WHATNEXT VISION MOTORS: SHAPING THE FUTURE OF MOBILITY WITH INNOVATION AND EXCELLENCE

Abstract

This project--WhatNext Vision Motors--was developed as part of a Salesforce Virtual Internship Capstone(SFVIP2025), focusing on automating vehicle order processing for a fictional automobile company. The goal was to utilize Salesforce's platform to streamline customer, dealer, and vehicle data management while leveraging automation to ensure a seamless purchase and test drive experience for both customers and dealers. Automation rules, custom apps, and Apex code were implemented to solve real-world logistics problems such as dealer assignment, stock checking, and customer engagement.

Objective

- Automate the vehicle order process using Salesforce.
- Assign new orders to the nearest dealer based on the customer’s location.
- Prevent orders for out-of-stock vehicles.
- Automate test drive reminders to customers via email notifications.
- Utilize Salesforce automation, custom applications, flows, and Apex code to achieve these objectives.

Technology Description

About Salesforce

Salesforce is a leading cloud-based Customer Relationship Management (CRM) platform used by businesses to manage sales, service, marketing, and more. It provides tools to automate processes, build custom apps, integrate data, and customize user experiences without requiring extensive coding. Organizations use Salesforce for efficient customer data management, automation of business logic, and seamless collaboration across teams.

1. Custom Objects

What Are Custom Objects?
Custom objects in Salesforce are user-defined database tables that allow organizations to store information unique to their business processes. Unlike standard objects (like Accounts or Contacts), these are tailored to specific requirements and may represent anything from products to transactions.

In this project, six custom objects were created:

- **Vehicle**: Stores vehicle details such as model, name, price, current stock, and status.
- **Vehicle Dealer**: Contains dealer information (name, location, contact, dealer code) to manage authorized partners.
- **Vehicle Customer**: Holds information about car buyers—names, addresses, and preferences.
- **Vehicle Order**: Tracks vehicle purchase orders, linking customers, vehicles, and status.
- **Vehicle Test Drive**: Manages bookings, schedules, and records for test drives.
- **Vehicle Service Request**: Handles post-purchase service issues and requests, including statuses and descriptions.

2. Tabs

What Are Tabs?
Tabs in Salesforce provide navigation links in the user interface, allowing easy access to different objects or functionalities (like lists, dashboards, or custom pages).

Project Implementation:
Separate tabs were created for each custom object—Vehicles, Dealers, Customers, Orders, Test Drives, and Service Requests. This enabled users (admin, dealer staff) to quickly view, create, or modify information associated with each component.

3. Custom App

What Is a Custom App?
A custom app in Salesforce is a group of tabs and features tailored to a particular business process. It provides a personalized workspace and organizes relevant tools in one place.

Project Implementation:
A Lightning App called “WhatNext Vision Motors” combines all relevant objects, dashboards, and tools under a single workspace. Accessibility is restricted to users with the appropriate role (e.g., System Administrator), enhancing data security and focus.

4. Flows

What Are Flows?
Flows are point-and-click automation tools within Salesforce that allow users to automate complex business processes, such as record updates, approvals, or notifications. Flows can run in the background or interactively.

Project Implementation:

- **Dealer Assignment Flow:** When a customer places an order, an automated flow finds the nearest dealer based on the customer’s location and assigns the order accordingly.

- **Test Drive Email Reminder Flow:** A scheduled flow automatically sends email reminders to customers the day before their booked test drive, improving engagement and reducing missed appointments.

