AUTOMOTIVE DEALER MANAGEMENT SYSTEM

INTRODUCTION

Looking to develop a DMS (Dealer Management System) for automotive dealers worldwide to be able to better manage their business.

The DMS should be able to help the business manager to manage these different key points. This is also the left side main menu of the DMS. Each section will have sub sections (as listed further in the document).

1. **DASHBOARD** *(An overview of the activity, based on specific timeframes)*
2. **INVENTORY** *(Automotive inventory like cars, trucks, motorbikes, spare parts)*
3. **LEADS** *(Incoming leads from various sources)*
4. **CUSTOMERS** *(When a leads make a sales, becomes a customer)*
5. **CALENDAR** *(Appointments with Leads/Inventory/Users/Location)*
6. **USERS** *(A dealer can have different users under him, like managers, sales, etc…)*
7. **LOCATIONS** *(A dealer can have different physical locations)*
8. **REPORTS** *(Generate reports on different topics)*
9. **DOCUMENTS** *(Media file database)*
10. **TRANSACTIONS** *(Accounting documents like quotes, invoices, etc…)*
11. **SETTINGS** *(Account profile details and payment details)*

TYPES OF USERS

Different types of users, in this order of authority, that can connect to the DMS:

1. **ADMIN** *(Our access to see / edit everything)*
2. **DEALER** *(A dealer can be a sole dealer or a bigger dealership with multiple locations and users)*
3. **USER** *(It can be a manager / sales belonging to a dealer. Dealer can pick and choose which parts / rules each user can have)*

MAIN COMPONENTS & FEATURES

1. **DASHBOARD**
    a. Overview of the business with some graphs and widgets
    b. Quick buttons/links to other sections/subsections
    c. Timeline on last actions of Dealer/Users on the DMS
    d. Important reminders
    e. Ability to change language (language files)
    f. Ability to change currency (currency converter API)

2. **INVENTORY**

a. Ability to create, update and disable inventory
b. Ability to search for inventory
c. Ability to import multiple inventory items on the go (via XLS/XLSX/CSV/XML) and map it with our database
d. Ability to create a lead from inventory (CRM component)
e. Ability to attach document to inventory (File system component)
f. Ability to add notes to an inventory item
g. Ability to view leads associated with inventory item
h. Ability to notify leads of an email
i. Ability to have multiple descriptions for inventory
j. Logging changes (Log component)

3. **LEADS**
   a. Ability to create, update and disable a lead
   b. Ability to create a manual lead
   c. Ability to import multiple leads on the go (via XLS/XLSX/CSV/XML) and map it with our database
   d. Ability to reply to leads (Email, SMS, ...)
   e. Ability to map a lead to an inventory item (Inventory component)
   f. Ability to attach a document to the lead (File system component)
   g. Ability to search for a lead including tags (HOT, COLD, etc…)
   h. Ability to assign a lead to a channel (where he came from, standard channels or custom ones)
   i. Ability to create notes and view history of interactions (lead timeline)
   j. Ability to change status/stage of the lead (New, Processing, Hold, Closed, Sale) and add custom status
   k. Ability to update owner(s) of lead (lead can be assigned to one or several USERS)
   l. Create new Invoice transaction on sales leads (Accounting component)
   m. Create or update customer if NOT a manual lead (CRM component) (email and/or phone as unique identification)
   n. Ability to view and verify lead phone number (Numverify)
   o. Ability to confirm and view lead address (GoogleMaps)
   p. Email notifications (Sendgrid)
   q. SMS notifications (Twilio)
   r. Logging changes (Log component)

4. CUSTOMERS
   a. Ability to create, update or delete a customer
   b. Ability to import multiple customers on the go (via XLS/XLSX/CSV/XML) and map it with our database
   c. Ability to view and verify customer phone number (Numverify)
   d. Ability to confirm and view customer address (GoogleMaps)
   e. Ability to attach document to customer (File system component)
   f. Ability to search for customer, inc. tags
   g. Ability to view customers historical leads if multiple enquiries (Lead component)
   h. Ability to create new lead for customer (Lead component)
   i. Ability to tag customer inventory preference, for potential future sales
   j. Ability to add notes to a customer

k. Logging changes (Log component)
l. Email notifications (Sendgrid)
m. SMS notifications (Twilio)
n. Ability to send customer satisfaction survey (email with link to customer satisfaction survey form)

