

# A CRM APPLICATION FOR WHOLESALE RICE MILL

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

Features and Functionality:

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

**A rollup summary field:** This is a field that summarizes data from a child object to a parent object that shares a master-detail relationship. Rollup summary fields can use the COUNT, SUM, MIN, and MAX functions. For example, you could use a rollup summary field to display the total value (amount of rice supplied ) from rice details on a related supplier.

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

**Validation rules:** validation rules also include an error message to display to the user when the rule returns a value of "True" due to an invalid value. so, In this project i gave Isblank formula. Isblank formula is used to verify whether it is blank it shows error.

**Permission sets:** Organization Wide Defaults(OWD) in salesforce is the baseline level of access that the most restricted user should have. Organizational Wide Defaults are used to restrict access. But in our case we created roles and given the roles in such a way that the owner can see employer and worker records, and the employer can see the worker records.

# Introduction to Salesforce

**Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers. Salesforce has everything you need to run your business from anywhere. Using standard products and features, you can manage relationships with prospects and customers, collaborate and engage with employees and partners, and store your data securely in the cloud.**

## Task -1 - Object

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

Salesforce objects are of two types:

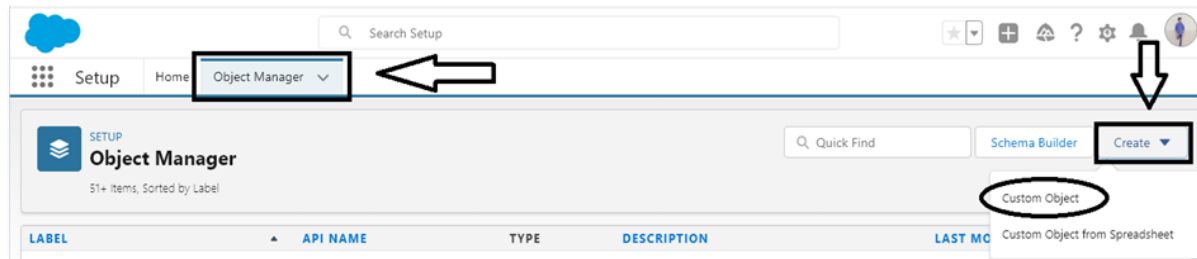
1. Standard Objects: Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.
2. Custom Objects: Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization.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

To Navigate to Setup page:

Click on gear icon -click setup.

To create an object:

1. From the setup page - Click on Object Manager -Click on Create - Click on Custom Object.



2. On Custom object defining page:
3. Enter the label name, plural label name, click on Allow reports, Allow search.

4. Click on Save.

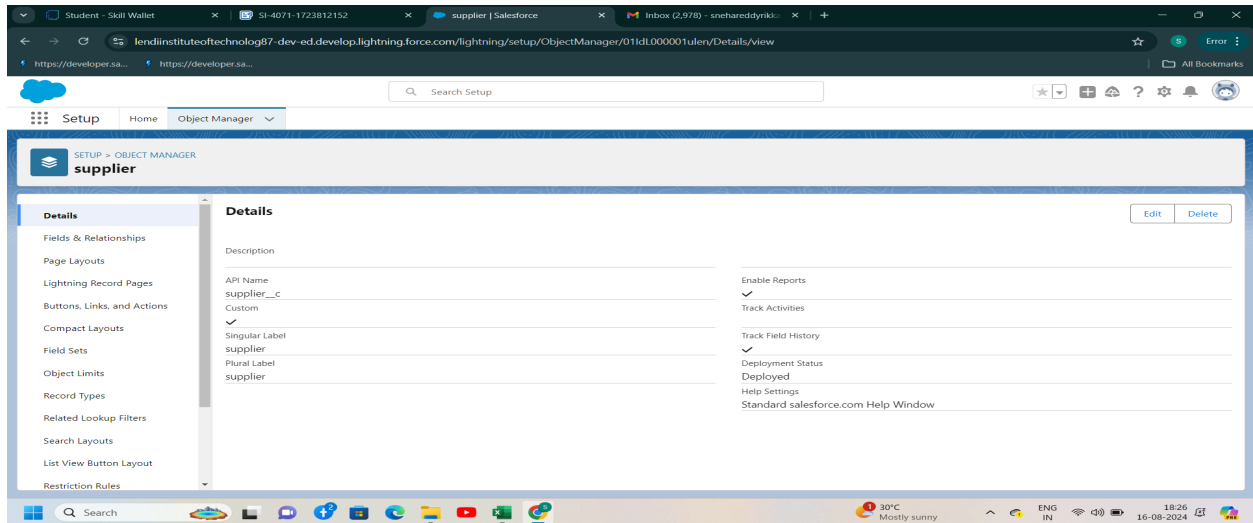
## Create Supplier Object

To create an object:

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

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

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



## Create Rice mill Object

To create an object:

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

Browser tabs: SI-4071-1723812152, rice mill | Salesforce, Student - Skill Wallet. Address bar: lendlinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01ldL000001ulq5/Details/view. Search Setup.

Setup > OBJECT MANAGER  
**rice mill**

**Details** [Edit] [Delete]

Description	
API Name	rice_mill__c
Custom	<input checked="" type="checkbox"/>
Singular Label	rice mill
Plural Label	rice mills
Enable Reports	<input checked="" type="checkbox"/>
Track Activities	<input checked="" type="checkbox"/>
Track Field History	<input checked="" type="checkbox"/>
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

Left sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules.

