

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

Abstract

WhatsNextVision Motors is revolutionizing its customer experience and operational efficiency with a cutting-edge Salesforce CRM implementation. The project streamlines the vehicle ordering process by auto-assigning orders to the nearest dealer based on customer location and preventing orders for out-of-stock vehicles. Automated workflows update order statuses dynamically and send scheduled email reminders for test drives. Key technical implementations include Apex triggers for stock validation, batch jobs for stock updates, and scheduled Apex for automated order processing. This initiative enhances customer satisfaction, improves order accuracy, and boostsoverall operational efficiency.

Objectives

Main objectiveofthis project is to implement Salesforce CRM skills in real life . This capstone Project perfectly demonstrates that cause .
The goals we achieved are

- Improving Customer accessbility by notifying customers when the vehicle is out of stock
- Auto Assigning Dealers lessens the burden on administrators and saves time
- By implementing flows ,we can send automated emails reminding customers of their upcoming test drive
- Using Apex triggers for stock validation, batch jobs for stock updates, and scheduled Apex for automated order processing. This initiative enhances customer satisfaction, improves order accuracy, and boosts overall operational efficiency

Technology

Salesforce CRM Implementation

- Store and manage vehicle details, stock availability, and dealer information in Salesforce.
- Track customer orders, test drives, and service requests efficiently.
- Automate workflows to assign orders to the nearest dealer based on customer location.

Process Automation

- Prevent order placement if the vehicle is out of stock.
- Auto-assign orders to the nearest dealer based on the customer's location.
- Send automated email reminders for scheduled test drives.

3. Apex and Trigger

- Implement Apex triggers to enforce business rules such as stock validation and automatic dealer assignment.
- Use trigger handlers to follow best practices and ensure modularity and maintainability.

4. Batch Jobs

- Develop a batch Apex job to periodically check vehicle stock levels and update availability.
- Send scheduled email notifications for stock replenishment and order processing.

Concepts

- Data Modelling
- Fields and Relationships
- Lightning App Builder
- Record Triggered Flows
- Apex and Apex Triggers
- Batch Apex
- Scheduled Apex

1.Data Modeling

DatamodelinginSalesforce defines how data is structured using objects, fields, and relationships. It ensures efficient storage, retrieval, and automation across the platform. A well-designed model improves scalability, reporting, and user experience. It's the blueprint for building reliable, connected business applications.The purpose of creating a Vehicle custom object is to have a clear picture of the vehicle details.

Object Name	Purpose	Relationships
Vehicle__c	Stores vehicle details	Related to Dealer & Orders
Vehicle_Dealer__c	Stores authorized dealer info	Related to Orders
Vehicle_Customer__c	Stores customer details	Related to Orders & Test Drives
Vehicle_Order__c	Tracks vehicle purchases	Related to Customer & Vehicle
Vehicle_Test_Drive__c	Tracks test drive bookings	Related to Customer & Vehicle
Vehicle_Service_Request__c	Tracks vehicle servicing requests	Related to Customer & Vehicle

As shown above each and every object has its own purpose.

Process of creating an object:

- From the setup page → Click on Object Manager → Click on Create → Click on Custom Object.
- Enter the label name→ Vehicle Dealer
- Plural label name→ Vehicle Dealers
- Enter Record Name Label and Format
- Record Name → Dealer Name
- Data Type → Text
- Click on Allow reports,
- Allow search → Save

Fields & Relationships

In Salesforce, fields are essential for capturing, storing, and organizing data. They enable reporting, automate processes, and power formulas for dynamic behavior. Custom fields let admins tailor apps to specific business needs, ensuring flexibility. With accurate field usage, data becomes actionable and reliable across the organization.

