# GARAGE MANAGEMENT SYSTEM USING SALESFORCE


R.HARIHARAN - 922222104012

N.NAVEEN KUMAR - 922222104032

N.GOKUL PRASATH - 922222104011

M.VENKATESHWARAN - 922222104050

## Project Overview

**Garage Management system**

The Garage Management System is a valuable tool for automotive repair facilities, helping them deliver top-notch service, increase operational efficiency, and build lasting customer relationships. With its user-friendly interface and powerful features, GMS empowers garages to thrive in a competitive market while ensuring a seamless and satisfying experience for both customers and staff.

## Objectives

The main goal of the Garage Management System is to enhance the efficiency and productivity of automobile workshops through Salesforce automation and customization.

It focuses on delivering a better customer experience, reducing manual workload, and providing real-time insights into service operations.

### Business Goals:

**A. Improve Service Efficiency:**

Automate appointment scheduling, vehicle tracking, and technician assignment to reduce delays and improve service quality.

**B. Enhance Customer Experience:**

Offer a transparent system for customers to track service status, view history, and receive timely updates.

**C. Optimize Inventory Management:**

Monitor spare part usage, stock levels, and reorder requirements to ensure availability during service operations.

**D. Streamline Billing and Payments:**

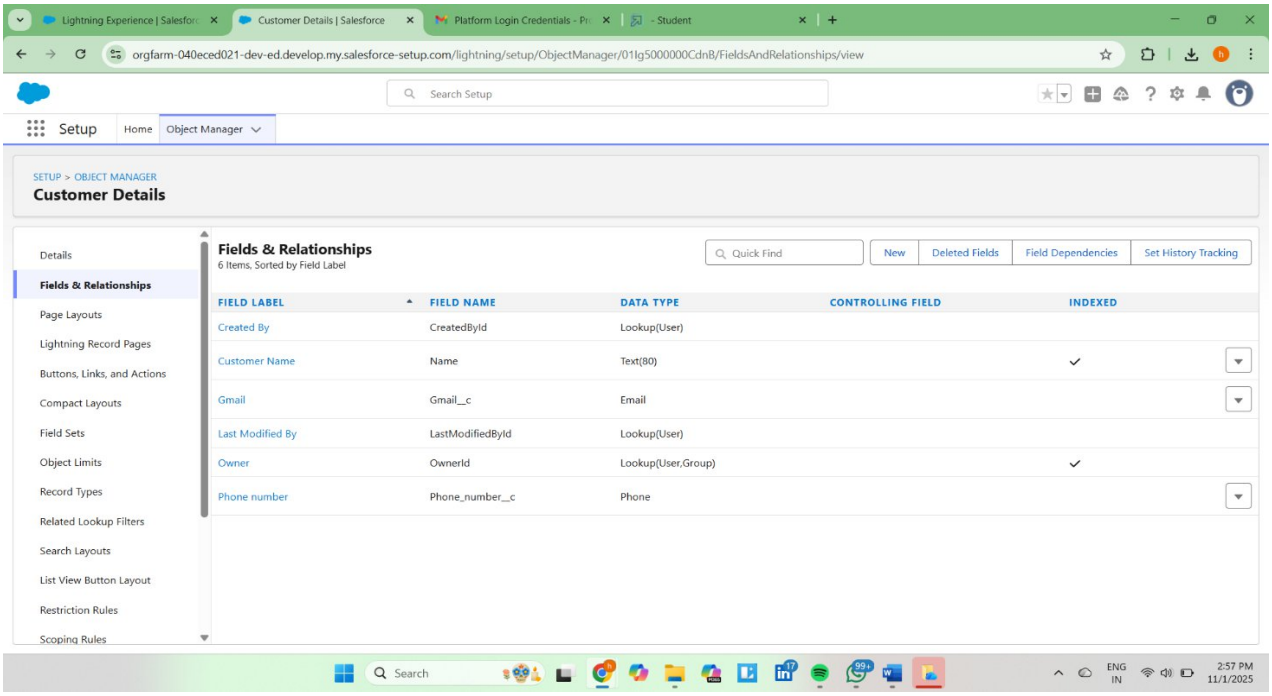
Generate digital invoices linked to completed services for faster and more accurate billing.

## Salesforce Key Features and Concepts Utilized

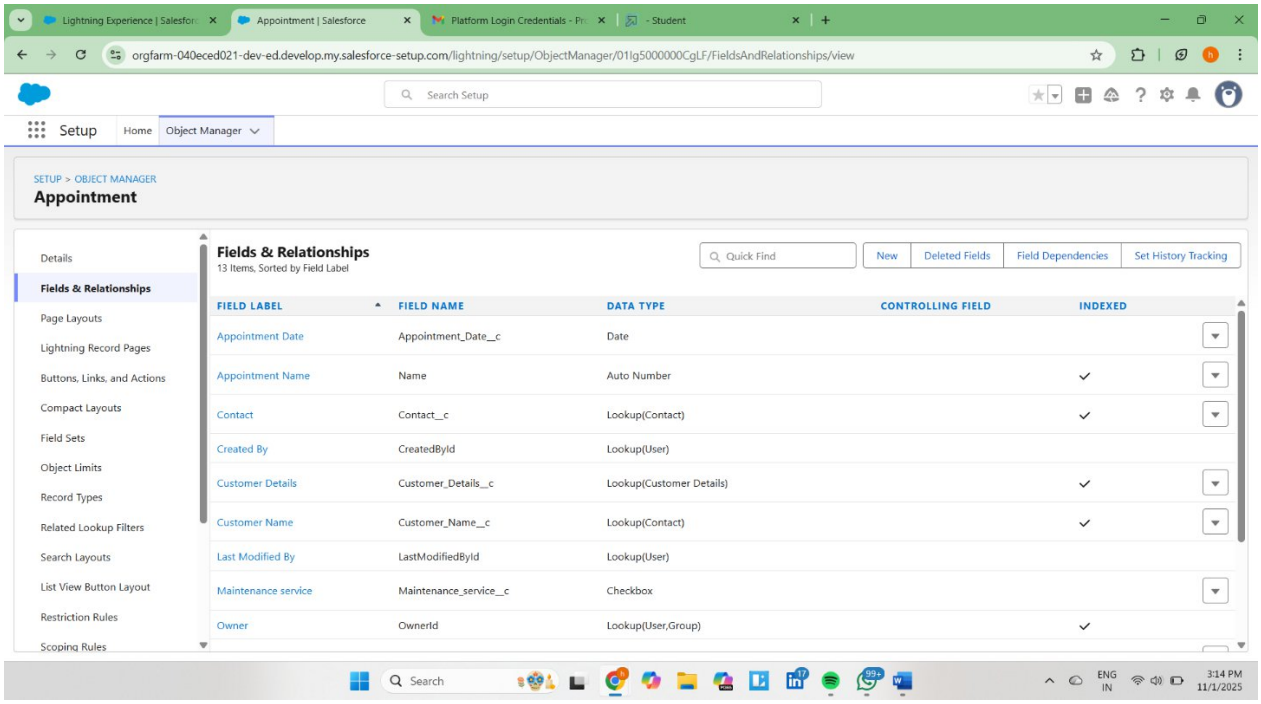
The Garage Management System leverages Salesforce's features to create a powerful, user-friendly environment for managing garage operations.

### 1.Custom Objects

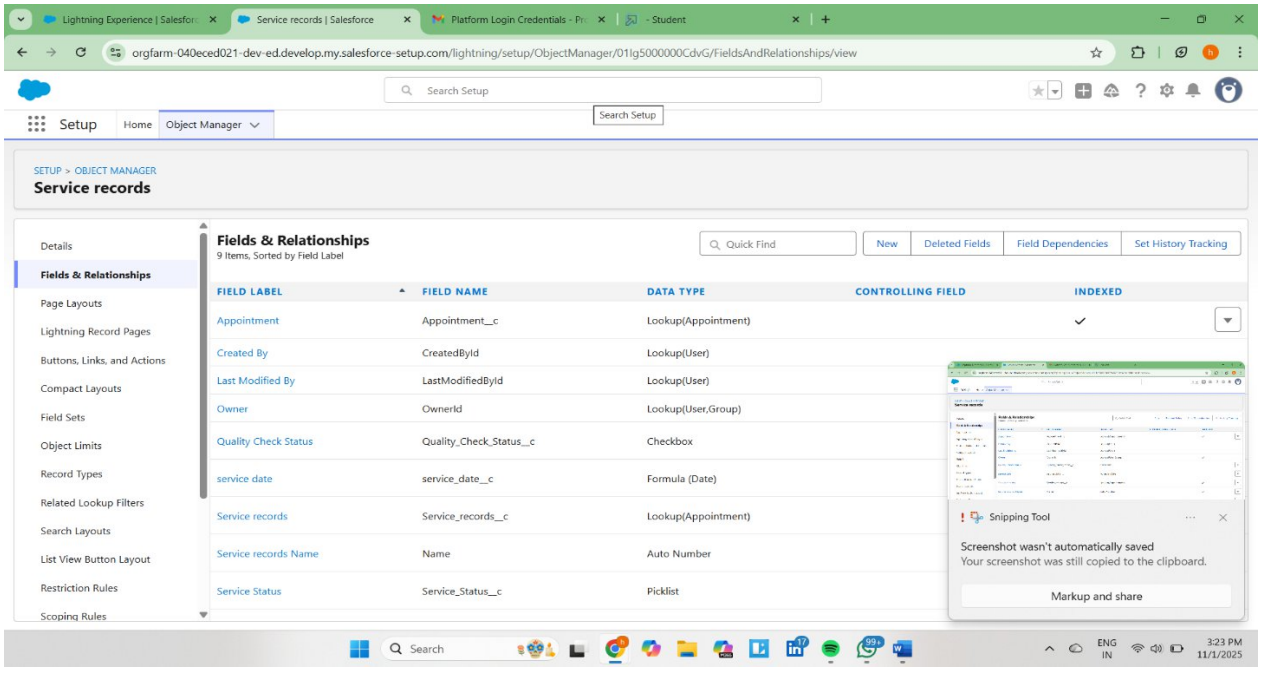
**Customer Details:** Stores key customer information such as name, contact number, email, and vehicle details. It helps garages maintain a complete customer database for quick access and personalized service.