## consumer Objects

Browser tabs: SI-4071-1723812152, consumer | Salesforce, Student - Skill Wallet. Address bar: lendlinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01ldL000001umPZ/Details/view. Search Setup.

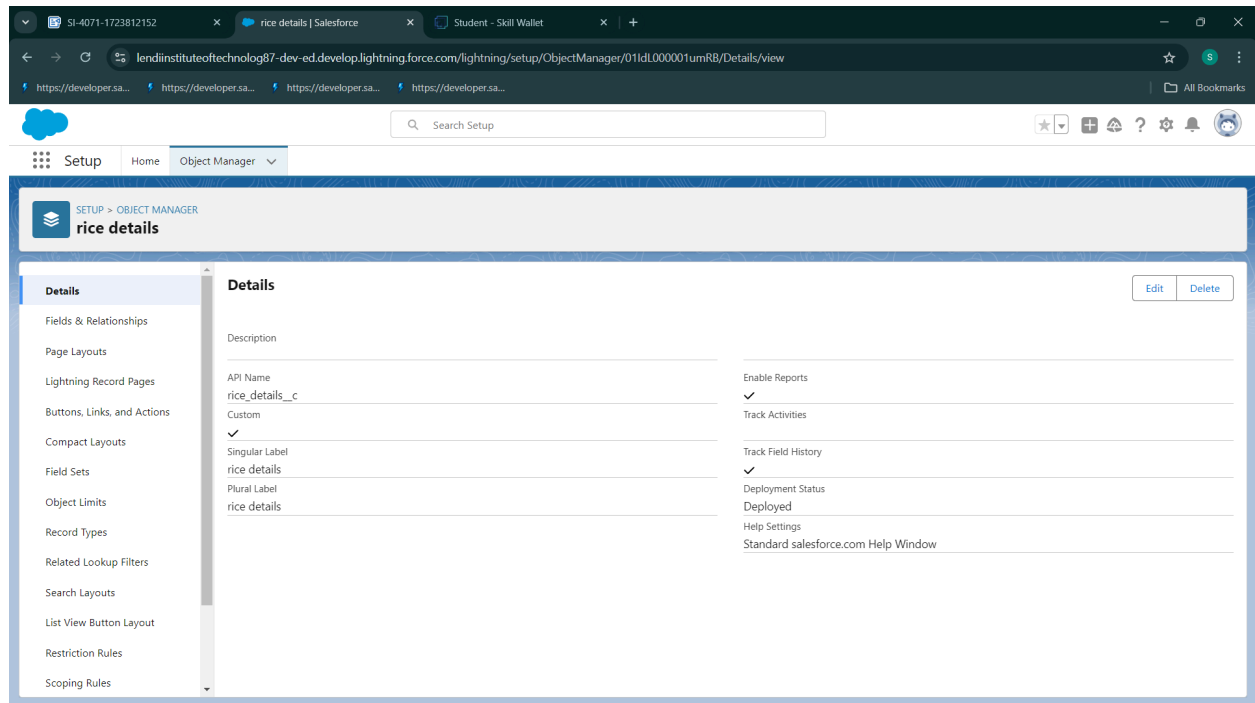
Setup > OBJECT MANAGER  
**consumer**

**Details** [Edit] [Delete]

Description	
API Name	consumer__c
Custom	<input checked="" type="checkbox"/>
Singular Label	consumer
Plural Label	consumers
Enable Reports	<input checked="" type="checkbox"/>
Track Activities	<input checked="" type="checkbox"/>
Track Field History	<input checked="" type="checkbox"/>
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

Left sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules.

# Create rice details Objects



## Task-2 Tabs

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

Types of Tabs:

### Custom Tabs

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

### Web Tabs

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

## Visualforce Tabs

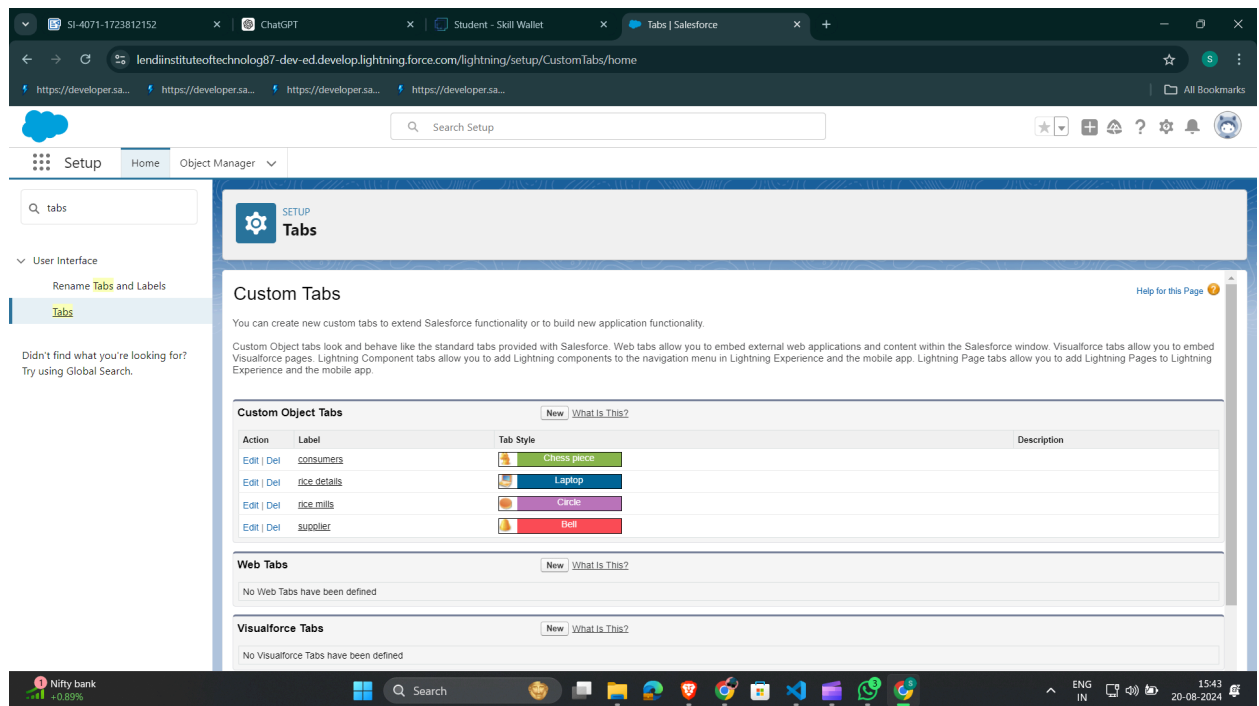
Visualforce Tabs are custom tabs that display a Visualforce page. Visualforce tabs look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