Relationships define how objects interact—connecting records for deeper insights. Lookup and master-detail links bind data in simple or strict ways, enabling roll-up summaries and shared security. Many-to-many setups expand modeling possibilities, while hierarchical and external relationships support complex org charts and integrations. Together, they create a scalable, intuitive data model. These are fields that are created

1. Vehicle__c (Custom Object)

- **Vehicle_Name__c** (Text)
- **Vehicle_Model__c** (Picklist: Sedan, SUV, EV, etc.)
- **Stock_Quantity__c** (Number)
- **Price__c** (Currency)
- **Dealer__c** (Lookup to Dealer__c)
- **Status__c** (Picklist: Available, Out of Stock, Discontinued)

2. Vehicle_Dealer__c (Custom Object)

- **Dealer_Name__c** (Text)
- **Dealer_Location__c** (Text)
- **Dealer_Code__c** (Auto Number)
- **Phone__c** (Phone)
- **Email__c** (Email)

3. Vehicle_Order__c (Custom Object)

- **Customer__c** (Lookup to Customer__c)
- **Vehicle__c** (Lookup to Vehicle__c)
- **Order_Date__c** (Date)
- **Status__c** (Picklist: Pending, Confirmed, Delivered, Canceled)

4. Vehicle_Customer__c (Custom Object)

- **Customer_Name__c** (Text)
- **Email__c** (Email)
- **Phone__c** (Phone)
- **Address__c** (Text)
- **Preferred_Vehicle_Type__c** (Picklist: Sedan, SUV, EV, etc.)

5. Vehicle_Test_Drive__c (Custom Object)

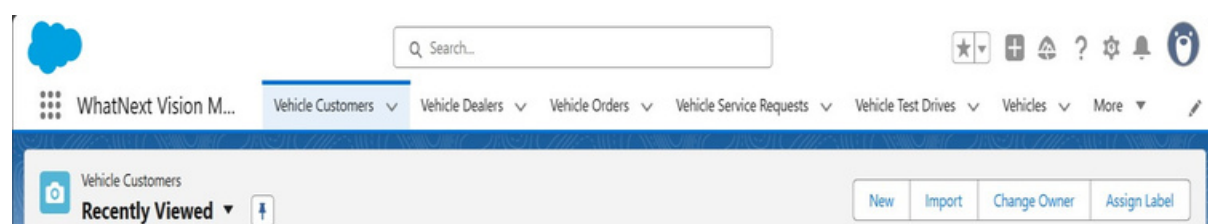
- **Customer__c** (Lookup to Customer__c)
- **Vehicle__c** (Lookup to Vehicle__c)
- **Test_Drive_Date__c** (Date)
- **Status__c** (Picklist: Scheduled, Completed, Canceled)

6. Vehicle_Service_Request__c (Custom Object)

- **Customer__c** (Lookup to Customer__c)
- **Vehicle__c** (Lookup to Vehicle__c)
- **Service_Date__c** (Date)
- **Issue_Description__c** (Text)
- **Status__c** (Picklist: Requested, In Progress, Completed)

Lightning App Builder

The Lightning App Builder is a point-and-click tool in Salesforce used to create custom pages for desktop and mobile. It lets you drag and drop standard, custom, and third-party components to design responsive layouts. You can build record pages, home pages, and app pages tailored to user roles and profiles. It supports dynamic forms, actions, and visibility rules for personalized experiences.



