

# Project: “Garage Management System”

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## 1. Project Overview:

The **Garage Management System** project is designed to streamline and enhance the process of managing a garage's customer appointments, vehicle services, and invoicing. This solution will address the common challenges in garage management, such as tracking service history, managing appointments, and generating invoices. By leveraging Salesforce's robust platform, we aim to improve operational efficiency, ensure data accuracy, and enhance the overall customer experience. This project supports the long-term goals of providing high-quality, timely service to customers and increasing business productivity.

## 2. Objectives:

### Business Goals:

- Enhance operational efficiency by automating scheduling, invoicing, and service management.
- Improve customer satisfaction through timely reminders and transparent service history.
- Enable data-driven insights into service trends, top customers, and revenue through reporting.

### Specific Outcomes:

- **Centralized Customer and Vehicle Records:** A system where all customer and vehicle details are stored and easily accessible.
- **Automated Appointment Scheduling and Reminders:** Ensuring timely notifications to customers and mechanics about upcoming appointments.
- **Service and Invoice Tracking:** Keep records of services performed and generate invoices automatically upon service completion.
- **Real-time Reporting:** Enable the garage to view reports on total revenue, service history per customer, and vehicle service trends.

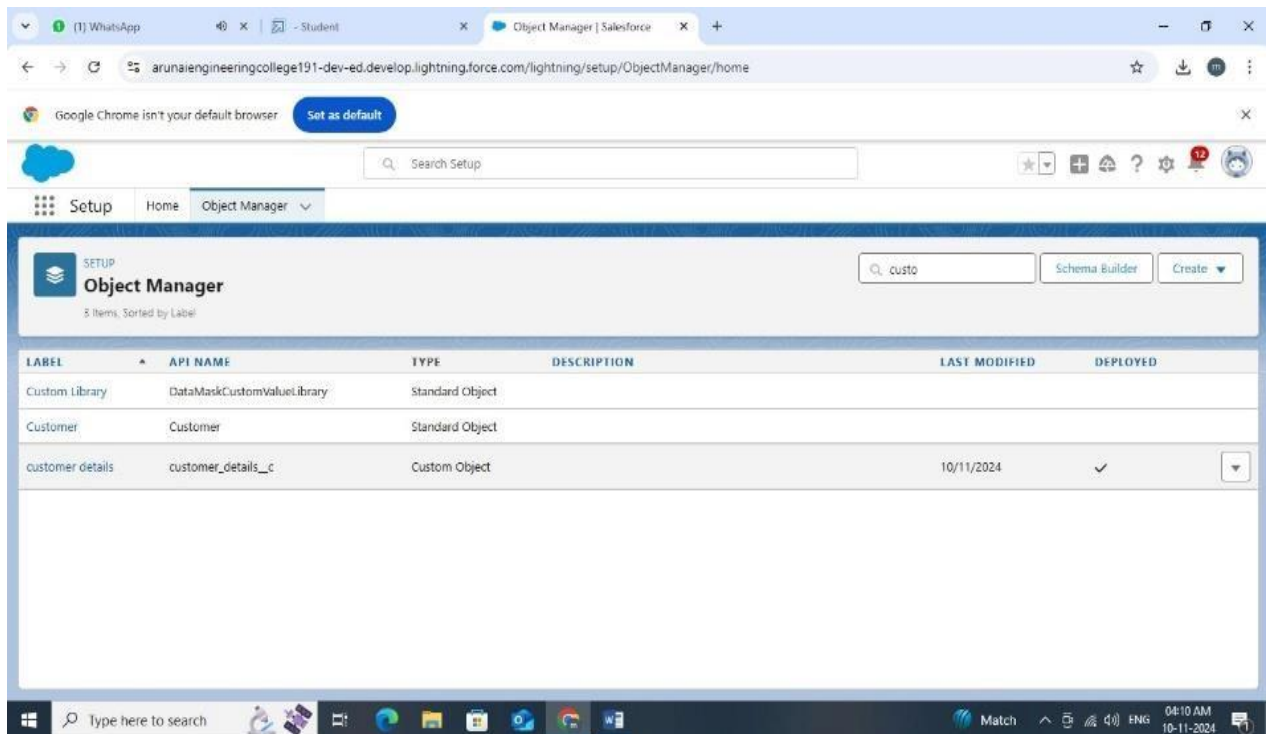
## 3. Salesforce Key Features and Concepts Utilized:

- **Custom Objects:** Created objects for Customer, Vehicle, Appointment, Service, and Invoice.
- **Lookup Relationships:** Connected objects (e.g., Customer to Vehicle, Vehicle to Appointment) for relational data management.

- **Salesforce Flow:** Automations for appointment reminders, invoice generation, and status updates.
- **Validation Rules:** Ensuring correct data entry, such as valid appointment dates and VIN formats.
- **Reports and Dashboards:** For tracking performance, revenue, and service metrics.
- **Page Layouts and Record Types:** Customized layouts for different users (e.g., mechanics vs. administrative staff)

## 4.Detailed Steps to Solution Design: 4.To create an object

### a. Customer details:



## b. Appointment:

The screenshot shows the Salesforce Object Manager interface. The search bar contains 'appoi'. The table lists various objects, with 'Appointment' highlighted. The 'Appointment' object is a Custom Object, last modified on 10/11/2024, and is deployed (indicated by a checkmark).