## Lightning Component Tabs

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

## Lightning Page Tabs

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

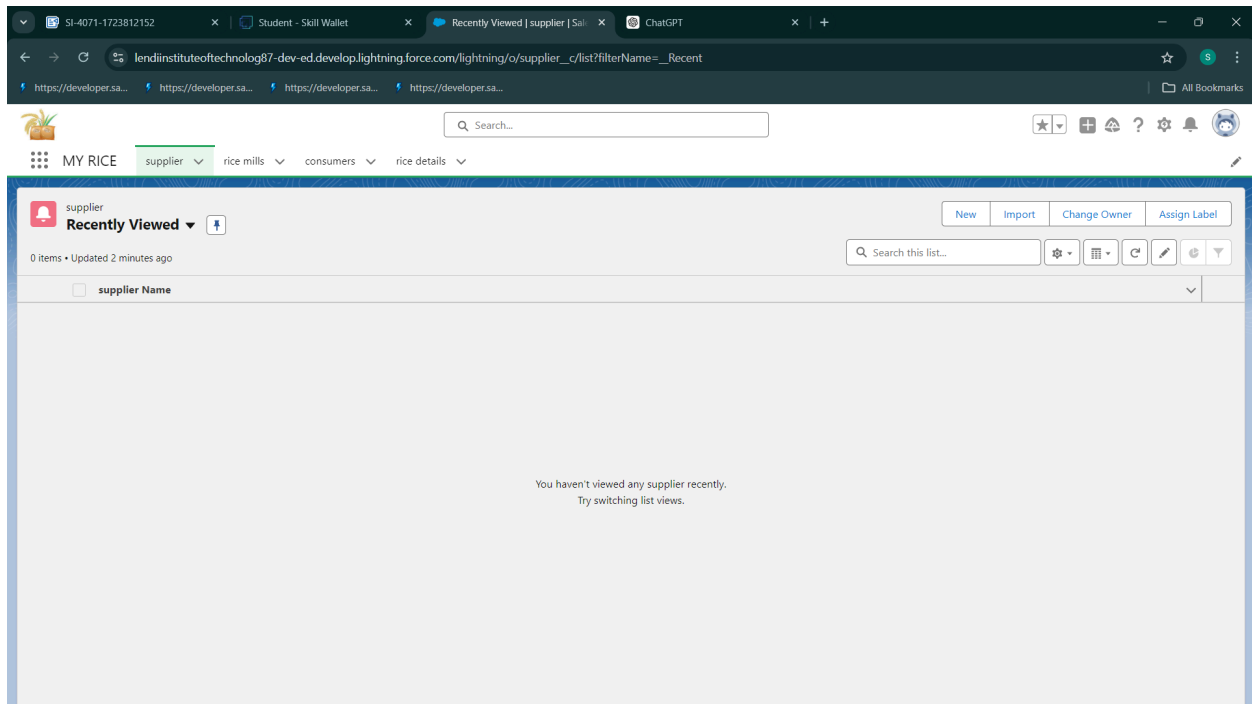


## Task-3 The Lightning App

An app is a collection of items that work together to serve a particular function. In

Lightning Experience, Lightning apps give your users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar.

Lightning apps let you brand your apps with a custom color and logo. You can even include a utility bar and Lightning page tabs in your Lightning app. Members of your org can work more efficiently by easily switching between apps.



## Task-4 Fields

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

Types of Fields

1. Standard Fields
2. Custom Fields

Standard Fields:

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



common in every Salesforce application. They are,

1. Created By
2. Owner
3. Last Modified
4. Field Made During object Creation

Custom Fields:

On the other side of the coin, Custom Fields are highly flexible, and users can change them according to requirements. Moreover, each organizer or company can use them if necessary. It means you need not always include them in the records, unlike Standard fields. Hence, the final decision depends on the user, and he can add/remove Custom Fields of any given form.

