

# Employee Management System

GitHub Repository: <https://github.com/ankitkumarsingh140/Employee-Management-System>

## 1. Project Overview

This is a Spring Boot-based RESTful backend application for managing employee records. It features JWT-based authentication and role-based authorization to protect sensitive endpoints. The application uses an H2 in-memory database and is tested with Postman.

## 2. Technologies Used

Technology	Description
Spring Boot	Java-based backend framework
Spring Security (JWT)	Secures APIs using stateless authentication
H2 Database	In-memory DB for development/testing
Maven	Build and dependency management tool
Postman	API testing and validation tool

## 3. Features

- JWT-based login & authentication
- Role-based access control (ADMIN, EMPLOYEE)
- CRUD operations for employee management
- In-memory database (H2) accessible via console
- Proper error handling and status codes

## 4. API Endpoints

Authentication & Registration APIs:

Method	Endpoint	Access	Description
POST	/auth/login	Public	Authenticate user and receive JWT token
POST	/register/user	Public	Register a new user only
POST	/register/employee	Public	Register a new employee only
POST	/register-employee-user	Public	Register both employee and user

Employee APIs:

Method	Endpoint	Access	Description
GET	/employees	Admin/Employee	Get all employees
GET	/employees/{id}	Admin/ Employee	Get employee by ID

<b>POST</b>	/employees	Admin	Add a new employee
<b>PUT</b>	/employees/{id}	Admin/ Employee	Update employee details
<b>DELETE</b>	/employees/{id}	Admin	Delete employee

## 5. Database Schema

Table: employee

Column	Type
<b>id</b>	Int (PK)
<b>name</b>	String
<b>department</b>	String
<b>email</b>	String
<b>salary</b>	Double

Table: users

Column	Type
<b>id</b>	Int (PK)
<b>username</b>	String
<b>password</b>	String
<b>role</b>	String

## 6. How to Run

1. Clone the repository:  
git clone https://github.com/ankitkumarsingh140/Employee-Management-System
2. Navigate to the project folder:  
cd Employee-Management-System
3. Run the app using Maven:  
mvn spring-boot:run
4. Access H2 console at: http://localhost:8080/h2-console

## 7. Sample Users

Username	Password	Role
<b>johndoe</b>	password123	EMPLOYEE
<b>Ankit</b>	password123	ADMIN
<b>vicky</b>	password123	OTHER