

# **A CRM APPLICATION FOR WHOLESALE RICE MILL**

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# **Project Abstract**

Title: Comprehensive CRM Application for Wholesale Rice Mill.

This project involves the development of a comprehensive Customer Relationship Management (CRM) application tailored for a wholesale rice mill using Salesforce. The primary goal was to create an integrated system that enhances operational efficiency, data management, and customer relations within the rice mill factory. The application features custom objects such as Consumers, Rice Mill, Rice Details, and Suppliers, each with its own dedicated tab for streamlined access. A custom Lightning App was designed to unify these components into a cohesive user experience, integrating various objects with relevant fields and page layouts. Profiles and role hierarchies were meticulously configured to establish clear access levels and permissions, ensuring that different user roles—from owners to workers—have appropriate visibility and control over the data. User accounts were created and assigned profiles, with permission sets used to extend access rights as needed, ensuring tailored access to specific functionalities. The application's reporting and dashboard capabilities deliver actionable insights into key metrics such as daily sales volumes, revenue, inventory levels, and customer purchasing patterns. These features facilitate real-time data analysis, aiding in strategic decision-making and operational planning. Custom Apex code was developed to address complex business logic, automate critical workflows, and manage sales transactions and inventory processes efficiently. Validation rules and cross-object formula fields were implemented to ensure data accuracy, with ISBLANK formulas enforcing mandatory field completion. This Salesforce CRM application thus provides a robust and scalable solution for managing the rice mill's operations, improving operational efficiency, and enhancing customer engagement, while also enabling comprehensive data analysis and reporting for strategic business growth. Additionally, the integration with external systems for data import and export was set up to facilitate seamless synchronization with existing databases and third-party applications. This ensures that the CRM system operates as a central hub for all business processes, providing a comprehensive view of operations and customer interactions. This Salesforce CRM application thus provides a robust and scalable solution for managing the rice mill's operations, improving operational efficiency, and enhancing customer engagement, while also enabling comprehensive data analysis and reporting for strategic business growth. Keywords: Salesforce, CRM Application, Custom Objects, Lightning App, Fields, Page Layouts, Profiles, Role Hierarchy, Permission Sets, Reports, Dashboards, Apex, Validation Rules

# INDEX PAGE

Topics		Page no.
Topic no 1	Introduction to Salesforce	04
Topic no 2	Objects	06
Topic no 3	Tabs	10
Topic no 4	The Lightning App	12
Topic no 5	Fields	14
Topic no 6	Page Layouts	22
Topic no 7	Profiles	24
Topic no 8	Role & Role Hierarchy	28
Topic no 9	Users	30
Topic no 10	Permission Sets	32
Topic no 11	Report	33
Topic no 12	Dashboards	37
Topic no 13	Apex	39

# Task 1: Introduction to Salesforce

## 1.1 Creating Developer Account

Creating a developer org in salesforce.

Go to <https://developer.salesforce.com/signup>

On the sign up form, enter the following details :

First name & Last name

Email

Role : Developer

Company : College Name

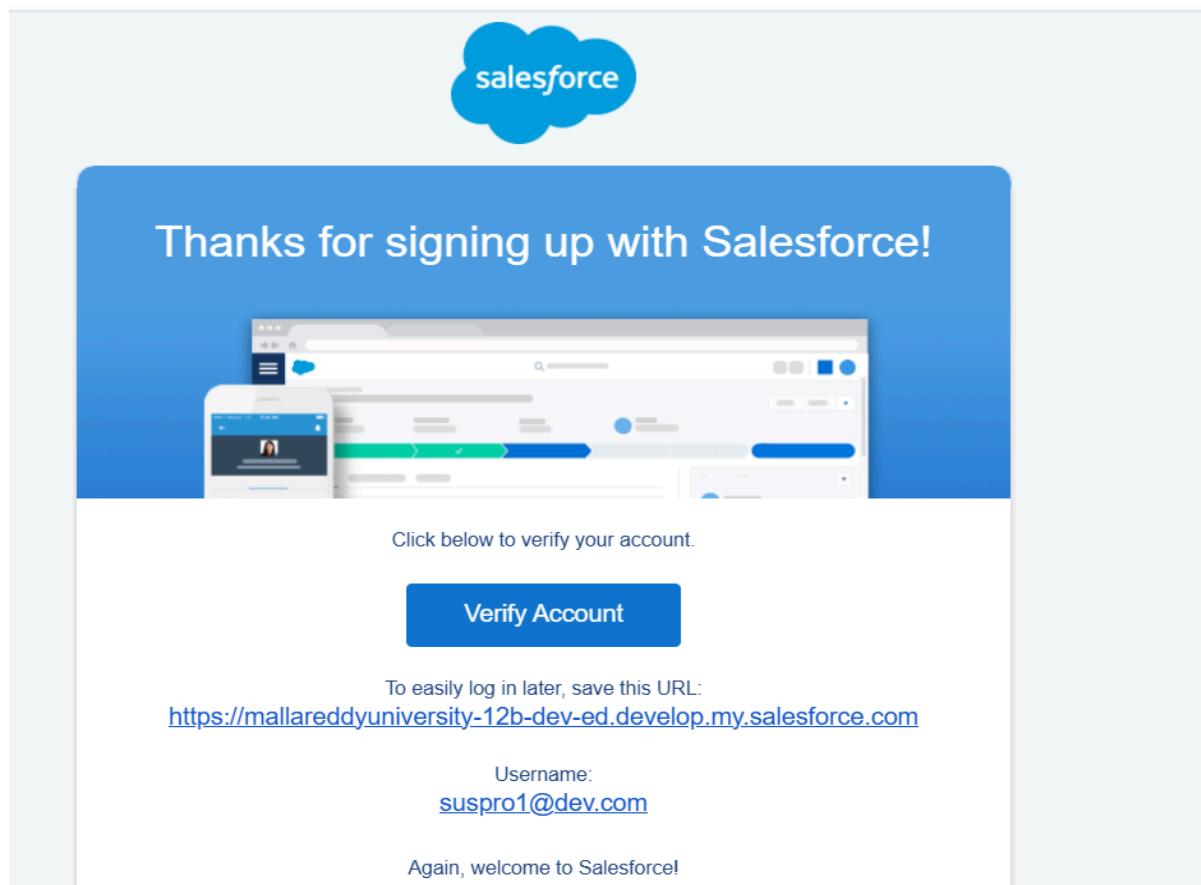
Country : India

Postal Code : pin code

Username : should be a combination of your name and company

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

Click on sign me up after filling these.