## Creating the number field in rice details object

### fields and relationship : in rice detail

The screenshot shows the Salesforce Setup interface for the 'rice details' object. The 'Fields & Relationships' section is active, displaying a table of fields. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status. The fields listed are:

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

FIELDS AND RELATIONSHIP:SUPPLIER:

SI-4071-1723812152 x Student - Skill Wallet x Recently Viewed | supplier | Sai x supplier | Salesforce x ChatGPT

lendlinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01ldl000001ulcn/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

supplier

Details

Fields & Relationships

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

field and relationship in consumer:

SI-4071-1723812152 x Student - Skill Wallet x Recently Viewed | supplier | Sai x consumer | Salesforce x ChatGPT

lendlinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01ldl000001umPZ/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

consumer

Details

Fields & Relationships

13 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount Paid	Amount_Paid__c	Formula (Number)		
consumer Name	Name	Text(80)		✓
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
First Name	First_Name__c	Text(50)		
Last Modified By	LastModifiedById	Lookup(User)		
Last Name	Last_Name__c	Text(50)		
Mode of Payment	Mode_of_Payment__c	Picklist		
Phone Number	Phone_Number__c	Phone		
rice mill name	rice_mill_name__c	Master-Detail(rice mill)		✓
Rice Taken by Shops	Rice_Taken_by_Shops__c	Number(3, 0)		
rice taken by shops in kgs	rice_taken_by_shops_in_kgs__c	Number(18, 0)		
Rice Type	Rice_Type__c	Picklist		

fields and relationship in rill mill:

Setup > OBJECT MANAGER

**rice details**

Details

**Fields & Relationships**

6 Items, Sorted by Field Label

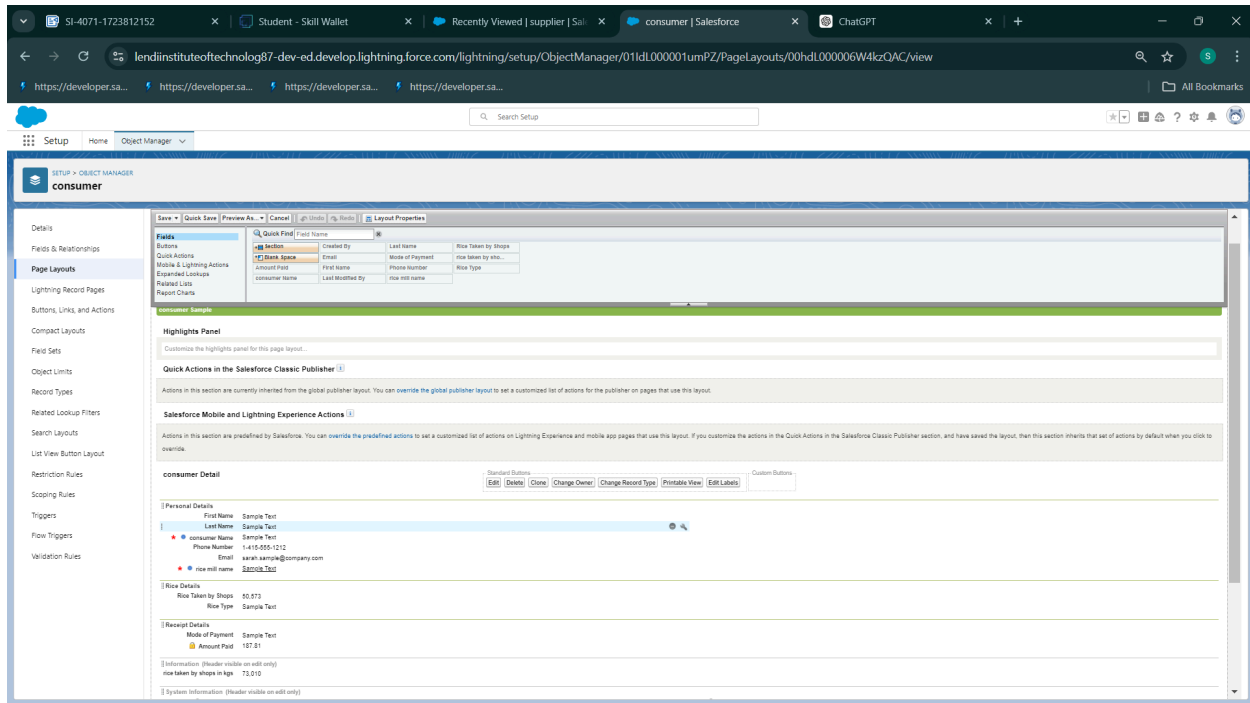
Quick Find

New Deleted Fields Field Dependencies Set History Tracking

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

## Task-5 Page layouts

Page Layout in Salesforce allows us to customize the design and organize detail and edit pages of records in Salesforce. Page layouts can be used to control the appearance of fields, related lists, and custom links on standard and custom objects' detail and edit pages.



## Task-6 Profiles

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

Types of profiles in salesforce

### 1. Standard profiles:

By default salesforce provides below standard profiles.

- Contract Manager
- Read Only
- Marketing User
- Solutions Manager
- Standard User
- System Administrator.