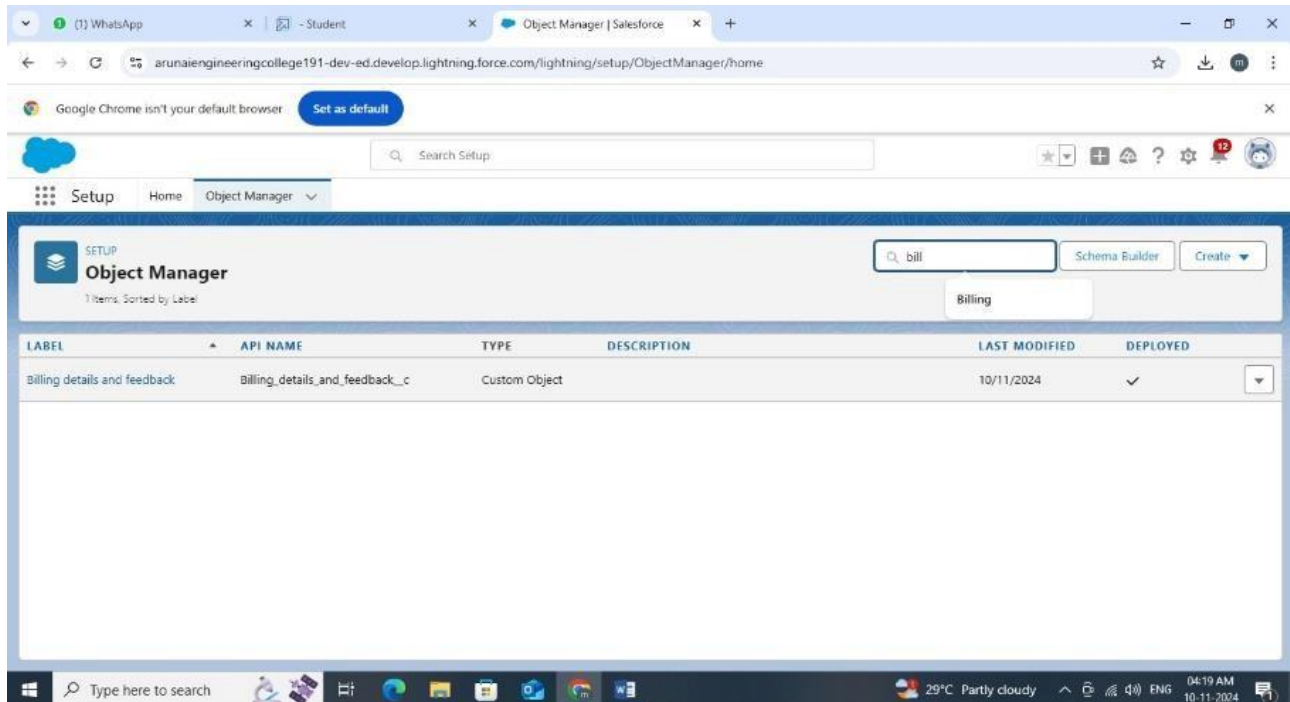
Address	Address	Standard Object
Alternative Payment Method	AlternativePaymentMethod	Standard Object
API Anomaly Event Store	ApiAnomalyEventStore	Standard Object
Appointment	Appointment__c	Custom Object
Appointment Category	AppointmentCategory	Standard Object
Appointment Invitation	AppointmentInvitation	Standard Object
Appointment Invitee	AppointmentInvitee	Standard Object
Appointment Topic Time Slot	AppointmentTopicTimeSlot	Standard Object
Asset	Asset	Standard Object

## c. Service records:

The screenshot shows the Salesforce Object Manager interface. The search bar contains 'service re'. The table lists four objects, with 'Service records' highlighted. The 'Service records' object is a Custom Object, last modified on 10/11/2024, and is deployed (indicated by a checkmark).

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Service records	Service_records__c	Custom Object		10/11/2024	✓
Service Resource	ServiceResource	Standard Object			
Service Resource Skill	ServiceResourceSkill	Standard Object			
Waitlist Service Resource	WaitlistServiceResource	Standard Object			

## d. Billing Details and Feedback:

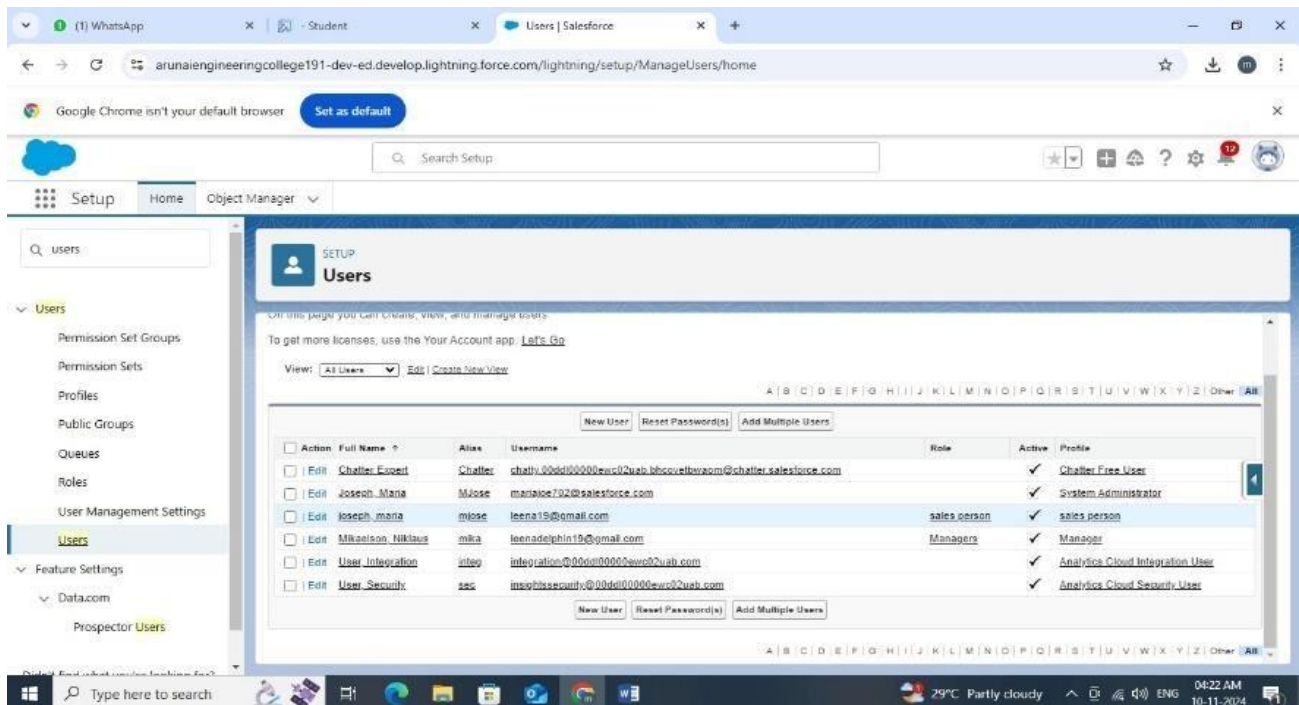


The screenshot shows the Salesforce Object Manager interface. The browser address bar displays the URL: `arunaengineeringcollege191-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/home`. The page title is "Object Manager" with a subtitle "1 Items, Sorted by Label". A search bar contains the text "bill". A "Billing" filter is applied. The table below lists the custom object:

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Billing details and feedback	Billing_details_and_feedback_c	Custom Object		10/11/2024	✓