## **1.2. Account Activation**

Then you will redirect to your salesforce setup page.

## Task 2: Object

Salesforce objects are of two types:

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

**Custom Objects:** Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization. They are the heart of any application and provide a structure for sharing data.

To Navigate to Setup page:

Click on gear icon -click setup.

To create an object:

1. From the setup page - Click on Object Manager -Click on Create - Click on Custom Object.
2. On Custom object defining page:
3. Enter the label name, plural label name, click on Allow reports, Allow search.
4. Click onSave.

### 2.1. Create Supplier Object

To create an object:

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
1. Record Name >> supplier Name
2. Data Type>>Text

- a. Click on Allow reports and Track Field History and allow search
- b. Allow search >> Save.

SETUP > OBJECT MANAGER  
**supplier**

Fields & Relationships				
7 Items, Sorted by Field Label				
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 by shops in kgs	rice_taken_by_shops_in_kgs_c	Number(18, 0)		✓
sum of rice distributed	sum_of_rice_distributed_c	Roll-Up Summary (SUM rice details)		✓
supplier Name	Name	Text(80)		✓

## 2.2. Create Rice mill Object

To create an object:

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
  1. Record Name >>
  2. Data Type >> Auto Number
  3. Display Format >> rice-{000} • Starting number >> 1
    - o Click on Allow reports and Track Field History, Allow Search and Save.

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Setup, Home, and Object Manager. The main title is "SETUP > OBJECT MANAGER" followed by "rice mill". On the left, a sidebar lists various configuration options: Fields & Relationships, 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 right panel displays the "Details" section for the "rice mill" object. It contains fields for Description, API Name (set to "rice\_mill\_\_c"), Custom status (checked), Singular Label ("rice mill"), Plural Label ("rice mills"), and several checkboxes for reports and tracking. At the bottom right of the main window are "Edit" and "Delete" buttons.

## 2.3. Create consumer Objects

Note: Follow the same steps as mentioned in Activity 2 for the and Receipt objects.

1. Use these display format for the consumer
  1. label name >> consumer
  2. Plural label name >> consumers
  3. Display Format >> consumers-{000}
  4. Starting number >> 1

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Setup, Home, and Object Manager. The main title is "SETUP > OBJECT MANAGER" followed by "consumer". On the left, a sidebar lists various configuration options: 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, and Scrolling Rules. The right panel displays the "Details" section for the "consumer" object. It contains fields for Description, API Name (set to "CONSUMER\_\_C"), Custom status (checked), Singular Label ("consumer"), Plural Label ("consumers"), and several checkboxes for reports and tracking. At the bottom right of the main window are "Edit" and "Delete" buttons.

## Create rice details Objects

1. Use these display format for the rice details

1. label name >> rice details
2. Plural label name >> rice details
3. Display Format >> rice-{000}
4. Starting Number >>1

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Setup, Home, and Object Manager. The main title is "rice details". On the left, a sidebar lists various configuration tabs: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, and Scoping Rules. The "Details" tab is selected. The main content area displays the following fields:

Field	Value
Description	
API Name	rice_details_c
Custom	✓
Singular Label	rice details
Plural Label	rice details
Enable Reports	
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

The bottom of the screen shows the Windows taskbar with icons for File Explorer, Task View, Taskbar settings, and other applications. The system tray indicates a weather of 29°C and Haze.

## Task 3 : 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.

### 3.1. Creating a Custom Tab

1. To create a Tab:(supplier)
2. Go to setup page >> type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab)

3. Select Object(supplier) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
4. Make sure that the Append tab to users' existing personal customizations is checked. ● Click save.

The screenshot shows the Salesforce Setup interface under the 'User Interface' category, specifically the 'Tabs' section. The main heading is 'Custom Tabs'. Below it, there's a brief description: 'You can create new custom tabs to extend Salesforce functionality or to build new application functionality.' A note below states: 'Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.' At the bottom, there's a table titled 'Custom Object Tabs' with columns for Action, Label, Tab Style, and Description. The table contains four rows:

Action	Label	Tab Style	Description
Edit   Del	consumers	Box	
Edit   Del	rice details	Bottle	
Edit   Del	rice mills	Box	
Edit   Del	supplier	Box	

### 3.2. Creating Remaining Tabs

1. Now create the Tabs for the remaining Objects, they are " rice mill,consumer, rice details".
2. Follow the same steps as mentioned in Activity -1 .

Q\_ tabs

SETUP Tabs

User Interface

Rename **Tabs** and Labels

**Tabs**

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

## Custom Tabs

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

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

Action	Label	Tab Style	Description
Edit   Del	consumers	Box	
Edit   Del	rice_details	Bottle	
Edit   Del	rice_mills	Box	
Edit   Del	supplier	Box	

New What Is This?

Help for this Page ?

## Task 4 : The Lightning App

An app is a collection of items that work together to serve a particular function. In Lightning Experience, Lightning apps give your users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar.

Lightning apps let you brand your apps with a custom 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.

Lightning App Builder | App Settings | Pages | MY RICE | ? Help

App Settings

App Details & Branding

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

App Details		App Branding	
* App Name <small>i</small>	MY RICE	Image <small>i</small>	Primary Color Hex Value <small>i</small>
* Developer Name <small>i</small>	MY_RICE	<input type="button" value="Clear"/>	#0070D2
Description <small>i</small>	Enter a description...		
Org Theme Options <input type="checkbox"/> Use the app's image and color instead of the org's custom theme			
App Launcher Preview			
		MY RICE	

Lightning App Builder | App Settings | Pages | MY RICE

90% Reset ? Help

**App Settings**

App Details & Branding  
App Options  
Utility Items (Desktop Only)

**Navigation Items**

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

**Available Items**

Type to filter list...  Create

- Accounts
- All Sites
- Alternative Payment Methods
- Analytics
- App Launcher
- Appointment Categories
- Appointment Invitations
- Approval Requests
- Asset Action Sources
- Asset Actions
- Asset State Periods
- Assets

**Selected Items**

- supplier
- nice mills
- consumers
- nice details

29°C Haze

Q Search

ENG IN 05-08-2024

## Task 5 : Fields

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

1. Standard Fields
2. Custom Fields

### **Standard Fields:**

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

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 organization 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.

