

# A CRM APPLICATION FOR WHOLESALE RICE MILL

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 rice 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. Isblank 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.

# Introduction to Salesforce

**Salesforce is a comprehensive customer success platform that helps you manage sales, service, marketing, analytics, and customer engagement. With its suite of tools and features, Salesforce empowers you to run your business from anywhere, streamline relationship management with prospects and customers, foster collaboration with employees and partners, and securely store your data in the cloud. Designed to meet the needs of businesses of all sizes, Salesforce provides the flexibility and capabilities to enhance your operations and customer interactions.**

## Task -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:

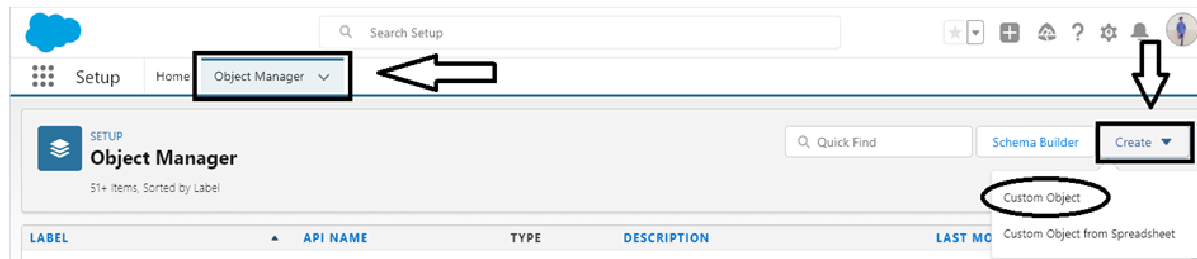
1. **Standard Objects:** Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.
2. **Custom Objects:** Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization.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

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 Supplier Object

To create an object:

1. From the setup page >> Click on Object Manager>> Click on Create>>Click on Custom Object.
1. Enter the label name>>supplier

2. Plural label name>>supplier
3. Enter Record Name Label and Format
  - Record Name >> supplier Name
  - Data Type>>Text

Click on Allow reports and Track Field History and allow search Save.

The screenshot shows the Salesforce Setup interface for creating a new custom object. The browser address bar indicates the URL: `sandboxcom-15f-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/new`. The page title is "New Custom Object".

**Custom Object Information**

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

Label:  Example: Account

Plural Label:  Example: Accounts

Starts with vowel sound: ☐

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

Object Name:  Example: Account

Description:

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

Content Name:

**Enter Record Name Label and Format**

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

Record Name:  Example: Account Name

Data Type:  Warning: If you plan to insert a high volume of records in this object, via the API for example, use the Text data type.


Display Format:  Example: A-{0000} [What Is This?](#)

Starting Number:








## Create Rice mill Object

To create an object:

1. From the setup page >> Click on Object Manager>>Click on Create >> Click on Custom Object.
1. Enter the label name>>rice mill
2. Plural label name>> rice mills
3. Enter Record Name Label and Format
  - Record Name >>
  - Data Type >> Auto Number
  - Display Format >> rice-{000}
  - Starting number >> 1
2. Click on Allow reports and Track Field History, Allow Search and Save.



