**Hands on 4 : Get average salary using HQL**

**OrmLearnApplication.java :-**

package com.cognizant.orm\_learn;

import com.cognizant.orm\_learn.service.EmployeeService;

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

import org.springframework.boot.CommandLineRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

*@SpringBootApplication*

public class OrmLearnApplication implements CommandLineRunner {

*@Autowired*

private EmployeeService employeeService;

public static void main(String[] args) {

SpringApplication.*run*(OrmLearnApplication.class, args);

}

*@Override*

public void run(String... args) throws Exception {

System.***out***.println("Average salary (all): " + employeeService.getAverageSalary());

Double avg = employeeService.getAverageSalary(1);

System.***out***.println("Average salary (Dept ID 1): " + (avg != null ? avg : "No employees found"));

}

}

**Department.java :-**

package com.cognizant.orm\_learn.model;

import jakarta.persistence.\*;

*@Entity*

public class Department {

*@Id*

private int id;

private String name;

// Getters and 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; }

}

**Employee.java :-**

package com.cognizant.orm\_learn.model;

import jakarta.persistence.\*;

*@Entity*

public class Employee {

*@Id*

private int id;

private String name;

private double salary;

*@ManyToOne*

*@JoinColumn*(name = "department\_id")

private Department department;

// Getters and 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 double getSalary() { return salary; }

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

public Department getDepartment() { return department; }

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

}

**EmployeeRepository.java :-**

package com.cognizant.orm\_learn.repository;

import com.cognizant.orm\_learn.model.Employee;

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

import org.springframework.data.repository.query.Param;

import org.springframework.data.repository.CrudRepository;

public interface EmployeeRepository extends CrudRepository<Employee, Integer> {

*@Query*("SELECT AVG(e.salary) FROM Employee e WHERE e.department.id = :id")

Double getAverageSalary(*@Param*("id") int id);

*@Query*("SELECT AVG(e.salary) FROM Employee e")

Double getAverageSalary();

}

**EmployeeService.java :-**

public interface EmployeeService {

Double getAverageSalary(); // wrapper

Double getAverageSalary(int deptId); // wrapper

}

**EmployeeServiceImpl.java :-**

package com.cognizant.orm\_learn.service;

import com.cognizant.orm\_learn.repository.EmployeeRepository;

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

import org.springframework.stereotype.Service;

*@Service*

public class EmployeeServiceImpl implements EmployeeService {

*@Autowired*

private EmployeeRepository employeeRepository;

*@Override*

public Double getAverageSalary() {

return employeeRepository.getAverageSalary();

}

*@Override*

public Double getAverageSalary(int deptId) {

return employeeRepository.getAverageSalary(deptId);

}

}

**Application.properties :-**

# Logging

logging.level.org.springframework=info

logging.level.com.cognizant=debug

logging.level.org.hibernate.SQL=debug

# DB

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

spring.datasource.url=jdbc:mysql://localhost:3306/orm\_learn

spring.datasource.username=root

spring.datasource.password=root

# Hibernate

spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQL8Dialect

spring.jpa.hibernate.ddl-auto=none

Output :-



