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BSIT 4-1	

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 (with sub-links for Subscription Management, Apps, and Feature Settings). The main area has a search bar at the top. Below it, a banner says "Welcome, Ma. Althea" and "Manage and customize Salesforce from Setup. Browse suggestions, explore features, and more." It features three cards under "Achieve Popular Business Goals": "Cross Cloud Connect with Sales Prospects and Customers" (includes Sales Cloud Everywhere, Agentforce (Default), Einstein Sales Emails; 3 Completed, 1 In Progress, Keep Going), "Cross Cloud Track & Manage Customer Data" (includes Case Management, Feedback Management, Einstein Activity Capture; 2 Completed, 1 In Progress, Keep Going), and "Sales Capture & Auto-Qualify Leads".

Data Management-Objects

The screenshot shows the Salesforce Object Manager page. At the top, there's a search bar with "vehicle" typed in, and buttons for Schema Builder and Create. Below the search bar, a message says "6 Items, Sorted by Label". A table lists six custom objects:

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Vehicle	Vehicle__c	Custom Object		11/24/2025	✓
Vehicle Customer	Vehicle_Customer__c	Custom Object		11/24/2025	✓
Vehicle Dealer	Vehicle_Dealer__c	Custom Object		11/24/2025	✓
Vehicle Order	Vehicle_Order__c	Custom Object		11/24/2025	✓
Vehicle Service Request	Vehicle_Service_Request__c	Custom Object		11/24/2025	✓
Vehicle Test Drive	Vehicle_Test_Drive__c	Custom Object		11/24/2025	✓

Data Management-Tabs

Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.

Action	Label	Tab Style	Description
Edit Del	Vehicle Customers	People	
Edit Del	Vehicle Dealers	Building	
Edit Del	Vehicle Orders	Box	
Edit Del	Vehicles	Car	
Edit Del	Vehicle Service Requests	Form	
Edit Del	Vehicle Test Drives	Gears	

Web Tabs

No Web Tabs have been defined.

Visualforce Tabs

New | What Is This?

Data Management-App Manager

Vehicle Customers

Recently Viewed ▾

1 item • Updated a few seconds ago

<input type="checkbox"/> John

New | Import | Change Owner | Assign Label

Search this list...

Data Management-Fields

orgfarm-ab7badcf08-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/01lgL0000039bjZ/FieldsAndRelationships/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Vehicle

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)		✓

orgfarm-ab7badcf08-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/01lgL0000039ZzK/FieldsAndRelationships/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Vehicle Dealer

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)		
Dealer Name	Name	Text(80)		✓
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone__c	Phone		

orgfarm-ab7badcf08-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/01lgL0000039ccD/FieldsAndRelationships/view

Setup Home Object Manager

SETUP > OBJECT MANAGER
Vehicle Order

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 Number	Name	Auto Number		✓

Setup > Object Manager

Vehicle Customer

Fields & Relationships

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text(60)		
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		
Phone	Phone__c	Phone		
Preferred Vehicle Type	Preferred_Vehicle_Type__c	Picklist		
Vehicle Name	Name	Text(80)		

Setup > Object Manager

Vehicle Test Drive

Fields & Relationships

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)		
Status	Status__c	Picklist		
Test Drive Date	Test_Drive_Date__c	Date		
Vehicle	Vehicle__c	Lookup(Vehicle)		
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)		
Vehicle Test Drive Name	Name	Text(80)		