### **5.1. Creating the number field in rice details object**

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.

SETUP > OBJECT MANAGER  
rice details

Fields & Relationships		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Details		Created By	CreatedById	Lookup(User)		
Fields & Relationships		Last Modified By	LastModifiedById	Lookup(User)		
Page Layouts		rice details Name	Name	Auto Number	✓	▼
Lightning Record Pages		rice distributed	rice_distributed_c	Number(5, 0)		▼
Buttons, Links, and Actions		rice mill 1(one)	rice_mill_1_one_c	Master-Detail(rice mill)	✓	▼
Compact Layouts		supplier Name	supplier_Name_c	Master-Detail(supplier)	✓	▼
Field Sets						
Object Limits						
Record Types						

## 5.2. 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

To create junction object

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

Click on fields & relationship - click on New.

Select “Master-Detail relationship” as data type and click Next.

1. Select the related object “ supplier ” and click next.
2. Give Field Label as “ supplier Name ” and click Next.

3. Next >> Next >> Save & New.
  
4. Follow the same steps from 1 to 3.
5. Select the related object “ rice mill ” and click Next.
6. Give Field Label as “rice mill 1(one)” and click Next.
7. Next >> Next >> Save.

The screenshot shows the Salesforce Setup interface with the 'Object Manager' for the 'rice mill' object. The 'Fields & Relationships' tab is active. The table lists the following 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 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)		

### 5.3. 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.

## **5.4. 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.  
Select the summarized object as “ rice details ”.
5. Select the Rollup type as “sum”.
6. Select the field to aggregate as “ rice distributed ”, and click Next >>Next >>Save.
7. Follow the same steps for the rice mill Object from 1 to 3
8. Give the Field label as “ rice distributed to shops ”,Field Name will be Auto generated, and click Next.
9. Select the summarized object as “ rice details ”.
10. Select the Rollup type as “sum”.
11. Select the field to aggregate as “ rice distributed ”, and click Next >> Next >> Save.
12. Note :create the field as “ rice taken by shops in kgs” using number datatype in consumer object
13. Follow the same steps for the rice mill Object from 1 to 3
14. Give the Field label as “ rice taken ”,Field Name will be Auto generated, and click Next.
15. Select the summarized object as “ consumer”.
16. Select the Rollup type as “sum”.
17. Select the field to aggregate as “ rice taken in shops ”, and click Next >> Next >> Save.

SETUP > OBJECT MANAGER  
**consumer**

**Fields & Relationships**  
14 Items, Sorted by Field Label

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(10)		

## 5.5. 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.

## 5.6. 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 ”

SETUP > OBJECT MANAGER  
**rice mill**

**Fields & Relationships**  
7 Items, Sorted by Field Label

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)		

## 5.7. Creating Fields in consumer Objects

Fields & Relationships					
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Fields & Relationships	Amount Field	Amount_Paid__c	Formula (Number)		✓
Page Layouts	Consumer Name	Name	Auto Number		
Lightning Record Pages	Consumer Name	Consumer_Name__c	Formula (Text)		
Buttons, Links, and Actions	Created By	CreatedById	Lookup(User)		
Compact Layouts	Email	email__c	Email		
Field Sets	First Name	First_Name__c	Text(20)		
Object Limits	Last Modified By	LastModifiedById	Lookup(User)		
Record Types	Last Name	Last_Name__c	Text(20)		
Related Lookup Filters	Mode of payment	Note_Type_Holder_Value_1_Desmat__c	Picklist		
Search Layouts	Phone number	Phone_Number__c	Phone		
List View Button Layouts	Rice mill name	Rice_Mill_Name__c	Master-Detail(Rice Mill)		
Restriction Rules	Rice taken by shops	Rice_Taken_By_Shops__c	Number(5, 0)		
Scoping Rules	Rice taken by shops in logs	Rice_Taken_By_Shops_In_Logs__c	Number(18, 0)		
Triggers	Note type	Note_Type__c	Varchar		
Flow Triggers					
Validation Rules					

## **5.8. 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.

Note :check whether the fields mentioned in the formula field are created or not , if not go to activity 9 and create those fields mentioned in consumer object.

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.

The screenshot shows the Salesforce formula editor interface. At the top, there are tabs for "Simple Formula" and "Advanced Formula". Below the tabs is a toolbar with "Insert Field", "Insert Operator", and a dropdown menu for "Functions". A scrollable list of functions is displayed, including ABS, ACOS, ADDMONTHS, AND, ASCII, and ASIN. The main workspace contains the formula: `amount paid (Number) = rice_taken_by_shops_c * ripe_mill_name__r.rice_price_kg_c`. A status bar at the bottom indicates "Check Syntax: No syntax errors in merge fields or functions. (Compiled size: 67 characters)".

## 5.9. 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

Note :check whether the fields mentioned in the formula field are created or not , if not go to activity 9 and create those fields mentioned in consumer object.

