SALESFORCE-SUPPORTED VIRTUAL INTERNSHIP PROGRAM 2025

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

NAME:K.BALADITHYA
BRANCH:B.TECH CSE
YEAR:4TH YEAR
COLLEGE NAME:GITAM UNIVERSITY, HYDERABAD
PERSONAL MAIL:baladithyakinthada@gmail.com
INTERN: SALESFORCE DEVELOPER WITH AGENTBLAZER
TRAILBLAZER:https://www.salesforce.com/trailblazer/v5c9fsu42nhjzbplhn
DEMO VIDEO LINK:
https://drive.google.com/file/d/19OUwkFn9fAvi0k4xeoNc3nwa1H0erFmk/view?usp=share_link
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Project Overview:

The WhatsNext Vision Motors Salesforce CRM Project is aimed at transforming customer experience and operational efficiency through a solid CRM solution. The CRM provides automated operational solutions to streamline the ordering process for vehicles through automatic assignment of orders to the closest dealership based on customer location, stopping orders from going through if the vehicle is out of stock, and managing vehicle order status updates with reminders for test drives sent via email according to a schedule. Features of the solution include stock validation through Apex triggers, batch jobs to run stock updates in bulk, and using scheduled Apex to process vehicle orders whenever a Vehicle Order processing record is submitted. The business needs addressed were increased customer satisfaction, increased accuracy in vehicle orders, and increased operational efficiency in a competitive automotive market.

Objectives:

The main objectives for developing the WhatsNext Vision Motors CRM are to improve customer management, automate order processes, and connect dealers easily using real-time data. By automatically assigning orders to the nearest dealer, successfully managing inventory with stock validation, and improving communication through automated reminders, the aim is to create an efficient booking system with minimal manual user effort. These objectives provide real business value by increasing customer satisfaction through timely service, reducing error rates with accurate order fulfilment, and increasing revenue from a more efficient operation & improved dealer performance.

Phase 1:Requirement Analysis & Planning
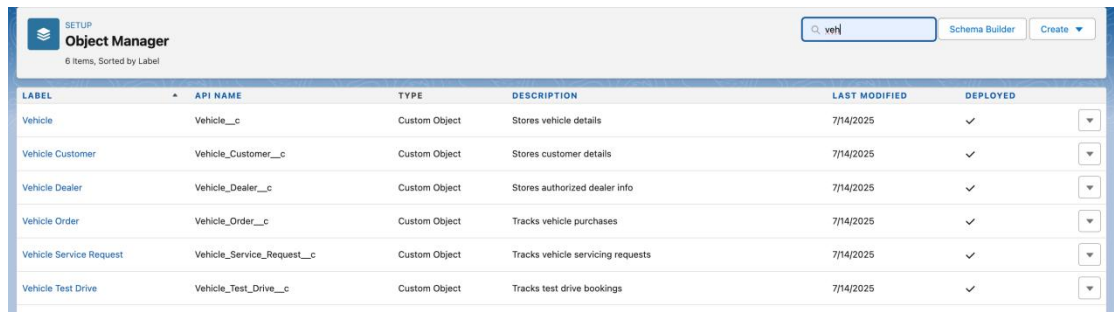
Defining Business:

Needs What is helpful for our customers, is that WhatsNext Vision Motors CRM is resolving clear user necessities while solving important operational problems. Customers want a simple and uncomplicated order process that provides accurate stock information and dealer assignments based on travel distance - small things like not having to worry about getting a delayed or the wrong order. Dealers also need effective tools to manage inventory and customer information, as issues regularly arise when they rely on personal, tangible, and manually updated files to communicate with customers or fulfill customer orders. The CRM solves the customer and dealer challenges presented by providing automated dealer recommendations, order suggestions that don't get flagged as out of stock and sending reminders to customers when it is time to test a drive. All of these factors contribute to an improved operational process while increasing internal and external user satisfaction.

Determine Project Scope / Deliverable Objectives:

- Develop a CRM to manage for vehicle inventory, customer orders and dealer assignments.

- Implement automated notifications of order status and like an email notification to customer - Quick order status updates communicate with team faster.

- Real-time validation of stock and proximity weighting for accurate dealer selection.

- Define scalable capacity for addition future benefits and new features such as AI driven recommendations and forecasts.

- An intuitive, simple to use interface to serve both customers (B2C) and dealer customers (B2B).

Design Data Model and Security Model:

- **Data Model -** Includes custom objects such as -

- **Security Model -**

  The security model implements role-based access with profiles for administrators or users, role hierarchy for dealers and customers, and sharing rules to select what each roles can see. All dealers and customers have permission sets that ensure limited access to stock levels or customer information.

