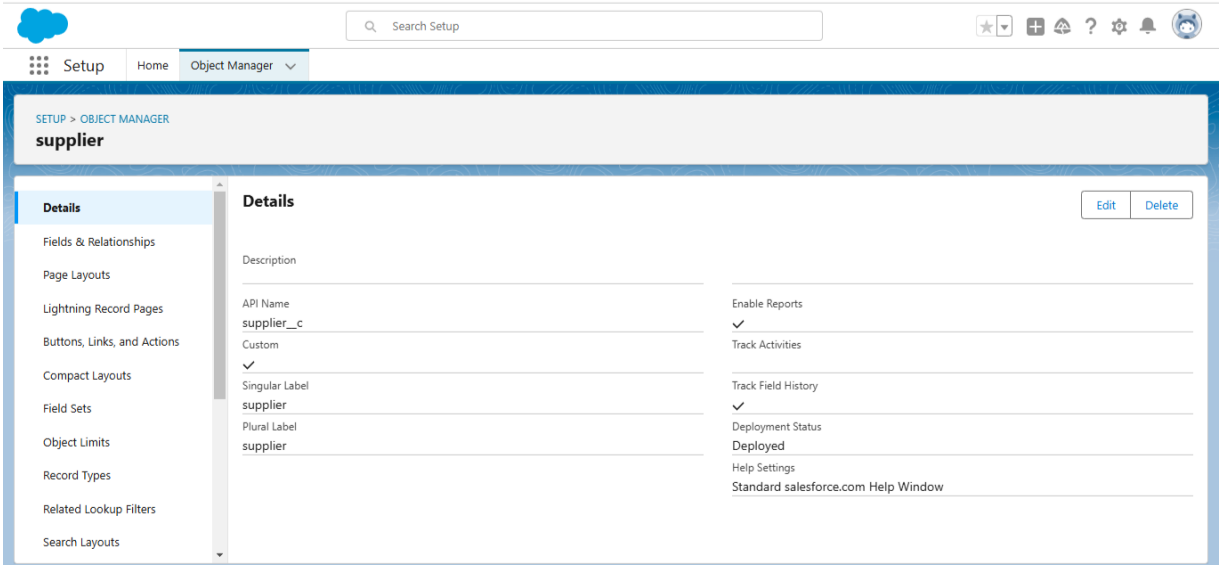
Created the following objects:

- Supplier object
- Rice mill object
- Consumer object
- Rice details object

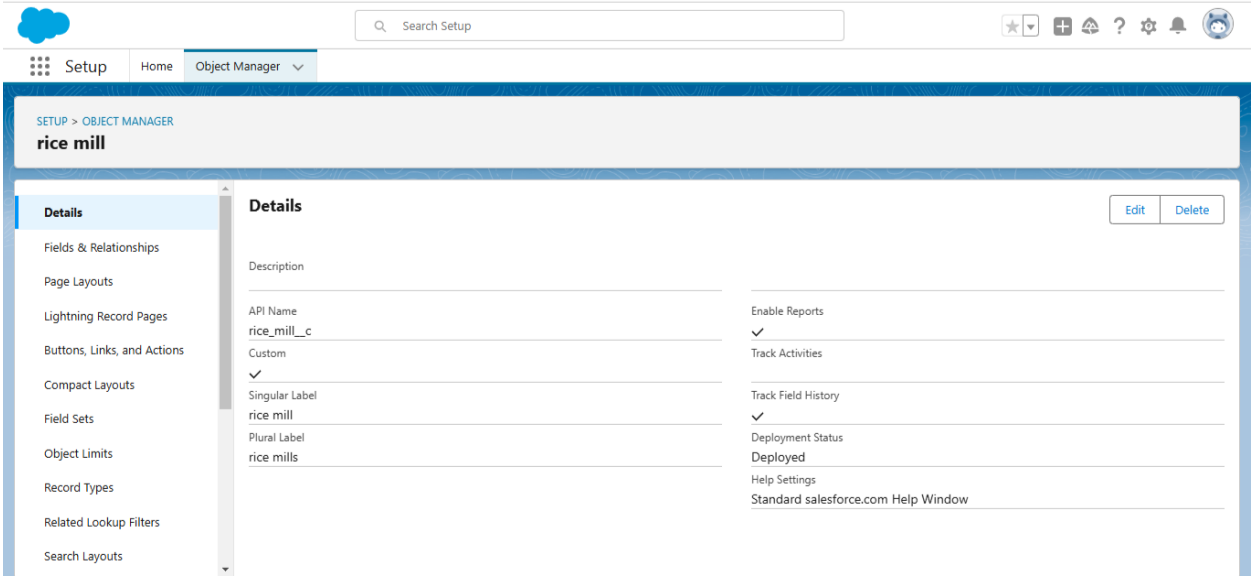
To create an object:

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.

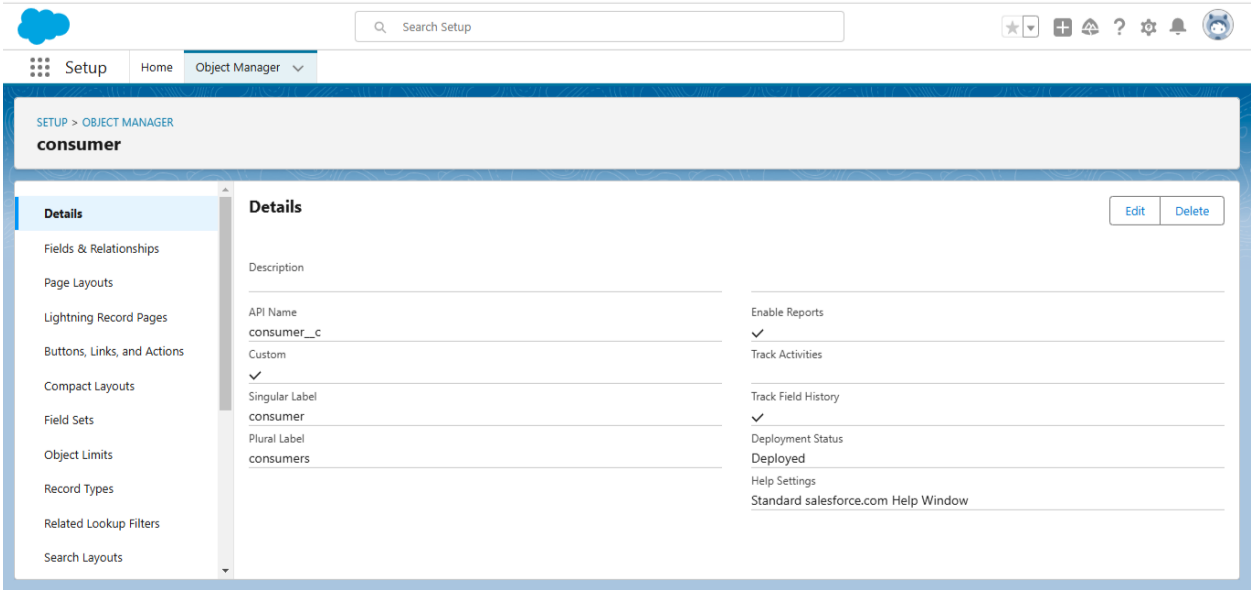
Supplier Object:



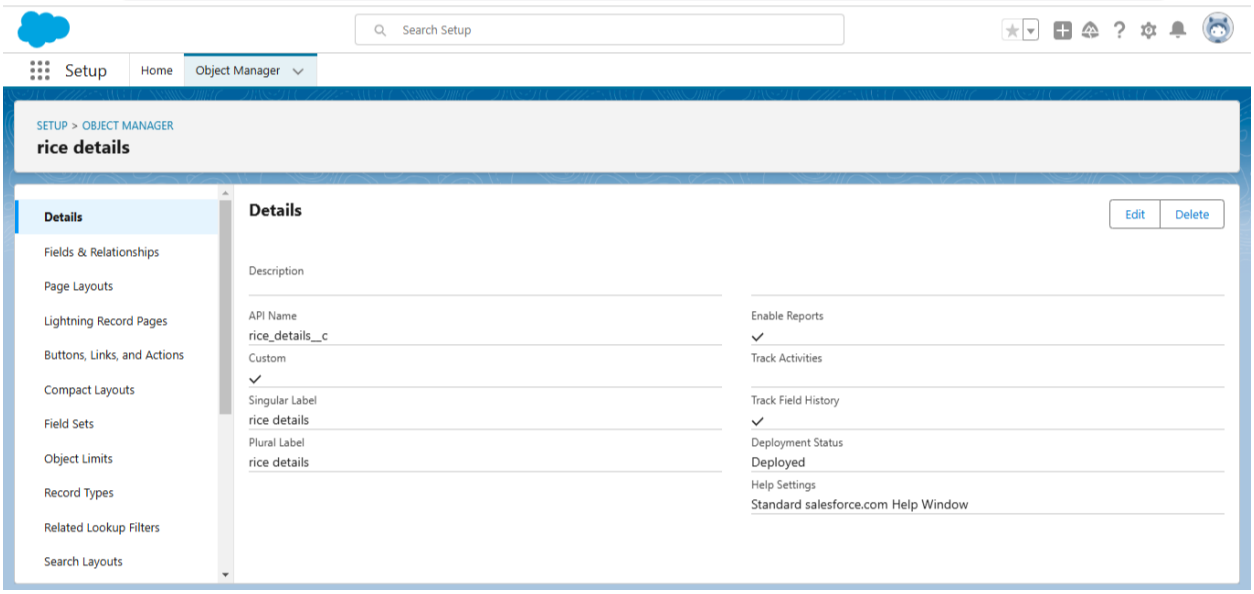
Rice mill object:



Consumer Object:



Rice details object:



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

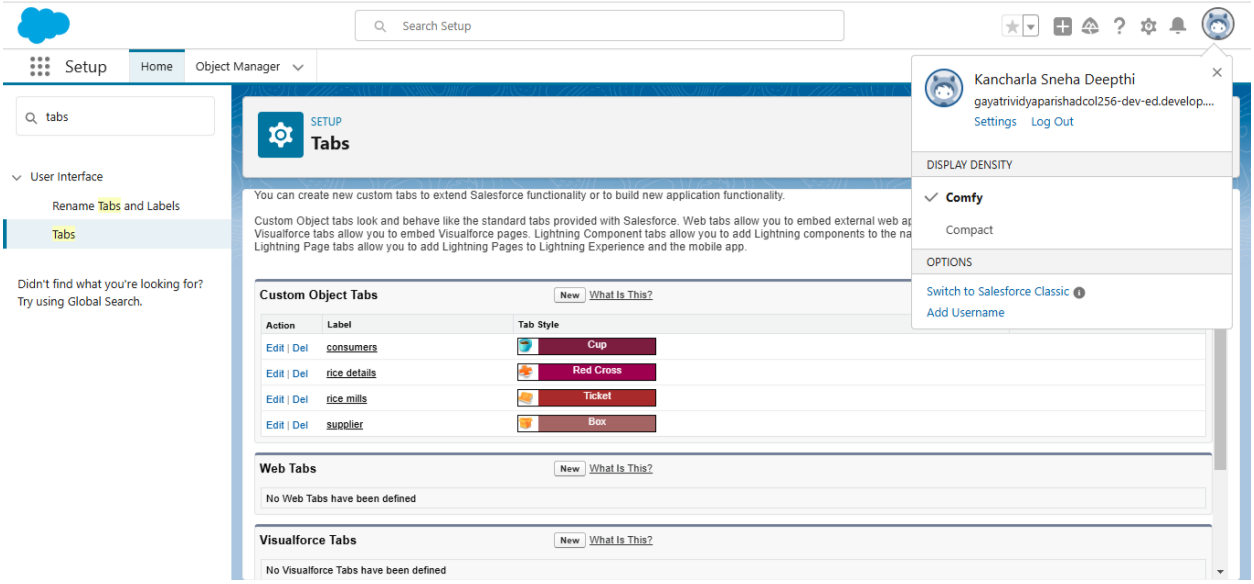
Creation of Tabs

Created the following tabs:

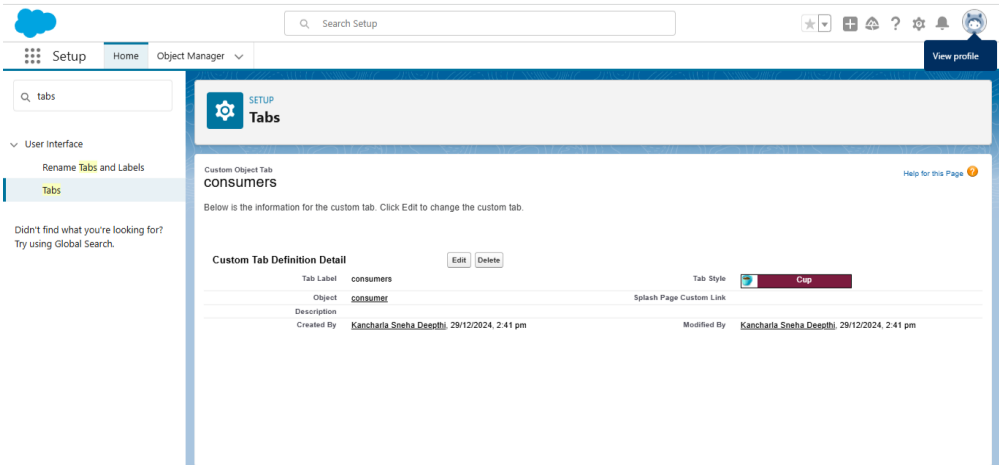
- Consumers
- Rice details
- Rice mills
- Suppliers

To create a Tab:

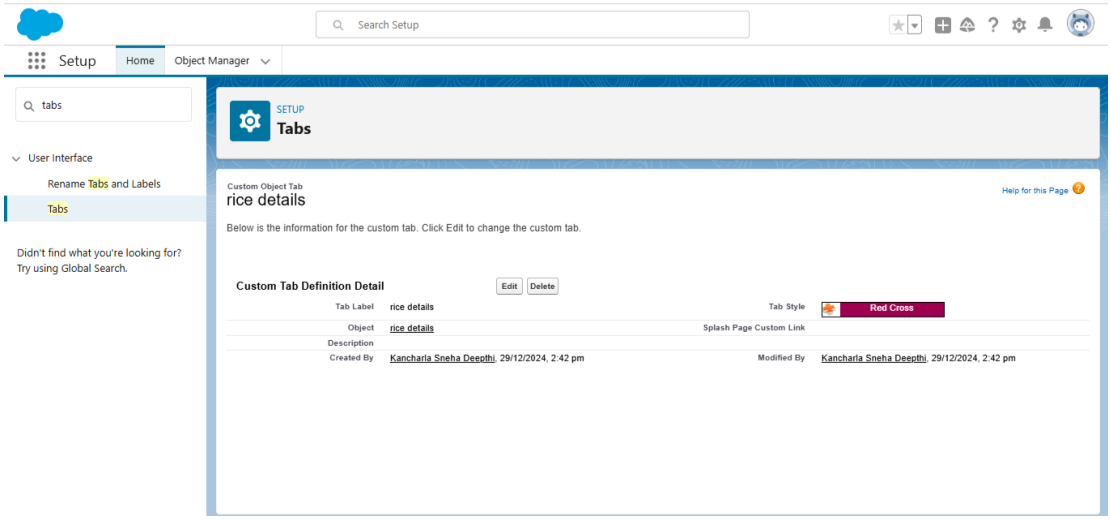
1. Go to setup page >> type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab)
2. Select Object >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
3. Make sure that the Append tab to users' existing personal customizations is checked.
4. Click save.