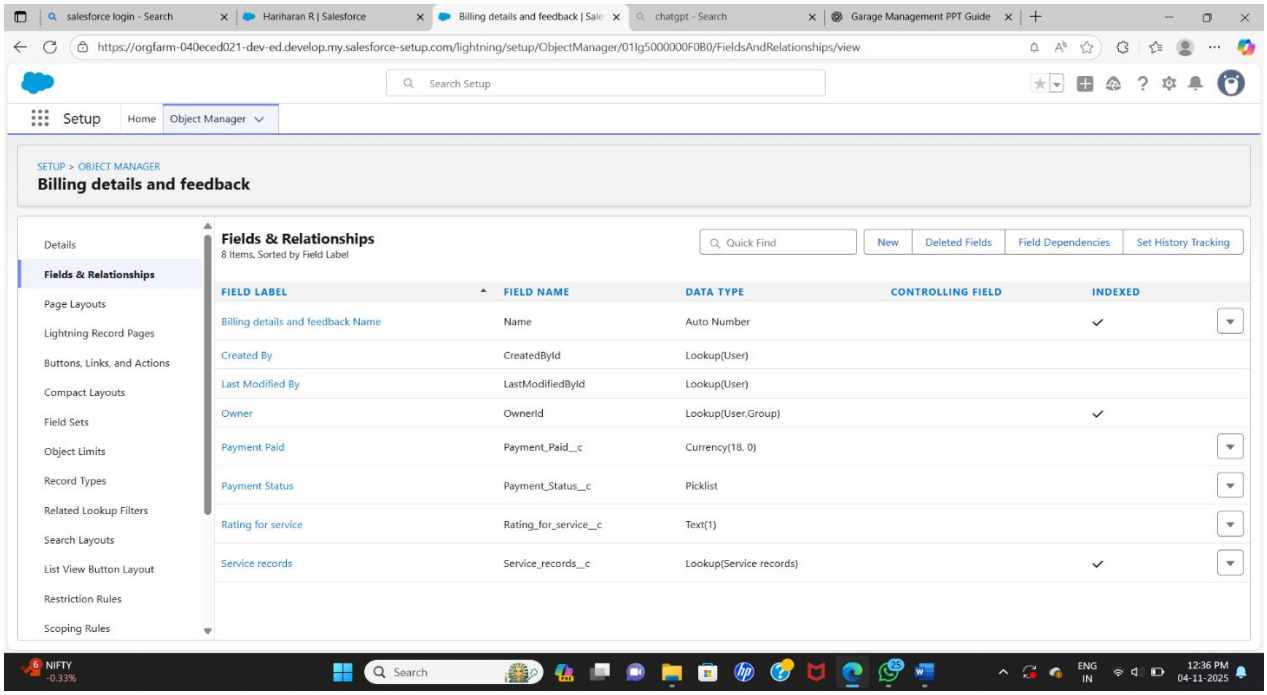

**Appointments :** Manages service bookings with details such as date, time, vehicle number, assigned technician, and service type. It helps avoid scheduling conflicts and ensures timely service delivery.




**Service records:** Keeps a detailed log of all services performed on each vehicle, including service status , service date , appointments and technician involved. This ensures transparency and makes it easy to view service history.



**Billing details & Feedback :** Handles billing operations by automatically generating invoices after service completion. It also collects customer feedback to evaluate service quality and improve future operations.

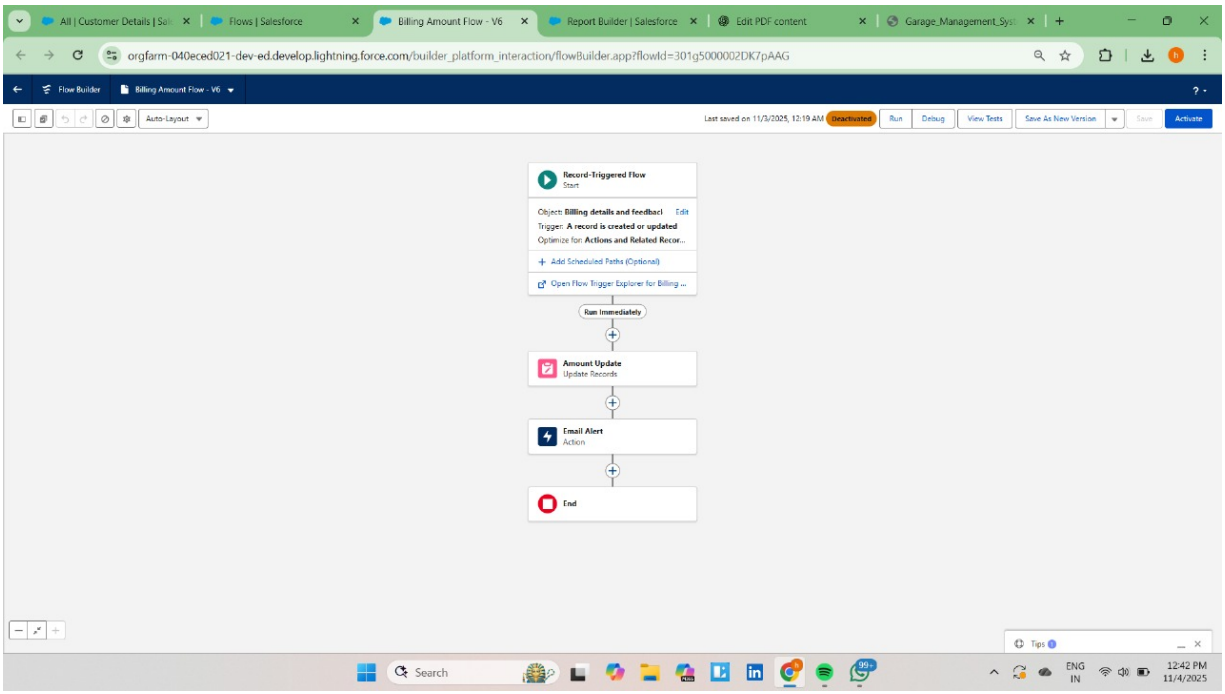



## 2. Relationships

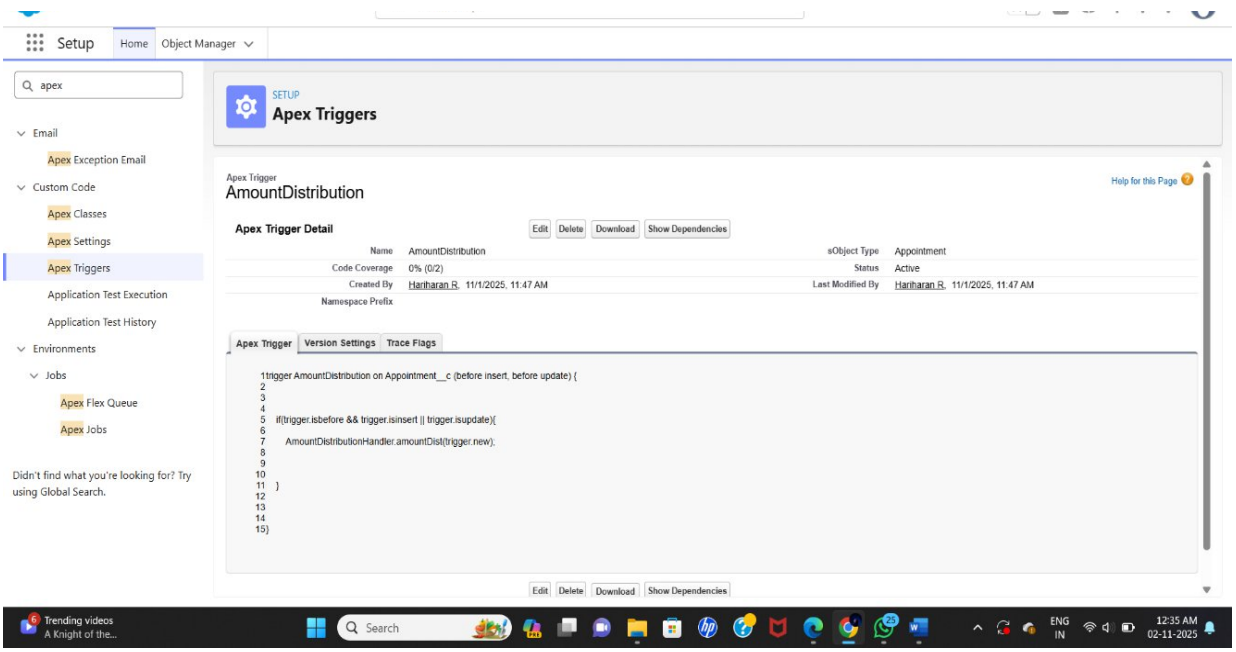
- **Master-Detail Relationships:**
  Establish structured data connections, such as linking **Service Records** to **Billing Details**, ensuring accurate billing and consistent tracking of completed services.
- **Lookup Relationships:**
  Provide flexible associations, such as linking **Appointments** to **Customer Details** and **Mechanics**, allowing dynamic scheduling based on availability and service type.

## 3.Automations and Workflows

**Flows:** Automate key processes like generating billing records once a service is marked as completed, guiding users through a step-by-step workflow that reduces manual entry errors.

