

A CRM Application for Wholesale Rice Mill



A Project Report Submitted to

SKILLWALLET (Smart Bridge)

in partial fulfillment of the requirements for the
Salesforce Developer Virtual Internship

By

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ABSTRACT

The Rice Mill CRM Application is a comprehensive solution designed to streamline and simplify how much rice per day, how many were sold that rice and which type of rice all reports send to owners daily wise. It leverages the power of customer relationship management (CRM) to enhance customer experiences, optimize store operations, and improve overall efficiency in the rice mill factory. This project aims to develop a user-friendly and feature-rich application that addresses the specific needs of a rice mill factory.

Features and Functionality:

Reporting and Dashboards: The application can generate detailed reports and analytics regarding daily how much rice sold and total income per daily, revenue generated, popular amenities, and most bought customers. Easy to understand the data to the owner, improving resource allocation, and planning future development.

A Rollup Summary Field:

This 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.

A cross-object formula field:

It is a formula field that references fields from another object in Salesforce. This type of formula allows users to calculate the total amount from number of rices taken*price/kg and it displays the total amount I have to pay.

Validation rules:

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. So, in this project i gave IsBlank formula is blank formula is used to verify whether it is blank it shows error.

Permission sets:

Organization Wide Defaults (OWD) in salesforce is the baseline level of access that the most restricted user should have. Organizational Wide Defaults are used to restrict access. 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.

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1. INTRODUCTION

The Rice Mill CRM Application is a comprehensive solution designed to streamline and simplify daily operations in a rice mill factory. It leverages the power of customer relationship management (CRM) to enhance customer experiences, optimize store operations, and improve overall efficiency. This project aims to develop a user-friendly and feature-rich application that addresses the specific needs of a rice mill factory. Features and Functionality:

Reporting and Dashboards: The application generates detailed reports and analytics regarding daily rice sales, total income, revenue generated, popular products, and top customers. These easy-to-understand reports help owners improve resource allocation and plan for future development.

Rollup Summary Field: This field summarizes data from a child object to a parent object in a master-detail relationship. It can use COUNT, SUM, MIN, and MAX functions. For example, it can display the total value (amount of rice supplied) from rice details on a related supplier.

Cross-Object Formula Field: This formula field references fields from another object in Salesforce. It calculates the total amount owed by multiplying the number of rice units taken by the price per kilogram, displaying the total amount payable.

Validation Rules: Validation rules include error messages that display when the rule returns a value of “True” due to an invalid entry. For this project, the IsBlank formula is used to check for blank values and show an error if a required field is empty.

Permission Sets: Organization-Wide Defaults (OWD) in Salesforce set the baseline level of access for the most restricted user. In this project, roles are created such that the owner can see employer and worker records, while the employer can see worker records.

This ensures appropriate access and security. Overall, the Rice Mill CRM Application is designed to provide valuable insights and streamline processes, making it an essential tool for any rice mill factory.

1.1 Problem Statement

In the highly competitive rice milling industry, efficient management and streamlined operations are crucial for maintaining profitability and customer satisfaction. Rice mill factories face numerous challenges, including tracking daily rice production, managing sales, monitoring inventory, and ensuring accurate financial reporting. Traditional manual methods and disparate systems often lead to inefficiencies, data inaccuracies, and a lack of real-time insights, hindering effective decision-making and resource allocation. Rice mill owners need a comprehensive solution that can integrate various aspects of their operations, providing a unified platform for tracking production, sales, and revenue.

They require detailed, daily reports that offer insights into how much rice is produced and sold, which types of rice are most popular, and who the top customers are. Additionally, the solution must ensure data accuracy, secure access control, and ease of use for different user roles within the organization.

Therefore, there is a need for a robust Customer Relationship Management (CRM) application specifically tailored to the unique requirements of rice mill factories. This application should provide advanced reporting capabilities, automated data summarization, cross-object calculations, and validation rules to enhance operational efficiency and accuracy. It should also include flexible permission settings to ensure that data is accessible only to authorized personnel, based on their roles and responsibilities. The Rice Mill CRM Application aims to address these challenges by delivering a feature-rich, user-friendly solution that optimizes daily operations, enhances customer experiences, and supports informed decision-making in rice mill factories.