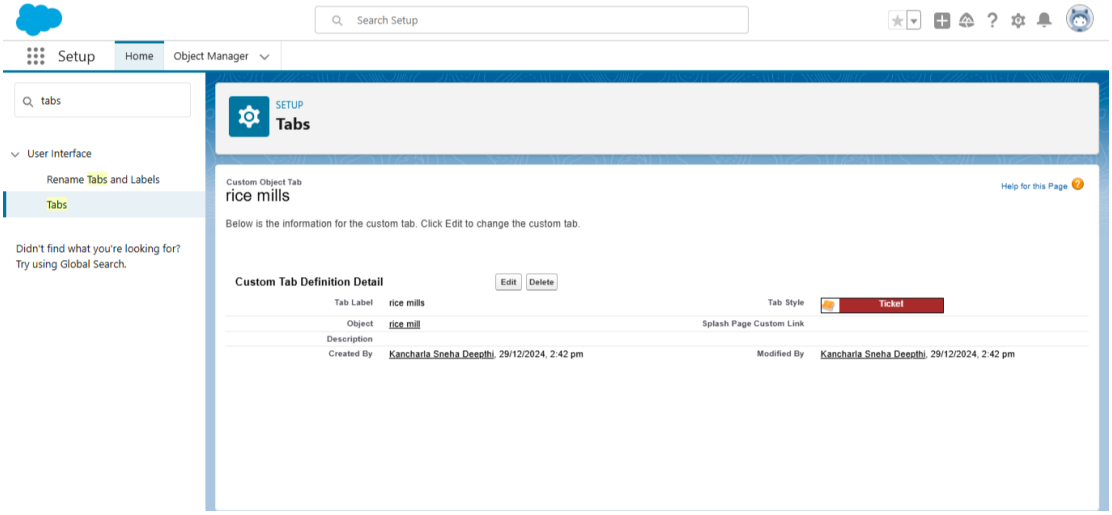
Consumers tab:



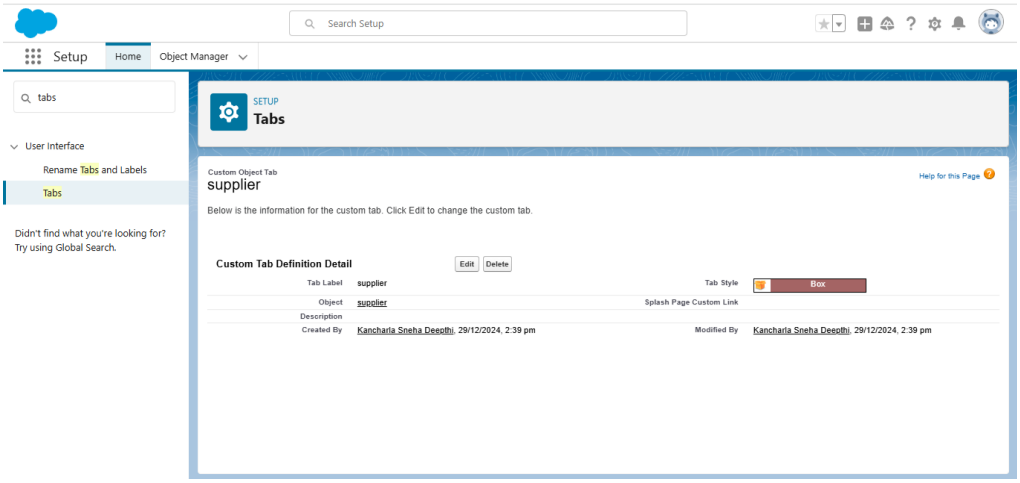
Rice details tab:



Rice mills tab:



Suppliers tab:



3)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 color 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.

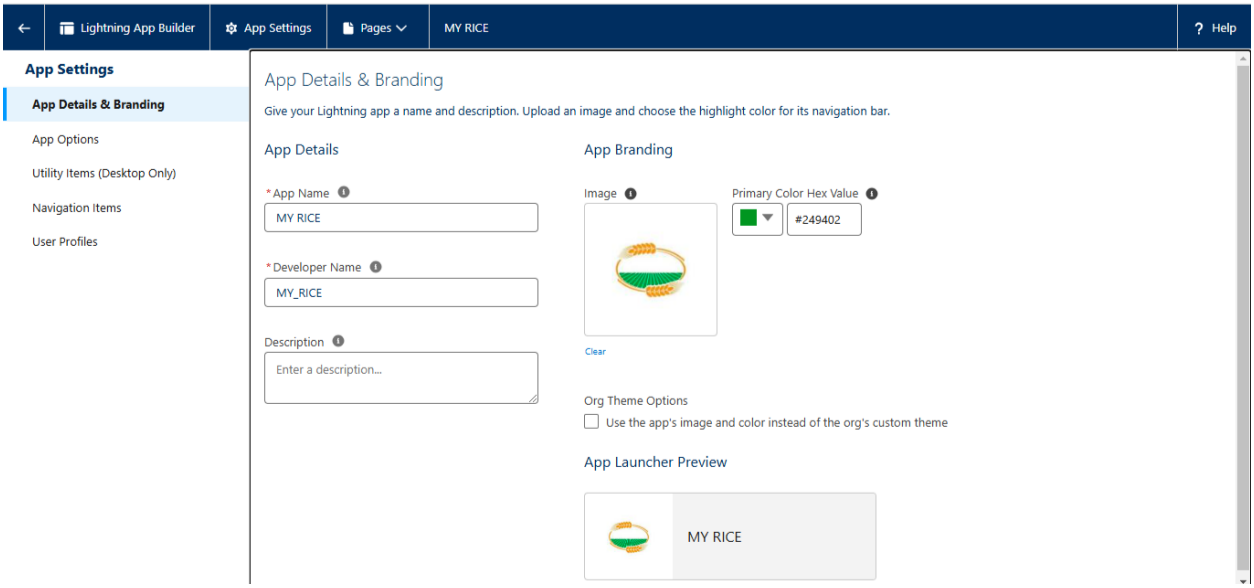
Creation of Lightning App

1. To create a lightning app page:
2. Go to setup page >> search “app manager” in quick find >> select “app manager” >> click on New lightning App.
3. Fill the app name in app details as MY RICE >> Next >> (App option page) keep it as default >> Next >> (Utility Items) keep it as default >> Next.
4. Upload a photo that is related to your app.
5. To add Navigation Item:

Select the items (supplier, rice mill, consumer , Rice details) from the search bar and move it using arrow button >> Next.

6. To Add User Profiles:

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



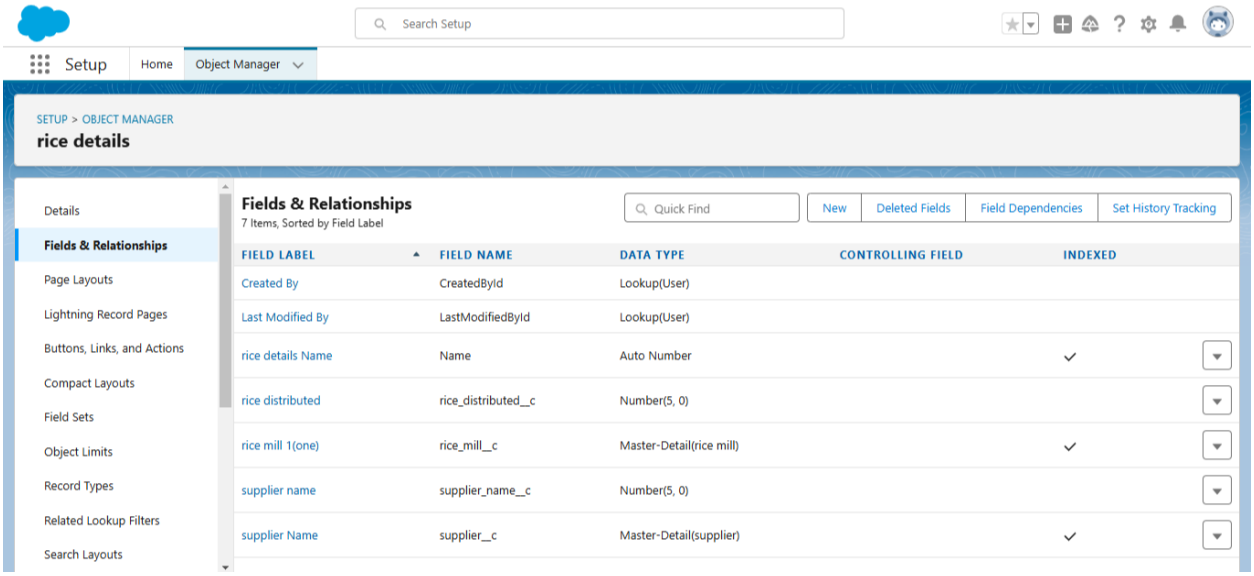
4)Fields: Fields represent the data stored in the columns of a relational database. It can also hold any valuable information that you require for a specific object. Hence, the overall searching, deletion, and editing of the records become simpler and quicker.

Creating the number field in rice details object

1. Go to the setup page >> click on object manager >> From drop down click edit for rice

details object

2. Click on fields & relationship >> click on New.
3. Select Data type as “Number” and click Next.
4. Given the Field Label as “ rice distributed ” and length as “ 5 ”.
5. Field Name will be auto populated, and click on Next- Next >> Save.

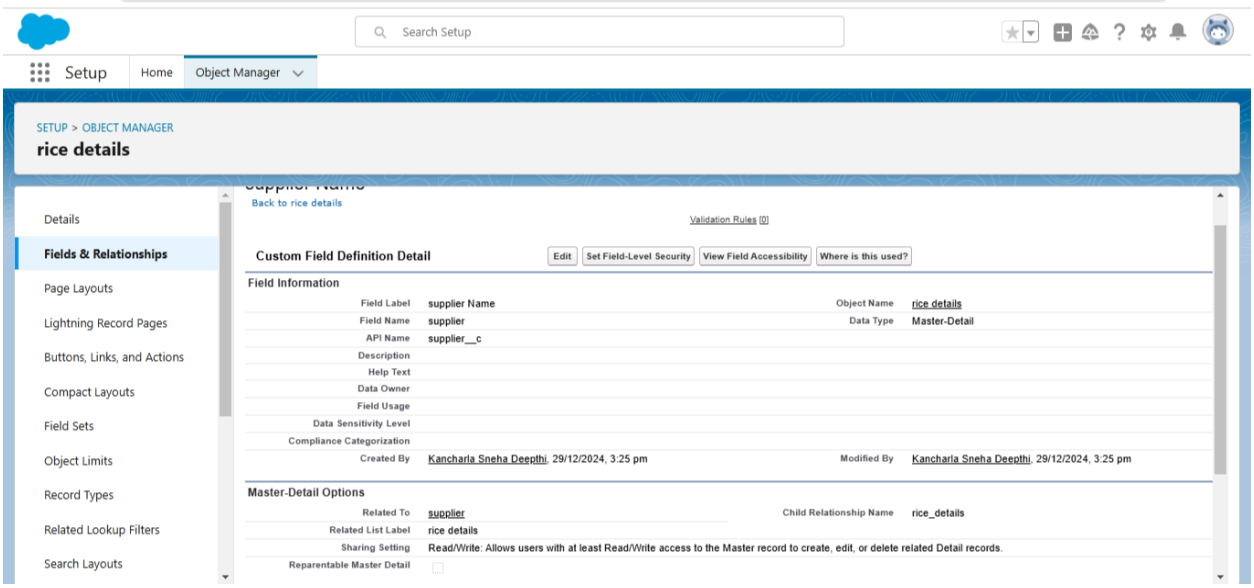


Creating Junction Object

A Junction object is a custom object that serves as a bridge between two related objects in a many-to-many relationship. It allows you to create a relationship between records of two different objects by creating a many-to-many relationship model.

Creating junction object as rice details with supplier & rice mill

1. Go to the setup page >> click on object manager >> From drop down click edit for rice details object
2. Click on fields & relationship - click on New.
3. Select “Master-Detail relationship” as data type and click Next.
4. Select the related object “ supplier ” and click next.
5. Give Field Label as “supplier Name” and click Next.
6. Next >> Next >> Save & New.
7. Follow the same steps from 1 to 3.
8. Select the related object “ rice mill ” and click Next.
9. Give Field Label as “rice mill 1(one)” and click Next.
10. Next >> Next >> Save.



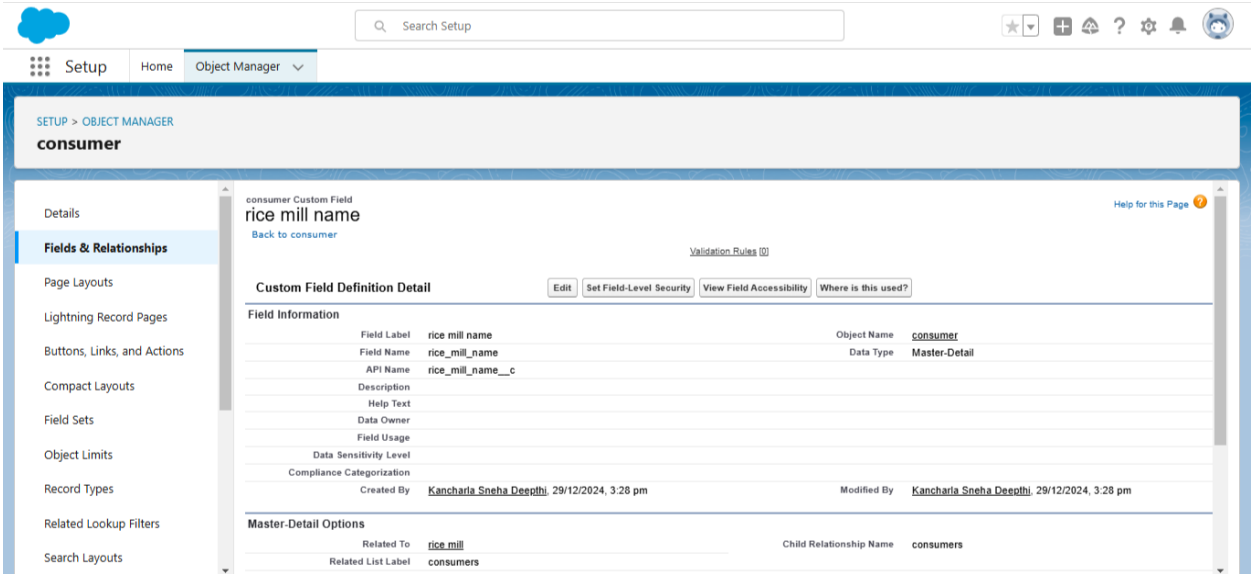
Creating a Master-Detail Relationship

master-detail relationship is a type of relationship between two objects where the master object controls certain behaviors and settings of the detail object. Here are a few use cases that demonstrate the use of master-detail relationships

Creating Master-Detail Relationship between consumer & rice mill Object

To Create a Master-Detail relationship:

1. Go to the setup page >> click on object manager >> From drop down click edit for consumer object.
2. Click on fields & relationship >> click on New.
3. Select “Master-Detail relationship” as data type and click Next.
4. Select the related object “ rice mill”.
5. Give Field Label as “rice mill name” and click Next.
6. Next >> Next >> Save.