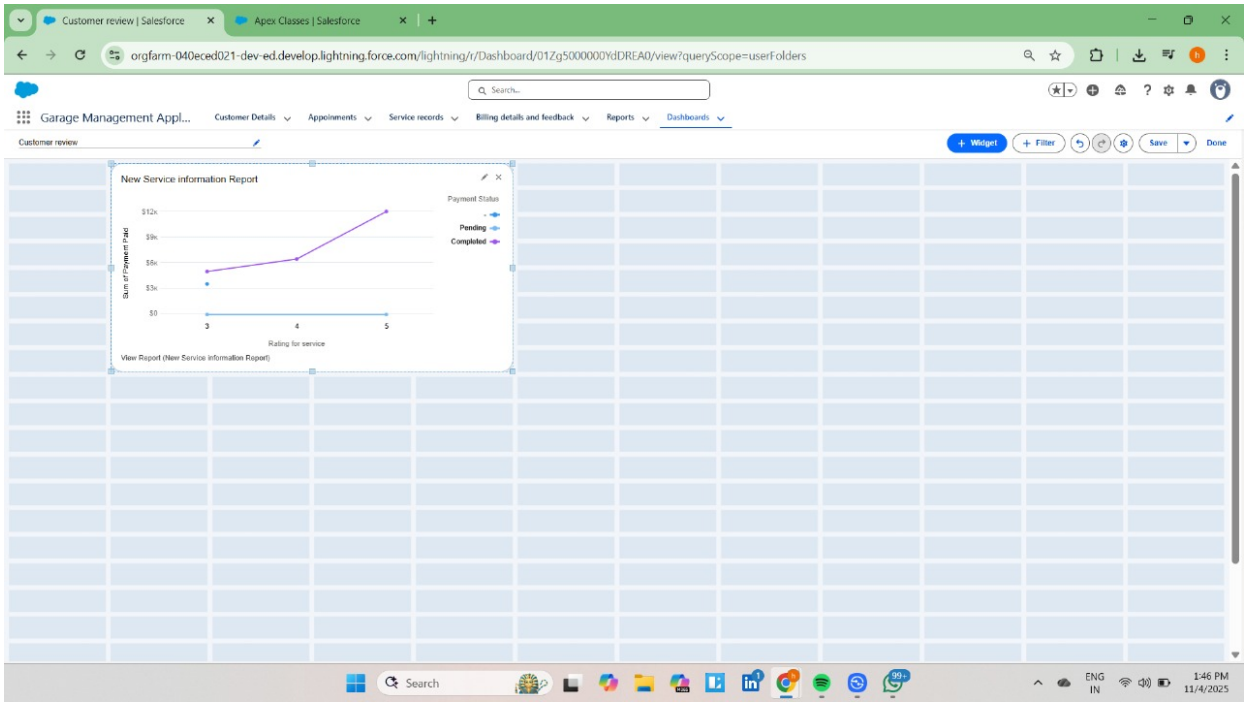



**Apex Triggers:** Implement custom logic to automatically update spare part inventory quantities after a service or to notify managers when a job is completed, improving operational accuracy and response times.

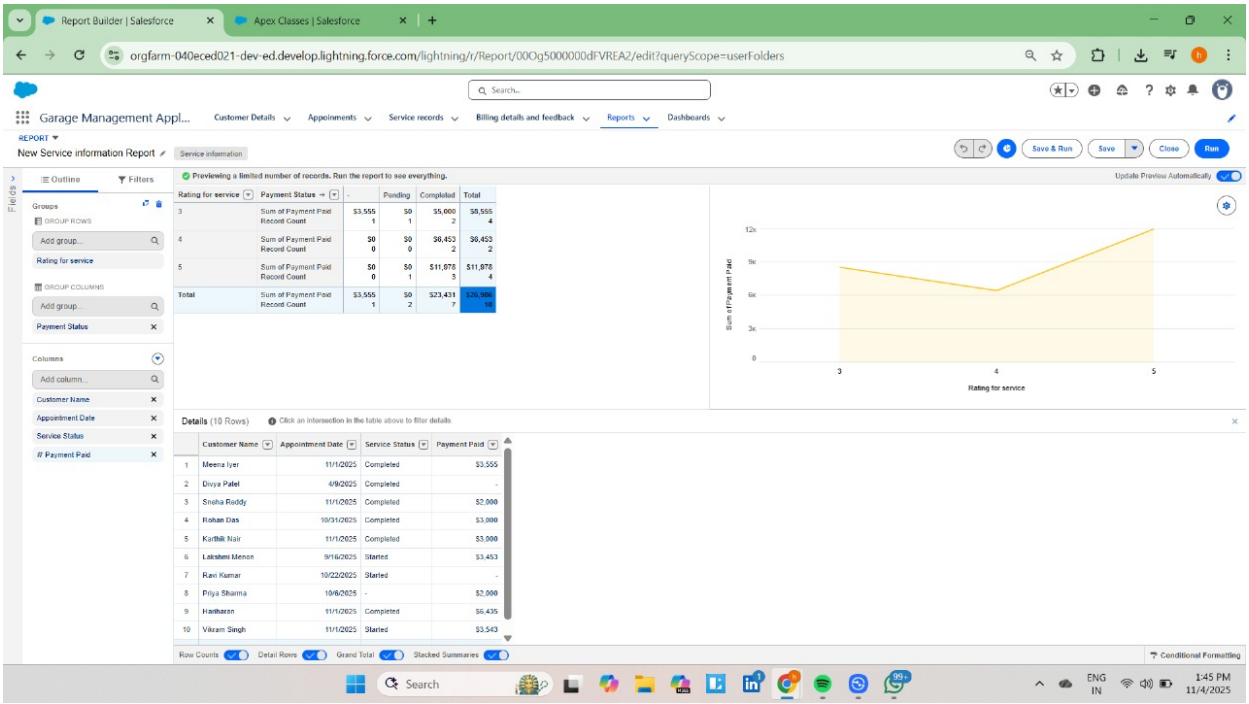


## 4.Dashboards and Reports

**Dashboards:** Provide visual representations of crucial garage data, including total services completed, mechanic workload, customer satisfaction, and revenue trends. These dashboards empower administrators to make informed decisions and improve overall performance.



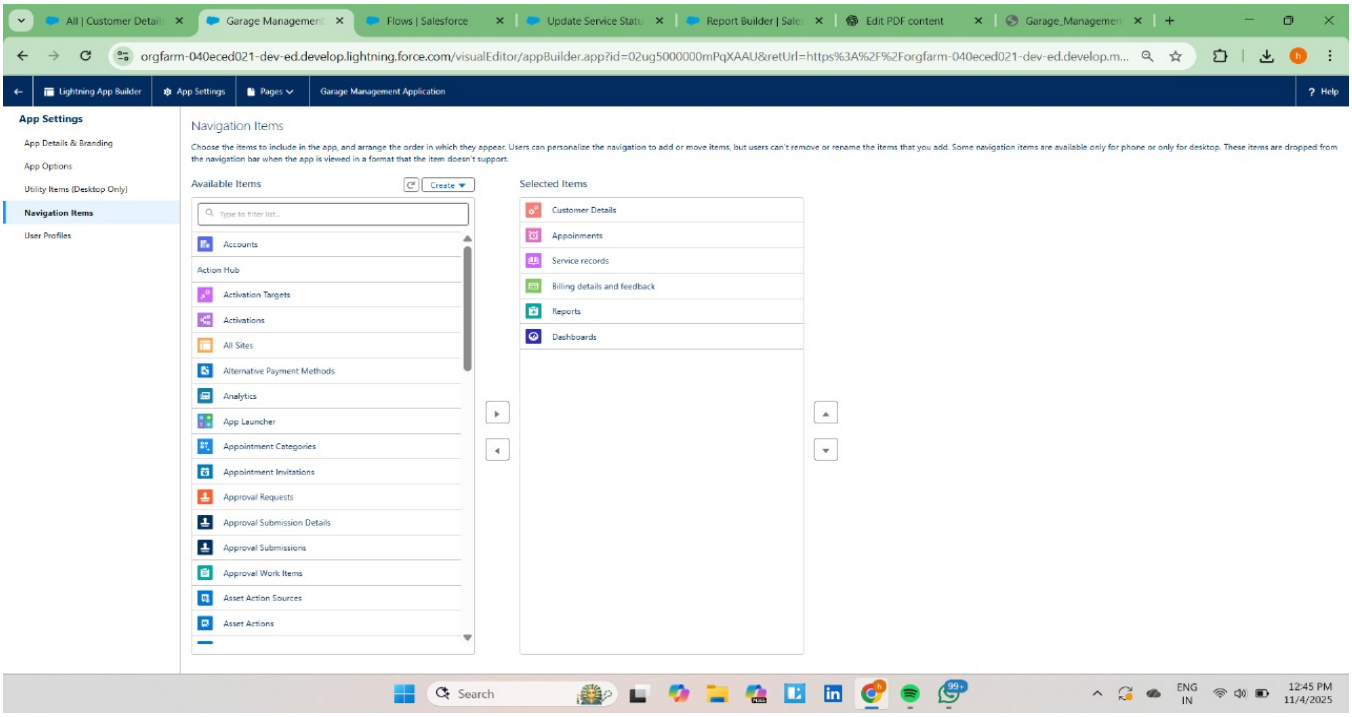

**Reports:** Generate detailed analytics on customer activity, service volume, and income, helping identify areas for efficiency and business growth.



## 5.User Experience Enhancements

### Lightning App

A custom app was developed to deliver an intuitive, user-friendly interface.  The app consolidates navigation for all major components Customers, Appointments, Service Records, Billing, Reports, and Dashboards ensuring quick access and smooth interaction across the platform.



