

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

WhatNext Vision Motors is enhancing both its customer service capabilities and internal operational efficiency through the implementation of a robust Salesforce CRM ecosystem. The system optimizes the vehicle purchasing workflow by automatically assigning customer orders to the nearest dealership based on geographic proximity and preventing transactions for units that are no longer in stock. Automated processes maintain accurate, real-time order status updates and generate reminder emails prior to scheduled test-drive appointments. The platform's functionality is supported by Apex triggers to enforce inventory rules, Batch Apex for routine stock validation, and Scheduled Apex for autonomous processing of pending orders. Collectively, these advancements improve customer satisfaction, minimize ordering inaccuracies, and streamline day-to-day dealership operations.

System Requirements & Functional Highlights:

Salesforce CRM Core Setup

- Maintain comprehensive and up-to-date records of all vehicles, inventory levels, and dealership branch information.
- Efficiently document and monitor customer transactions, scheduled test drives, and service-related inquiries.
- Automatically assign customer orders to the dealership geographically closest to the customer's location.

Business Process Automation

- Prevent order submissions when the selected vehicle is out of stock.
- Initiate automated dealership assignment based on the customer's address or location data.
- Dispatch scheduled email notifications to provide timely reminders for upcoming test-drive appointments.

Apex Development & Trigger Logic

- Utilize Apex triggers to enforce critical business rules, including inventory validation and automated order routing.
- Adopt a structured trigger handler architecture to promote clean, scalable, and easily maintainable code.

Batch & Scheduled Processes

- Employ Batch Apex to regularly monitor inventory levels and update vehicle availability records.
- Utilize Scheduled Apex to automate routine stock updates and facilitate order-related notifications.

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 various links like Setup Home, Salesforce Go, Service Setup Assistant, etc. The main area has a "Welcome, Allen" message and a "Recent Items" section. This section contains a table with 12 items, each with a name, type, and object reference.

NAME	TYPE	OBJECT
VehicleOrderBatchScheduler	Apex Class	
VehicleOrderBatch	Apex Class	
VehicleOrderTrigger	Apex Trigger	Vehicle Order
VehicleOrderTriggerHandler	Apex Class	
Allen Endaya	User	
SFDC_DevConsole	Debug Level	
Vehicle Order Layout	Page Layout	Vehicle Order
Vehicle Customer	Custom Field Definition	Vehicle Order
Assigned Dealer	Custom Field Definition	Vehicle Order
Status	Custom Field Definition	Vehicle Service Request

Data Management Object

The screenshot shows the Salesforce Lightning Setup Object Manager page. The URL in the browser is `orgfarm-f1ef473c00-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/home`. The page title is "Data Management Object". The top navigation bar includes links for "Blue Lock 2nd Seas...", "9anime - Watch Ani...", "Menu Management", and "AJAX product quant...". The main header features a blue cloud icon, a search bar with the placeholder "Search Setup", and various navigation icons. The main content area is titled "Object Manager" and displays a table of custom objects. The table has columns: LABEL, API NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. There are 6 items listed, all sorted by Label. Each row shows a checkmark in the DEPLOYED column.

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Vehicle	Vehicle__c	Custom Object		11/20/2025	✓
Vehicle Customer	Vehicle_Customer__c	Custom Object		11/20/2025	✓
Vehicle Dealer	Vehicle_Dealer__c	Custom Object		11/20/2025	✓
Vehicle Order	Vehicle_Order__c	Custom Object		11/20/2025	✓
Vehicle Service Request	Vehicle_Service_Request__c	Custom Object		11/20/2025	✓
Vehicle Test Drive	Vehicle_Test_Drive__c	Custom Object		11/20/2025	✓

Data Management-Table

The screenshot shows the Salesforce Setup interface with the URL <https://orgfarm-f1ef473c00-dev-ed.develop.my.salesforce-setup.com/lightning/setup/CustomTabs/page?area=Custom%20Tabs>. The page title is "Custom Tabs".

The left sidebar shows "User Interface" and "Tabs" selected under "Rename Tabs and Labels". A message at the top says, "Didn't find what you're looking for? Try using Global Search."

The main content area displays sections for "Custom Object Tabs", "Web Tabs", "Visualforce Tabs", and "Lightning Component Tabs".

Custom Object Tabs:

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:

No Visualforce Tabs have been defined.