2.MODULES

2.1 Object

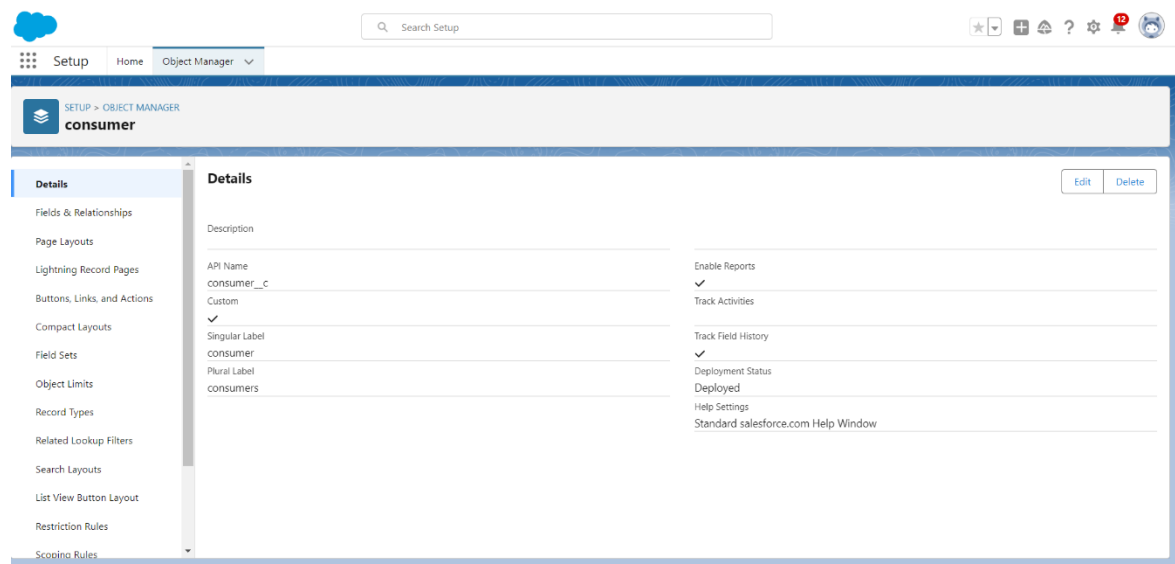
Salesforce objects are database tables that permit you to store data that is specific to an organization. What are the types of Salesforce objects

Salesforce objects are of two types:

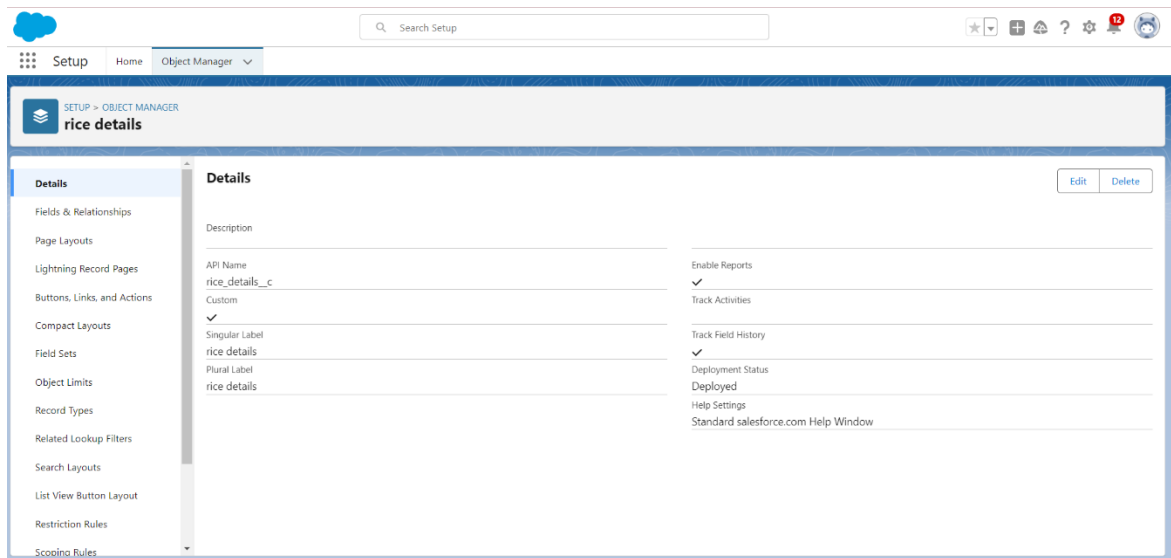
1. **Standard Objects:** Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.
2. **Custom Objects:** Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization.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

To Navigate to Setup page:

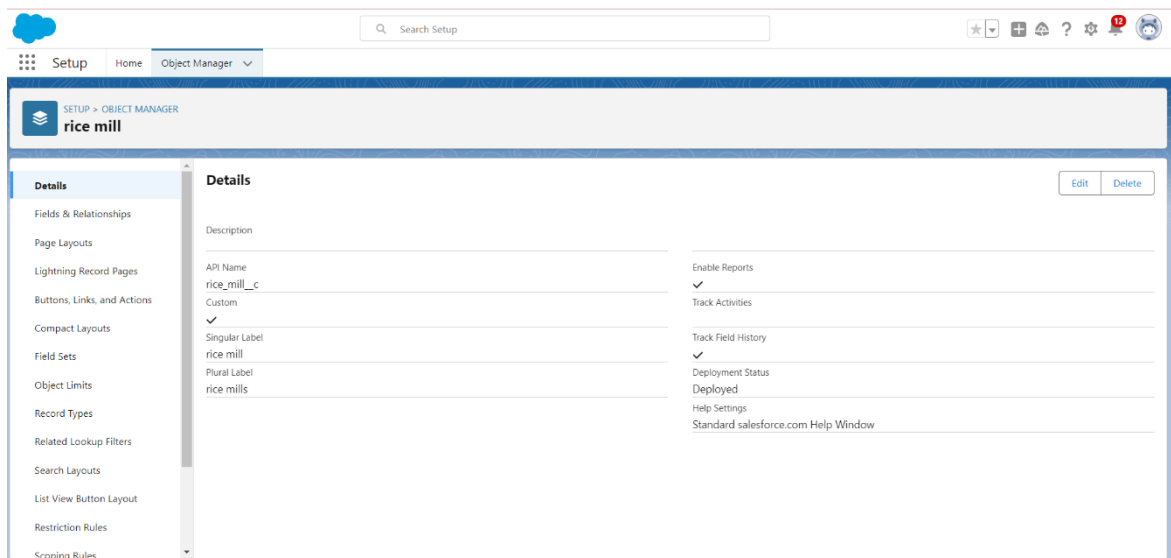
Click on gear icon -click setup.