## Detailed Steps to Solution Design

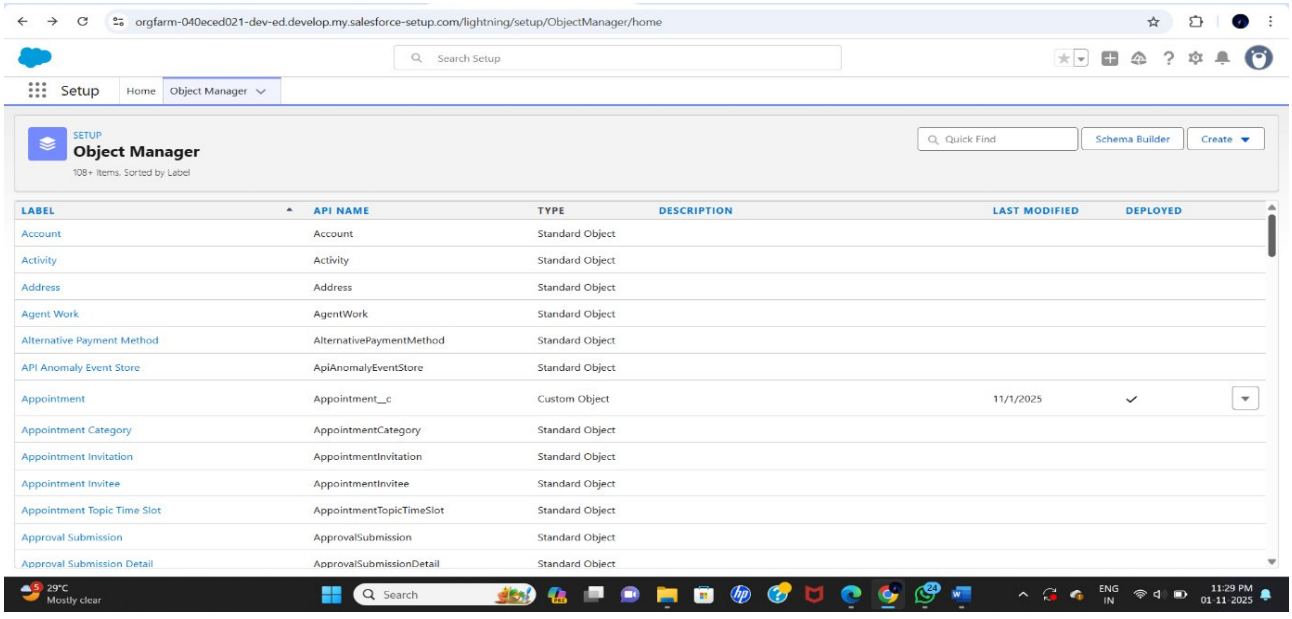
Building the **Garage Management System (GMS)** involved a structured and thoughtful approach to ensure the platform meets the needs of customers, mechanics, and administrators while leveraging the robust capabilities of Salesforce. Below is a step-by-step breakdown of the design and implementation process:

### Step 1: Developer Account Setup

- Registered for a Salesforce Developer account to create a dedicated environment for development and testing.
- Verified the account to unlock full access to Salesforce features, ensuring a smooth setup process.

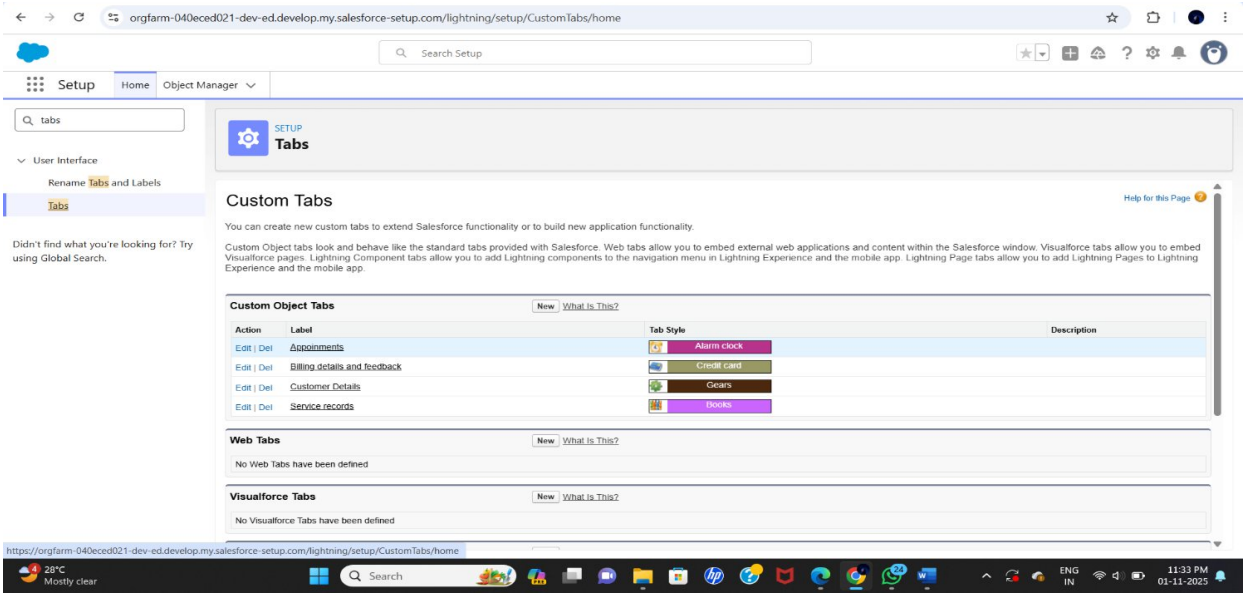
### Step 2: Custom Object Creation

- Used Salesforce Object Manager to design custom objects for **Customer Details, Appointment, Service Records, and Billing Details & Feedback.**
- Configured fields such as text, numbers, currency, and lookup relationships to capture all relevant data, ensuring each object accurately reflects the real-world requirements of a garage management system.



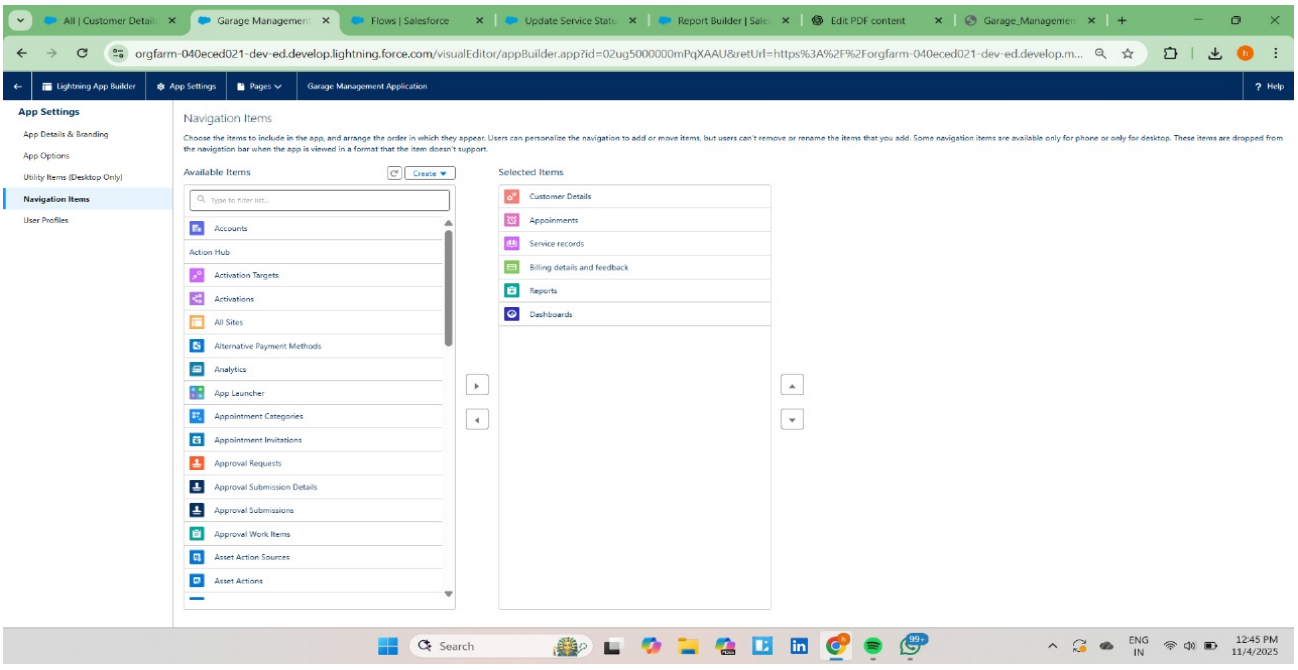
## Step 3: Custom Tabs for Navigation

Created custom tabs for each object, improving navigation and making it easier for users to access