Lightning Component Tabs:

Action	Label	Tab Style	Description
Edit	Get Started with Agentforce	Heart	
Edit	Get Started with Data Cloud	Map	
Edit	Get Started with MuleSoft	Heart	
Edit	Get Started with Salesforce DX	Building Block	

Data-Management-App Manager

orgfarm-f1ef473c00-dev-ed.develop.lightning.force.com/lightning/o/Vehicle_Customer__c/list?filter... | All Bookmarks

Blue Lock 2nd Seas... | 9anime - Watch Ani... | Menu Management | AJAX product quant... |

Cloud icon | Search... | Star icon | Plus icon | Arrow icon | Question mark | Gear icon | Bell icon (2) | User icon | More |

WhatNext Vision Motors | Vehicle Customers | Vehicle Dealers | Vehicle Orders | Vehicle Service Requests | More

Vehicle Customers | Recently Viewed | New | Import | Change Owner | Assign Label

0 items • Updated a few seconds ago | Search this list... | Filter icon | List icon | Refresh icon | Edit icon | Delete icon | More icon



Nothing to see here

There's nothing in your list yet. Try adding a new record.

Data Management-Fields

Vehicle Data Management-Fields

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle' object. The left sidebar lists various setup categories, and the main area displays the 'Fields & Relationships' section. The table lists nine fields, each with its label, name, data type, and controlling field.

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)	✓	▼

Vehicle Dealer Data Management-Fields

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle Dealer' object. The top navigation bar includes links for 'Blue Lock 2nd Seas...', '9anime - Watch Ani...', 'Menu Management', and 'AJAX product quant...'. The search bar contains 'Search Setup'. The main menu tabs are 'Setup', 'Home', and 'Object Manager' (selected). The page title is 'SETUP > OBJECT MANAGER Vehicle Dealer'.

The left sidebar lists various configuration options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, Object Access, Triggers, Flow Triggers, Validation Rules, and Conditional Field Formatting.

The right panel displays the 'Fields & Relationships' section for the 'Vehicle Dealer' object. It shows 8 items, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.

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)	✓	

Vehicle Order Data Management-Fields

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle Order' object. The left sidebar lists various setup categories. The main area displays the 'Fields & Relationships' section, which includes a table listing fields like Created By, Last Modified By, Order Date, and Vehicle.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
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	✓	

Vehicle Customer Data Management-Fields

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle Customer' object. The left sidebar lists various setup categories, and the main area displays the 'Fields & Relationships' section. The table lists eight fields:

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 Customer Name	Name	Text(80)		✓

Vehicle Test Drive Data Management-Fields

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle Test Drive' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, Buttons, etc. The main content area is titled 'Fields & Relationships' and displays a table of fields.

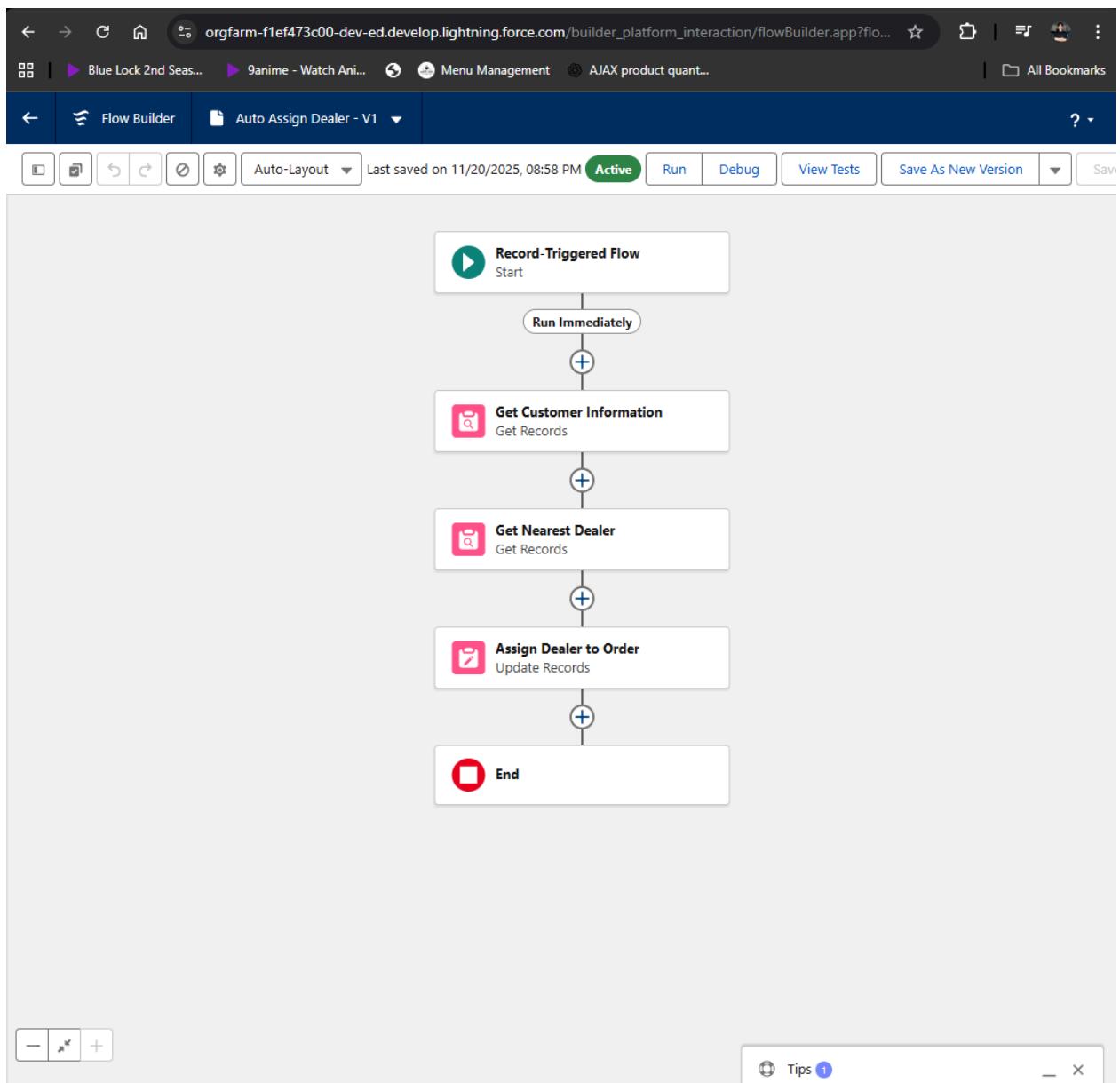
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)	✓	
Status	Status__c	Picklist		▼
Test Drive Date	Test_Drive_Date__c	Date		▼
Vehicle	Vehicle__c	Lookup(Vehicle)	✓	▼
Vehicle Customer	Vehicle_Customer__c	Lookup(Vehicle Customer)	✓	▼
Vehicle Test Drive Name	Name	Text(80)	✓	▼

