

Employee Management System Documentation

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Submission Type:- Group

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Name:- Employee Management System

Github link:- <https://github.com/vaibhavtode/EmployeeManagementSystem.git>

Software Installation Guide & Instructions:

1. System Requirements:

- i) Operating System: Windows, macOS, or Linux
- ii) RAM : 8 GB
- iii) Java Development Kit (JDK) 8 or later
- iv) MySQL 8 database server
- v) Node.js and npm (Node Package Manager)

2. Database Setup:

- Install MySQL: Download and install MySQL from the official website (<https://www.mysql.com>) based on your operating system. Follow the installation instructions provided.

3. Backend Setup:

- i) Install JDK: Download and install the JDK version 8 from the Oracle website (<https://www.oracle.com/in/java/technologies/javase/javase8-archive-downloads.html>)
- ii) Install Maven 9 version in the Eclipse otherwise it's automatically embedded in the Spring Boot application.
- iii) Spring Boot setup:
 - Create a new Spring Boot project: Use your preferred IDE's (e.g., IntelliJ IDEA, Eclipse, STS) or the Spring Initializr (<https://start.spring.io>) to generate a new Spring Boot project with the necessary dependencies
 - Spring Web
 - Spring Data jpa
 - MySQL Connector
 - Spring Starter Mail
 - Spring Boot Dev Tools
 - Spring Lombok
 - Spring Security

Add some external dependencies given below

```
<dependency>
    <groupId>io.jsonwebtoken</groupId>
    <artifactId>jjwt-api</artifactId>
    <version>0.11.5</version>
</dependency>
<dependency>
    <groupId>io.jsonwebtoken</groupId>
```

```

        <artifactId>jjwt-impl</artifactId>
        <version>0.11.5</version>
    </dependency>
</dependency>

    <groupId>io.jsonwebtoken</groupId>
    <artifactId>jjwt-jackson</artifactId>
    <version>0.11.5</version>
</dependency>

```

- Configure the database connection: Open the **application.properties** file in project's resources folder and set the database connection properties (URL, username, password) for MySQL.
- Install Lombok(<https://projectlombok.org/download>) and adding to Eclipse (<https://www.baeldung.com/lombok-ide>) by using this website

4. Frontend Setup:

- Install Node.js and npm: Download and install Node.js from the official website (<https://nodejs.org>). npm is included with Node.js installation.
- Create a new React project: Open a terminal or command prompt, navigate to the desired location, and run the following command to create a new React project:

```
npx create-react-app employee-management-system
```

- Install additional dependencies: Navigate to the project directory (**employee-management-system**) and install the required dependencies by running the following command:

=> npm install

[Note: All required dependencies are listed in the package.json file,

Internally npm refers that file it install the required dependencies.]

5. Running the Application:

- **i) Backend:**
 - Build and run the Spring Boot application using your Eclipse Or prescribed IDE's (e.g., IntelliJ IDEA, Eclipse, STS).
- **ii) Frontend:**
 - Open a terminal or command prompt, navigate to the React project directory (**employee-management-system**), and run the following command:

=> npm start

- Accessing the application: Open a web browser and enter **http://localhost:3000** in the address bar. You should see the Employee Management System's Login Portal.