WhatNext Vision Motors: Shaping The Future Of Mobility With Innovation And Excellence

Project Overview

The WhatsNext Vision Motors CRM System is a Salesforce-based solution designed to streamline customer order management and test drive operations for an automotive dealership. It aims to replace manual workflows with automation, improve accuracy in vehicle inventory tracking, and enhance customer engagement through smart dealer assignment and real-time updates. Built within Salesforce, the CRM integrates core business processes — from vehicle ordering to dealer allocation and test drive scheduling — under one centralized platform. Key features include automated dealer assignment, stock validation, test drive reminder automation, and a unified dashboard for administrators to monitor operations efficiently.

Objectives

The main goal of developing the WhatsNext Vision Motors Salesforce CRM is to automate and simplify the company's order and test drive management while improving communication between customers, dealers, and management.
Specifically, the system aims to:

- Automate the vehicle ordering process to eliminate out-of-stock errors and ensure data accuracy.
- Assign the nearest dealer automatically based on customer location for faster response times.
- Automate test drive scheduling and reminders to improve customer satisfaction.
- Provide administrators with a unified dashboard for real-time tracking of customer requests, orders, and stock levels.
- Minimize manual workload through Salesforce automation tools such as Flows, Process Builder, and Apex Triggers.
- Establish a scalable CRM system that can support future enhancements like AI-driven vehicle recommendations or chatbot-assisted inquiries.

Phase 1: Requirement Analysis & Planning

Understanding Business Requirements:

WhatsNext Vision Motors identified key operational challenges — manual tracking of vehicle orders, lack of centralized dealer assignment, and inconsistent communication with customers. The need was for an integrated Salesforce solution that automates dealer allocation, manages inventory, and enhances customer engagement.

Defining Project Scope and Objectives:

The project focuses on:

- Automating vehicle order and dealer assignment processes.
- Managing vehicle inventory and preventing out-of-stock orders.
- Handling test drives, reminders, and service requests seamlessly.
- Integrating automation logic using Salesforce Flows, Process Builder, and Apex.
- Creating user-friendly dashboards for performance insights.

Design Data Model and Security Model:

The CRM's data architecture includes six key custom objects:

- **Vehicle__c** – Stores vehicle details and stock status.
- **Vehicle_Dealer__c** – Contains dealer information and location data.
- **Vehicle_Customer__c** – Manages customer records.
- **Vehicle_Order__c** – Links customers, dealers, and vehicles in each order.
- **Vehicle_Test_Drive__c** – Handles scheduling and reminders for test drives.
- **Vehicle_Service_Request__c** – Tracks after-sales service and maintenance requests.

A security model was developed using **Profiles**, **Roles**, and **Sharing Rules**, ensuring data access aligns with user responsibilities. System Administrators have full access, while dealers and service representatives have limited permissions.

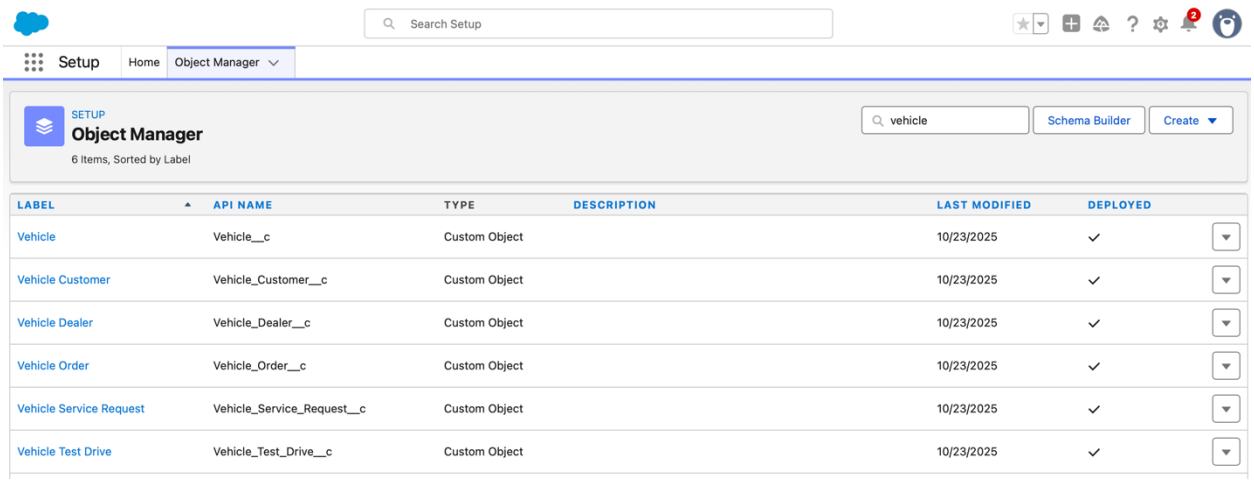

Figure 1.1: Salesforce Object Manager – Custom Objects Overview

Stakeholders Mapping:

- **Project Lead:** Salesforce Administrator
- **Business Users:** Dealers, Service Representatives
- **End Users:** Customers interacting through service requests and test drives
- **Management:** Oversees CRM reports and performance dashboards

Execution Roadmap:

1. Business Requirement Gathering
2. Data Model Design
3. Backend Configuration and Automation Setup
4. UI/UX Development
5. Testing and Security Validation
6. Deployment and Documentation

Phase 2: Salesforce Development – Backend & Configurations

Setup Environment & DevOps Workflow:

The project was built in Salesforce Developer Edition. Sandbox-level configurations and change sets were used conceptually to simulate migration from development to production.

Customization of Objects, Fields, and Automation:

- Created six custom objects with defined relationships (lookup and master-detail).
- Added custom fields, validation rules, and automation logic to ensure data consistency.
- Implemented **Flows** for:
    - **Auto Dealer Assignment** – Automatically assigns the nearest available dealer when an order is created.
    - **Test Drive Reminder Flow** – Sends automated email reminders to customers one day before their test drive.
- Configured **Validation Rules** to prevent order creation for vehicles marked as "Out of Stock."
- Created **Approval Processes** for managing bulk vehicle orders.

