

ACRM APPLICATION FOR WHOLESALE RICE MILL

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1. Project Overview:

The Rice Mill CRM covering is a complete solution for managing and making simpler rice production and sales tracking. It enables daily reporting on rice quantity, type, and sales, which is then passed to the owners. This CRM purchases customer kinship control to enhance customer battle, streamline actions, and improve performance in the rice mill factory. The project aims to deliver a user-friendly coating that meets the specific functional needs of a rice mill.

2. Objectives :

Business Goals:

The Rice Mill CRM App will automate daily production and revenue reporting, providing owners with clear insights into functional performance. It will also implement customer calculus to place buying trends and popular rice assortment, enabling targeted marketing and better customer agreement. In addition, the coating will streamline resource allotment by forecasting demand and canvassing sales patterns. This will help the business optimize stock list control and quickly allocate resources. **Specific Outcomes:**

The Rice Mill CRM App will automate daily production and revenue reporting, track customer buying trends, and optimize resource allotment based on demand forecasts and sales patterns. This will provide clear insights, enhancing functional performance.

3. Salesforce Key Features and Concepts Utilized:

1. Reporting and Dashboards:

- **Daily Sales and Production Reports:** The system generates detailed reports showing the amount of rice produced and sold each day.
- **Revenue Reports:** Provides insights into daily revenue brought forth.
- **Customer Data Review:** Tracks popular rice types and most frequent buyers.
- **Resource dispersion:** Helps owners understand data for better resource allotment and future planning.

2. Rollup Summary Field:

- **Purpose:** sum up data from a child object to a parent object that shares a master-detail kinship.

Functions: Can use COUNT, SUM, Minimum, and Maximum functions.

Cross-Object Formula Field:

- **Purpose:** mention fields from another object in Salesforce.
- **Function:** Calculates the total amount payable by proportionate the number of rice units taken by the price per kg.

Proof Rules:

- **Purpose:** Ensures data unity by confirming user inputs.
- **Is Blank Formula:** Verifies if a field is blank and displays an error message if the rule returns a value of "True."

Permission Sets:

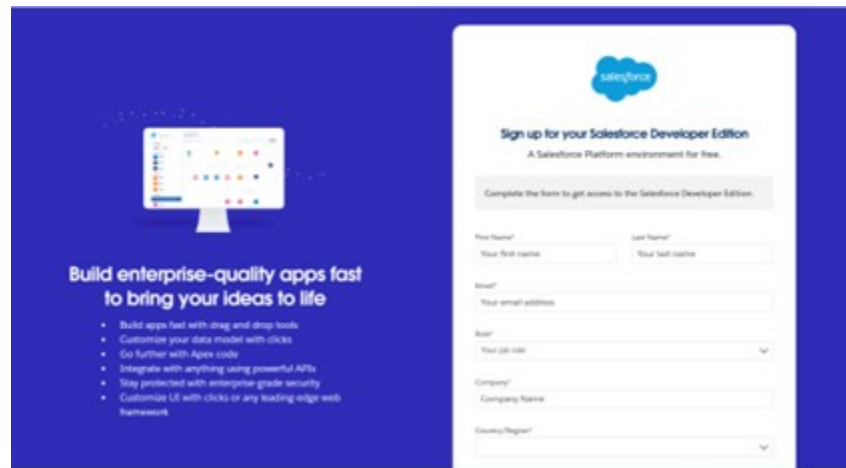
- **Wide Defaults (OWD):** Defines the baseline level of access for the most restricted user.
- **Roles and Access:**
- **Company Owner:** Can view records of employers and workers.
- **Employer:** Can view records of workers.

4. Detailed Steps to Solution Design:

action 1: Creating Programmer Account and Account Initiation Steps

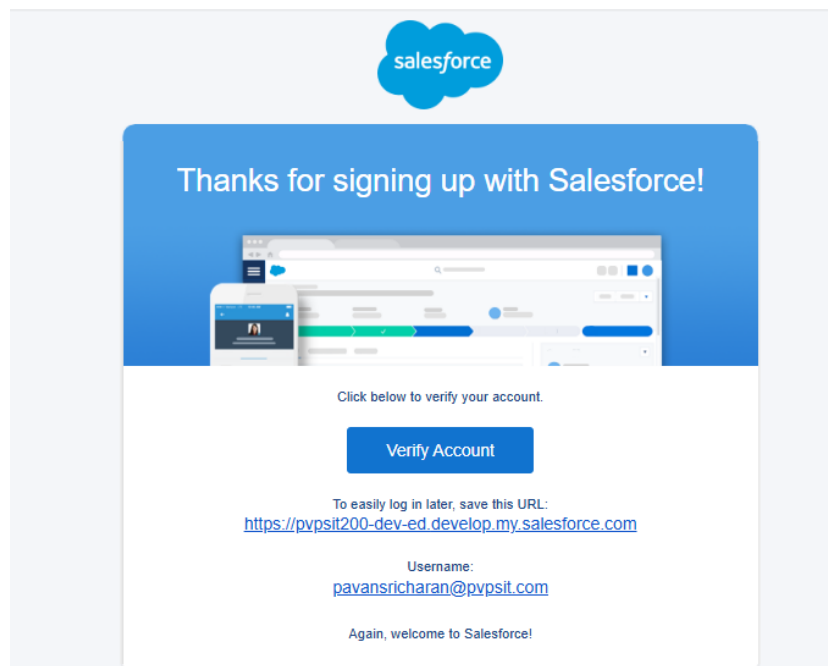
- On the sign up form, enter the following details.
- Click on sign me up after filling these.
- First name & Last name
- Email
- Role : Developer
- Company : CollegeName
- Country : India
- Postal Code : pin code
- Username : should be a combination of your name and company.
- This need not be an actual email id, you can give anything in the format.

