WhatNext Vision Motors: Shaping the Future of Mobility with Innovation and Excellence

Submitted by:

Poliki Komala Sai

Roll Number:

22F21A3145

College/Organisation:

Gates Institute of Technology, Gooty

Course:

B.Tech – CSE (Artificial Intelligence)

Submission Date:

13/07/2025

Table of Contents

1. Project Overview …….. 1

2. Objectives …… 2

3. Phase 1: Requirement Analysis & Planning ……. 3-6

4. Phase 2: Salesforce Development – Backend & Configurations …….. 7-11

5. Phase 3: UI/UX Development & Customization …….. 12-15

6. Phase 4: Data Migration, Testing & Security …… 16-18

7. Phase 5: Deployment, Documentation & Maintenance ……. 19-22

8. Conclusion ……. 23

9. Future Enhancements ……..... 23

1. Project Overview

WhatNext Vision Motors is a pioneering automotive company committed to transforming the mobility sector with innovative technologies that prioritize customer satisfaction and operational excellence. To achieve these goals, the company embarked on an ambitious Salesforce CRM implementation aimed at enhancing the customer ordering experience and streamlining internal processes.

This Salesforce CRM project focuses on automating key workflows such as dealer assignment based on customer location, preventing orders for out-of-stock vehicles, and updating order statuses automatically as stock availability changes. Additionally, it enhances customer engagement through automated reminders for scheduled test drives.

The implementation includes:

- **Development of custom objects** for vehicles, dealers, customers, orders, test drives, and service requests.
- **Record-triggered flows** for dealer assignment automation and test drive reminders.
- **Lightning App** with intuitive navigation, customized page layouts, reports, and dashboards for real-time data visibility.
- **Apex triggers** and batch jobs for enforcing business rules and updating order statuses efficiently.

Overall, this CRM system is designed to reduce operational errors, improve service efficiency, enhance customer satisfaction, and enable staff to focus on strategic tasks, laying a strong foundation for future digital transformation initiatives at WhatNext Vision Motors. The goal is to build a scalable, automated, and user-friendly CRM solution that enhances customer satisfaction, optimizes operational workflows, and drives the company's digital transformation objectives forward.

2. Objectives

The main objectives of the Salesforce CRM project for WhatNext Vision Motors are as follows:

1. **Efficient Ordering System**
    - Prevent placement of orders for vehicles that are out of stock.
    - Ensure customers and dealers order only available vehicles, reducing errors and cancellations.
2. **Automated Dealer Assignment**
    - Assign customer orders to the nearest dealer automatically based on customer address.
    - Enhance convenience and reduce manual intervention in order processing.
3. **Streamlined Order Status Updates**
    - Automate updates of order statuses from Pending to Confirmed when vehicle stock is replenished.
    - Improve transparency and communication with customers about their order progress.
4. **Scheduled Test Drive Reminders**
    - Send automated email reminders to customers for their scheduled test drives.
    - Enhance customer engagement and reduce missed appointments.
5. **Operational Efficiency & Agility**
    - Reduce manual workload on sales, dealer, and service teams by automating routine tasks.
    - Enable staff to focus on strategic and customer relationship-building activities.
6. **Improved Data Management & Security**
    - Centralize data for vehicles, dealers, customers, orders, and services in Salesforce.
    - Implement robust security through profiles, roles, and permission sets to protect business data.

3. Phase 1: Requirement Analysis & Planning

Developer Account Creation and Platform Setup

Introduction

To begin the WhatNext Vision Motors Salesforce CRM project, it was essential to create a Salesforce Developer account. This account provides a dedicated development environment to build, test, and implement the project functionalities without impacting any live data. Setting up this platform was the first technical step to ensure a seamless development process.

Objective

- To create a Salesforce Developer account for project development
- To set up the Salesforce platform environment for building custom objects, automation, Apex, and flows

Activities Performed

1. **Navigated to Salesforce Developer Signup Page**
    - Opened *https://developer.salesforce.com/signup*
2. **Filled Required Details**
    - First Name & Last Name: Entered my full name as per registration
    - Email: Provided my active email ID for account activation
    - Role: Selected Developer as my role
    - Company: Entered my college name as this is for a learning and implementation of Project
    - Country: Selected India
    - Postal Code: Entered my area PIN code
    - Username: Entered my Mail id

3. **Completed Signup**
    - Clicked Sign Me Up after entering all details correctly
4. **Account Activation**
    - Checked my email inbox for the Salesforce verification mail
    - Clicked “Verify Account” to activate the developer account
    - Set a secure password upon first login
5. **Access to Salesforce Setup**

    After activation, successfully logged into Salesforce Setup Home Page

    Confirmed availability of features such as:
    - Object Manager
    - App Launcher
    - Flows and Process Automation tools
    - Developer Console for Apex programming

Outcome

- Successfully created and activated a Salesforce Developer account
- Verified that the Salesforce platform is ready to perform project activities including data modelling, automation creation, and Apex programming
- Ensured environment readiness for the upcoming phases of the WhatNext Vision Motors project implementation