Search Setup



SetupHomeObject Manager

SETUP > OBJECT MANAGER

rice mill

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Details

EditDelete

Description

API Name

rice\_mill\_\_c

Custom

✓

Singular Label

rice mill

Plural Label

rice mills

Enable Reports

✓

Track Activities

Track Field History

✓


Deployment Status

Deployed








Help Settings

Standard salesforce.com Help Window

## consumer Objects



Search Setup



SetupHomeObject Manager

SETUP > OBJECT MANAGER

consumer

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Details

EditDelete

Description

API Name

consumer\_\_c

Custom

✓

Singular Label

consumer

Plural Label

consumers

Enable Reports

✓

Track Activities

Track Field History

✓

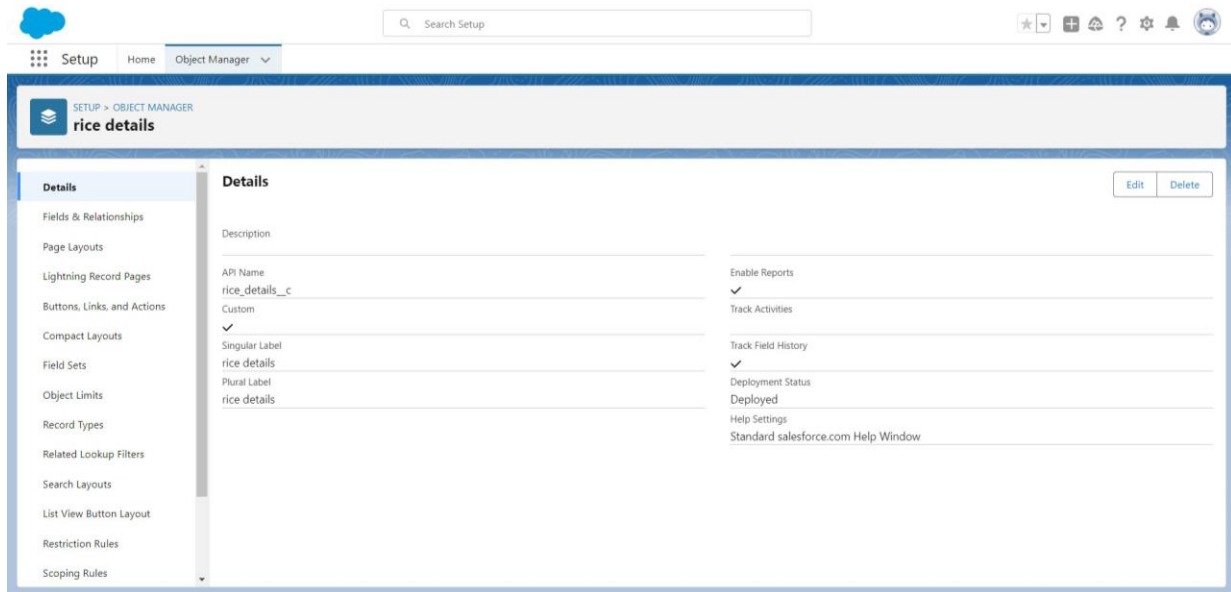
Deployment Status

Deployed

Help Settings

Standard salesforce.com Help Window

# Create rice details Objects



## Task-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

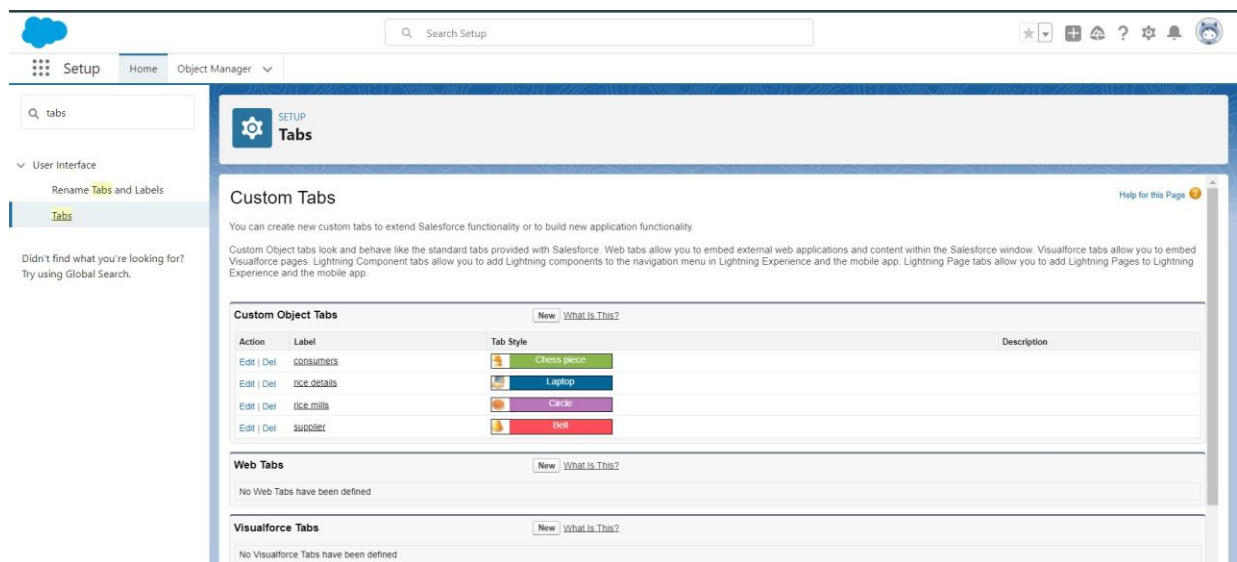
Visualforce Tabs are custom tabs that display a Visualforce page. Visualforce tabs look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