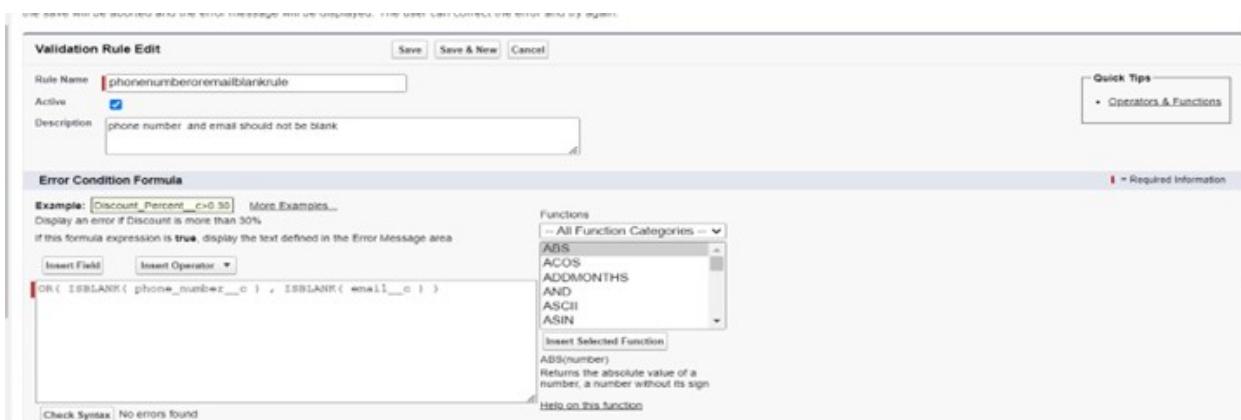
Go to the setup page >>click on object manager >> From drop down click edit for consumer object.

Click on the validation rule >> click New.

The screenshot shows the Salesforce Object Manager for the "consumer" object. On the left, a sidebar lists various object settings 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 area is titled "Validation Rules" and shows a table with one item:

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
phonenumbersremiblankrule	Top of Page	please fill phone number	<input checked="" type="checkbox"/>	udeyashvi.yelagandula, 05/07/2023, 12:57 pm

1. Enter the Rule name as "Phonenumberoremailblankrule"
2. Enter the description as "phone number and email number should not be blank"
3. Enter the formula as "OR( ISBLANK( phone\_number\_\_c ), ISBLANK( email\_\_c ) )" and check the syntax.
4. Under the error message write as "please fill in your phone number."
5. Select error location "top of page".
6. Save the validation rule.

