**Week 3\_Spring Data JPA\_HandsOn**

**1. Spring Data JPA - Quick Example**

**OrmLearnApplication.java**

package com.cognizant.orm\_learn;

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

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

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.context.ApplicationContext;

import java.util.List;

@SpringBootApplication

public class OrmLearnApplication {

private static final Logger *LOGGER* = LoggerFactory.*getLogger*(OrmLearnApplication.class);

private static CountryService *countryService*;

public static void main(String[] args) {

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

*countryService* = context.getBean(CountryService.class);

*LOGGER*.info("Inside main");

*testGetAllCountries*();

}

private static void testGetAllCountries() {

*LOGGER*.info("Start");

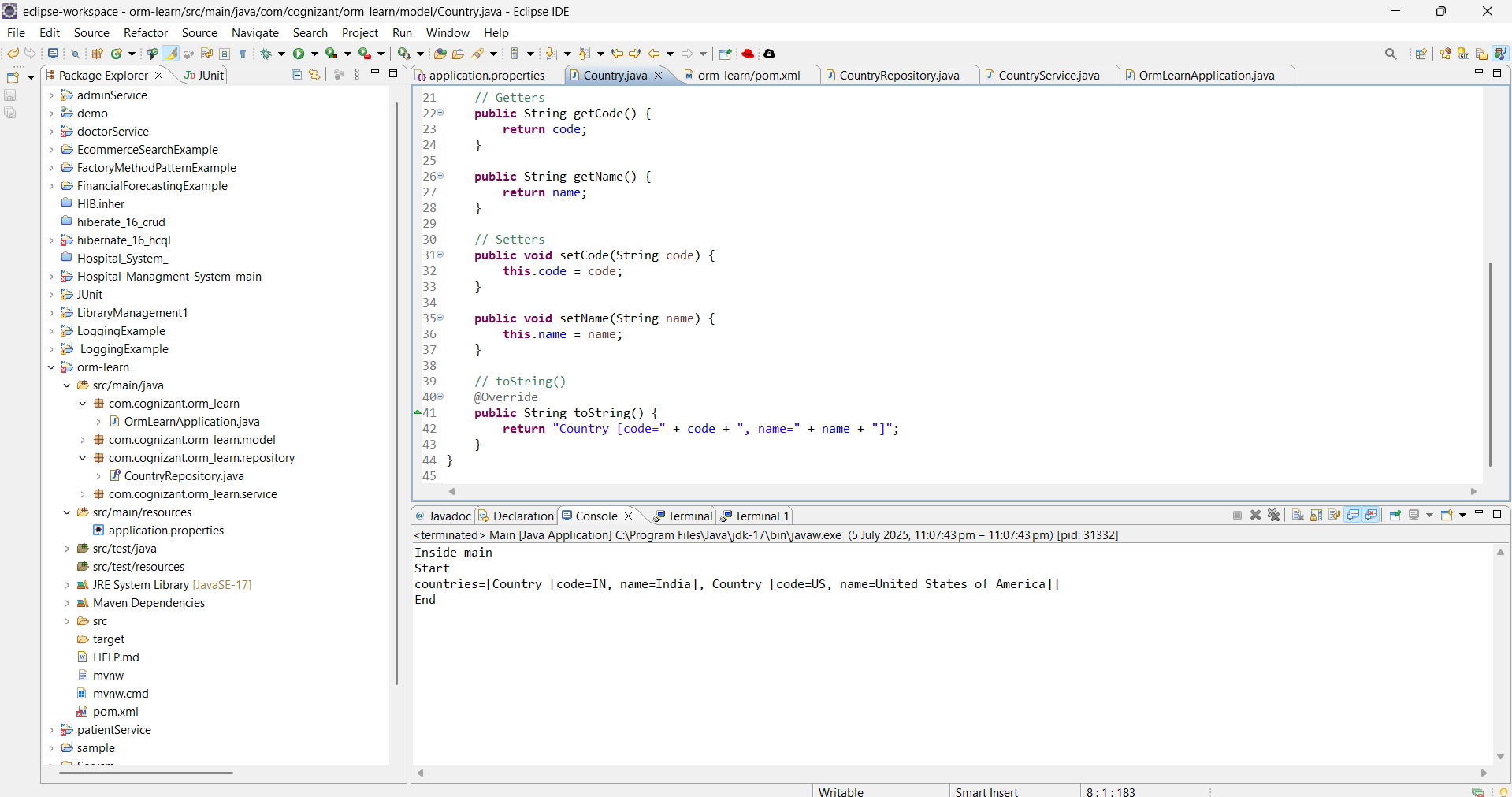
List<Country> countries = *countryService*.getAllCountries();