## 5.Tab:

### Create a Custom tab:



The screenshot shows the Salesforce Users management page. The browser address bar displays the URL: `arunaengineeringcollege191-dev-ed.develop.lightning.force.com/lightning/setup/ManageUsers/home`. The page title is "Users". A search bar contains the text "users". The left sidebar shows the "Users" section selected. The main content area displays a table of users:

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatter_00dd0000000000000000000000000000@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	Joseph Mana	MJose	manaioe792@salesforce.com		✓	System Administrator
<input type="checkbox"/> Edit	Joseph mana	mJose	leena19@gmail.com	sales person	✓	sales person
<input type="checkbox"/> Edit	Mikaelson Niklaus	mika	leenadelphin19@gmail.com	Managers	✓	Manager
<input type="checkbox"/> Edit	User Integration	intep	integration@00dd0000000000000000000000000000@salesforce.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sec	maybtecurity@00dd0000000000000000000000000000@salesforce.com		✓	Analytics Cloud Security User

## 6. For lightning apps:

The screenshot shows the Salesforce Lightning Experience App Manager interface. The left sidebar contains a navigation menu with options like 'Setup', 'Home', and 'Object Manager'. The main content area displays a list of 24 items, sorted by App Name. The table includes columns for App Name, Developer Name, Description, Last Modified, App Type, and Visibility. The table lists various apps such as Data Manager, Digital Experiences, Garage Management, Lightning Usage App, Marketing CRM Cloud, Platform, Queue Management, Sales, and Sales LightningSales.

App Name	Developer Name	Description	Last Modified	App Type	Visibility
Data Manager	DataManager	Use Data Manager to view limits, monitor usage, and manage rec...	06/11/2024, 10:33 am	Lightning	✓
Digital Experiences	SalesforceCMS	Manage content and media for all of your sites.	06/11/2024, 10:33 am	Lightning	✓
Garage Manage...	Garage_Manageme...		10/11/2024, 2:09 pm	Lightning	✓
Lightning Usage App	LightningInstrumen...	View Adoption and Usage Metrics for Lightning Experience	06/11/2024, 10:33 am	Lightning	✓
Marketing CRM Cla...	Marketing	Track sales and marketing efforts with CRM objects.	06/11/2024, 10:33 am	Classic	✓
Platform	Platform	The fundamental Lightning Platform	06/11/2024, 10:33 am	Classic	✓
Queue Management	QueueManagement	Create and manage queues for your business.	06/11/2024, 10:33 am	Lightning	✓
Sales	Sales	The world's most popular sales force automation (SFA) solution	06/11/2024, 10:33 am	Classic	✓
Sales	LightningSales	Manage your sales process with accounts, leads, opportunities, an...	06/11/2024, 10:33 am	Lightning	✓

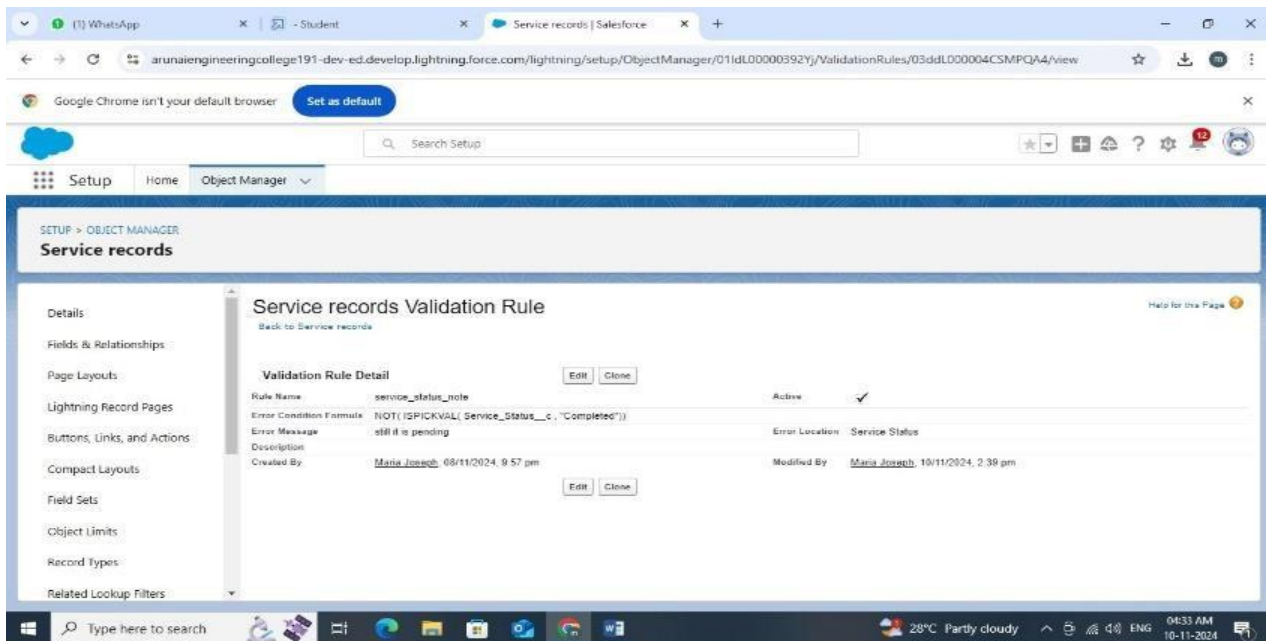
## 7. For customer details:

The screenshot shows the Salesforce Lightning Experience Object Manager interface for 'customer details'. The left sidebar contains a navigation menu with options like 'Details', 'Fields & Relationships', 'Page Layouts', 'Lightning Record Pages', 'Buttons, Links, and Actions', 'Compact Layouts', 'Field Sets', 'Object Limits', 'Record Types', and 'Related Lookup Filters'. The main content area displays a table of fields and relationships for the 'customer details' object. The table includes columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The table lists fields such as Created By, Customer Name, Gmail, Last Modified By, Owner, and phone number.

