

**Software Construction and Development**

**LAB 07**

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**DEPARTMENT OF SOFTWARE ENGINEERING**

**Vehicle Booking Services API**

**GitHub Link:** [**https://github.com/Adeel-Bin-Asghar/SCD\_Lab-07.git**](https://github.com/Adeel-Bin-Asghar/SCD_Lab-07.git)

**Introduction**

In this lab, we developed RESTful APIs using Java Spring Boot to manage Emplyee Management System using JPA and MySQL. This assignment aimed to help us understand how to create backend services that handle CRUD (Create, Read, Update, Delete) operations. Additionally, we practiced using GitHub for version control, including branching, committing, pushing, and merging.

**Testing the API with Postman**

To verify the implementation, we tested the API endpoints using Postman:

**Question 1:**

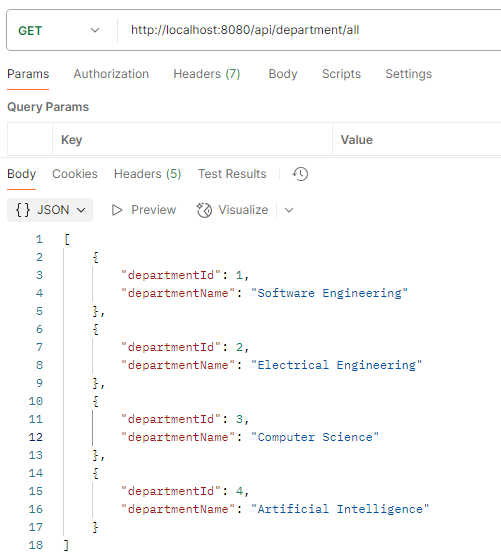
**A screenshot of a computer

AI-generated content may be incorrect.POST /api/department/add**

A screenshot of a computer

AI-generated content may be incorrect.

Add a new department in the system, like HR or IT, so you can assign employees later.

**GET /api/department/all**

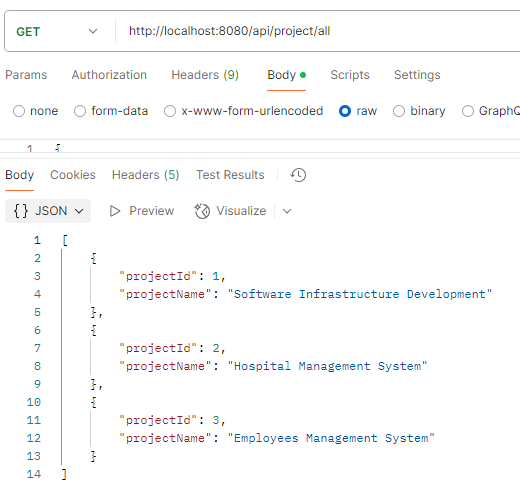
Get a list of all departments currently saved in the system.

**POST /api/project/add**

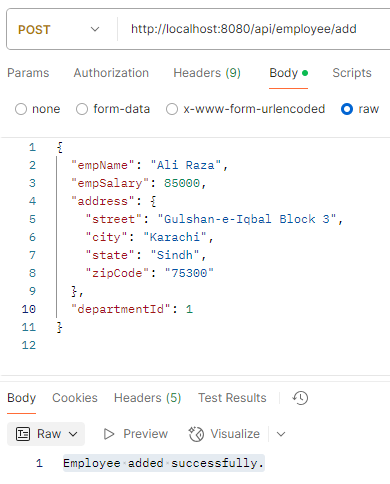
**A screenshot of a computer program

AI-generated content may be incorrect.**Add a new project so employees can be assigned to it.

**GET /api/project/all**

View all the projects that are available in the system.

**POST /api/employee/add**

Add a new employee with their personal details, salary, address, and assign a department.

**POST/api/employee/assignProject?empId=1&projectId=1**

A screenshot of a computer

AI-generated content may be incorrect.Assign a specific employee to a project by giving both their ids.

**GET /api/employee/all**

A screenshot of a computer

AI-generated content may be incorrect.Get a list of all employees along with their department and project info.