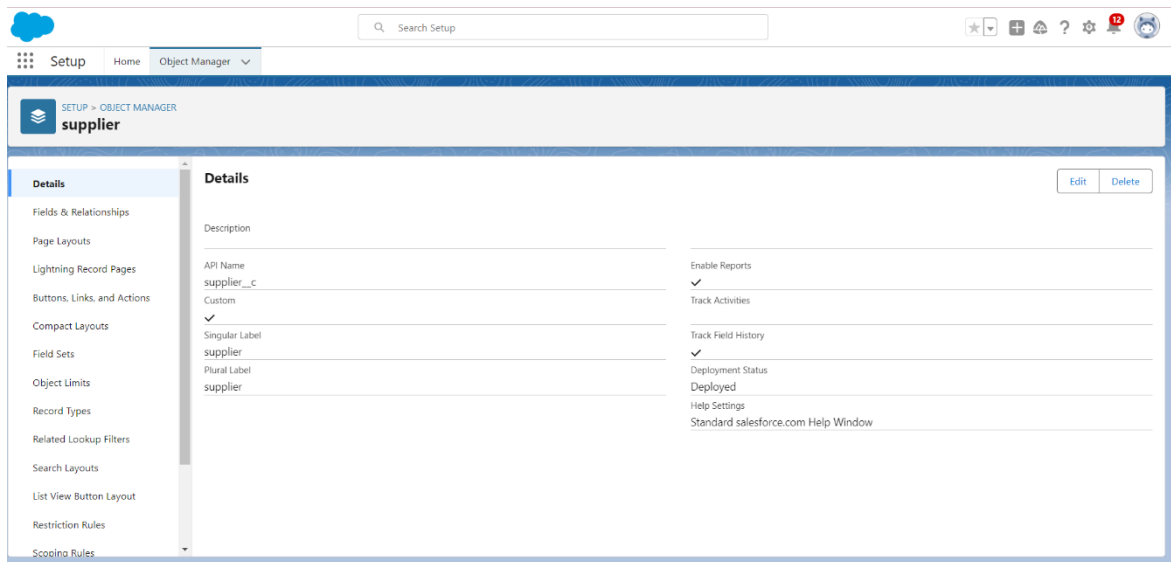
2.1.1 Consumer object



2.1.2 Rice details object



2.1.3 Rice mill object



2.1.4 Supplier object

2.2 Tabs

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

Types of Tabs:

Custom Tabs

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

Web Tabs

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

Visualforce Tabs

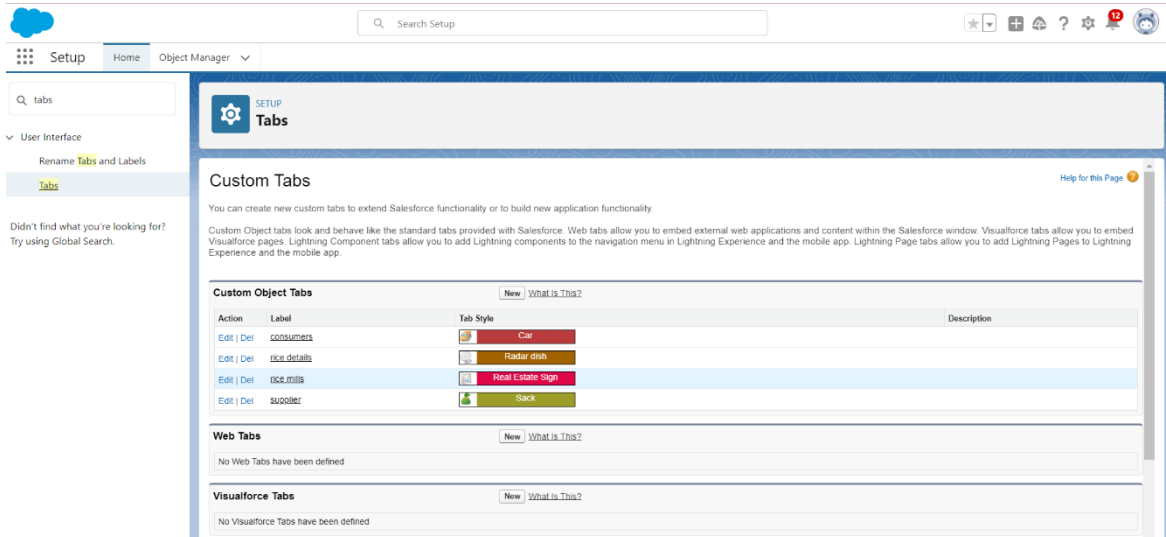
Visualforce Tabs are custom tabs that display a Visualforce page. Visualforce tabs look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