5. Apex Code

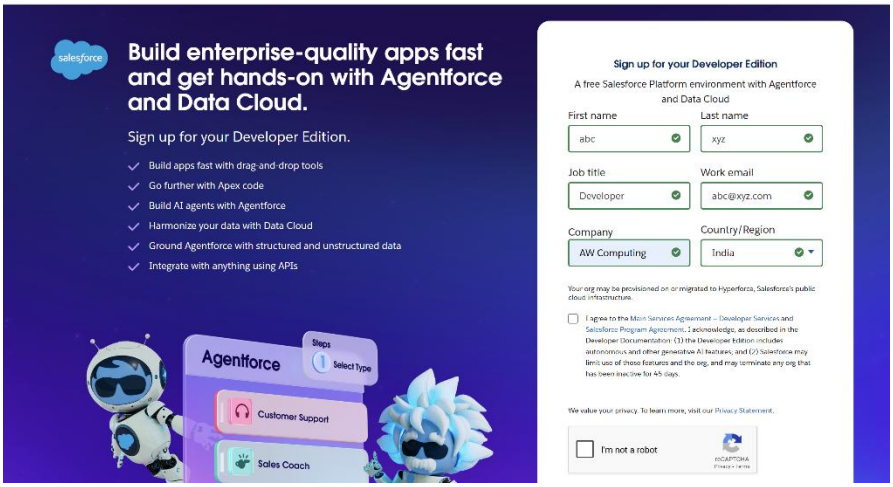
What Is Apex?
Apex is Salesforce's proprietary programming language, similar to Java, that enables developers to add complex business logic beyond what is possible with declarative tools (like flows). It allows for writing triggers, scheduled jobs, and batch operations.

Project Implementation:

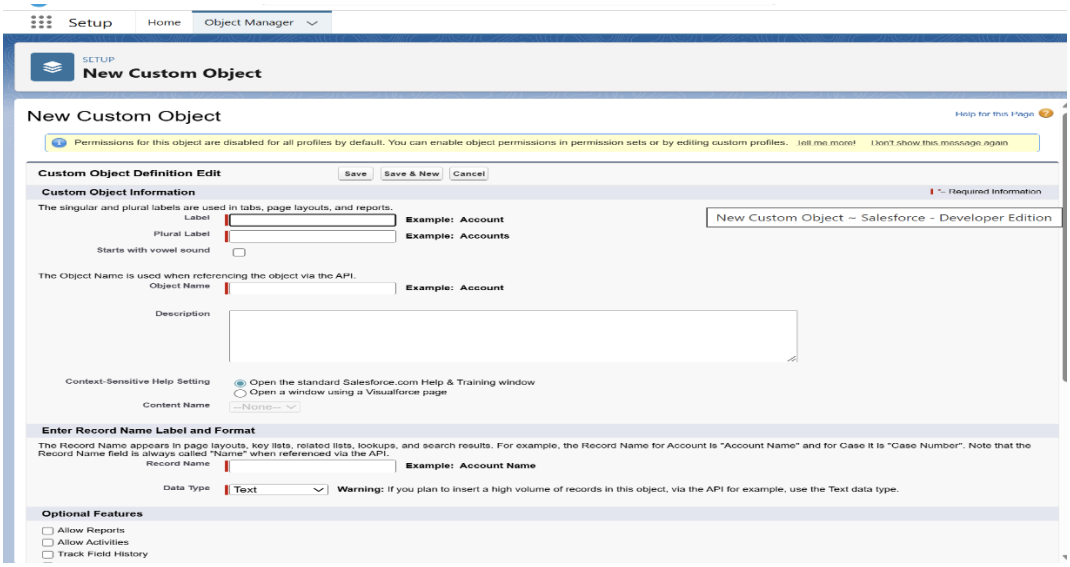
- **Apex Triggers:** Activate on order creation to decrease vehicle stock automatically and prevent orders when a vehicle is out of stock.
- **Batch Class and Scheduler:** Periodically audits vehicle inventories, updating statuses and ensuring data accuracy across bulk records.

Detailed Execution

1. **Salesforce Developer Environment Setup**
    - Creation of a new developer org and setup of objects, tabs, and app.