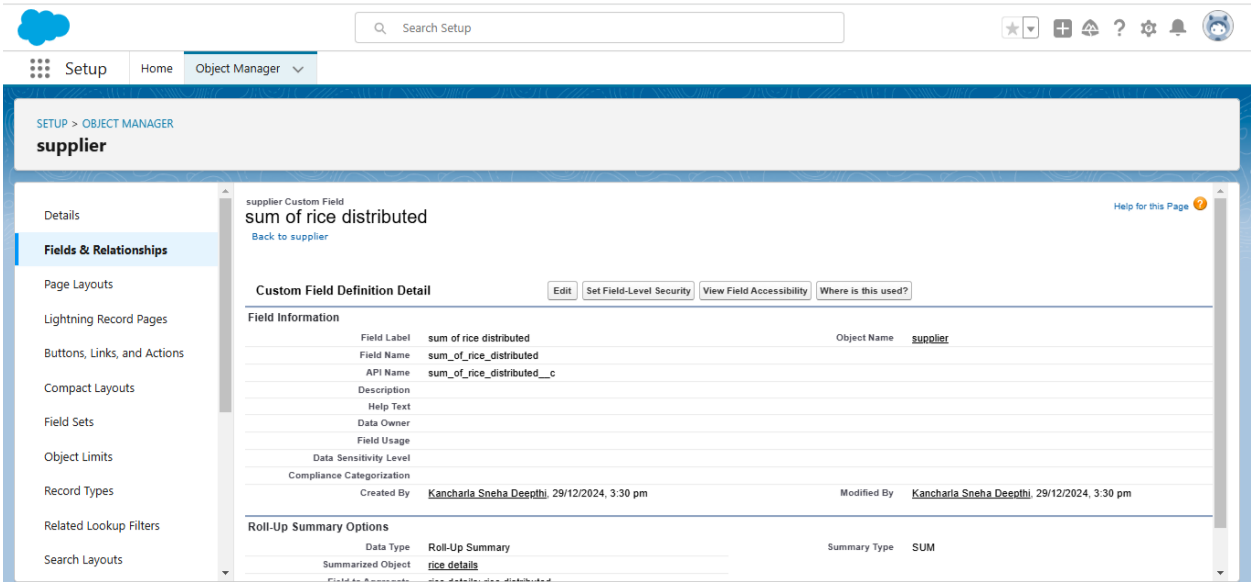
Creating the Roll-up Summary

A rollup summary field is a field that summarizes data from a child object to a parent object that shares a master-detail relationship. Rollup summary fields can use the COUNT, SUM, MIN, and MAX functions. For example, you could use a rollup summary field to display the total value (amount of rice supplied) from rice details on a related supplier.

Creating the Roll-up summary field on supplier & rice mill Objects.

1. Go to setup >> click on Object Manager >> type object name(supplier) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select the data type as “Rollup summary ”,and click Next.
4. Give the Field label as “ sum of rice distributed ”,Field Name will be Auto generated, and click Next.
5. Select the summarized object as “ rice details ”.
6. Select the Rollup type as “sum”.
7. Select the field to aggregate as “ rice distributed ”, and click Next >>Next >>Save.
8. Follow the same steps for the rice mill Object from 1 to 3
9. Give the Field label as “ rice distributed to shops ”,Field Name will be Auto generated, and click Next.
10. Select the summarized object as “ rice details ”.
11. Select the Rollup type as “sum”.
12. Select the field to aggregate as “ rice distributed ”, and click Next >> Next >> Save.
13. Note : create the field as “ rice taken by shops in kgs” using number datatype in consumer object
14. Follow the same steps for the rice mill Object from 1 to 3
15. Give the Field label as “ rice taken ”,Field Name will be Auto generated, and click Next.
16. Select the summarized object as “ consumer”.

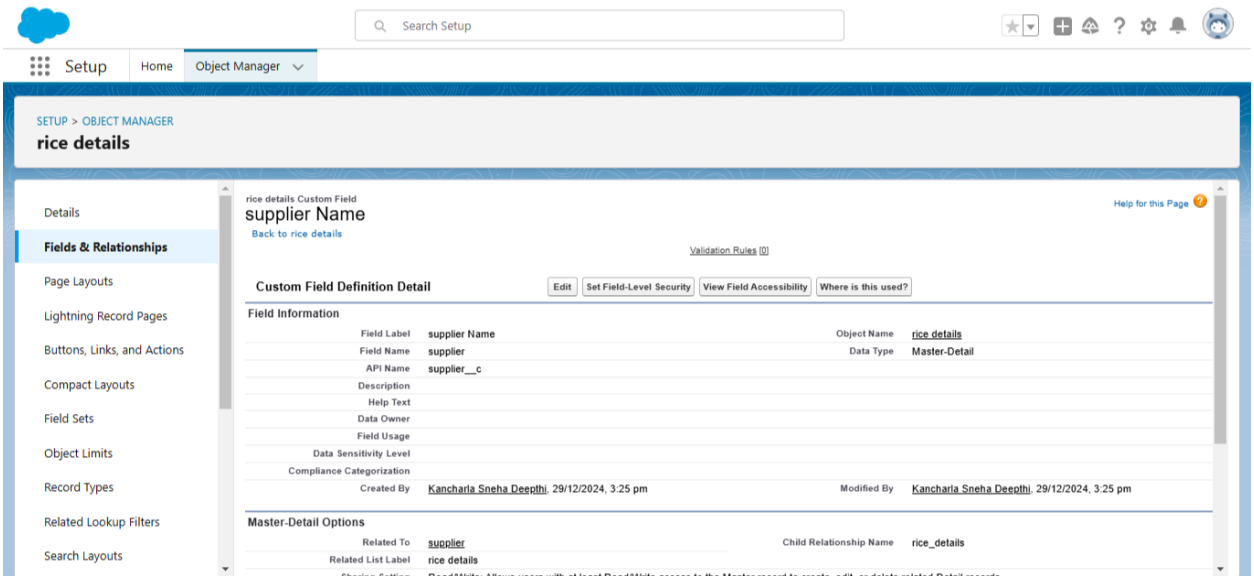
17. Select the Rollup type as “sum”.
18. Select the field to aggregate as “ rice taken in shops ”, and click Next >> Next >> Save.



Creating Fields in Objects

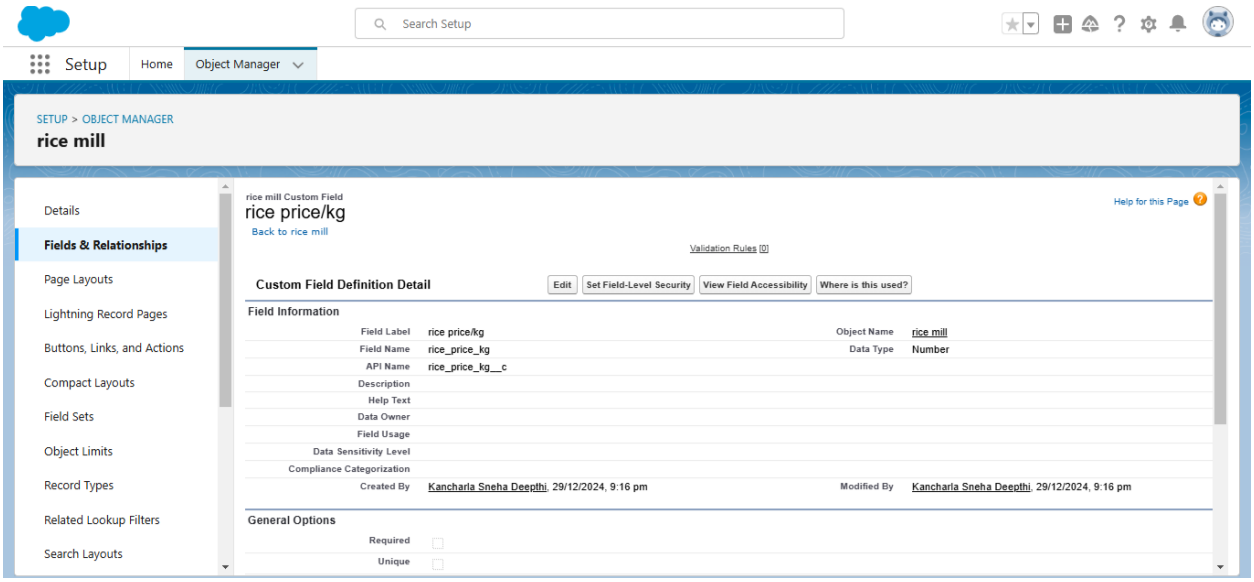
Creating the number field in rice details object

1. Go to the setup page >> click on object manager >> From drop down click edit for rice details object.
2. Click on fields & relationship >> click on New.
3. Select Data type as “master detail” and click Next.
4. Given the Field Label as “ supplier name ” and length as “ 5
5. Field Name will be auto populated, and click on Next>> Next >>Save.



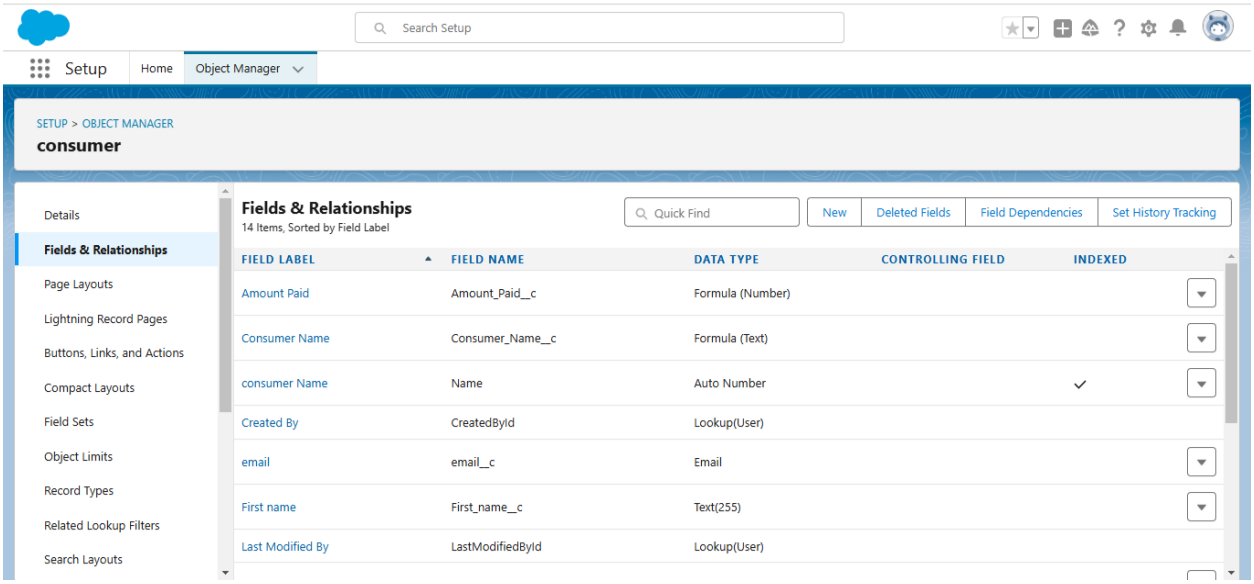
Creating Fields in rice mill Objects

1. Select Data type as “Number” and click Next.
2. Given the Field Label as “ rice price/kg ” and length as “ 5 ”



Creating Fields in consumer Objects

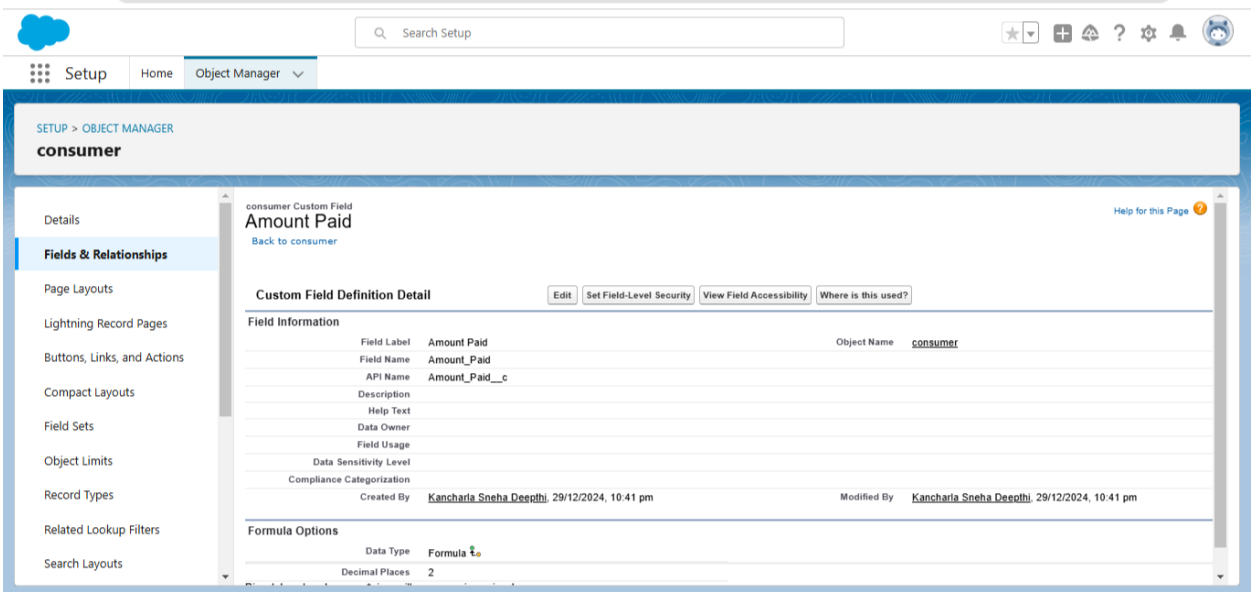
Fields	**Data type**
First name	Text
Last name	Text
Phone number	phone
email	email
Rice taken by shops	Number (length=5)
Rice type	(Picklist values) 1.basmati 2.normal rice
Mode of payment	Picklist values • Credit card • Debit card • Net banking • UPI • Cash



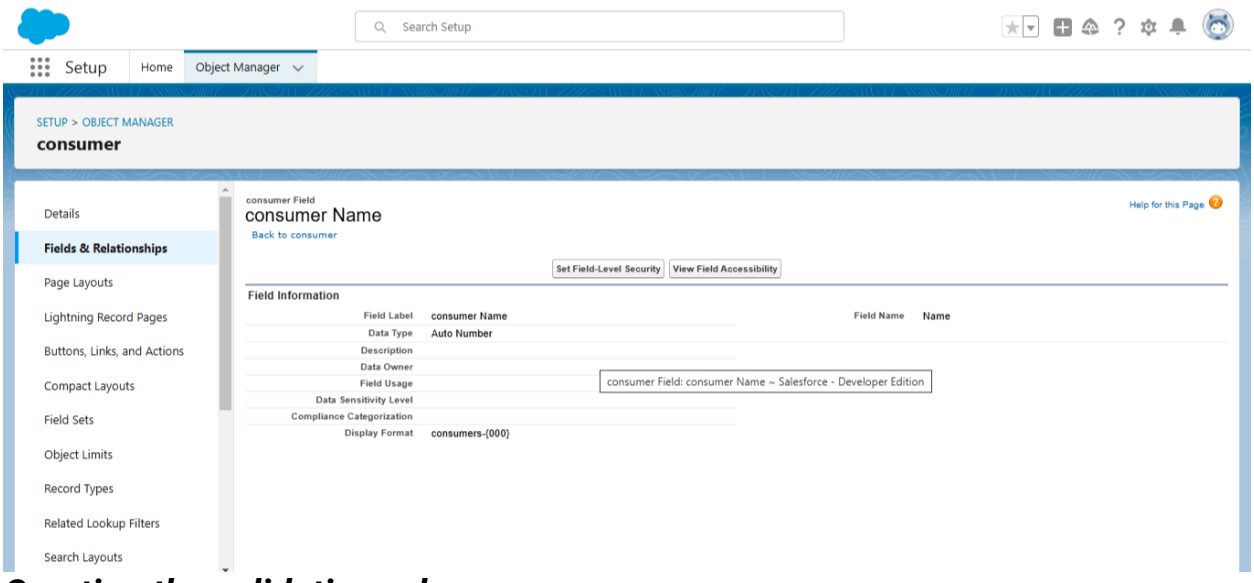
Creating Cross Object Formula Field in consumer Object

A cross-object formula field is a formula field that references fields from another object in Salesforce. This type of formula allows users to calculate and display data from multiple objects on a single record

1. Go to setup >> click on Object Manager >> type object name(consumer) 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 “Amount Paid ” and select formula return type as “Number” and click next.
5. Insert fields formula should be :
   rice_taken_by_shops__c * rice_mill_name__r.rice_price_kg__c
6. Under Advanced Formula write down the formula and click “Check Syntax” and Save.