Field Label	Field Name	Data Type	Controlling Field	Indexed
Created By	CreatedById	Lookup(User)		
Customer Name	Name	Text(80)		✓
Gmail	Gmail_c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
phone number	phone_number_c	Number(18, 0)		



## a. Service records:

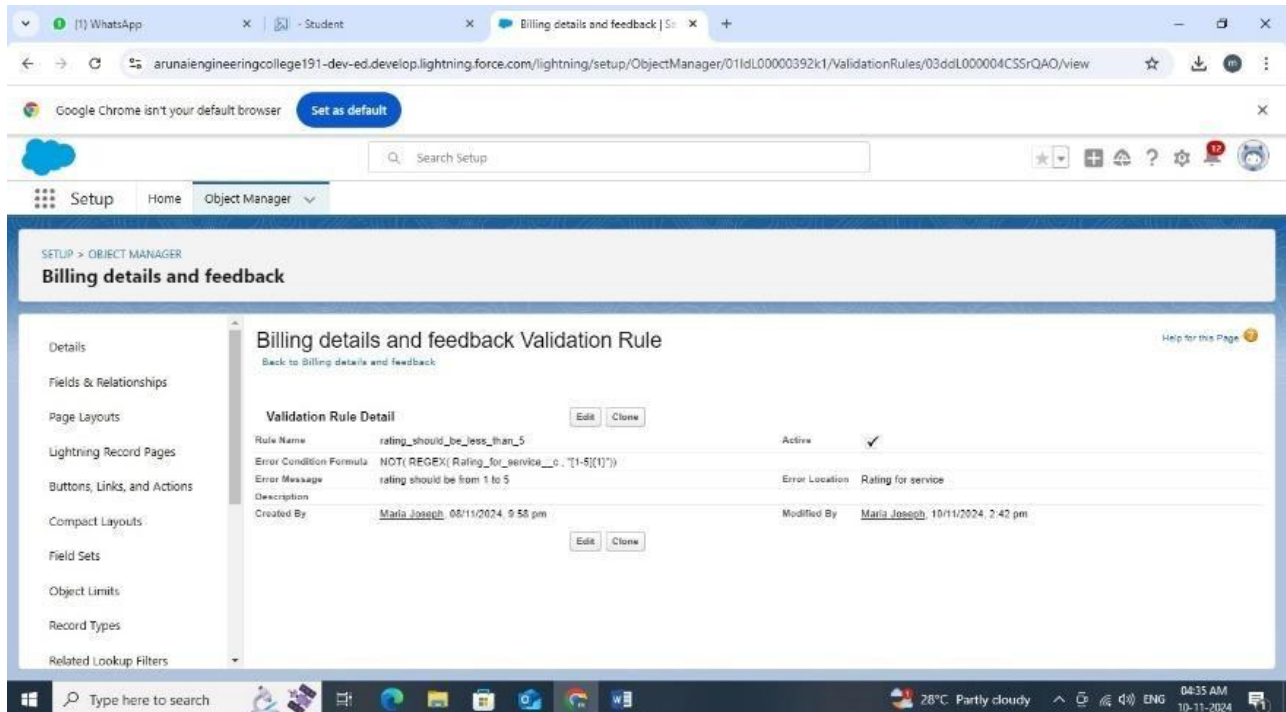


The screenshot shows the Salesforce Setup interface for a Validation Rule named "Service records Validation Rule". The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area displays the "Validation Rule Detail" for the "Service records Validation Rule". The rule is active and has the following details:

Field	Value
Rule Name	service_status_note
Error Condition Formula	NOT( ISPICKVAL( Service_Status__c , "Completed" ) )
Error Message	still it is pending
Description	
Created By	Maria Joseph, 08/11/2024, 9:57 pm
Modified By	Maria Joseph, 10/11/2024, 2:39 pm

The bottom of the screen shows the Windows taskbar with the search bar, taskbar icons, and system tray showing the date and time as 04:33 AM on 10-11-2024.

## b. Billing details and feedback:

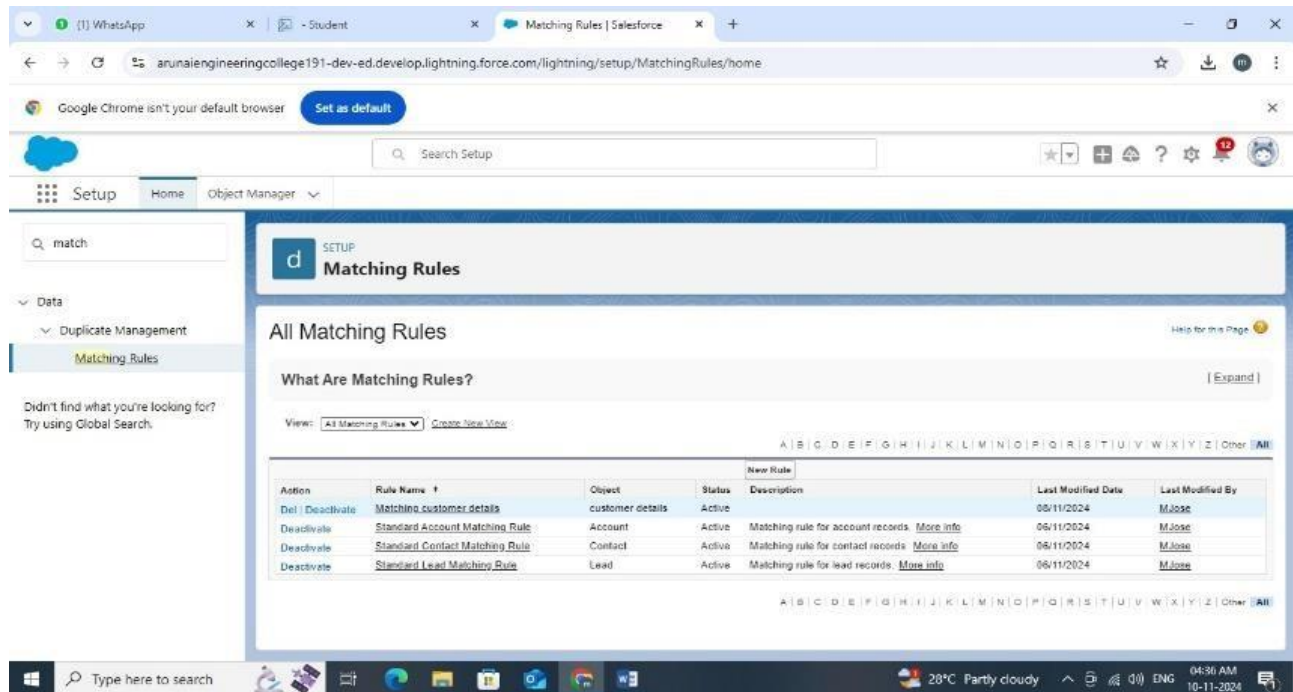


The screenshot shows the Salesforce Setup interface for a Validation Rule named "Billing details and feedback Validation Rule". The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area displays the "Validation Rule Detail" for the "Billing details and feedback Validation Rule". The rule is active and has the following details:

Field	Value
Rule Name	rating_should_be_less_than_5
Error Condition Formula	NOT( REGEX( Rating_for_service__c , "[1-5]{1}" ) )
Error Message	rating should be from 1 to 5
Description	
Created By	Maria Joseph, 08/11/2024, 9:58 pm
Modified By	Maria Joseph, 10/11/2024, 2:42 pm

The bottom of the screen shows the Windows taskbar with the search bar, taskbar icons, and system tray showing the date and time as 04:35 AM on 10-11-2024.