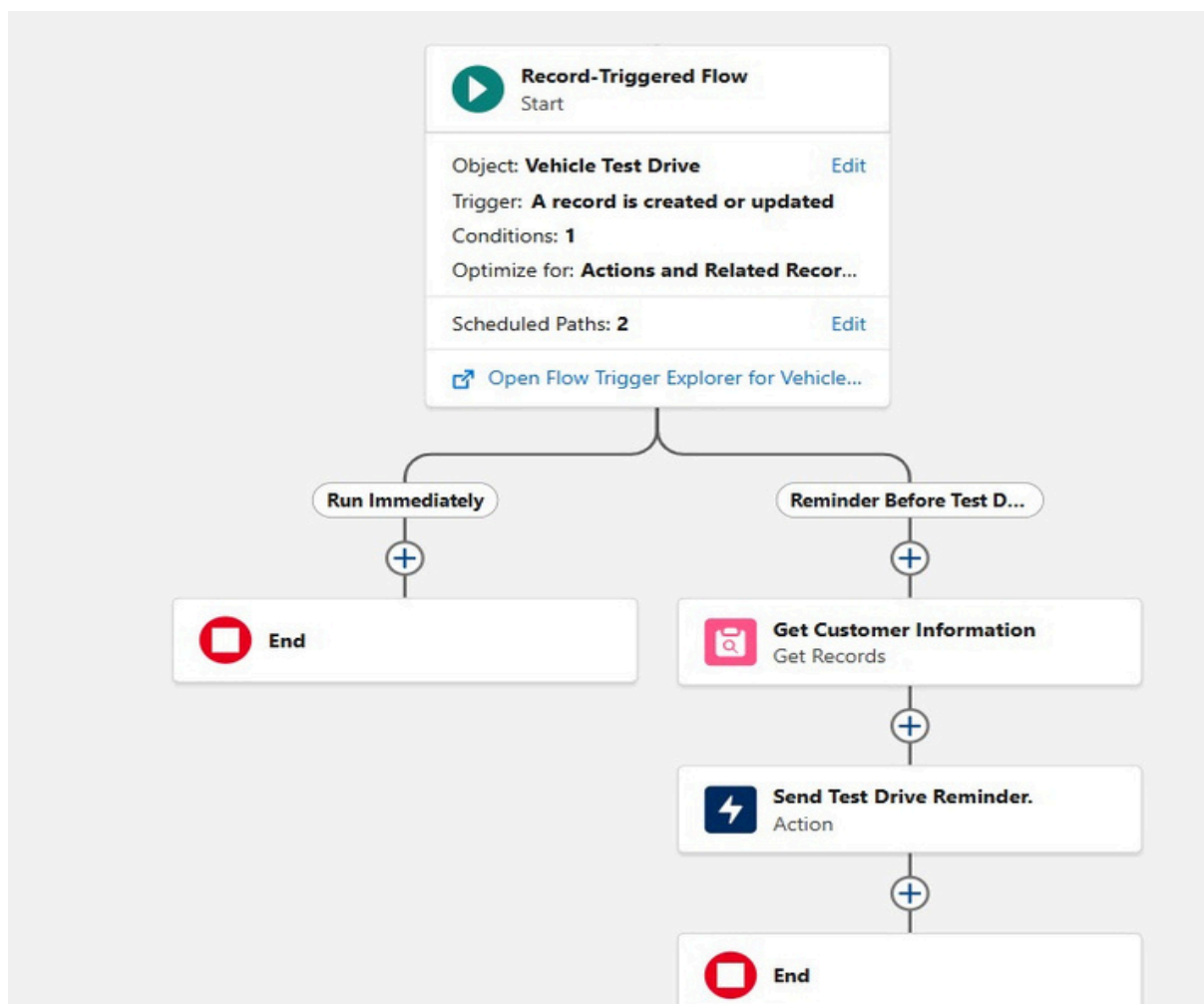
Automation with flows

Flows in Salesforce automate business processes using clicks, not code. They guide users, update records, send emails, and more. Flow Builder lets you design logic visually for seamless automation. Record-Triggered Flows run automatically when a record is created, updated, or deleted. They're ideal for behind-the-scenes actions like assigning tasks or sending alerts.