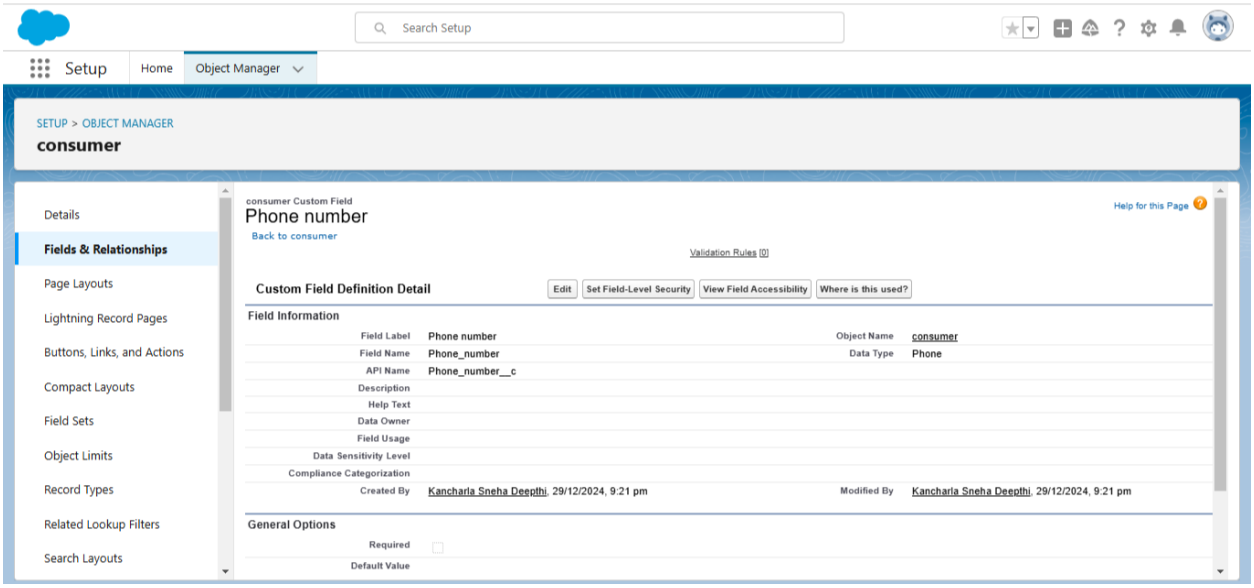
1. Creating the Formula field in consumer Object
2. Go to setup >> click on Object Manager >> type object name(consumer) in search bar >> click on the object.
3. Click on fields & relationship >> click on New.
4. Select Data type as “Formula” and click Next.
5. Give Field Label and Field Name as “Consumer Name” and select formula return type as “TEXT” and click next.
6. Insert field formula should be : First_Name__c + ' ' + Last_Name__c
7. click “Check Syntax” and Save.



Creating the validation rule

Improve the quality of your data using validation rules. Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of “True” or “False”. Validation rules also include an error message to display to the user when the rule returns a value of “True” due to an invalid value.
Creating the validation rule for phone number field in consumer object

1. Go to the setup page >>click on object manager >> From drop down click edit for consumer object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as “Phonenumberoremailblankrule ”.
4. Enter the description as “phone number and email number should not be blank”.
5. Enter the formula as “OR(ISBLANK(phone_number__c) , ISBLANK(email__c))” and check the syntax.
6. Under the error message write as”please fill in your phone number.”
7. Select error location “top of page”.
8. Save the validation rule.

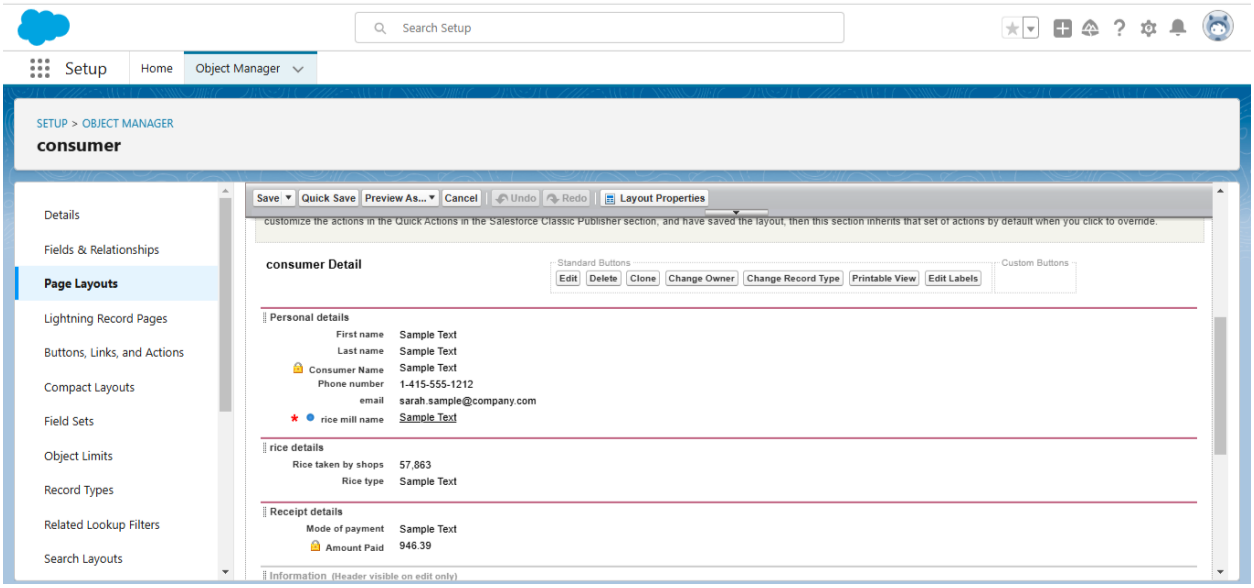


5)Page layouts

Page Layout in Salesforce allows us to customize the design and organize detail and edit pages of records in Salesforce. Page layouts can be used to control the appearance of fields, related lists, and custom links on standard and custom objects' detail and edit pages.

To Create a Page layout:

1. Go to Setup >> Click on Object Manager >>Search for the object (consumer) >> From drop down select the object and click on it.
2. Click on Page layout >> Click on New.
3. Select the existing page layout, and give the page layout name as “consumer layout”, and click save.
4. Drag and drop the section field to consumer details and create the section.
5. Enter the section name as “Personal details”, - click Ok.
6. Now drag the fields to this section that mentioned , they are
7. First name , last name , consumer name , phone number, email, rice mill name.
8. Follow the same process for another two sections as shown above , they are
9. One section is “ rice details ” , drag the fields that are Rice taken by shop, rice type.
10. Another section is “Receipt details ”, and drag the fields that are Mode of payment , Amount paid.
11. Then , Click save.



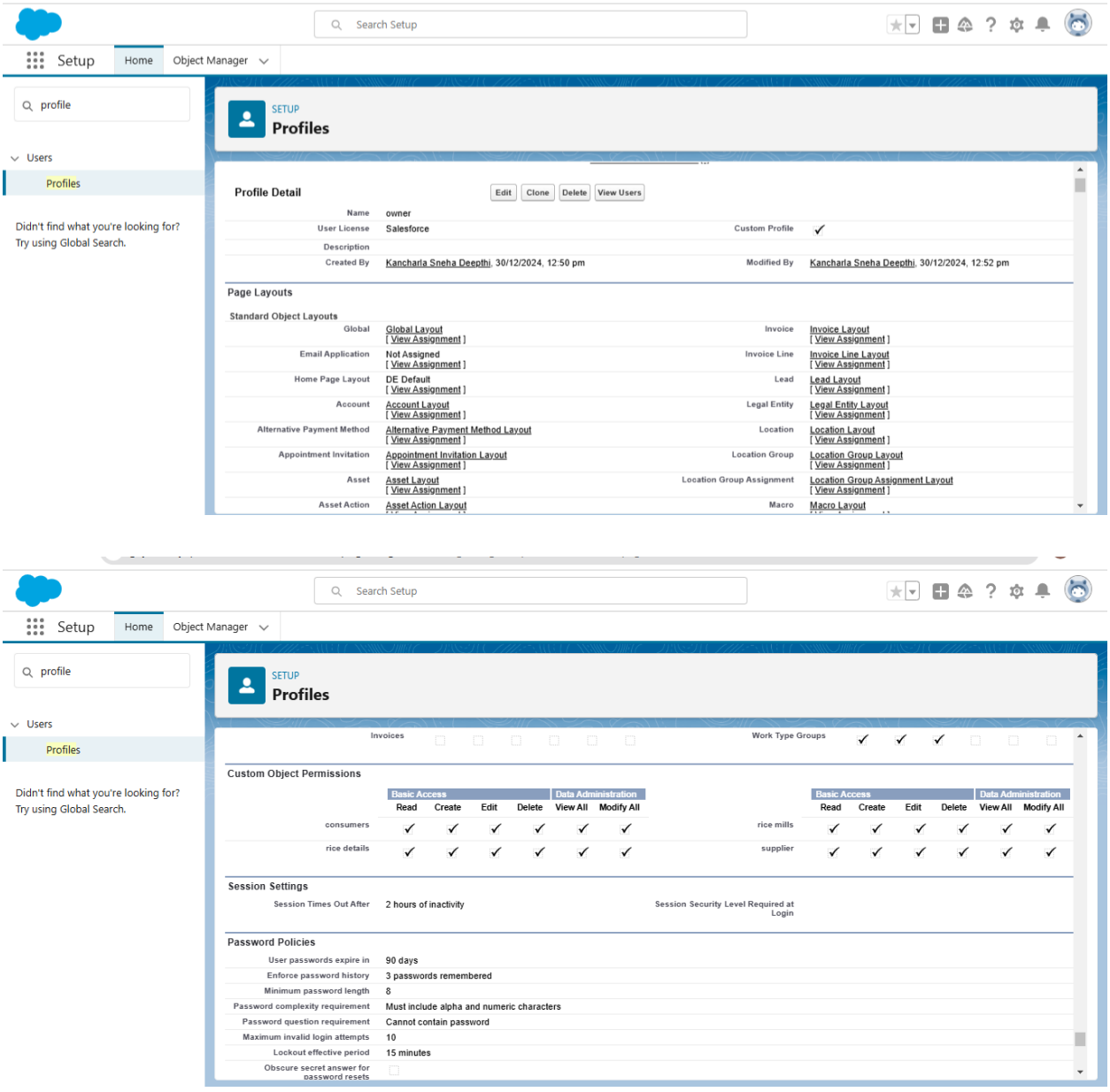
6)Profiles

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.

owner Profile

To create a new profile:

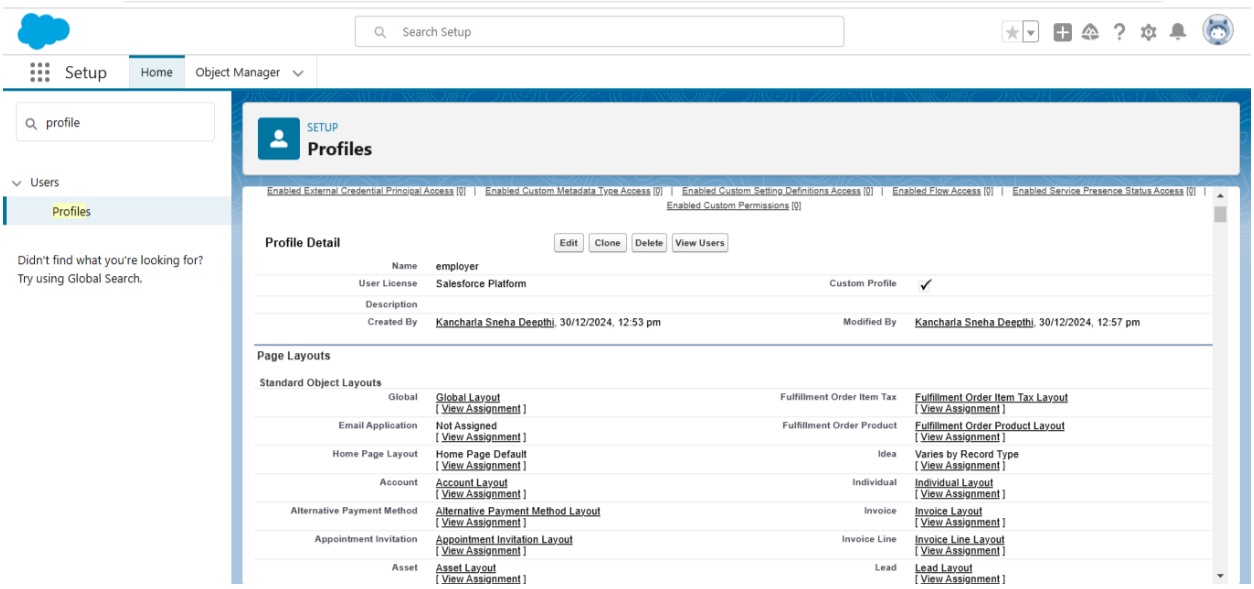
1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Standard User) >>enter profile name (owner) >> Save.
2. Scroll down to Custom Object Permissions and Give access permissions for consumers, rice details , rice mill and suppliers objects as mentioned in the below diagram.
3. Give access and save it.