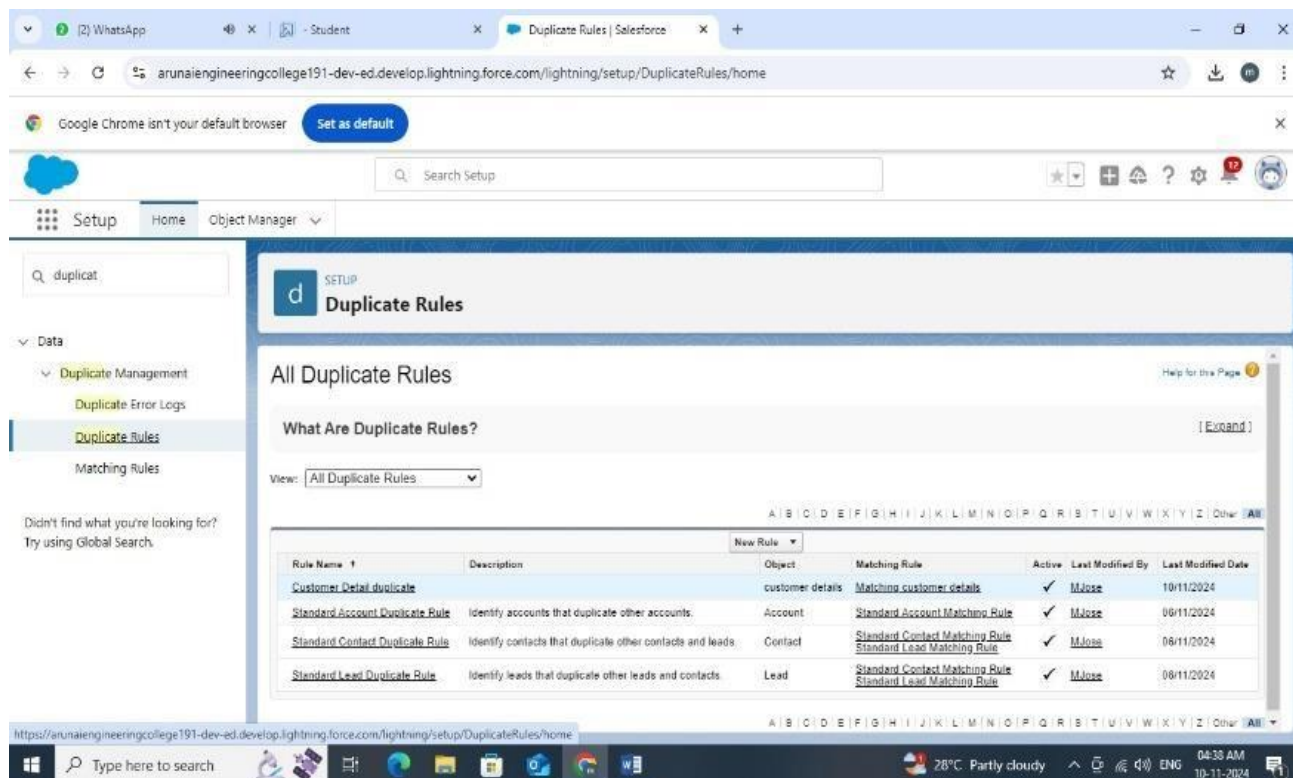
## 8. Matching rule:



The screenshot shows the Salesforce Matching Rules setup page. The browser address bar displays the URL: `arunaengineeringcollege191-dev-ed.develop.lightning.force.com/lightning/setup/MatchingRules/home`. The page title is "Matching Rules". The left sidebar shows the navigation menu with "Matching Rules" selected. The main content area is titled "All Matching Rules" and includes a "What Are Matching Rules?" section. Below this, there is a table listing existing matching rules.

Action	Rule Name	Object	Status	Description	Last Modified Date	Last Modified By
Del / Deactivate	Matching customer details	customer details	Active		06/11/2024	M.Jose
Deactivate	Standard Account Matching Rule	Account	Active	Matching rule for account records. <a href="#">More info</a>	06/11/2024	M.Jose
Deactivate	Standard Contact Matching Rule	Contact	Active	Matching rule for contact records. <a href="#">More info</a>	06/11/2024	M.Jose
Deactivate	Standard Lead Matching Rule	Lead	Active	Matching rule for lead records. <a href="#">More info</a>	06/11/2024	M.Jose

### a. Duplicate rule:



The screenshot shows the Salesforce Duplicate Rules setup page. The browser address bar displays the URL: `arunaengineeringcollege191-dev-ed.develop.lightning.force.com/lightning/setup/DuplicateRules/home`. The page title is "Duplicate Rules". The left sidebar shows the navigation menu with "Duplicate Rules" selected. The main content area is titled "All Duplicate Rules" and includes a "What Are Duplicate Rules?" section. Below this, there is a table listing existing duplicate rules.

Rule Name	Description	Object	Matching Rule	Active	Last Modified By	Last Modified Date
Customer Detail duplicate		customer details	<a href="#">Matching customer details</a>	✓	M.Jose	10/11/2024
Standard Account Duplicate Rule	Identify accounts that duplicate other accounts.	Account	<a href="#">Standard Account Matching Rule</a>	✓	M.Jose	06/11/2024
Standard Contact Duplicate Rule	Identify contacts that duplicate other contacts and leads.	Contact	<a href="#">Standard Contact Matching Rule</a> <a href="#">Standard Lead Matching Rule</a>	✓	M.Jose	06/11/2024
Standard Lead Duplicate Rule	Identify leads that duplicate other leads and contacts.	Lead	<a href="#">Standard Contact Matching Rule</a> <a href="#">Standard Lead Matching Rule</a>	✓	M.Jose	06/11/2024



## b. Manager:

The screenshot shows the Salesforce Setup interface. The left sidebar contains a navigation menu with 'Setup' at the top, followed by 'Home', 'Object Manager', and a search bar. Below the search bar, there are sections for 'Hyperforce Assistant', 'Users', 'Profiles' (selected), 'Data', 'Mass Transfer Approval Requests', 'Feature Settings', 'Data.com', 'Prospector Preferences', 'Prospector Users', 'Decision Explorer', 'Business Process Type Definition', and 'Functions'. The main content area is titled 'Profiles' and shows a table of profiles. The table has columns for 'Action', 'Profile Name', 'User License', and 'Custom'. The 'Manager' profile is selected, and its 'Custom' checkbox is checked. The table also shows other profiles like 'Marketing User', 'Minimum Access - API Only Integrations', and 'Minimum Access - Salesforce'. The bottom of the screen shows a Windows taskbar with the date and time as 04:39 AM on 10-11-2024.