Apex Classes and Triggers:

- **VehicleOrderTriggerHandler** – Handles logic for validating stock before order confirmation.
- **VehicleOrderTrigger** – Executes stock checks and order updates upon record creation or modification.
- **VehicleOrderBatch** – Performs bulk processing for multiple orders simultaneously.
- **VehicleOrderBatchScheduler** – Automates periodic batch runs for pending order validation.

These Apex components ensured high efficiency and data integrity in order management.

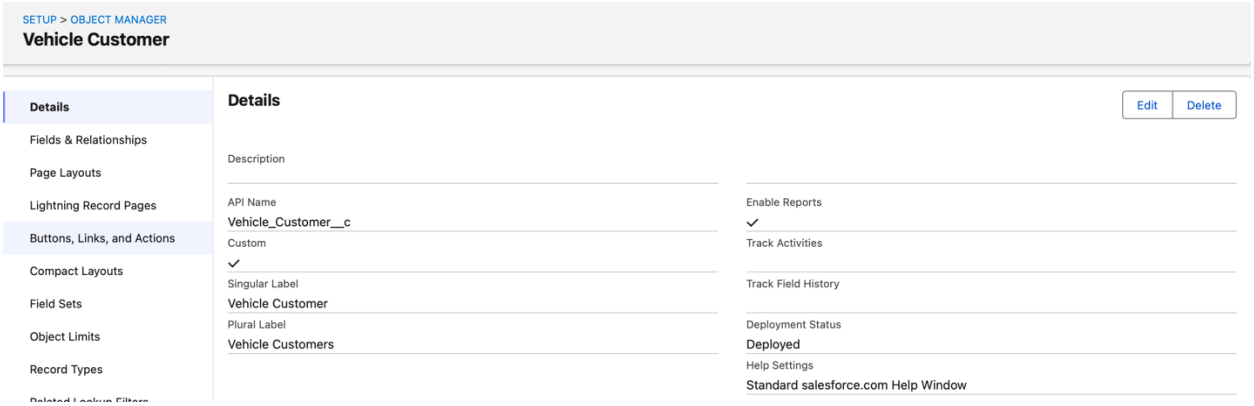

Figure 2.1 Vehicle Customer Custom Object

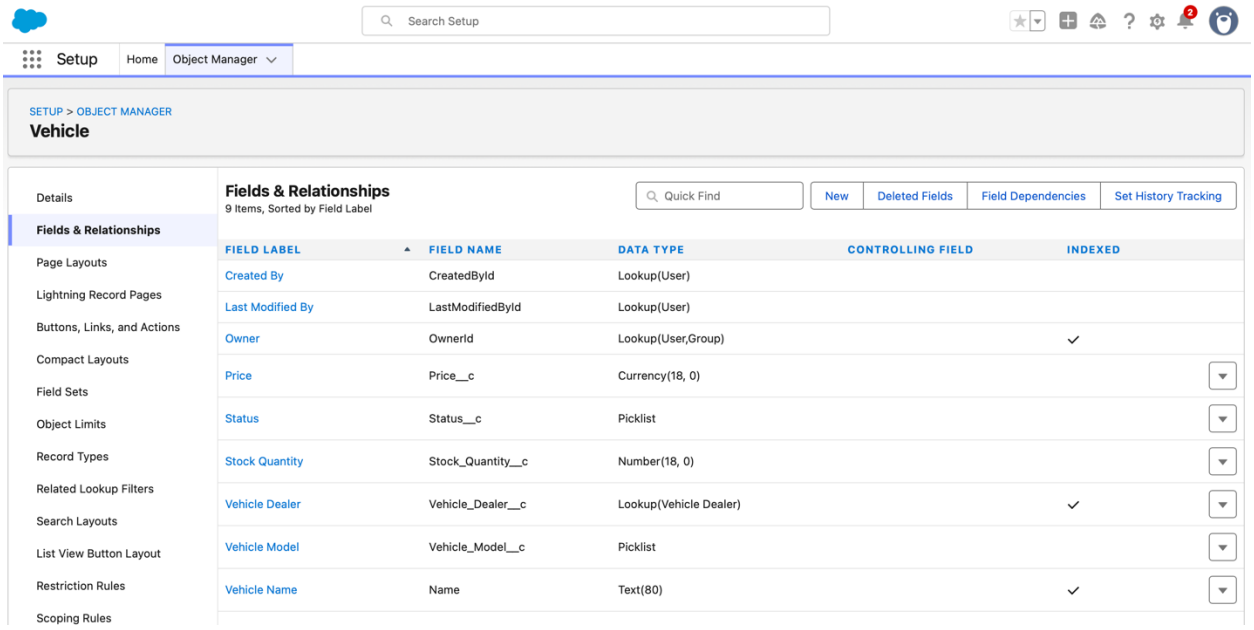