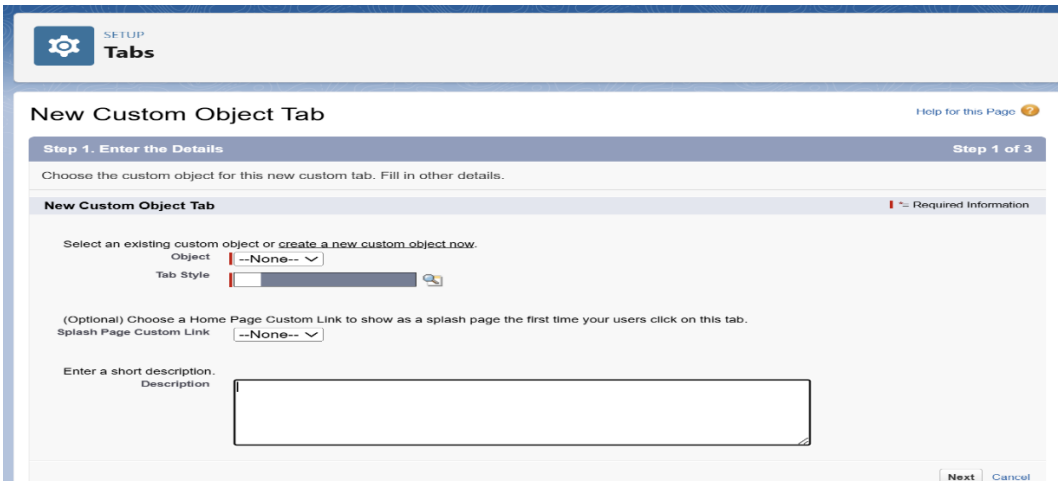


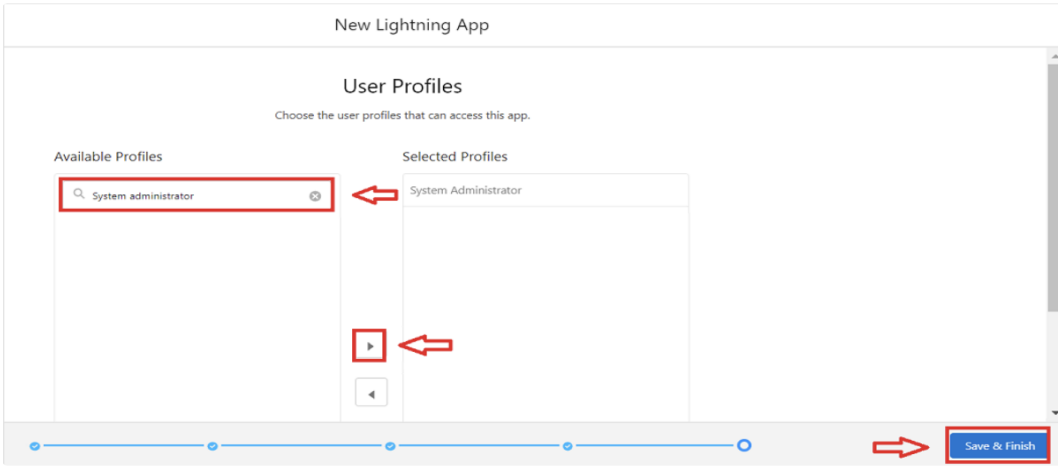
2. **Data Model Implementation**
    - Six custom objects were defined as described above.
    - Each object was populated with relevant fields, including lookups, picklists, currency, numbers, and auto-number fields.



