**Exercise1 Spring Data Jpa - Quick Example**

**MYSQL SCRIPT**

create schema ormlearn;

use ormlearn;

create table country (

code varchar(2) primary key,

name varchar(50)

);

insert into country values ('IN', 'India');

insert into country values ('US', 'United States of America');

**APPLICATION PROPERTIES**

logging.level.org.springframework=info

logging.level.com.cognizant=debug

logging.level.org.hibernate.SQL=trace

logging.level.org.hibernate.type.descriptor.sql=trace

logging.pattern.console=%d{dd-MM-yy} %d{HH:mm:ss.SSS} %-20.20thread %5p %-25.25logger{25} %25M %4L %m%n

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

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

spring.datasource.username=root

spring.datasource.password=root

spring.jpa.hibernate.ddl-auto=validate

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

**POM.XML**

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-data-jpa</artifactId>

</dependency>

<dependency>

<groupId>mysql</groupId>

<artifactId>mysql-connector-java</artifactId>

<scope>runtime</scope>

</dependency>

</dependencies>

**COUNTRY.JAVA**

package com.cognizant.ormlearn.model;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.Id;

import javax.persistence.Table;

@Table(name = "country")

public class Country {

Column(name = "code")

private String code;

Column(name = "name")

private String name;

public String getCode() {

return code;

}

public void setCode(String code) {

this.code = code;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public String toString() {

return "Country [code=" + code + ", name=" + name + "]";

}

}

**COUNTRYREPOSITORY.JAVA**

package com.cognizant.ormlearn.repository;

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

import org.springframework.stereotype.Repository;

import com.cognizant.ormlearn.model.Country;

public interface CountryRepository extends JpaRepository<Country, String>

**COUNTRYSERVICE.JAVA**

package com.cognizant.ormlearn.service;

import java.util.List;

import javax.transaction.Transactional;

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

import org.springframework.stereotype.Service;

import com.cognizant.ormlearn.model.Country;

import com.cognizant.ormlearn.repository.CountryRepository;

public class CountryService {

private CountryRepository countryRepository;

public List<Country> getAllCountries() {

return countryRepository.findAll();

}

}

**ORMLEARNAPPLICATION.JAVA**

package com.cognizant.ormlearn;

import java.util.List;

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 com.cognizant.ormlearn.model.Country;

import com.cognizant.ormlearn.service.CountryService;

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);

LOGGER.info("Inside main");

countryService = context.getBean(CountryService.class);

testGetAllCountries();

}

private static void testGetAllCountries() {

LOGGER.info("Start");

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

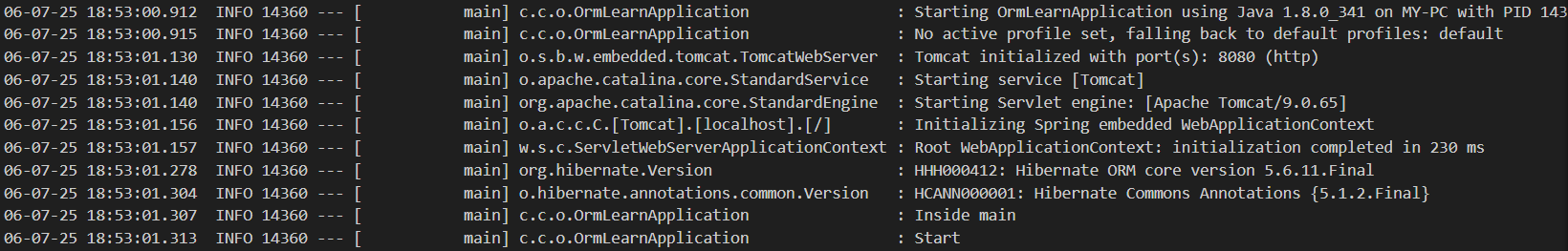
LOGGER.debug("countries={}", countries);

LOGGER.info("End");

}

}

OUTPUT



**EXERCISE 4 DIFFERENCE BETWEEN JPA, HIBERNATE AND SPRING DATA JPA**

**HIBERNATE CODE**

public Integer addEmployee(Employee employee) {

Session session = factory.openSession();

Transaction tx = null;

Integer employeeID = null;

try {

tx = session.beginTransaction();

employeeID = (Integer) session.save(employee);

tx.commit();

} catch (HibernateException e) {

if (tx != null) tx.rollback();

e.printStackTrace();

} finally {

session.close();

}

return employeeID;

}

**EMPLOYEEREPOSITORY.JAVA**

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

import org.springframework.stereotype.Repository;

import com.example.demo.model.Employee;

public interface EmployeeRepository extends JpaRepository<Employee, Integer>

**EMPLOYEESERVICE.JAVA**

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

import com.example.demo.model.Employee;

import com.example.demo.repository.EmployeeRepository;

public class EmployeeService {

private EmployeeRepository employeeRepository;

public void addEmployee(Employee employee) {

employeeRepository.save(employee);

}

}

**OUTPUT**

