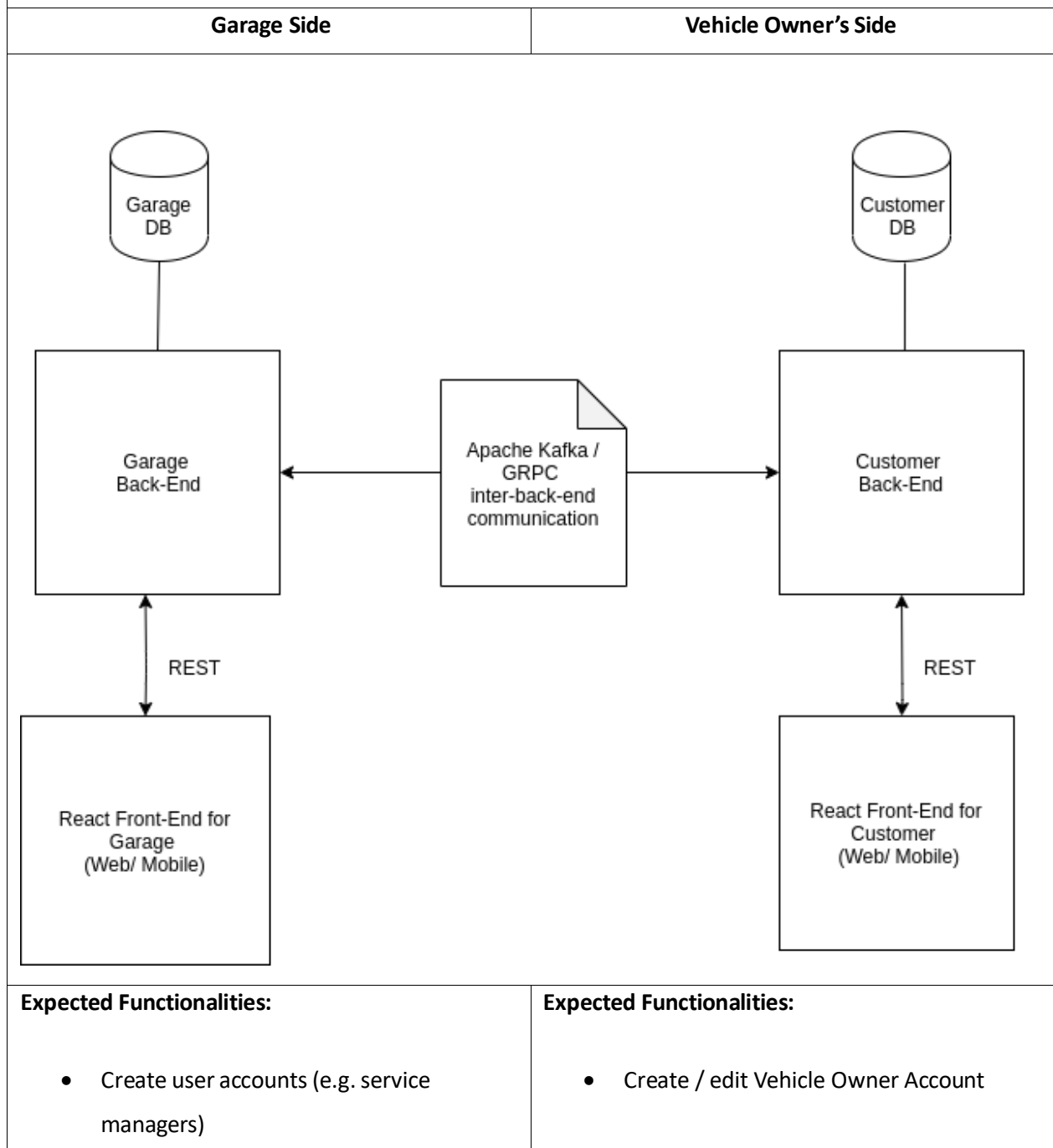# AccelAero Programming Challenge

AccelAero Programming Challenge – Level 1
Challenge 2: Garage App

The task is to develop an app and its back-end services used by a Vehicle service center (e.g.: Auto-Miraj / United motors). This project is divided into two major sections as described in the high-level diagram below. You may choose one side of the project while one of your colleagues will work on the other side(s). You should develop your side of the project independently. However, you are expected to agree on APIs / Inter-back-end communication with other colleagues who are developing the other sides of the solution for all the sides to be integrated seamlessly into a working product.

Garage Side	Vehicle Owner's Side

Expected Functionalities:	Expected Functionalities:
• Create user accounts (e.g. service managers)	• Create / edit Vehicle Owner Account

• User login by providing credentials • Create / edit vehicle service time slots and the no. of the vehicles that can be serviced in each time slot • View / search service bookings • Confirm service bookings and notify the vehicle owner	• Vehicle Owner login by providing credentials • Add / edit vehicles to the Vehicle Owner Account • Book service time slots

Technologies and Architecture:

- Back end – **Java 17, Spring boot**, and **Gradle**
- Login – **Spring Security**
- Database – **Couchbase / Postgress / MySQL** (Select as per your choice.)
- Front end – **Ant Design Pro** (or any other design library as per your choice) and **React**
- Inter-back-end communication – **Apache Kafka / gRPC and protobuf** (Select as per your choice in agreement with the colleague doing the other side(s) of the project.)
- Deployment – **Docker** (Dockerize all the back-end services and front-end apps.)
- Repository and Version Control– **Git** and **Bit Bucket**
- Architecture – **Monolithic** or **Micro-services** architecture as per your choice.

Instructions:

- You are required to submit a daily plan for the project period on the day following the issued date of this assignment.
- You are expected to provide your mentor a daily update on the tasks you have performed, daily work plan, and the project status.
- You may ask for help or learning opportunities, problems, and clarifications on the relevant technologies, architecture and project from any employee of the company. We are more than eager to help you.
- You will be sent an email with some of the learning resources.
- A demo is expected to be done on the day following the deadline date.