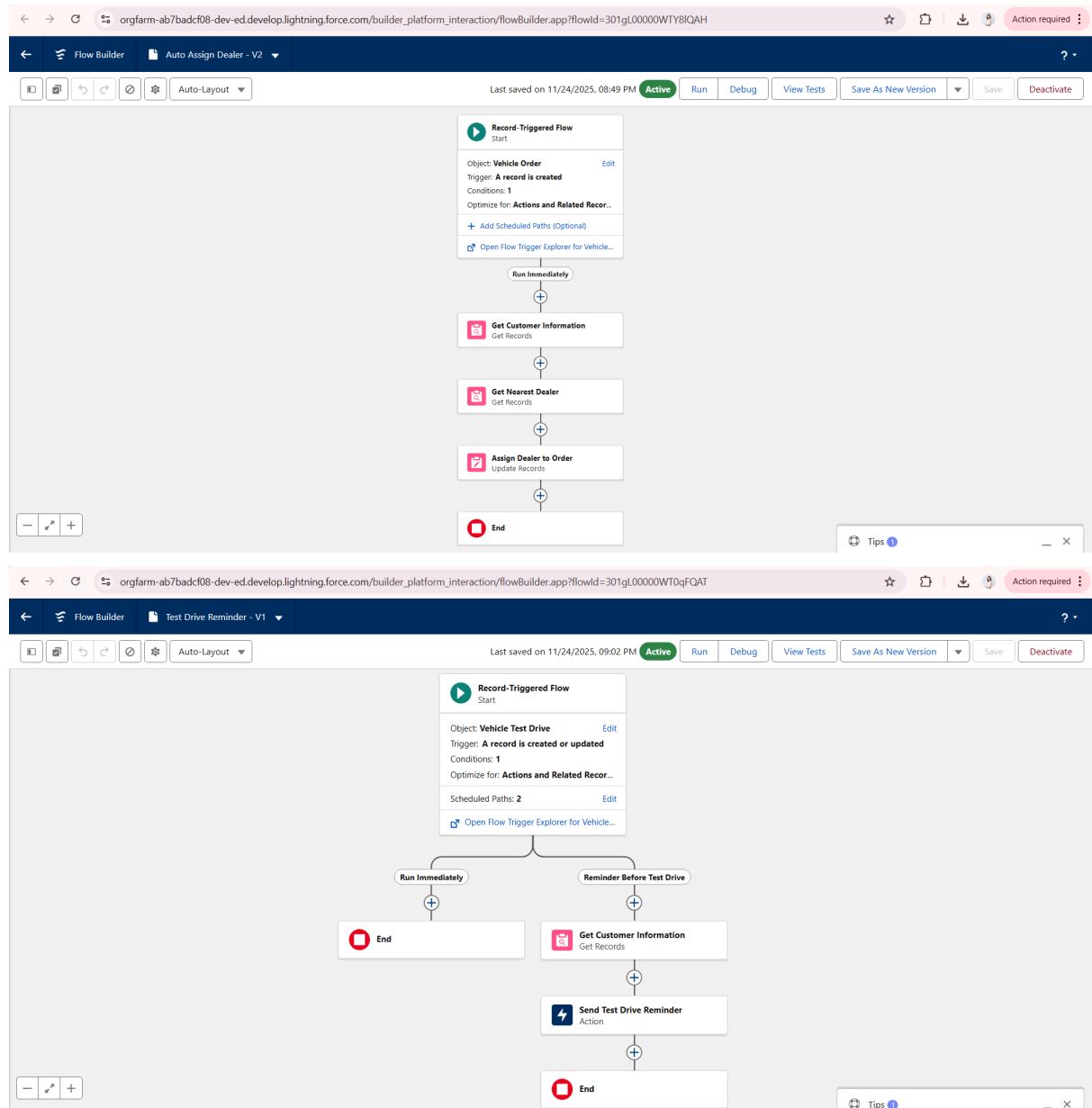
Setup > Object Manager

Vehicle Service Request

Fields & Relationships

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Issue Description	Issue__c	Text(60)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		
Service Date	Service_Date__c	Date		
Status	Status__c	Picklist		
Vehicle	Vehicle__c	Lookup(Vehicle)		
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)		
Vehicle Service Request Name	Name	Text(80)		

Automation



Apex and Batch Class

← → ⌂ orgfarm-ab7badcf08-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >

VehicleOrderTriggerHandler.apxt [] VehicleOrderBatchScheduler.apxt [] VehicleOrderTrigger.apxt [] VehicleOrderBatch.apxt []

