

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

**WhatsNext Vision 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 boosts overall operational efficiency.

### **Requirements:**

#### **1. 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.

#### **2. 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.

### **What you'll learn:**

1. Data Modelling
2. Fields and Relationships
3. Lightning App Builder
4. Record Triggered Flows
5. Apex and Apex Triggers
6. Batch Apex
7. Scheduled Apex

## Project Progress

### Salesforce Credentials Creation

The screenshot shows the Salesforce Setup Home page. On the left, there's a sidebar with links like Setup Home, Salesforce Go, Service Setup Assistant, Commerce Setup Assistant, Hyperforce Assistant, Release Updates, Salesforce Mobile App, Lightning Usage, Optimizer, Sales Cloud Everywhere, Administration (with sub-links for Users, Data, Email), and Platform Tools (Subscription Management). The main area features a "Welcome, Janna Mae" message and a "Manage and customize Salesforce from Setup. Browse suggestions, explore features, and more." banner. Below this is a section titled "Achieve Popular Business Goals" with two cards: "Cross Cloud Connect with Sales Prospects and Customers" (includes Sales Cloud Everywhere, Agentforce (Default), Einstein Sales Emails; 3 Completed, 1 In Progress) and "Cross Cloud Track & Manage Customer Data" (includes Case Management, Feedback Management, Einstein Activity Capture; 2 Completed, 1 In Progress). A "Sales" card is also visible. The URL in the address bar is <https://orgfarm-026f6a129b-dev-ed.develop.my.salesforce-setup.com/lightning/setup/SetupOneHome/home>.

### Data Management-Objects

The screenshot shows the Salesforce Object Manager page. The sidebar has links for Setup, Home, and Object Manager. The main area shows a table of objects: Vehicle, Vehicle\_Customer, Vehicle\_Dealer, Vehicle\_Order, Vehicle\_Service\_Request, and Vehicle\_Test\_Drive. The table includes columns for Label, API Name, Type, Description, Last Modified, and Deployed. A search bar at the top right filters results by "vehicle". The URL in the address bar is <https://orgfarm-026f6a129b-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager>.

### Data Management-Tabs

The screenshot shows the Salesforce Tabs setup page. The sidebar has links for Setup, Home, and Object Manager. The main area shows a "Custom Tabs" section with a sub-section "Custom Object Tabs". It says you can create new custom tabs to extend Salesforce functionality or to build new application functionality. It explains Custom Object tabs look like standard tabs, Web tabs embed external web applications, Visualforce tabs embed Visualforce pages, Lightning Component tabs add Lightning components to the navigation menu, and Lightning Page tabs add Lightning Pages to Lightning Experience and the mobile app. A "Custom Object Tabs" table lists tabs for Vehicle\_Customer, Vehicle\_Dealers, Vehicle\_Orders, and Vehicles. The URL in the address bar is <https://orgfarm-026f6a129b-dev-ed.develop.my.salesforce-setup.com/lightning/setup/Tabs>.

## Data Management-App Manager

The screenshot shows the App Manager interface for the 'Vehicle Customer' app. At the top, there's a navigation bar with links for Vehicle Dealers, Vehicle Orders, Vehicle Service Requests, Vehicle Test Drives, Vehicles, Reports, and Dashboards. Below the navigation is a search bar labeled 'Search...'. On the left, there's a sidebar titled 'Recently Viewed' with a user icon and a dropdown arrow. The main content area has a header 'Vehicle Customer' with buttons for New, Import, Change Owner, and Assign Label. A search bar 'Search this list...' is followed by several icons: a gear, a grid, a refresh, a list, a pencil, and a trash can. The central part of the screen features a blue-toned illustration of a building with mountains and clouds. Below the illustration, the text 'Nothing to see here' is displayed, followed by the subtext 'There's nothing in your list yet. Try adding a new record.'

## Data Management-Fields

SETUP > OBJECT MANAGER					
Vehicle					
Details		Fields & Relationships			
Fields & Relationships		9 Items, Sorted by Field Label			
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Created By	CreatedById	Lookup(User)			
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Price	Price__c	Currency(18, 0)			
Status	Status__c	Picklist			
Stock Quantity	Stock_Quantity__c	Number(18, 0)			
Vehicle Dealer	Vehicle_Dealer__c	Lookup(Vehicle Dealer)		✓	
Vehicle Model	Vehicle_Model__c	Picklist			
Vehicle Name	Name	Text(80)		✓	