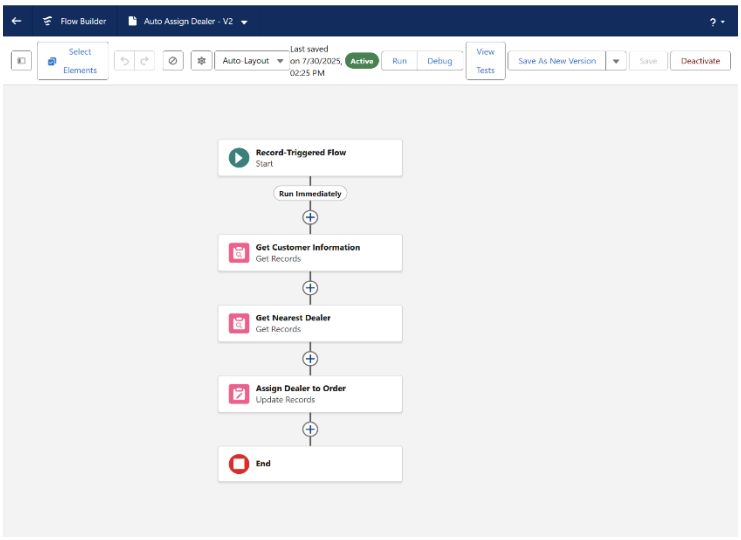
3. **App and UI Creation**

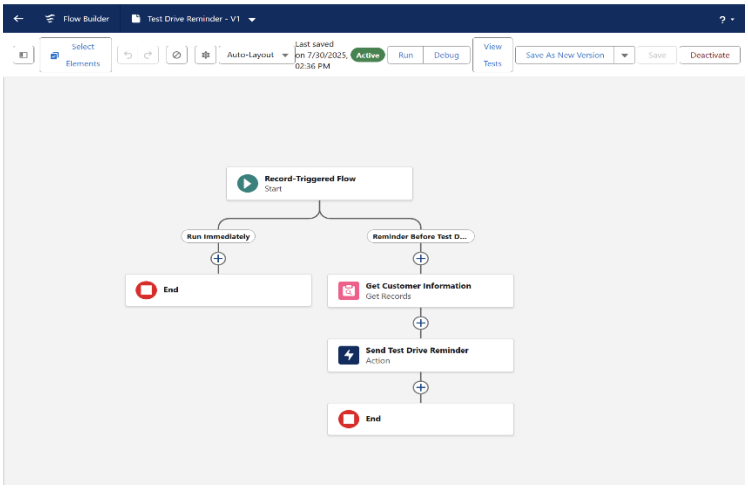
- Tabs for each object and a single unified app to streamline all related business functionality.





4. **Process Automation**
    - Flows for:
        - Assigning the nearest dealer automatically during order processing by matching the locations of customer and dealer records.
        - Sending email reminders for test drives using scheduled flows.





5. **Apex Automation**
    - Deploying Apex triggers to ensure business rules like stock reduction and order prevention for out-of-stock vehicles.
    - Batch Apex scripts to enforce business logic and consistency during large data updates.

6. **Field and Record Creation**
    - Manual testing by creating sample entries (e.g., customers, dealers with addresses and locations) and observing automation effects.

Project Explanation with Real World Example

Let's consider Tara, a working professional residing in Hyderabad, who is interested in purchasing a new electric car for her daily commute. She accesses the WhatNext Vision Motors customer portal and browses through the available vehicles. After comparing features and prices, Tara decides to order a "Vision EV Prime."

Step-by-Step Walkthrough:

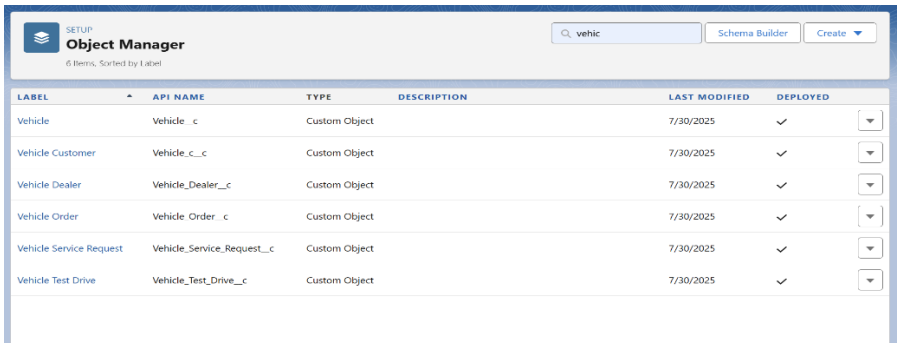
1. **Placing the Order:**
   Tara fills in her contact details, preferred vehicle (Vision EV Prime), and location (Bangalore) in the order form provided by the WhatNext Vision Motors Salesforce app. Once she submits the order, a new "Vehicle Order" record is created with 'Pending' status.
2. **Dealer Assignment:**
    - The system uses an automated Flow to read Tara's location.
    - It searches the "Vehicle Dealer" records and finds the nearest authorized dealer—TM Automobiles, located in Hyderabad.
    - Tara's order is automatically assigned to TM Automobiles, eliminating the need for manual allocation and reducing response times.
3. **Stock Verification:**
    - Immediately after assignment, an Apex Trigger validates the stock of the Vision EV Prime at TM Automobiles.
    - If the car is available (e.g., 3 units in stock), the order proceeds.
    - If the stock were zero, Tara would receive an immediate notification that the vehicle is out of stock, preventing her from placing an unfulfillable order.
4. **Test Drive Booking and Reminder:**
    - Tara chooses to book a test drive for Thursday(317/25) /using the portal.
    - A "Vehicle Test Drive" record is created and linked to her order.
    - An automated scheduled Flow ensures that Tara receives a personalized email reminder the previous day, confirming her test drive slot with the dealer's details and contact information.
5. **Service Request (in the Future):**
   After purchasing the car, Tara later uses the customer portal to create a "Service

