SWE 212 PROJECT STUDY 2 (2026)

Due date: 17 March 2026, in class.

The goal of this project is to develop a REST-API web application using Java (version 25) Spring-Boot framework (version 4.0.1) and Maven build tool (version 4.0.0). MySQL or PostgreSQL database server can be used for data storage.

- All exceptions and errors must be handled carefully creating proper logs.
- Repository and service layers must be designed and implemented.
- A clear and concise way has to be chosen for controller end-points. Complex tasks has to be done in the service layer.
- Data returns must be handled with a proper Data Transfer Object (DTO). Do not use the entity classes!
- New data insertions and manipulations must create a log line at standard output.
- Tests will be conducted Postman (sometime browser can be used as well).
- Your application must include Swagger.

All your application endpoints must be shown in the browser Swagger output (see Figure 1). Practical examples and how your application is going to be tested with Postman and browser will be shown in the class.

Figure 2. shows some example views which will be shown in the class for car-rental example. You are expected to work on your problem and create similar Swagger and Postman outputs based on your problem.

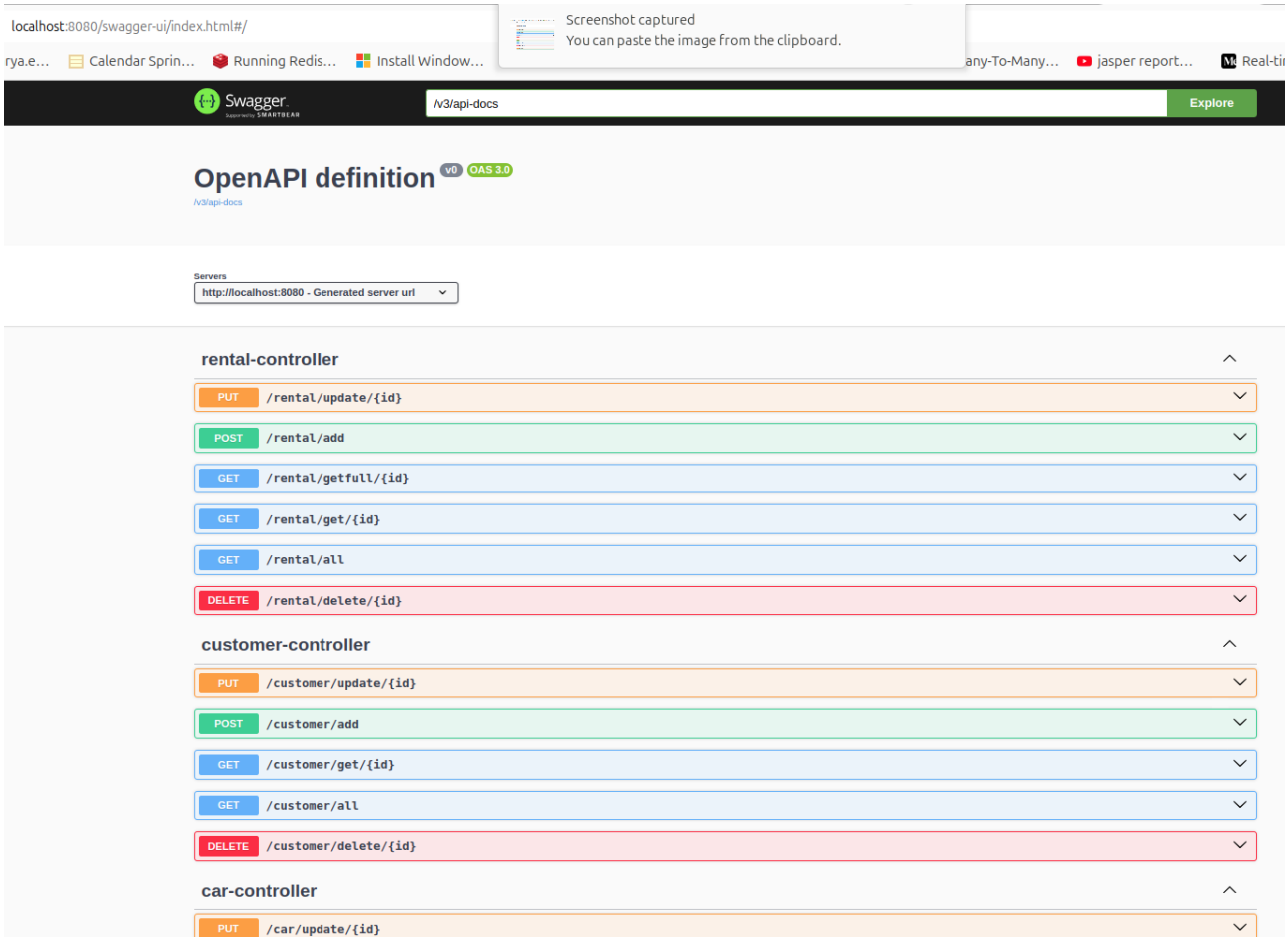

Figure 1. Example Swagger output.