Phase 1 Screenshots

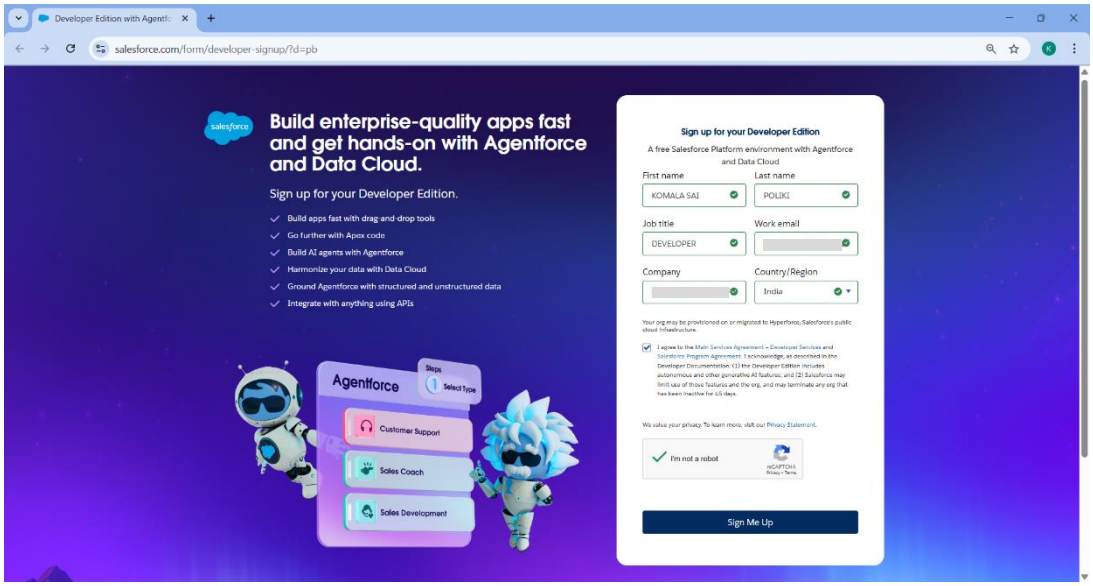

Figure 1: *Salesforce Developer Account Signup Page with Sample Details*

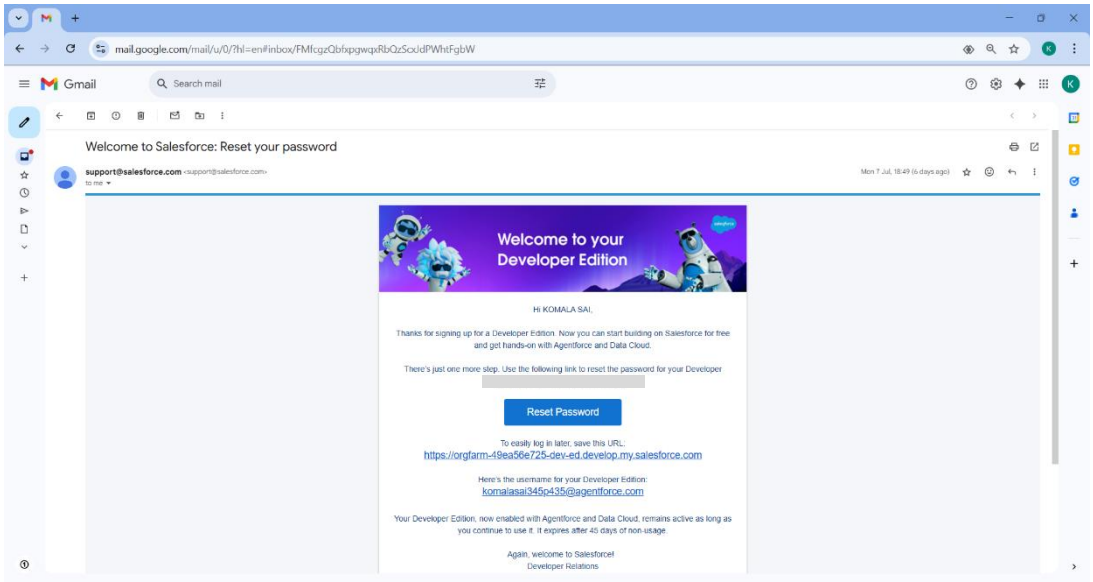

Figure 2: *Salesforce Account Activation Email confirmation*

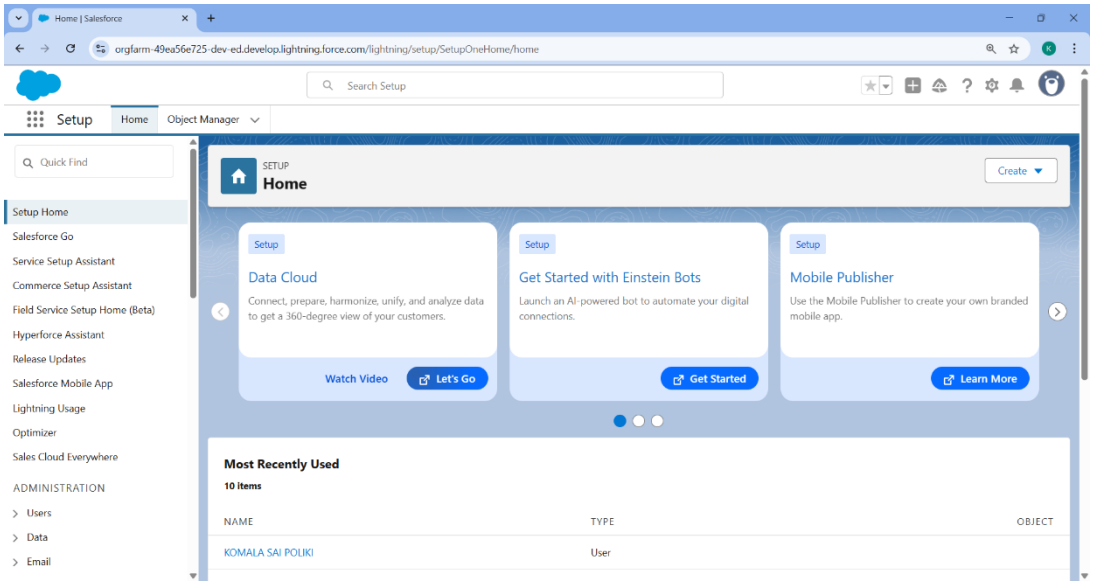

Figure 3: *Salesforce Setup Home Page*

Phase 2: Data Modelling and Object Configuration

Introduction

After successful platform setup, the next step involved designing the data model for the WhatNext Vision Motors Salesforce CRM project. This phase focused on creating custom objects, fields, and relationships to accurately represent business entities and their interactions within the system.

Objective

- To design and implement a scalable data model for WhatNext Vision Motors in Salesforce.
- To create required custom objects, fields, and relationships to capture all project requirements efficiently.