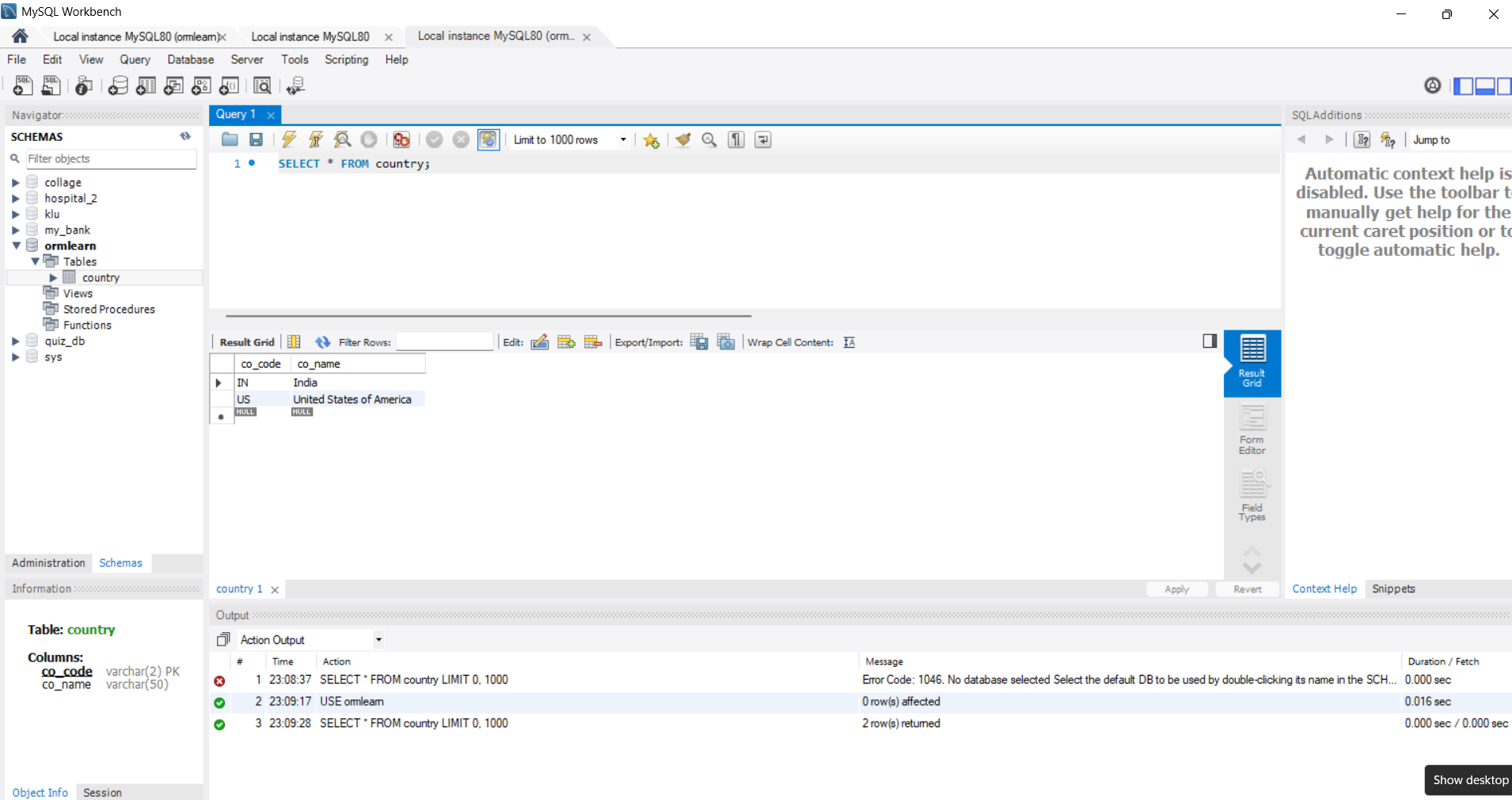
*LOGGER*.debug("countries={}", countries);

*LOGGER*.info("End");

} }

**OUTPUT:**

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

**Employee.java**

package com.example.employeejpademo.model;

import jakarta.persistence.Entity;

import jakarta.persistence.GeneratedValue;

import jakarta.persistence.GenerationType;

import jakarta.persistence.Id;

*@Entity*

public class Employee {

*@Id*

*@GeneratedValue*(strategy = *GenerationType*.***IDENTITY***)

private Long id;

private String name;

private String department;

public Employee() {

public Employee(String name, String department) {

this.name = name;

this.department = department;