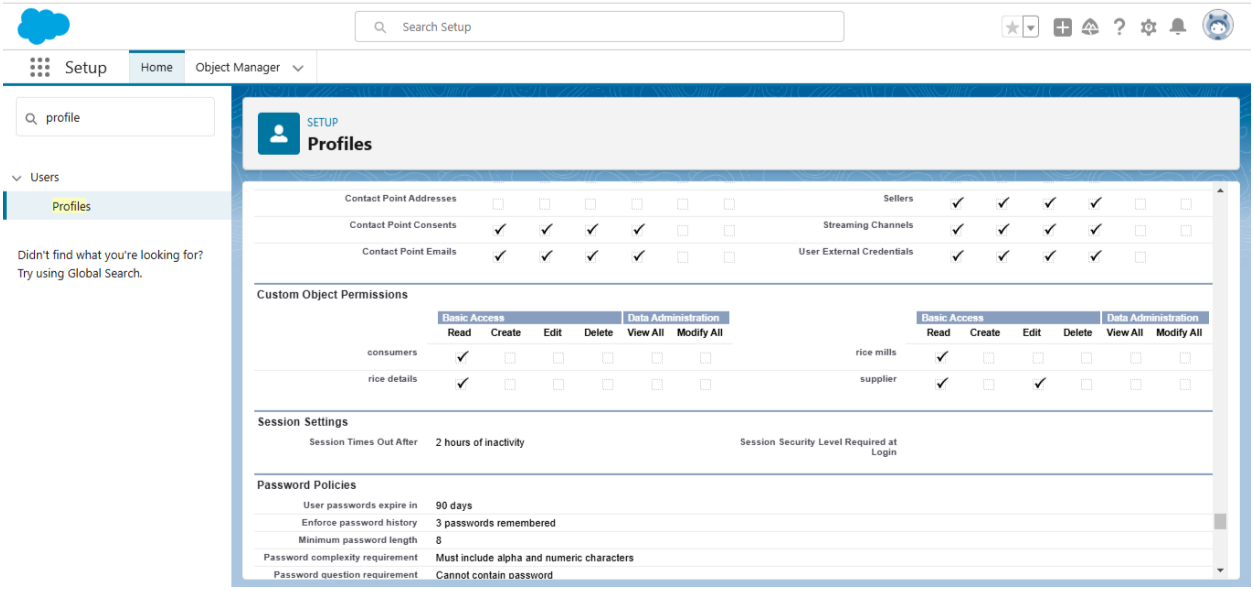


Employer Profile

1. Go to setup >> type profiles in quick find box >>click on profiles >> clone the desired profile (Standard Platform User) >> enter profile name (employer) >> Save.
2. While still on the profile page, then click Edit.
3. Select the Custom App settings as default for the rice mill.

4. Scroll down to Custom Object Permissions and Give access permissions for consumer, rice details , rice mill and suppliers objects as mentioned in the below diagram.
5. And click save.

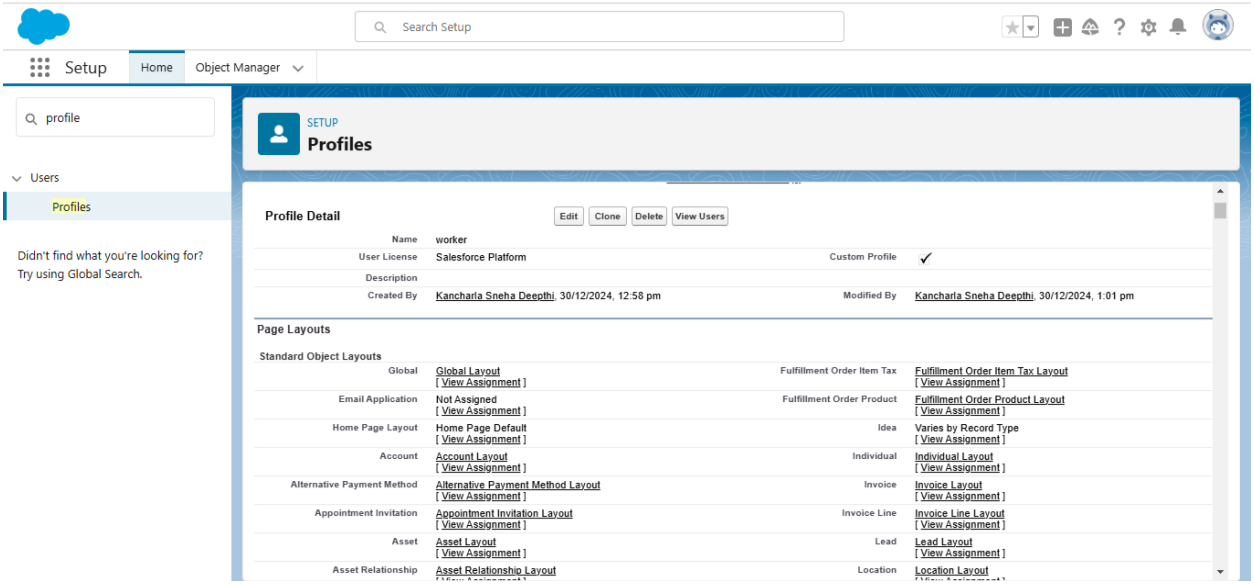


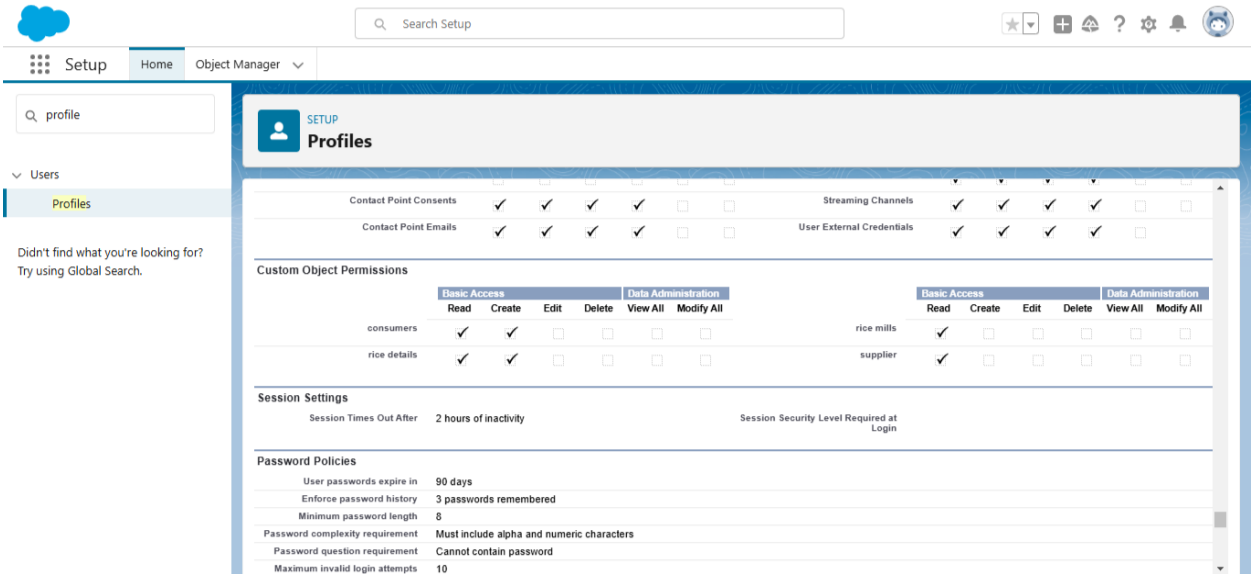


Worker Profile

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

2. While still on the profile page, then click Edit.
3. Select the Custom App settings as default for the rice mill.
4. Scroll down to Custom Object Permissions and Give access permissions for consumer, rice details , rice mill and suppliers objects as mentioned in the below diagram.
5. And click save.





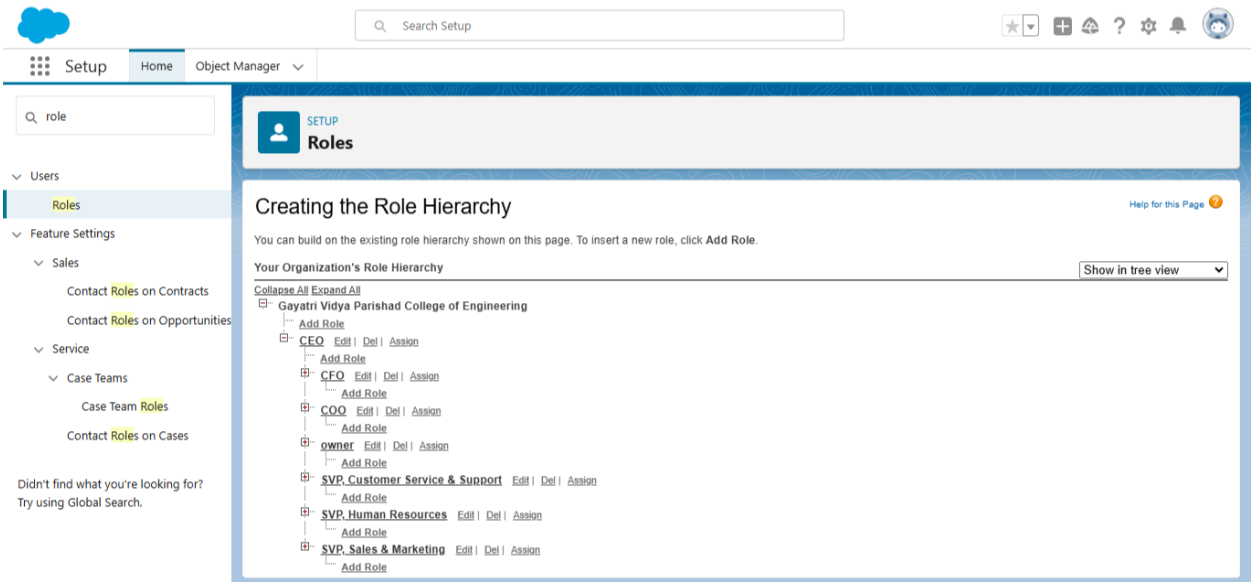
7)Role & Role Hierarchy

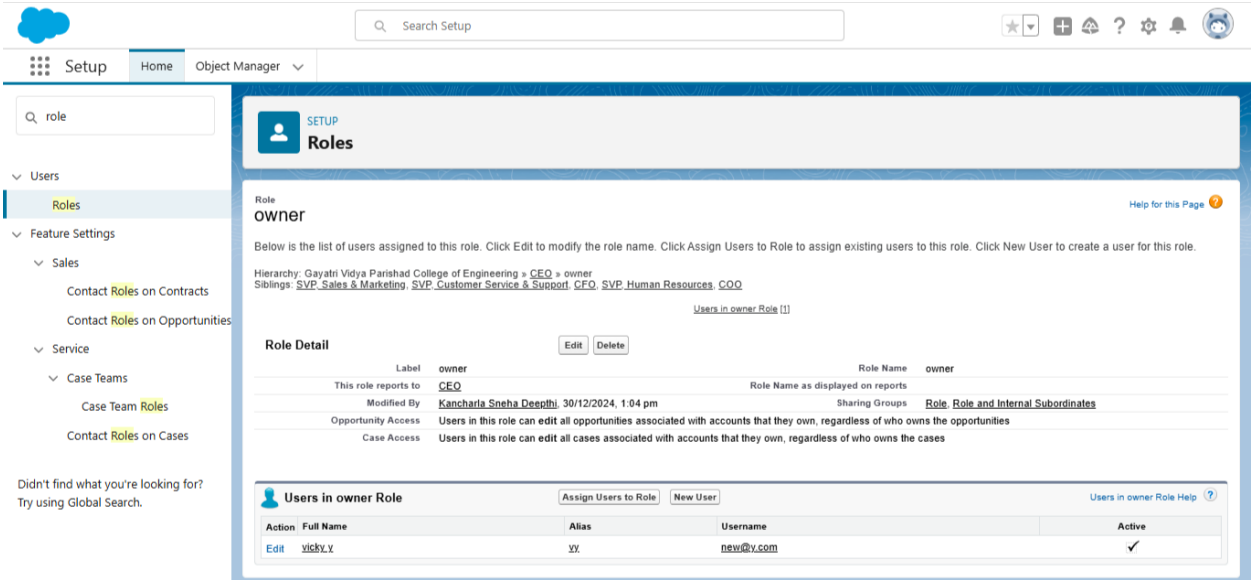
A role in Salesforce defines a user's visibility access at the record level. Roles may be used to specify the types of access that people in your Salesforce organization can have to data. Simply put, it describes what a user could see within the Salesforce organization.

Created roles :

