

Car Application

A secondhand car dealer application which buys and sells secondhand cars. The price of each acquisition is determined by the car's condition. Clients will be able to trade in their car and get a deducted price on their new purchase. Customers can get a loyalty card which gives them a discount depending on how much they have purchased.

User stories

1. Car Acquisition (Admin)

As an admin,

I want to add new cars to the inventory

So that the database is updated with the new car

Wireframe

The wireframe shows a form with the following structure:

- Header: New Car
- Field 1: Model
- Field 2: Year
- Field 3: Condition
- Below Condition: Two checkboxes, one labeled 'Y' and one labeled 'N'.

Acceptance Criteria

- **Given** the new car registration page **when** filling in car details **then** the choice to save or return will present themselves
- **Given** the new car registration page **when** the user confirms **then** the car is saved to the database

2. Car Purchase (Customer)

As a customer,

I want to browse the available cars in the dealership's inventory with filters for make, model, year, and condition,

So that I can easily find a car that fits my preferences and budget.

Wireframe

• ~	MAZDA
• ~	NISSAN
+ ~	BMW
• ~	~
• ~	~
• ~	~

Acceptance Criteria

- **Given** a full list of available cars **when** I apply filters **then** the selection should be narrowed down accordingly
- **Given** the list of available filters **when** looking for a certain type **then** the parameters will be respected

3. Trade-In Submission (Customer)

As a customer

I want to submit my car for trade-in by providing details and pictures,

So that I can receive an estimated value for my car and apply it toward the purchase of a new one.

Wireframe

Model
PIC
~
~
VALUE:

Acceptance Criteria

- **Given** the screen to add a trade-in car **when** adding a new car **then** the value is calculated and applied to the account
- **Given** a successful evaluation **when** filling in the details **then** the screen is closed

4. Trade-In Evaluation (Admin)

As a dealership admin,

I want to review trade-in submissions, evaluate the condition of the cars, and approve or reject offers,

So that I can accurately offer a fair trade-in value and keep track of trade-in transactions.

Wireframe



Acceptance Criteria

- **Given** the screen of trade-in offers **when** reviewing **then** the admin can accept or deny the offer
- **Given** the list of offers **when** clicking on one **then** the full information will display

5. Loyalty Program (Customer)

As a customer,

I want to view my loyalty card status

So that I can know the discount I am eligible for on future purchases.

Wireframe



Acceptance Criteria

- **Given** the loyalty section **when** I want to view my loyalty card tier then it is displayed

6. Make appointments (Customer)

As a customer,

I want to be able to make visiting appointments,

SO that I can go to the store in person to complete my purchase.

Wireframe



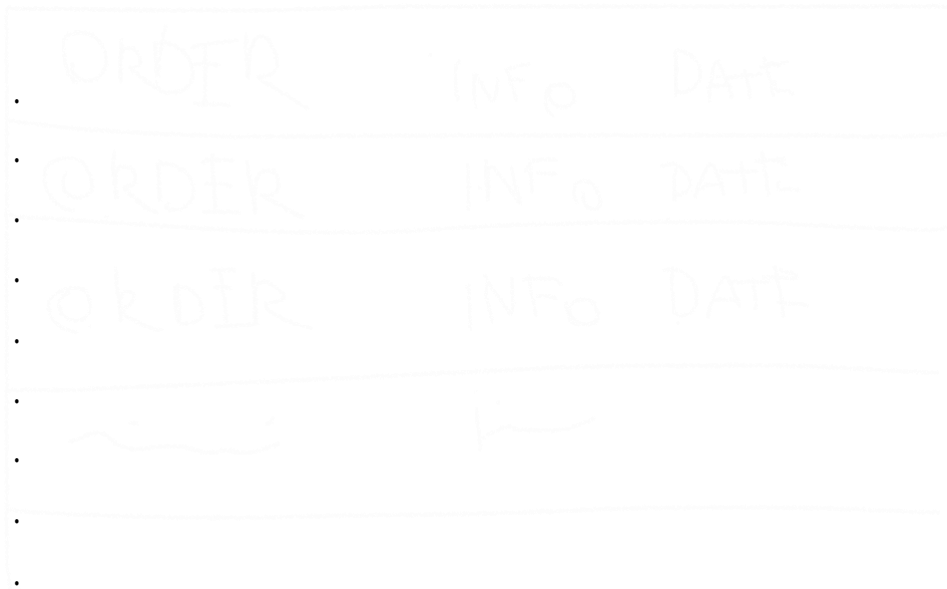
7. Appointment management (Admin)

As a dealership admin,

I want to be able to see and change all appointments made,

So that I can monitor business performance of all transactions.

Wireframe



.	ORDER	INFO	DATE
.	ORDER	INFO	DATE
.	ORDER	INFO	DATE
.			
.			
.			
.			