There are 2 record triggered flows used in this project

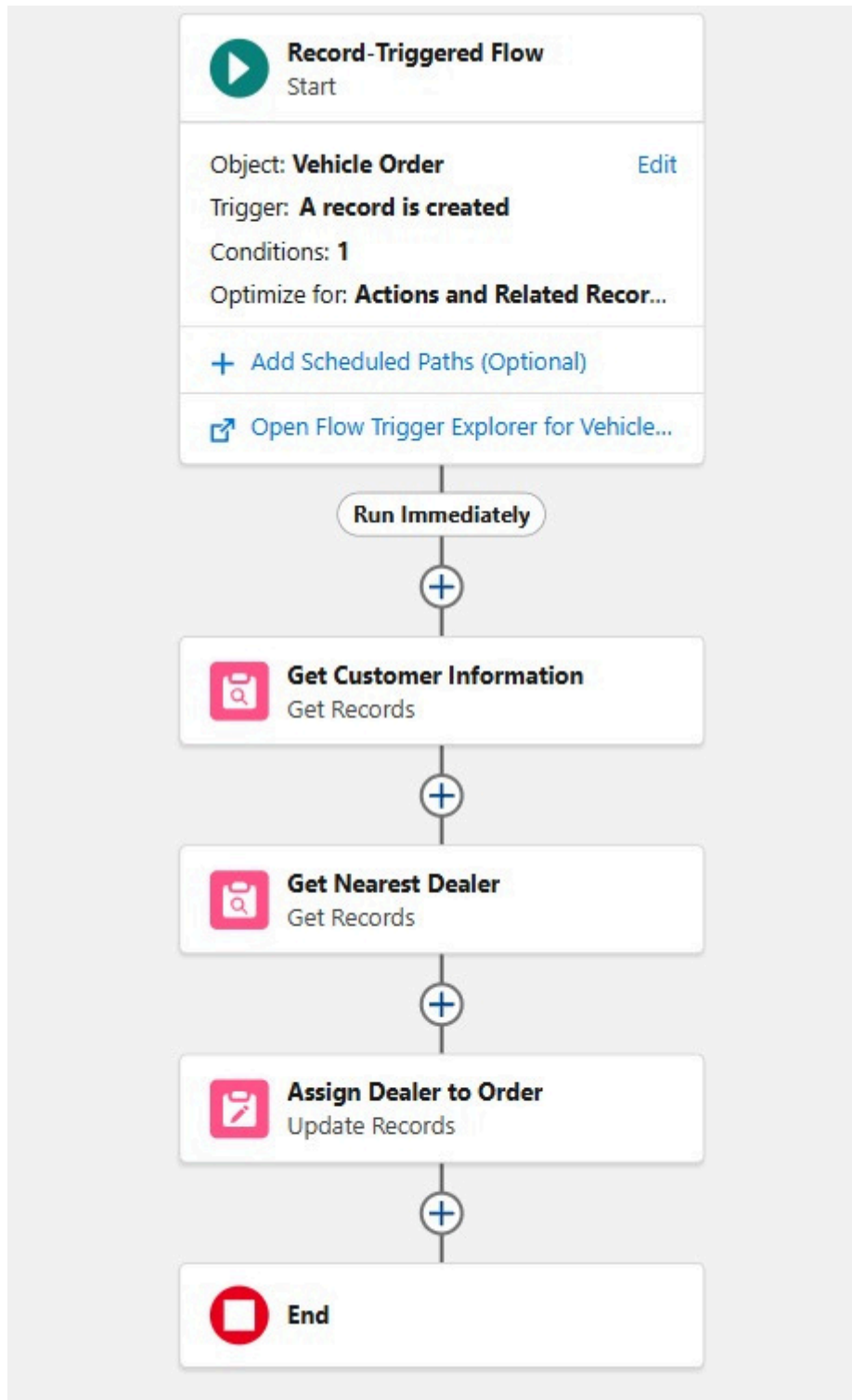
1. Test Drive Reminder

This flow is used to get automated emails 24 hours before the test drive begins



2.Auto Assign Dealers

This flow is used to automatically assign dealers to customer orders based on address



Apex Triggers ,Batch Apex and Scheduled Jobs

- ApexTriggers

Apex Triggers run custom logic automatically when records are inserted, updated, or deleted. They're used to enforce business rules, update related records, and interact with external systems. Triggers must be bulkified to handle multiple records efficiently. Developers use context variables like `Trigger.new` and `Trigger.old` to control logic flow.

- Batch Apex

Batch Apex processes large volumes of records asynchronously, making it ideal for handling thousands of entries efficiently. It follows a three-part structure: start, execute, and finish, using the `Database.Batchable` interface. Each batch runs in a separate transaction, offering fresh governor limits. Use cases include data cleanups, calculations, and large-scale updates.

- Scheduled Jobs

Scheduled Jobs allow Apex code to run at defined intervals using the `Schedulable` interface. You can schedule them via UI or the `System.schedule()` method. They're great for periodic tasks like nightly data syncs or weekly email reports. Cron expressions control timing, with limits on the number of active schedules per org.

In the WhatNext Vision Motors project, Apex Triggers blocked vehicle orders when stock was unavailable and updated inventory on order confirmation. Batch Apex processed all pending orders in bulk, ensuring status updates based on stock levels. A Scheduled Apex job ran the batch class daily to automate backend operations. Together, they maintained real-time data accuracy, reduced manual effort, and improved system reliability. This trio of automation kept the vehicle management system efficient and scalable.