**GET /api/employee/details/{id}**

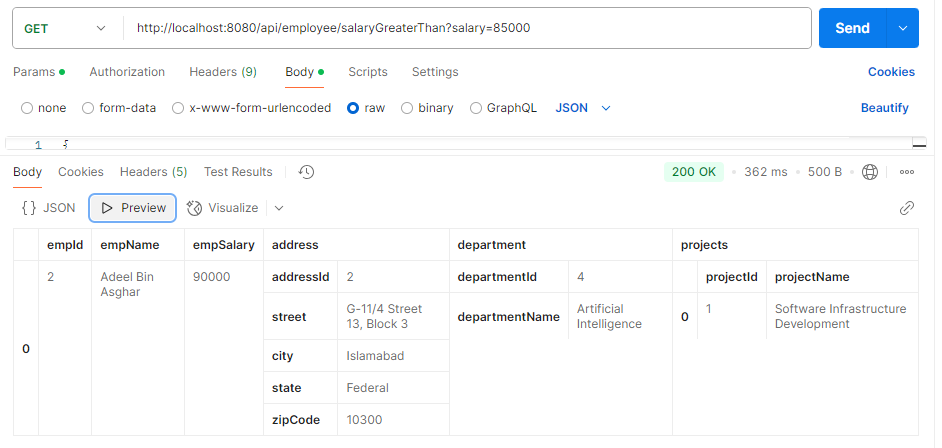
Get full information about a single employee using their ID (including projects and department).

A screenshot of a computer program

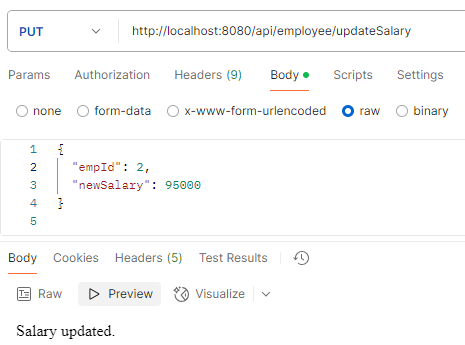
AI-generated content may be incorrect.

**Question 2**

**GET /api/employee/salaryGreaterThan?**

Show all employees whose salary is more than a certain amount (e.g., 80000).

**PUT /api/employee/updateSalary**

Update the salary of an employee by entering their ID and new salary amount.

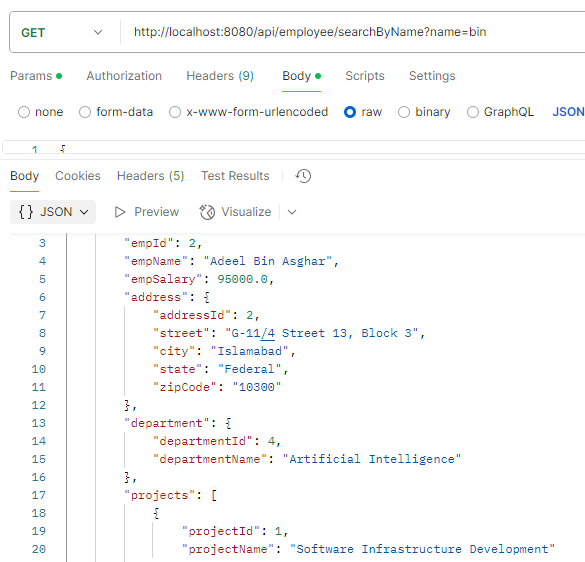
**DELETE /api/employee/delete/{id}**

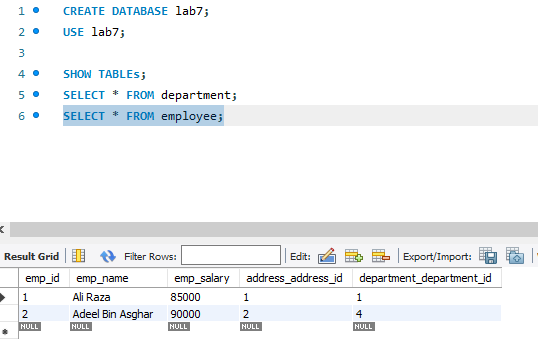
Remove or delete an employee from the system by using their ID.

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AI-generated content may be incorrect.

**GET /api/employee/searchByName?**

Search for employees by typing part of their name.



A screenshot of a computer program

AI-generated content may be incorrect.

A screenshot of a computer

AI-generated content may be incorrect.