Figure 2.2 Vehicle Custom Object

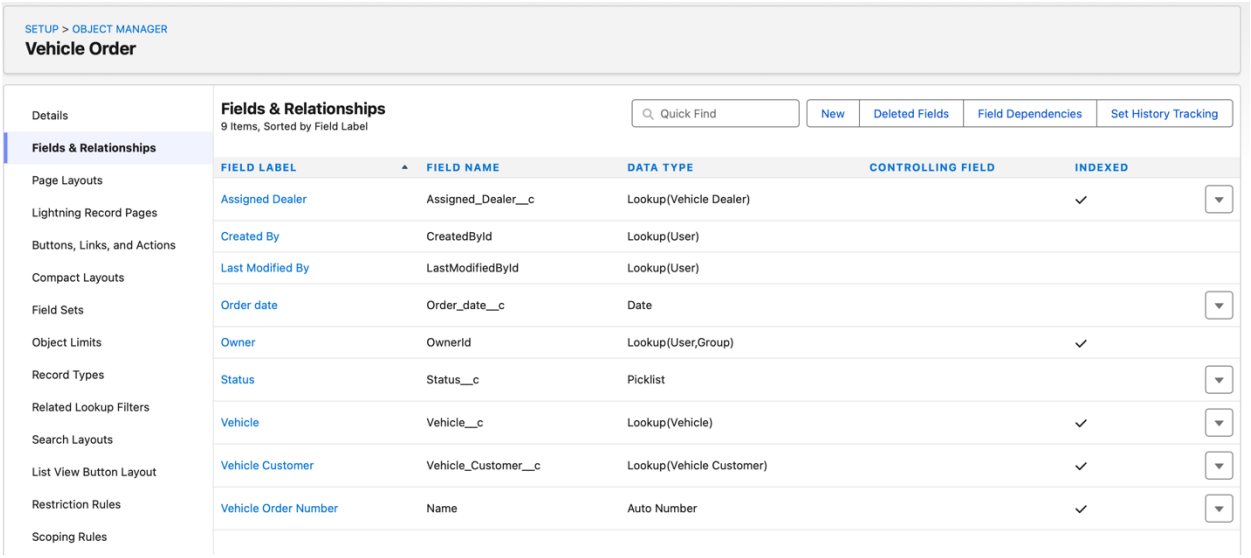

Figure 2.3 Vehicle Order Custom Object

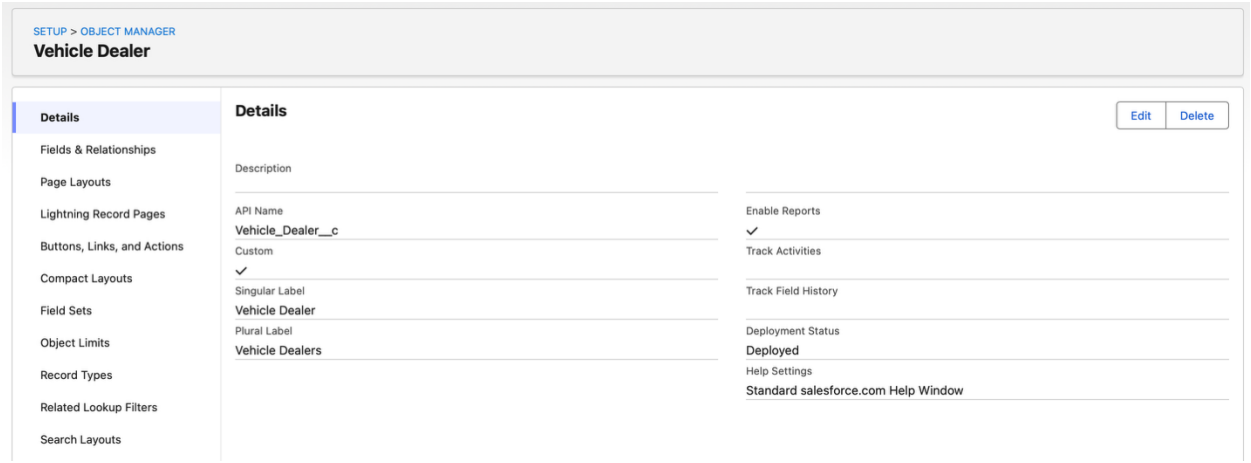

Figure 2.4 Vehicle Dealer Custom Object

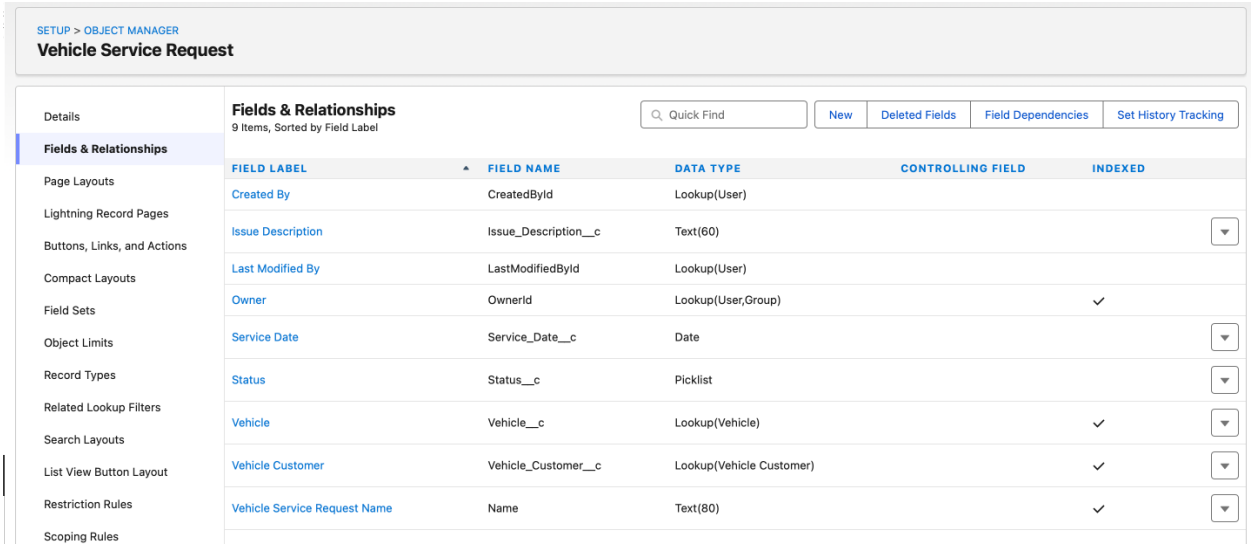

Figure 2.5 Vehicle Service Custom Object

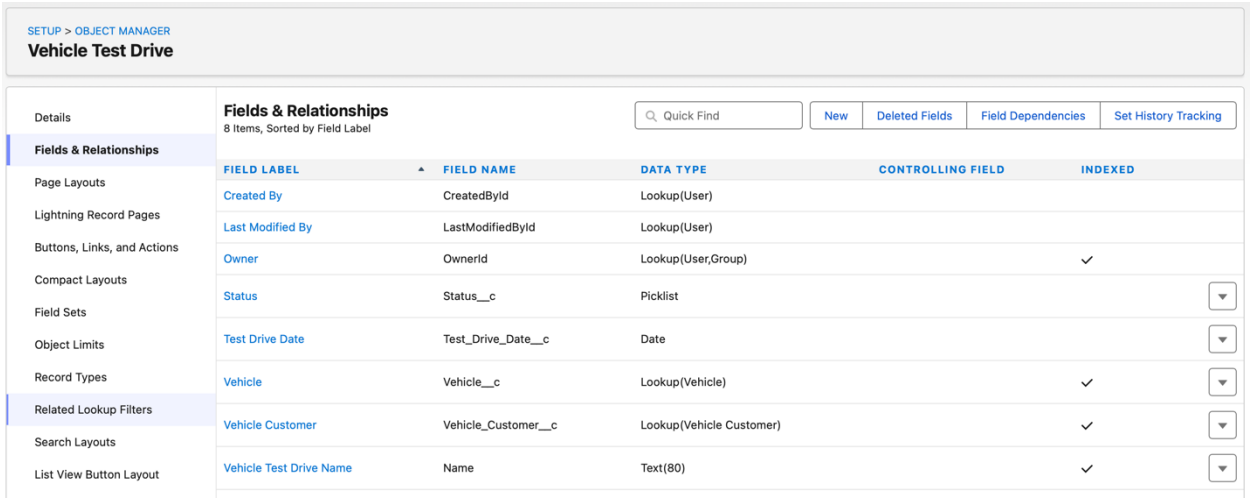

Figure 2.6 Vehicle Test Drive Custom Object

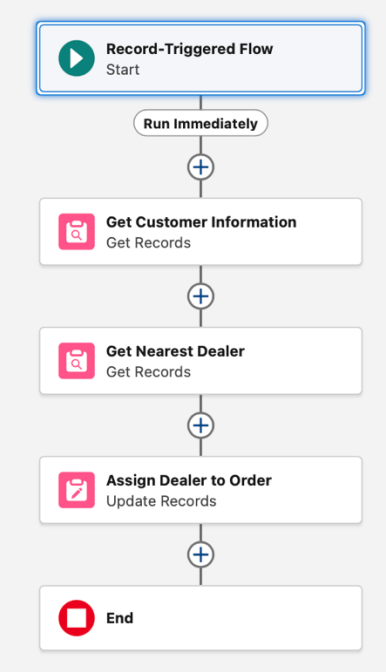

Figure 2.7 Active Flow: End-to-End 'Auto Assign Dealer

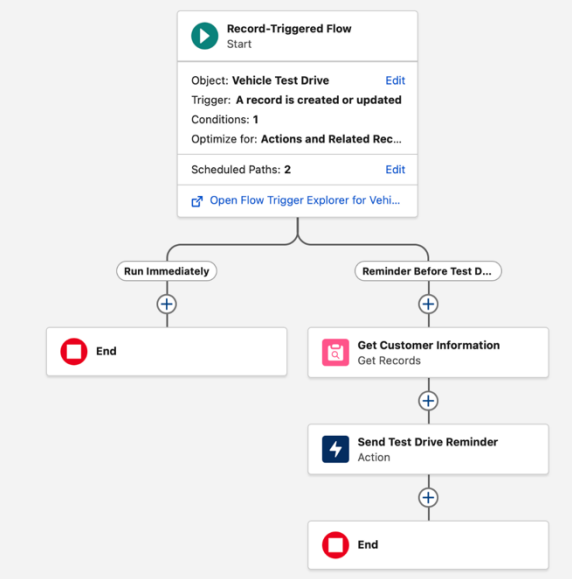

Figure 2.8 Automated Test Drive Email Reminder Flow

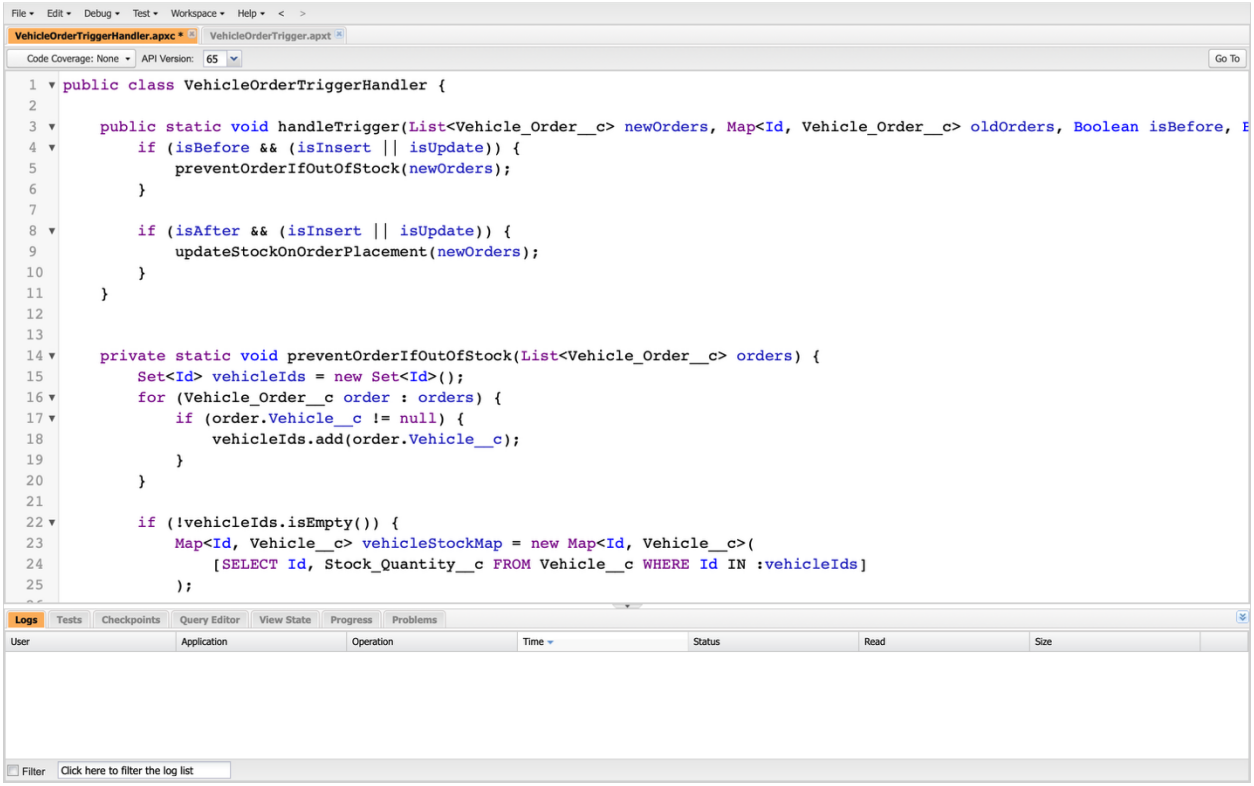