Lightning Component Tabs

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

Lightning Page Tabs

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

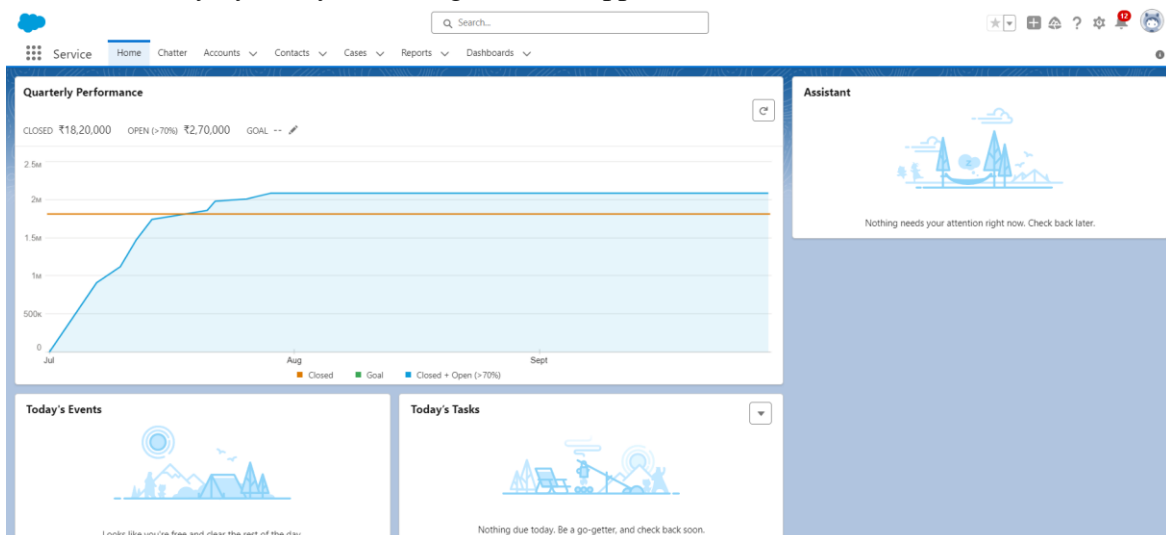


3.2.1 Tabs

2.3 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.



2.3.1 The lightning app

2.4 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

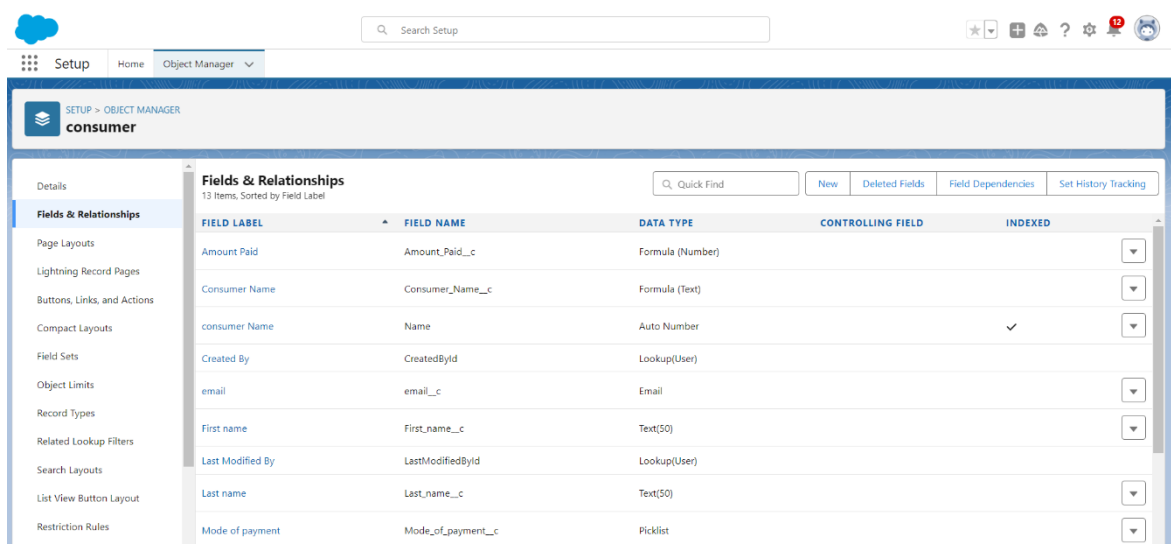
Standard Fields:

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,

1. Created By
2. Owner
3. Last Modified
4. 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 organizer 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.



The screenshot shows the Salesforce Setup interface. The left sidebar contains a navigation menu with options like Setup, Home, and Object Manager. The main content area is titled 'FIELDS & RELATIONSHIPS' for the 'consumer' object. It displays a table of fields with columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The table lists various fields such as Amount Paid, Consumer Name, consumer Name, Created By, email, First name, Last Modified By, Last name, and Mode of payment.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount Paid	Amount_Paid__c	Formula (Number)		
Consumer Name	Consumer_Name__c	Formula (Text)		
consumer Name	Name	Auto Number		✓
Created By	CreatedById	Lookup(User)		
email	email__c	Email		
First name	First_name__c	Text(50)		
Last Modified By	LastModifiedById	Lookup(User)		
Last name	Last_name__c	Text(50)		
Mode of payment	Mode_of_payment__c	Picklist		

2.4.1 Consumer fields

Setup > OBJECT MANAGER
rice details

Details

Fields & Relationships
6 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
rice details Name	Name	Auto Number		✓
rice distributed	rice_distributed__c	Number(5, 0)		
rice mill 1	rice_mill_1__c	Master-Detail(rice mill)		✓
supplier Name	supplier_Name__c	Master-Detail(supplier)		✓