Activities Performed

1. Created Custom Objects

- Vehicle

  Purpose: To store detailed information about vehicles.
- Vehicle Dealer

  Purpose: To maintain dealer details and locations.
- Vehicle Customer

  Purpose: To capture customer information for orders, test drives, and services.
- Vehicle Order

  Purpose: To track vehicle purchase orders.
- Vehicle Test Drive

  Purpose: To manage test drive bookings.

- Vehicle Service Request

  Purpose: To handle vehicle servicing records.

2. Configured Fields and Relationships

A. Vehicle Object

- ***Fields Created:***

  Vehicle Name (Text)

  Vehicle Model (Picklist: Sedan, SUV, EV, etc.)

  Stock Quantity (Number)

  Price (Currency)

  Dealer (Lookup to Vehicle Dealer)

  Status (Picklist: Available, Out of Stock, Discontinued)

B. Vehicle Dealer Object

- ***Fields Created:***

  Dealer Name (Text)

  Dealer Location (Text)

  Dealer Code (Auto Number)

  Phone (Phone)

  Email (Email)

C. Vehicle Customer Object

- ***Fields Created:***

  Customer Name (Text)

  Email (Email)

  Phone (Phone)

  Address (Text)

  Preferred Vehicle Type (Picklist: Sedan, SUV, EV, etc.)

D. Vehicle Order Object

- ***Fields Created:***

  Customer (Lookup to Vehicle Customer)

  Vehicle (Lookup to Vehicle)

  Order Date (Date)

  Status (Picklist: Pending, Confirmed, Delivered, Cancelled)

E. Vehicle Test Drive Object

- ***Fields Created:***

  Customer (Lookup to Vehicle Customer)

  Vehicle (Lookup to Vehicle)

  Test Drive Date (Date)

  Status (Picklist: Scheduled, Completed, Cancelled)

F. Vehicle Service Request Object

- ***Fields Created:***

  Customer (Lookup to Vehicle Customer)

  Vehicle (Lookup to Vehicle)

  Service Date (Date)

  Issue Description (Text)

  Status (Picklist: Requested, In Progress, Completed)

3. Created Tabs for Each Object

Added tabs for all newly created custom objects for easy navigation within the Salesforce Lightning App.

4. Created a Lightning App

- App Name: WhatNext Vision Motors
- Added all custom objects, Reports, and Dashboards as navigation items.
- Ensured appropriate access for System Administrator profile.

Outcome

- Successfully designed and implemented the data model for WhatNext Vision Motors CRM project.
- Created and configured all required custom objects and fields to capture vehicle, dealer, customer, order, test drive, and service request information.
- Ensured object relationships are accurately mapped to support upcoming automation and business logic development phases.

