**Assignment: Build an Employee Management System**

**🎯 Objective**

Develop a simple **Employee Management System** using **Spring Boot** for the backend, **H2 in-memory database** for data storage, and **HTML/CSS** for the frontend. This project will help you practice full-stack development and explore how GitHub Copilot can assist in generating boilerplate code, suggesting logic, and improving productivity.

**📌 Requirements**

**1. Project Setup**

* Use **Spring Boot** (preferably with Spring Initializr).
* Include dependencies:
  + Spring Web
  + Spring Data JPA
  + H2 Database
  + Thymeleaf (for HTML rendering)

**2. Core Features**

* **Add New Employee**
  + A form to input employee details: Name, Email, Department, and Salary.
  + On submission, the data should be saved to the H2 database.
* **View All Employees**
  + A page that lists all employees in a tabular format.
  + Data should be fetched from the H2 database and displayed using Thymeleaf.

**3. Database**

* Use **H2 in-memory database**.
* Configure the database in application.properties.
* Enable the H2 console for debugging.

**4. Frontend**

* Use **HTML/CSS** for UI.
* Use Thymeleaf templates for rendering dynamic content.
* Keep the UI simple and clean.

**📁 Suggested Project Structure**

employee-management/

├── src/

│ ├── main/

│ │ ├── java/com/example/employeemanagement/

│ │ │ ├── controller/

│ │ │ ├── model/

│ │ │ ├── repository/

│ │ │ └── service/

│ │ └── resources/

│ │ ├── templates/

│ │ │ ├── add-employee.html

│ │ │ └── view-employees.html

│ │ └── application.properties

└── pom.xml

**✅ Deliverables**

* A GitHub repository with:
  + Complete source code
  + A README.md file with:
    - Project overview
    - Setup instructions
    - Screenshots of the UI
  + Prompts which has been used
  + Challenges which has been faced during the development

**🧠 Tips for Using GitHub Copilot**

* Use Copilot to generate boilerplate code (e.g., model classes, repository interfaces).
* Let Copilot assist with controller logic and form handling.
* Use comments to guide Copilot in generating specific code snippets.