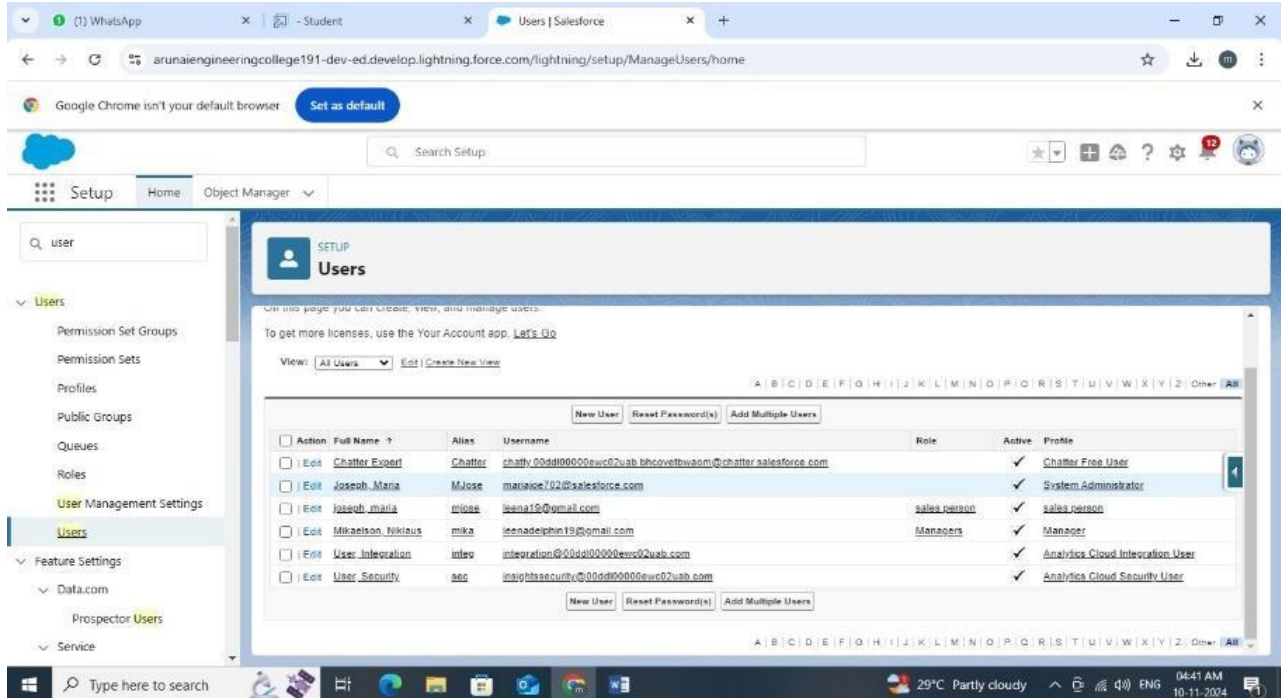
Action	Profile Name	User License	Custom
<input type="checkbox"/>	Manager	Salesforce	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Marketing User	Salesforce	<input type="checkbox"/>
<input type="checkbox"/>	Minimum Access - API Only Integrations	Salesforce Integration	<input type="checkbox"/>
<input type="checkbox"/>	Minimum Access - Salesforce	Salesforce	<input type="checkbox"/>

## c. Sales person:

The screenshot shows the Salesforce Setup interface. The left sidebar contains a navigation menu with 'Setup' at the top, followed by 'Home', 'Object Manager', and a search bar. Below the search bar, there are sections for 'Hyperforce Assistant', 'Users', 'Profiles' (selected), 'Data', 'Mass Transfer Approval Requests', 'Feature Settings', 'Data.com', 'Prospector Preferences', 'Prospector Users', 'Decision Explorer', 'Business Process Type Definition', and 'Functions'. The main content area is titled 'Profiles' and shows a table of profiles. The table has columns for 'Action', 'Profile Name', 'User License', and 'Custom'. The 'Sales person' profile is selected, and its 'Custom' checkbox is checked. The table also shows other profiles like 'Salesforce API Only System Integrations', 'Silver Partner User', 'Solution Manager', 'Standard Platform User', 'Standard User', and 'System Administrator'. The bottom of the screen shows a Windows taskbar with the date and time as 04:40 AM on 10-11-2024.

Action	Profile Name	User License	Custom
<input type="checkbox"/>	Sales person	Salesforce Platform	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Salesforce API Only System Integrations	Salesforce Integration	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Silver Partner User	Silver Partner	<input type="checkbox"/>
<input type="checkbox"/>	Solution Manager	Salesforce	<input type="checkbox"/>
<input type="checkbox"/>	Standard Platform User	Salesforce Platform	<input type="checkbox"/>
<input type="checkbox"/>	Standard User	Salesforce	<input type="checkbox"/>
<input type="checkbox"/>	System Administrator	Salesforce	<input type="checkbox"/>

