**Hands-on 1**

**Spring Data JPA - Quick Example**

**Solution:**

**Step 1:** Create a Spring Boot Project

**Step 2**: Create Database & Table in MySQL

CREATE DATABASE ormlearn;

USE ormlearn;

CREATE TABLE country (

co\_code VARCHAR(2) PRIMARY KEY,

co\_name VARCHAR(50) NOT NULL

);

INSERT INTO country VALUES ('IN', 'India'), ('US', 'United States of America');

**Step 3:** Configure application.properties

spring.application.name=orm-learn

# Logging

logging.level.org.springframework=info

logging.level.com.cognizant=debug

logging.level.org.hibernate.SQL=trace

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

# Log format

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

# Database Configuration

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=pinki

# Hibernate Configuration

spring.jpa.hibernate.ddl-auto=validate

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

**Step 4:** Create the Country Entity (Country.java)

package com.cognizant.ormlearn.model;

import javax.persistence.Entity;

import javax.persistence.Id;

import javax.persistence.Table;

import javax.persistence.Column;

@Entity

@Table(name = "country") // this should match the table name in your MySQL DB

public class Country {

@Id

@Column(name = "co\_code") // column name in DB

private String code;

@Column(name = "co\_name") // column name in DB

private String name;

// Getters and setters

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;

}

// For printing the object

@Override

public String toString() {

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

}

}

**Step 5:** Create Repository Interface (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;

@Repository

public interface CountryRepository extends JpaRepository<Country, String> {

}

**Step 6:** Create Service Layer (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;

@Service

public class CountryService {

@Autowired

private CountryRepository countryRepository;

@Transactional

public List<Country> getAllCountries() {

return countryRepository.findAll();

}

}

**Step 7:** Create the Main Class 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;

@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);

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);

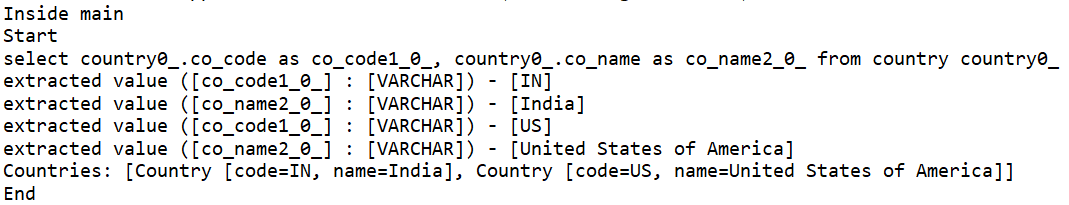
LOGGER.info("End");

}

}

**Step 8:** Run the application

**Output:**

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