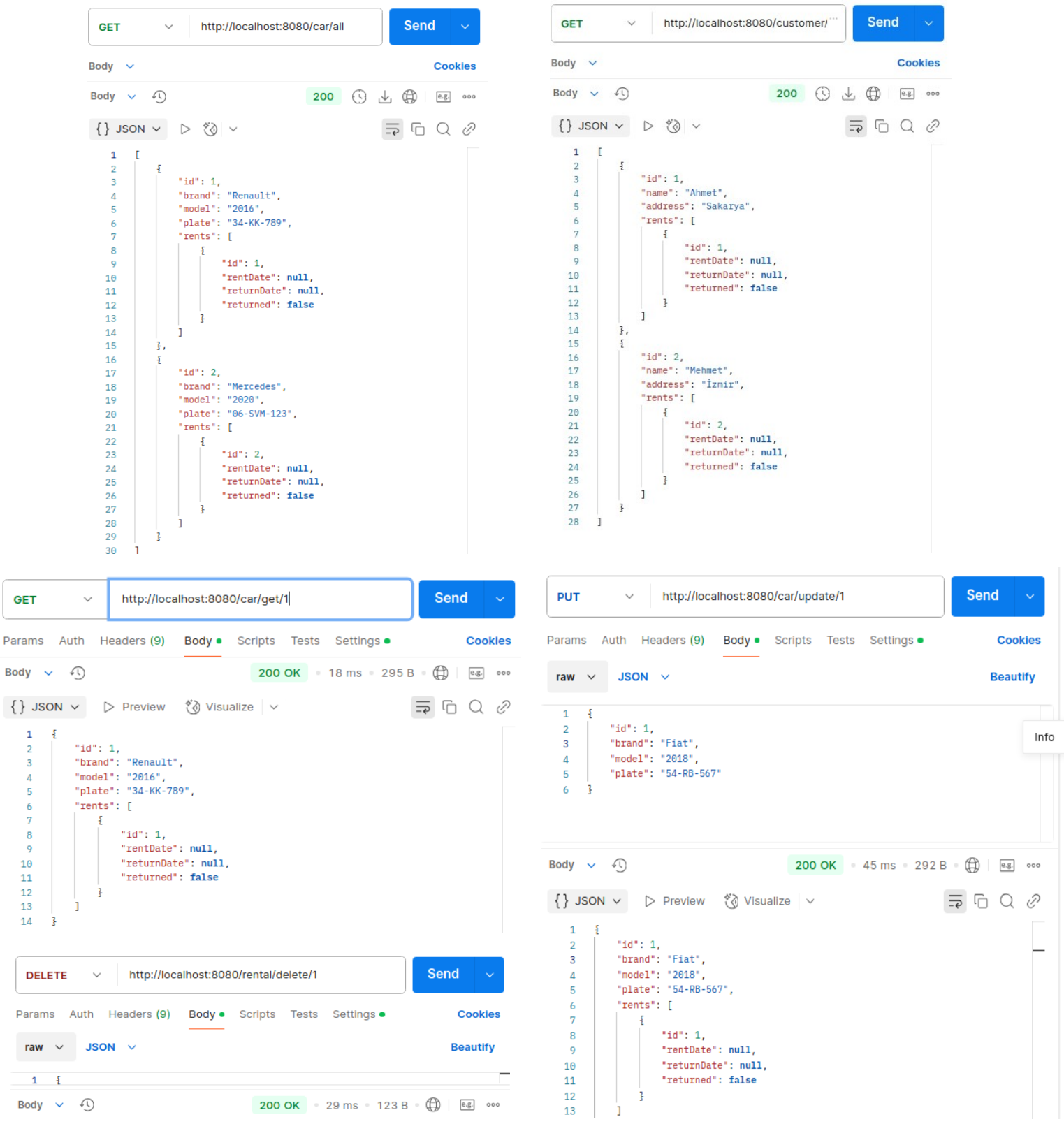

Figure 2. Some Postman views for car-rental project.

PS: Your group subject was distributed in the beginning of the semester.

Grading:

No	Task	Grade
1	The database and tables are created in MySQL or PostgreSQL server by Hibernate.	**10**
2	The model entities and required DTOs are OK.	**20**
3	Exceptions, errors are handled properly. Logging is OK	**20**
4	Repository and service layers that implement all required DB operations are OK.	**20**
5	Swagger and all controller endpoints are OK (CRUD methods are implemented).	**20**
6	Everything works as described with no error, exceptions handled properly.	**10**

PS: Group presentation is required, group members must show up to in presentation to collect points.