Request" when her car's first service is due. She receives automated updates as her request status changes (e.g., "Received," "In Progress," "Completed").

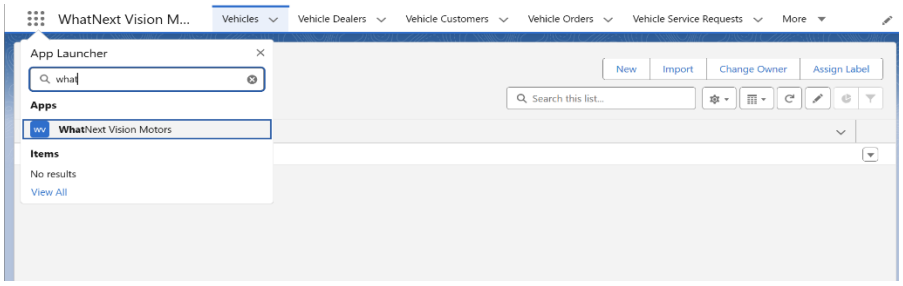
Key Details in the Example:

- The automated assignment improves user experience and ensures orders are distributed optimally based on real-world geography.
- Stock checks and preventive logic reduce customer frustration and operational overhead.
- Scheduled email reminders for test drives close the loop, enhancing engagement and lowering the risk of missed appointments.
- The system is flexible for both dealers (TM Automobiles) and customers (Tara), reflecting real automotive business workflows.

