

# AutoPark – Java Backend Project

One of my passions is represented by cars, that's why for this project I chose a car related business. The project is an application for a basic car selling business. Every company needs a site to display information about its trustiness and its products. A company who wants to grow needs to have a site synced with its real time stock. For the backend of the website I used Java as the programming language.

As the main priority is to learn how to use Java as a backend language, I made a very simple database with only 3 tables (Client, Car and User). There is only one table relation between Client and Car (one to many). The server I'm using is SQL Server Management Studio. Another softs used are Spring and Thymeleaf for the Java backend.

My main database is on a server and I want to show it on a website, I need to get the data from the SQL server into local memory (to load it into cache). To store local variables, I need to use classes, a class per table. Spring has another 2 very important folders, one as repository to access the database, and controller to access the user interface.

In script `MasinaController.java` I use multiple annotations (like small functions) to show and execute on different URLs functions which can add, remove or display elements from the list array. The most important one is “`showCars`”, displaying the car stock.

Users are very important; they are the leads basically. That's why sometimes it is important to have them as subscribers to a blog or for offerts. Also some users are the admins and they are the one who keep the site updated with the latest version. I created a system for the administrators to add, remove cars or change the status of ownership (by choosing the new owner from an existing customer or by adding). These functions are in `MasinaController.java` (“`addClientAndSell`”, “`addMasina`” and “`deleteMasina`”).

As HTML and CSS were not my priority, the valuable part of code was represented by displaying the sorted cars by one or another field. If I needed to choose what to add for this project, I would choose a filtering system for cars, as it is necessary with bigger stocks. The script for this would be a SQL query containing the chose ticks and range by price or kilometers. Another Java related improvements would be: a more complex system for all administrative accounts by role, a financial record of all transactions (adding a new table and a dedicated page only for the right accounts), a system for clients to sell or trade their cars and a working mail service on page Contacts.