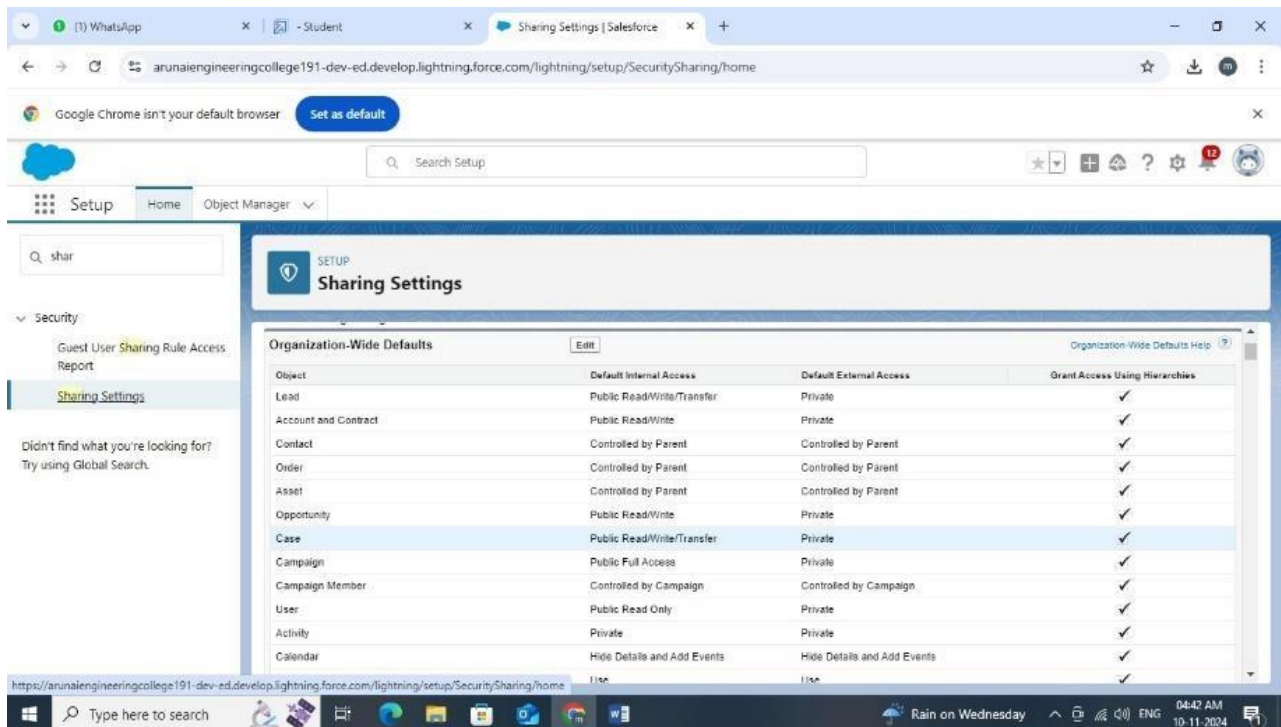
## d.Sharing:



The screenshot shows the Salesforce Setup interface for managing users. The left sidebar contains a search bar with 'user' and a list of navigation items: Users, Permission Set Groups, Permission Sets, Profiles, Public Groups, Queues, Roles, User Management Settings, Feature Settings, Data.com, and Service. The main content area is titled 'SETUP Users' and includes a search bar, a 'View: All Users' dropdown, and a table of users. The table has columns for Action, Full Name, Alias, Username, Role, Active, and Profile. The users listed are Chatter Expert, Joseph Maria, Joseph Maria, Mikaelson Niklaus, User Integration, and User Security. The bottom of the screen shows a Windows taskbar with the date and time 04:41 AM 10-11-2024.

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatter.00dd0000000000000000000000000000@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	Joseph Maria	MJose	mariajose702@salesforce.com		✓	System Administrator
<input type="checkbox"/> Edit	Joseph Maria	mjose	joseph10@gmail.com	Sales Person	✓	Sales Person
<input type="checkbox"/> Edit	Mikaelson Niklaus	mika	mikaelsonniklaus19@gmail.com	Managers	✓	Manager
<input type="checkbox"/> Edit	User Integration	intev	integration.00dd0000000000000000000000000000@salesforce.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sec	insightsecurity.00dd0000000000000000000000000000@salesforce.com		✓	Analytics Cloud Security User

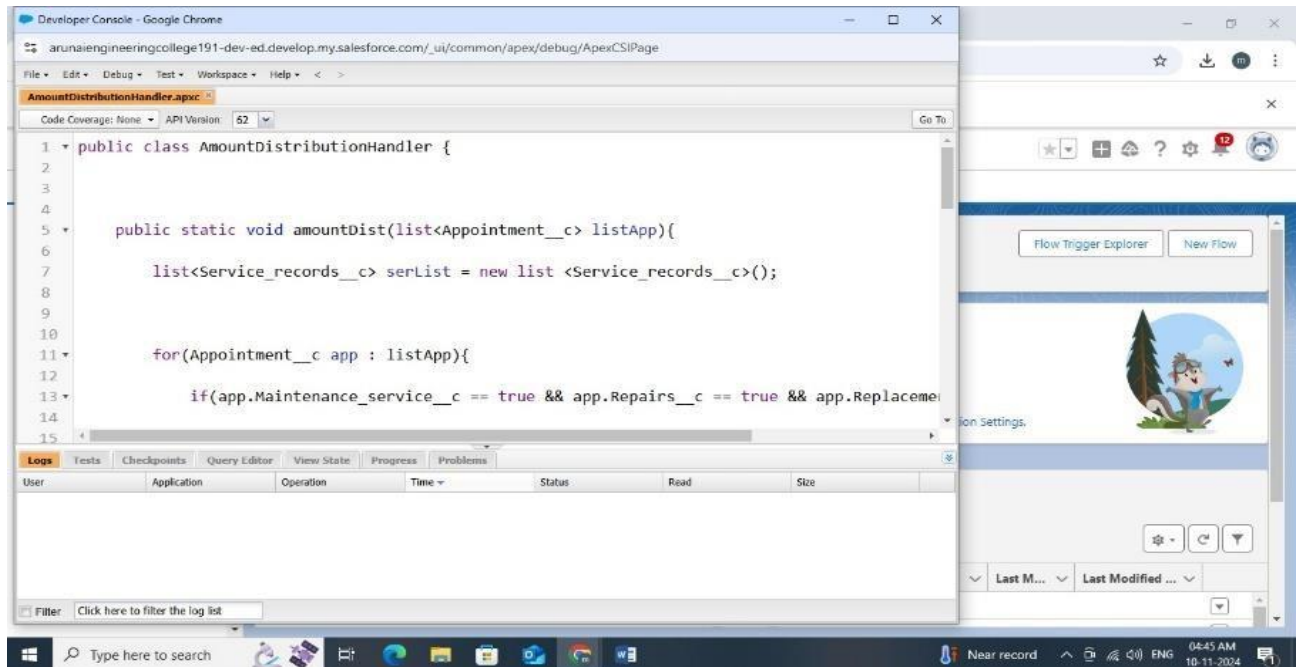
## 9.Create a flow:



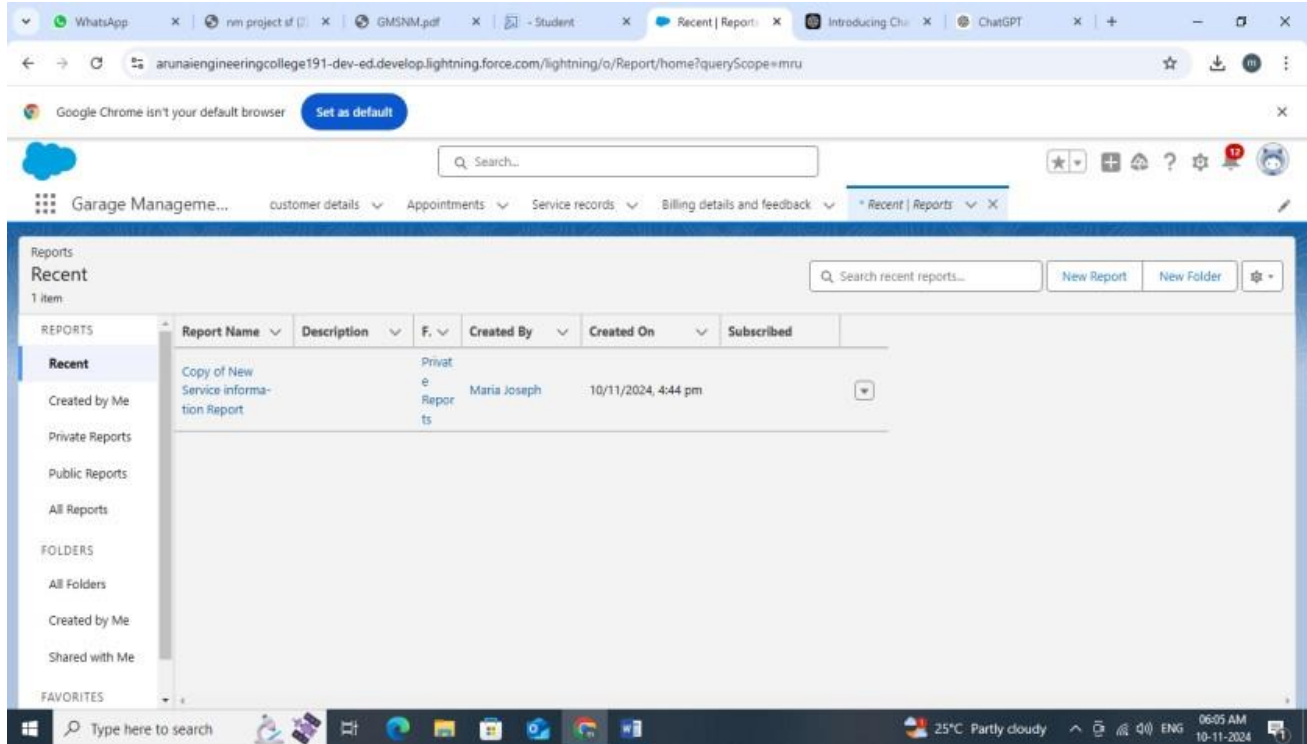
The screenshot shows the Salesforce Setup interface for sharing settings. The left sidebar contains a search bar with 'shar' and a list of navigation items: Security, Guest User, Sharing Rule Access Report, and Sharing Settings. The main content area is titled 'SETUP Sharing Settings' and includes a search bar, a 'View: All Users' dropdown, and a table of sharing settings. The table has columns for Object, Default Internal Access, Default External Access, and Grant Access Using Hierarchies. The objects listed are Lead, Account and Contract, Contact, Order, Asset, Opportunity, Case, Campaign, Campaign Member, User, Activity, and Calendar. The bottom of the screen shows a Windows taskbar with the date and time 04:42 AM 10-11-2024.

Object	Default Internal Access	Default External Access	Grant Access Using Hierarchies
Lead	Public Read/Write/Transfer	Private	✓
Account and Contract	Public Read/Write	Private	✓
Contact	Controlled by Parent	Controlled by Parent	✓
Order	Controlled by Parent	Controlled by Parent	✓
Asset	Controlled by Parent	Controlled by Parent	✓
Opportunity	Public Read/Write	Private	✓
Case	Public Read/Write/Transfer	Private	✓
Campaign	Public Full Access	Private	✓
Campaign Member	Controlled by Campaign	Controlled by Campaign	✓
User	Public Read Only	Private	✓
Activity	Private	Private	✓
Calendar	Hide Details and Add Events	Hide Details and Add Events	✓

## 10.Apex Trigger:



## 11. Reports:



## **12. Testing and Validation:**

### **Unit Testing**

- **Apex Classes and Triggers:** Test classes for custom logic, such as calculating total service costs or validating appointment status updates.
- **Flow Testing:** Ensure flows execute correctly (e.g., appointment reminders trigger on time).

### **User Interface Testing**

- Test the user experience from start to finish: customer lookup, vehicle registration, scheduling, service updates, and invoicing.
- Validate the display of reports and dashboards for accurate insights.

## **13. Key Scenarios Addressed by Salesforce in the Implementation Project: 1. Appointment Scheduling and Notifications:**

- Allows customers to schedule appointments and receive automatic reminders before their service date.
- 2. Service Tracking and History:**
- Keeps a record of all services performed on each vehicle, accessible to both customers and garage staff.
- 3. Billing and Invoicing:**
- Automatically generates an invoice when services are completed, simplifying billing.
- 4. Reporting on Revenue and Service Trends:**

- Provides a breakdown of revenue generated by service type, allowing the garage to adjust offerings based on demand.

## **14. Conclusion:**

### **1. Enhanced Operational Efficiency**

The Garage Management System built on Salesforce streamlines various garage operations, from scheduling appointments and tracking vehicle services to managing inventory and customer data.

### **2. Improved Customer Satisfaction**

By utilizing Salesforce's CRM capabilities, the system provides a personalized and efficient experience for customers. Real-time status updates on vehicle repairs, reminders for scheduled services, and easy appointment booking enhance customer satisfaction, fostering loyalty and trust.

### **3. Real-Time Data Tracking and Analytics**

Salesforce's data management and reporting tools enable garage owners and managers to monitor key metrics, such as service duration, parts inventory, and revenue trends.

### **4. Scalability and Flexibility**

Built on a cloud-based platform, this system is highly scalable, making it suitable for both small garages and larger operations with multiple locations.



## **5. User-Friendly Interface**

The Salesforce platform provides a user-friendly interface that is accessible to both technical and non-technical staff. This reduces training time and allows employees to adapt quickly to the new system

Project link: <https://arunaiengineeringcollege191-deved.develop.lightning.force.com/lightning/setup/SetupOneHome/home>

# **THANK YOU!!!**