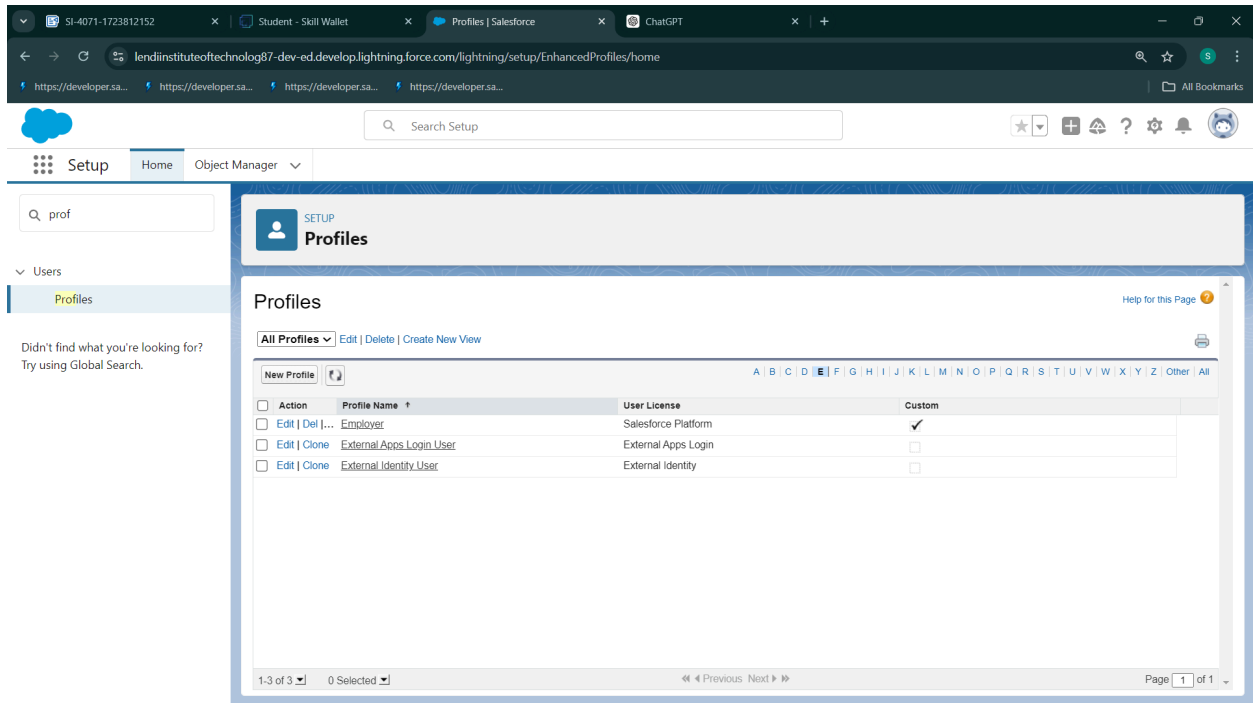
We cannot deleted standard ones

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

## 2. Custom Profiles:

Custom ones defined by us.

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



The screenshot shows the Salesforce Setup interface for Profiles. The browser address bar displays the URL: `lendiinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/setup/EnhancedProfiles/home`. The left sidebar contains the navigation menu with 'Setup' selected, and a search bar with 'prof' entered. Below the search bar, the 'Profiles' link is highlighted. The main content area is titled 'Profiles' and includes a 'New Profile' button and a table of existing profiles.

Action	Profile Name	User License	Custom
<input type="checkbox"/> Edit   Del   ...	Employer	Salesforce Platform	<input checked="" type="checkbox"/>
<input type="checkbox"/> Edit   Clone	External Apps Login User	External Apps Login	<input type="checkbox"/>
<input type="checkbox"/> Edit   Clone	External Identity User	External Identity	<input type="checkbox"/>

At the bottom of the table, it shows '1-3 of 3' and '0 Selected'. The page number 'Page 1 of 1' is also visible.

The screenshot shows the Salesforce Setup interface for Profiles. The left sidebar has a search bar with 'prof' and a 'Profiles' link under the 'Users' section. The main content area is titled 'Profiles' and includes a 'New Profile' button and a table of existing profiles.

Action	Profile Name	User License	Custom
<a href="#">Edit</a>   <a href="#">Del</a>   ...	owner	Salesforce	<input checked="" type="checkbox"/>

At the bottom, it shows '1-1 of 1' profiles and '0 Selected'.

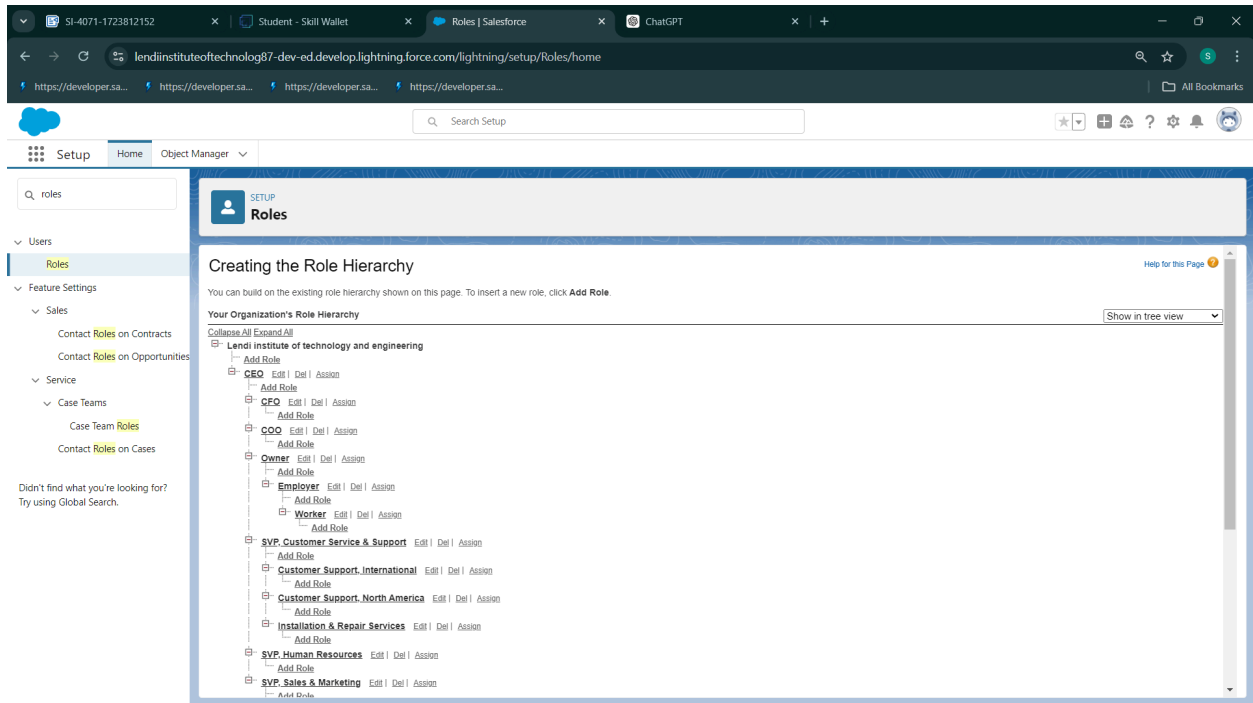
This screenshot shows the same Salesforce Setup interface but with three profiles listed in the table.