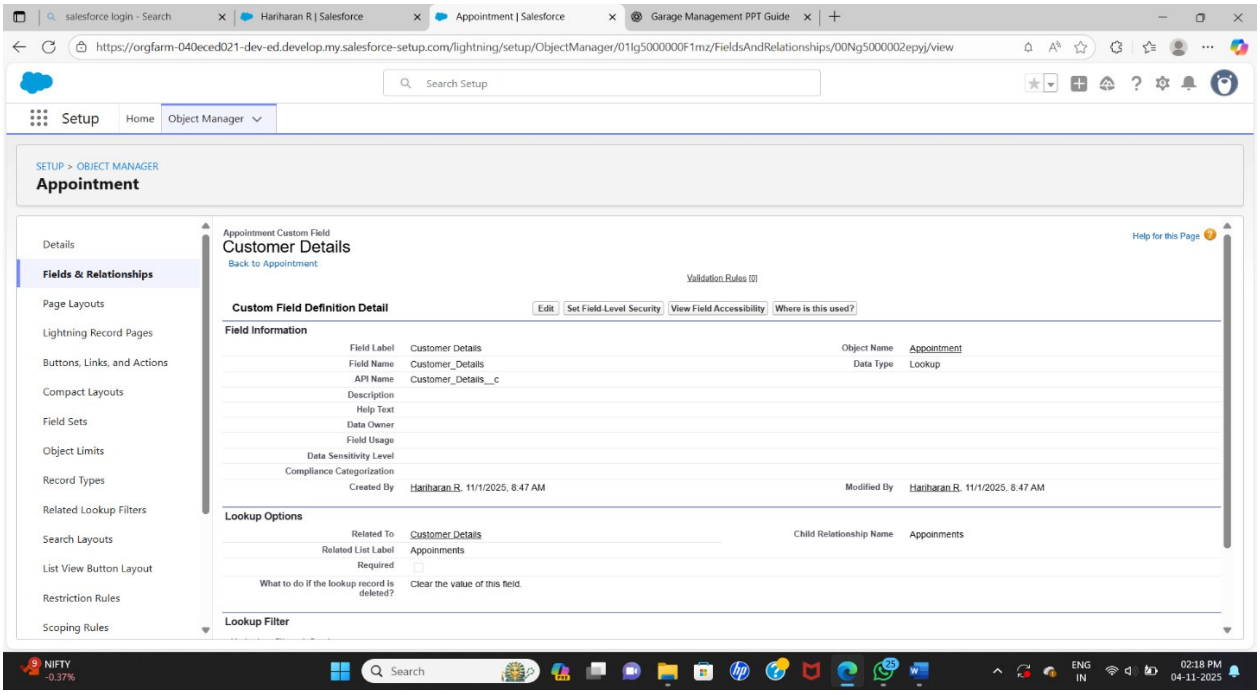

## Step 4: Lightning App Development

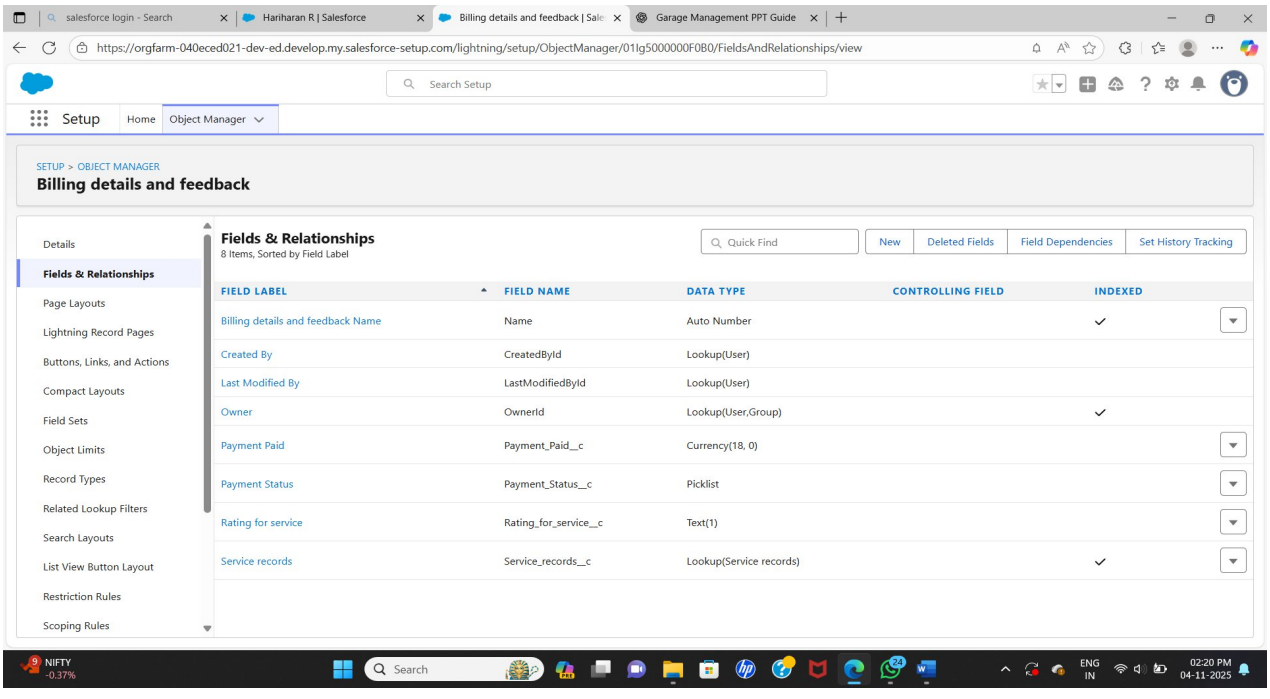
- Developed a Lightning App and included essential navigation items like custom objects, reports, and dashboards to provide a user-friendly interface.
- Assigned user profiles to ensure role based access and operational security.



## Step 5: Establishing Data Relationships

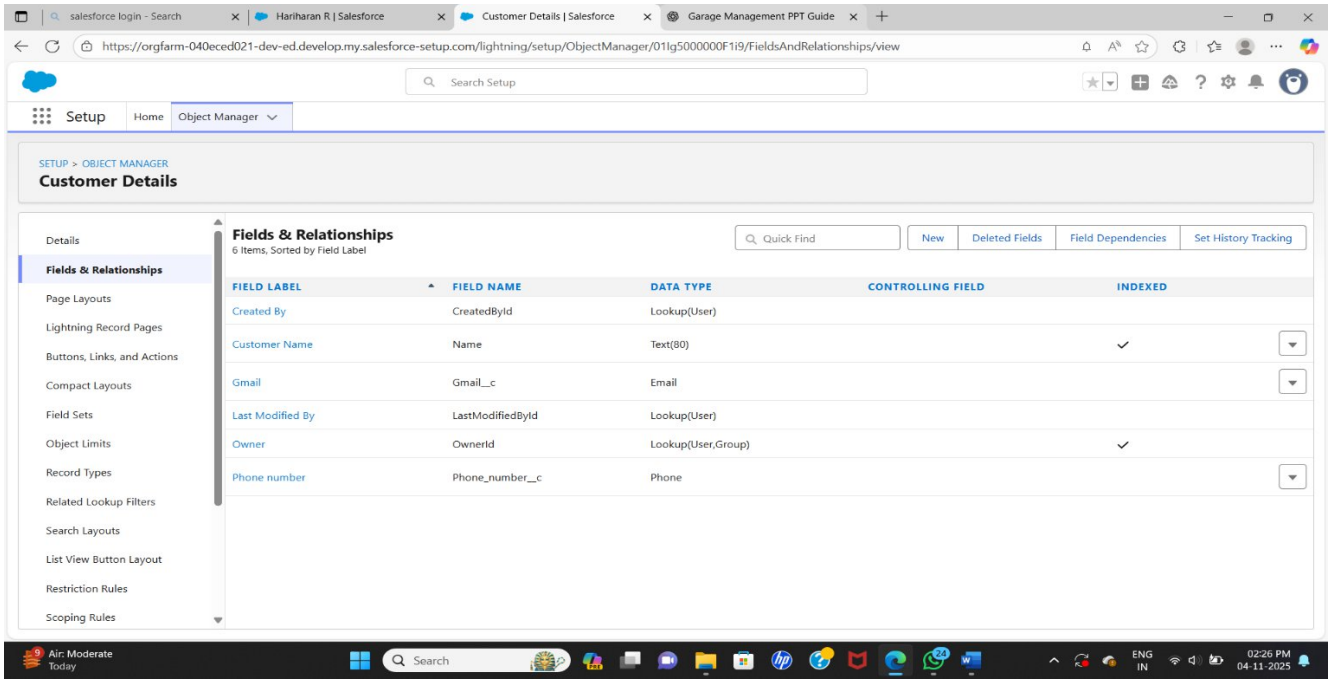
- Defined relationships between objects using **Lookup** and **Master-Detail** fields.
- Examples include: Lookup between **Appointment** and **Customer Details** to link customers with service appointments. Master-Detail between **Service Records** and **Billing Details** to maintain connected service and payment data.

