PROJECT TITLE : CRM APPLICATION FOR WHOLESALE RICE MILL

1. Project Overview :

The **Rice Mill CRM Application** is a comprehensive solution for managing and simplifying rice production and sales tracking. It enables dailyreporting on rice quantity, type, and sales, which is then communicated to the owners. This CRM leverages customer relationship management to enhance customer engagement, streamline operations, and improveefficiency in the rice mill factory. The project aims to delivera user-friendly application that meets the specific operational needs of a rice mill.

2. Objectives :

Business Goals: The Rice Mill CRM Application will automate daily production and revenue reporting, providing owners with clear insights into operational performance. will also implement customer analytics to identify buying trends and popular rice varieties, enabling targetedmarketing and bettercustomer understanding. Additionally, the application will streamline resource allocation by forecasting demandand analyzing sales patterns, helping the business optimize inventory and manage resources efficiently.
Specific Outcomes: The Rice Mill CRM Application will automate daily production and revenue reporting, track customer buying trends, and optimize resource allocation based on demand forecasts and sales patterns,providing clear insightsfor operational efficiency.

3. Salesforce Key Features and ConceptsUtilized :

1. **Reporting and Dashboards:**

    a. Daily Sales and Production Reports:Generates detailed reportson how much rice lis produced & sold each day.
    b. Revenue Reports: Provides insights into daily revenue generated.
    c. Customer Analytics: Trackspopular rice types and most frequent buyers.
    d. Resource Allocation: Helps owners understand data for better resource allocation and future planning.

2. Rollup SummaryField:

a. Purpose: Summarizes data from a child object to a parent object that shares a master- detail relationship.
b. Functions:Can use COUNT,SUM, MIN, and MAX functions

3. Cross-Object FormulaField:

a. Purpose: References fields from anotherobject in Salesforce.
b. Function: Calculates the total amountpayable by multiplying the number of rice units taken by the price per kg.

4. Validation Rules:

a. Purpose: Ensures data integrity by validating user inputs.
b. Is Blank Formula:Verifies if a field is blank and displays an error messageif the rule returns a value of "True."

5. Permission Sets:

a. Wide Defaults (OWD): Definesthe baseline level of access for the most restricted user.
b. Roles and Access:
c. Organization Owner: Can view recordsof employers and workers.
d. Employer: Can view records of workers.

4. Detailed Steps to SolutionDesign :

Activity 1: CreatingDeveloper Account and Account activation.Steps:

a. On the sign up form, enter the following details

b. Click on sign me up after fillingthese.
c. First name & Last name
d. Email
e. Role : Developer
f. Company : CollegeName
g. Country : India
h. Postal Code : pin code

i. Username : should be a combination of your name and company
j. This need not be an actual emailid, you can give anythingin 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 objectsare of two types:

1. **Standard Objects:** Standard objectsare the kind of objectsthat are providedby salesforce.com such as users, contracts, reports, dashboards, etc.

2. **Custom Objects:** Custom objectsare those objectsthat are createdby users. They

supply information that is uniqueand essential to their organization, are the heartof any application, and provide a structure for data.

Steps:

Create Supplier Object

a. From the setup page >>Click on Object Manager>> Click on Create>>Click on Custom Object.
b. Enter the label name>>supplier
c. Plural label name>>supplier
d. Enter Record Name Label and Format
e. Record Name >>supplier Name

f. Data Type>>Text

g. Click on Allow reportsand Track FieldHistory and allowsearch
h. Allow search >>Save.

Create consumer Objects

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

Create rice details Objects

1. Use these display formatfor the rice details
2. label name >>rice details
3. Plural label name >>rice details
4. Display Format >> rice-{000}
5. Starting Number >>1

Activity 3: Tabs

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

d. Select Object(supplier)>> Select the tab style >> Next (Add to profiles page) keep it as default

>> Next (Add to CustomApp) uncheck the include tab .

e. Make sure that the Append tab to users' existingpersonal customizations is checked.
f. Click save.