username@organization.com



ACTIVATION :

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



Activity 2: 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, are the heart of any application, and provide a structure for data.

Steps:

Create Supplier Object

- From the setup page >> Click on Object Manager>> Click on Create>>Click on Custom Object.
- Enter the label name>>supplier
- Plural label name>>supplier
- Enter Record Name Label and Format
- Record Name >> supplierName
- Data Type>>Text
- Click on Allow reports and Track Field History and allow search
- Allow search >> Save.

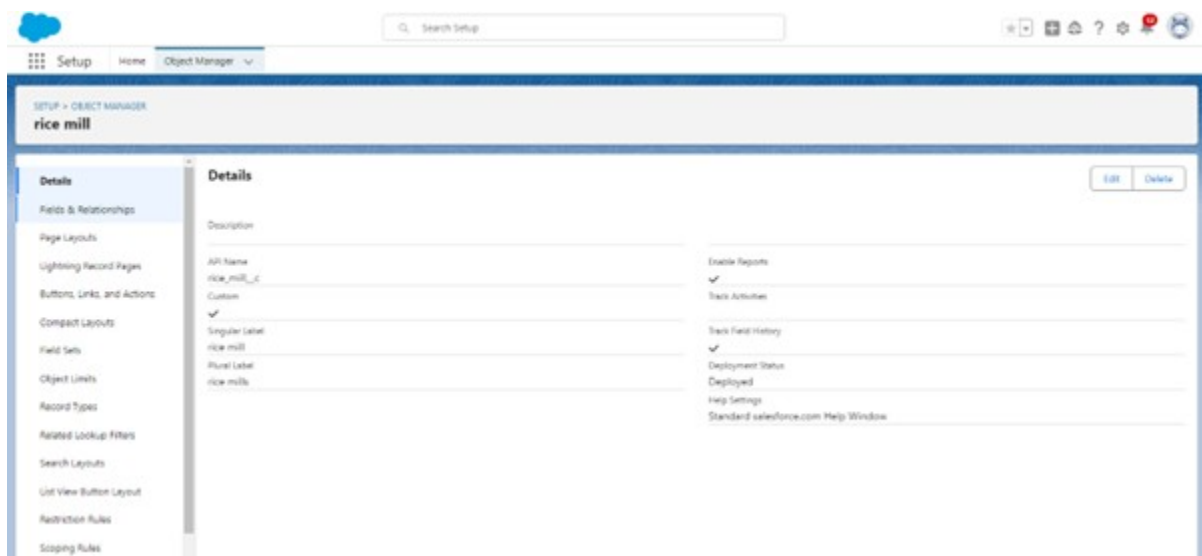
The screenshot shows the Salesforce Object Manager interface for a custom object named 'supplier'. The breadcrumb trail at the top reads 'SETUP > OBJECT MANAGER'. The left sidebar contains a 'Details' section with a list of configuration options: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, and Restriction Rules. The main content area is titled 'Details' and contains the following fields:

- Description: (empty text field)
- API Name: supplier__c
- Custom: ☒
- Singular Label: supplier
- Plural Label: suppliers
- Enable Reports: ☒
- Track Activities: ☒
- Track Field History: ☒
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

At the top right of the main content area, there are 'Edit' and 'Delete' buttons.