- The Codes of these Apex are given in the folder

Results

1.OutofStock Message

New Vehicle Order

* = Required Information

Information

*Vehicle Order Name

New order

Vehicle Customer

John

Vehicle

Honda

Order Date

8/2/2025

Status

Pending

Owner

Aftab Pathan

We hit a snag.

Review the errors on this page.

- This vehicle is out of stock. Order cannot be placed.

Assigned Dealer

Search Vehicle Dealers...

Cancel

Save & New

Save

2.Auto Dealer Assignment

Information

*Vehicle Order Name

New order

Vehicle Customer

John

Vehicle

Honda

Order Date

8/2/2025

Status

Pending

Assigned Dealer

Search Vehicle Dealers...

Owner

Aftab Pathan

Cancel

Save & New

Save

After Saving

Vehicle Order

New order

Related

Details

Vehicle Order Name

New order

Vehicle Customer

John

Vehicle

Honda

Order Date

8/2/2025

Status

Pending

Assigned Dealer

Sara

Owner

Aftab Pathan

Created By

Aftab Pathan, 8/2/2025, 12:27 AM

Last Modified By

Aftab Pathan, 8/2/2025, 12:27 AM

Dealer Mark has been assigned automatically

3.Automnatic Email Alert

Vehicle Test Drive

xyz

Related

Details

Vehicle Test Drive Name

xyz

Vehicle Customer

John

Vehicle

Honda

Test Drive Date

8/2/2025

Status

Scheduled

Owner

Aftab Pathan

Created By

Aftab Pathan, 7/31/2025, 11:49 AM

Last Modified By

Aftab Pathan, 7/31/2025, 11:51 AM

After Booking Test Drive

Reminder: Your Test Drive is Tomorrow! Inbox x

Pathan 0176cs221019@lnct.ac.in via 2l1qz3vinejb.gk-83hi9uaa.can96.bnc.salesforce.com

Fri 1 Aug, 00:20 (1 day ago) ☆ (

Customer John,

Remainder that your test drive a04gK000000iS0bQAE is tomorrow if you need to reschedule please contact us at support@gmail.com.

You

Reply Forward 😊

4, Scheduled Job

SETUP

Scheduled Jobs

All Scheduled Jobs

Help for this Page

The All Scheduled Jobs page lists all of the jobs scheduled by your users. Multiple job types may display on this page. You can delete scheduled jobs if you have the permission to do so.

Percentage of Scheduled Jobs Used: 1%

You have currently used 1 scheduled Apex jobs out of an allowed organization limit of 100 active or scheduled jobs. To learn about how this limit is calculated and what contributes to it see the [Lightning Platform Apex Limits](#) topic.

View: All Scheduled Jobs Create New View

A B C D E F G H I J K L M N O P Q R S T U **V** W X Y Z Other All

Action	Job Name	Submitted By	Submitted	Started	Next Scheduled Run	Type	Cron Trigger ID
Manage Del Pause Job	Vehicle Order Batch Scheduler	Pathan, Aftab	8/1/2025, 3:36 AM		8/2/2025, 12:00 AM	Scheduled Apex	08egK000008gBqV

A B C D E F G H I J K L M N O P Q R S T U **V** W X Y Z Other All

- These Photos are available In folder

Conclusion and future scope

The WhatNext Vision Motors project successfully demonstrates the capabilities of Salesforce in streamlining vehicle ordering and service workflows.

It improves operational processes through smart dealer assignment, inventory checks, and automated communications.

The system offers a smooth experience for both customers and dealers, reflecting real business challenges and solutions.

The future scope of the WhatNext Vision Motors project includes integrating AI-driven analytics to predict vehicle demand and optimize inventory. Expanding to mobile platforms can enhance customer engagement and streamline order tracking. IoT integration may allow real-time vehicle diagnostics and service scheduling. Advanced automation with Einstein AI could personalize user experiences and improve decision-making. Scaling the system for multi-location dealerships ensures broader market reach and operational efficiency.

I thank SmartBridge for giving me an opportunity to access salesforce resources and implementing them in a real world example .This experience has affected my career growth and my knowledge .