Technical Documentation

Architecture Overview

The application has three layers

● Presentation Layer: On the presentation we have react js

● Business Logic: I have use java frame work spring boot to create the business logic

● Data Access Layer: Data is stored in a database managed by

Spring Data JPA repository .

Technologies:

● Development Framework: Spring Boot

● Database: MySQL Database

● Backend Language: JAVA framework spring boot

Tools:

● IDE: IntelliJ IDEA Community Edition 2023

Implementation Details Desciption

The application architecture is structured around controllers, services, and repositories. Controllers manage incoming requests, interface with services to execute business logic, and return responses. Services encapsulate application logic, offering essential functionalities to support overall operation. Repositories facilitate communication with the database, employing Java Persistence API (JPA) for CRUD operations, ensuring seamless data interaction. This division of responsibilities enhances code organization, readability, and maintainability in the application.

Libraries and Frameworks

Apache Tomcat : The built in servlet provided by Spring Boot.

REACT JS

Hibernate frame work

Security Measures

● Authentication: Ensures secure access based on user roles.

● Authorization: Role-based access control for appropriate permissions.

● Session Management: Protection against fixation and configurable timeout.

● CSRF Protection: Tokens in forms to prevent CSRF attacks.

● CORS Support: Configurable settings for cross-origin resource sharing.

● Password Encryption: Encourages secure password storage.

Version Control

-Git for local storage and github for remote