Phase 2:Salesforce Development - Backend & Configurations

Setup environment:

Using the URL: https://developer.salesforce.com/signup, I created a developer organization in Salesforce with my first and last names, email address, role as developer, company name (college name), country (India), and a custom username (name@collegename.com, for example: baladithyakinthada436@agentforce.com of mine). Verifying email, creating a password, and going to the Salesforce setup page activates the account. used a sandbox setting for testing and development.

Customization of Objects, Fields, Validation Rules, Automation (Workflow Rules, Process Builder, Flows, Approval Process):

➢ **Objects & Relationships -**

- **Vehicle__c:** Stores vehicle details, related to Dealer__c and Vehicle_Order__c.

- **Vehicle_Dealer__c:** Stores authorized dealer info, related to Vehicle_Order__c.

- **Vehicle_Customer__c:** Stores customer details, related to Vehicle_Order__c and **Vehicle_Test_Drive__c**.

- **Vehicle_Order__c:** Tracks vehicle purchases, related to Vehicle_Customer__c and **Vehicle__c**.

- **Vehicle_Test_Drive__c:** Tracks test drive bookings, related to **Vehicle_Customer__c** and **Vehicle__c**.

- **Vehicle_Service_Request__c:** Tracks vehicle servicing requests, related to **Vehicle_Customer__c** and **Vehicle__c**.

➢ **Key Fields for Each Object-**

Vehicle Order

Details	**Fields & Relationships** 8 Items, Sorted by Field Label	Quick Find New Deleted Fields Field Dependencies Set History Tracking

Fields & Relationships	**FIELD LABEL** ▲	**FIELD NAME**	**DATA TYPE**	**CONTROLLING FIELD**	**INDEXED**
Page Layouts	Created By	CreatedById	Lookup(User)		
Lightning Record Pages	Customer	Customer__c	Lookup(Vehicle Customer)		✓
Buttons, Links, and Actions	Last Modified By	LastModifiedById	Lookup(User)		
Compact Layouts	Order Date	Order_Date__c	Date		
Field Sets	Order Name	Name	Text(80)		✓
Object Limits	Owner	OwnerId	Lookup(User,Group)		✓
Record Types	Status	Status__c	Picklist		
Related Lookup Filters	Vehicle	Vehicle__c	Lookup(Vehicle)		✓
Search Layouts					
List View Button Layout					
Restriction Rules					
Scoping Rules					
Object Access					

Vehicle Test Drive

Details	**Fields & Relationships** 8 Items, Sorted by Field Label	Quick Find New Deleted Fields Field Dependencies Set History Tracking

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

Details
Fields & Relationships
Page Layouts
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Buttons, Links, and Actions
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Fields & Relationships
9 Items, Sorted by Field Label

Quick Find | New | Deleted Fields | Field Dependencies | Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Created By	CreatedById	Lookup(User)			
Customer	Customer__c	Lookup(Vehicle Customer)		✓	▼
Issue Description	Issue_Description__c	Text(255)			▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Service Date	Service_Date__c	Date			▼
Service Request Name	Name	Text(80)		✓	▼
Status	Status__c	Picklist			▼
Vehicle	Vehicle__c	Lookup(Vehicle)		✓	▼

➢ **Validation Rules-**

Vehicle
Mahendra

New Contact | Edit | New Opportunity | ▼

Related **Details**

Vehicle Name	Owner
Mahendra	👤 Kinthada Baladithya
Vehicle Model	
SUV	
Stock Quantity	
5	
Dealer	
Price	
Status	
Available	