Create Rice mill Object

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

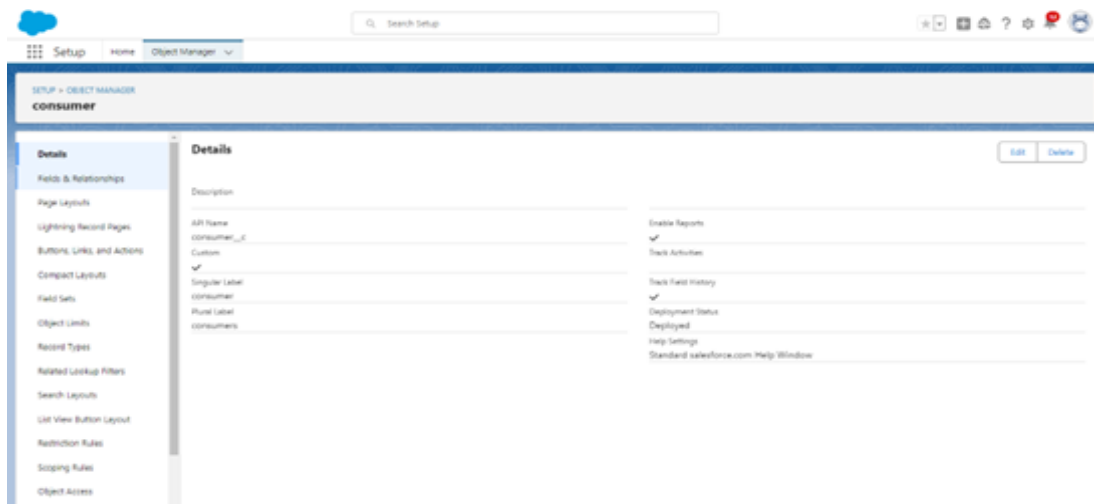


Create consumer Objects

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

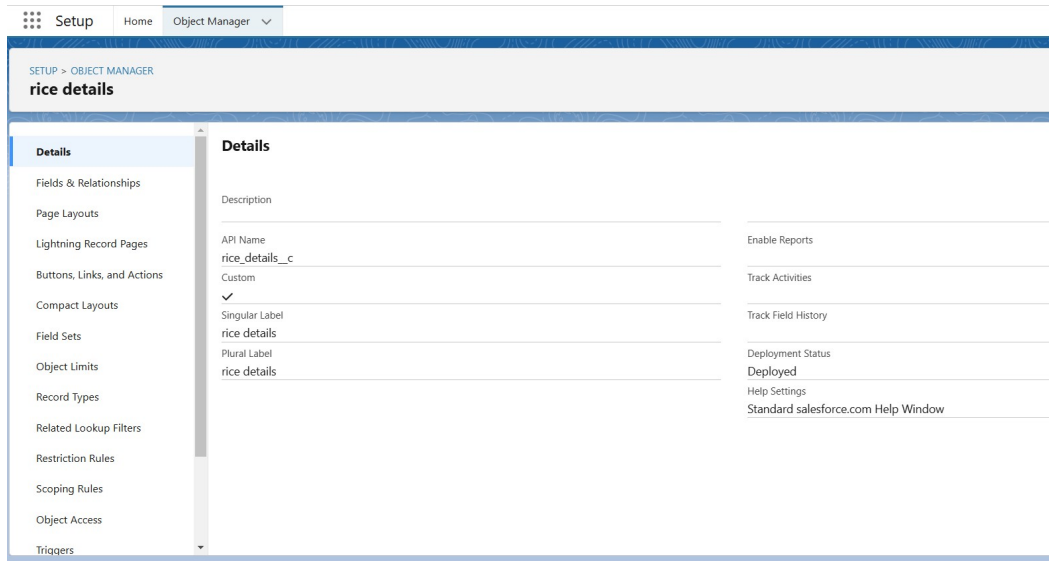
Create rice details Objects

- Use these display format for the rice details
- label name >> rice details
- Plural label name >> rice details
- Display Format >> rice-{000}
- Starting Number >>1



Create rice details Objects

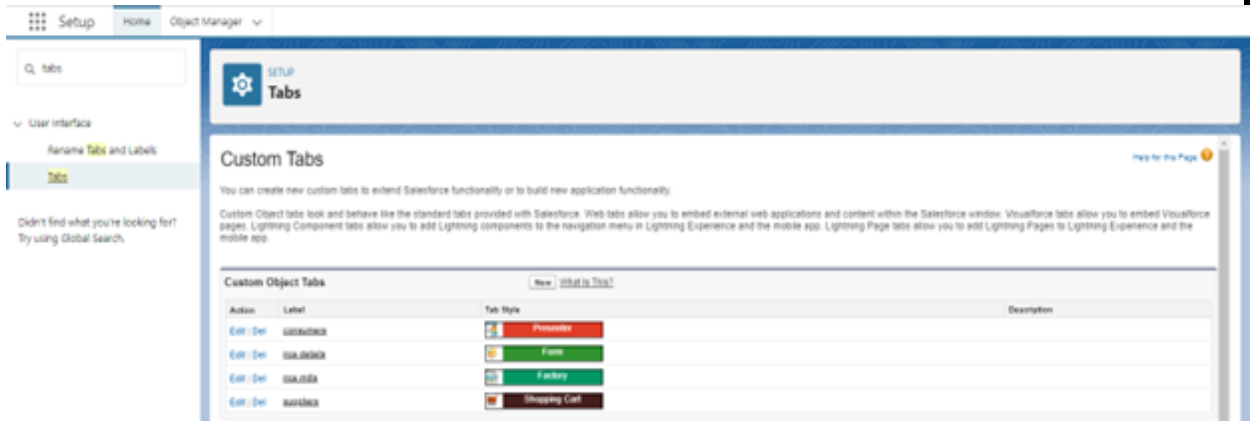
- Use these display format for the rice details
- label name >> rice details
- Plural label name >> rice details
- Display Format >> rice-{000}
- Starting Number >>1