Figure 2.9 VehicleOrderTriggerHandler Logic

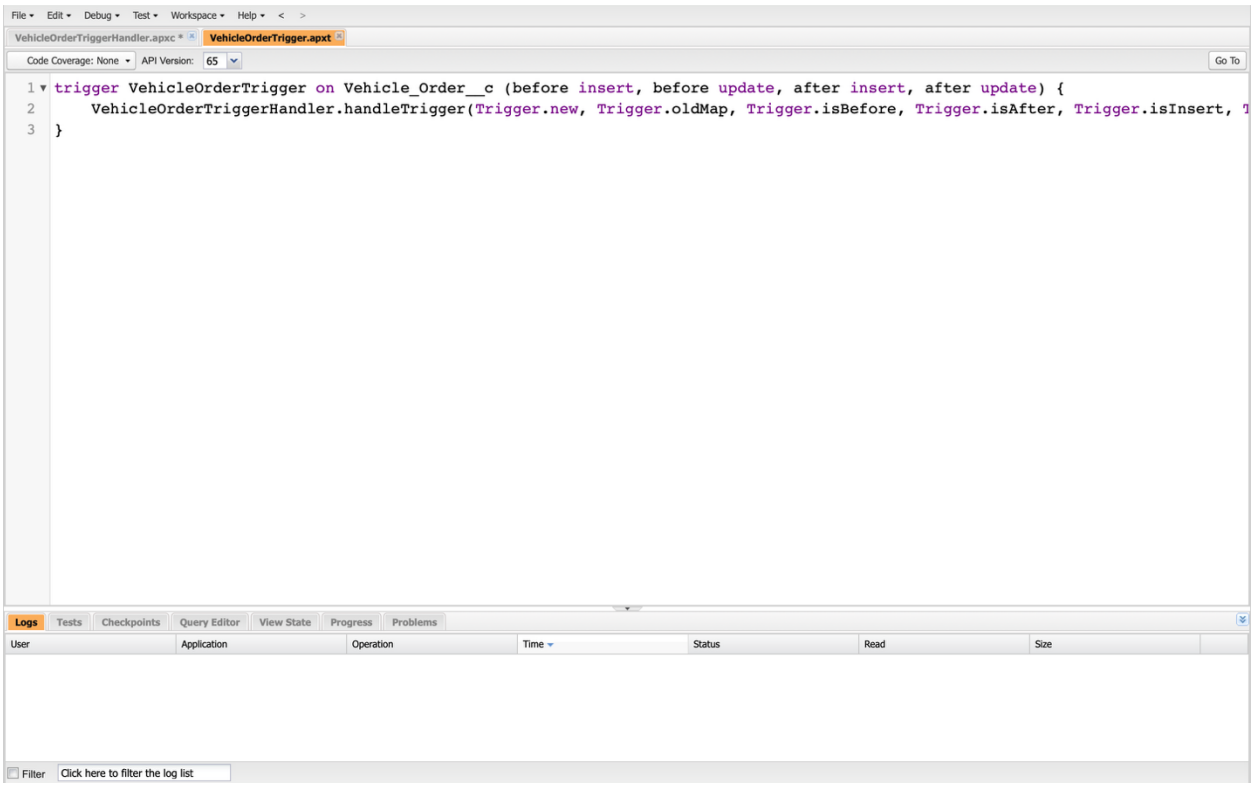

Figure 2.10 VehicleOrderTrigger Activation

Phase 3: UI/UX Development & Customization

Lightning App Setup through App Manager:

The custom “WhatsNext Vision Motors” app was created using the Lightning App Builder. It serves as the central hub for managing all CRM activities.

Page Layouts and Dynamic Forms:

Each object — Vehicle, Dealer, Customer, Order, Test Drive, and Service Request — was assigned a custom page layout for easy navigation and quick access to key details.

User Management:

Access was restricted to authorized profiles. Dealers, Service Representatives, and Administrators were granted role-based permissions to ensure data security and operational efficiency.

Reports and Dashboards:

Interactive dashboards and reports were developed to visualize:

- Total Orders and Sales per Dealer
- Active and Completed Test Drives
- Vehicle Inventory Levels
- Service Request Statuses

These reports provide real-time business insights for management.

Lightning Pages:

Custom Lightning Record Pages were created for each object to enhance the user interface and streamline record management.