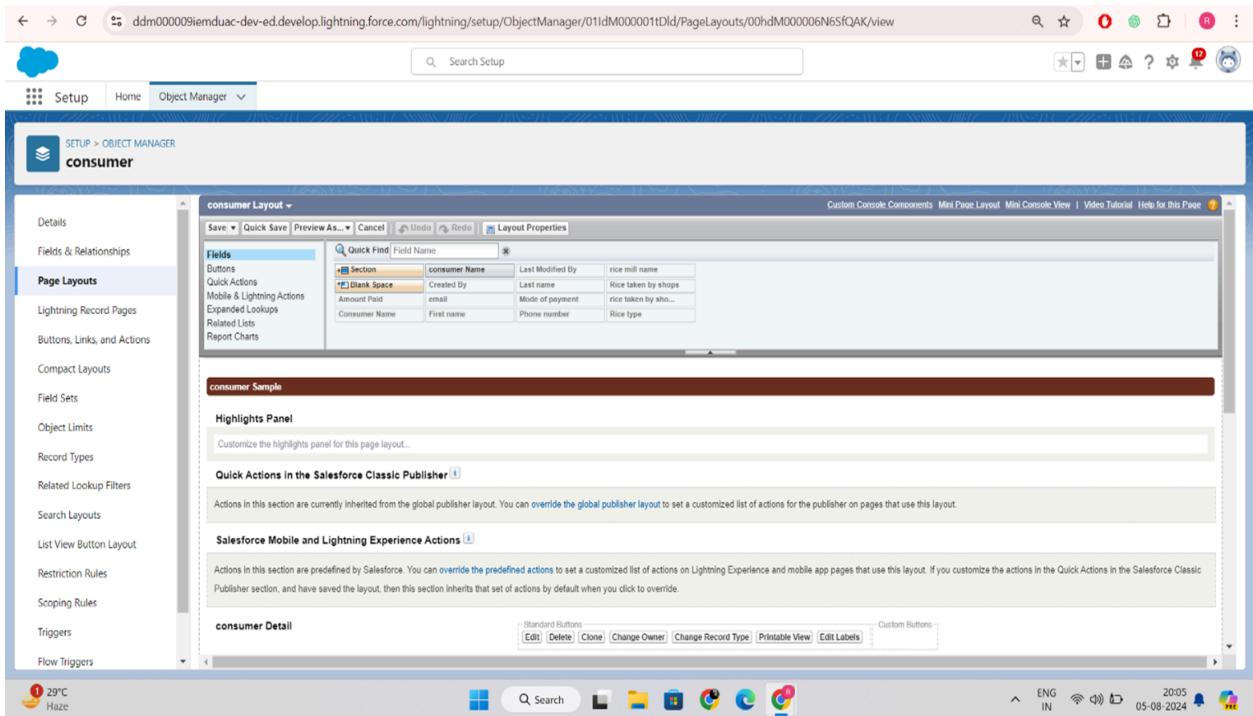


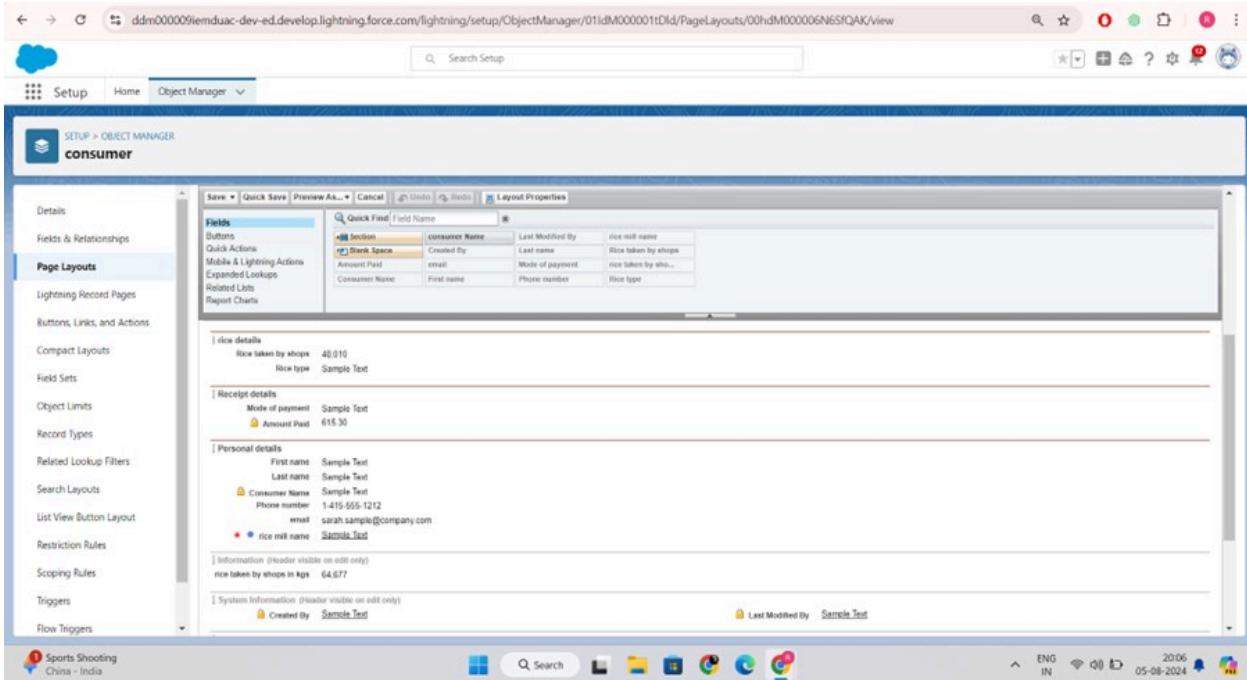
## Task 6 : Page Layouts

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.

## 6.1.creating the page layout

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





## Task 7 : Profiles

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.

1. Contract Manager
  2. Read Only
  3. Marketing User
  4. Solutions Manager
  5. Standard User
  6. 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

## **7.1. owner Profile**

To create a new profile:

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

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.

Give access and save it.

## 7.2. 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.

The screenshot shows the Salesforce 'Profiles' page under the 'SETUP' tab. It displays two permission sets side-by-side:

Object	Basic Access					Data Administration	
	Read	Create	Edit	Delete	View All	Modify All	
Assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Asset Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brokers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
consumers	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
Employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
energy audits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
item details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
nick names	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
positions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ProjectTasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Properties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Object	Basic Access					Data Administration	
	Read	Create	Edit	Delete	View All	Modify All	
purchasers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
reviews	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
rice details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
rice mills	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SolarBots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SolarBot Status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
stud	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
student	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
super marts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
suppliers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
vendors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1. And click save.

## 7.3. 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.

The screenshot shows the Salesforce Setup Profiles page. At the top, there's a header with a user icon and the word "SETUP". Below it, the title "Profiles" is displayed. The main content consists of two tables side-by-side, each with two tabs: "Basic Access" and "Data Administration".

**Left Table (Basic Access):**

	Read	Create	Edit	Delete	View All	Modify All
Assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asset Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brokers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
consumers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
energy audits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
item details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nick names	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
positions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Right Table (Data Administration):**

	Read	Create	Edit	Delete	View All	Modify All
purchasers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
reviews	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rice details	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
rice mills	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SolarBots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SolarBot Status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
studis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
super marts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
suppliers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
tickets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

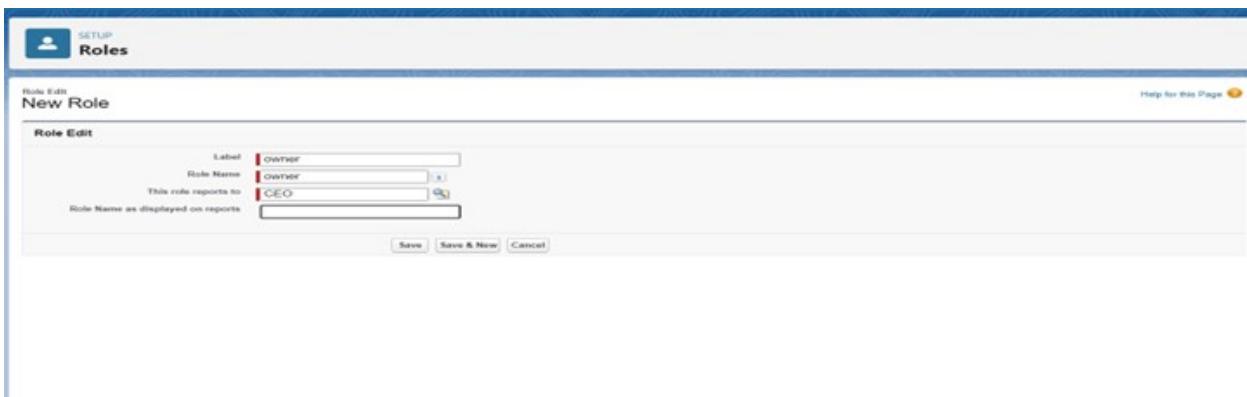
1. And click save.

## Task 8 : 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.

### 8.1. Creating owner Role

1. Creating owner Role:
2. Go to quick find >> Search for Roles >> click on set up roles.
3. Go to quick find >> Search for Roles >> click on set up roles.
4. Click on Expand All and click on add role under whom this role works.
  
5. Give Label as "owner" and Role name gets auto populated. Then click on Save.



The screenshot shows the 'Role Edit' page for creating a new role. The page has a header with 'SETUP' and 'Roles'. Below the header, it says 'Role Edit New Role'. On the left, there's a sidebar with 'Role Edit' and 'New Role'. The main form has fields for 'Label' (containing 'owner'), 'Role Name' (containing 'owner'), and 'This role reports to' (containing 'CEO'). At the bottom, there are buttons for 'Save', 'Save & New', and 'Cancel'.