Phase 2 Screenshots

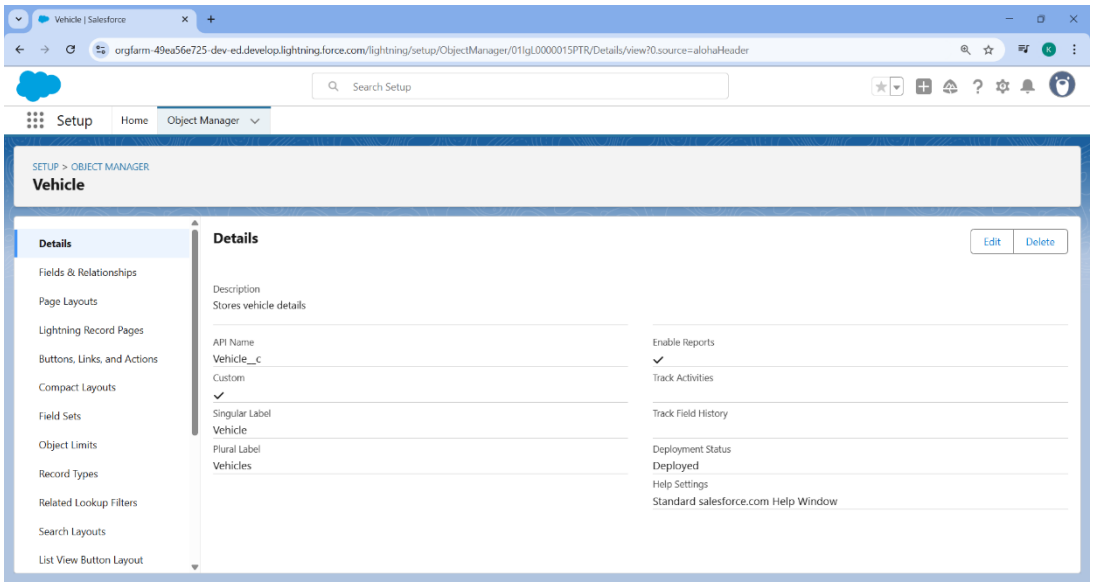

Figure 1: *Vehicle Custom Object Creation*

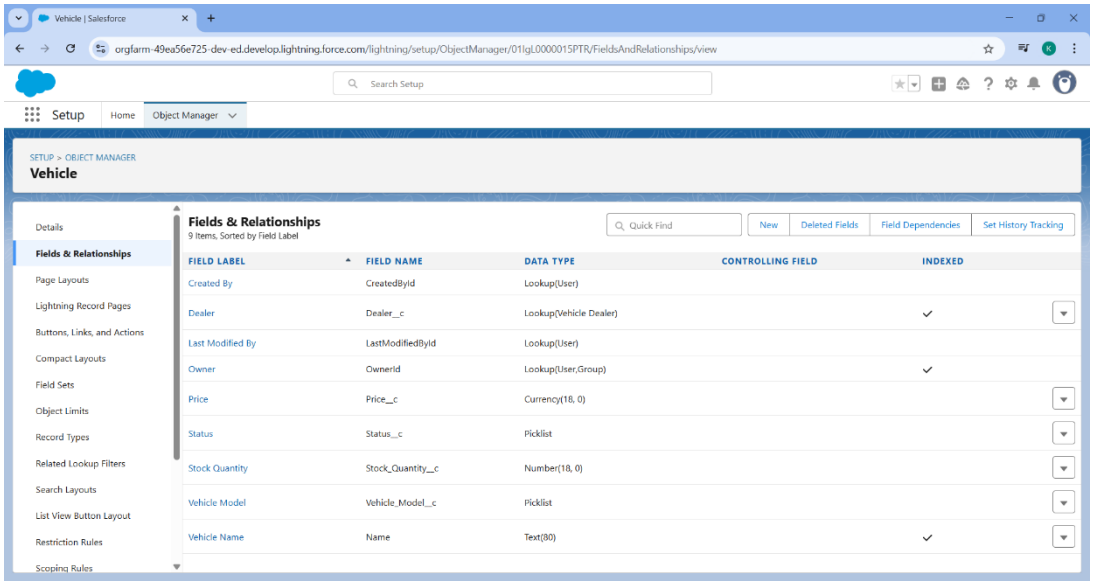

Figure 2: Fields Configuration for Vehicle Object

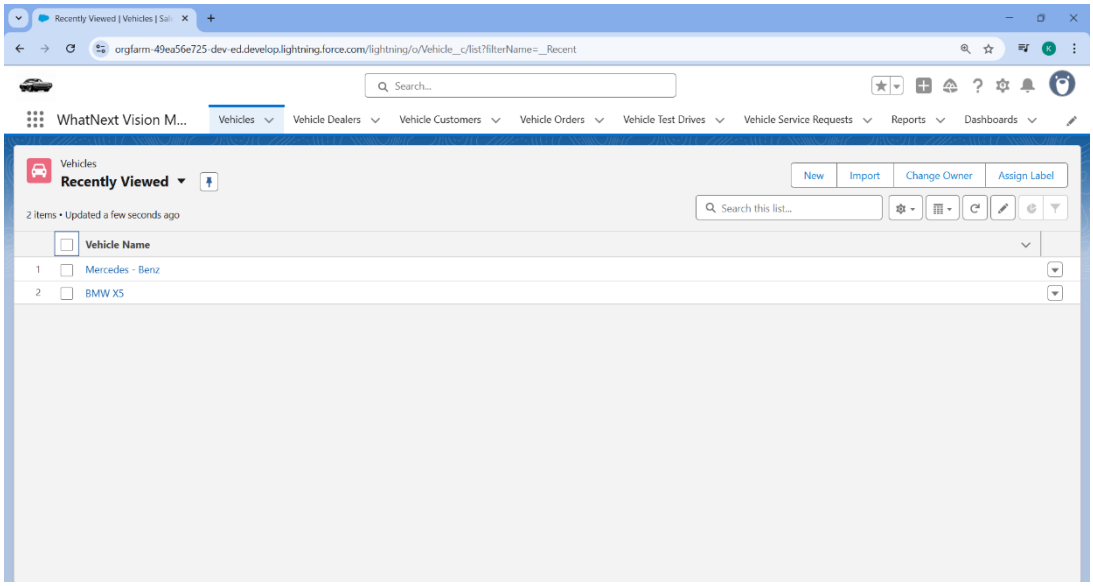

Figure 3: WhatNext Vision Motors Lightning App Configuration

Phase 3: Process Automation and Flow Implementation

Introduction

This phase focuses on implementing process automation using Salesforce Flows.

It automates tasks like dealer assignment and customer reminders.

This enhances operational efficiency and customer satisfaction.

Objective

The objective of Phase 3 is to automate critical business processes within WhatNext Vision Motors using Salesforce Flows to improve operational efficiency, accuracy, and customer experience.

Activities Performed

1. Record-Triggered Flow to Auto-Assign Nearest Dealer

- ***Purpose:***

  To automatically assign the nearest dealer to a customer's vehicle order based on their address, enhancing order processing speed and accuracy.

- ***Steps Followed:***

A. Navigated to Setup > Flows.
B. Clicked New Flow.
C. Selected Record-Triggered Flow.
D. Configured flow to trigger when a Vehicle Order record is created with status "Pending".
E. Added Get Records element to fetch customer information using Customer ID.
F. Added another Get Records element to find the nearest dealer based on the customer's address.
G. Used Update Records element to assign the dealer to the order.

H. Saved and activated the flow with the label “Auto Assign Dealer”.

2. Record-Triggered Flow for Test Drive Reminder Email

- *Purpose*:
  To send automated reminder emails to customers scheduled for a test drive, improving customer communication and reducing missed appointments.

- ***Steps Followed:***

A. Created a Record-Triggered Flow on the Vehicle Test Drive object.
B. Configured flow to trigger when Status = Scheduled.
C. Added Scheduled Path to run 1 day before Test Drive Date.
D. Used Get Records to retrieve customer email address.
E. Added Send Email action with:
    - Subject: “Reminder: Your Test Drive is Tomorrow!”
    - Recipient: Customer email
    - Body: Personalized reminder message.
F. Saved and activated the flow with the label “Test Drive Reminder”.

Outcome

- Automated assignment of nearest dealer to customer orders.
- Reduced manual work for order processing team.
- Automated customer communication for test drive appointments, enhancing customer satisfaction.
- Improved operational efficiency and workflow reliability within Salesforce.