Notes

Car management system

- **Car inventory:** Track all cars available for sale with their information
- **Acquisition of cars:** Allow categorization for every acquired car by the company
- **Car condition evaluation:** Evaluate and assign a car condition category (Excellent, Good, Fair, Poor) to influence pricing.
- **Trade-in system:** Allow customers to trade in their existing car, calculate the trade-in value based on its condition, and apply it toward their new purchase.

Customer management

- **Customer profiles:** Store customer details, including their purchase history, loyalty card information, and potential trade-in car details.

- **Loyalty card system:** Issue loyalty cards that provide discounts based on the customer's accumulated purchase value. The more they buy, the bigger the discount on future purchases.

Sales and purchase system

- **Sell cars:** Let customers browse the car inventory and purchase cars.
- **Purchase offers:** The dealership can make purchase offers based on a car's condition when customers want to sell their vehicle.

Pricing and discounting

- **Car pricing:** Assign prices to cars based on their condition (excellent, good, fair, used). Algorithms will be used to calculate the estimated trade-in value.
- **Loyalty discounts:** Discounts increase with the total amount the customer has spent (for example 2% higher discount per purchase up until 15%).
- **Trade-in deduction:** Automatically deduct the trade-in value from the new car purchase price.

User roles

1. Admin

- Manage car inventory (add, update, delete cars).
- View and update car condition evaluations.
- Manage customer profiles and assign loyalty card discounts.
- Review and approve car trade-in offers.

2. Customers

- Browse available cars.
- View their loyalty card status and trade-in offers.
- Purchase cars using applied discounts.
- Submit a trade-in request for their old car.

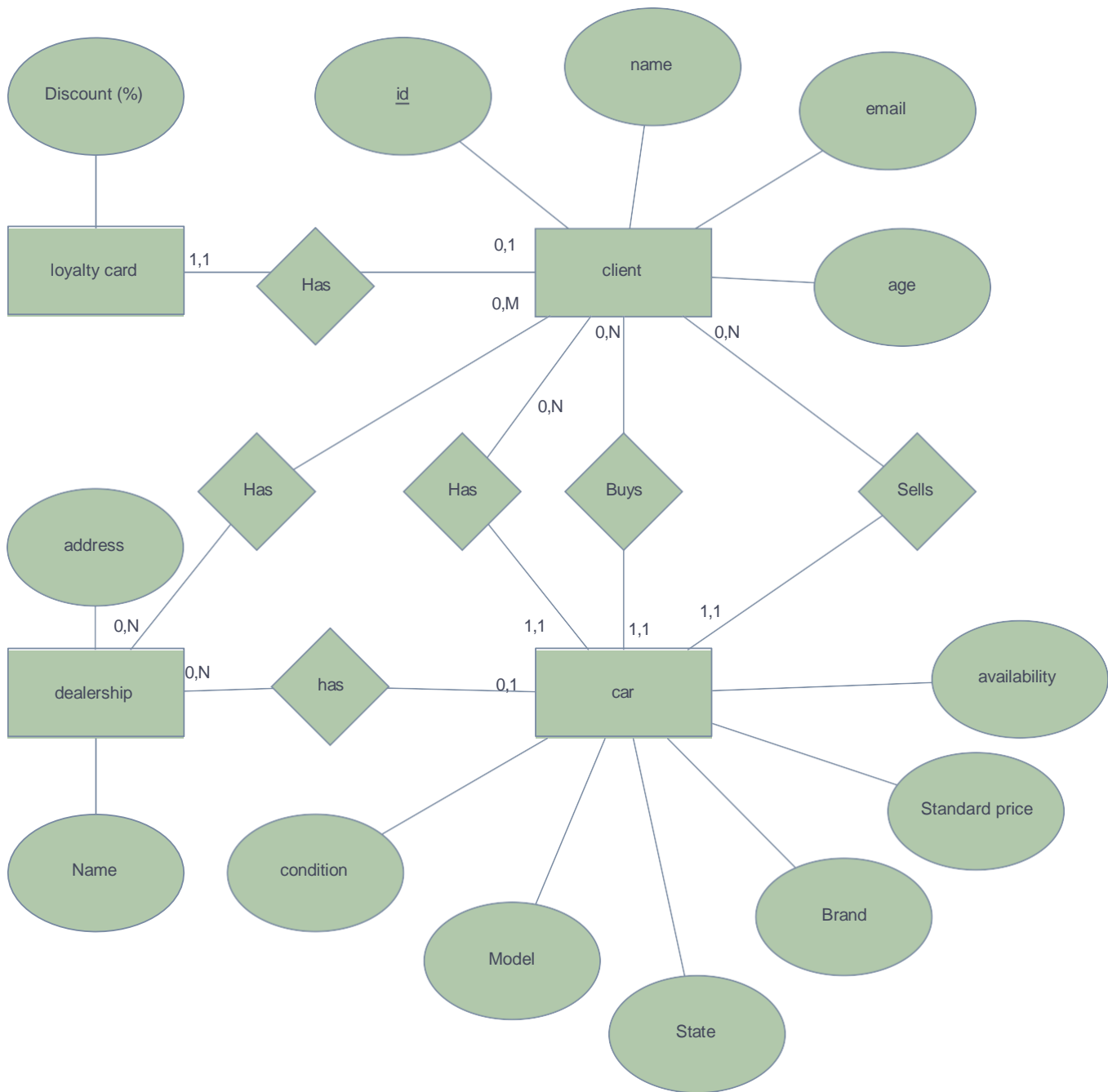
User interface

1. Admin panel

- **Dashboard:** Overview of inventory, pending trade-ins, sales history.
- **Car management:** Add, update, or delete car entries.
- **Customer management:** View and edit customer profiles, apply loyalty discounts.
- **Trade-in requests:** View, evaluate, and approve or reject trade-ins.