SETUP > OBJECT MANAGER					
Vehicle Dealer					
Details		Fields & Relationships			
Fields & Relationships		8 Items, Sorted by Field Label			
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Created By	CreatedById	Lookup(User)			
Dealer Code	Dealer_Code__c	Auto Number			
Dealer Location	Dealer_Location__c	Text(60)			
Email	Email__c	Email			
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Phone	Phone__c	Phone			
Vehicle Dealer Name	Name	Text(80)		✓	

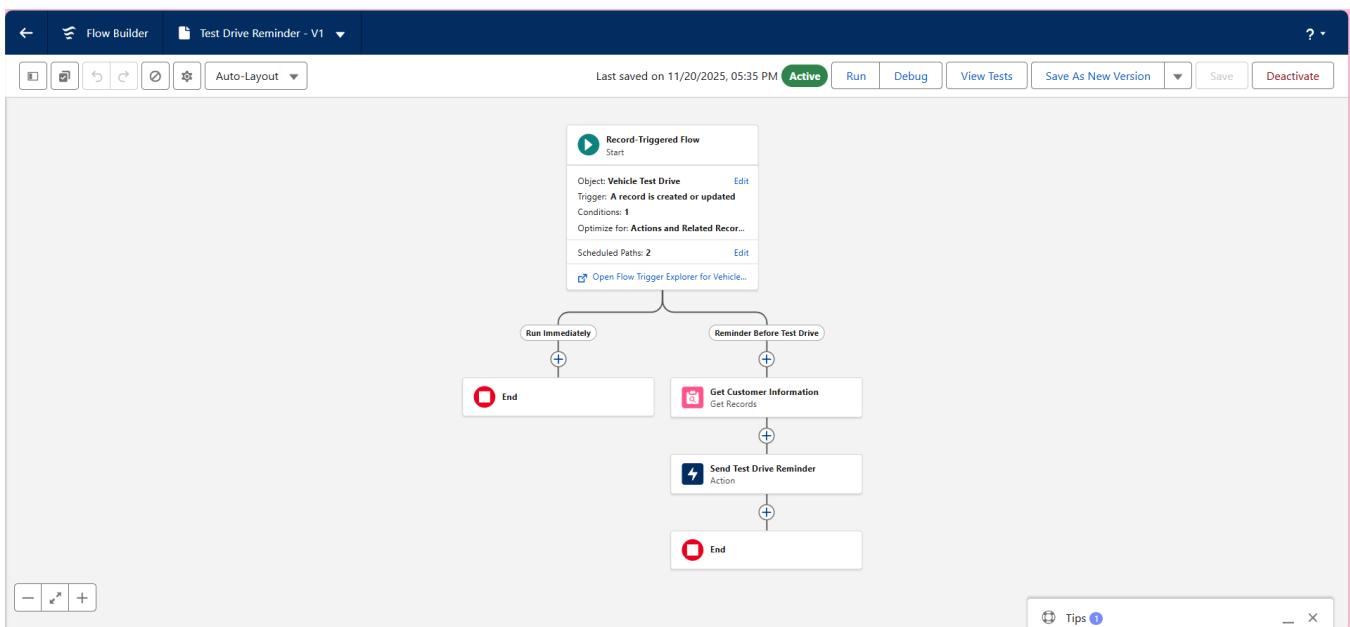
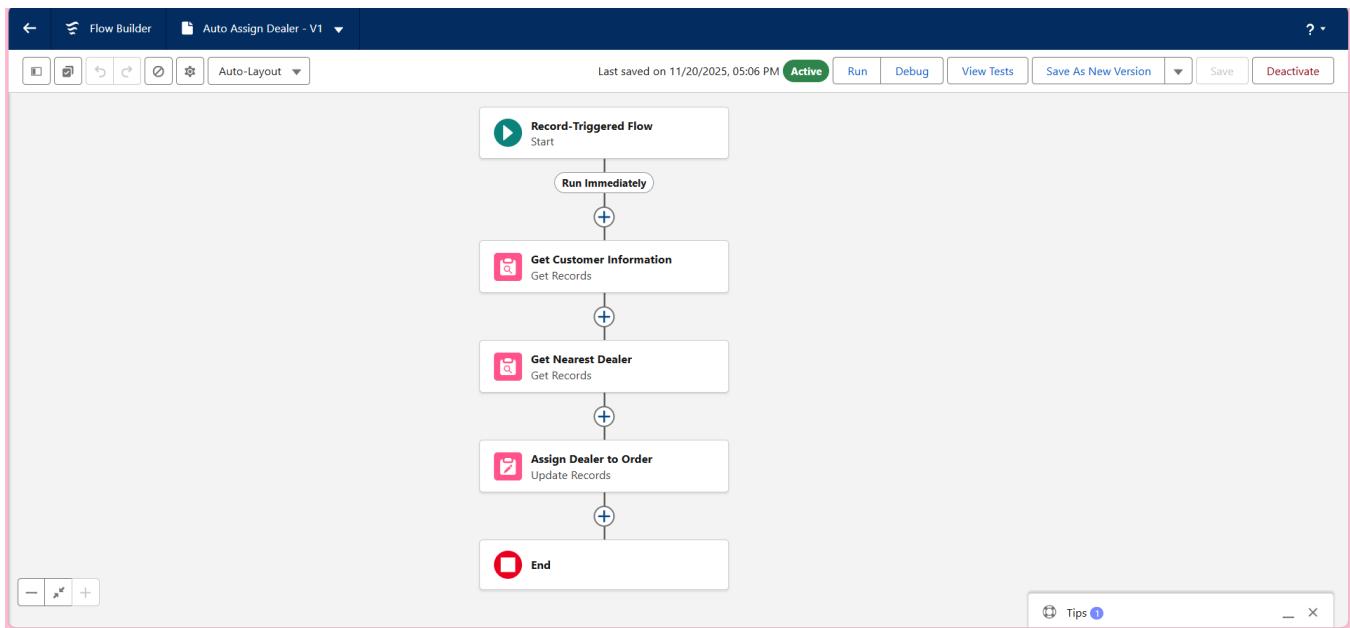
SETUP > OBJECT MANAGER					
Vehicle Order					
Details		Fields & Relationships			
Fields & Relationships		9 Items, Sorted by Field Label			
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Assigned Dealer	Assigned_Dealer__c	Lookup(Vehicle Dealer)		✓	
Created By	CreatedById	Lookup(User)			
Last Modified By	LastModifiedById	Lookup(User)			
Order Date	Order_Date__c	Date			
Owner	OwnerId	Lookup(User,Group)		✓	
Status	Status__c	Picklist			
Vehicle	Vehicle__c	Lookup(Vehicle)		✓	
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)		✓	
Vehicle Order Name	Name	Text(80)		✓	