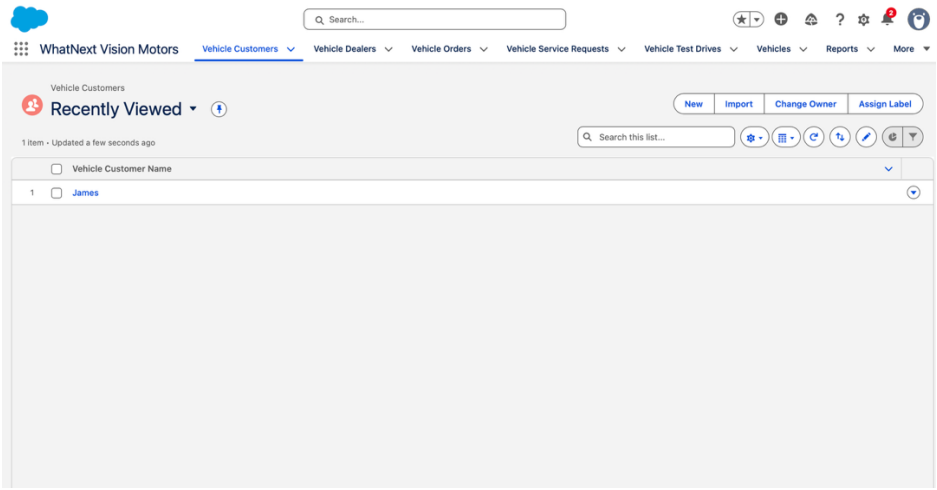

Figure 3.1 Vehicle Customer Record Page Layout

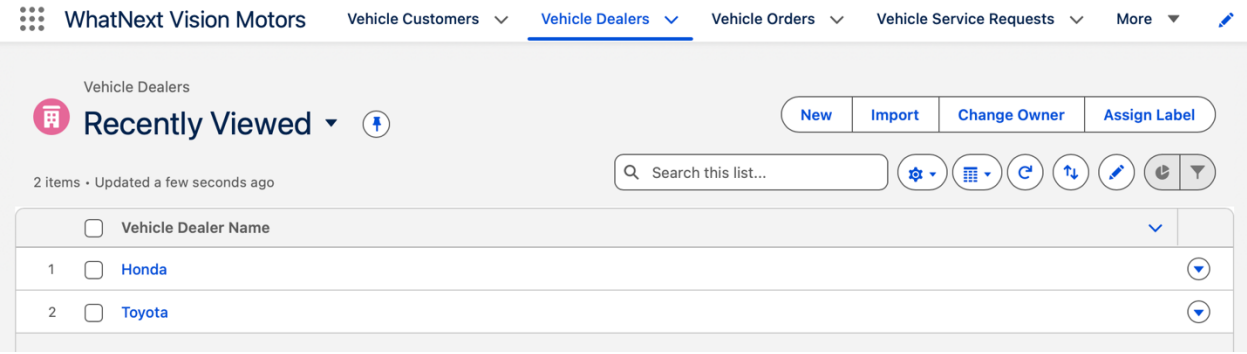

Figure 3.2 Vehicle Dealers Tab

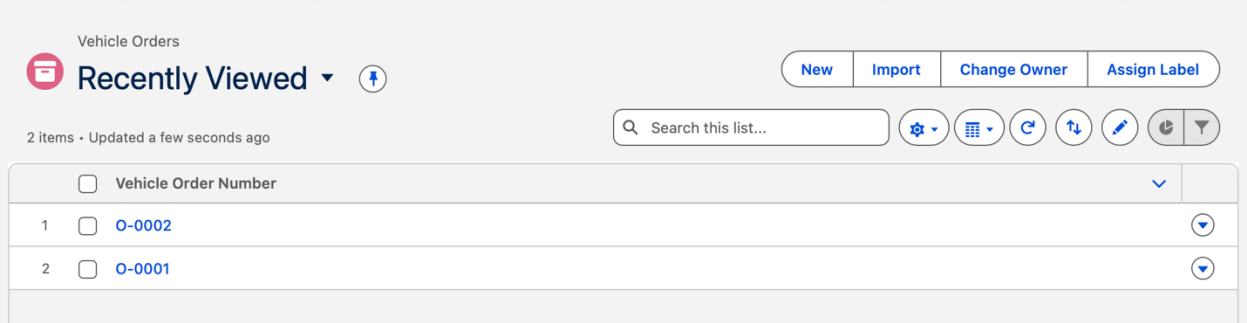

Figure 3.3 Vehicle Order Tab

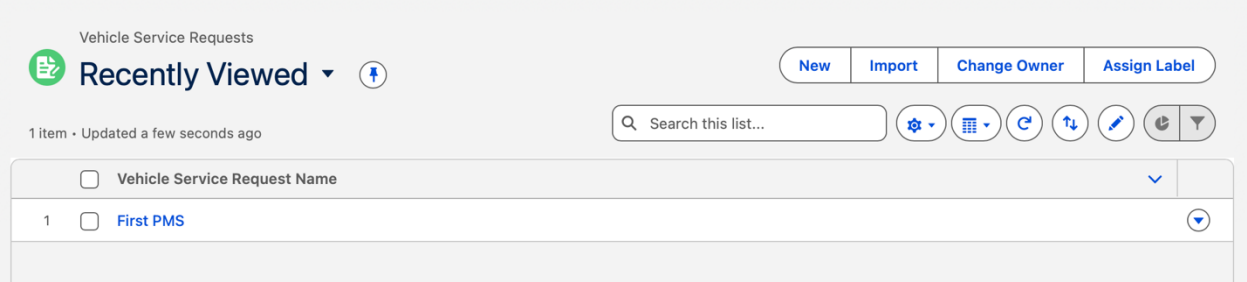

Figure 3.4 Vehicle Service Requests Tab

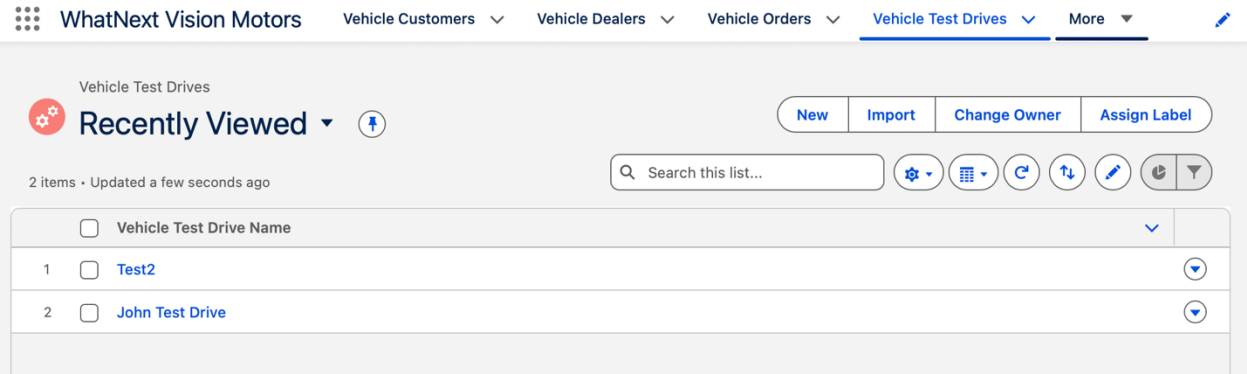

Figure 3.5 Vehicle Test Drives Tab

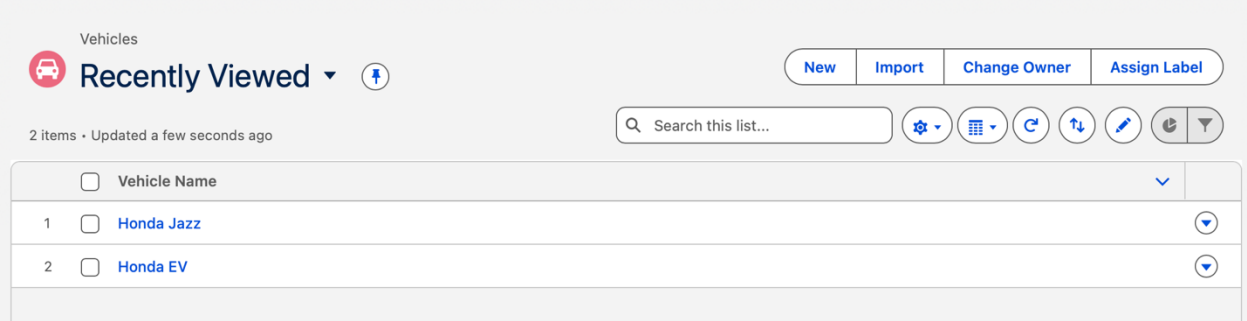

Figure 3.6 Vehicles Tab

Phase 4: Data Migration, Testing & Security

Data Loading Process:

Data migration was completed using Salesforce **Data Import Wizard**, importing vehicle, dealer, and customer data from spreadsheets.

Testing Approach:

Each automation feature was tested systematically:

- **Order Creation:** Verified automatic dealer assignment and inventory update.
- **Test Drive Scheduling:** Confirmed reminder emails were sent successfully.
- **Stock Validation:** Ensured system prevented out-of-stock orders.