5. CALENDAR

a. Ability to create, edit and delete appointments
b. Ability to link appointment with any or all of these references: Leads/Customers/Inventory/Users/Locations
c. Ability to create different types of meetings (standard: Test Drive, Inspection, Visit, Handover) and customised)
d. Sending notifications for appointments (Email, SMS, …) and reminders that can be setup
e. Logging changes (Log component)

6. USERS

a. Ability to create, edit and delete additional DMS users
b. Ability to set permission to user based on component (yes/no functionality)
c. Ability to assign user to Locations (if multiple Locations)
d. Ability to edit user profile
e. Logging changes (Log component)

7. LOCATIONS

a. Ability to create, edit and delete additional Locations
b. Each Location can then be assigned (not mandatory) to a User or a Lead or an Inventory
c. Ability to map these locations (Google Maps API, by address or pin when address not known)
d. Logging changes (Log component)

8. REPORTS

a. Ability to generate reports to download
b. Ability to view specific graphs (TBD?)

9. DOCUMENTS

a. Ability to upload and delete files
b. Ability to map to an inventory (Inventory component)
c. Ability to map to a customer (CRM component)
d. Ability to map to a lead (Lead component)
e. Ability to enter title, description tag
f. Ability to tag an upload
g. File restriction to images and PDF extension
h. Viewing restriction for private and public
i. Logging changes (Log component)

10. TRANSACTIONS

a. Ability to create quotes and invoices (templates will be given)

b. Invoice is always generated from a <u>sold</u> lead
c. Ability to view lead associated with invoice
d. Ability to view and download invoice
e. Ability to view inventory associated with invoice
f. Ability to edit invoice payment status (Waiting payment, paid)
g. Ability to add notes
h. Ability to search for invoice
i. Ability to view revenue from sold transactions
j. Invoice details are used from DMS configuration for dealership
k. Email to customer (Sendgrid)
l. Logging changes (Log component)

11. SETTINGS

a. Ability to edit profile for dealer
b. Ability to verify phone number (numverify API)
c. Ability to upload logo (to be used in Quotes/Invoices and on Dashboard)
d. Logging changes (Log component)

12. LOGS (ADMIN)

a. Capturing history on update, edit and delete actions

MENU SECTIONS & SUBSECTIONS

1. **DASHBOARD** (Template to use)

2. **INVENTORY**
    a. All Listings (quick buttons to Search/Filter/Sort/Add/Import) (for the list, template)
        i. View Listing (we can also use timelines to sum up the activity - template)
    b. Add Listings
    c. Deleted Listings
    d. Import Listings
    e. Status
    f. Tags
    g. Options (like AC/Heating/etc...)
    h. Log Timeline

3. **LEADS**
    a. All Leads (quick buttons to Search/Filter/Sort/Add/Import) (for the list, template)
        i. View Lead (we can also use timelines to sum up the activity - template)
    b. Add Lead
    c. Deleted Leads
    d. Import Leads
    e. Status
    f. Tags
    g. Log Timeline

4. **CUSTOMERS**

a. All Customers (quick buttons to Search/Filter/Sort/Add/Import) (for the list, template)
    i. View Customer (we can also use timelines to sum up the activity - template)
b. Add Customer
c. Deleted Customers
d. Import Customers
e. Status
f. Tags
g. Log Timeline

5. **CALENDAR**
    a. Events
        i. View Event
    b. Event Types
    c. Notifications
    d. Log Timeline

6. **USERS**
    a. All Users (quick buttons to Search/Filter/Sort/Add) (for the list, template)
        i. View User (we can also use timelines to sum up the activity - template)
    b. Add User
    c. Deleted Users
    d. User Roles
    e. Log Timeline

7. **LOCATIONS**
    a. All Locations (quick buttons to Search/Filter/Sort/Add) (for the list, template)
        i. View Location
    b. Add Location
    c. Deleted Locations
    d. Location Types
    e. Log Timeline

8. **REPORTS**
    a. -

9. **DOCUMENTS**
    a. All Documents (quick buttons to Search/Filter/Sort/Add) (for the list, template)
        i. View Document (details and preview using Dropbox API or free one for file previews?)
    b. Add Document
    c. Deleted Documents
    d. Tags
    e. Log Timeline

10. **TRANSACTIONS**
    a. All Transactions (quick buttons to Search/Filter/Sort/Add) (for the list, template)
        i. View Transaction

b. Create Invoice (template)
c. Create Quote (template)
d. Deleted Documents
e. Tags
f. Log Timeline