## 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.

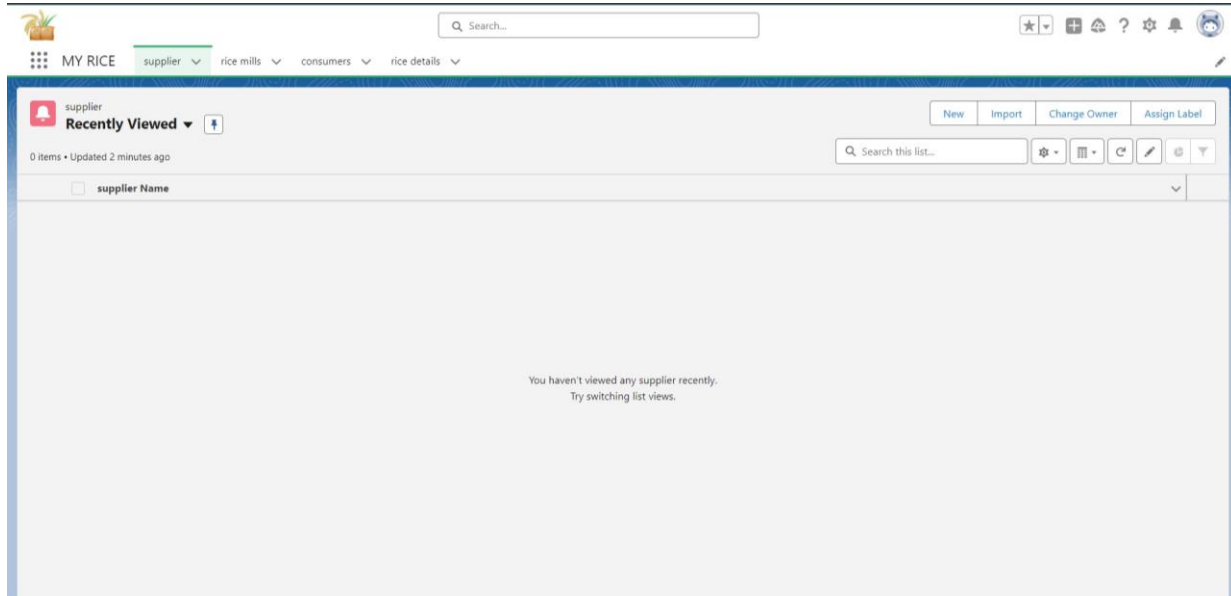


## Task-3 The Lightning App

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.



## Task-3 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.

## Creating the number field in rice details object

fields and relationship : in rice detail

FIELDS AND RELATIONSHIP:SUPPLIER:

The screenshot shows the Salesforce Setup interface for the 'rice details' object. The left sidebar contains a navigation menu with options like 'Details', 'Fields & Relationships', 'Page Layouts', 'Lightning Record Pages', 'Buttons, Links, and Actions', 'Compact Layouts', 'Field Sets', 'Object Limits', 'Record Types', 'Related Lookup Filters', 'Search Layouts', 'List View Button Layout', and 'Restriction Rules'. The main content area is titled 'Fields & Relationships' and displays a table of fields for the 'rice details' object. The table has columns for 'FIELD LABEL', 'FIELD NAME', 'DATA TYPE', 'CONTROLLING FIELD', and 'INDEXED'. The fields listed are 'Created By', 'Last Modified By', 'rice details Name', 'rice distributed', 'rice mill 1(one)', and 'supplier Name'. The 'rice details Name' field is highlighted in blue, indicating it is the selected field.

