

TrainingMug Backend Developer Internship Assignment

Objective: Develop a **Car Management System**

Assignment Overview: You are required to create a system that allows users to manage car details, such as adding, updating, viewing, and deleting car information. Additionally, you are expected to implement extra features as outlined below.

Assignment Requirements:

1. Functional Requirements:

1. CRUD Operations:

- **Create:** Add new cars with the following details:
 - Car Name
 - Model
 - Year
 - Price
 - Color
 - Fuel Type (Petrol, Diesel, Electric, etc.)
- **Read:** View a list of all cars and filter them by name, model, or year.
- **Update:** Update the details of an existing car.
- **Delete:** Delete a car entry.

2. Additional Features:

- **Global Search:** Search cars by name, model, year, color, or fuel type.
- **Pagination & Sorting:** Display large datasets efficiently with pagination and sorting.
- **Validation:** Validate all inputs to ensure proper data is submitted.
- **API Documentation:** Use **Swagger** or **SpringDoc OpenAPI** for documenting the API endpoints.
- **API Hosting:** Deploy the APIs on a platform (like AWS, Azure, or any other cloud service) and provide a public URL to access them.

2. Technical Requirements:

- **Backend:** Use **Spring Boot** for the backend.
- **Database:** Use an **SQL database** (like MySQL or PostgreSQL).
- **API Documentation:** Use **Swagger** or **Postman Collections** to document your API.

3. Deliverables:

1. **GitHub Repository:** Share the GitHub repository link containing the complete source code.
2. **README.md:** Include a README file with instructions on how to run the project and API endpoints.
3. **Hosted API URL:** Provide a link to the live, hosted API for testing.

Submission Deadline:

- **Deadline:** Submit the assignment within **3 days** from the date of receiving this document.

Notes:

- For any queries, feel free to reach out.
- Partial submissions will be considered, but complete and well-documented projects are preferred.

Good luck, and we look forward to your submission!