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

2.4.2 Rice details fields

Setup > OBJECT MANAGER
rice mill

Details

Fields & Relationships
7 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User, Group)		✓
rice distributed to shops	rice_distributed_to_shops__c	Roll-Up Summary (SUM rice details)		
rice mill Name	Name	Auto Number		✓
rice price/kg	rice_price_kg__c	Number(5, 0)		
rice taken	rice_taken__c	Roll-Up Summary (SUM consumer)		

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

2.4.3 Rice mill fields

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
rice distributed to shops	rice_distributed_to_shops__c	Roll-Up Summary (SUM rice details)		
rice taken	rice_taken__c	Roll-Up Summary (SUM rice details)		
sum of rice distributed	sum_of_rice_distributed__c	Roll-Up Summary (SUM rice details)		
supplier Name	supplier_Name__c	Number(5, 0)		
supplier Name	Name	Text(80)		✓

2.4.4 Supplier fields

consumer Validation Rule

Back to consumer

Validation Rule Detail

Rule Name: Phonenumoremailbankrule Edit Clone

Active: ☒

Error Condition Formula: OR(ISBLANK(Phone_number__c), ISBLANK(email__c))

Error Location: Top of Page

Error Message: please fill in your phone number

Description: phone number and email number should not be blank

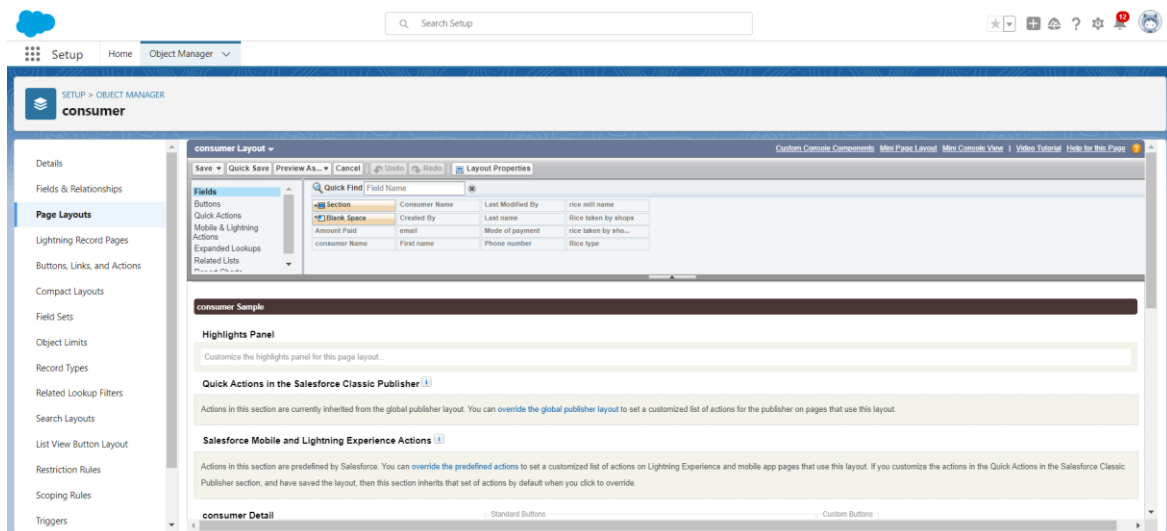
Created By: Hani Prashanth 03/08/2024, 10:48 am Edit Clone

Modified By: Hani Prashanth 03/08/2024, 10:48 am

2.4.5 Consumer validation rule

2.5 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.



2.5.1 Consumer page layout

2.6 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.

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.

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The profile name is 'owner'. The page displays the profile's details and the page layouts assigned to it.

Profile Detail

Name	owner	Custom Profile	✓
User License	Salesforce		
Description			
Created By	Harj Preeth	Modified By	Harj Preeth
	03/08/2024, 11:04 am		03/08/2024, 11:06 am

Page Layouts

Standard Object Layouts	Global	Location Group Assignment	Location Group Assignment Layout
Global	Global Layout (View Assignment)		
Email Application	Not Assigned (View Assignment)	Macro	Macro Layout (View Assignment)
Home Page Layout	DE Default (View Assignment)	Object Milestone	Object Milestone Layout (View Assignment)
Account	Account Layout (View Assignment)	Operating Hours	Operating Hours Layout (View Assignment)
Alternative Payment Method	Alternative Payment Method Layout (View Assignment)	Opportunity	Opportunity Layout (View Assignment)
Appointment Invitation	Appointment Invitation Layout (View Assignment)	Opportunity Product	Opportunity Product Layout (View Assignment)
Asset	Asset Layout (View Assignment)	Order	Order Layout (View Assignment)

2.6.1 Owner profile

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The profile name is 'employer'. The page displays the profile's details and the page layouts assigned to it.