| 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(one)  | rice_mill__c        | Master-Detail(rice mill) |                   | ✓       |
| supplier Name     | supplier__c         | Master-Detail(supplier)  |                   | ✓       |

Setup

Home

Object Manager

Search Setup

Star

Grid

Refresh

Help

Settings

Notifications

User

Setup > OBJECT MANAGER

supplier

Details

Fields & Relationships

5 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)                 |                   | ✓       |
| sum of rice distributed | sum_of_rice_distributed__c | Roll-Up Summary (SUM rice details) |                   |         |
| supplier Name           | Name                       | Text(80)                           |                   | ✓       |

field and relationship in consumer:

fields and relationship in rill mill:

Setup

Home

Object Manager

Search Setup

Star

Grid

Refresh

Help

Settings

Notifications

User

Setup > OBJECT MANAGER

consumer

Details

Fields & Relationships

13 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

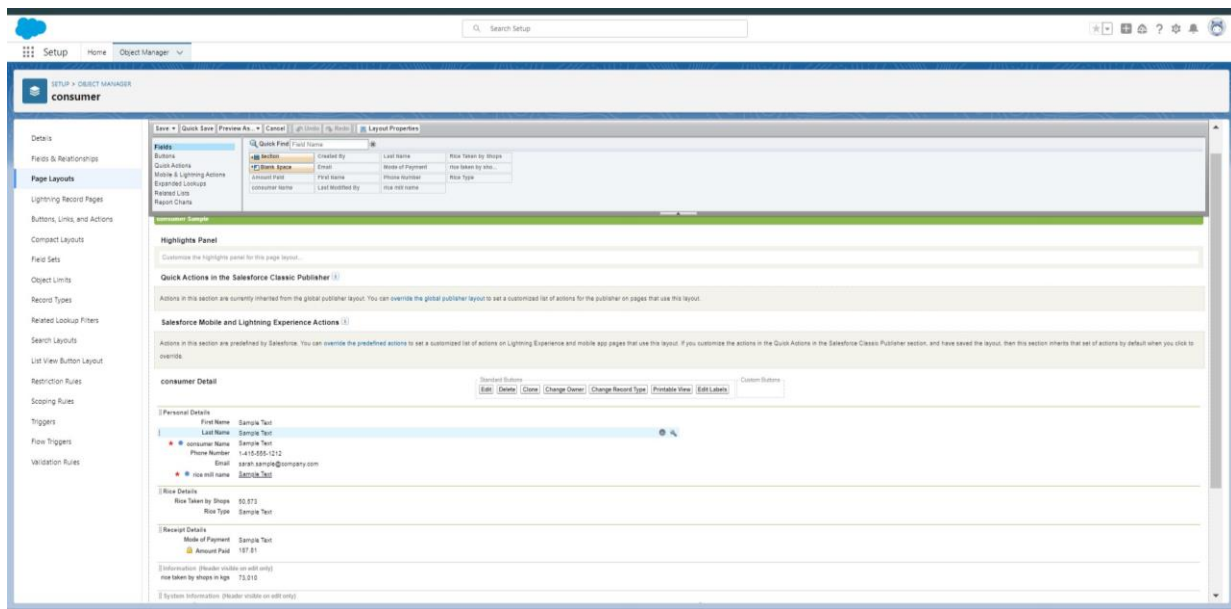
| FIELD LABEL                | FIELD NAME                    | DATA TYPE                | CONTROLLING FIELD | INDEXED |
|----------------------------|-------------------------------|--------------------------|-------------------|---------|
| Amount Paid                | Amount_Paid__c                | Formula (Number)         |                   |         |
| consumer Name              | Name                          | Text(80)                 |                   | ✓       |
| 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                 |                   |         |
| Phone Number               | Phone_Number__c               | Phone                    |                   |         |
| rice mill name             | rice_mill_name__c             | Master-Detail(rice mill) |                   | ✓       |
| Rice Taken by Shops        | Rice_Taken_by_Shops__c        | Number(5, 0)             |                   |         |
| rice taken by shops in kgs | rice_taken_by_shops_in_kgs__c | Number(18, 0)            |                   |         |
| Rice Type                  | Rice_Type__c                  | Picklist                 |                   |         |