11. SETTINGS

a. Edit Profile

12. LOGOUT

DATABASE DATA FIELDS

1. INVENTORY

a. Vehicle Type (Cars/Trucks/Motorbikes)
b. Make (cf. car2db.com)
c. Model (cf. car2db.com)
d. Generation (cf. car2db.com)
e. Series (cf. car2db.com)
f. Trim (cf. car2db.com)
g. Equipment (cf. car2db.com)
h. Year (choose within a list)
i. Price
j. Currency (choose within a list)
k. Negotiable (Yes/No)
l. Finance (Yes/No)
m. Country
n. City
o. Color
p. Transmission (only for cars/trucks)
q. Engine
r. Fuel Type (list)
s. Body Type (list)
t. Options (set a checkbox list)
u. Location (as per dealer database)
v. Description
w. Photos (files to upload)
x. Tag
y. Status

2. LEADS

a. Gender
b. First Name
c. Last Name
d. Phone (can add several) (www.numverify.com API)
e. Email (www.emaillistverify.com API)
f. Country (based on phone number)

g. Country of Residence
h. Photo (file to upload)
i. Messaging Apps (WhatsApp/Viber/Telegram/Line)
j. Tag

3. CUSTOMERS
(Leads can be transformed to customers)

4. CALENDAR
a. Event Name
b. Date
c. Time
d. Assigned Inventory
e. Assign Lead
f. Assign User
g. Assign Location
h. Event Description

5. USERS
a. First Name
b. Last Name
c. Gender
d. Photo
e. Email
f. Phone (can add several) (www.numverify.com API)
g. Role/Status
h. Assigned Location
i. Authorisations (what the user can see/add/edit/delete)

6. LOCATIONS
a. Name
b. Address (GoogleMaps API)
c. Phone (can add several) (www.numverify.com API)
d. Email
e. Social Media (can add several)
f. Website Address
g. Location Type
h. Description
i. Photos (files upload)
j. Logo (file upload)

7. REPORTS
a. Standard Reports (we will set a list of standard report that all agents needs)
b. Custom Reports (we can be able to create line/bar/pie/bubble charts based on two different metrics we can choose on the same period of time)

8. DOCUMENTS
a. Name

b. File (file/files upload)
c. Type (auto recognition based on extension)
d. Tag

9. **TRANSACTIONS**
   a. Invoice or Quote template: http://demo.interface.club/limitless/demo/bs4/Template/layout_1/LTR/default/full/invoice_template.html

10. **SETTINGS**
    a. Company Name
    b. Registration Number
    c. Main Currency
    d. Country
    e. City
    f. Address (Google Maps API)
    g. Phone
    h. Email (to login)
    i. Password
    j. Account Manager Name
    k. Company Logo (file)
    l. Website
    m. General Email (for invoices, quotes, communications)

DESIGN TO USE

Main Design > Layout #2
http://demo.interface.club/limitless/demo/bs4/Template/layout_2/LTR/default/full/index.html

TECHNOLOGIES TO USE

1. AWS for hosting / database / CDN
2. Design Framework / https://ant.design/ or bootstrap
3. User Interface / React
4. Admin Template / http://demo.interface.club/limitless/demo/bs4/Template/layout_1/LTR/material/full/index.html (files will be transferred)

APIs TO USE FOR BETTER UI & UX

5. AWS hosting platform and services
6. Google Maps API
7. Sendgrid API

8. Numverify (or similar) www.numverify.com
9. Emaillistverify API (or similar) www.emaillistverify.com
10. XE currency conversion API
11. Auth0 API
12. Twilio (SMS)
13. Automotive databases with API (all makes, models and versions)
    a. Cars / https://car2db.com/
    b. Trucks, Trailers & Buses / https://truck.car2db.com/
    c. Motorcycles / https://moto.car2db.com/

WARNINGS

1. This platform needs to be translatable via language file
2. This system needs to be visually attractive (that's why we use the template)
3. This system needs to be fully mobile responsive
4. This system needs to be intuitive (that's why we use different third parties APIs)
5. This system needs to be evolutive (we already have a lot of other features to add)
6. This system should be able to pull or push data (inventory, leads, etc…) to other systems (via APIs)

EXAMPLES OF SIMILAR SYSTEMS

For real estate
https://www.inspectrealestate.com.au/
https://www.agentapp.com.au

For automotive
https://www.dealercenter.com/dealer-management-system/
http://365dms.com/dealership-management-system/
https://dealershipsoft.com/
https://www.technosoft.com.sg/
https://www.motork.io/
https://www.autofuzion.co.za/
https://issuu.com/outlookpublishing/docs/autotrader-south-africa
https://www.capterra.com/auto-dealer-software/