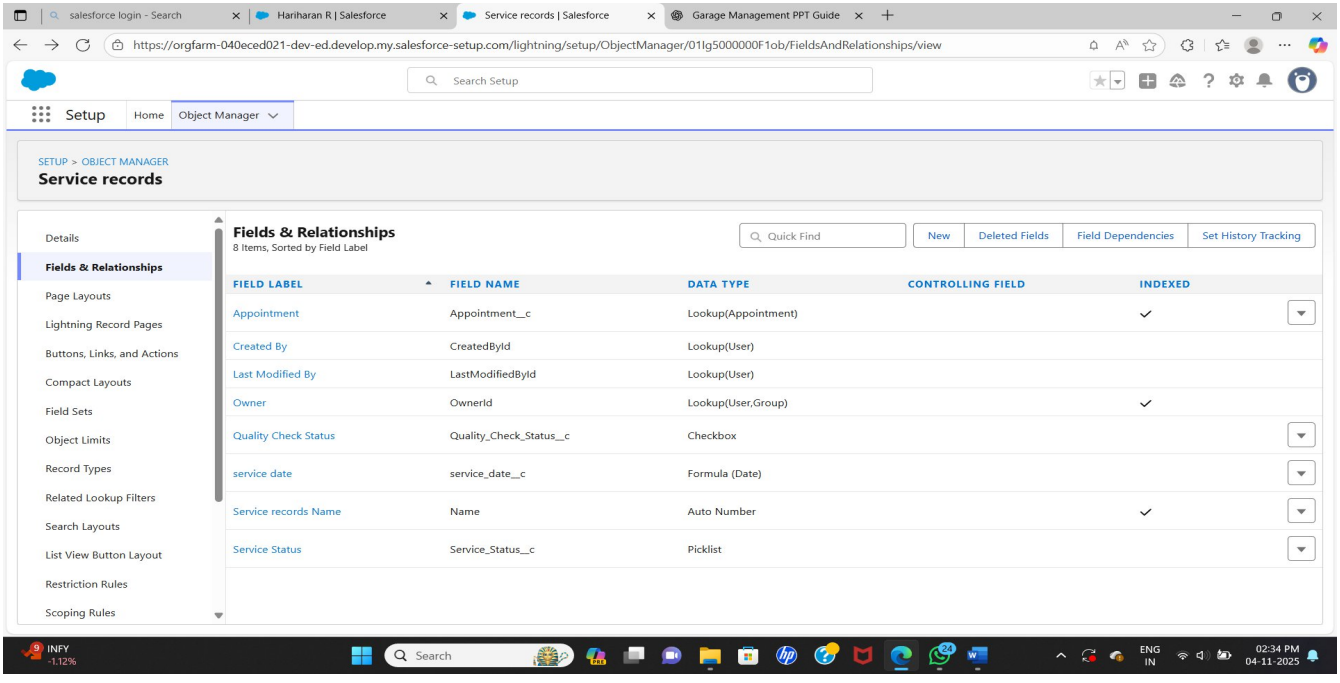


## Step 6: Field Configuration

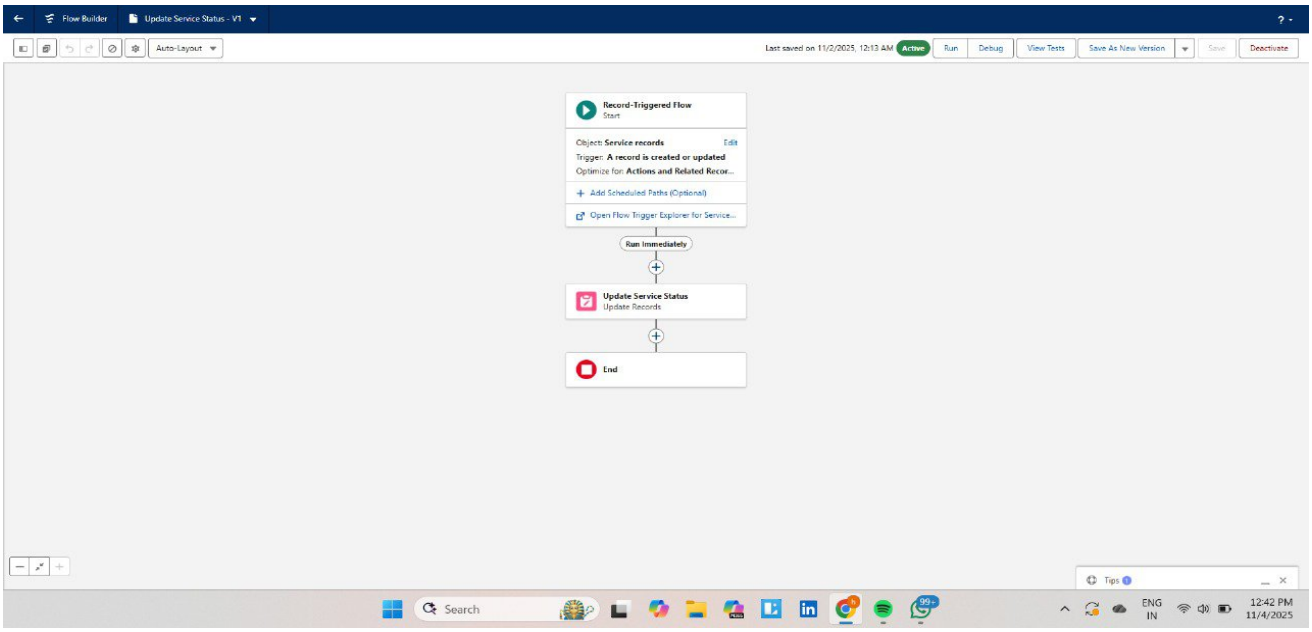
- Configured fields for each custom object to capture critical details, such as:
  **Customer Details:** Name, Contact Number, Email, Vehicle Model.
  **Appointment:** Date, Time, Vehicle, Assigned Mechanic.
  **Service Records:** Service Type, Cost, Status, Completion Date.
  **Billing & Feedback:** Amount, Payment Status, Customer Comments.

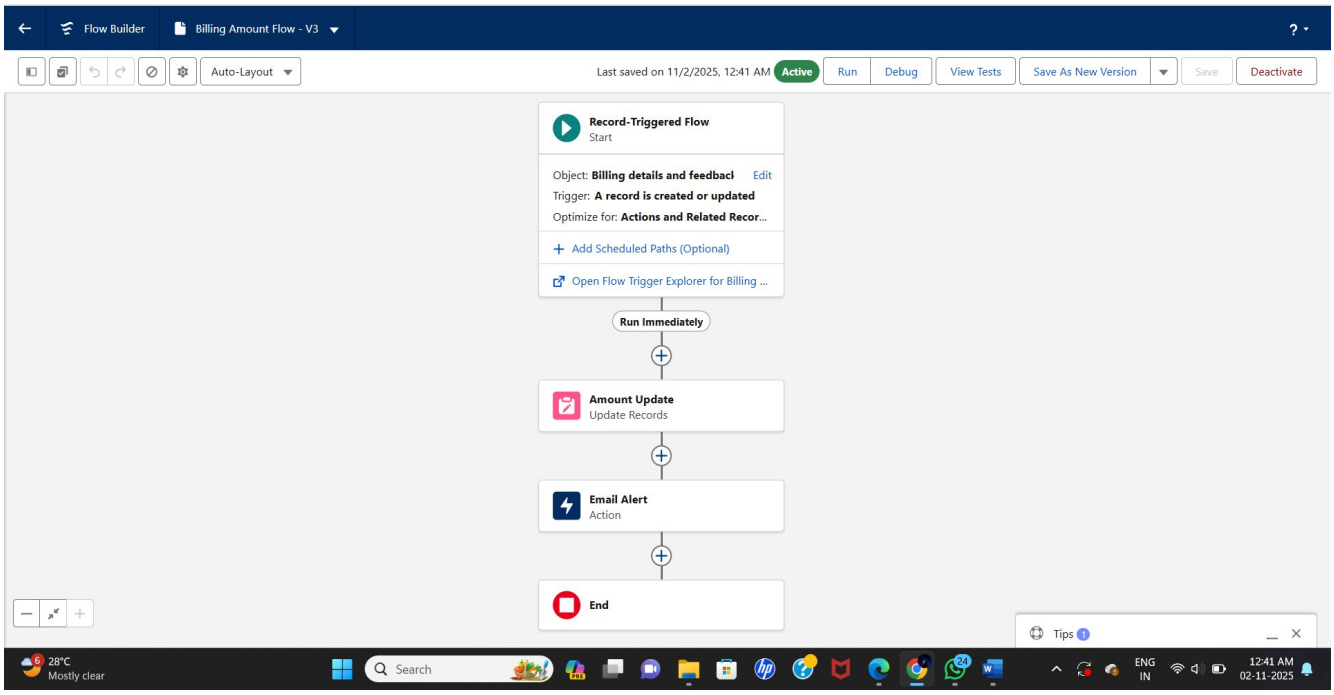


## Step 7: Flow Design

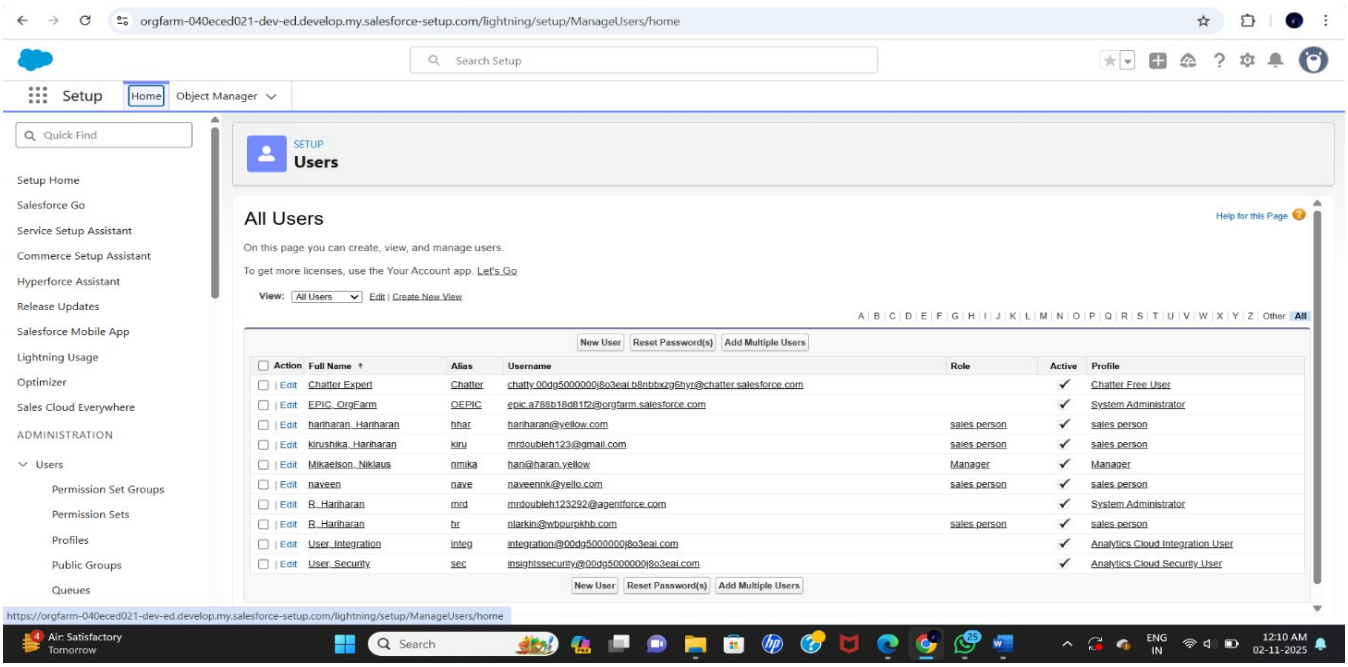
- Designed a guided **screen flow** to simplify service booking and automate the creation of appointment records.
- Implemented an automatic process to generate a billing record once a service is marked as



## Step 8: Trigger Implementation

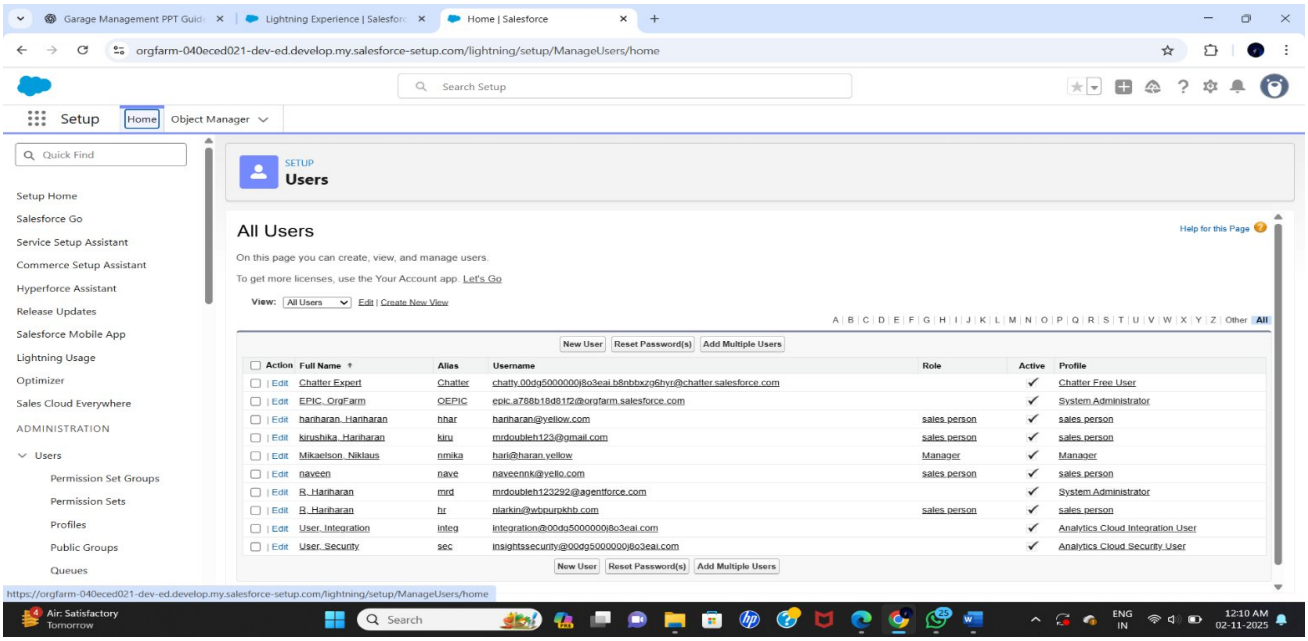
- Developed **Apex Triggers** to enhance automation, such as updating spare part stock quantities after each completed service.
- The triggers reduce manual effort and maintain accuracy in inventory tracking and billing..