The screenshot shows the Salesforce Setup interface. At the top, there's a navigation bar with 'Setup', 'Home', and 'Object Manager'. Below this, the breadcrumb trail reads 'SETUP > OBJECT MANAGER' and 'rice details'. The left sidebar contains a list of setup options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The main content area is titled 'Fields & Relationships' and shows a table of 6 items, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The items listed are 'Created By', 'Last Modified By', 'rice details Name', 'rice distributed', 'rice mill 1(one)', and 'supplier Name'.

| 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(one)  | rice_mill__c        | Master-Detail(rice mill) |                   | ✓       |
| supplier Name     | supplier__c         | Master-Detail(supplier)  |                   | ✓       |

## Task-4 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.



## Task-5 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.

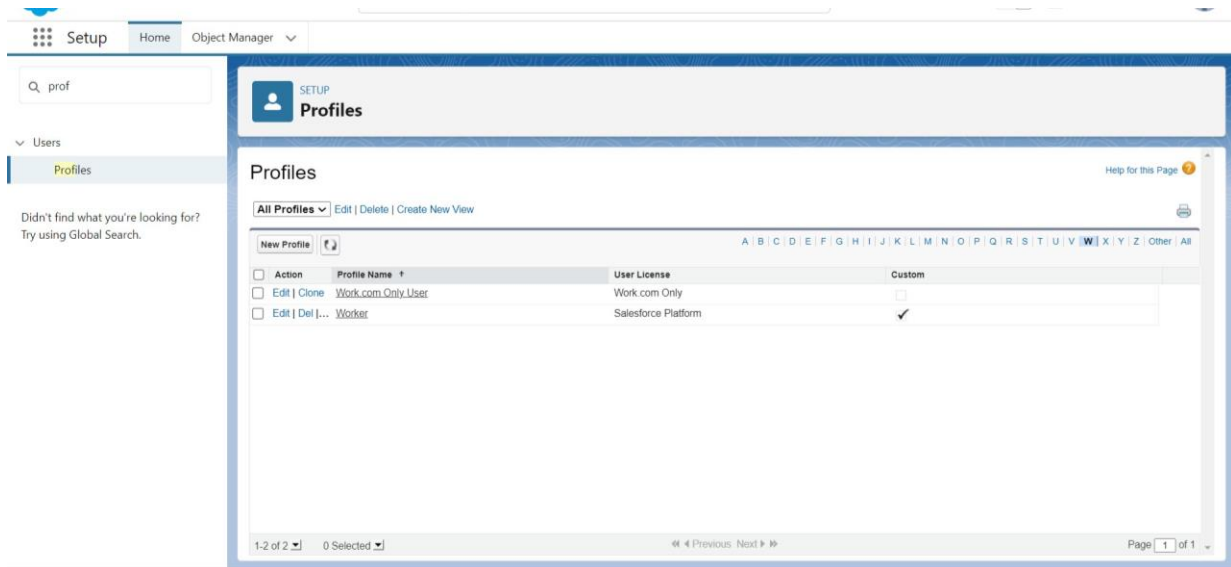
We cannot deleted standard ones

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

## 2. Custom Profiles:

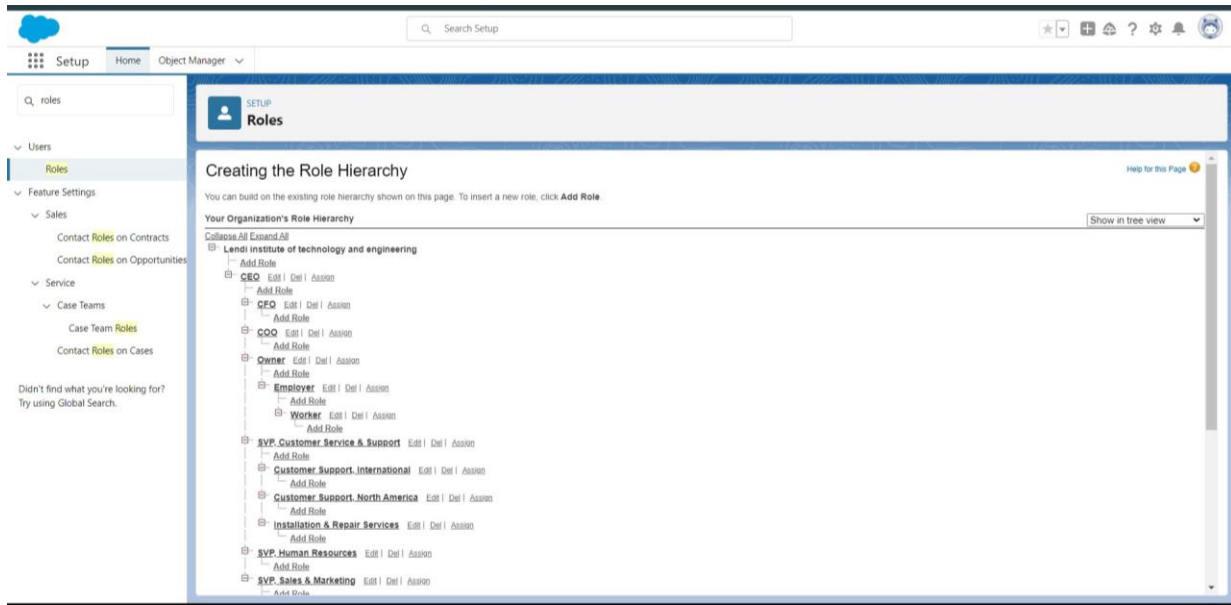
Custom ones defined by us.

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



## Task-6 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.



## Task-7 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.

Setup

Home

Object Manager

users

Users

All Users

On this page you can create, view, and manage users.

To get more licenses, use the Your Account app. [Let's Go](#)

View: All Users

Edit

Create New User

New User

Reset Password(s)

Add Multiple Users

| Action                        | Full Name               | Alias   | Username  | Role | Active | Profile                                 |
|-------------------------------|-------------------------|---------|---|------|--------|---|
| <input type="checkbox"/> Edit | Chatter Expert          | Chatter | chatter_00d8000009c67mua0.zf68bexdda@chatter.salesforce.com |      | ✓      | Chatter Free User                       |