Phase 3 Screenshots

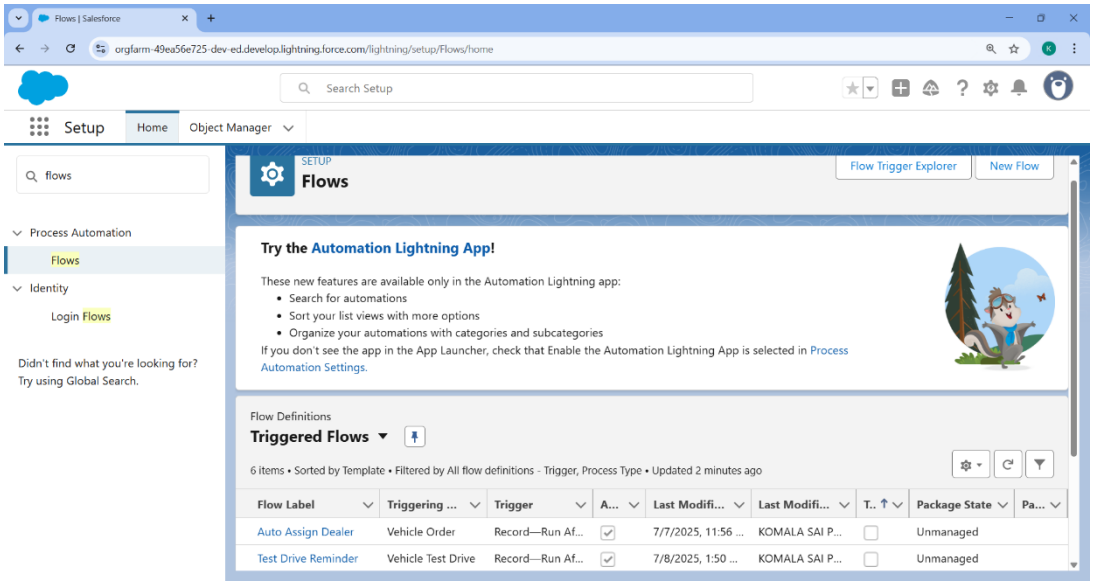

Figure 1: Flows Created for Process automation

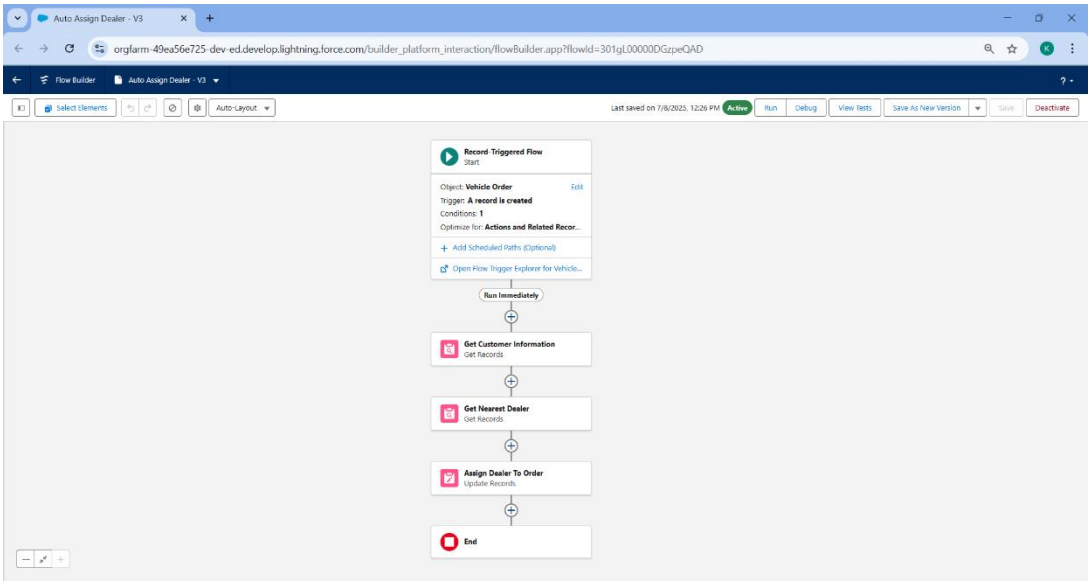

Figure 2: Record-Triggered Flow to auto-assign nearest dealer to orders

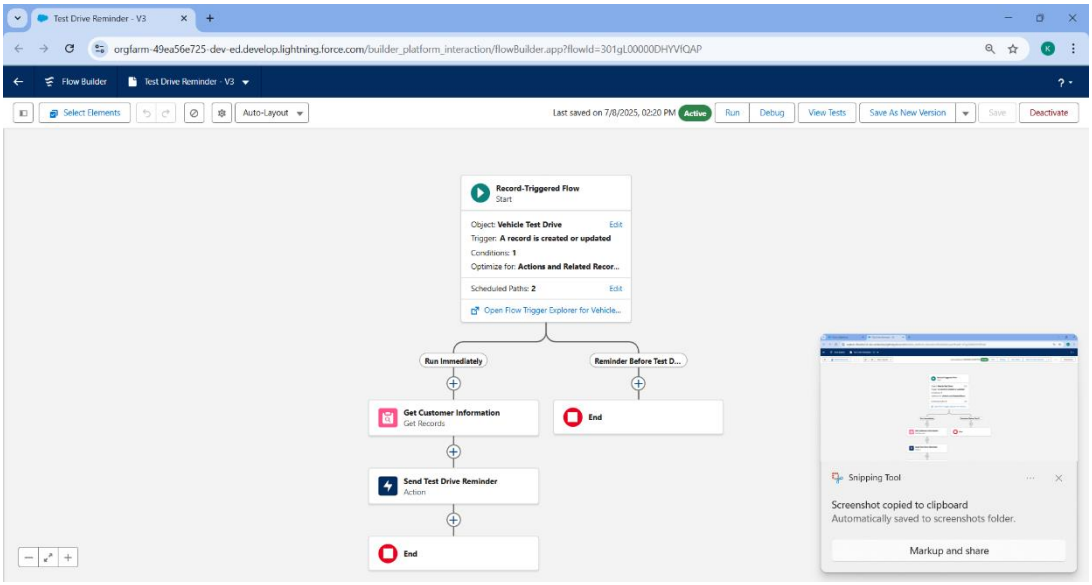

Figure 3: Scheduled Flow to send test drive reminders to customers

Phase 4: Apex Programming and Batch Processing

Introduction:

Phase 4 focuses on implementing the backend logic using Apex programming to automate critical business workflows. This includes enforcing stock validation rules during order placement, managing inventory updates, and ensuring accurate order status through scheduled batch processes. Apex Triggers, Batch Apex, and Scheduler classes are used to achieve robust automation and maintain data integrity within the Salesforce system.