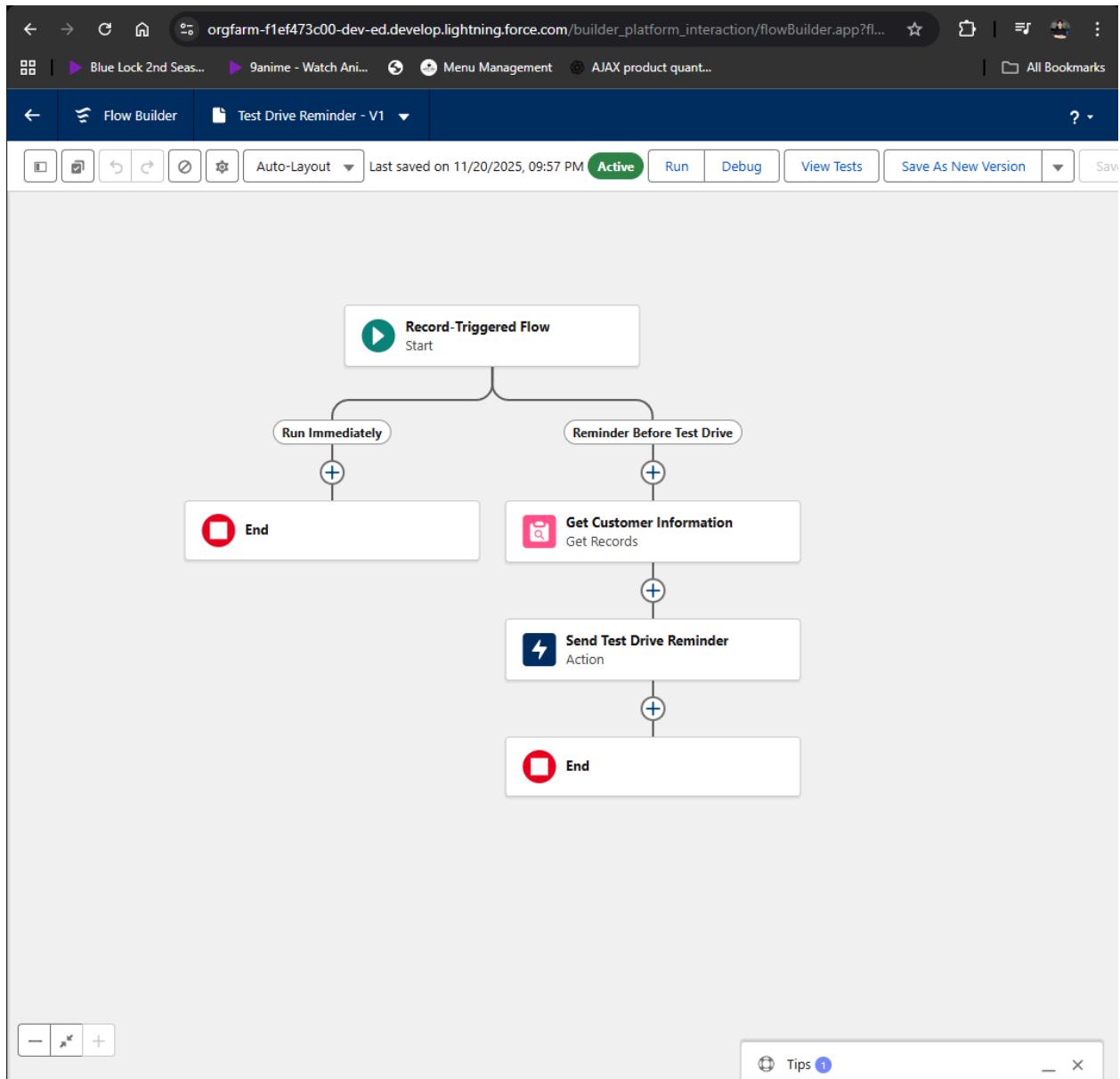
Vehicle Service Request Data Management-Fields