### 8.2. Creating employer roles

1. Creating another two roles under manager
2. Go to quick find >>Search for Roles >>click on set up roles.
3. Click plus on CEO role, and click add role under owner.
4. Give Label as "employer" and Role name gets auto populated. Then click on Save.
5. Repeat the same steps, for another role.
6. Click plus on CEO role, and click plus on owner, and click add role under employer.
7. Give Label as "worker" and Role name gets auto populated. Then click on Save.

ddm000009iemduac-dev-ed.lightning.force.com/lightning/setup/Roles/home

roles

SETUP Roles

### Creating the Role Hierarchy

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

Collapses All | Expands All

Add Role

- CEO Edit | Del | Assign  
Add Role
- CFO Edit | Del | Assign  
Add Role
- COO Edit | Del | Assign  
Add Role
- owner Edit | Del | Assign  
Add Role
- employee Edit | Del | Assign  
Add Role
- worker Edit | Del | Assign  
Add Role
- SVP\_Customer\_Service\_Support Edit | Del | Assign  
Add Role
- SVP\_Human\_Resources Edit | Del | Assign  
Add Role
- SVP\_Sales\_Marketing Edit | Del | Assign  
Add Role

Show in tree view

Help for this Page

Setup Home Service Setup Assistant Commerce Setup Assistant Multi-Factor Authentication Assistant Hyperforce Assistant Release Updates Lightning Experience Transition Assistant Salesforce Mobile App Lightning Usage Optimizer Sales Cloud Everywhere ADMINISTRATION Users Permission Set Groups Permission Sets Profiles Public Groups Queues Roles

29°C Haze

ENG IN 20:11 05-08-2024

The screenshot shows the 'Roles' setup page in Salesforce. The main title is 'Creating the Role Hierarchy'. Below it, a note says 'You can build on the existing role hierarchy shown on this page. To insert a new role, click Add Role.' A section titled 'Your Organization's Role Hierarchy' displays a hierarchical tree of roles. The root node is 'None' (selected). Under 'None', there are several pre-defined roles: CEO, CFO, COO, owner, employee, worker, SVP\_Customer\_Service\_Support, SVP\_Human\_Resources, and SVP\_Sales\_Marketing. Each role has 'Edit', 'Del', and 'Assign' buttons. A 'Show in tree view' link is located at the top right of the tree. On the left, a sidebar lists various setup categories like Service Setup Assistant, Commerce Setup Assistant, and Administration sections like Users, Permission Sets, and Profiles. At the bottom, there's a weather widget showing '29°C Haze' and system status indicators.

## Task 9 : 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.

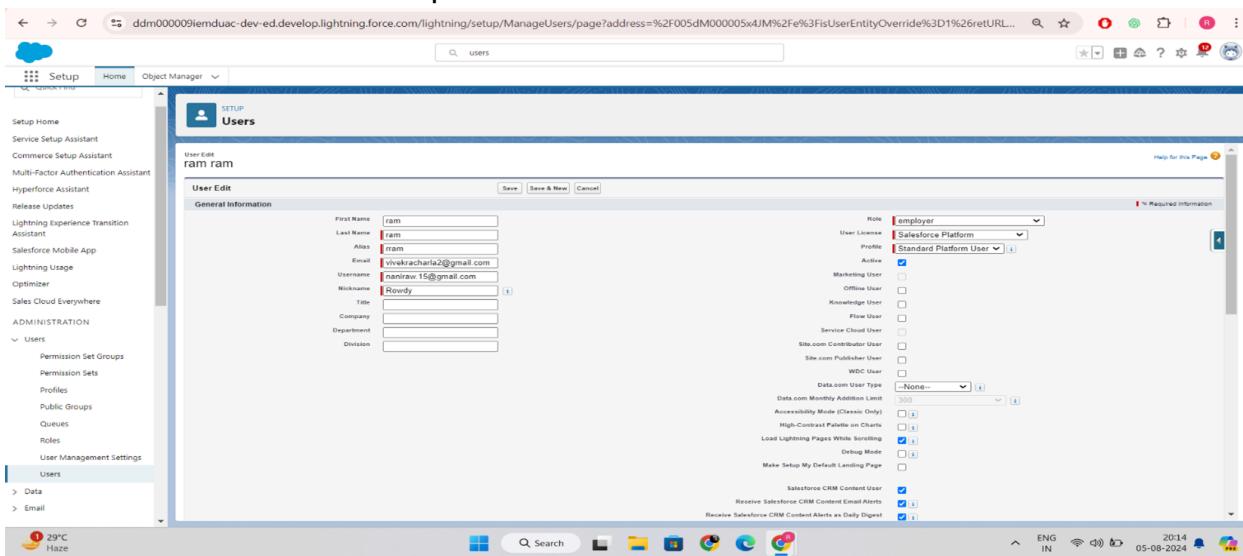
### 9.1. Create User

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.

The screenshot shows the Salesforce User Edit page. At the top, there is a header with a profile icon, 'SETUP', and 'Users'. Below the header, the page title is 'User Edit' followed by the name 'vicky y'. On the right side, there is a 'Help for this Page' link. The main area is titled 'General Information' and contains two columns of input fields. The left column includes fields for First Name ('vicky'), Last Name ('y'), Alias ('vy'), Email ('ramesh0820@gmail.com'), Username ('ramesh0820@754123gmail'), Nickname ('Vicky'), Title (empty), Company (empty), Department (empty), and Division (empty). The right column includes fields for Role ('owner'), User License ('Salesforce'), Profile ('owner'), Active (checkbox checked), Marketing User (checkbox), Offline User (checkbox), Knowledge User (checkbox), Flow User (checkbox), Service Cloud User (checkbox), Site.com Contributor User (checkbox), Site.com Publisher User (checkbox), WDC User (checkbox), Data.com User Type ('--None--'), and Data.com Monthly Addition Limit ('300'). A note at the bottom right indicates that the 'Active' field is required information.

## 9.2. creating another users

1. Go to setup ? type users in quick find box ? select users ? click New user.
  2. Fill in the fields
  3. First Name: ram
  4. Last Name: ram
  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: employer
10. User license: Salesforce platform
11. Profiles: standard platform user.