Objective:

- To enforce business rules such as vehicle stock validation during order placement.
- To automate inventory management and order status updates without manual intervention.
- To improve system efficiency and accuracy through scalable backend processing using Apex triggers and batch jobs.

Activities Performed:

1. Developed Apex Triggers

- Created an Apex Trigger on Vehicle_Order__c to validate stock availability before confirming orders.
- Integrated Trigger Handler for modular and maintainable code structure.

2. Implemented Trigger Handler Class

- Developed a handler class to manage trigger logic cleanly and efficiently.

3. Developed Batch Apex Job

- Created a Batch Apex class to process pending orders and update their status to "Confirmed" if vehicle stock becomes available.
- Reduced stock count automatically upon order confirmation.

4. Created Scheduler Class

- Developed a Scheduler class to execute the batch job daily at midnight, ensuring timely order status updates and stock sync.

5. Tested Apex Code

- Executed and debugged triggers, batch jobs, and scheduled classes in the developer environment using sample data to ensure correctness and stability.

Outcome:

- Business rules enforced: Orders for out-of-stock vehicles remain pending, preventing invalid order placements.
- Automated stock updates: Pending orders are auto-confirmed when new stock is available, ensuring real-time order fulfillment.
- Operational efficiency improved: Reduced manual intervention in order processing and inventory updates.
- Scalable backend system: Apex batch and scheduled processes support high data volumes seamlessly, enhancing system reliability.

Phase 4 Screenshots

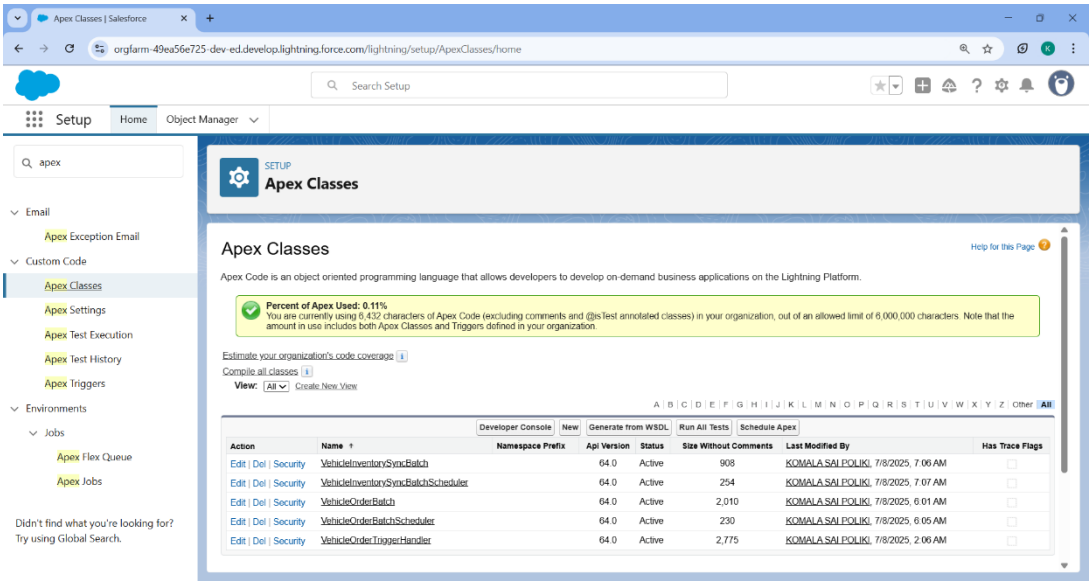

Figure 1: *Apex Classes*

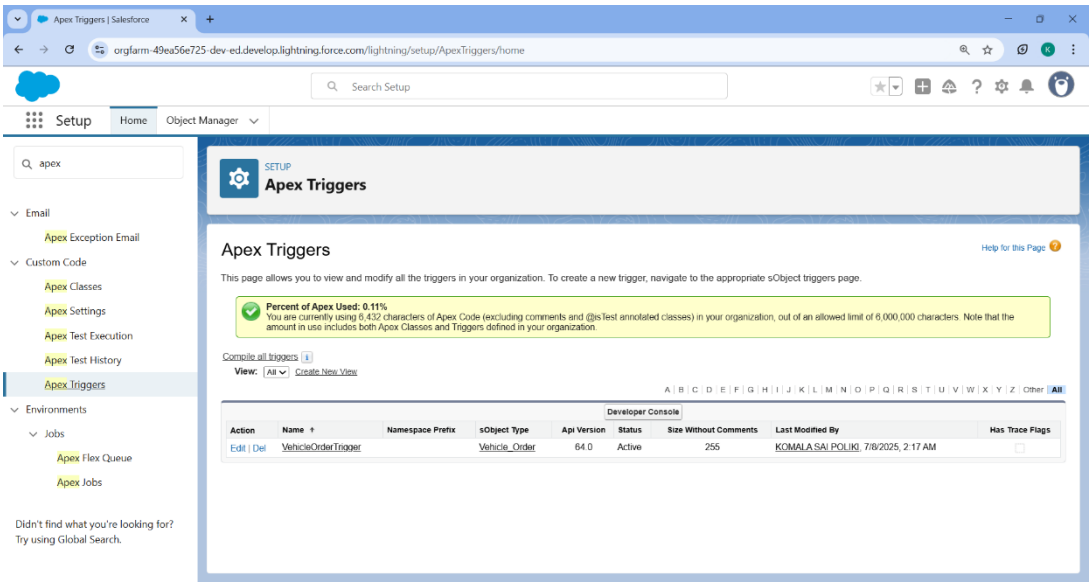

Figure 2: *Apex Triggers*

Phase 5: Deployment, Testing, and Final Review

Process Introduction:

Phase 5 focuses on validating the developed solution, deploying it to the production environment, and ensuring smooth transition through user training and comprehensive documentation. Rigorous testing is conducted for flows, Apex triggers, and batch processes to ensure business requirements are fully met with stable and reliable system performance.