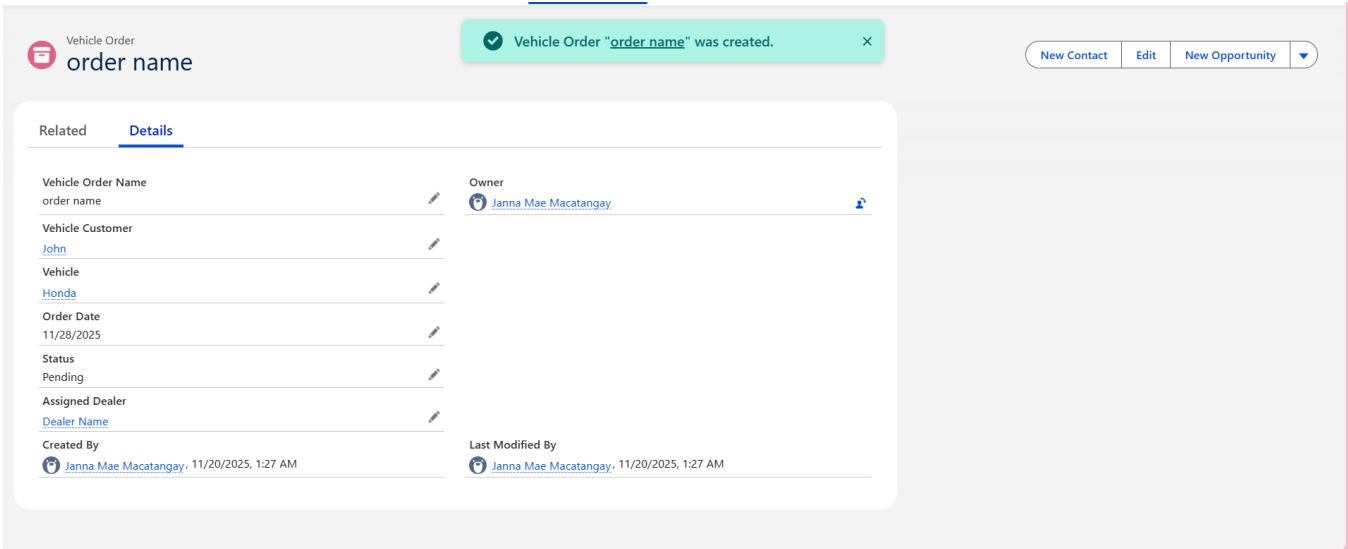
Vehicle Customer					
Fields & Relationships		Fields & Relationships			
Details		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD INDEXED
Page Layouts		Address	Address_c	Text(60)	
Lightning Record Pages		Created By	CreatedById	Lookup(User)	
Buttons, Links, and Actions		Email	Email_c	Email	
Compact Layouts		Last Modified By	LastModifiedById	Lookup(User)	
Field Sets		Owner	OwnerId	Lookup(User,Group)	✓
Object Limits		Phone	Phone_c	Phone	
Record Types		Preferred Vehicle Type	Preferred_Vehicle_Type_c	Picklist	
Related Lookup Filters		Vehicle Customer Name	Name	Text(80)	✓
Search Layouts					
List View Button Layout					
Restriction Rules					

