

SWE 523 PROJECT STUDY 1 (2024)

Due date: 1 November 2024, class time.

In this project you will develop a Java Spring-Boot web application using code-first approach with either MySQL or PostgreSQL database connectivity. Your subject was announced last week. Figure 1. shows some example views which are developed in the class for car-rental example. However, you are expected to work on your own subject and create similar functional views based on your problem. This is kind of art and engineering, show your skills!

The figure displays several web application views for a car-rental system. The top three views are index views for the 'Customers', 'Cars', and 'Rentals' tables. The bottom six views are for CRUD operations: 'Add Customer', 'Update Customer', 'Delete Customer', 'Add Car', 'Update Car', and 'Delete Car'. The last two views are 'Rent a Car' forms, one for a customer and one for a car.

Customers Index View:

Name	Address	Operations
Ahmet	Sakarya	Update Delete Rent
Mehmet	Ankara	Update Delete Rent
Betül	Izmir	Update Delete Rent
Sinan	Bursa	Update Delete Rent

Cars Index View:

Id	Brand	Model	Operations
1	Fiat-Egea	2023	Update Delete Rent
2	Volkswagen-Passat	2024	Update Delete Rent

Rentals Index View:

Customer	Car	Start	Days	End	IsReturned?	Operations
Ahmet	Fiat-Egea - 2023	07-03-2024	2	09-03-2024	NO	Return Update Delete Rent

CRUD Operation Views:

- Add Customer:** Form with fields for Name and City. Buttons: Save, Close.
- Update Customer:** Form with fields for Name (Ahmet) and Address (Sakarya). Buttons: Save, Close.
- Delete Customer:** Form with fields for Name (Ahmet) and Address (Sakarya). Buttons: Delete, Close.
- Add Car:** Form with fields for Brand and Model. Buttons: Save, Close.
- Update Car:** Form with fields for Brand (Fiat-Egea) and Model (2023). Buttons: Save, Close.
- Delete Car:** Form with fields for Brand (Volkswagen-Passat) and Model (2024). Buttons: Delete, Close.
- Rent a Car (Customer):** Form with fields for Customer (Ahmet), Car (Fiat-Egea - 2023), Date (mm/dd/yyyy), and Days (0). Buttons: Save, Close.
- Rent a Car (Car):** Form with fields for Car (Fiat-Egea - 2023), Customer (Ahmet), Date (mm/dd/yyyy), and Days (0). Buttons: Save, Close.

Figure 1: Example web views for car-rental project. Top three are index views for the tables, and the following six views are for CRUD operations. The last two views are for relation table. Observe that the “Rent” buttons on both views provides quick accesses.

Grading:

No	Task	Grade
1	Creating the database and tables in DB server.	5
2	Creating model entities and required DTOs (or view-models).	20
2	Creating all controllers and CRUD methods.	20
3	Creating repositories that implements standard methods and queries for special SQL operations if needed.	20
4	Creating functional views with HTML, CSS and JavaScripts.	20
5	Everything works as described with no error, exceptions handled properly.	15

PS: In class presentation is required.