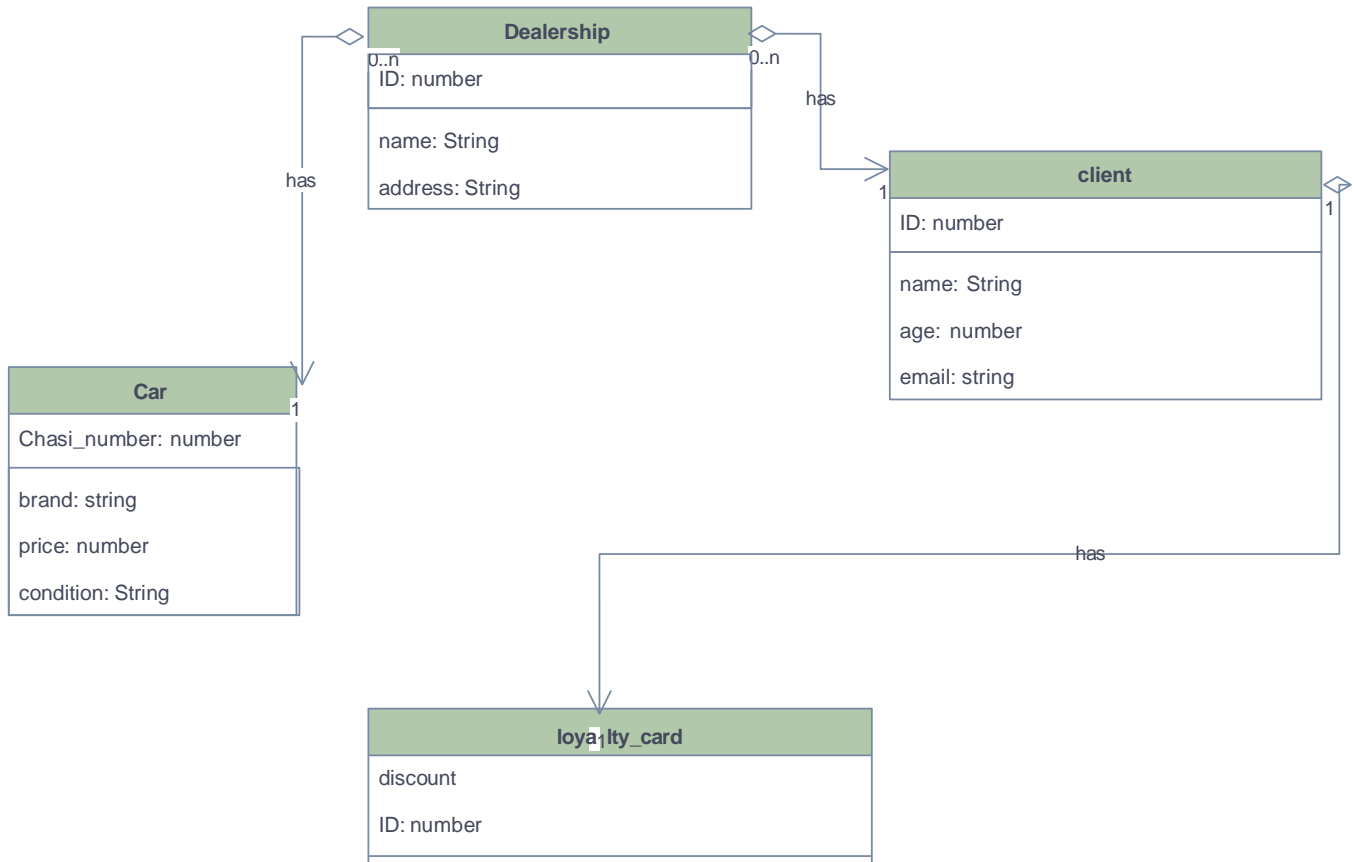
2. Customer portal

- **Browse inventory:** Filter and search for cars by make, model, year, condition, price.
- **View loyalty status:** See current loyalty points and discount percentages.
- **Submit trade-in:** Fill out details of the car to trade in, upload photos, and get an estimated offer.
- **Purchase car:** Select a car, view its details and price, apply loyalty and trade-in discounts, and proceed to checkout.



Conceptual Model

Domain Model



Logical Model