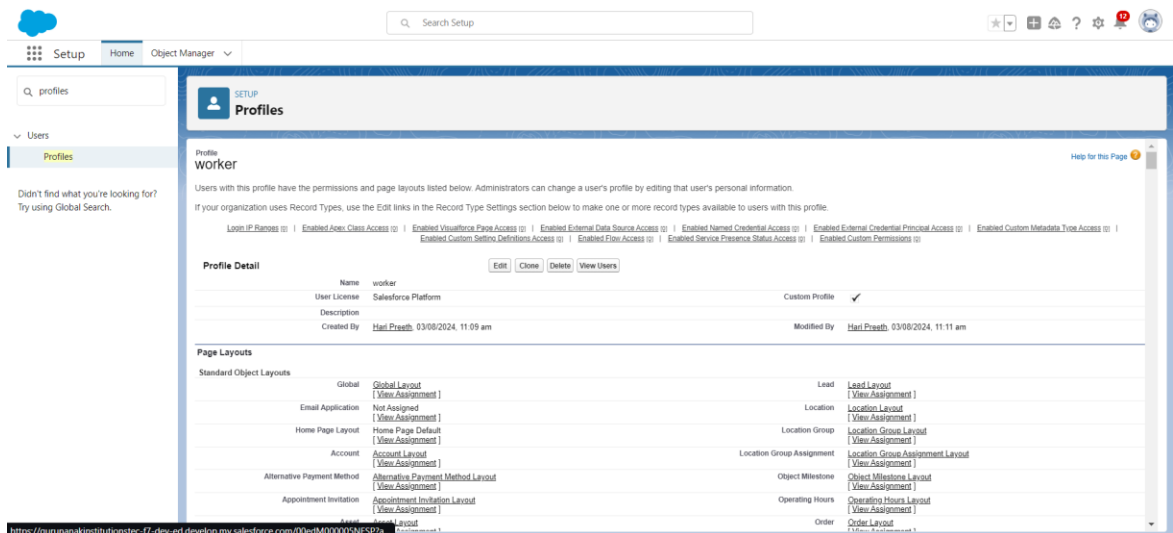
Profile Detail

Name	employer	Custom Profile	✓
User License	Salesforce Platform		
Description			
Created By	Harj Preeth	Modified By	Harj Preeth
	03/08/2024, 11:07 am		03/08/2024, 11:09 am

Page Layouts

Standard Object Layouts	Global	Lead	Lead Layout
Global	Global Layout (View Assignment)		
Email Application	Not Assigned (View Assignment)	Location	Location Layout (View Assignment)
Home Page Layout	Home Page Default (View Assignment)	Location Group	Location Group Layout (View Assignment)
Account	Account Layout (View Assignment)	Location Group Assignment	Location Group Assignment Layout (View Assignment)
Alternative Payment Method	Alternative Payment Method Layout (View Assignment)	Object Milestone	Object Milestone Layout (View Assignment)
Appointment Invitation	Appointment Invitation Layout (View Assignment)	Operating Hours	Operating Hours Layout (View Assignment)
Asset	Asset Layout (View Assignment)	Order	Order Layout (View Assignment)

