Le Mans Hotel Management System

Project Setup & Execution Guide

This document provides a neat and clean, step-by-step guide to setting up and running the Le Mans Hotel Management System.

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1. Prerequisites

Before starting, ensure you have the following installed on your system:

- **Java Development Kit (JDK)**: Version 17 or higher.
- **Node.js**: Version 18 or higher (includes `npm`).
- **MySQL Server**: For the database.
- **Git**: For version control.

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2. Environment Configuration

The backend requires specific environment variables to function correctly (Database, Email, Security).

2.1 Variables Guide

Variable	Description	Required	Example Value
`DB_URL`	MySQL Connection URL	**Yes**	`jdbc:mysql://localhost:3306/test_db?useSSL=false`
`DB_USERNAME`	MySQL Username	**Yes**	`root`
`DB_PASSWORD`	MySQL Password	**Yes**	`your_password`
`MAIL_USERNAME`	Gmail Address	**Yes**	`your.email@gmail.com`
`MAIL_PASSWORD`	Gmail App Password	**Yes**	`abcd efgh ijkl mnop`
`JWT_SECRET`	Secret Key for Tokens	**Yes**	`Use_a_secure_random_string_at_least_32_chars`

2.2 Setup Instructions (Recommended)

1. Navigate to the `backend` directory.

2. Create a file named `.env` (copy from `.env.example` if available).

3. Add the variables in the following format:

```
DB_URL=jdbc:mysql://localhost:3306/test_db?
useSSL=false&allowPublicKeyRetrieval=true
DB_USERNAME=root
DB_PASSWORD=your_password
MAIL_USERNAME=your_email@gmail.com
MAIL_PASSWORD=your_app_password
JWT_SECRET=your_secure_random_secrect_key_at_least_32_chars
```

(Note: Replace the example values with your actual credentials)

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3. Backend Setup (Spring Boot)

Step 3.1: Prepare Database

1. Open your MySQL Client.
2. Create the database:

```
CREATE DATABASE test_db;
```

Step 3.2: Start the Backend

1. Open a terminal (PowerShell).
2. Navigate to the backend directory:

```
cd "C:\Users\Admin\Desktop\Cloud Deployed\Hotel-Management\backend"
```

3. Run the start script:

```
.\start-backend.ps1
```

Success Indicator: The console shows "Started HotelManagementApplication" (Port 8080).

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4. Frontend Setup (Angular)

Step 4.1: Install Dependencies

1. Open a **new** terminal window.
2. Navigate to the frontend directory:

```
cd "C:\Users\Admin\Desktop\Cloud Deployed\Hotel-
Management\frontend\lemans_hotel"
```

3. Install packages:

```
npm install
```

Step 4.2: Start the Frontend

1. Run the application:

```
npm start
```

Success Indicator: The server listens on `http://localhost:4200`.

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5. Accessing the Application

- **User UI**: http://localhost:4200
- **Swagger API Docs**: http://localhost:8080/swagger-ui.html

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6. Troubleshooting

- **Database Error**: Check `DB_URL` and credentials in `.env`. Ensure MySQL is running.
- **Email Error**: Use a Google **App Password** for `MAIL_PASSWORD` if using Gmail with 2FA.
- **Port In Use**: Close other apps using ports 8080 or 4200.