Objective:

- Test all implemented components (flows, triggers, batches) for correctness and stability.
- Debug and fix any issues identified during testing.
- Deploy the validated solution to the production environment seamlessly.
- Conduct final review, user training sessions, and documentation handover for system adoption and maintenance.

Activities Performed:

1. **Testing Flows, Apex Triggers, and Batch Processes**
    - Tested all flows for expected automation and data updates.
    - Validated Apex triggers by creating sample records to ensure business rules enforcement (e.g. stock validation).
    - Executed batch jobs and scheduler classes to confirm automated processes run successfully on schedule.
    - Reviewed debug logs to identify and fix minor issues.

2. **Debugging and Validating Implementation**
    - Performed unit testing for Apex classes to ensure minimum 75% code coverage as per Salesforce standards.
    - Conducted functional testing to validate business rules such as order placement restrictions for out-of-stock vehicles and automated stock sync processes.
3. **Deployment to Production**
    - Created Change Sets including:
        a) Flows
        b) Apex Triggers and Handler
        c) Batch Apex Classes
        d) Scheduler Classes
        e) Custom Objects and Fields
    - Validated Change Set in production before deployment.
    - Deployed solution to production environment successfully.
4. **Final Project Review and User Training**

- Conducted project review meetings with stakeholders to demonstrate the implemented features and backend automation.
- Delivered user training sessions covering:
- Order placement flows
- Trigger validations
- Automated batch processes
- Handed over final project documentation, including solution design, technical details, and deployment guidelines.

Outcome:

- Solution successfully deployed to production with stable performance.
- All business rules validated with no critical issues post-deployment.
- Users trained effectively, ensuring smooth adoption of the new system.
- Comprehensive documentation handed over for future maintenance and enhancements.