Activity 3: Tabs

Creating a CustomTab

- To create a Tab:(supplier)
- Go to setup page >> type Tabs in Quick Find bar >>click on tabs >> New (under custom object tab)
- Select Object(supplier) >>Select the tab style >>Next (Add to profiles page) keep it as default
 >> Next (Add to CustomApp) uncheck the include tab .
- Make sure that the Append tab to users'existing personal customizations is checked.
- Click save.



Activity 4: The Lightning App

Create a Lightning App

- Goto setup page >> search“app manager” in quick find >> select“app manager” >>click on New lightning App
- Fill the app name in app details as MY RICE >> Next >> (App option page) keep it asdefault >> Next >> (Utility Items) keep it as default >> Next.
- Upload a photothat is related to your app.
- To add Navigation Item:
- Select the items (supplier, rice mill, consumer, Rice details) from the searchbar andmove it using the arrow button >> Next.
- To Add User Profiles:
- Search profiles (System administrator) in the search bar >>click on the arrow button >>save & finish.

New Lightning App

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 Name ⓘ
Name your app...

* Developer Name ⓘ
Enter a developer name...

Description ⓘ
Enter a description...

App Branding

Image ⓘ

Upload

Primary Color Hex Value ⓘ

Org Theme Options

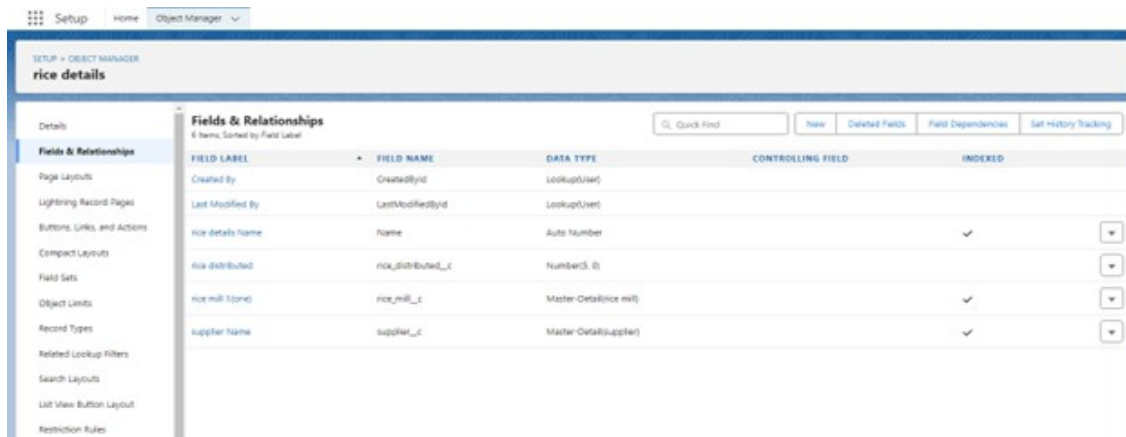
☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview

Activity 5: Fields

Creating the number field in rice details object

- Goto the setup page >> click on object manager >> From drop down click edit for ricedetails object
- Click on fields & relationship >> click on New.
- Select Data type as “Number” and click Next.
- Given the Field Label as “rice distributed ” and lengthas “ 5 ”.
- Field Name will beauto populated, and click on Next- Next >> Save.



FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Last Modified By	LastModifiedBy	Lookup(User)		
rice details Name	Name	Auto Number		✓
rice distributed	rice_distributed__c	Number(5, 0)		
rice mill Name	rice_mill__c	Master-Detail(rice mill)		✓
supplier Name	supplier__c	Master-Detail(supplier)		✓

CreatingJunction Object

Creating junction object as rice details with supplier & rice mill

- Goto the setup page >> click on object manager >> From drop down click edit for ricedetails object
- Click on fields & relationship - click on New.
- Select “Master-Detail relationship” as data type and click Next.
- Select the relatedobject “supplier” and click next.
- Give Field Label as “supplier Name” and click Next
- Next >> Next >> Save & New.
- Follow the same steps from 1 to 3.

