

**Diagram  
Key**



Done



Incomplete

Deliverables

- Spring Boot project source code with the implemented RESTful API and H2 database integration
- Integration test cases for the API endpoints
- React frontend application source code consuming the API and providing the required user interface for book management
- Documentation explaining the project structure, setup instructions, and any additional notes deemed necessary
- Please follow the requirements and deliverables mentioned above to build a Spring Boot RESTful API with CRUD operations for managing a collection of books in an H2 database, integrated with a React frontend

Use Spring Initializr to create a new Spring Boot project with the required dependencies

Use Maven for project management. This includes build, dependency and documentation

Set up an H2 in-memory database as the persistence layer for storing book data

Create a Book entity with the following properties: title, author, description, and publication year

Implement RESTful API endpoints to support CRUD

Ensure proper validation of request payloads and handle appropriate error responses

Use Spring Data JPA to handle database interactions, including CRUD operations

Use Postman to test API endpoints

Implement integration tests for the API endpoints using a testing framework

Set up CORS (Cross-Origin Resource Sharing) configuration to allow the React frontend to access the API.

Create a React frontend application to consume the API and provide a user interface for managing the book collection.

Display a list of all employees with their relevant details on the frontend.

Implement front end functionality to add, edit, and delete employee data using the API endpoints.

Ensure proper error handling and display appropriate messages to the user in case of API errors.

Use a popular library or framework (e.g., Axios) to handle API requests and responses in the React frontend.

Design the frontend with a user-friendly interface, allowing intuitive interaction with the book collection.

Implement a framework that allows for the incentivisation of employee action