Phase 5 Screenshots

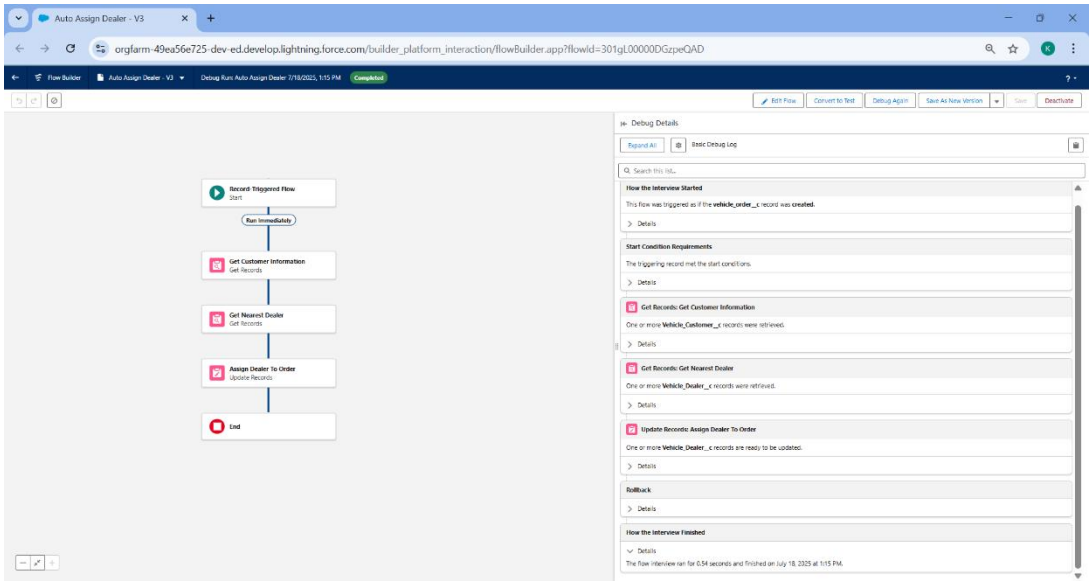

***Figure 1**: Auto Assign Dealer Flow Testing*

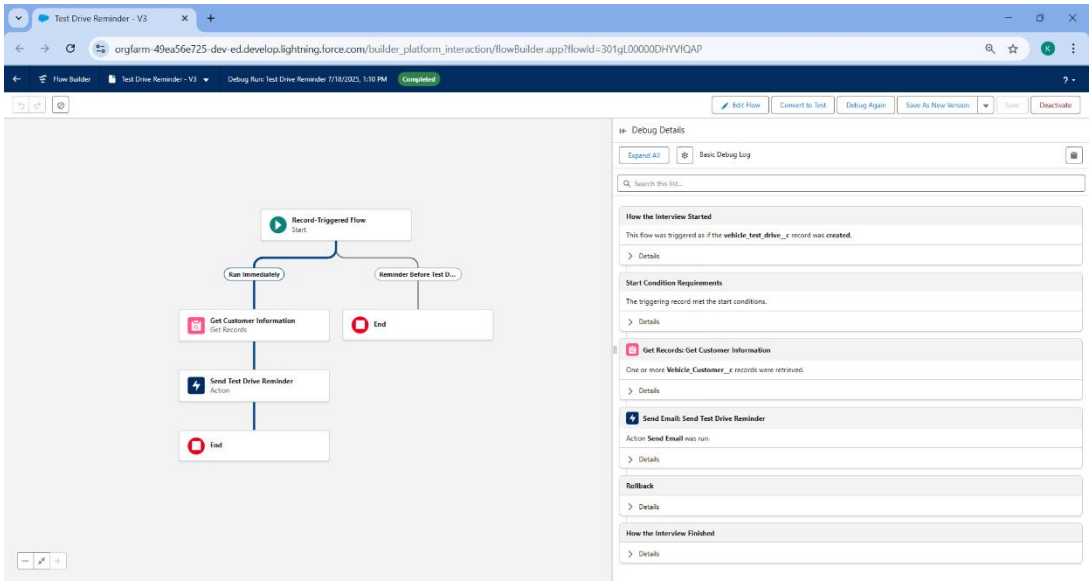

***Figure 2:** Test Drive Reminder Flow Testing*

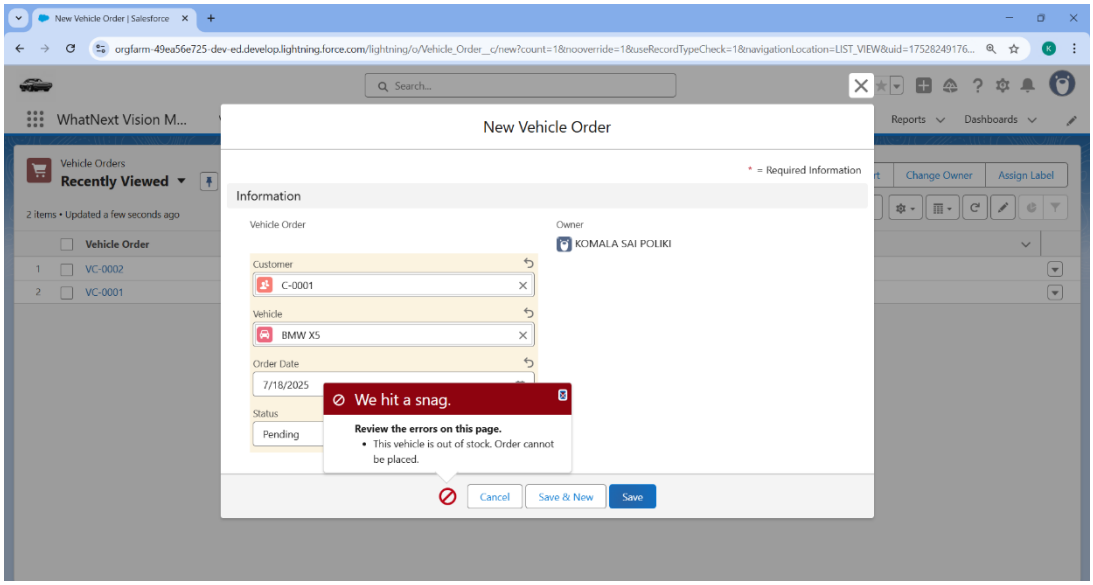

Figure 3: *VehicleOrderTrigger Testing*

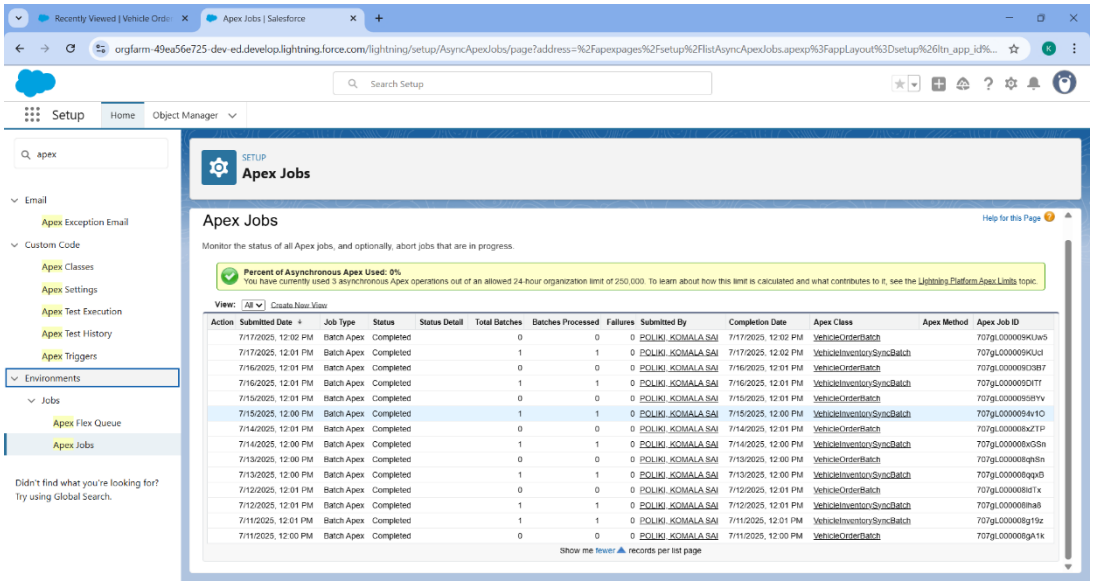

Figure 4: *VehicleOrderBatch and VehicleInventorySyncBatch Testing*

Conclusion

The Salesforce CRM implementation for WhatNext Vision Motors has successfully achieved its primary goal of enhancing the customer ordering process while ensuring operational efficiency and data integrity. Through the integration of automated dealer assignment, stock validation triggers, batch jobs for order status updates, and scheduled inventory sync processes, the project has addressed critical business challenges faced in the automotive industry.

The system now ensures that orders are only placed for available vehicles, preventing invalid orders and improving customer satisfaction. The automated backend processes have reduced manual intervention, enabling staff to focus on strategic tasks and improving overall productivity. Additionally, features such as automated email reminders for test drives and scheduled batch processes for real-time order status updates have streamlined customer communications and service delivery.

Overall, this project has laid a strong foundation for WhatNext Vision Motors to adopt a scalable, reliable, and efficient CRM system that aligns with their vision of transforming mobility solutions.

It has also opened avenues for future enhancements, including :

- ***Chatbot Integration***: Implementing Salesforce Einstein Bot or external chatbot for handling customer queries and order tracking in real-time.
- ***AI-Based Dealer Suggestions***: Using AI recommendations to assign dealers not only based on proximity but also on availability, ratings, and performance metrics.
- ***Customer Portal***: Developing a self-service portal for customers to view their orders, test drives, service requests, and make online payments.
- ***Integration with ERP systems***: For seamless stock and finance management across business units'