Vehicle Test Drive					
Fields & Relationships		Fields & Relationships			
Details		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD INDEXED
Page Layouts		Created By	CreatedById	Lookup(User)	
Lightning Record Pages		Last Modified By	LastModifiedById	Lookup(User)	
Buttons, Links, and Actions		Owner	OwnerId	Lookup(User,Group)	✓
Compact Layouts		Status	Status_c	Picklist	
Field Sets		Test Drive Date	Test_Drive_c	Date	
Object Limits		Vehicle	Vehicle_c	Lookup(Vehicle)	✓
Record Types		Vehicle Customer	Vehicle_Customer_c	Lookup(Vehicle Customer)	✓
Related Lookup Filters		Vehicle Test Drive Name	Name	Text(80)	✓
Search Layouts					
List View Button Layout					
Restriction Rules					

Vehicle Service Request					
Fields & Relationships		Fields & Relationships			
Details		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD INDEXED
Page Layouts		Created By	CreatedById	Lookup(User)	
Lightning Record Pages		Issue Description	Issue_Description_c	Text(60)	
Buttons, Links, and Actions		Last Modified By	LastModifiedById	Lookup(User)	
Compact Layouts		Owner	OwnerId	Lookup(User,Group)	✓
Field Sets		Service Date	Service_Date_c	Date	
Object Limits		Status	Status_c	Picklist	
Record Types		Vehicle	Vehicle_c	Lookup(Vehicle)	✓
Related Lookup Filters		Vehicle Customer	Vehicle_Customer_c	Lookup(Vehicle Customer)	✓
Search Layouts		Vehicle Service Request Name	Name	Text(80)	✓
List View Button Layout					
Restriction Rules					

## Automation





## Apex and Batch Class

VehicleOrderTriggerHandler.apxc   VehicleOrderTrigger.apxt   VehicleOrderBatch.apxc   VehicleOrderBatchScheduler.apxc

Code Coverage: None   API Version: 65

```

49
50         List<Vehicle__c> vehiclesToUpdate = new List<Vehicle__c>();
51     for (Vehicle_Order__c order : orders) {
52         Vehicle__c vehicle = vehicleStockMap.get(order.Vehicle__c);
53         if (vehicle != null && vehicle.Stock_Quantity__c > 0) {
54             vehicle.Stock_Quantity__c -= 1;
55             vehiclesToUpdate.add(vehicle);
56         }
57     }
58
59     if (!vehiclesToUpdate.isEmpty()) {
60         update vehiclesToUpdate;
61     }
62 }
63 }
64 }
65 }
```

VehicleOrderTriggerHandler.apxc   VehicleOrderTrigger.apxt   VehicleOrderBatch.apxc   VehicleOrderBatchScheduler.apxc

Code Coverage: None   API Version: 65

```

1 trigger VehicleOrderTrigger on Vehicle_Order__c (before insert, before update, after insert, after update) {
2     VehicleOrderTriggerHandler.handleTrigger(Trigger.new, Trigger.oldMap, Trigger.isBefore, Trigger.isAfter, Trigger.isInsert, Trigger.isUpdate);
3 }
```

VehicleOrderTriggerHandler.apxc VehicleOrderTrigger.apxt **VehicleOrderBatch.apxc** VehicleOrderBatchScheduler.apxc

Code Coverage: None API Version: 65

```
26     Vehicle__c vehicle = vehicleStockMap.get(order.Vehicle__c);
27     if (vehicle != null && vehicle.Stock_Quantity__c > 0) {
28         order.Status__c = 'Confirmed';
29         vehicle.Stock_Quantity__c -= 1;
30         ordersToUpdate.add(order);
31         vehiclesToUpdate.add(vehicle);
32     }
33 }
34
35     if (!ordersToUpdate.isEmpty()) update ordersToUpdate;
36     if (!vehiclesToUpdate.isEmpty()) update vehiclesToUpdate;
37 }
38 }
39
40 global void finish(Database.BatchableContext bc) {
41     System.debug('Vehicle order batch job completed.');
42 }
43 }
```