Salesforce Capstone Project

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

Abstract

The WhatNext Vision Motors is a Salesforce-based automotive solution that streamlines customer order management, dealer assignment, test drives, and service requests. It integrates automation using Flows, Apex, and Batch Jobs while offering rich business insights via dashboards and reports. The project simulates a real-world vehicle dealership and after-sales service management process.

User Scenario

WhatsNext Vision Motors, a pioneering force in the automotive industry, is dedicated to transforming the mobility sector with innovative technology and solutions that prioritize customer needs. The company has embarked on an ambitious Salesforce project with the core objective of enhancing the customer experience and streamlining its operational processes.
At the heart of this project is the improvement of the customer ordering process. The system is designed to automatically suggest the nearest dealer location to customers based on their address. This feature is intended to significantly enhance the convenience and efficiency of the ordering experience, making it more customer-friendly and reducing the time and effort required from the customer's end.

The project also addresses a common issue in the automotive industry: stock availability. The system includes a mechanism that prevents customers from placing orders for vehicles that are out of stock. This proactive approach ensures that customers can only create orders for vehicles that are currently available, thus avoiding potential confusion and disappointment that may arise from stock unavailability. This feature not only enhances customer satisfaction but also improves the accuracy of the company's order fulfillment process.

Furthermore, the project incorporates a scheduled process for updating the status of bulk order records. This automated process is designed to update the order status based on stock availability. If a vehicle is out of stock at the time of order placement, the system will update the order status to 'Pending.' On the other hand, if the vehicle is in stock, the system will update the status to 'Confirmed.' This ensures that all orders are accurately reflected in terms of their fulfillment status, providing clear and transparent communication to customers regarding the status of their orders. The implementation of this Salesforce project at WhatsNext Vision Motors is expected to yield several benefits. It aims to create a more efficient ordering system that reduces the potential for errors and improves the overall service provided to customers. By

streamlining the ordering process and ensuring accurate stock availability, the company can enhance customer satisfaction and loyalty.

Moreover, the project is expected to contribute to operational efficiency by reducing the administrative burden on staff. By automating certain processes, employees can focus on more strategic tasks that require human intervention and expertise. This not only improves the overall productivity of the company but also allows for a more agile response to market demands and customer needs.

Requirements:

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.

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.

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.

Key Learning:

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

Objective

To implement a Salesforce application that:

- Manages vehicles, customers, and dealer inventory
- Automatically assigns nearest dealers to customer orders
- Prevents order placement when vehicles are out of stock
- Sends scheduled reminders for test drives
- Tracks service requests and updates order statuses via scheduled batch processes
- Provides real-time business insights through reports and dashboards

Technology Description

Platform

Salesforce Lightning Experience

CRM Tools

- Object Manager
- Flow Builder
- Apex Classes
- Dashboards
- Reports
- App Manager

Automation

- Record-Triggered
- Flows
- Apex Triggers
- Batch Jobs

Analytics

- Lightning
- Dashboards
- Custom Reports

Languages

Apex (Server-Side Logic)

Project Phases

Phase 1: Salesforce Credentials Creation

- Signed up at https://developer.salesforce.com/signup
- Entered personal details, selected Developer as role

Developer Account Creation

- Used email verification link
- Set password and security question

Verify Account

- Logged into Salesforce Setup
- Accessed Lightning App Builder and Object Manager

Phase 2: Data Management

Object Purpose and **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 servicing requests	Related to Customer & Vehicle

Phase 3: Fields and Relationships

Vehicle

Field Label	Field Name	Data Type
Dealer	Dealer__c	Lookup(User)
Price	Price__c	Currency(16, 2)
Status	Status__c	Picklist
Stock Quantity	Stock_Quantity__c	Number(18, 0)
Vehicle Model	Vehicle_Model__c	Picklist
Vehicle Name	Name	Text(80)

Vehicle Customer

Field Label	Field Name	Data Type
Address	Address__c	Long Text Area
Customer Name	Name	Text(80)
Email	Email__c	Email
Stock Quantity	Stock_Quantity__c	Number(18, 0)
Phone	Phone__c	Phone
Preferred Vehicle Type	Preferred_Vehicle_Type__c	Picklist