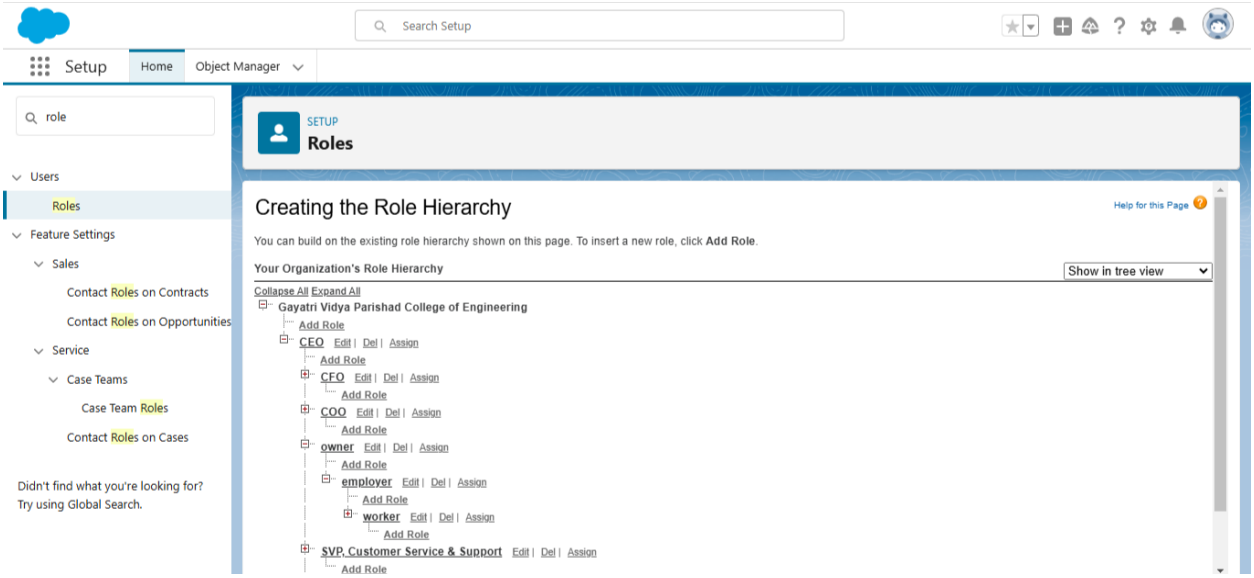
- Owner
- Employer

Owner role





Employer role


Search Setup
Setup
Home
Object Manager
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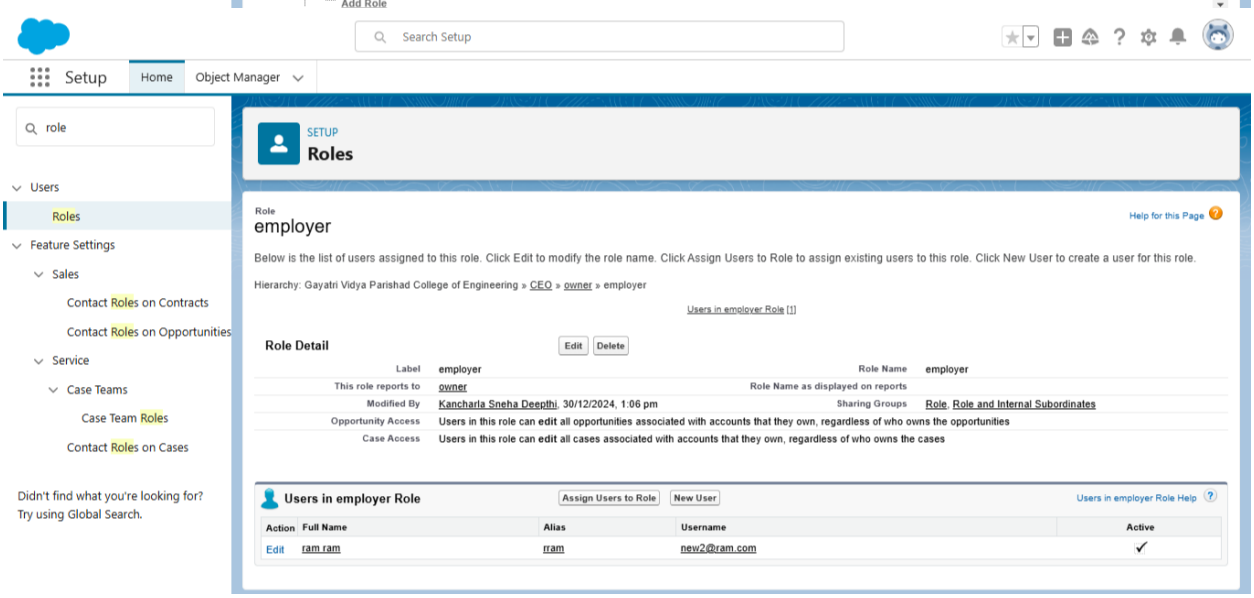
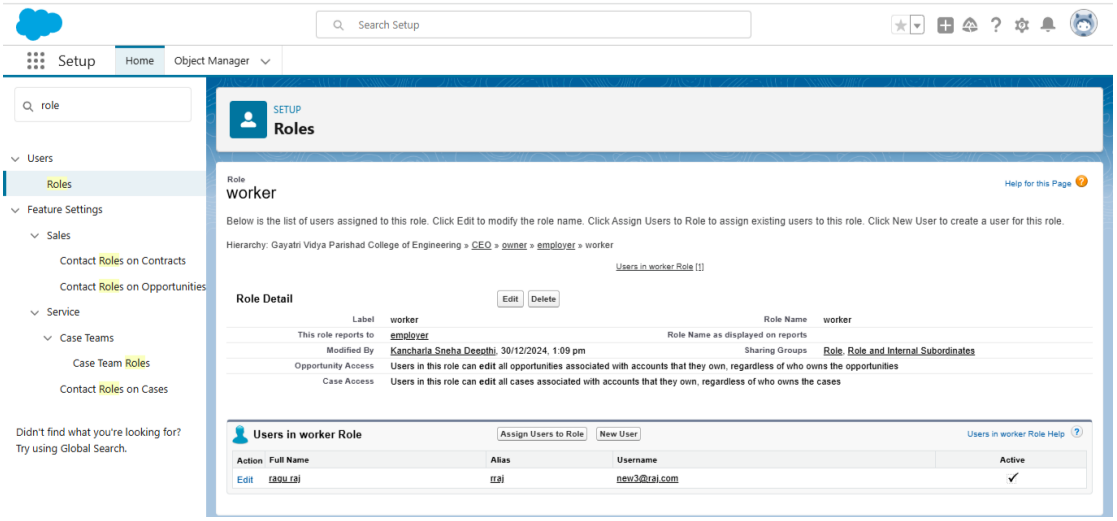
Users
Roles
Feature Settings
Sales
Contact Roles on Contracts
Contact Roles on Opportunities
Service
Case Teams
Case Team Roles
Contact Roles on Cases
Didn't find what you're looking for?
Try using Global Search.
SETUP
Roles
Creating the Role Hierarchy
Help for this Page
You can build on the existing role hierarchy shown on this page. To insert a new role, click Add Role.
Your Organization's Role Hierarchy
Show in tree view
Collapse All Expand All
Gayatri Vidya Parishad College of Engineering
Add Role
CEO Edit | Del | Assign
CFO Edit | Del | Assign
COO Edit | Del | Assign
owner Edit | Del | Assign
employer Edit | Del | Assign
worker Edit | Del | Assign
SVP, Customer Service & Support Edit | Del | Assign


Search Setup
Setup
Home
Object Manager
role
Users
Roles
Feature Settings
Sales
Contact Roles on Contracts
Contact Roles on Opportunities
Service
Case Teams
Case Team Roles
Contact Roles on Cases
Didn't find what you're looking for?
Try using Global Search.
SETUP
Roles
Role
employer
Help for this Page
Below is the list of users assigned to this role. Click Edit to modify the role name. Click Assign Users to Role to assign existing users to this role. Click New User to create a user for this role.
Hierarchy: Gayatri Vidya Parishad College of Engineering » CEO » owner » employer
Users in employer Role [1]
Role Detail
Edit
Delete
Label employer
Role Name employer
This role reports to owner
Role Name as displayed on reports
Modified By Kancharla Sneha Deepthi, 30/12/2024, 1:06 pm
Sharing Groups Role, Role and Internal Subordinates
Opportunity Access Users in this role can edit all opportunities associated with accounts that they own, regardless of who owns the opportunities
Case Access Users in this role can edit all cases associated with accounts that they own, regardless of who owns the cases
Users in employer Role
Assign Users to Role
New User
Users in employer Role Help
Action Full Name Alias Username Active
Edit ram ram rram new2@ram.com

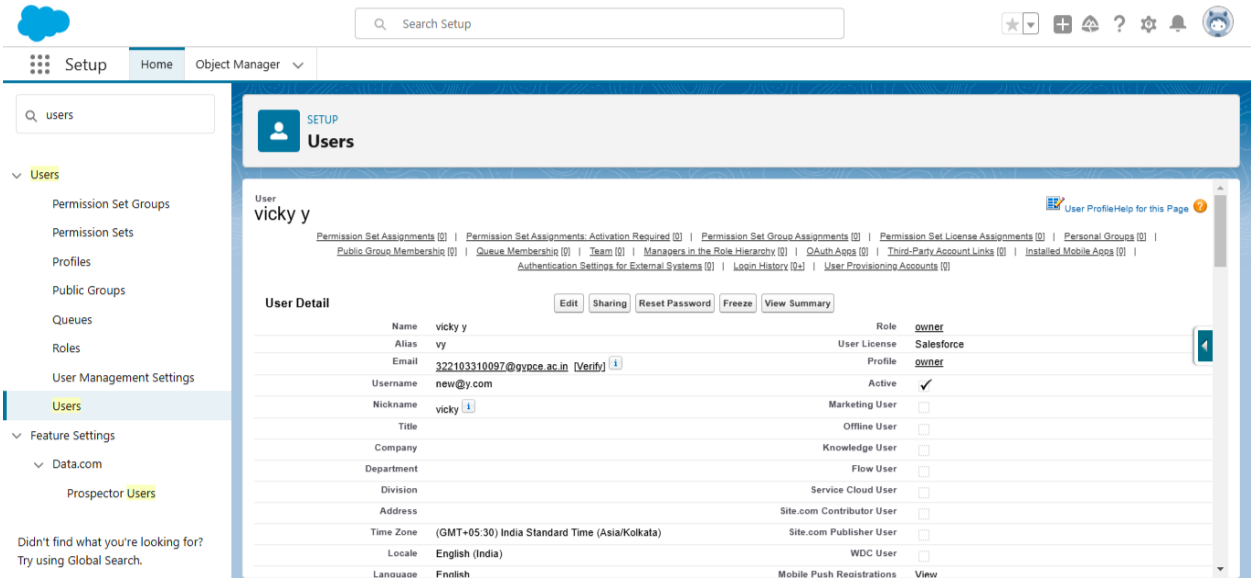

Search Setup
Setup
Home
Object Manager
role
Users
Roles
Feature Settings
Sales
Contact Roles on Contracts
Contact Roles on Opportunities
Service
Case Teams
Case Team Roles
Contact Roles on Cases
Didn't find what you're looking for?
Try using Global Search.
SETUP
Roles
Role
worker
Help for this Page
Below is the list of users assigned to this role. Click Edit to modify the role name. Click Assign Users to Role to assign existing users to this role. Click New User to create a user for this role.
Hierarchy: Gayatri Vidya Parishad College of Engineering » CEO » owner » employer » worker
Users in worker Role [1]
Role Detail
Edit
Delete
Label worker
Role Name worker
This role reports to employer
Role Name as displayed on reports
Modified By Kancharla Sneha Deepthi, 30/12/2024, 1:09 pm
Sharing Groups Role, Role and Internal Subordinates
Opportunity Access Users in this role can edit all opportunities associated with accounts that they own, regardless of who owns the opportunities
Case Access Users in this role can edit all cases associated with accounts that they own, regardless of who owns the cases
Users in worker Role
Assign Users to Role
New User
Users in worker Role Help
Action Full Name Alias Username Active
Edit ragu raj rraj new3@raj.com

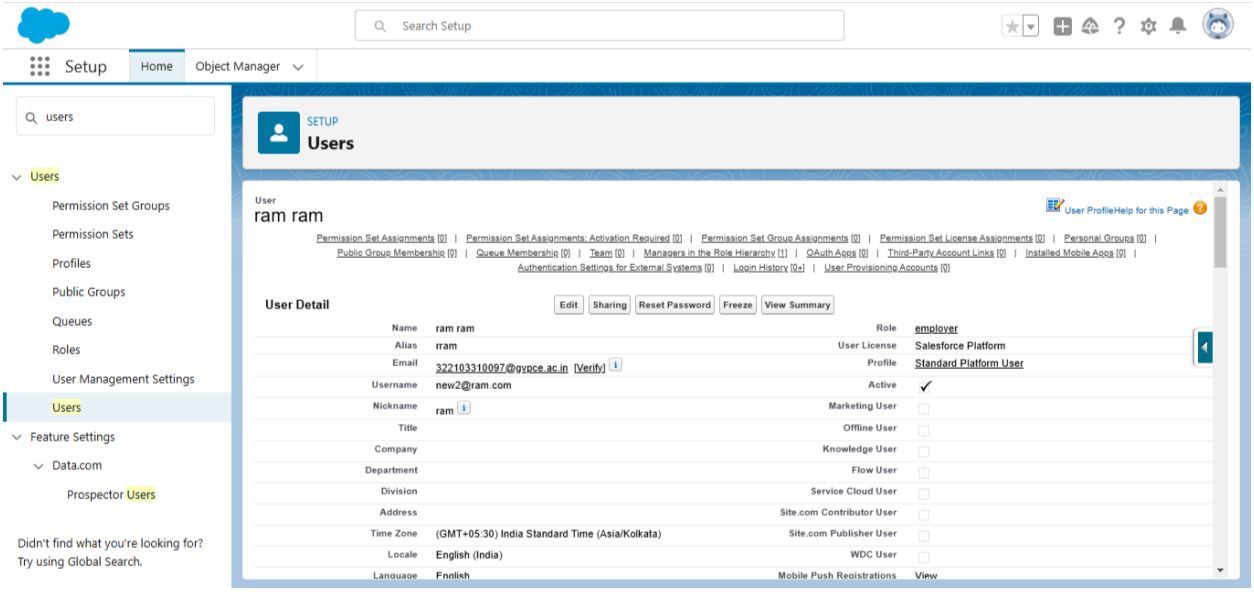
8)Users

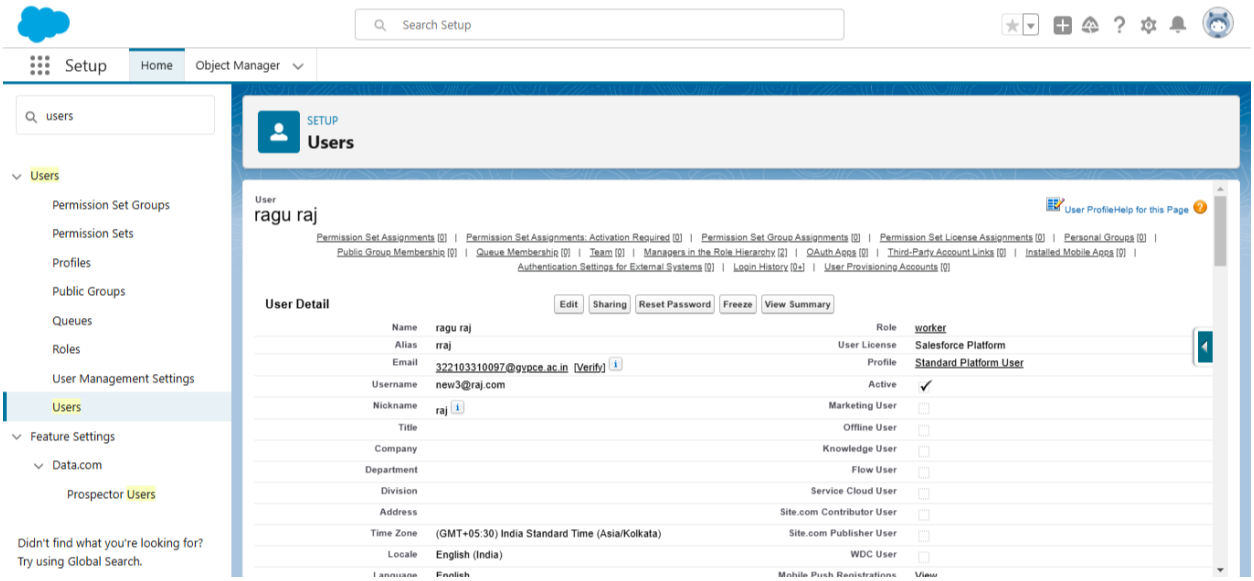
A user is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account. The user account identifies the user, and the user account settings determine what 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
3. First Name : vicky
4. Last Name : y
5. Alias : Give a Alias Name
6. Email id : Give your Personal Email id
7. Username : Username should be in this form: text@text.text
8. Nick Name : Give a Nickname
9. Role : owner
10. User license : Salesforce
11. Profiles : owner
12. Save it.







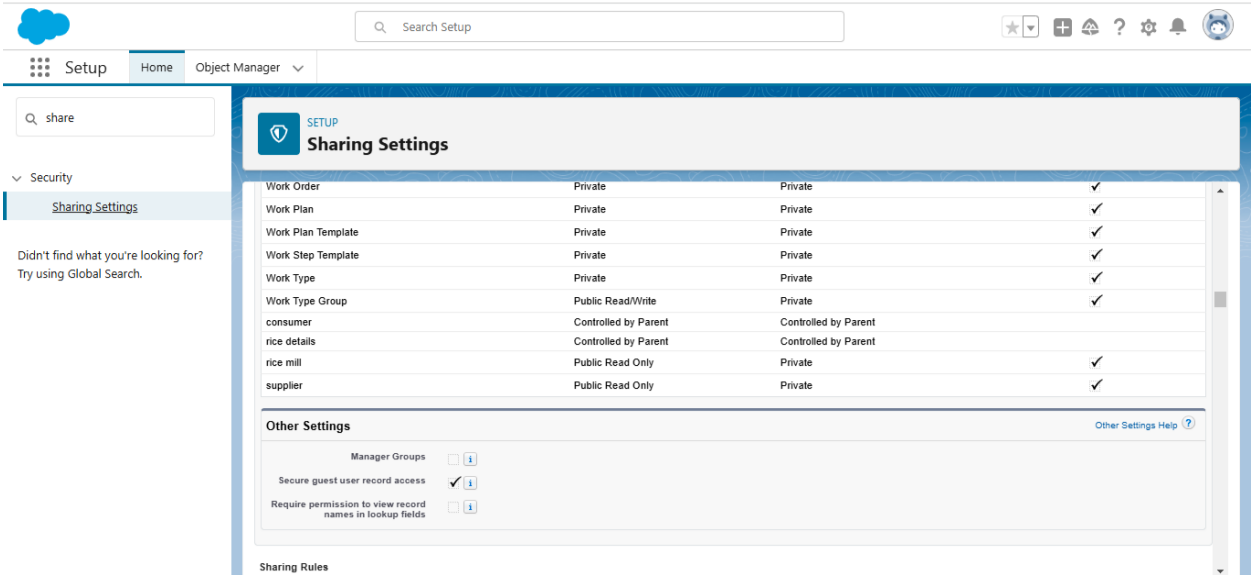
9)Permission sets

A permission set is a collection of settings and permissions that give users access to various tools and functions. Permission sets extend users' functional access without changing their profiles and are the recommended way to manage your users' permissions.