}

public Long getId() {

return id;

}

public void setId(Long 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;

}

}

**EmployeeRepository.java**

package com.example.employeejpademo.repository;

import com.example.employeejpademo.model.Employee;

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

import org.springframework.stereotype.Repository;

*@Repository*

public interface EmployeeRepository extends JpaRepository<Employee, Integer> {

}

**EmployeeService.java**

package com.example.employeejpademo.service;

import com.example.employeejpademo.model.Employee;

import com.example.employeejpademo.repository.EmployeeRepository;

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

import org.springframework.stereotype.Service;

import java.util.List;

import java.util.Optional;

*@Service*

public class EmployeeService {

*@Autowired*

private EmployeeRepository employeeRepository;

public List<Employee> getAllEmployees() {

return employeeRepository.findAll();

}

public Optional<Employee> getEmployeeById(Long id) {

return employeeRepository.findById(id);

}

public Employee saveEmployee1(Employee employee) {

return employeeRepository.save(employee);

}

public Employee saveEmployee(Employee employee) {

return employeeRepository.save(employee);

}

public void deleteEmployee(Long id) {

employeeRepository.deleteById(id);

}

}

**HomeController.java**

package com.example.employeejpademo.controller;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.RestController;

*@RestController*

public class HomeController {

*@GetMapping*("/")

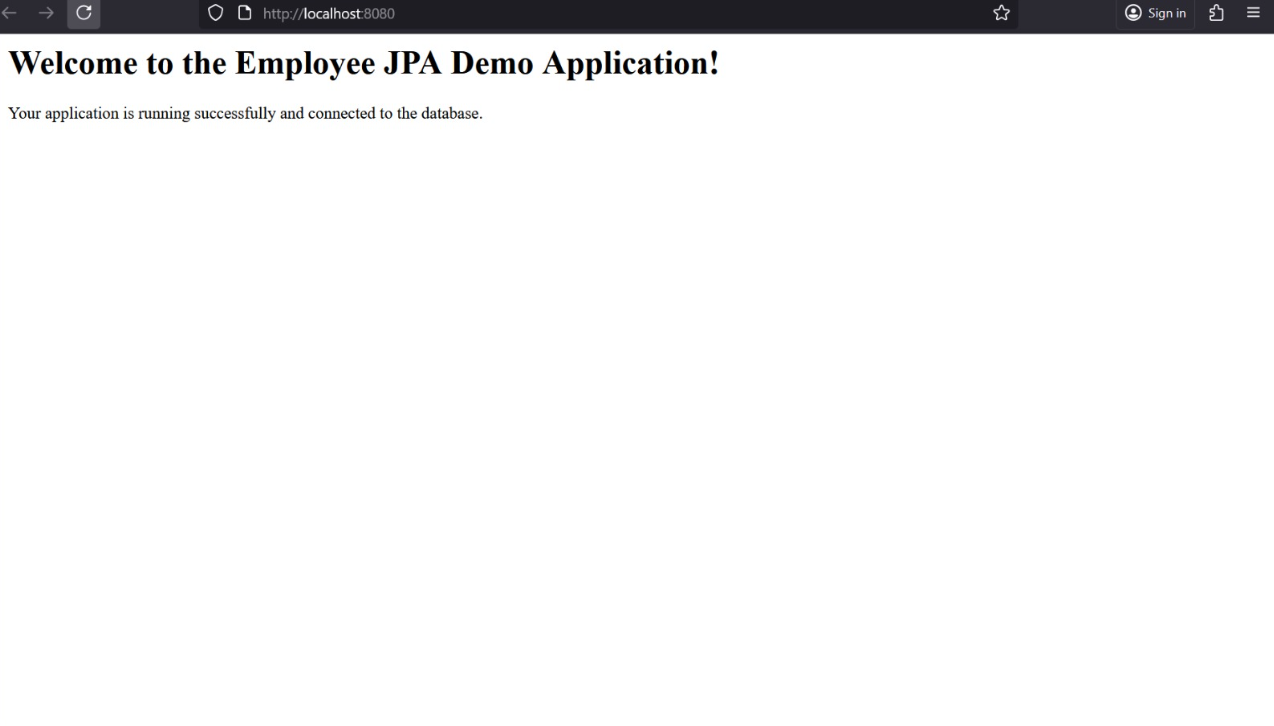
public String home() {

return "<h1>Welcome to the Employee JPA Demo Application!</h1><p>Your application is running successfully and connected to the database.</p>";

}

**}**

**OUTPUT:**

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