Activity 4: The Lightning App

Create a Lightning App

g. Go to setuppage >> search“app manager” in quick find >> select“app manager” >> click on New lightning App
h. Fill the app name in app detailsas MY RICE >> Next >> (App option page)keep it as default >> Next >> (Utility Items) keep it as default >> Next.
i. Upload a photo that is related to your app.
j. To add Navigation Item:
k. Select the items (supplier, rice mill, consumer, Rice details) from the search bar and move it using the arrow button >> Next.
l. To Add User Profiles:
m. Search profiles (Systemadministrator) in the search bar >> click on the arrow button

>> save & finish.

Activity 5: Fields

Creatingthe number field in rice details object

n. Go to the setup page >> clickon object manager>> From drop down clickedit for rice details object
o. Click on fields & relationship >> click on New.
p. Select Data type as “Number” and click Next.
q. Given the Field Label as “rice distributed ” and length as “ 5 ”.
r. Field Name will be auto populated, and click on Next- Next >> Save.

Creating Junction Object

Creatingjunction object as rice details with supplier & rice mill

s. Go to the setup page >> clickon object manager>> From drop down clickedit for rice detailsobject
t. Click on fields & relationship - click on New.
u. Select “Master-Detail relationship” as data type and click Next.

v. Select the related object“supplier” and click next.
w. Give Field Label as “supplierName” and click Next
x. Next >> Next >> Save & New.
y. Follow the same steps from 1 to 3.
z. Select the related object “rice mill” and click Next.
aa. Give Field Label as “rice mill 1(one)”and click Next.
ab. Next >> Next >> Save.

Creating a Master-Detail Relationship

ac. Go to the setup page >> click on object manager >>From drop down click edit for consumer object.
ad. Click on fields & relationship >> click on New.
ae. Select “Master-Detail relationship” as data type and click Next.
af. Select the relatedobject “rice mill”.
ag. Give Field Label as “rice mill name” and click Next.
ah. Next >> Next >> Save.

Creating the Roll-up Summary

ai. Go to setup >> click on Object Manager >> type object name (supplier) in search bar >> click on the object.

aj. Now click on “Fields& Relationships” >>New

ak. Select the data type as “Rollupsummary”, and click Next.

al. Give the Field label as “sum of rice distributed”, Field Name will be Auto generated, and click Next.

am. Select the summarized objectas “rice details”.

an. Select the Rollup type as “sum”.

ao. Select the field to aggregate as “rice distributed”, and click Next >>Next >>Save

ap. Follow the same stepsfor the rice mill Objectfrom 1 to 3

aq. Give the Field labelas “rice distributed to shops”, Field Name will be Auto generated, and click Next.

ar. Select the summarized objectas “rice details”.

as. Select the Rollup type as “sum”.

at. Select the field to aggregate as “rice distributed”, and click Next >> Next >> Save.

au. Note: create the field as “ rice taken by shops in kgs” using number datatype in consumer object

av. Follow the same stepsfor the rice mill Objectfrom 1 to 3

aw. Give the Field label as “rice taken”, Field Name will be Auto generated, and click Next.

ax. Select the summarized object as “consumer”.

ay. Select the Rollup type as “sum”.

az. Select the field to aggregate as “rice taken in shops”,and click Next >> Next >>

Save.

Creating the validation rule

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

bb. Click on the validation rule >> click New.

bc. Enter the Rule name as “Phonenumberoremailblankrule ”.

bd. Enter the description as “phone numberand email numbershould not be blank”.

be. Enter the formula as “OR(ISBLANK(phone_number c) , ISBLANK(email c))” and check the syntax.
bf. Under the error messagewrite as “pleasefill in your phone number.”
bg. Select errorlocation “top of page”.
bh. Save the validation rule.