Creating OWD setting

1. Go to setup >> type "sharing settings " in quick search >> Click edit.
2. Scroll down, change the default internal access to " public read-only" for rice mill and supplier object.

3. Click save.
4. Extra information, By these every profile has their own access, according to their profile.
5. But in our case we created roles and given the roles in such a way that the owner can see employer and worker records , and the employer can see the worker records.

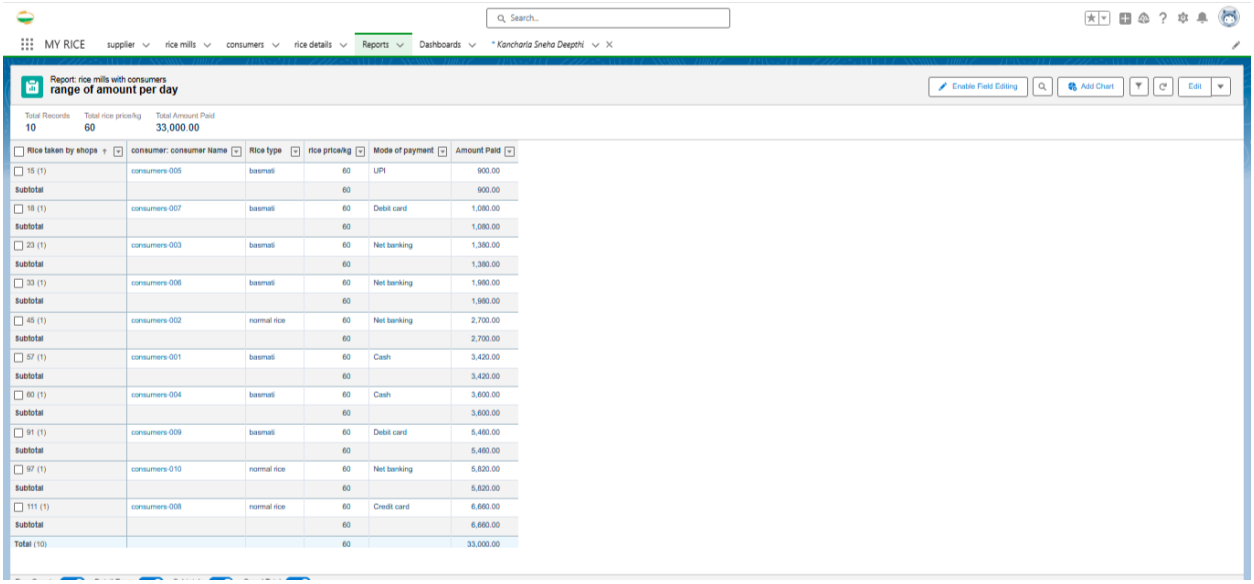


10)Report

Create Report:

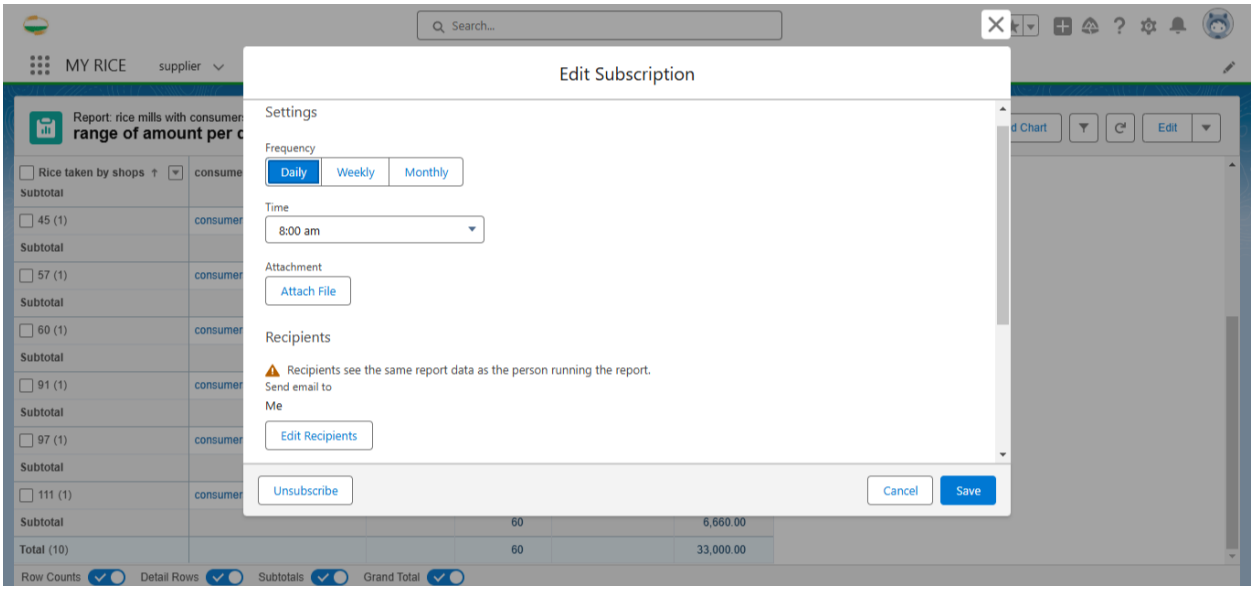
1. Go to the app >>click on the reports tab
2. Click New Report.
3. select for report type, search for “rice mill with consumers” click on it. And click on start report.
4. Their outline pane is opened already, select the fields that are mentioned below in the column section.
    a. consumer name
    b. rice type
    c. rice price/kg
    d. mode of payments
    e. amount paid
5. Remove the unnecessary fields.
6. Select the fields that are mentioned below in the GROUP ROWS section.
7. Rice taken by shops

    Click save and run and save the report as “range of amount per day”.and save it



Sharing report to owner

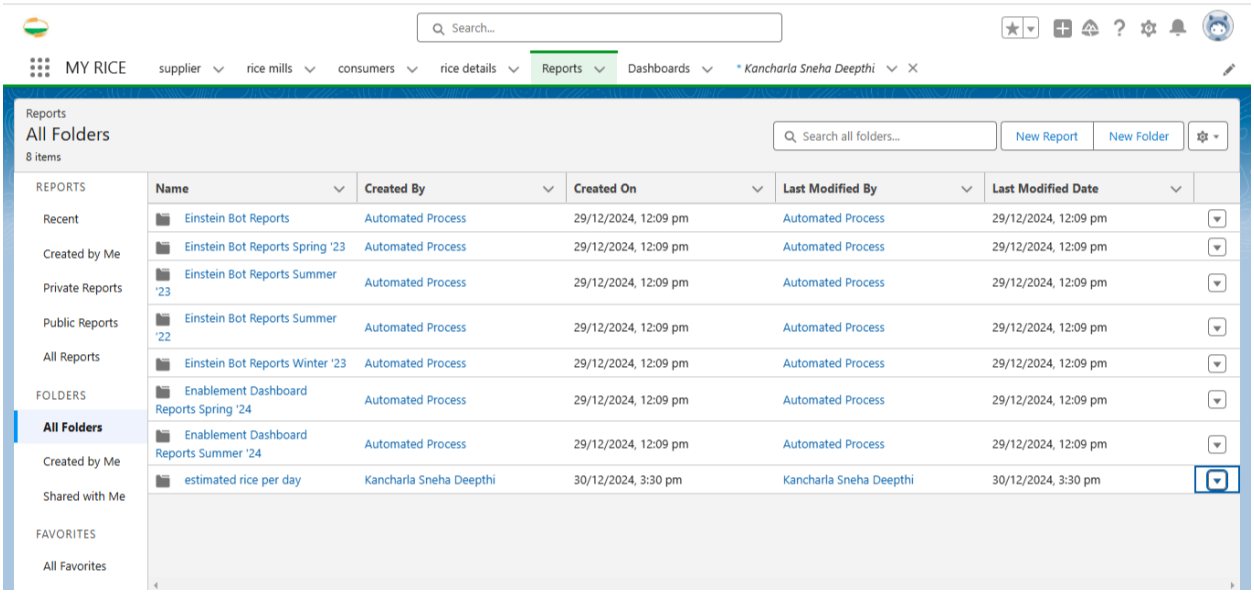
1. Click edit drop down and select subscribe option
2. Follow as per below image.
3. After selecting the run report as a “another person” select your personal account or whom you want to send that mail to.
4. Click save.



create a report folder

1. Click on the app launcher and search for reports.
2. Double click on the report, “ reports tab” will be auto populated in the navigation bar.

3. Click on the report tab, click on the new folder.
4. Give the Folder label as “estimated rice per day ”, Folder unique name will be auto populated.
5. Click save.
6. navigate to app launcher and click reports on that.
7. click all reports.
8. Select the range of amount per day drop down in that click move.
9. Select estimated rice per day folder and select folder.

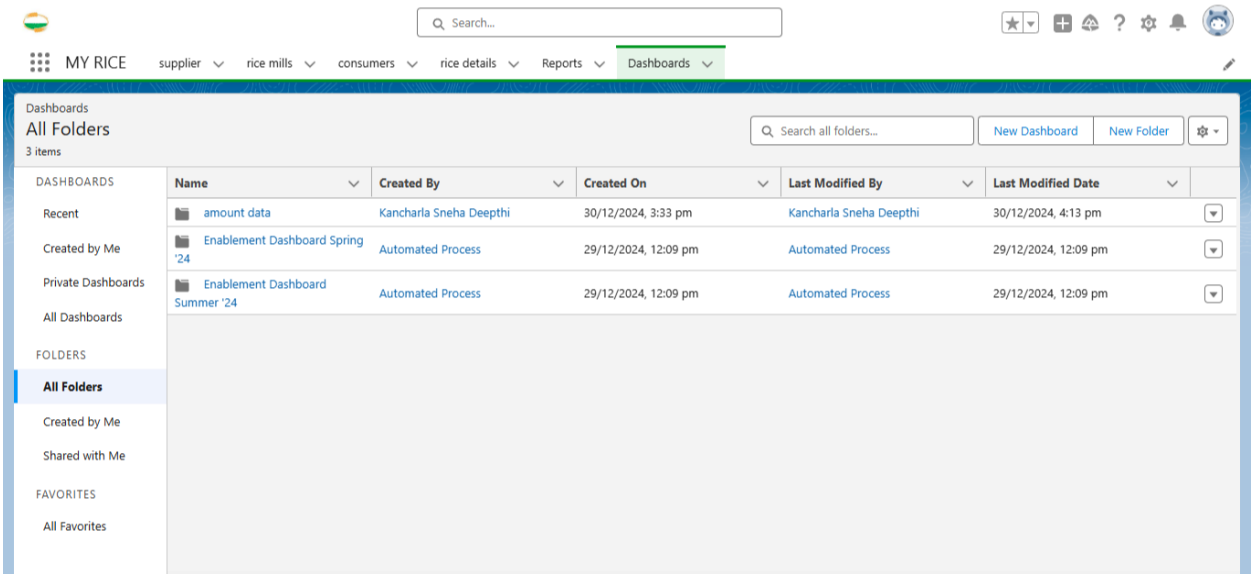


11)Dashboards

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.

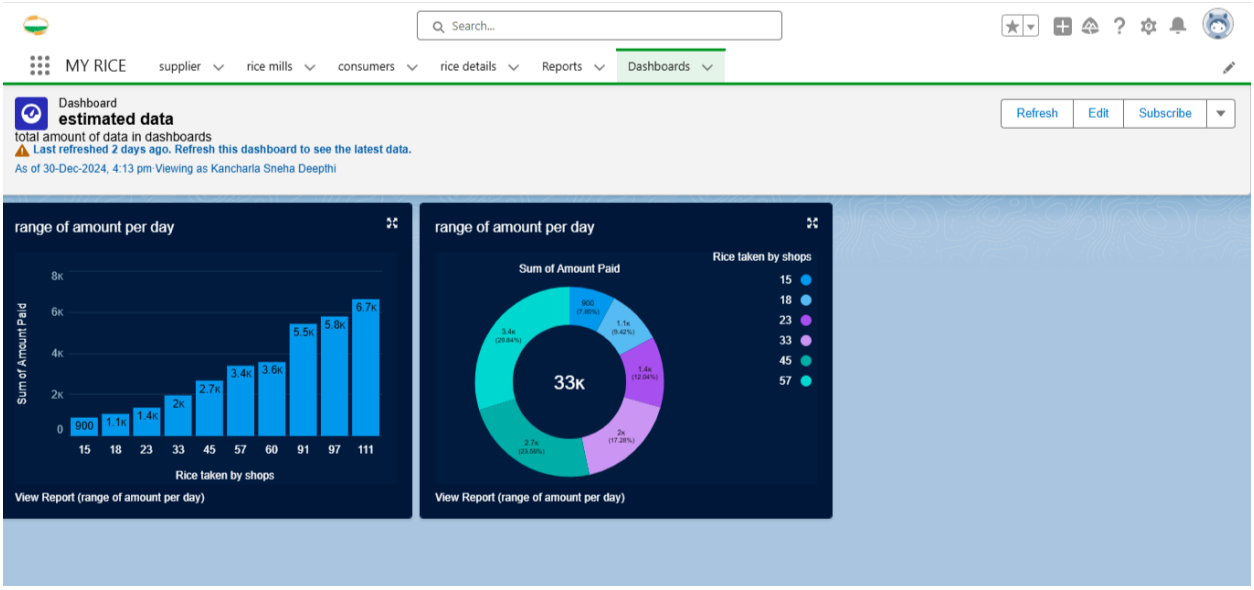
Create Dashboard Folder

1. Click on the app launcher and search for the dashboard.
2. Click on the dashboard tab.
3. Click the new folder, give the folder label as “ amount data dashboard”.
4. Folder unique names will be auto populated.
5. Click save.



Create Dashboard

1. Go to the app >> click on the Dashboards tabs.
2. Give a Name and select the folder that was created, and click on create.
3. Select add component.
4. Select a Report and click on select.
5. Display as>> vertical bar chart
6. X-axis >> rice taken by shops
7. Y-axis >> sum of amount
8. Y-axis range >> automatic
9. Sort by >> rice taken by shops
10. Component theme >> dark.
11. Add the component
12. Again select add component with above same steps
13. display as donut chart
14. sort by >> sum of amount
15. title>>range of amount per day
16. component theme dark
17. Click add.
18. Click save and done.



12)APEX

Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Lightning platform server in conjunction with calls to the Lightning Platform? API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

Creating an Apex Class(ConsumerRecord)

1. Login to the Salesforce account and navigate to the gear account in the top right corner.
2. Then we can see the Developer console. Click on the developer console and you will navigate to a new console window.
3. Then you can see many tools in the Toolbar of the new console window. Click on File, New and Apex Class.
4. Enter the name of the class(ConsumerRecord) to create a new class file.

