allane mobility group

Allane SE

Code-Challenge
Fullstack-Developer

17.02.2022

1.1.1 Allane SE – Code Challenge

1.2 Business Requirements

We have the need to implement a leasing application to be able to administrate leasing contracts.

1.2.1 Models

1.2.1.1 Leasing Contract

A leasing contract consists of the following properties:

- Contract Number
- Monthly Rate

1.2.2 Customer

A leasing contract is connected to one customer and a customer could have several leasing contracts.
A customer consists of the following properties:

- First name
- Last name
- Birthdate

1.2.3 Vehicle

A leasing contract is connected to one specific vehicle and a vehicle could only be connected to one contract at a time.
A vehicle consists of the following properties:

- Brand
- Model
- Model year
- Vehicle identification number when the vehicle is produced. During creation of contract it could be empty.
- Price

1.3 Frontend

The application for maintaining the contracts should look like at least as follows. If you see potential to improve things feel free to do so.

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1.3.1 Contract Overview

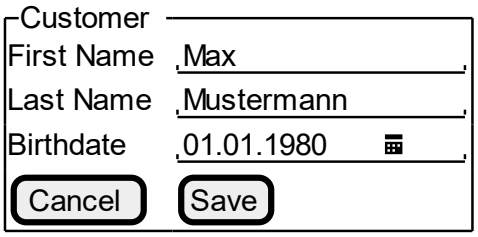
Contract Overview

Contract No	Customer	Vehicle	VIN	Monthy Rate	Vehicle Price	Details
123567	Max Mustermann	BMW X3 (2022)	X123456	350,00 €	45.350,00 €	
123568	Maria Musterfrau	BMW 330i (2022)	-	365,00 €	47.350,00 €	

There is planned to show a contract overview with some columns:

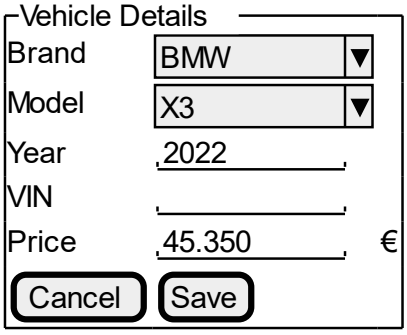
- Contract No
- Summary of the Customer
- Summary of the Vehicle
  - Brand
  - Model
  - In braces: Model year
- VIN if available or "-" if empty
- Monthly Rate
- Vehicle Price
- Link to the Contract Details

1.3.2 Customer Details



Edit mask to create/edit a customer.

1.3.3 Vehicle



Edit mask to create/edit a vehicle.

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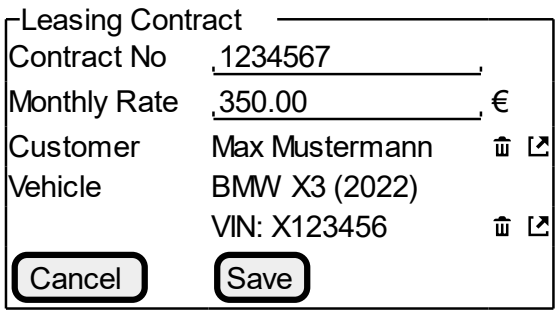
1.3.4 Leasing Contract



Edit mask to create/edit a leasing contract.

1.4 Task

- Implement a REST service to fulfil the requirements and has to be used by the frontend.
- The data should be persisted into a database.
- Model the entities for persistence.
- Implement the frontend to fulfil the requirements derived from the wireframes.
- Write unit test if appropriate.

1.5 Technical Constraints

The following technologies should be used:

- Java 11
- Spring Boot >= 2.5
- MySQL/MariaDB Database (locally dockerized)
- Gradle
- Flyway database migration to create the initial schema
- Optional: OpenAPI specification to generate server/client.
- Angular >= 13

1.6 Result

- Provide your solution as git repo to be able to see how the progress was.
- Document in a README
    - Preconditions needed to run the application
    - How to start the application
    - Reason of chosen solution

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