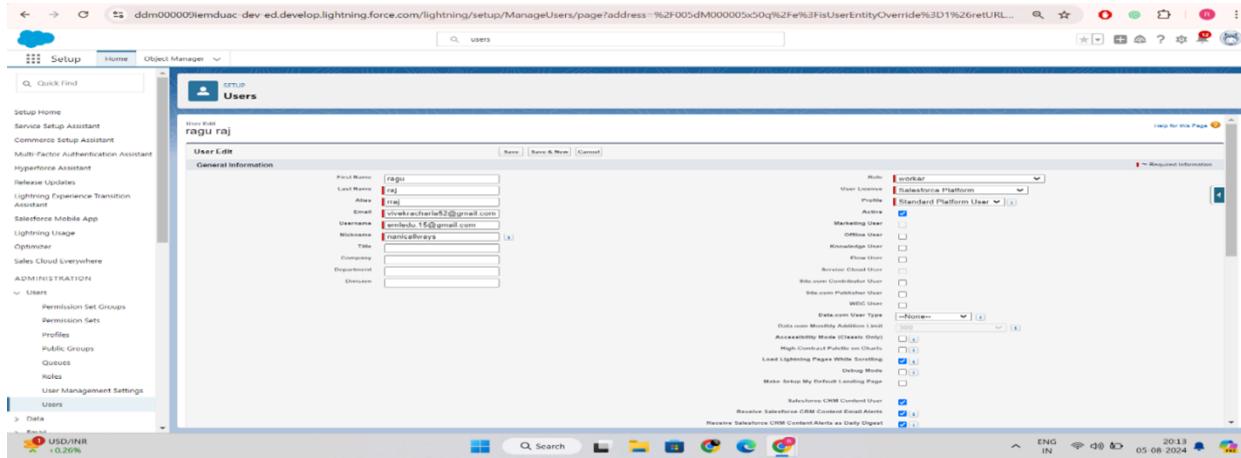


## 9.3. Create Another User

1. Go to setup ? type users in quick find box ? select users ? click New user.
2. Fill in the fields
3. First Name : ragu
4. Last Name : raj
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 : worker

10.User license : Salesforce platform

11.Profiles : standard platform user.



## Task 10 : 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.

### 10.1. Creating OWD setting.

- a. Go to setup >> type "sharing settings " in quick search >> Click edit.
- b. Scroll down, change the default internal access to " public read-only" for rice mill and supplier object.
- c. Click save.
- d. Extra information, By these every profile has their own access, according to their profile.
- e. 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.

Object	Default sharing	Permissions	
Shipment	Private	Private	✓
Shipping Carrier	Public Read Only	Private	✓
Shipping Carrier Method	Public Read Only	Private	✓
Shipping Configuration Set	Public Read Only	Private	✓
Streaming Channel	Public ReadWrite	Private	✓
Tableau Host Mapping	Public Read Only	Private	✓
User Provisioning Request	Private	Private	✓
Water	Private	Private	✓
Web Cart Document	Private	Private	✓
Work Order	Private	Private	✓
Work Plan	Private	Private	✓
Work Plan Template	Private	Private	✓
Work Step Template	Private	Private	✓
Work Type	Private	Private	✓
Work Type Group	Public ReadWrite	Controlled by Parent	✓
consumers	Controlled by Parent	Controlled by Parent	✓
rice details	Public Read Only	Private	✓
rice mill	Public Read Only	Private	✓
supplier	Public Read Only	Private	✓

**Other Settings**

Manager Groups:  [ ]

Secure guest user record access:  [ ]

Require permission to view record names in lookup:  [ ]

Other Settings Help ?

## Task 11 : Reports

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

1. Go to the app >>click on the reports tab
2. Click New Report. select for report type, search for “rice mill with consumers” click on it. And click on start

report.

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

1. consumer name
2. rice type
3. rice price/kg
4. mode of payments
5. amount paid
6. Remove the unnecessary fields.
7. Select the fields that are mentioned below in the GROUP ROWS section.
8. Rice taken by shops

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

The screenshot shows a reporting application interface. At the top, there is a navigation bar with links for 'supplier', 'rice details', 'rice mills', 'consumers', 'Reports', and 'Dashboards'. Below the navigation bar is a search bar labeled 'Search...'. On the left, there is a sidebar titled 'Recent' with a single item listed: 'range of amount per day'. The main area displays a table with columns: Report Name, Description, Folder, Created By, Created On, and Subscribed. The row for the recent report shows 'range of amount per day' in the Report Name column, 'estimated rice per day' in the Description column, 'Susiritha Jonnalagadda' in the Created By column, '25/10/2024, 11:36 pm' in the Created On column, and a checked 'Subscribed' checkbox. There are also buttons for 'New Report' and 'New Folder' at the top right of the main area.

The screenshot shows the 'Edit Subscription' dialog box. At the top, it says 'Edit Subscription'. The 'Settings' section includes a 'Frequency' dropdown with 'Daily' selected, 'Weekly', and 'Monthly' options. Below that is a 'Time' dropdown set to '8:00 am'. The 'Attachment' section has a 'Attach File' button. The 'Recipients' section shows 'Send email to Me' and a 'Edit Recipients' button. The 'Run Report As' section has radio buttons for 'Me' (unchecked) and 'Another Person' (checked). At the bottom right are 'Cancel' and 'Save' buttons.

## 11.1. Sharing report to owner

Click edit drop down and select subscribe option

1. Follow as per below image.

The screenshot shows the 'Edit Subscription' dialog box. At the top, it says 'Edit Subscription'. Below that is a 'Settings' section with a 'Frequency' dropdown showing 'Daily' (which is selected), 'Weekly', and 'Monthly'. Under 'Frequency' is a 'Time' dropdown set to '8:00 am'. There is an 'Attachment' section with a 'Attach File' button. The next section is 'Recipients', which includes a 'Send email to' field containing 'Me' and a 'Edit Recipients' button. Below that is a 'Run Report As' section with two radio buttons: 'Me' (unchecked) and 'Another Person' (checked). At the bottom right are 'Cancel' and 'Save' buttons.

## 11.2. create a report folder

- 1.navigate to app launcher and click reports on that.
- 2.click all reports.
3. Select the range of amount per day drop down in that click move.
5. Select estimated rice per day folder and select folder.

Note: if you want to see the report which you have created then go to reports - all folders - estimated rice per day - your report will appear in this way.

