Project Title - AutoFlow CRM
AutoFlow CRM – Intelligent Vehicle Sales & Dealer Network System

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Phase 1: Problem Understanding & Industry Analysis

👉 **Goal:** Understand the challenges in vehicle sales and dealership network management.

1. **Requirement Gathering**
    - Talk to stakeholders: Sales Managers, Dealers, Customers.
    - Example requirements:
        - Automatically route customer requests to the nearest dealer.
        - Prevent bookings for unavailable vehicles.
        - Automate test drive notifications.
        - Provide dashboards for order tracking and dealer performance.
2. **Stakeholder Analysis**
    - Buyers: Request vehicles, book test drives.
    - Dealership Partners: Manage inventory, confirm orders, coordinate deliveries.
    - Sales Administrators: Monitor dealer performance, approve high-value orders.
3. **Business Process Mapping**
    - Flow: Customer requests vehicle → System assigns nearest dealer → Inventory check → Booking confirmed → Test drive scheduled → Vehicle delivered.
4. **Industry-Specific Use Case Analysis**
    - Vehicles are limited in stock and vary by location.
    - Need real-time inventory sync, booking validation, and automated notifications.
5. **Competitor Analysis / AppExchange Exploration**
    - Existing solutions may not handle real-time routing or automated test drives.
    - Build a custom CRM focused on automation and performance tracking.

Phase 2: Org Setup & Configuration

👉 **Goal:** Prepare Salesforce environment for CRM development.

1. **Salesforce Edition**
    - Use Developer Edition org for development and testing.
2. **Company Profile Setup**
    - Add company info, time zone, and currency settings.

3. **Business Hours & Holidays**
    - Define operational hours and holidays to avoid automatic tasks on non-working days.
4. **User Setup & Licenses**
    - Create users: Dealer, Sales Admin, Customer Support.
    - Assign Salesforce licenses appropriately.
5. **Profiles & Roles**
    - Dealers: Manage inventory and orders.
    - Sales Admin: Full access.
    - Role hierarchy: Admin → Dealer → Support → ensures proper record visibility.
6. **Permission Sets & OWD**
    - Extra access via permission sets (e.g., reports).
    - Vehicle object: Public read-only; Orders: Private.
7. **Sharing Rules & Login Policies**
    - Sharing rules for collaborative order handling.
    - Restrict login hours for users.

Phase 3: Data Modeling & Relationships

👉 **Goal:** Build the data structure for CRM operations.

1. **Standard & Custom Objects**
    - Standard: Contact (Buyers).
    - Custom: Vehicle, Dealer, Order, Test Drive.
2. **Fields**
    - Vehicle: Model, VIN, Status, Dealer.
    - Order: Buyer, Vehicle, Booking Date, Status.
    - Test Drive: Customer, Vehicle, Date, Dealer.
3. **Record Types**
    - Orders: Online Purchase vs Dealer Walk-in.
4. **Page Layouts & Compact Layouts**
    - Vehicle page shows current inventory and bookings.
    - Order page shows customer and vehicle details.
5. **Schema Builder & Relationships**

- Vehicle ↔ Dealer → Lookup.
- Order ↔ Vehicle → Lookup.
- Order ↔ Buyer → Lookup.

Phase 4: Process Automation (Admin)

👉 **Goal:** Automate repetitive tasks and workflows.

1. **Validation Rules**
   - Prevent booking if vehicle is unavailable.
2. **Flow Builder**
   - Record-triggered flows: Auto-update order status.
   - Screen flows: Customer vehicle booking forms.
3. **Email & SMS Alerts**
   - Notify buyers about booking, confirmation, and test drives.
4. **Scheduled Apex Jobs**
   - Refresh inventory daily.
   - Send follow-up notifications for pending test drives.
5. **Approval Processes**
   - High-value vehicle orders require Admin approval.

Phase 5: Apex Programming (Developer)

👉 **Goal:** Add advanced logic and backend automation.

1. **Classes & Services**
   - VehicleService, OrderService for reusable logic.
2. **Triggers**
   - Prevent duplicate bookings for same vehicle.
   - Assign nearest dealer automatically.
3. **Batch, Queueable & Scheduled Apex**
   - Batch: Sync dealer inventory.
   - Scheduled: Daily order status update emails.
4. **Asynchronous Processing**
   - Call external APIs for vehicle financing or insurance asynchronously.

5. **Exception Handling & Test Classes**
    - Ensure booking errors are caught.
    - Unit tests for triggers and services.

Phase 6: User Interface Development

👉 **Goal:** Build an intuitive UI for users.

1. **Lightning App Builder**
    - Create “AutoFlow CRM” app.
2. **Record Pages & Tabs**
    - Tabs: Vehicles, Orders, Test Drives, Dashboard.
3. **Lightning Web Components (LWC)**
    - Vehicle search by location and model.
    - Booking forms with dynamic validations.
4. **Utility Bar & Navigation**
    - Quick “New Booking” or “New Test Drive” actions.
5. **Imperative Apex Calls & Events**
    - Fetch nearest dealer for a vehicle booking.
    - Handle child → parent events in LWC.

Phase 7: Integration & External Access

👉 **Goal:** Connect CRM to external services.

1. **Named Credentials & Remote Site Settings**
    - Store external API credentials securely.
2. **Web Services Callouts**
    - Check insurance/financing status before booking.
3. **Platform Events & Change Data Capture**
    - Notify other systems when order status changes.
4. **OAuth & Authentication**
    - Customer portal login for self-service.

Phase 8: Data Management & Deployment

👉 **Goal:** Import, maintain, and deploy CRM data.

1. **Data Import Wizard & Data Loader**
    - Import vehicle stock and demo orders.
2. **Duplicate & Validation Rules**
    - Prevent duplicate vehicle records.
3. **Change Sets & SFDX Deployments**
    - Move configurations from Sandbox → Production.
4. **Backup & Export**
    - Weekly backup of orders and vehicle inventory.

Phase 9: Reporting, Dashboards & Security Review

👉 **Goal:** Track performance and secure data.

1. **Reports**
    - Dealer performance, vehicle availability, order success rate.
2. **Dashboards**
    - Real-time sales funnel and test drive metrics.
3. **Field-Level Security & Sharing Settings**
    - Hide sensitive data from unauthorized users.
4. **Audit Trail & Session Settings**
    - Track changes and auto-logout inactive users.

Phase 10: Final Presentation & Demo Day

👉 **Goal:** Showcase the project to stakeholders.

1. **Pitch Presentation**
    - Problem → Solution → Benefits of AutoFlow CRM.
2. **Demo Walkthrough**
    - Book a vehicle, assign dealer, schedule test drive, and view dashboard.
3. **Handoff Documentation**
    - System design document, user guide, and training material.