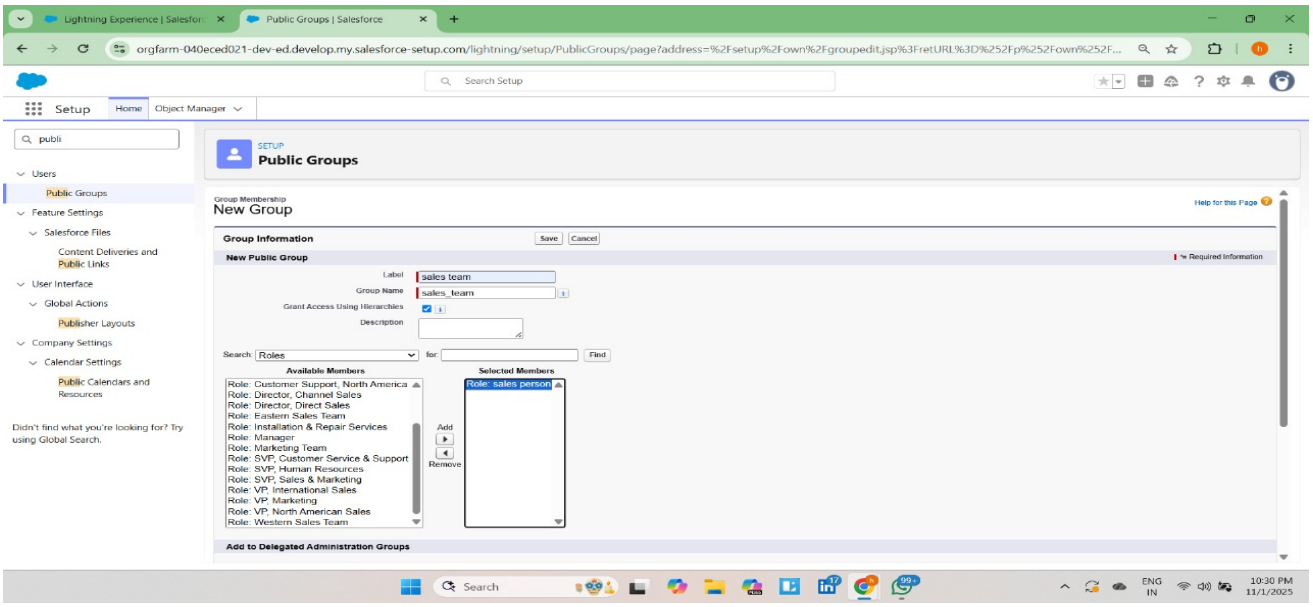
## Step 9: User Management and Permissions

- Set up user profiles for **Managers, Mechanics, and Sales Personnel.**
- Configured permissions to ensure each role accesses only the relevant objects and records needed for their tasks.

**1. User List Page** – shows all created users with their assigned roles and profiles.

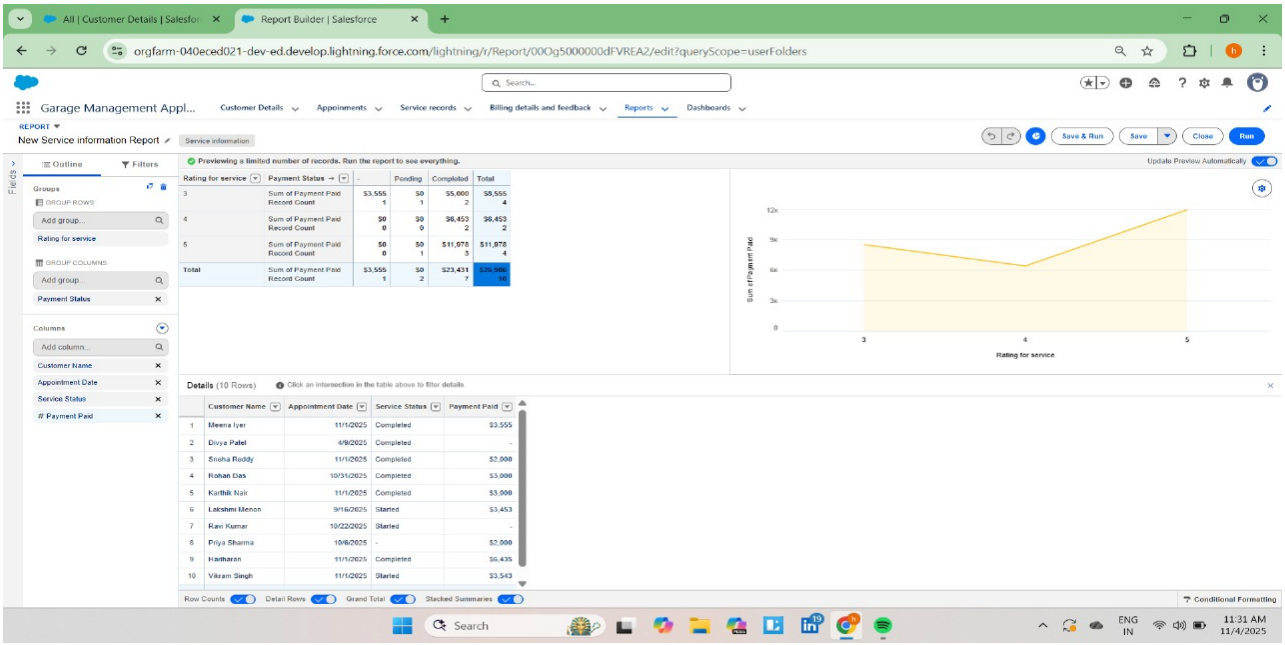



**2.Public Groups List Page** – shows the created group used for sharing rules.

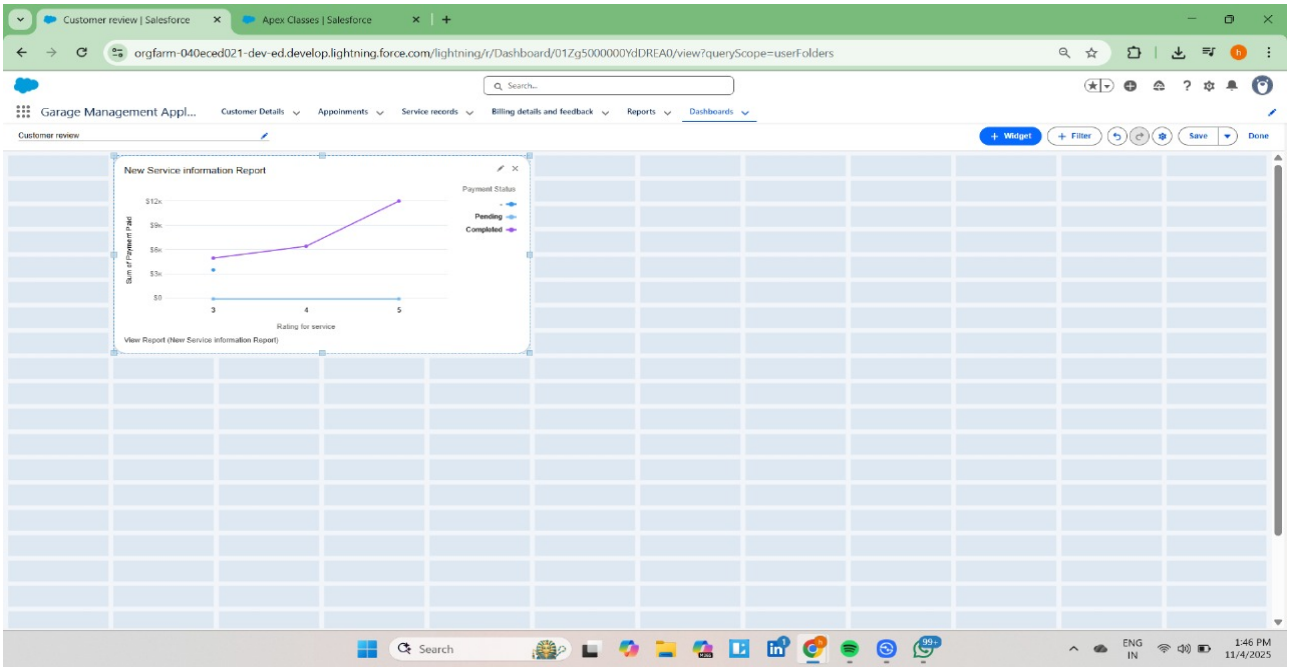


## Step 10: Reporting and Dashboards

**Report :** Created custom **report** types to analyze key garage metrics, such as total services, revenue generation, and mechanic performance.




**Dashboard :** Built interactive **dashboards** to visualize trends and provide actionable insights, enabling managers to make informed business decisions.



