Project Overview:

The project aimed to enhance the security of a Spring Boot application by implementing basic authentication and securing REST API endpoints. This involved configuring Spring Security to authenticate users with basic authentication and restricting access to specific endpoints based on user roles. It also involves developing the Backend and connecting to the Database using CRUD fundamentals. Provide frontend for the users to interact with when registering their vehicles.

Achievements:

- Implemented basic authentication using Spring Security.
- Secured REST API endpoints using method-level security annotations.
- Developed frontend login/logout functionality.
- Developed the backend and frontend of the project
- Implemented the Database using MySQL and JPA on Spring application.
- Tested the project using Postman.
- Able to apply CRUD endpoints on the Spring application.
- Developed problem-solving skills and design thinking.

Challenges Faced:

- Understanding Spring Security Configuration: Configuring Spring Security for basic authentication required a good understanding of its configuration options and concepts.
- Integrating Frontend with Backend: Integrating the frontend with the backend for login/logout functionality required coordination between frontend and backend development teams.
- Connecting the REST API's endpoints was the most difficult task I faced during this company projects.
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- Enhanced Understanding of Spring Security: The project provided a deeper understanding of Spring Security and its various features, such as authentication, authorization, and method-level security.
- Hands-On Experience with Security Implementation: Implementing basic authentication and securing REST API endpoints provided practical experience in implementing security measures in a Spring Boot application.
- Improved Frontend-Backend Integration Skills: Integrating frontend login/logout functionality with backend authentication mechanisms improved skills in frontend-backend coordination and communication.
- To apply CRUD basic operations of persistent storage in computer programming and databases.

Overall, the project successfully enhanced the security of the Spring Boot application and provided valuable insights and practical experience in implementing authentication and authorization mechanisms. It also provided insights and practical experience in implementing the backend and frontend of the project. Integrating the database with JPA with spring boot application.