- Select the related object “rice mill” and click Next.
- Give Field Label as “rice mill 1(one)” and click Next.
- Next >> Next >> Save.

Creating a Master-Detail Relationship

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

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	CreatedBy	LookupUser		
Last Modified By	LastModifiedDate	LookupUser		
Owner	OwnerId	LookupUser Group		✓
rice distributed to shops	rice_distributed_to_shops__c	Roll-up Summary (SUM rice details)		▼
rice mill name	name	Auto Number		✓ ▼
rice pricing	rice_pricing__c	Number(, 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
Scoping Rules

Setup Home Object Manager

SETUP > OBJECT MANAGER
supplier

Details

Fields & Relationships
3 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	CreatedBy	LookupUser		
Last Modified By	LastModifiedDate	LookupUser		
Owner	OwnerId	LookupUser Group		✓
sum of rice distributed	sum_of_rice_distributed__c	Roll-up Summary (SUM rice details)		▼
supplier name	name	Text(30)		✓ ▼

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

Creating the Roll-up Summary

- Goto setup >>click on Object Manager >> type object name (supplier) in searchbar >>click on the object.
- Now click on "Fields & Relationships" >> New
- Select the data type as "Rollup summary", and click Next.
- Give the Field label as "sum of rice distributed", FieldName will be Auto generated, and click Next.
- Select the summarized object as "rice details".
- Select the Rollup type as "sum".
- Select the field to aggregate as "rice distributed", and click Next >>Next >>Save
- Follow the same steps for the rice mill Object from 1 to 3
- Give the Field label as "rice distributed to shops", Field Name will be Auto generated, and click Next.
- Select the summarized object as "rice details".
- Select the Rollup type as "sum".
- Select the field to aggregate as "rice distributed", and click Next >> Next >> Save.
- Note: create the field as "rice taken by shops in kgs" using number datatype in consumer object
- Follow the same steps for the rice mill Object from 1 to 3
- Give the Field label as "rice taken", Field Name will be Auto generated, and click Next.
- Select the summarized object as "consumer".
- Select the Rollup type as "sum".
- Select the field to aggregate as "rice taken in shops", and click Next >> Next >> Save.

supplier
New Custom Field

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Step 1. Choose the field type

Specify the type of information that the custom field will contain.

Data Type

☐ None Selected Select one of the data types below.

☐ Auto Number A system-generated sequence number that uses a display format you define. The number is automatically incremented for each new record.

☐ Formula A read-only field that derives its value from a formula expression you define. The formula field is updated when any of the source fields change.

☒ Roll-Up Summary A read-only field that displays the sum, minimum, or maximum value of a field in a related list or the record count of all records listed in a related

Edit supplier Custom Field
sum of rice distributed

Custom Field Definition Edit Save Cancel

Field Information

Field Label

Field Name

Description

Help Text

Data Owner

Field Usage

Data Sensitivity Level

Compliance Categorization

Available	Chosen
PII	
HIPAA	
GDPR	
PCI	

Roll-Up Summary Options

Data Type **Roll-Up Summary**

Calculation Options

☒ Automatic calculation (Recommended)

☐ Force a mass recalculation of this field

Select Object to Summarize

Master Object: supplier

Summarized Object: rice details

Select Roll-Up Type

☐ COUNT

☒ SUM

☐ MIN

☐ MAX

Field to Aggregate:

Creating the validation rule

- Goto the setup page >>click on object manager>> From drop down click edit for consumer object.
- Click on the validation rule >> click New.
- Enter the Rule name as "Phonenumberoremailblankrule".
- Enter the description as "phone number and email number should not be blank".

- Enter the formula as “OR(ISBLANK(phone_number_c) , ISBLANK(email_c))”and check the syntax.
- Under the error message writeas “please fill in your phone number.”
- Select error location “top of page”.
- Save the validation rule.

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

consumer Validation Rule

[Back to consumer](#)

Validation Rule Detail Edit Clone

Rule Name	Phonenumberoremailblankrule	Active	<input checked="" type="checkbox"/>
Error Condition Formula	OR(ISBLANK(Phone_number__c) , ISBLANK(email__c))		
Error Message	please fill in your phone number.	Error Location	Top of Page
Description	phone number and email number should not be blank		
Created By	CHANUMOLU PAVAN SRICHARAN, 18/11/2024, 11:45 am	Modified By	CHANUMOLU PAVAN SRICHARAN, 18/11/2024, 11:45 am