| <input type="checkbox"/> Edit | B. Ram                  | rr      | 21tdt11510@tendl.org  |      | ✓      | Force.com - Free User                   |
| <input type="checkbox"/> Edit | Raj. Raju               | raj     | 21tdt11525@tendl.org  |      | ✓      | Force.com - Free User                   |
| <input type="checkbox"/> Edit | Sneha.Iatha.reddy_Rikka | RSneha  | snehareddyrikka@gmail.com                                   |      | ✓      | System Administrator                    |
| <input type="checkbox"/> Edit | User Integration        | integ   | integration@00d8000009c67mua0.com                           |      | ✓      | Analytics Cloud Integration User        |
| <input type="checkbox"/> Edit | User Security           | ssc     | insightsscurity@00d8000009c67mua0.com                       |      | ✓      | Analytics Cloud Security User           |
| <input type="checkbox"/> Edit | Y_vickay                | yx      | 21tdt11501@tendl.org  |      | ✓      | Salesforce API Only System Integrations |

New User

Reset Password(s)

Add Multiple Users

## Task-8 Report:

MY RICE

suppliers

consumers

rice mills

rice details

Reports

Search...

Star

Plus

Cloud

Help

Settings

12

Avatar

consumers

Recently Viewed

10 items • Updated a few seconds ago

New

Import

Assign Label

Settings

Table

Copy

Edit

Refresh

Filter

|    | consumer Name                          |  |
|----|--|--|
| 1  | <input type="checkbox"/> consumers-010 |  |
| 2  | <input type="checkbox"/> consumers-009 |  |
| 3  | <input type="checkbox"/> consumers-008 |  |
| 4  | <input type="checkbox"/> consumers-007 |  |
| 5  | <input type="checkbox"/> consumers-006 |  |
| 6  | <input type="checkbox"/> consumers-005 |  |
| 7  | <input type="checkbox"/> consumers-004 |  |
| 8  | <input type="checkbox"/> consumers-003 |  |
| 9  | <input type="checkbox"/> consumers-002 |  |
| 10 | <input type="checkbox"/> consumers-001 |  |