Action	Profile Name	User License	Custom
<a href="#">Edit</a>   <a href="#">Clone</a>	Work.com Only User	Work.com Only	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   ...	Worker	Salesforce Platform	<input checked="" type="checkbox"/>

The bottom status bar now shows '1-2 of 2' profiles and '0 Selected'.

## Task-7 Role & Role Hierarchy

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



## Task-8 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.

Screenshot of the Salesforce Setup page for Users management.

The page shows the "All Users" section under the "Users" tab. The left sidebar lists navigation options: Users, Permission Set Groups, Permission Sets, Profiles, Public Groups, Queues, Roles, User Management Settings, and Feature Settings (Data.com, Prospector Users).

The main content area displays a table of users with columns: Action, Full Name, Alias, Username, Role, Active, and Profile. The table lists several users, including Chatter Expert, Pavan Teja Veesam Parasuram, raj\_lagu, ram\_ram, User\_Integration, User\_Security, and y\_vicky.

Buttons for "New User", "Reset Password(s)", and "Add Multiple Users" are visible at the top and bottom of the table.

## Task-9 Report:

Screenshot of the Salesforce Setup page for Consumers management.

The page shows the "Recently Viewed" section under the "Consumers" tab. The left sidebar lists navigation options: MY RICE, supplier, rice mills, consumers, and rice details.

The main content area displays a table of consumers with columns: consumer Name, and a dropdown menu. The table lists 10 items, including Mahesh rao, Madhu povara, Lavanya Sambra, Srinivasa godiva, nakshatra, Arjuna Varna, Nanika, Rowanj, mahib, and kumrajha.

Buttons for "New", "Import", and "Assign Label" are visible at the top right of the table.



SI-4071-1723812152Student - Skill WalletReports | SalesforceChatGPT

lendiinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/o/Report/home?queryScope=miru

https://developer.sa...https://developer.sa...https://developer.sa...https://developer.sa...

MY RICEsupplierrice millskonsumersrice detailsReports

Recent

1 item

Search recent reports...

New ReportNew Folder

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	Range of Amount per Day		Estimated Rice Per Day	Rikka Sneha latha reddy	15/8/2024, 6:48 pm	✓
Created by Me						
Private Reports						
Public Reports						
All Reports						
FOLDERS						
All Folders						
Created by Me						
Shared with Me						
FAVORITES						
All Favorites						

34°CPartly sunny16:1520-08-2024

SI-4071-1723812152Student - Skill WalletRange of Amount per Day | SalesForceChatGPT

lendiinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/r/Report/00OdL0000051DzRUAU/view?queryScope=userFolders

https://developer.sa...https://developer.sa...https://developer.sa...https://developer.sa...