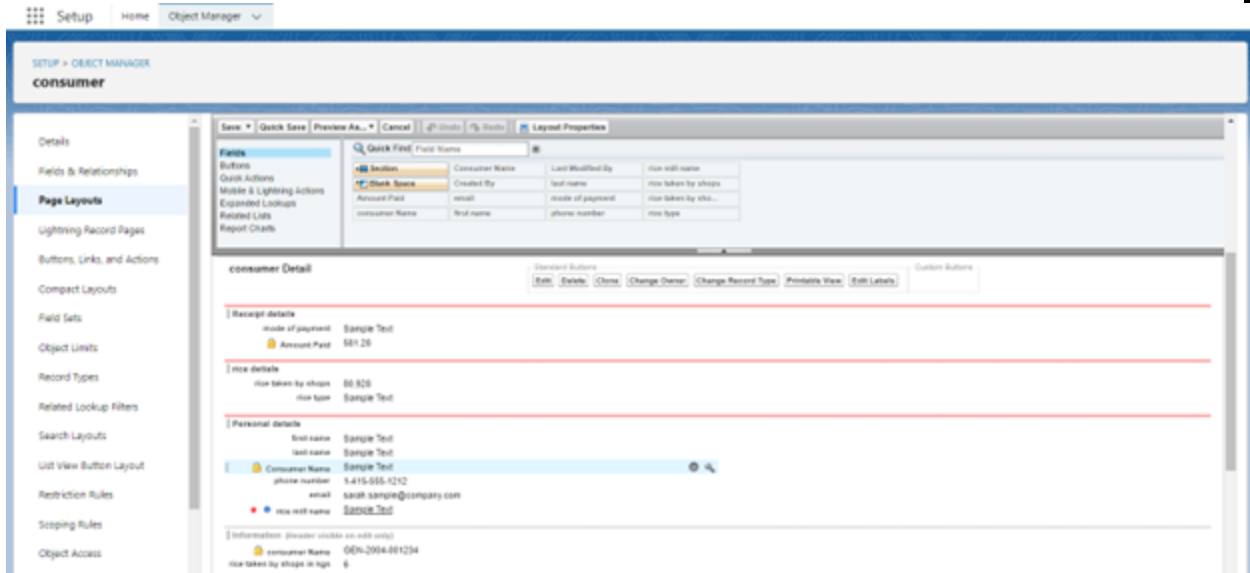
Edit Clone

[Help for this Page](#)

PAGE LAYOUTS

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

- Then, Click save.



PROFILES

A profile is a group/collection of settings and permissions that define what a user can do insalesforce. Profile controls“Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP ranges. You can define profiles by the user's job function. For example System Administrator, Developer, Sales Representative.

Owner Profile:

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

Employer Profile

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

Scroll down to Custom ObjectPermissions and Give access permissions for consumer, ricedetails , rice mill and suppliers objectsas mentioned in the below diagram.

The screenshot shows the Salesforce Setup interface with the 'Profiles' section selected. The profile 'owner' is displayed with the following details:

- Name:** owner
- User License:** Salesforce
- Description:**
- Created By:** CHANUMOLU PAVAN SRI CHARAN, 18/11/2024, 11:57 am
- Modified By:** CHANUMOLU PAVAN SRI CHARAN, 18/11/2024, 12:00 pm

Page Layouts:

Standard Object Layouts	Global	Invoice
Email Application	Not Assigned	Invoice Line
Home Page Layout	DE Default	Lead
Account	Account Layout	Legal Entity
Alternative Payment Method	Alternative Payment Method Layout	Location
Appointment Invitation	Appointment Invitation Layout	Location Group
Asset	Asset Layout	Location Group Assignment
Asset Action	Asset Action Layout	Macro

The screenshot shows the Salesforce Setup interface with the 'Profiles' section selected. The profile 'employer' is displayed with the following details:

- Name:** employer
- User License:** Salesforce Platform
- Description:**
- Created By:** CHANUMOLU PAVAN SRI CHARAN, 18/11/2024, 12:01 pm
- Modified By:** CHANUMOLU PAVAN SRI CHARAN, 18/11/2024, 12:03 pm

Page Layouts:

Standard Object Layouts	Global	Fulfillment Order Item Tax
Email Application	Not Assigned	Fulfillment Order Product
Home Page Layout	Home Page Default	Individual
Account	Account Layout	Invoice
Alternative Payment Method	Alternative Payment Method Layout	Invoice Line
Appointment Invitation	Appointment Invitation Layout	Lead
Asset	Asset Layout	Location
Asset Relationship	Asset Relationship Layout	

Worker Profile

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

- Scroll down to Custom ObjectPermissions and Give access permissions for consumer, ricedetails , ricemill and suppliers objects as mentioned in the below.