## Key Scenarios Addressed by Salesforce in the Implementation Project

The **Garage Management System** leverages Salesforce's robust features to handle real-world garage operations efficiently. Below are the key scenarios addressed during implementation:

### Efficient Management of Customer and Vehicle Details

- **Scenario:** Each customer's vehicle details must be recorded accurately for service tracking.
- **Salesforce Solution:** Custom objects for Customer Details and Vehicle Information ensure accurate data management with lookup relationships between customers and appointments.

### Automated Appointment Scheduling

- **Scenario:** Service appointments need to be scheduled efficiently based on mechanic availability.
- **Salesforce Solution:** Appointment records are created through guided Flows, assigning mechanics dynamically using lookup fields and triggers.

### Service Record Tracking

- **Scenario:** Garage staff must record service details, cost, and completion status
- **Salesforce Solution:** The Service Records object captures service type, job cost, and completion data, while relationships link each service to the relevant customer and appointment.

### Automated Billing and Feedback Collection

- **Scenario:** After a service is completed, invoices and customer feedback must be recorded.
- **Salesforce Solution:** Automated Flows create billing records and trigger notifications, while the Billing & Feedback object stores payment details and customer comments.

### Duplicate Customer Prevention

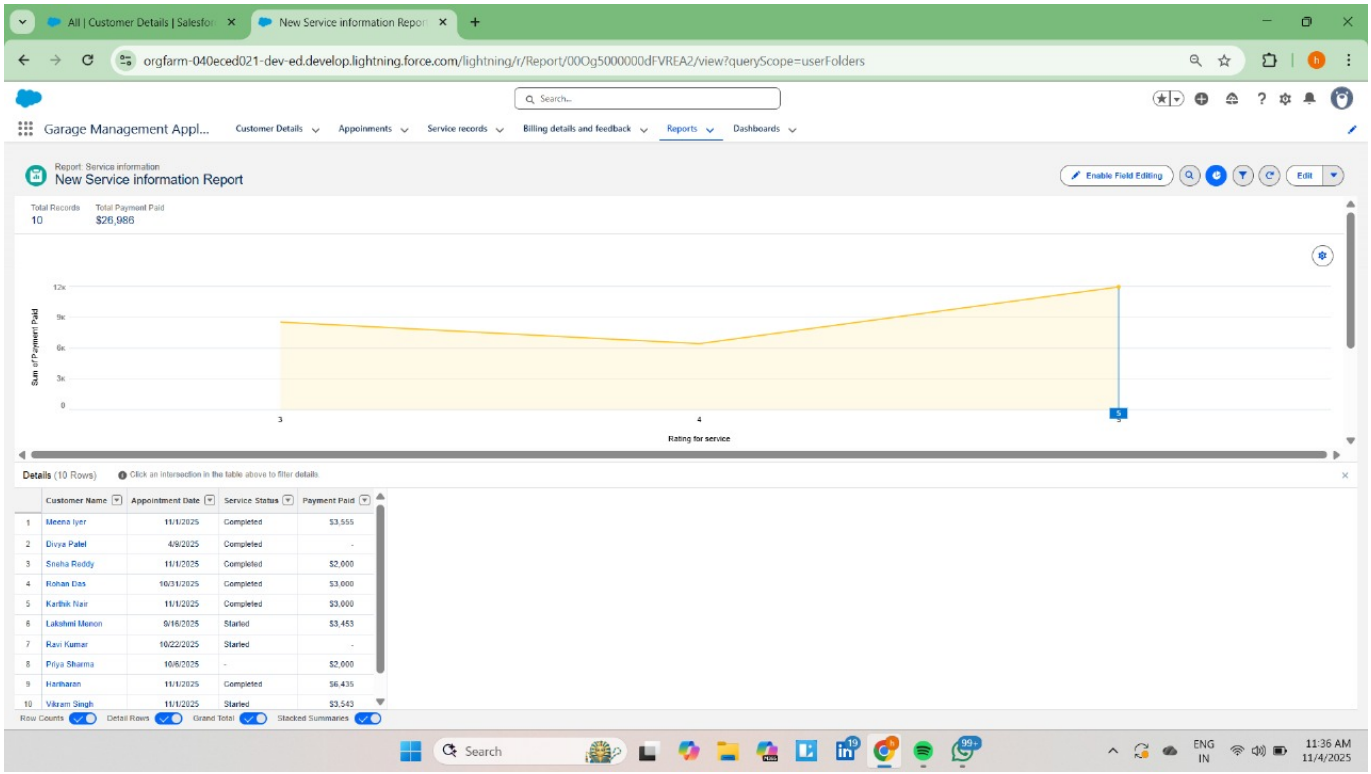
- **Scenario:** Duplicate customer entries can cause confusion and inaccurate service tracking.
- **Salesforce Solution:** Matching Rules and Duplicate Rules prevent repeated entries based on customer name or contact details.

### Secure and Role-Based Access Control

- **Scenario:** Different users (managers, mechanics, and staff) require specific data access levels.
- **Salesforce Solution:** Profiles, roles, and sharing settings ensure restricted, role-appropriate access, maintaining data security and confidentiality.

### Real-Time Reporting and Analysis

- **Scenario:** Garage owners need clear insights into operations, revenue, and workload.
- **Salesforce Solution:** Custom reports and dashboards present visual summaries of service volume, total revenue, and mechanic performance, driving data-based decision-making.

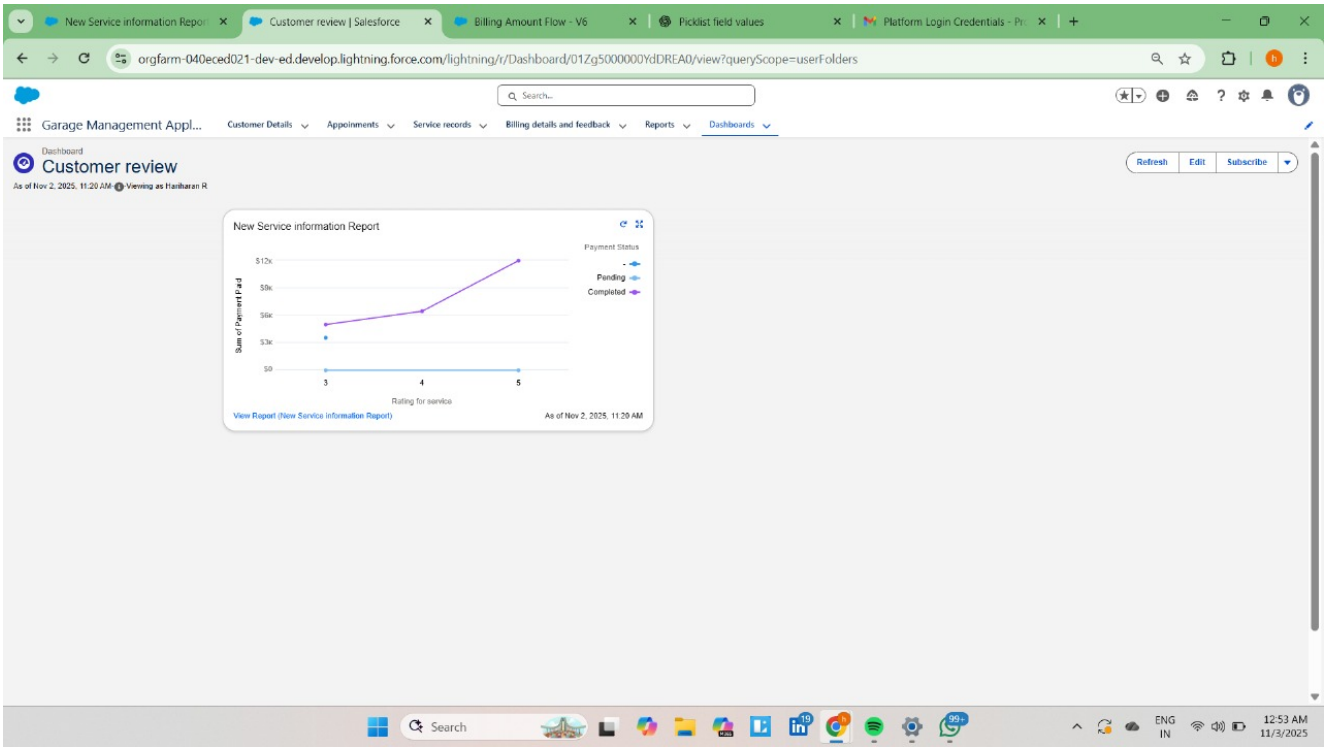



## Conclusion

### Summary of Achievements:

The **Garage Management System** successfully delivers an integrated, automated solution for garage operations using Salesforce technology. Key accomplishments include:

- **Streamlined Service Management:** Built a structured system to manage customers, vehicles, appointments, and billing seamlessly.
- **Automation and Efficiency:** Implemented flows and triggers to reduce manual effort and ensure timely task execution.
- **Improved Data Integrity:** Enforced validation and duplicate rules to maintain accurate and consistent records.
- **Role-Based Security:** Established controlled data access through profiles, roles, and sharing rules.
- **Data-Driven Insights:** Designed comprehensive reports and dashboards for analyzing performance and profitability.
- **User-Friendly Interface:** Created an intuitive Lightning App that ensures smooth navigation for all users.


New Service information Report
Customer review | Salesforce
Billing Amount Flow - V6
Picklist field values
Platform Login Credentials - Pr
orgfarm-040eced021-dev-ed.develop.lightning.force.com/lightning/r/Dashboard/01Zg5000000YdDREA0/view?queryScope=userFolders
Search...
Garage Management Appl...
Customer Details
Appointments
Service records
Billing details and feedback
Reports
Dashboards
Dashboard
Customer review
As of Nov 2, 2025, 11:20 AM · Viewing as Hariharan R
Refresh
Edit
Subscribe
New Service information Report
Payment Status
Pending
Completed
$12k
$9k
$6k
$3k
$0
Sum of Payment Paid
3
4
5
Rating for service
View Report (New Service information Report)
As of Nov 2, 2025, 11:20 AM
Search
ENG
IN
12:53 AM
11/3/2025