MY RICEsupplierrice millskonsumersrice detailsRange of Amount per Day

Report: rice mills with consumers

Range of Amount per Day

Enable Field Editing

Search

Add Chart

Filter

Copy

Edit

Total Records

Total rice price/kg

Total Amount Paid

10

21

22,633.00

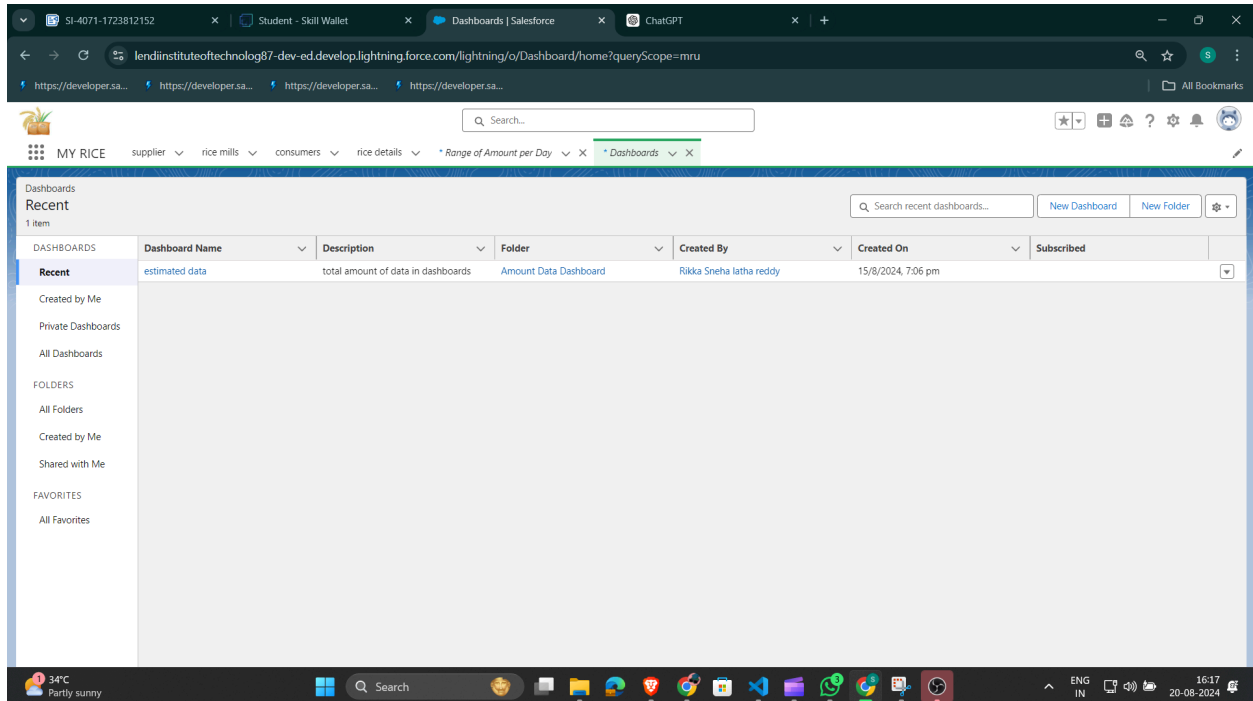
☐ rice distributed to shops

consumer: ID	Rice Type	rice price/kg	Mode of Payment	Amount Paid
<input type="checkbox"/> 0 (10)				
a02dL00000484sd	Normal Rice	11	UPI	11.00
a02dL00000486xq	Basmati	10	UPI	2,500.00
a02dL00000489O3	Basmati	11	Debit Card	22.00
a02dL000004895K	Normal Rice	11	Net Banking	2,750.00
a02dL0000048BKT	Normal Rice	11	Net Banking	3,850.00
a02dL0000048CTO	Normal Rice	10	Credit Card	2,500.00
a02dL0000048DJQ	Normal Rice	10	Debit Card	2,500.00
a02dL0000048EVB	Normal Rice	10	UPI	3,500.00
a02dL0000048Fnp	Normal Rice	10	Net Banking	2,500.00
a02dL0000048Gnx	Basmati	10	Credit Card	2,500.00
Subtotal		21		22,633.00
Total (10)		21		22,633.00

34°CPartly sunny16:1620-08-2024

# Task-10 Dashboards

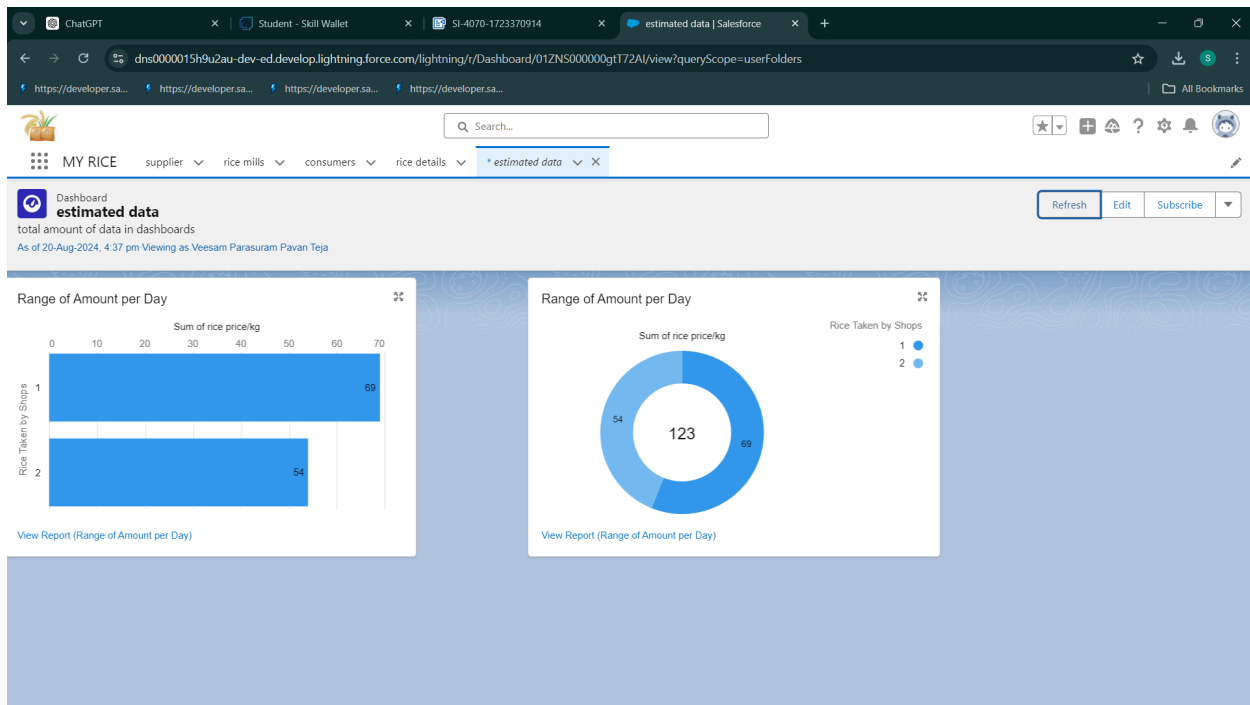
Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.