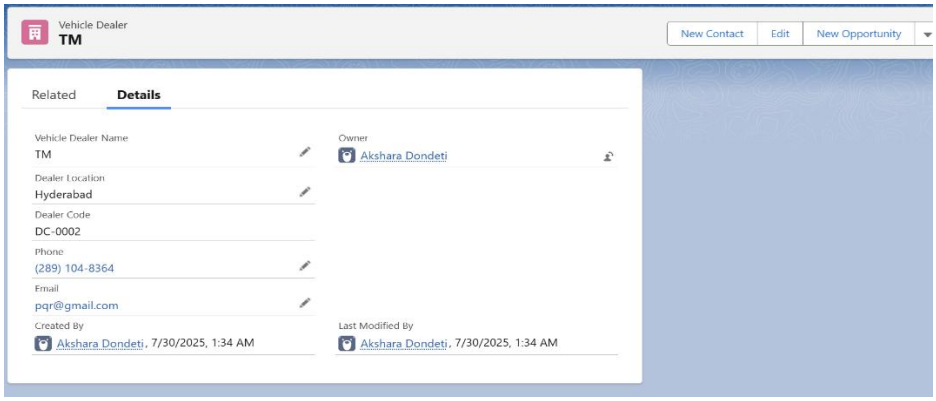
Screenshots



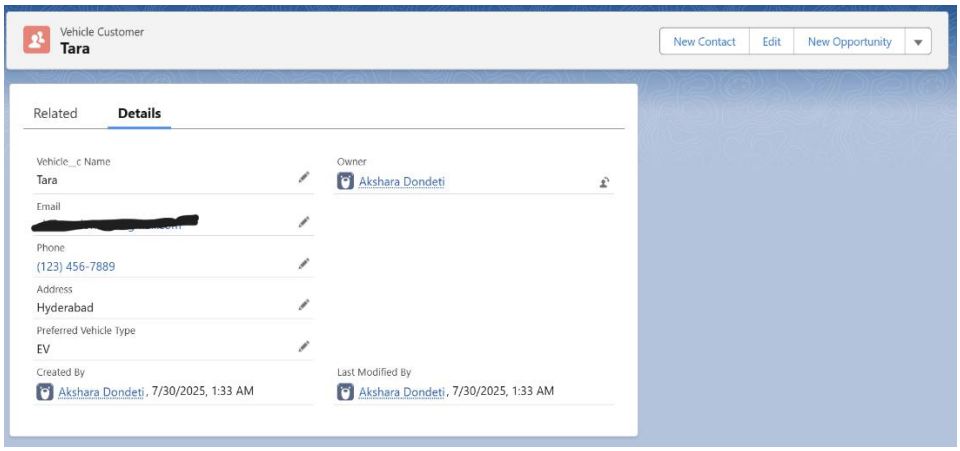
Custom Objects for the Vehicle Order Automation