Created By
👤 Kinthada Baladithya , 7/15/2025, 7:52 AM

Last Modified By
👤 Kinthada Baladithya , 7/15/2025, 7:52 AM

➢ **Automation-**

1. **Flow - Auto Assign Dealer:-**
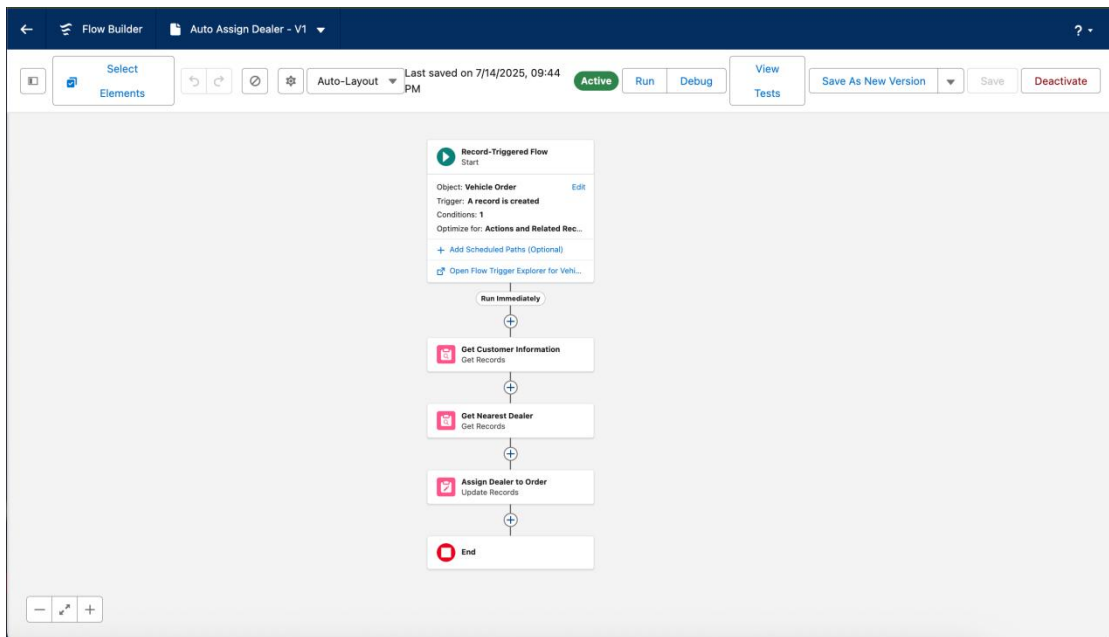
2. Flow - Test Drive Reminder:-
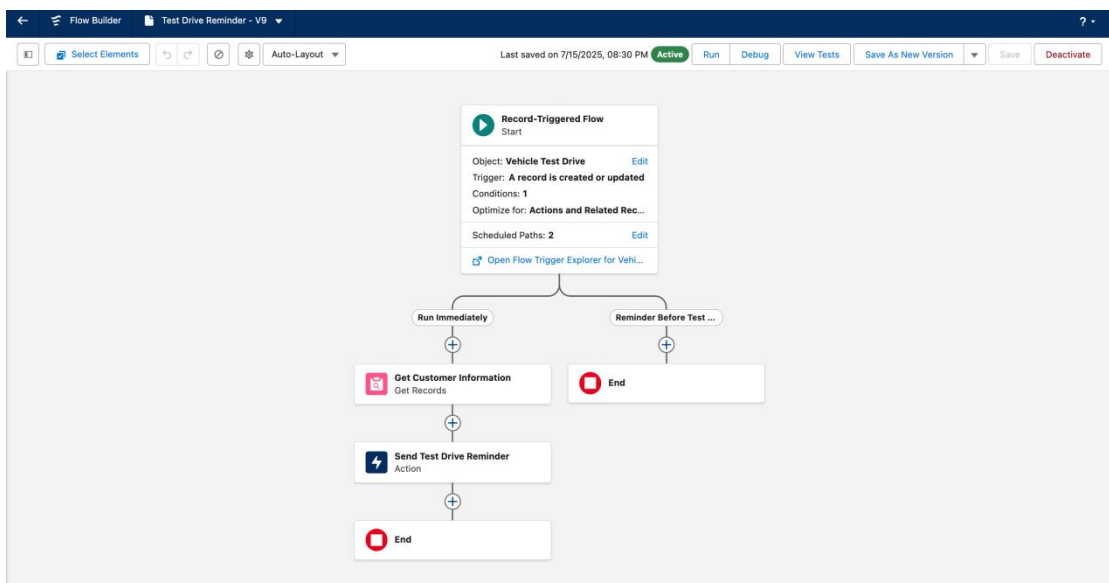
Apex Classes, Triggers, Asynchronous Apex Classes-