Report: rice mills with consumers

Range of Amount per Day

Enable Field Editing

Q

Add Chart

▼

↺

Edit ▼

Total Records

Total rice price/kg

Total Amount Paid

10

21

22,633.00

| <input type="checkbox"/> rice distributed to shops ▼ | consumer: ID ▼   | Rice Type ▼ | rice price/kg ▼ | Mode of Payment ▼ | Amount Paid ▼ |
|--|------------------|-------------|-----------------|-------------------|---------------|
| <input type="checkbox"/> 0 (10)                      | a02d6.000004B4td | Normal Rice | 11              | UPI               | 11.00         |
|  | a02d6.000004B6wq | Basmati     | 10              | UPI               | 2,500.00      |
|  | a02d6.000004B9C3 | Basmati     | 11              | Debit Card        | 22.00         |
|  | a02d6.000004B95K | Normal Rice | 11              | Net Banking       | 2,750.00      |
|  | a02d6.000004B8KT | Normal Rice | 11              | Net Banking       | 3,850.00      |
|  | a02d6.000004BCTO | Normal Rice | 10              | Credit Card       | 2,500.00      |
|  | a02d6.000004BDJ0 | Normal Rice | 10              | Debit Card        | 2,500.00      |
|  | a02d6.000004BEwb | Normal Rice | 10              | UPI               | 3,500.00      |
|  | a02d6.000004BFnp | Normal Rice | 10              | Net Banking       | 2,500.00      |
|  | a02d6.000004BGrx | Basmati     | 10              | Credit Card       | 2,500.00      |
| Subtotal   |                  |             | 21              |                   | 22,633.00     |
| Total (10)   |                  |             | 21              |                   | 22,633.00     |

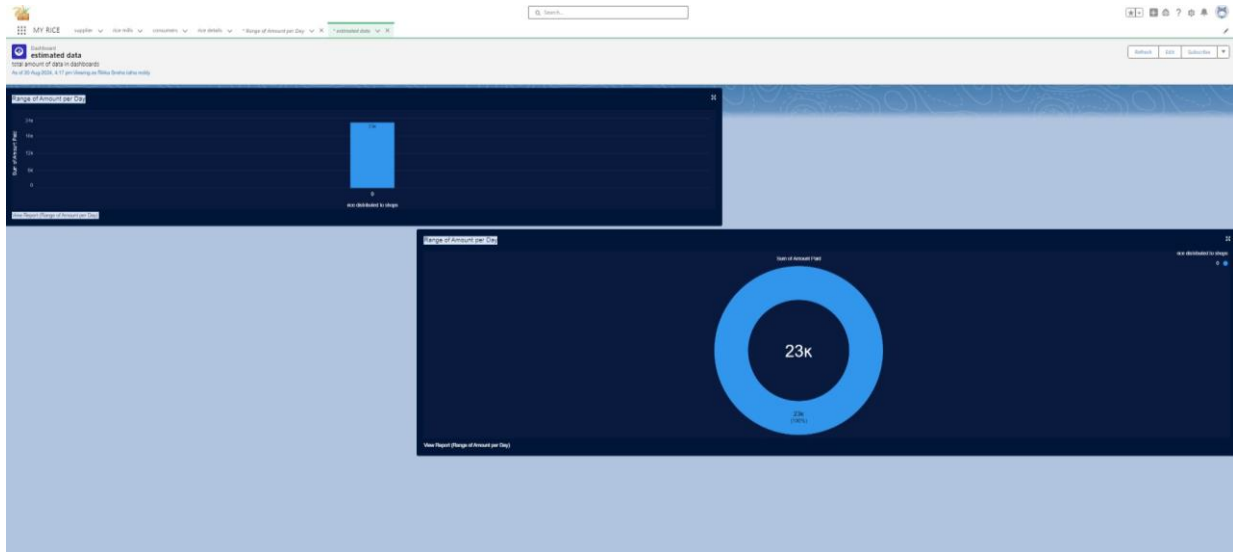
## Task-9 Dashboards

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,

r



Leading, and sharing dashboards, review these dashboard basics.

## Task-10 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.

It is as similar as java i.e, it also supports OOP( Object oriented programming) like Classes, objects, methods.