Profiles

Profile: **owner**

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

Login IP Ranges (0) | Enabled Apex Class Access (0) | Enabled Visualforce Page Access (0) | Enabled External Data Source Access (0) | Enabled Named Credential Access (0) | Enabled External Credential Principal Access (0) | Enabled Custom Metadata Type Access (0) | Enabled Custom Setting Definitions Access (0) | Enabled Flow Access (0) | Enabled Service Presence Status Access (0) | Enabled Custom Permissions (0)

Profile Detail

Name	owner	Custom Profile	<input checked="" type="checkbox"/>
User License	Salesforce		
Description			
Created By	CHANUMOLU PAVAN SRI CHARAN	Modified By	CHANUMOLU PAVAN SRI CHARAN
Created	18/11/2024, 11:57 am	Modified	18/11/2024, 12:00 pm

Page Layouts

Standard Object Layouts	Global	Invoice
Global	Global Layout [View Assignment]	Invoice Layout [View Assignment]
Email Application	Not Assigned [View Assignment]	Invoice Line Layout [View Assignment]
Home Page Layout	DE Default [View Assignment]	Lead Layout [View Assignment]
Account	Account Layout [View Assignment]	Legal Entity Layout [View Assignment]
Alternative Payment Method	Alternative Payment Method Layout [View Assignment]	Location Layout [View Assignment]
Appointment Invitation	Appointment Invitation Layout [View Assignment]	Location Group Layout [View Assignment]
Asset	Asset Layout [View Assignment]	Location Group Assignment Layout [View Assignment]
Asset Action	Asset Action Layout [View Assignment]	Macro Layout [View Assignment]

Object Name	Read	Create	Edit	Delete	View All	Modify All
consumers	<input checked="" type="checkbox"/>	<input checked="" 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"/>
suppliers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

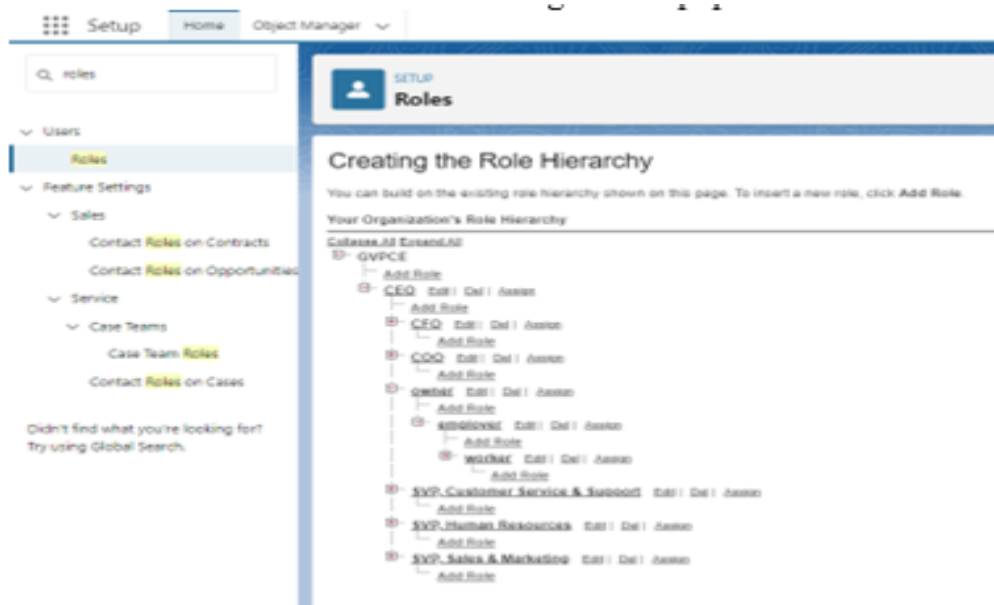
Role & Role

- Go to quick find >> Searchfor Roles >>click on set up roles.
- Go to quick find >> Searchfor Roles >>click on set up roles.
- Click on Expand All and click on add role under whom this role works.
- Give Label as “owner”and Role name gets auto populated. Then click on Save.

Creating employerroles

- Go to quick find >>Search for Roles >>click on set up roles.
- Click plus on CEO role, and clickadd role underowner.
- Give Label as “employer” and Role name gets auto populated. Then click on Save.
- Repeat the same steps, for another role.

- Click plus on CEO role, and clickplus on owner, and clickadd role under employer.
- Give Label as “worker” and Role name gets auto populated. Then click on Save.