PAGE LAYOUTS

bi. Go to Setup >>Click on Object Manager >>Search for the object (consumer) >> From drop down select the object and click on it.
bj. Click on Page layout>> Click on New.
bk. Select the existing page layout, and give the page layout name as “consumer layout”, and click save.
bl. Drag and drop the section field to consumerdetails and createthe section.
bm. Enter the section name as “Personal details”, - click Ok.
bn. Now drag the fieldsto this sectionthat mentioned , they are
bo. First name, last name , consumername , phone number, email,rice mill name.
bp. Follow the same processfor another two sections as shown above, they are
bq. One section is “ rice details” , drag the fieldsthat are
br. Rice taken by shop,rice type.
bs. Another sectionis “Receipt details”, and drag the fields that are
bt. Mode of payment, Amountpaid.
bu. Then, Click save.

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 defineprofiles by the user'sjob function. For example SystemAdministrator, Developer, Sales Representative.

Owner Profile:

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

bw. Scroll down to CustomObject Permissions and Give accesspermissions for consumers, rice details , rice mill and suppliers objects as mentioned in the below diagram.

bx. Give access and save it.

Employer Profile

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

2. While still on the profile page, then click Edit.
3. Select the Custom App settings as default for the rice mill.

Scrolldown to Custom Object Permissions and Give access permissions for consumer,

rice details, rice mill and suppliers objects as mentioned in the below diagram.

Worker Profile

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

Scroll down to Custom Object Permissions and Give access permissions for consumer, rice details , rice mill and suppliers objects as mentioned in the below

Role & Role Hierarchy Creating owner Role:

d. Go to quick find >> Search for Roles >> click on set up roles.
e. Go to quick find >> Search for Roles >> click on set up roles.
f. Click on Expand All and click on add role under whom this role works.

g. Give Label as “owner”and Role name gets auto populated. Then click on Save. Creating employer roles
h. Go to quick find >>Search for Roles >>click on set up roles.
i. Click plus on CEO role, and click add role under owner.

j. Give Label as “employer” and Role name gets auto populated. Then click on Save.
k. Repeat the same steps,for another role.
l. Click plus on CEO role, and click plus on owner, and click add role under employer.
m. Give Label as “worker”and Role name gets auto populated. Then click on Save.

Report

Create Report:

n. Go to the app >>click on the reportstab
o. Click New Report.
p. select for report type, search for “rice mill with consumers” click on it. And click on start report.
q. Their outlinepane is openedalready, select the fields that are mentioned below in the column section.
r. 1.consumer name
s. 2.rice type
t. 3.rice price/kg
u. 4.mode of payments
v. 5.amount paid
w. Remove the unnecessary fields.
x. Select the fields that are mentionedbelow in the GROUP ROWS section.
y. Rice taken by shops

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

5. Testing and Validation:

Creating an Apex Class(ConsumerRecord):

1. Login to the Salesforce account and navigateto the gear account in the top right corner.
2. Then we can see the Developerconsole. Click on the developerconsole and you will navigateto a new console window.
3. Then you can see many toolsin the Toolbar of the new consolewindow. Click on File,

New and Apex Class.

4. Enter the name of the class(ConsumerRecord) to create a new class file.

Code Snippet :

```
publicclassConsumerRecord{
public staticvoid 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 customerto 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 takinga step back, take a leap of faith and shop with us more,while we provide
with the valuableproducts and offers'+'\n'+'\n'+'\n'+
'Thankyou for buying'+ " +'Here are some of the products that are broughtby 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 trailheadaccount, 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 triggername and the object to be triggered.

Syntax For creating trigger :

The syntax for creatingtrigger 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);

}

}

1. Key Scenarios Addressed by Salesforce in the Implementation Project.

1. Sales ProcessAutomation: Salesforce can automate salesworkflows, reducing manual tasks.
2. Customer Support:Salesforce can providetools to manage customer service cases and track resolutions.
3. Data Analyticsand Reporting: Salesforce can generate detailedreports for business insights.

DASHBOARDS:

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

2. Conclusion:

In this project,Salesforce streamlined operational processes by enablingautomated 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, Salesforceoptimized business operations, contributing to improved productivity and planning.