- **Trigger Execution:** Checked correct updates on stock quantities and order statuses.

Security Configuration:

- **Profiles & Roles:** Defined based on job functions (Administrator, Dealer, Service Representative).
- **Permission Sets:** Granted additional access for testing specific components.
- **Field History Tracking:** Enabled for major objects to track updates on stock, customer info, and orders.
- **Duplicate Rules and Matching Rules:** Maintained clean data across records.

Order Creation & Dealer Assignment

When a new vehicle order is created, the system automatically assigns the nearest available dealer based on the customer's location. This ensures a faster and more efficient order fulfillment process.

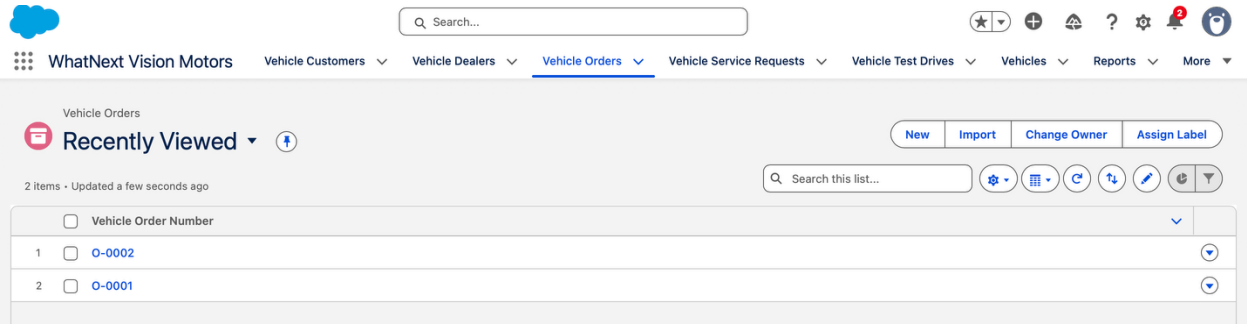

Figure 4.1

Test Drive Reminder Email Proof

After scheduling a test drive, an automated email reminder is sent to the customer one day before the appointment. This feature improves communication and reduces missed test drive schedules.