Vehicle Dealer

Field Label	Field Name	Data Type
Dealer Code	Dealer_Code__c	Auto Number
Dealer Location	Dealer_Location__c	Text(80)
Dealer Name	Name	Text(80)
Email	Email__c	Email
Phone	Phone__c	Phone

Vehicle Service Request

Field Label	Field Name	Data Type
Issue Description	Issue_Description__c	Long Text Area
Service Date	Service_Date__c	Date
Service Request ID	Name	Auto Number
Status	Status__c	Picklist
Vehicle	Vehicle__c	Lookup(Vehicle)
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)

Vehicle Test Drive

Field Label	Field Name	Data Type
Status	Status__c	Picklist
Test Drive Date	Test_Drive_Date__c	Date/Time
Test Drive ID	Name	Auto Number
Vehicle	Vehicle__c	Lookup(Vehicle)
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)

Phase 4: Tabs Creation

Setup → Tabs → New

Custom tabs:

- Vehicle
- Dealer
- Customer
- Orders
- Test Drives
- Service Requests

Phase 5: Lightning App Creation

Setup → App Manager → New Lightning App

App Details:

- **App Name:** WhatNext Vision Motors
- Added all tabs to navigation bar
- Assigned visibility to System Administrator

Phase 6: Automation

Record-Triggered Flow: Auto Assign Dealer

- **Object:** Vehicle_Order__c
- Triggered when Status__c = Pending
- Used Get Records to fetch customer and nearest dealer
- Update Records to assign Dealer to the Order

Record-Triggered Flow: Test Drive Reminder

- Triggered 1 day before Test_Drive_Date__c
- **Action:** Send Email Reminder
- Email sent to Customer's Email field

Phase 7: Apex and Batch Classes

Trigger Handler: VehicleOrderTriggerHandler

- Prevents order placement if vehicle is out of stock
- Updates stock quantity when order is confirmed

Apex Trigger: VehicleOrderTrigger

Calls the above handler for insert/update operations

Batch Class: VehicleOrderBatch

- Runs daily, checks if stock is replenished
- Changes order status from Pending → Confirmed

Scheduler Class: VehicleOrderBatchScheduler

- Scheduled at 12:00 AM every day via System.schedule()
- Visible in **Scheduled Jobs**

Phase 8: Reports and Dashboards

Reports:

- Vehicle Dealer Orders
- Top Performing Dealers
- Service Request Status
- Vehicle Orders Status
- Test Drives Date
- Vehicle Inventory Report

Dashboard:

Vehicle Dealer Orders

- **Type:** Donut Chart
- **Purpose:** Displays the total number of orders per dealer.

Top Performing Dealers

- **Type:** Vertical Bar Chart
- **Purpose:** Highlights dealers with the **highest number of orders**.
- **Helps identify** which dealers are generating the most business.

Service Request Status

- **Type: Tabular Report**
- **Purpose:** Shows service request issues logged by customers.

Vehicle Orders Status

- **Type:** Horizontal Bar Chart
- **Purpose:** Categorizes vehicle orders by **status**.

Test Drives Date

- **Type: Line Graph**
- **Purpose:** Tracks **test drive activity over time**.

Vehicle Inventory Report

- **Type: Tabular Report**
- **Purpose:** Displays current vehicle inventory.

Conclusion

The WhatNext Vision Motors Salesforce application successfully demonstrates how CRM systems can enhance efficiency in vehicle dealership operations. Through object modeling, automation, and analytics, the platform simulates real-world business processes and delivers actionable insights via reports and dashboards.

Future Scope

- Add LWC component for real-time order tracking.
- Create Partner Community for dealers.
- Enable customer login via Experience Cloud.
- Integrate with third-party APIs for service tracking.

Final Thoughts

The **WhatNext Vision Motors** Salesforce application represents a well-rounded capstone project that demonstrates a strong grasp of CRM customization, automation, and data analytics. By simulating a real-world automotive workflow from vehicle inventory and dealer assignments to test drives, service requests, and automated batch updates, this project bridges business needs with technology solutions. It showcases both the power of declarative tools and the flexibility of Apex development, making it a valuable addition to any Salesforce portfolio and a strong foundation for tackling enterprise-level CRM challenges in the future.