

Course Project: e-Hotels

Deliverable 2

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CSI2132 : Databases I

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1. The DBMS and the programming languages that you have used in your implementation of the application.

The DBMS used for this project is PostgreSQL.

The backend of the application is developed using Java and the Spring Boot framework, which simplifies the creation of REST APIs and manages application configuration. For build and dependency management, the project uses Maven, which automates the process of downloading libraries and compiling the project.

The frontend is built using standard web technologies. HTML has been used for the structure of the pages. CSS has been used in this project to style and polish the look of the interface. And JavaScript is used to handle the frontend logic, such as making API calls and interacting with the backend.

The development environment used was Visual Studio Code because of its lightweight nature, its rich plugin ecosystem, its Git integration and its support for multiple-language development.

Version control was handled using Git, with collaboration and backup on GitHub. This allowed easy tracking of changes, as well as branching, and collaboration amongst the team members.

1. Specific steps to guide someone to install your applications

The e-Hotel Booking System is a full-stack web application that allows users to book hotels, view their bookings, manage reservations, and handle employee authentication. It consists of a Spring Boot backend connected to a PostgreSQL database, and a frontend built with HTML/CSS/JS.

Prerequisites

1. Install Java Development Kit (JDK) Download and install JDK 17 or later: Download JDK Verify installation: java -version
2. Install PostgreSQL (Database) Download and install PostgreSQL 17: Download PostgreSQL Create a database named e\_hotel. Open pgAdmin and set up the database
3. Install Maven (Build Tool) Download and install Apache Maven: Download Maven Verify installation: mvn -version
4. Ensure port 8080 is free

Backend Setup:

1. Navigate to backend/e-hotel
2. Run ./mvnw spring-boot:run
3. Confirm server is running at <http://localhost:8080/>

Frontend Setup:

1. Navigate to frontend/
2. Open customer.html in browser **or** Use VS Code Live Server

Database Setup:

1. Open psql
2. Connect to e-hotel Database
3. Run the SQL file

Required data:

1. To run the project and access its full functionality, at least one customer must exist in the database, with a valid fullName for login.
2. Hotels, rooms, and bookings must be present in the database so that the customers can search, book, and interact with the website features.
3. A list with the DDLs that create your database