Step 1: Creating JPA Entities

Create two Java classes, Employee.java and Department.java, to define the JPA entities for Employee and Department.

Employee.java:

package com.example.employeemanagementsystem.entity;

import lombok.Data;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.JoinColumn;

import javax.persistence.ManyToOne;

@Data

@Entity

public class Employee {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

private String name;

private String email;

@ManyToOne

@JoinColumn(name = "department\_id")

private Department department;

}

Department.java:

package com.example.employeemanagementsystem.entity;

import lombok.Data;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.OneToMany;

import java.util.List;

@Data

@Entity

public class Department {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

private String name;

@OneToMany(mappedBy = "department")

private List<Employee> employees;

}

Step 2: Mapping Entities to Database Tables

Use JPA annotations to map the entities to database tables.

@Entity indicates that the class is a JPA entity.

@Table specifies the table name in the database (not used in this example, as the table name defaults to the entity name).

@Id specifies the primary key of the entity.

@GeneratedValue specifies the strategy for generating the primary key value.

@ManyToOne and @OneToMany specify the relationships between entities.

@JoinColumn specifies the join column for the many-to-one relationship.

In this example, I have defined a one-to-many relationship between Department and Employee, where one department can have multiple employees, and each employee belongs to one department. The department\_id column in the Employee table is the foreign key that references the id column in the Department table.