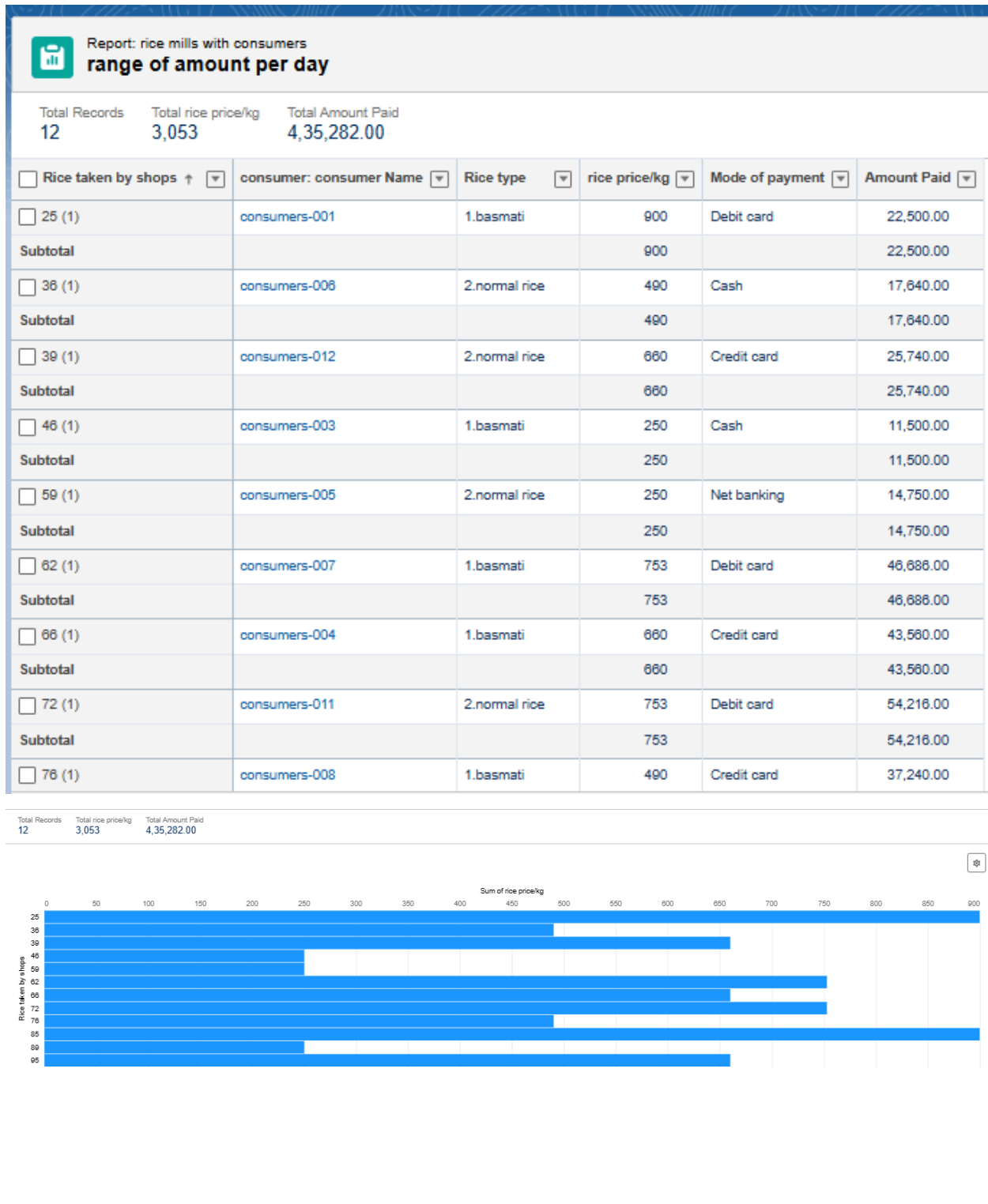


Report

Create Report:

- Go to the app>>click on the reports tab
- Click New Report.
- select for report type, search for “rice mill with consumers” click on it. And click on startreport.
- Their outlinepane 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
- Remove the unnecessary fields.

- Select the fields that are mentioned below in the GROUP ROWS section.
- Rice taken by shops
- Click save and run and save the report as “range of amount per day”.and save it.



5. Testing and Validation:

Creating an Apex Class(ConsumerRecord):

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

Code Snippet :

```
public class ConsumerRecord {  
    public static void sendEmailNotification (List<consumer_  
        c>con){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' +  
                                    'Thank you 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});  
                                }  
        }  
    }  
}
```

Creating an Apex 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 [triggername] on [objectname]( Before/After event){  
    //Trigger Logic  
}
```

Code Snippet :

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

6.KeyScenarios Addressed by Salesforce in the Implementation Project.

- **Sales ProcessAutomation:** Salesforce can automate sales workflows, reducing manual tasks.
- **Customer Support:** Salesforce can provide tools to managecustomer service casesand track resolutions.
- **Data Analytics and Reporting:** Salesforce can generate detailed reports for business insights.

DASHBOARDS:



Resource Management: Salesforce can help allocate resource efficiently based on business needs.

7.Conclusion:

In this project, Salesforce streamlined operational processes by enabling automated data calculations, real-time reporting, and secure access control. Custom widgets provided visual insights into rice sales, production, and revenue, enhancing decision-making. Validation rules ensured data accuracy, while role-based access protected sensitive information. Rollup summaries and formulas reduced manual effort in calculations. Overall, Salesforce optimized business operations, contributing to improved productivity and planning