- ### Apex Class - VehicleOrderTriggerHandler:

```
public class VehicleOrderTriggerHandler {
    public    static    void    handleTrigger(List<Vehicle_Order__c>
newOrders, Map<Id, Vehicle_Order__c> oldOrders, Boolean isBefore,
Boolean isAfter, Boolean isInsert, Boolean isUpdate) {
        if (isBefore) {
            if (isInsert || isUpdate) {
                preventOrderIfOutOfStock(newOrders);
            }
```

```
        }
    if (isAfter) {
      if (isInsert || isUpdate) {
        updateStockOnOrderPlacement(newOrders);
      }
    }
  }
// Method to prevent orders when the vehicle is out of stock

  private                   static                   void
preventOrderIfOutOfStock(List<Vehicle_Order__c> orders) {

    Set<Id> vehicleIds = new Set<Id>();

    for (Vehicle_Order__c order : orders) {

      if (order.Vehicle__c != null) {

        vehicleIds.add(order.Vehicle__c);

      }

    }

    if (!vehicleIds.isEmpty()) {

      Map<Id,  Vehicle__c>  vehicleStockMap  =  new  Map<Id,
Vehicle__c>();

      for (Vehicle__c vehicle : [SELECT Id, Stock_Quantity__c
FROM Vehicle__c WHERE Id IN :vehicleIds]) {

        vehicleStockMap.put(vehicle.Id, vehicle);

      }

      for (Vehicle_Order__c order : orders) {

        if (vehicleStockMap.containsKey(order.Vehicle__c)) {

          Vehicle__c                    vehicle                    =
vehicleStockMap.get(order.Vehicle__c);

            if (vehicle.Stock_Quantity__c <= 0) {

              order.addError('This  vehicle  is  out  of  stock.  Order
cannot be placed.');

            }
```

```apex
                }

            }

        }

    }

    // Method to update vehicle stock when an order is placed

    private                      static                      void
updateStockOnOrderPlacement(List<Vehicle_Order__c> orders) {

        Set<Id> vehicleIds = new Set<Id>();

        for (Vehicle_Order__c order : orders) {

            if (order.Vehicle__c != null && order.Status__c ==
'Confirmed') {

                vehicleIds.add(order.Vehicle__c);

            }

        }

        if (!vehicleIds.isEmpty()) {

            Map<Id, Vehicle__c> vehicleStockMap = new Map<Id,
Vehicle__c>();

            for (Vehicle__c vehicle : [SELECT Id, Stock_Quantity__c
FROM Vehicle__c WHERE Id IN :vehicleIds]) {

                vehicleStockMap.put(vehicle.Id, vehicle);

            }

            List<Vehicle__c>        vehiclesToUpdate        =        new
List<Vehicle__c>();

            for (Vehicle_Order__c order : orders) {

                if (vehicleStockMap.containsKey(order.Vehicle__c)) {

                    Vehicle__c                vehicle                =
vehicleStockMap.get(order.Vehicle__c);

                    if (vehicle.Stock_Quantity__c > 0) {
```

```
                    vehicle.Stock_Quantity__c -= 1;

                    vehiclesToUpdate.add(vehicle);

                }

            }

        }

        if (!vehiclesToUpdate.isEmpty()) {
            update vehiclesToUpdate;
        }
      }
    }
}
```

- **Trigger - VehicleOrderTrigger:**

```
trigger VehicleOrderTrigger on Vehicle_Order__c (before
insert,before update, after insert, after update) {

    VehicleOrderTriggerHandler.handleTrigger(Trigger.new,
Trigger.oldMap, Trigger.isBefore,Trigger.isAfter, Trigger.isInsert,
Trigger.isUpdate);

}
```

- **Asynchronous Apex - VehicleOrderBatch:**

```
global class VehicleOrderBatch implements
Database.Batchable<SObject> {

    global Database.QueryLocator start(Database.BatchableContext bc)
{
        return Database.getQueryLocator([
            SELECT Id, Status__c, Vehicle__c
            FROM Vehicle_Order__c
            WHERE Status__c = 'Pending'
        ]);
    }

    global void execute(Database.BatchableContext bc,
List<Vehicle_Order__c> orderList) {
        Set<Id> vehicleIds = new Set<Id>();

        for (Vehicle_Order__c order : orderList) {
            if (order.Vehicle__c != null) {
                vehicleIds.add(order.Vehicle__c);
            }
```

```
        }

    if (!vehicleIds.isEmpty()) {
        Map<Id, Vehicle__c> vehicleStockMap = new Map<Id,
Vehicle__c>(
            [SELECT Id, Stock_Quantity__c FROM Vehicle__c
WHERE Id IN :vehicleIds]
        );

        List<Vehicle_Order__c>    ordersToUpdate    =    new
List<Vehicle_Order__c>();
        List<Vehicle__c>    vehiclesToUpdate    =    new
List<Vehicle__c>();

        for (Vehicle_Order__c order : orderList) {
            if (vehicleStockMap.containsKey(order.Vehicle__c)) {
                Vehicle__c            vehicle            =
vehicleStockMap.get(order.Vehicle__c);

                if (vehicle.Stock_Quantity__c > 0) {
                    order.Status__c = 'Confirmed';
                    vehicle.Stock_Quantity__c -= 1;

                    ordersToUpdate.add(order);
                    vehiclesToUpdate.add(vehicle);
                }
            }
        }

        if (!ordersToUpdate.isEmpty()) {
            update ordersToUpdate;
        }

        if (!vehiclesToUpdate.isEmpty()) {
            update vehiclesToUpdate;
        }
    }
}

    global void finish(Database.BatchableContext bc) {
        System.debug('    Vehicle    order    batch    job    completed
successfully.');
    }
}
```

