



ARUNAI ENGINEERING COLLEGE

(An Autonomous Institution)

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

**BACHELOR OF ENGINEERING
2024 - 2025**

FIFTH SEMESTER

Project: “Garage Management System”

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Arunai Engineering College (An Autonomous Institution)

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.

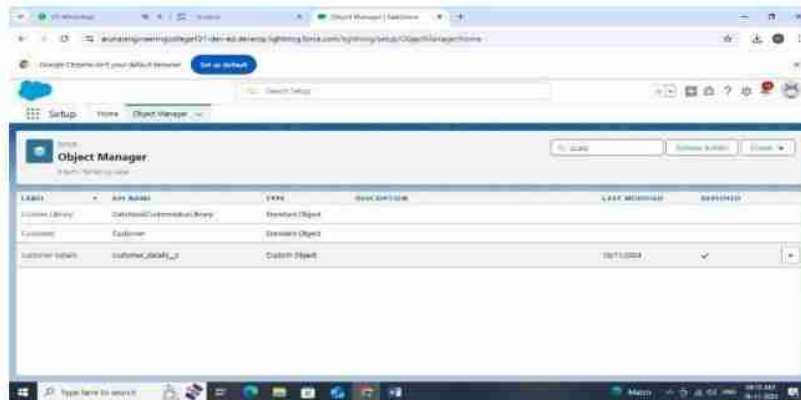
- **Service and Invoice Tracking:** Keep records of services performed and generate invoices automatically upon service completion.
- **Real-time Reporting:** Enable the garage to view reports on total revenue, service history per customer, and vehicle service trends.

3. Salesforce Key Features and Concepts Utilized:

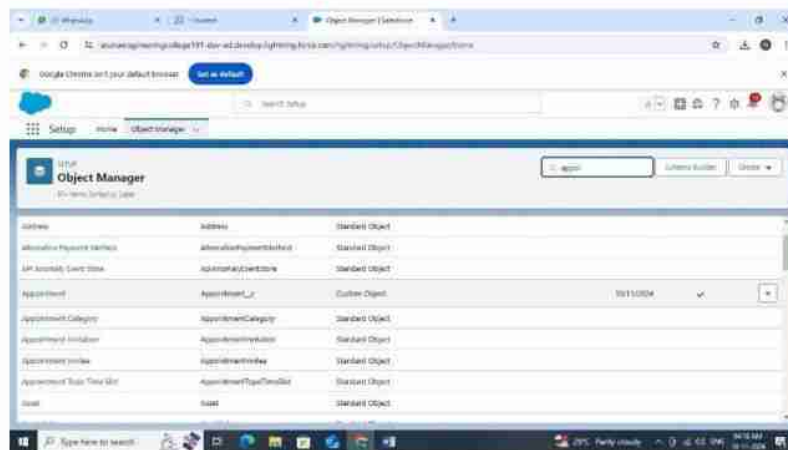
- **Custom Objects:** Created objects for Customer, Vehicle, Appointment, Service, and Invoice.
- **Lookup Relationships:** Connected objects (e.g., Customer to Vehicle, Vehicle to Appointment) for relational data management.
- **Salesforce Flow:** Automations for appointment reminders, invoice generation, 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)

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

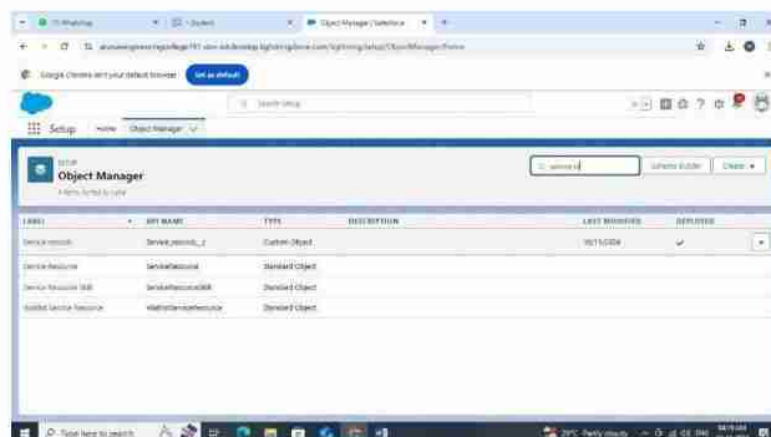
a. Customer details:



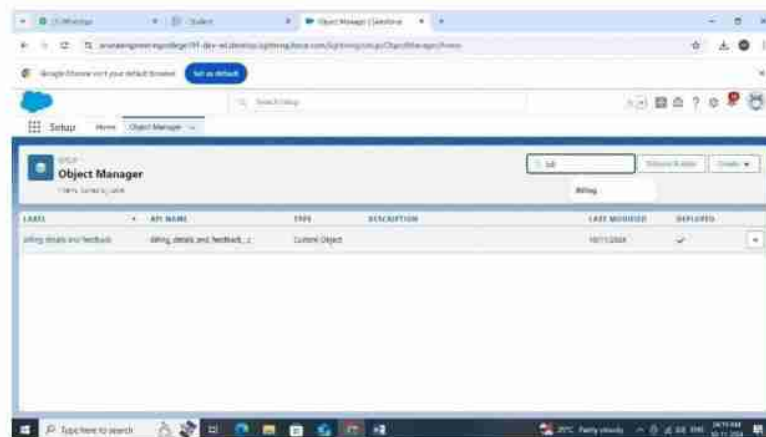
b. Appointment:



c. Service records:

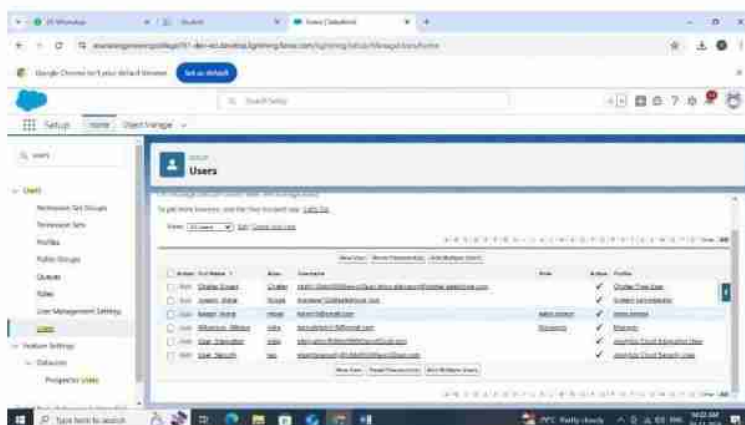


d. Billing Details and Feedback:

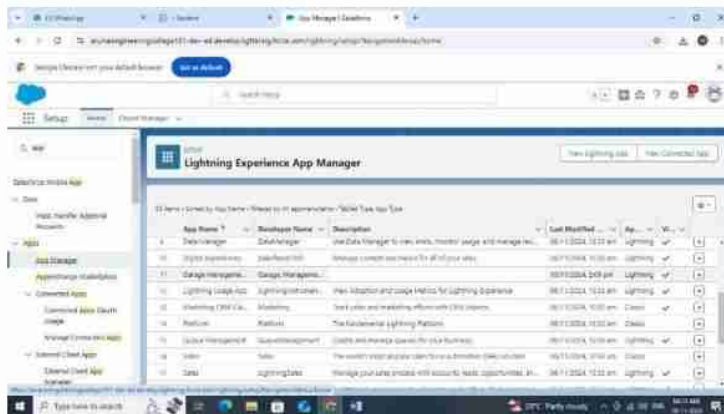


5.Tab:

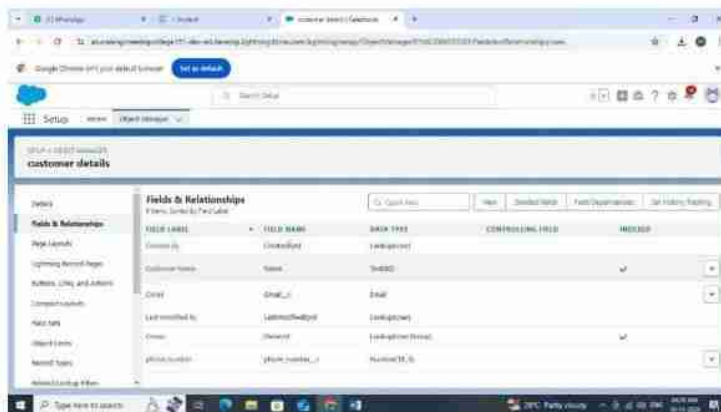
Create a Custom tab:



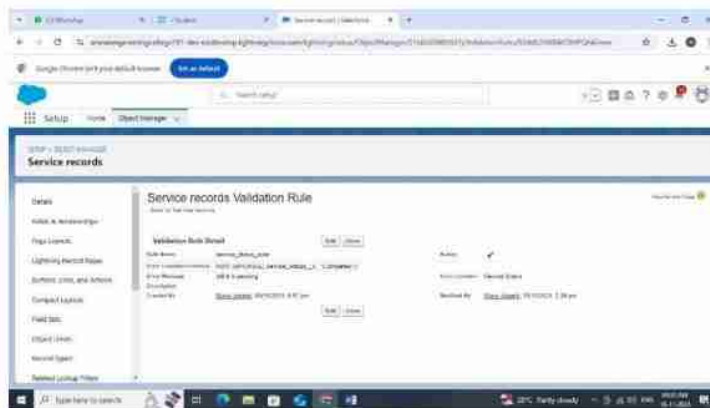
6. For lightning apps:



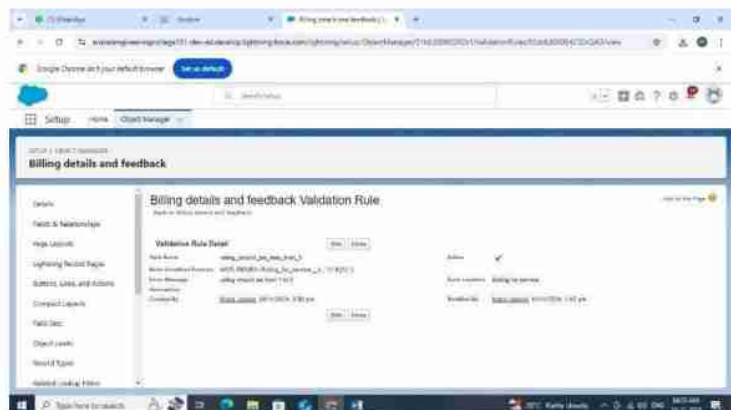
7. For customer details:



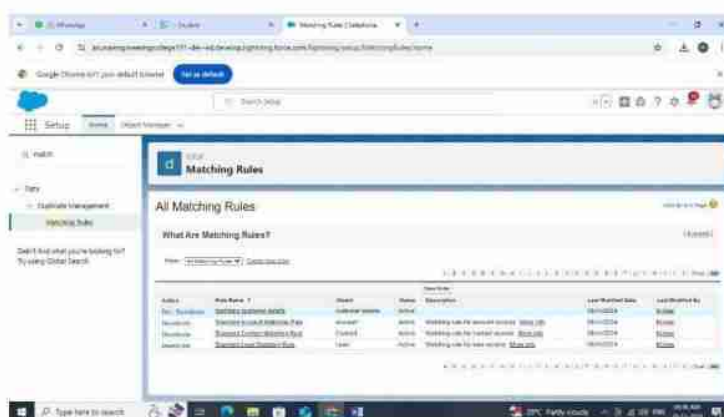
a. Service records:



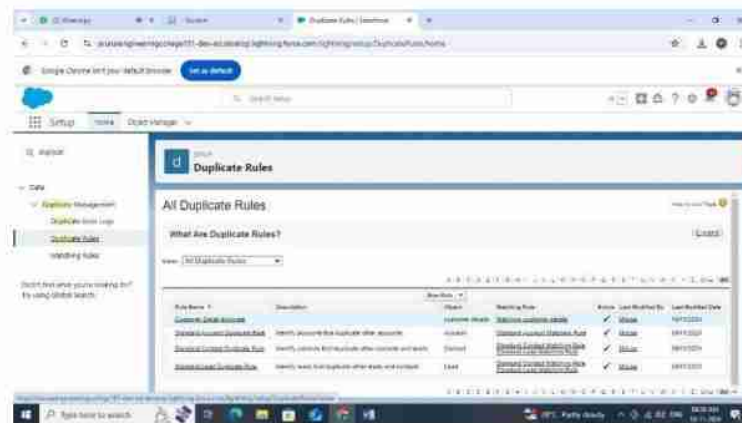
b. Billing details and feedback:



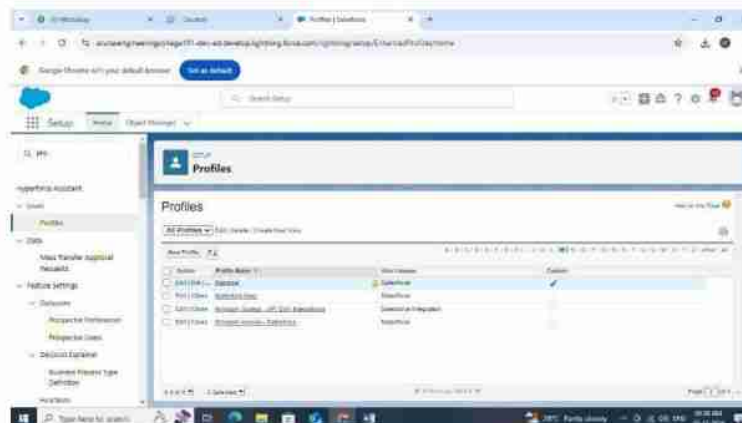
8. Matching rule:



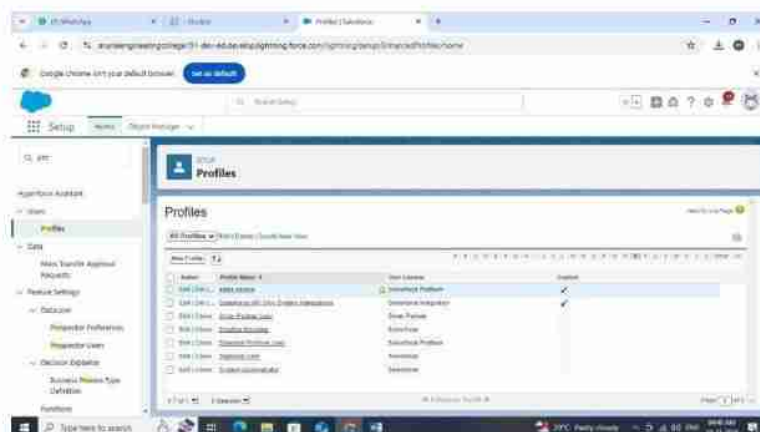
a. Duplicate rule:



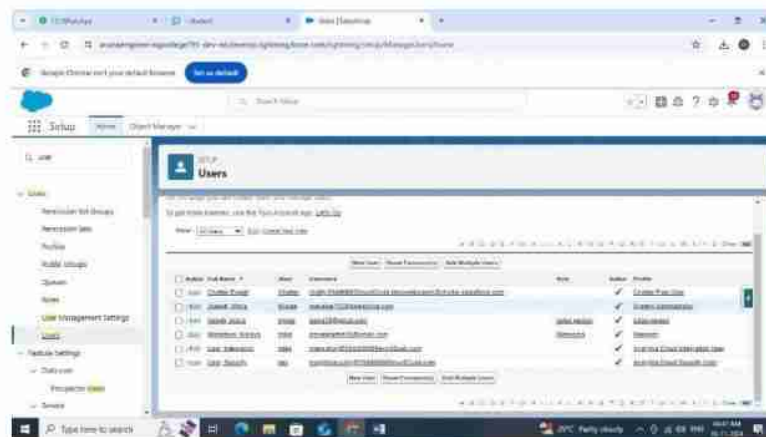
b. Manager:



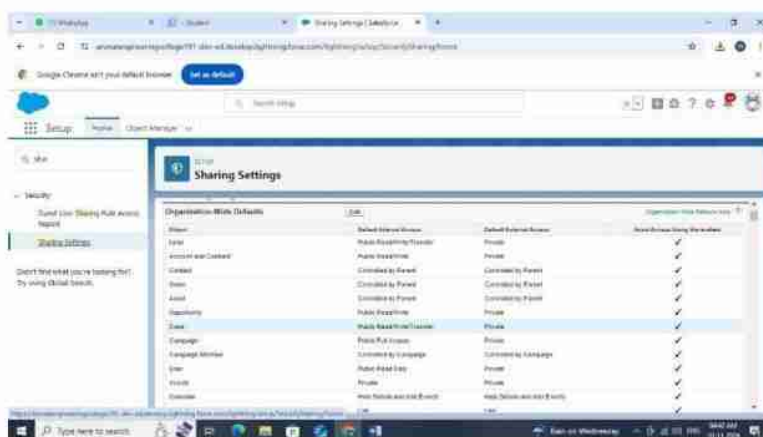
c. Sales person:



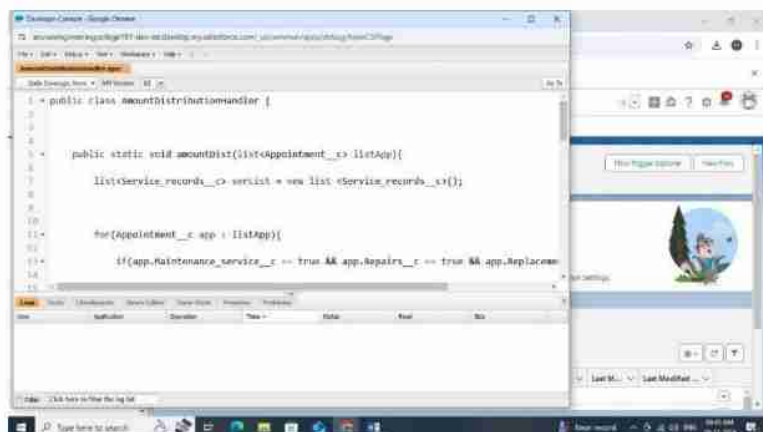
d. Sharing:



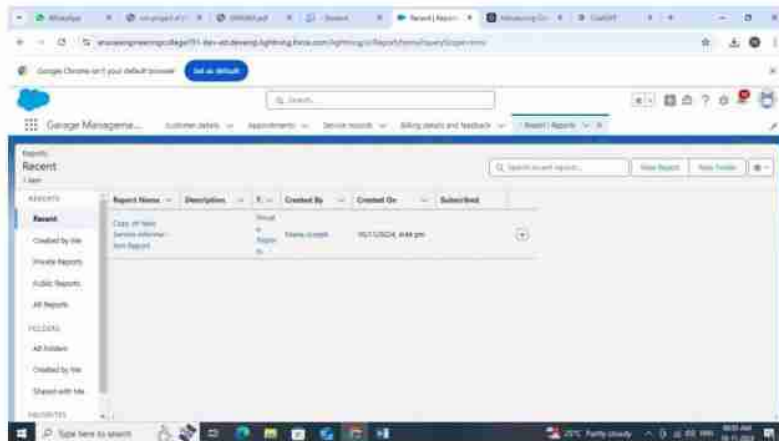
9.Create a flow:



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-dev-ed.develop.lightning.force.com/lightning/setup/SetupOneHome/home>

THANK YOU!!!