### **Creating Classes :**

Apex classes are modeled on their counterparts in Java. You'll define, instantiate, and extend classes, and you'll work with interfaces, Apex class versions, properties, and other related class concepts.

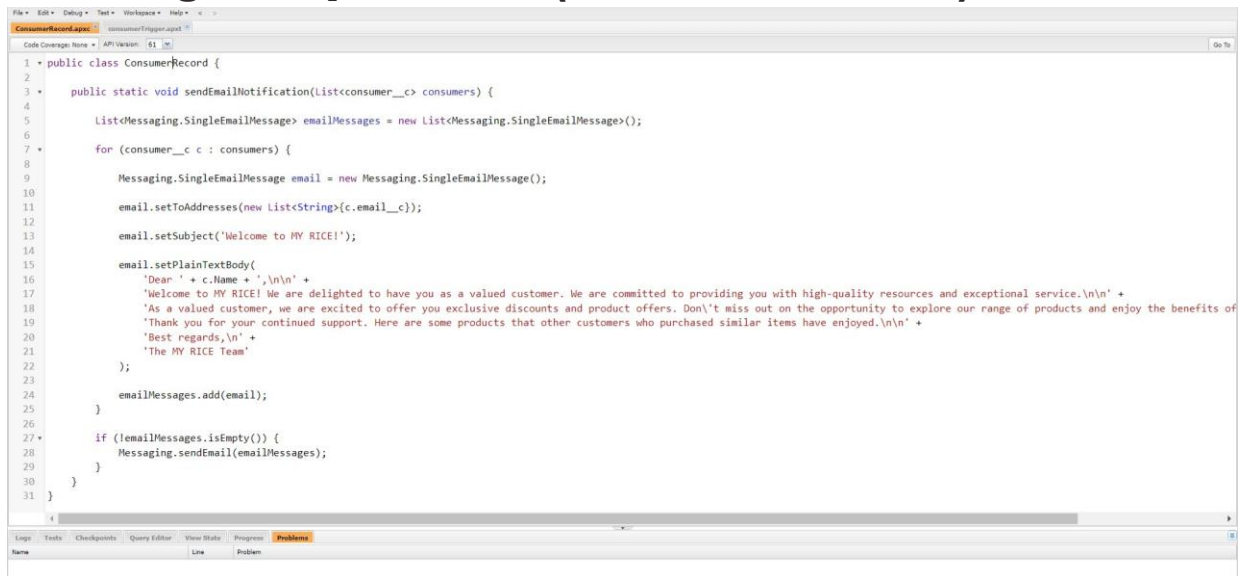
- **Class:**

As in Java, you can create classes in Apex. A class is a template or blueprint from which objects are created. An object is an instance of a class.

- **Object**

Object is an instance of a class, where it can access all the properties that are present in a class i.e, variables and methods.

## Creating an Apex Class(ConsumerRecord)



```
1 public class ConsumerRecord {
2
3     public static void sendEmailNotification(List<consumer__c> consumers) {
4
5         List<Messaging.SingleEmailMessage> emailMessages = new List<Messaging.SingleEmailMessage>();
6
7         for (consumer__c c : consumers) {
8
9             Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
10
11             email.setToAddresses(new List<String>{c.email__c});
12
13             email.setSubject('Welcome to MY RICE!');
14
15             email.setPlainTextBody(
16                 'Dear ' + c.Name + ',\n\n' +
17                 'Welcome to MY RICE! We are delighted to have you as a valued customer. We are committed to providing you with high-quality resources and exceptional service.\n\n' +
18                 'As a valued customer, we are excited to offer you exclusive discounts and product offers. Don\'t miss out on the opportunity to explore our range of products and enjoy the benefits of\n\n' +
19                 'Thank you for your continued support. Here are some products that other customers who purchased similar items have enjoyed.\n\n' +
20                 'Best regards,\n' +
21                 'The MY RICE Team'
22             );
23
24             emailMessages.add(email);
25         }
26
27         if (!emailMessages.isEmpty()) {
28             Messaging.sendEmail(emailMessages);
29         }
30     }
31 }
```

## Creating an Apex Trigger