Code Snippet :

```
public class ConsumerRecord {
   public static void sendEmailNotification(List<consumer__c> con) {
      List<Messaging.SingleEmailMessage> emails = new
List<Messaging.SingleEmailMessage>();
      for (consumer__c c : con) {
         Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
```

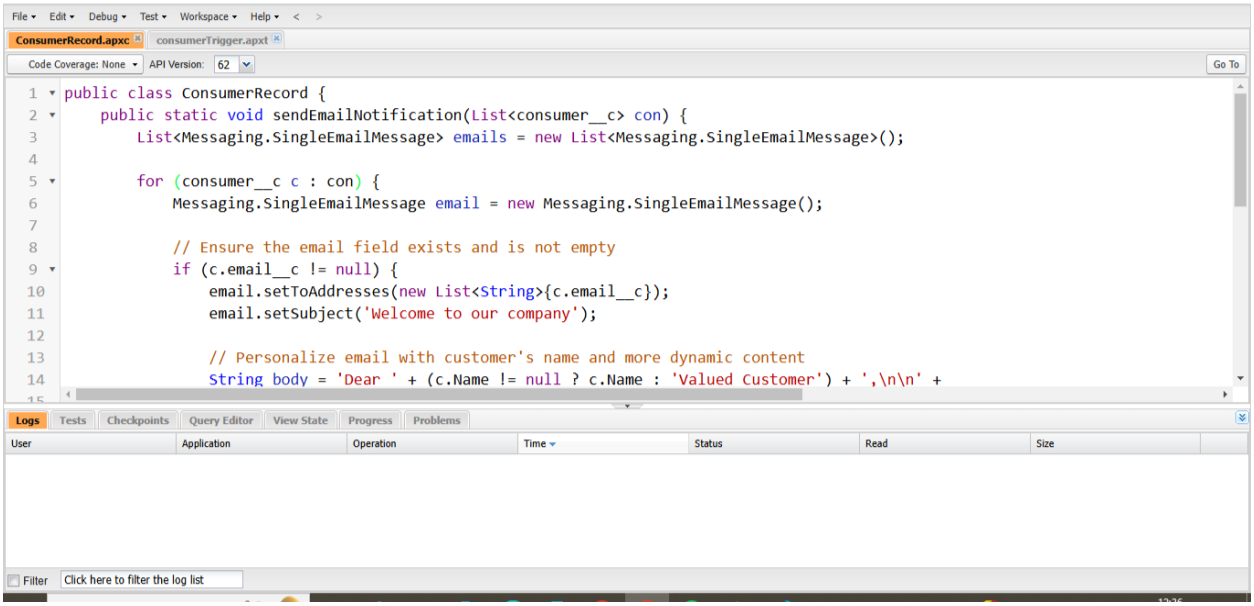
```
        // Ensure the email field exists and is not empty
        if (c.email__c != null) {
            email.setToAddresses(new List<String>{c.email__c});
            email.setSubject('Welcome to our company');

            // Personalize email with customer's name and more dynamic content
            String body = 'Dear ' + (c.Name != null ? c.Name : 'Valued Customer') + ',\n\n' +
                          'Welcome to MY RICE! You have been seen as a valuable customer to us. Please continue your journey with us, ' +
                          'while we strive to provide you with high-quality resources.\n\n' +
                          'We are proud to associate with valuable customers like you, and we look forward to collaborating with you by providing more exciting discounts and product offers.\n\n' +
                          'So why take a step back? Take a leap of faith and shop with us more, while we provide you with valuable products and offers!\n\n' +
                          'Thank you for shopping with us! Here are some products brought by customers who similarly bought items like yours:\n\n' +
                          '[Product Recommendations Here]'; // Placeholder for product recommendations

            email.setPlainTextBody(body);

            // Add the email to the list
            emails.add(email);
        }
    }

    // Send all emails in one batch
    if (!emails.isEmpty()) {
        Messaging.sendEmail(emails);
    }
  }
}
```



Creating an Apex Trigger

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 the File menu in the toolbar, and click on new Trigger.
4. Enter the trigger name and the object to be triggered.

Trigger code:

```
trigger consumerTrigger on consumer__c (After insert) {
   if(trigger.isAfter && trigger.isInsert) {
      ConsumerRecord.sendEmailNotification(trigger.new);
   }
}
```

5. Testing and Validation

Unit Testing:

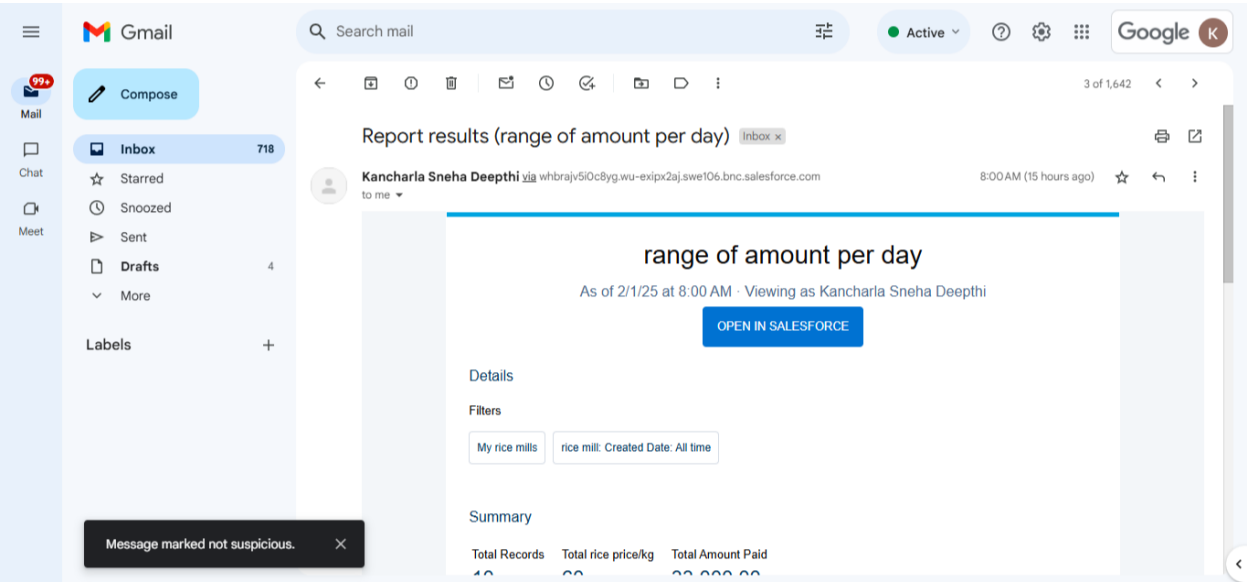
- Apex classes and triggers tested to ensure they handle edge cases and return accurate results.
- Achieved >90% code coverage to meet Salesforce standards.

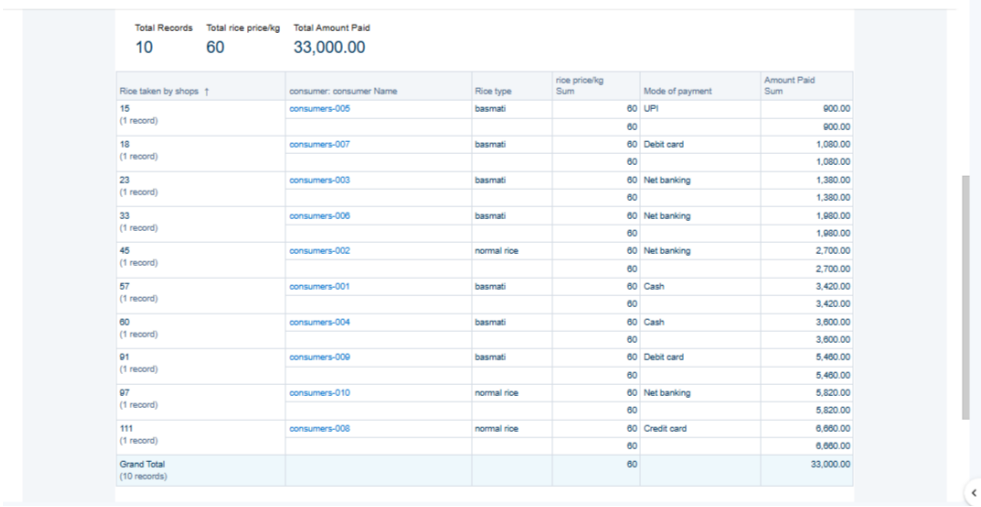
User Interface Testing:

- Validated all forms and pages across different browsers and devices.
- Ensured consistent user experience and accurate data presentation.

End-to-End Testing:

- Simulated real-world scenarios, such as entering daily production data, generating reports, and managing inventory, to confirm seamless functionality.





Total Records	Total rice price/kg	Total Amount Paid
10	60	33,000.00

Rice taken by shops	consumer: consumer Name	Rice type	rice price/kg Sum	Mode of payment	Amount Paid Sum
15 (1 record)	consumers-005	basmati	60	UPI	900.00
			60		900.00
18 (1 record)	consumers-007	basmati	60	Debit card	1,080.00
			60		1,080.00
23 (1 record)	consumers-003	basmati	60	Net banking	1,380.00
			60		1,380.00
33 (1 record)	consumers-006	basmati	60	Net banking	1,980.00
			60		1,980.00
45 (1 record)	consumers-002	normal rice	60	Net banking	2,700.00
			60		2,700.00
57 (1 record)	consumers-001	basmati	60	Cash	3,420.00
			60		3,420.00
60 (1 record)	consumers-004	basmati	60	Cash	3,600.00
			60		3,600.00
91 (1 record)	consumers-009	basmati	60	Debit card	5,460.00
			60		5,460.00
97 (1 record)	consumers-010	normal rice	60	Net banking	5,820.00
			60		5,820.00
111 (1 record)	consumers-008	normal rice	60	Credit card	6,660.00
			60		6,660.00
Grand Total (10 records)			60		33,000.00

6. Key Scenarios Addressed by Salesforce in the Implementation Project

In the implementation of a project rice mill system on Salesforce, addressing key scenarios ensures the platform's capabilities are effectively leveraged. Here are some key scenarios that Salesforce can handle during the implementation:

1. Data Management and Integration:

- **Customer Data Management**: Salesforce can handle complex customer data management, including creating and managing customer records, tracking customer interactions, and handling consumer-specific information.
- **Integration with External Systems**: Salesforce can integrate with external systems such as inventory management or billing systems, ensuring smooth data flow between different platforms.
- **Data Migration**: Salesforce provides tools for data import and migration (using Data Loader or third-party tools), ensuring a smooth transition from legacy systems to Salesforce.

2. Sales Process Automation:

- **Lead and Opportunity Management**: Salesforce allows for efficient tracking and management of leads, opportunities, and sales pipelines, automating processes for follow-ups, approvals, and deal closure.
- **Order and Quote Management**: Salesforce can help automate the creation of orders and quotes, which is particularly useful in the rice mill industry for managing product orders, custom orders, and offers.
- **Workflow Automation**: Salesforce workflows and process builders can automate repetitive tasks, such as sending emails, updating records, or notifying teams when certain conditions are met.

3. Customer Service and Support:

- **Case Management**: Salesforce's Service Cloud can handle customer inquiries or complaints, manage cases, and track issue resolution, providing customers with faster support.
- **Knowledge Base**: With Salesforce, the rice mill can create a comprehensive knowledge base for customers and support agents, enabling self-service options for common queries or product information.
- **Omnichannel Support**: Salesforce can integrate various support channels, such as email, chat, and social media, to provide consistent support across platforms.

4. Salesforce Communities:

- **Customer and Partner Portals**: Salesforce Communities can be set up to provide customers with portals where they can track their orders, make payments, access offers, and interact with your company. Partners can also access relevant data to enhance collaboration.
- **Collaborative Spaces**: Communities allow internal teams, partners, and even customers to collaborate on product feedback, troubleshooting, or new feature ideas.

5. Analytics and Reporting:

- **Custom Reporting**: Salesforce enables users to create custom reports and dashboards, providing actionable insights on sales, customer activity, and inventory levels, critical for decision-making in the rice mill project.
- **Predictive Analytics**: With Salesforce Einstein Analytics, predictions can be made on future sales trends, customer behaviors, and more, helping businesses to anticipate demands and adjust their operations accordingly.

6. Inventory and Supply Chain Management:

- **Product Management**: Salesforce allows efficient management of products, including keeping track of inventory, managing suppliers, and handling product offers.
- **Order Fulfillment**: With integration to supply chain systems, Salesforce can assist in tracking order fulfillment, managing backorders, and updating inventory in real-time.
- **Product Recommendations**: With Salesforce's AI features, personalized product recommendations can be made to customers based on their previous purchase history.

7. Compliance and Security:

- **Data Security**: Salesforce offers robust security features, including user role management, field-level security, and audit trails to protect sensitive business data and ensure compliance.
- **Regulatory Compliance**: Salesforce can help ensure compliance with industry regulations by tracking changes in business processes, providing audit logs, and facilitating document management.
- **GDPR and Privacy Regulations**: Salesforce supports compliance with data privacy laws like GDPR, allowing businesses to manage customer consent, access, and deletion requests in compliance with privacy regulations.

8. Marketing and Campaign Management:

- **Email Marketing**: With Salesforce Marketing Cloud, businesses can set up and automate email marketing campaigns, segment customers, and track customer engagement.
- **Targeted Campaigns**: Personalized campaigns can be run based on customer segments, purchasing patterns, and more, enhancing customer engagement and sales opportunities.
- **Lead Nurturing**: Marketing automation in Salesforce can nurture leads through various stages of the sales funnel, ensuring continuous engagement.

9. Mobile and Field Services:

- **Mobile Access**: With Salesforce Mobile App, field sales representatives and service agents can access customer data, update orders, and manage cases from the field in real time.
- **Field Service Management**: Salesforce Field Service can help in scheduling and dispatching maintenance or service tasks for your products or customers, enhancing service delivery.

10. Customization and Scalability:

- **Custom Objects and Workflows**: Salesforce can be customized by creating custom objects, fields, and workflows that specifically fit the rice mill business processes, ensuring that all aspects of the business are tracked and managed effectively.
- **Scalability**: As your rice mill business grows, Salesforce can scale by adding new users, processes, or integrations without significant restructuring.

11. User Training and Adoption:

- **Onboarding and Training**: Salesforce offers built-in tools like Trailhead to help onboard and train new users effectively, ensuring they understand how to use the platform to its fullest potential.
- **Change Management**: Salesforce facilitates the change management process with tools to communicate updates and changes to users, ensuring smooth transitions and high user adoption rates.

By addressing these key scenarios, Salesforce helps streamline operations, improve customer experiences, and drive business growth in the rice mill project, while ensuring scalability and flexibility to meet future demands.

7.Conclusion

Summary of Achievements:

The CRM Application for the Wholesale Rice Mill has successfully tackled key business challenges by offering an integrated, automated, and intuitive solution. Key accomplishments include:

- **Automated workflows and reports** to save time and minimize errors.
- **Real-time dashboards and analytics** enhancing decision-making.
- **Streamlined data management** with rollup summaries and cross-object formula fields.
- **Role-based access controls** for secure and efficient data handling.

This project showcases how Salesforce CRM can be tailored to meet the specific needs of the rice mill industry, laying the foundation for scalable growth and operational excellence. It highlights the transformative power of technology in modernizing traditional business processes into efficient, data-driven operations.