**WEEK-3**

**Spring Data JPA with Spring Boot, Hibernate**

**Hands On-7: Add a new country**

**1.pom.xml:**

<project xmlns="http://maven.apache.org/POM/4.0.0"

         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">

    <modelVersion>4.0.0</modelVersion>

    <groupId>com.cognizant</groupId>

    <artifactId>orm-learn</artifactId>

    <version>0.0.1-SNAPSHOT</version>

    <packaging>jar</packaging>

    <name>orm-learn</name>

    <description>Spring Boot ORM Learn Project</description>

    <parent>

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

        <artifactId>spring-boot-starter-parent</artifactId>

        <version>3.1.0</version>

        <relativePath/>

    </parent>

    <properties>

        <java.version>17</java.version>

    </properties>

    <dependencies>

        <dependency>

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

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

        </dependency>

        <dependency>

            <groupId>com.h2database</groupId>

            <artifactId>h2</artifactId>

            <scope>runtime</scope>

        </dependency>

        <dependency>

            <groupId>jakarta.persistence</groupId>

            <artifactId>jakarta.persistence-api</artifactId>

            <version>3.1.0</version>

        </dependency>

        <dependency>

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

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

        </dependency>

    </dependencies>

    <build>

        <plugins>

            <plugin>

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

                <artifactId>spring-boot-maven-plugin</artifactId>

            </plugin>

        </plugins>

    </build>

</project>

**2.Country.java:**

package com.cognizant.ormlearn.model;

import jakarta.persistence.Entity;

import jakarta.persistence.Id;

import jakarta.persistence.Table;

@Entity

@Table(name = "country")

public class Country {

    @Id

    private String code;

    private String name;

    public Country() {}

    public Country(String code, String name) {

        this.code = code;

        this.name = 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; }

}

**3.CountryRepository.java:**

package com.cognizant.ormlearn.repository;

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

import com.cognizant.ormlearn.model.Country;

public interface CountryRepository extends JpaRepository<Country, String> {

}

**4.CountryService.java:**

package com.cognizant.ormlearn.service;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

import com.cognizant.ormlearn.model.Country;

import com.cognizant.ormlearn.repository.CountryRepository;

@Service

public class CountryService {

    @Autowired

    private CountryRepository countryRepository;

    @Transactional

    public void addCountry(Country country) {

        countryRepository.save(country);

    }

    public Country findCountryByCode(String code) {

        return countryRepository.findById(code).orElse(null);

    }

}

**5.OrmLearnApplication.java:**

package com.cognizant.ormlearn;

import org.springframework.boot.CommandLineRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import com.cognizant.ormlearn.model.Country;

import com.cognizant.ormlearn.service.CountryService;

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

@SpringBootApplication

public class OrmLearnApplication implements CommandLineRunner {

    @Autowired

    private CountryService countryService;

    public static void main(String[] args) {

        SpringApplication.run(OrmLearnApplication.class, args);

    }

    @Override

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

        testAddCountry();

    }

    public void testAddCountry() {

        Country newCountry = new Country("XY", "Testland");

        countryService.addCountry(newCountry);

        Country result = countryService.findCountryByCode("XY");

        if (result != null) {

            System.out.println("Country added: " + result.getName());

        } else {

            System.out.println("Country not found.");

        }

    }

}

**6.application.properties:**

spring.datasource.url=jdbc:h2:mem:testdb

spring.datasource.driverClassName=org.h2.Driver

spring.datasource.username=sa

spring.datasource.password=

spring.jpa.database-platform=org.hibernate.dialect.H2Dialect

spring.h2.console.enabled=true

spring.jpa.hibernate.ddl-auto=update

**Output:**