- **Schedule Class - VehicleOrderBatchScheduler:**

```
global class VehicleOrderBatchScheduler implements Schedulable {

    global void execute(SchedulableContext sc) {
```

```
VehicleOrderBatch batchJob = new VehicleOrderBatch();

Database.executeBatch(batchJob, 50); // 50 is the batch size

    }

}
```

- **Scheduled Job:**

```
String cronExp = '0 0 12 * * ?'; // Runs daily at 12:00 PM

System.schedule('Daily Vehicle Order Processing', cronExp, new
VehicleOrderBatchScheduler());
```

Phase 3: UI/UX Development & Customization

Lightning App Setup through App Manager

Created a Lightning App named "WhatNext Vision Motors" via the App
Manager in Setup, with a meaningful description. Added navigation items
including Vehicle, Dealer, Customer, Order, Test Drive, Service Request,
Reports, and Dashboard. Assigned the app to the System Administrator profile
for access.
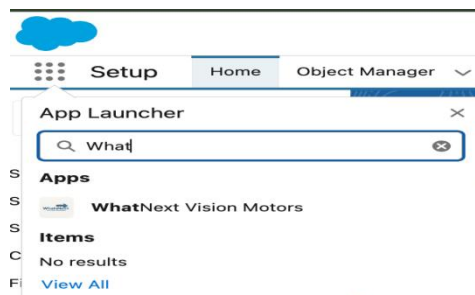
Page Layouts, Dynamic Forms

Designed page layouts for Vehicle__c and Vehicle_Order__c objects, incorporating
Dynamic Forms to enhance field visibility and user interaction based on record type
and user role.

WhatsNext
VISION MOTORS

WhatNext Vision M... | Vehicles ∨

Vehicles
Recently Viewed ∨ | 📌

To unpin, pin another

1 item • Updated a few seconds ago

		Vehicle Name
1	☐	Mahendra

WhatsNext | 🔍 Search...

⠿ WhatNext Vision M... | Vehicles ∨ | Vehicle Dealers ∨ | Vehicle Customers ∨ | Vehicle Orders ∨ | Vehicle Test Drives ∨ | Vehicle Servi

Vehicle Order
Vision

Related | **Details**

Order Name
Vision ✏️

Customer
Bal Reddy ✏️

Vehicle
Mahendra ✏️

Order Date
7/19/2025 ✏️

Status
Confirmed ✏️

Created By
Kinthada Baladithya, 7/17/2025, 2:30 AM

Owner
Kinthada Baladithya 👤

Last Modified By
Kinthada Baladithya, 7/17/2025, 2:30 AM

Phase 4: Data Migration, Testing, Security

Sample Records Created

Vehicle: Mahendra SUV Model

Testing

Done by flows of test drive remainder.

Phase 5 – Deployment Maintenance

Deployment

After completion of flow test drive remainder, the customer got the mail regarding test drive.

Why is this message in spam? This message is similar to messages that were identified as spam in the past.

Report not spam

Hi Bal Reddy,

This is a reminder that your test drive is scheduled for tomorrow.

Please contact us if you need to reschedule.

Thanks,

WhatNext Vision Motors

Maintenance

Use Apex logs for monitoring - Updates to flows or triggers via Setup

Conclusion:

The WhatsNext Vision Motors CRM automates vehicle order processing and improves customer engagement with Salesforce tools. It removes manual stock checks and provides real-time updates using triggers and batch jobs. This creates a seamless experience for both customers and dealers. This solution meets the business needs of improving order accuracy, increasing customer satisfaction, and boosting operational efficiency. It positions WhatsNext Vision Motors as a leader in automotive CRM innovation.

Benefits:

- **Saves Time and Prevents Stockouts:** Automating stock validation and dealer assignments reduces manual effort and ensures availability.

- **Ensures Accuracy with Test Validation:** Detailed test cases and high code coverage guarantee reliable performance.

- **Role-Based Access Improves Security:** Customized profiles and sharing rules protect sensitive data while keeping it accessible.

Future Scope:

- **Add Slack Notifications:** Integrate real-time alerts for order and stock updates to improve team communication.

- **Develop LWC Dashboard for Live Stock Tracking:** Create a dynamic interface for real-time inventory monitoring.

- **Implement Multi-Level Approval for Orders:** Add a layered approval process to improve order management control.

THANK YOU