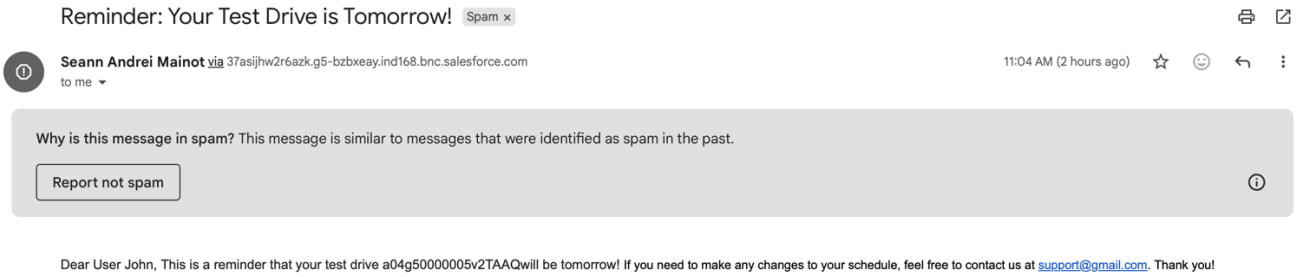

Figure 4.2

Out-of-Stock Validation

If a vehicle's stock quantity reaches zero, the system prevents users from placing new orders for that vehicle and displays an error message. This maintains inventory accuracy and prevents overbooking.

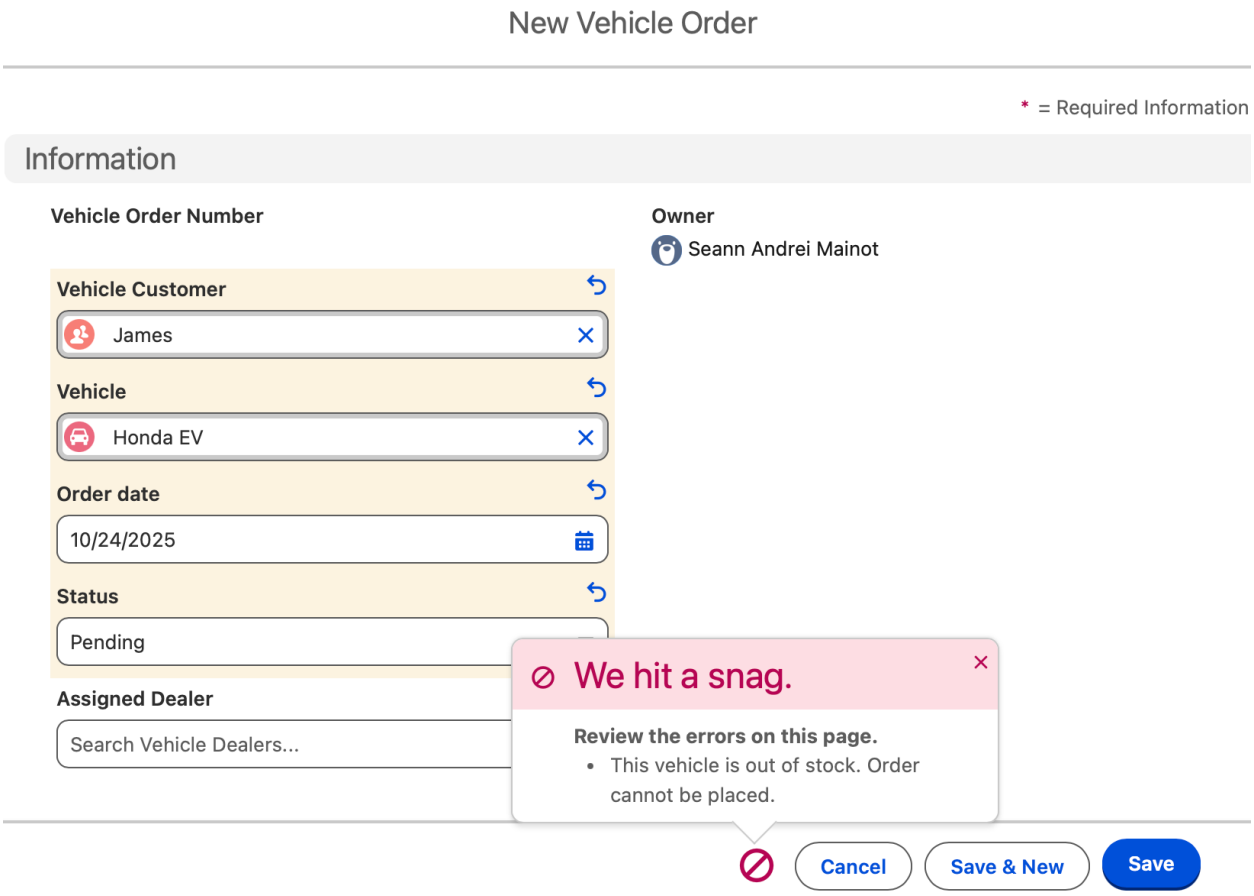

Figure 4.3

Phase 5: Deployment, Documentation & Maintenance

Deployment Strategy:
Simulated using **Outbound Change Sets**, including:

- Custom Objects
- Apex Classes and Triggers
- Validation Rules and Flows
- Approval Processes and Page Layouts

Post-Deployment Validation:

Re-tested automation, access controls, and data accuracy to ensure proper function in the deployed environment.

Documentation and Knowledge Transfer:

Comprehensive records were prepared, including:

- Object and Field Configurations
- Automation Flow Summaries
- Testing Results
- User Guide for system operations and dashboard usage

Maintenance and Monitoring:

- Periodic job scheduling for automated tasks using Apex Scheduler.
- Debug logs for monitoring performance and error resolution.
- Data backups using Salesforce Data Export.
- Regular feedback sessions for continuous system improvement.

Conclusion

The WhatsNext Vision Motors Salesforce CRM Project demonstrates how automation can enhance efficiency, accuracy, and customer satisfaction in vehicle order management. Through a combination of custom data models, Apex automation, and user-centric design, the system successfully digitizes business workflows, reducing manual errors and improving service delivery.

Future enhancements may include integrating AI-driven vehicle recommendations, chatbot-assisted customer interactions, and real-time analytics to further elevate customer experience and business intelligence.