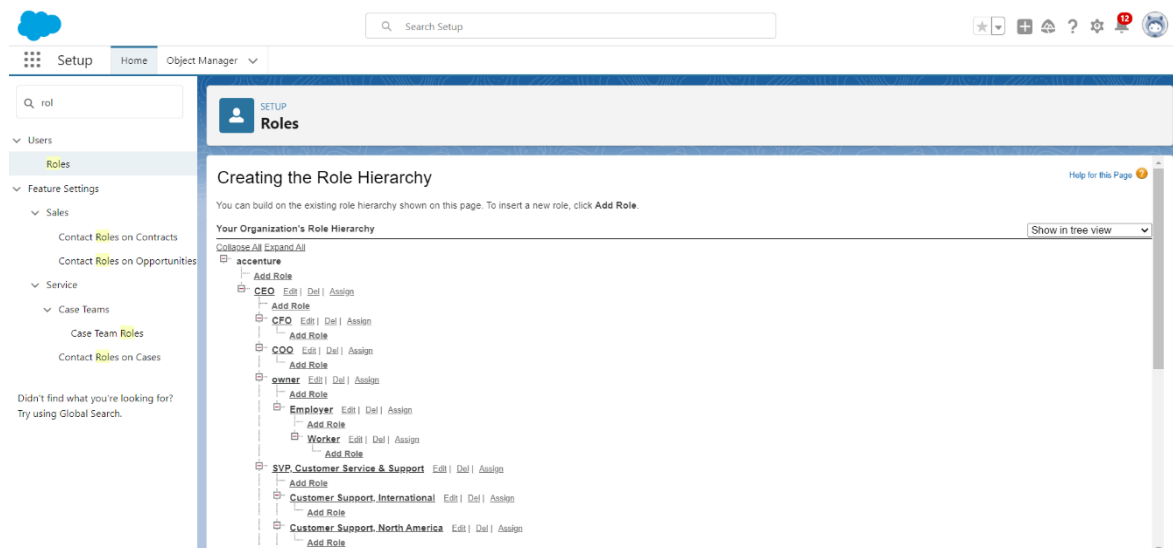
2.6.2 Employer profile



2.6.3 Worker profile

2.7 Roles and Role Hierarchy

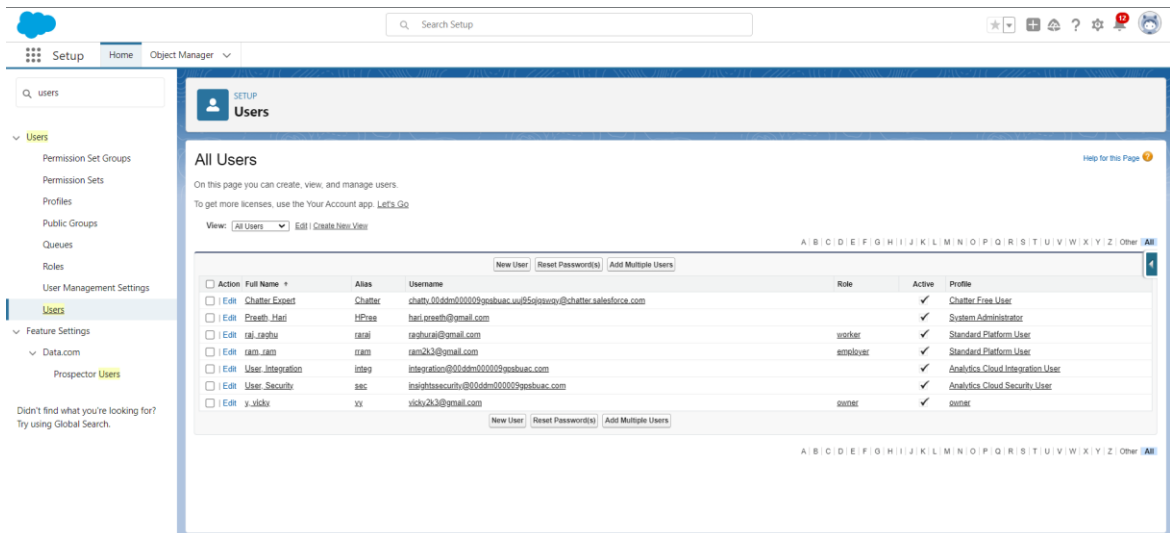
A role in Salesforce defines a user's visibility access at the record level. Roles may be used to specify the types of access that people in your Salesforce organization can have to data. Simply put, it describes what a user could see within the Salesforce organization.



2.7.1 Roles and role hierarchy

2.8 User

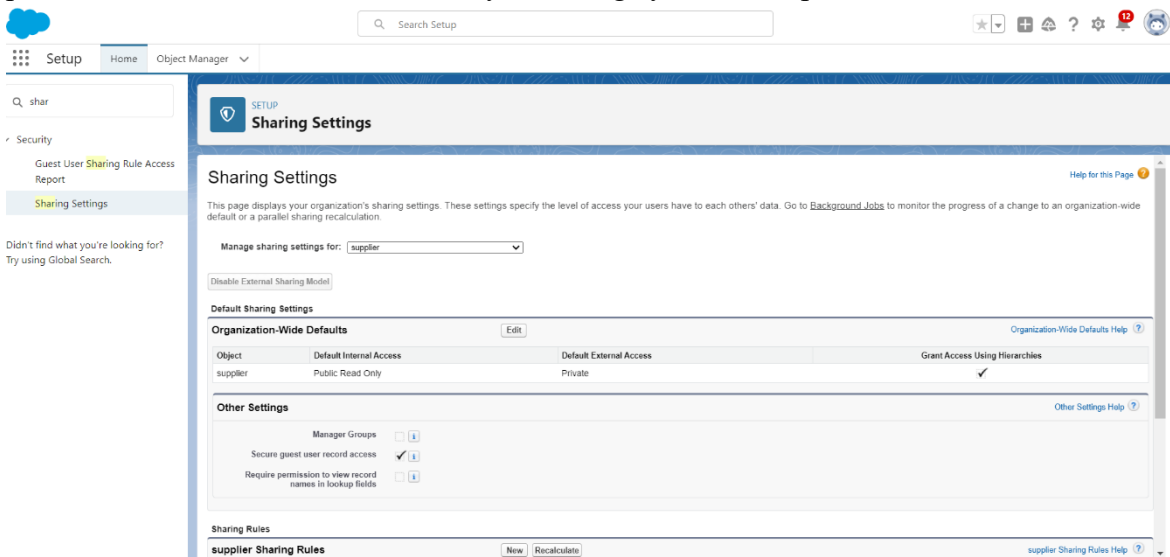
A user is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account. The user account identifies the user, and the user account settings determine what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



2.8.1 User

2.9 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.



2.9.1 sharing settings

2.10 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.

In Salesforce.com we can easily generate reports in different styles. And can create reports in a very short time and also schedule the reports. Salesforce provides a powerful suit of analytic tools to help you organize, view and analyse your data

Types of Reports in Salesforce

1. Tabular
2. Summary
3. Matrix
4. Joined Reports

1. **Tabular Reports:** Simple listing of data without any subtotals. This type of reports provide you most basically to look at your data. Use tabular reports when you want a simple list or a list of items with a grand total.

Example: This type of reports are used to list all accounts, List of contacts, List of opportunities.....etc.....

2. **Summary Reports:** This type of reports provides a listing of data with groupings and sub totals. Use summary reports when you want subtotals based on the value of a particular field or when you want to create a hierarchically grouped report, such as sales organized by year and then by quarter.

Example: All opportunities for your team sub totalled by Sales Stage and Owner.

3. **Matrix Reports:** This type of reports allows you to group records both by row and by column. A comparison of related totals, with totals by both row and column. Use matrix reports when you want to see data by two different dimensions that aren't related, such as date and product.

Example: Summarize opportunities by month vertically and by account horizontally.

4. **Joined Reports:** Blocks of related information in a single report. This type of reports enable you to adopt five different blocks to display different types of related data. Each block can own unique columns, summary fields, formulas, filters and sort order. Use joined reports to group and show data from multiple report types in different views.

Example: You can build a report to show opportunity, case and activity data for your accounts.