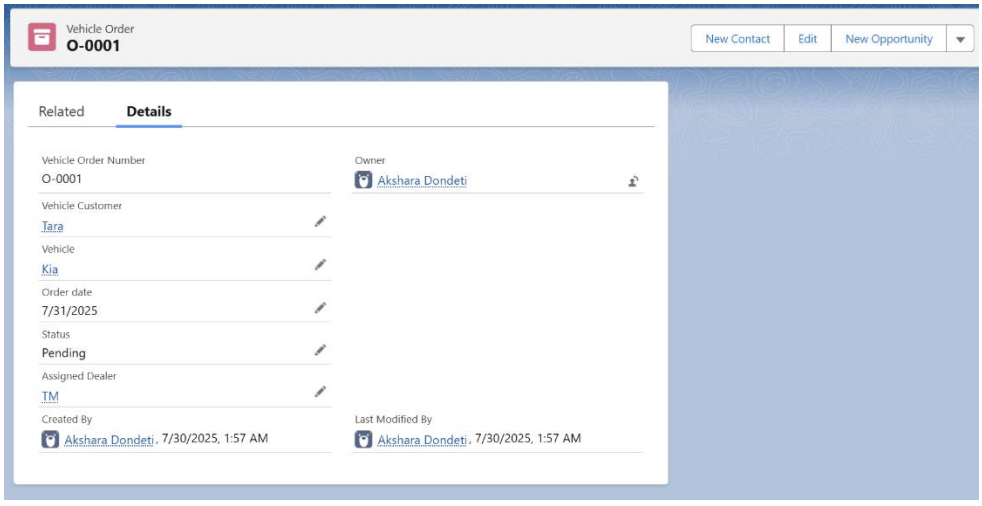
Custom Application



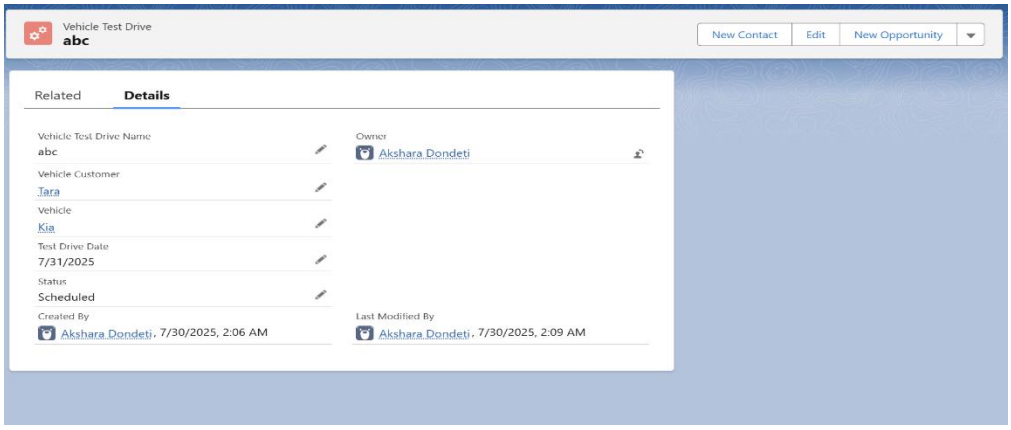
Vehicle Dealer Record Created



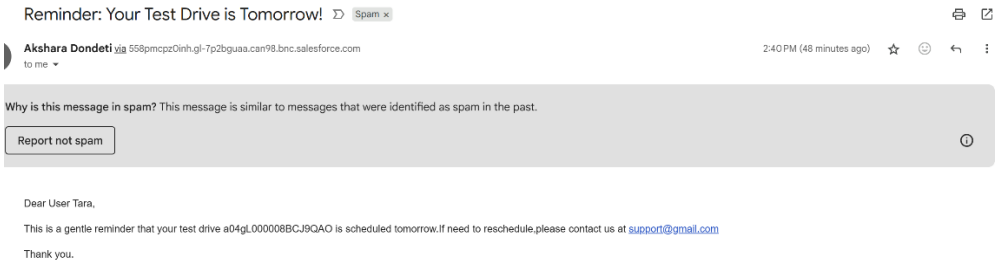
Customer Record Created



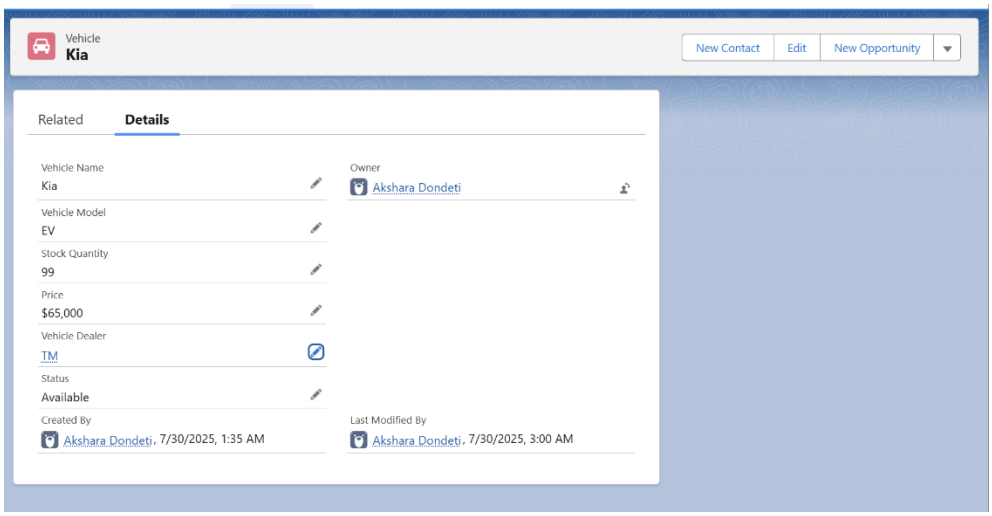
Vehicle Order Placed



Vehicle Test Drive Scheduled-Alert



Alert Received by Email



Inventory Managed using Apex Classes

Conclusion

The WhatNext Vision Motors Salesforce project demonstrates how cloud-based automation and custom development can digitize and optimize a typical auto retail workflow. By integrating data models, custom flows, and code, the project enhances operational efficiency, reduces human error, and significantly improves the customer experience through timely automation.

Future Scope

- Scalability: Extend automation rules to include regional logic, dynamic pricing, or loyalty incentives.
- Integration: Add integration with external email/SMS gateways, mapping APIs for advanced dealer-customer proximity calculations, or ERP systems for parts inventory.
- Reporting: Advanced dashboards and analytics to predict sales trends and manage inventories proactively.
- AI Enhancements: Implement machine learning to recommend vehicles or dealers to customers based on preferences and historical data.
- Mobile Experience: Develop a mobile UI for customers and dealers for on-the-go access to order status and test drive notifications.