The screenshot shows the Salesforce Dashboards interface. The browser address bar displays the URL: `lendlinstituteoftechnolog87-dev-ed.develop.lightning.force.com/lightning/o/Dashboard/home?queryScope=mrn`. The page header includes a search bar and navigation tabs for "MY RICE", "supplier", "rice mills", "consumers", "rice details", and "Range of Amount per Day". The main content area is titled "Dashboards" and shows a list of recent dashboards.

DASHBOARDS	Dashboard Name	Description	Folder	Created By	Created On	Subscribed
Recent	estimated data	total amount of data in dashboards	Amount Data Dashboard	Rikka Sheha latha reddy	15/8/2024, 7:06 pm	

The left sidebar contains navigation options: "Dashboards", "Recent", "Created by Me", "Private Dashboards", "All Dashboards", "FOLDERS", "All Folders", "Created by Me", "Shared with Me", "FAVORITES", and "All Favorites". The bottom status bar shows the temperature as 34°C, the time as 16:17, and the date as 20-08-2024.



## Task-11 APEX

Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Lightning platform server in conjunction with calls to the Lightning Platform? API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

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

### Creating Classes :

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

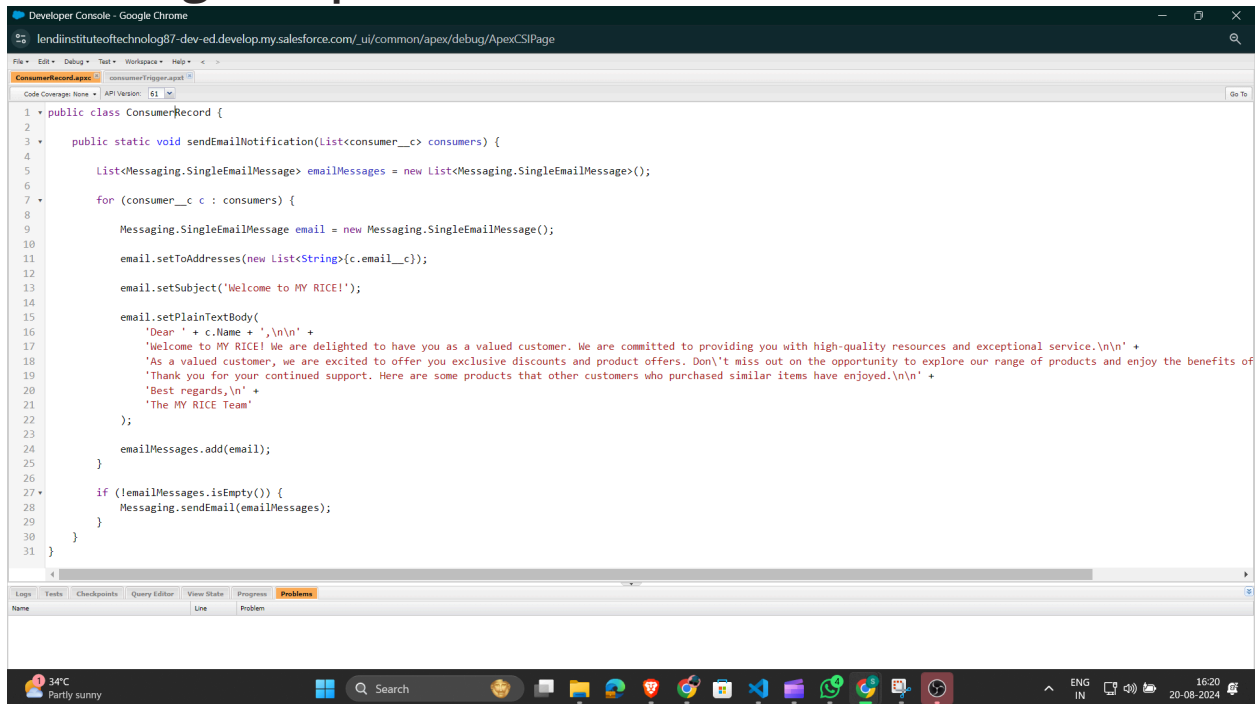
- **Class:**

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

- **Object**

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

## Creating an Apex Class(ConsumerRecord)



The screenshot displays the Salesforce Developer Console in Google Chrome. The browser address bar shows the URL: `lendlinstituteoftechnology87-dev-ed.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The console title is "Developer Console - Google Chrome". The main editor shows the Apex class `ConsumerRecord` with the following code:

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

The bottom of the console shows tabs for "Logs", "Tests", "Checkpoints", "Query Editor", "View State", "Progress", and "Problems". The "Problems" tab is active, showing a table with columns "Name", "Line", and "Problem". The Windows taskbar at the bottom indicates a temperature of 34°C, "Partly sunny" weather, and the date 20-08-2024.

## Creating an Apex Trigger

Developer Console - Google Chrome

lendlinstituteoftechnolog87-dev-ed.develop.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

File Edit Debug Test Workspace Help

ConsumerRecord.apex consumerTrigger.apex

Code Coverage: None API Version: 61 Go To

```
1 trigger consumerTrigger on consumer__c (after insert) {
2
3     if (Trigger.isAfter && Trigger.isInsert) {
4
5         ConsumerRecord.sendEmailNotification(Trigger.new);
6     }
7 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

Name	Line	Problem
------	------	---------

34°C Partly sunny

Search

ENG IN 16:18 20-08-2024