Code Coverage: None ▾ API Version: 65 ▾ Go To

```
1 * public class VehicleOrderTriggerHandler {  
2  
3     public static void handleTrigger(List<Vehicle_Order__c> newOrders, Map<Id, Vehicle_Order__c> oldOrders, Boolean isBefore, Boolean isAfter, Boolean preventOrderIfOutOfStock(newOrders);  
4     if (isBefore && (isInsert || isUpdate)) {  
5         preventOrderIfOutOfStock(newOrders);  
6     }  
7  
8     if (isAfter && (isInsert || isUpdate)) {  
9         updateStockOnOrderPlacement(newOrders);  
10    }  
11 }  
12  
13 // ✖ Prevent placing an order if stock is zero  
14 private static void preventOrderIfOutOfStock(List<Vehicle_Order__c> orders) {  
15     Set<Id> vehicleIds = new Set<Id>();  
16     for (Vehicle_Order__c order : orders) {  
17         if (order.Vehicle__c != null) {  
18             vehicleIds.add(order.Vehicle__c);  
19         }  
20     }  
21 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Ma. Althea Alberto	Browser	/aura	11/24/2025, 10:26:14 PM	Success	Unread	316 bytes
Ma. Althea Alberto	Browser	/aura	11/24/2025, 9:56:38 PM	Success	Unread	316 bytes

← → ⌂ orgfarm-ab7badcf08-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

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VehicleOrderTriggerHandler.apxt [] VehicleOrderBatchScheduler.apxt [] VehicleOrderTrigger.apxt [] VehicleOrderBatch.apxt []

Code Coverage: None ▾ API Version: 65 ▾ Go To

```
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 }
```

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VehicleOrderTriggerHandler.apxc [VehicleOrderBatchScheduler.apxc [VehicleOrderTrigger.apxc [**VehicleOrderBatch.apxc [** Action required :

Code Coverage: None ▾ API Version: 65 ▾ Go To

```

1 * global class VehicleOrderBatch implements Database.Batchable<sObject> {
2
3     global Database.QueryLocator start(Database.BatchableContext bc) {
4         return Database.getQueryLocator([
5             SELECT Id, Status__c, Vehicle__c FROM Vehicle_Order__c WHERE Status__c = 'Pending'
6         ]);
7     }
8
9     global void execute(Database.BatchableContext bc, List<Vehicle_Order__c> orderList) {
10        Set<Id> vehicleIds = new Set<Id>();
11        for (Vehicle_Order__c order : orderList) {
12            if (order.Vehicle__c != null) {
13                vehicleIds.add(order.Vehicle__c);
14            }
15        }
16
17        if (!vehicleIds.isEmpty()) {
18            Map<Id, Vehicle__c> vehicleStockMap = new Map<Id, Vehicle__c>(
19                SELECT Id, Stock__c FROM Vehicle__c WHERE Id IN :vehicleIds
20            );
21
22            for (Id id : vehicleIds) {
23                Vehicle__c vehicle = vehicleStockMap.get(id);
24                if (vehicle != null) {
25                    vehicleStockMap.remove(id);
26                }
27            }
28
29            Database.update(vehicleStockMap.keySet(), true);
30        }
31    }
32
33    global void finish(Database.BatchableContext bc) {
34    }
35
36 }
```

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VehicleOrderTriggerHandler.apxc [**VehicleOrderBatchScheduler.apxc [** VehicleOrderTrigger.apxc [VehicleOrderBatch.apxc [Action required :

Code Coverage: None ▾ API Version: 65 ▾ Go To

```

1 * global class VehicleOrderBatchScheduler implements Schedulable {
2     global void execute(SchedulableContext sc) {
3         VehicleOrderBatch batchJob = new VehicleOrderBatch();
4         Database.executeBatch(batchJob, 50); // 50 = batch size
5     }
6 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

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