Report Name	Description	Folder	Created By	Created On	Subscribed
Program Overview by User	Analyze how different users are progressing towards a program and its outcome.	Enablement Dashboard Reports Spring '24	Automated Process	23/10/2024, 8:42 pm	<input type="checkbox"/>
Program Overview by User	Analyze how different users are progressing towards a program and its outcome.	Enablement Dashboard Reports Summer '24	Automated Process	23/10/2024, 8:42 pm	<input type="checkbox"/>
range of amount per day	estimated rice per day	Susritha Jonnalagadda	Automated Process	25/10/2024, 11:36 pm	<input checked="" type="checkbox"/>
Sample Flow Report: Screen Flows	Which flows run, what's the status of each interview, and how long do users take to complete the screens?	Public Reports	Automated Process	23/10/2024, 8:42 pm	<input type="checkbox"/>
	What orchestration run logs were created and				

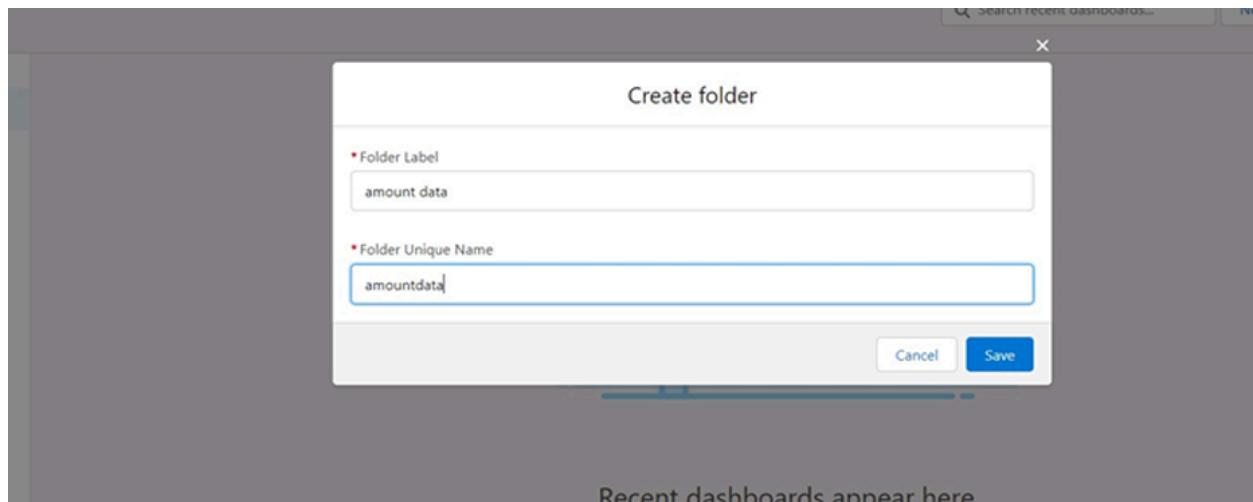
## Task 12 : Dashboards

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.

### 12.1. 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.



## 12.2. Create Dashboard

A screenshot of a dashboard management interface. The top navigation bar includes 'MY RICE', 'supplier', 'rice details', 'rice mills', 'consumers', 'Reports' (which is selected), and 'Dashboards'. The main area shows a table of recent reports. The table has columns: Report Name, Description, Folder, Created By, Created On, and Subscribed. One entry is visible: 'range of amount per day' (Description), 'estimated rice per day' (Folder), 'Susritha Jonnalagadda' (Created By), '25/10/2024, 11:36 pm' (Created On), and a checked 'Subscribed' box. On the left sidebar, there are sections for 'Recent' (1 item), 'Created by Me', 'Private Reports', 'Public Reports', and 'All Reports'. A 'FOLDERS' section lists 'All Folders', 'Created by Me', and 'Shared with Me'.

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.

Preview is shown below.

Display as>> vertical bar chart

X-axis >> rice taken by shops

Y-axis >> sum of amount

Y-axis range >> automatic

Sort by >> rice taken by shops

1. Component theme >> dark.

2. Add the component

3. Again select add component with above same steps

4. .display as donut chart

5. sort by >> sum of amount

6. .title>>range of amount per day

7. component theme dark

8. click add.

9. Click save and done.



Search...



MY RICE

supplier

rice details

rice mills

consumers

Reports

Dashboards



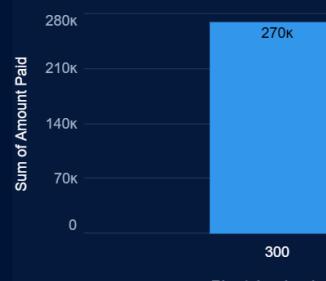
Dashboard  
**estimated data**

total amount of data in dashboards

As of 25-Oct-2024, 11:52 pm - Viewing as Susritha Jonnalagadda

Refresh Edit Sub

range of amount per day



[View Report \(range of amount per day\)](#)

range of amount per day



[View Report \(range of amount per day\)](#)

## Task 13 : 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.

#### **1. 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.

#### **2. 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.

#### **a. 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 :

```
class ConsumerRecord {  
    public static void sendEmailNotification (List<consumer__c> con){  
        for(consumer__c c:con)  
        {  
            Messaging.SingleEmailMessage email  
=      new  
            Messaging.SingleEmailMessage();  
            email.setToAddresses( new List<String>{c.email__c});  
            email.setSubject('Welcome to our company');  
            email.setPlainTextBody('Dear ' + ' + ',\n\nWelcome to MY  
RICE!'+'You have been seen as a valuable customer to us. Please continue  
your journey with us, while we try to provide you with good quality  
resources.'+'\n'+  
                "We are proud to associate with valuable customers  
like you and we look forward to collaborating with you by providing more and  
more exciting discounts or even product offers too.' + '\n'  
                +'So why taking a step back, take a leap of faith and  
shop with us more, while we provide with the valuable products and  
offers+'\n+'\n+'\n'+  
                'Thankyou for buying '+ " "+'Here are some of the  
products that are brought by the customers who similarly bought products  
like this+'\n\n');  
            Messaging.sendEmail(new  
List<Messaging.SingleEmailMessage>{email});  
  
        }  
    }  
}
```

## 13.2. Creating an Apex Trigger

**How to create a new trigger :**

While still in the trailhead account, navigate to the gear icon in the top right corner. Click on developer console and you will be navigated to a new console window. Click on the File menu in the toolbar, and click on new? Trigger.

Enter the trigger name and the object to be triggered.

**Syntax For creating trigger :**

The syntax for creating trigger is :

```
Trigger [trigger name] on [object name]( Before/After event) {  
    //Trigger Logic  
}
```

**Trigger code:**

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

**Thank you**