**Difference between JPA, Hibernate and Spring Data JPA**

**Create Database and Table in MySQL**

CREATE DATABASE employeedb;

USE employeedb;

CREATE TABLE employee (

id INT PRIMARY KEY AUTO\_INCREMENT,

name VARCHAR(50),

department VARCHAR(50),

salary DOUBLE

);

**Configure application.properties**

src/main/resources/application.properties

properties

CopyEdit

# Logging

logging.level.org.springframework=info

logging.level.com.cognizant=debug

# DB config

spring.datasource.url=jdbc:mysql://localhost:3306/employeedb

spring.datasource.username=root

spring.datasource.password=root

spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

# Hibernate

spring.jpa.hibernate.ddl-auto=validate

spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQL5Dialect

**Create Employee Entity**

com.cognizant.employeeapp.model.Employee

package com.cognizant.employeeapp.model;

import javax.persistence.\*;

@Entity

@Table(name = "employee")

public class Employee {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private int id;

private String name;

private String department;

private double salary;

// Getters & Setters

public int getId() { return id; }

public void setId(int id) { this.id = id; }

public String getName() { return name; }

public void setName(String name) { this.name = name; }

public String getDepartment() { return department; }

public void setDepartment(String department) { this.department = department; }

public double getSalary() { return salary; }

public void setSalary(double salary) { this.salary = salary; }

@Override

public String toString() {

return "Employee [id=" + id + ", name=" + name + ", department=" + department + ", salary=" + salary + "]";

}

}

**Create Repository Interface**

com.cognizant.employeeapp.repository.EmployeeRepository

package com.cognizant.employeeapp.repository;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

import com.cognizant.employeeapp.model.Employee;

@Repository

public interface EmployeeRepository extends JpaRepository<Employee, Integer> {

}

**Create Service Class**

com.cognizant.employeeapp.service.EmployeeService

java

CopyEdit

package com.cognizant.employeeapp.service;

import javax.transaction.Transactional;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.cognizant.employeeapp.model.Employee;

import com.cognizant.employeeapp.repository.EmployeeRepository;

@Service

public class EmployeeService {

@Autowired

private EmployeeRepository employeeRepository;

@Transactional

public void addEmployee(Employee employee) {

employeeRepository.save(employee);

}

}

**Test from EmployeeAppApplication.java**

📁 com.cognizant.employeeapp.EmployeeAppApplication

java

package com.cognizant.employeeapp;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.context.ApplicationContext;

import com.cognizant.employeeapp.model.Employee;

import com.cognizant.employeeapp.service.EmployeeService;

@SpringBootApplication

public class EmployeeAppApplication {

public static void main(String[] args) {

ApplicationContext context = SpringApplication.run(EmployeeAppApplication.class, args);

EmployeeService employeeService = context.getBean(EmployeeService.class);

Employee e1 = new Employee();

e1.setName("John Doe");

e1.setDepartment("IT");

e1.setSalary(60000);

employeeService.addEmployee(e1);

System.out.println("Employee inserted successfully!");

}

}

**OUTPUT:**A computer screen shot of a black screen

AI-generated content may be incorrect.