**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) throws Exception {

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

countryService = context.getBean(CountryService.class);

LOGGER.info("Inside main");

testGetAllCountries();

testFindCountryByCode();

testAddCountry();

testUpdateCountry();

testDeleteCountry();

}

private static void testGetAllCountries() {

LOGGER.info("Start: testGetAllCountries");

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

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

LOGGER.info("End: testGetAllCountries");

}

private static void testFindCountryByCode() throws Exception {

LOGGER.info("Start: testFindCountryByCode");

Country country = countryService.findCountryByCode("IN");

LOGGER.debug("Country: {}", country);

LOGGER.info("End: testFindCountryByCode");

}

private static void testAddCountry() throws Exception {

LOGGER.info("Start: testAddCountry");

Country country = new Country();

country.setCode("JP");

country.setName("Japan");

countryService.addCountry(country);

LOGGER.debug("Added Country: {}", countryService.findCountryByCode("JP"));

LOGGER.info("End: testAddCountry");

}

private static void testUpdateCountry() throws Exception {

LOGGER.info("Start: testUpdateCountry");

countryService.updateCountry("JP", "Japan - Updated");

LOGGER.debug("Updated Country: {}", countryService.findCountryByCode("JP"));

LOGGER.info("End: testUpdateCountry");

}

private static void testDeleteCountry() {

LOGGER.info("Start: testDeleteCountry");

countryService.deleteCountry("JP");

LOGGER.info("Deleted Country with code JP, verify by checking DB.");

LOGGER.info("End: testDeleteCountry");

}

}

**Country.java:**

package com.cognizant.orm\_learn.model;

import jakarta.persistence.Column;

import jakarta.persistence.Entity;

import jakarta.persistence.Id;

import jakarta.persistence.Table;

@Entity

@Table(name = "country")

public class Country {

@Id

@Column(name = "co\_code")

private String code;

@Column(name = "co\_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;

}

@Override

public String toString() {

return "Country{" +

"code='" + code + '\'' +

", name='" + name + '\'' +

'}';

}

}

**CountryRepository.java:**

package com.cognizant.orm\_learn.repository;

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

import org.springframework.stereotype.Repository;

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

@Repository

public interface CountryRepository extends JpaRepository<Country, String> {

}

**CountryService.java:**

package com.cognizant.orm\_learn.service;

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

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

import jakarta.transaction.Transactional;

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

import org.springframework.stereotype.Service;

import java.util.List;

import java.util.Optional;

@Service

public class CountryService {

@Autowired

private CountryRepository countryRepository;

@Transactional

public List<Country> getAllCountries() {

return countryRepository.findAll();

}

@Transactional

public Country findCountryByCode(String countryCode) throws Exception {

Optional<Country> result = countryRepository.findById(countryCode);

if (!result.isPresent()) {

throw new Exception("Country not found with code: " + countryCode);

}

return result.get();

}

@Transactional

public void addCountry(Country country) {

countryRepository.save(country);

}

@Transactional

public void updateCountry(String code, String name) throws Exception {

Country country = findCountryByCode(code);

country.setName(name);

countryRepository.save(country);

}

@Transactional

public void deleteCountry(String code) {

countryRepository.deleteById(code);

}

}

**ORMLearnApplicationTest.java:**

package com.cognizant.orm\_learn;

import org.junit.jupiter.api.Test;

import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest

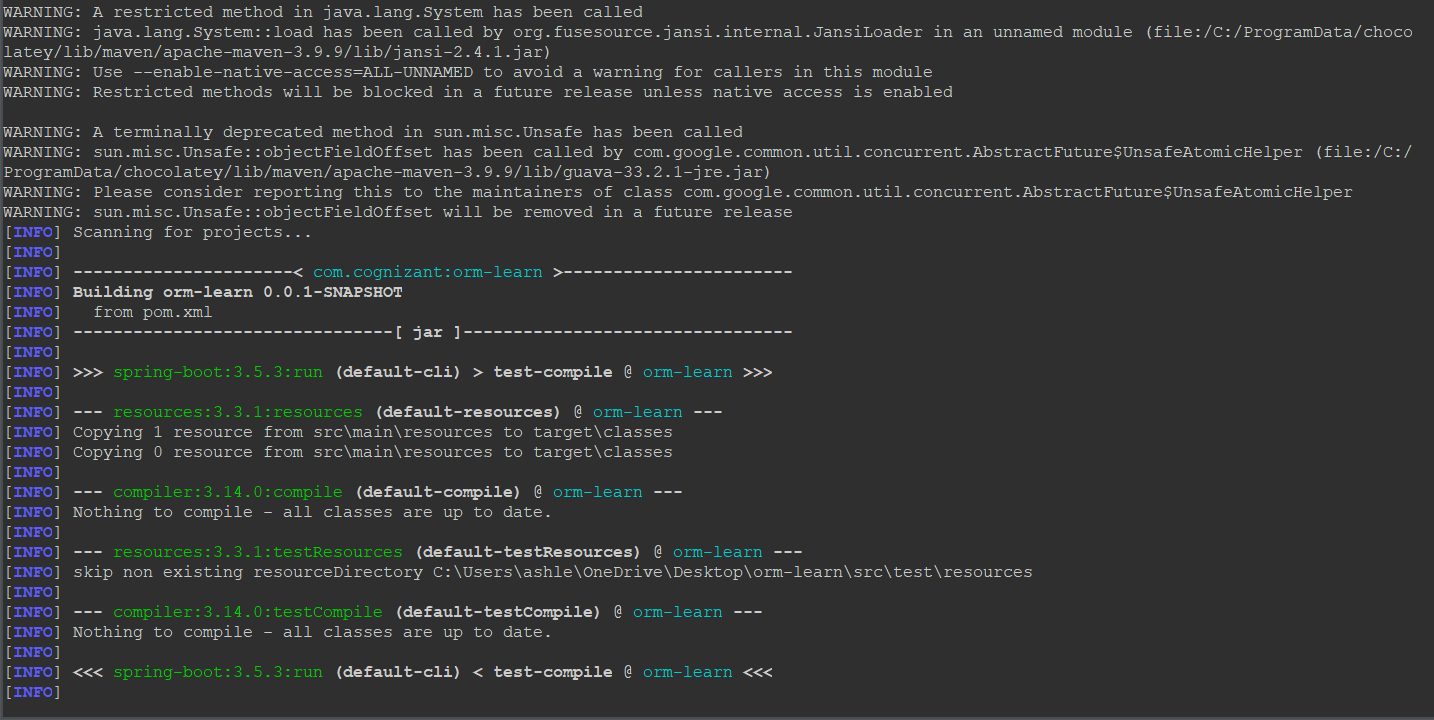
class OrmLearnApplicationTests {

@Test

void contextLoads() {

}

}

 A screen shot of a computer screen

AI-generated content may be incorrect. A screen shot of a computer code

AI-generated content may be incorrect. A screen shot of a computer program

AI-generated content may be incorrect.