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle Service Request' object. The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main content area displays the 'Fields & Relationships' section with a table showing field details.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Issue Description	Issue_Description__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 Name	Name	Text(80)	✓	

Automation





← → ⌛ ⌂ orgfarm-f1ef473c00-dev-ed.develop.lightning.force.com/lightning/r/Vehicle_Test_Drive__c/a04gK000001... ☆ ⌂ | All Bookmarks

Blue Lock 2nd Seas... 9anime - Watch Ani... Menu Management AJAX product quant...

Cloud Search... Search...

WhatNext Vision Motors Vehicle Customers Vehicle Dealers Vehicle Orders Vehicle Test Drives More

Vehicle Test Drive "test drive" was created.

test drive

Related Details

Vehicle Test Drive Name test drive Owner Allen Endaya

Vehicle Customer Allen Benedict O. Endaya

Vehicle Ford

Test Drive Date 11/22/2025

Status Scheduled

Created By Allen Endaya, 11/20/2025, 5:59 AM Last Modified By Allen Endaya, 11/20/2025, 5:59 AM

Apex and Batch Class

Developer Console - Google Chrome
orgfarm-f1ef473c00-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
VehicleOrderTriggerHandler.apxc [] VehicleOrderTrigger.apxt []
Code Coverage: None API Version: 65 Go To

```
1 public class VehicleOrderTriggerHandler {  
2     public static void handleTrigger(List<Vehicle_Order__c> newOrders, Map<Id, Vehicle_Order__c> oldOrders) {  
3         if (isBefore && (isInsert || isUpdate)) {  
4             preventOrderIfOutOfStock(newOrders);  
5         }  
6         if (isAfter && (isInsert || isUpdate)) {  
7             updateStockOnOrderPlacement(newOrders);  
8         }  
9     }  
10    // ✖ Prevent placing an order if stock is zero  
11    private static void preventOrderIfOutOfStock(List<Vehicle_Order__c> orders) {  
12        Set<Id> vehicleIds = new Set<Id>();  
13        for (Vehicle_Order__c order : orders) {  
14            if (order.Vehicle__c != null) {  
15                vehicleIds.add(order.Vehicle__c);  
16            }  
17        }  
18        if (!vehicleIds.isEmpty()) {  
19            Map<Id, Vehicle__c> vehicleStockMap = new Map<Id, Vehicle__c>(  
20                [SELECT Id, Stock_Quantity__c FROM Vehicle__c WHERE Id IN :vehicleIds]  
21            );  
22            for (Vehicle_Order__c order : orders) {  
23                if (order.Vehicle__c != null && vehicleStockMap.containsKey(order.Vehicle__c)) {  
24                    if (order.Stock_Quantity__c < vehicleStockMap.get(order.Vehicle__c).Stock_Quantity__c) {  
25                        preventOrderIfOutOfStock(order);  
26                    }  
27                }  
28            }  
29        }  
30    }  
31}
```

Developer Console - Google Chrome
orgfarm-f1ef473c00-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
VehicleOrderTriggerHandler.apxc [] VehicleOrderTrigger.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)  
3 }
```

Developer Console - Google Chrome

orgfarm-f1ef473c00-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

VehicleOrderTriggerHandler.apxc | VehicleOrderTrigger.apxt | **VehicleOrderBatch.apxc**

Code Coverage: None API Version: 65 Go To

```
19     [SELECT Id, Stock_Quantity__c FROM Vehicle__c WHERE Id IN :vehicleIds]
20 );
21
22     List<Vehicle_Order__c> ordersToUpdate = new List<Vehicle_Order__c>();
23     List<Vehicle__c> vehiclesToUpdate = new List<Vehicle__c>();
24
25     for (Vehicle_Order__c order : orderList) {
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 }
```

Developer Console - Google Chrome

orgfarm-f1ef473c00-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage

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

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 }
```