Rice taken by shops	consumer: consumer Name	Rice type	rice price/kg	Mode of payment	Amount Paid
(1)	consumers-001	normal rice	200	UPI	0.00
Subtotal			200		0.00
10 (2)	consumers-008	normal rice	150	UPI	1,500.00
	consumers-009	basmati	75	Debit card	750.00
Subtotal			225		2,250.00
15 (1)	consumers-010	normal rice	95	Net banking	1,425.00
Subtotal			95		1,425.00
20 (1)	consumers-007	basmati	160	Credit card	3,200.00
Subtotal			160		3,200.00
25 (1)	consumers-006	normal rice	85	Cash	2,125.00
Subtotal			85		2,125.00
50 (1)	consumers-005	normal rice	200	Net banking	10,000.00
Subtotal			200		10,000.00
400 (1)	consumers-004	basmati	90	Debit card	36,000.00
Subtotal			90		36,000.00
600 (1)	consumers-002	basmati	150	UPI	90,000.00
Subtotal			150		90,000.00
700 (1)	consumers-003	basmati	160	Debit card	1,12,000.00
Subtotal			160		1,12,000.00
Grand Total					

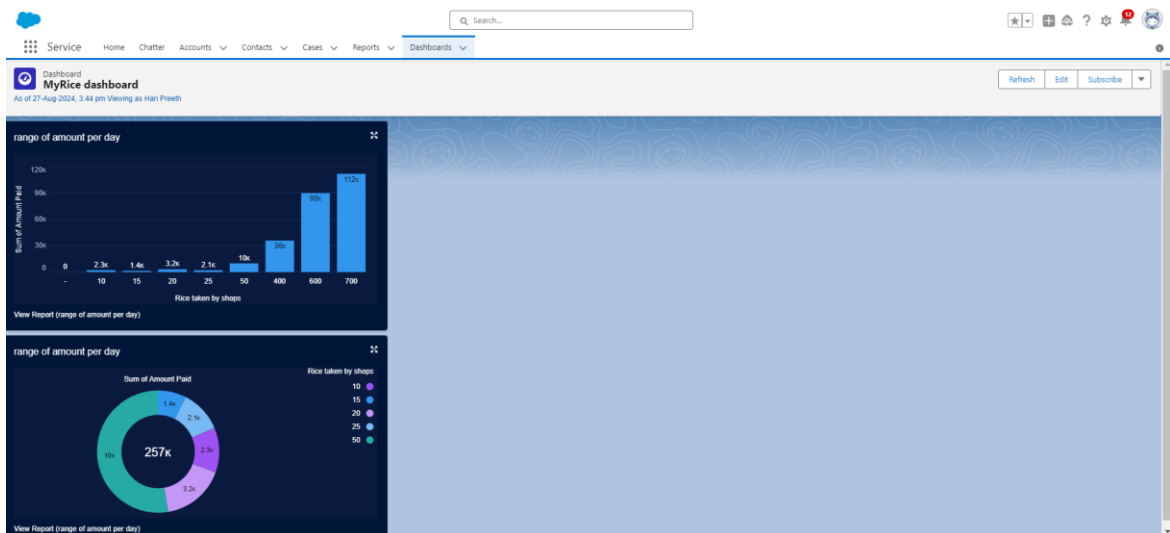
2.10.1 Reports

REPORTS	Name	Created By	Created On	Last Modified By	Last Modified Date
Recent	Einstein Bot Reports	Automated Process	2/8/2024, 9:47 pm	Automated Process	2/8/2024, 9:47 pm
Created by Me	Einstein Bot Reports Spring '23	Automated Process	2/8/2024, 9:47 pm	Automated Process	2/8/2024, 9:47 pm
Private Reports	Einstein Bot Reports Summer '23	Automated Process	2/8/2024, 9:47 pm	Automated Process	2/8/2024, 9:47 pm
Public Reports	Einstein Bot Reports Winter '23	Automated Process	2/8/2024, 9:47 pm	Automated Process	2/8/2024, 9:47 pm
All Reports	Enablement Dashboard Reports Spring '24	Automated Process	2/8/2024, 9:47 pm	Automated Process	2/8/2024, 9:47 pm
FOLDERS	Enablement Dashboard Reports Summer '24	Automated Process	2/8/2024, 9:47 pm	Automated Process	2/8/2024, 9:47 pm
All Folders	estimated rice per day	Hari Preeth	3/8/2024, 12:20 pm	Hari Preeth	3/8/2024, 12:20 pm

2.10.1 Reports Folder creation

2.11 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.



2.11.1 Dashboards

3. CONCLUSION AND FUTURE WORK

The Rice Mill CRM Application is poised to revolutionize the operational efficiency and customer relationship management within rice mill factories. By integrating advanced reporting capabilities, automated data summarization, cross-object calculations, and stringent validation rules, this application addresses the unique challenges faced by rice mill owners. It ensures accurate, real-time insights into daily production, sales, and revenue, facilitating informed decision-making and strategic planning.

Moreover, the application's user-friendly interface and tailored permission settings provide secure and role-based access to critical data, enhancing transparency and accountability within the organization. As a comprehensive solution, the Rice Mill CRM Application not only streamlines operations but also significantly improves resource allocation, customer satisfaction, and overall business performance.

In summary, the Rice Mill CRM Application is an essential tool for rice mill factories, designed to meet their specific needs and drive sustainable growth and success in a competitive industry.