**1.SPRINGDATAJPA**

**ORMLEARN**

**Project Structure**

orm-learn/

├── pom.xml <-- Maven configuration file

├── src/

│ ├── main/

│ │ ├── java/

│ │ │ └── com/

│ │ │ └── cognizant/

│ │ │ └── ormlearn/

│ │ │ ├── OrmLearnApplication.java <-- main Spring Boot class with test methods

│ │ │ ├── model/

│ │ │ │ └── Country.java <-- @Entity mapped to country table

│ │ │ ├── repository/

│ │ │ │ └── CountryRepository.java <-- interface extending JpaRepository

│ │ │ ├── service/

│ │ │ │ └── CountryService.java <-- @Service with CRUD logic

│ │ │ └── service/

│ │ │ └── exception/

│ │ │ └── CountryNotFoundException.java <-- custom exception

│ ├── resources/

│ │ ├── application.properties <-- DB and logging configuration

├── target/ <-- auto-generated after build

**OrmLearnApplication.java**

package com.cognizant.ormlearn;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class OrmLearnApplication {

    public static void main(String[] args) {

        SpringApplication.run(OrmLearnApplication.class, args);

        System.out.println("Inside main()");

    }

}

**Application.properties**

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

spring.datasource.username=root

spring.datasource.password=Spoorthi@28

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

spring.jpa.hibernate.ddl-auto=update

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

logging.level.org.springframework=INFO

logging.level.com.cognizant=DEBUG

logging.level.org.hibernate.SQL=TRACE

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

**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>Demo project for Spring Data JPA and Hibernate</description>

    <parent>

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

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

        <version>2.7.1</version>

        <relativePath/>

    </parent>

    <dependencies>

        <dependency>

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

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

        </dependency>

        <dependency>

            <groupId>mysql</groupId>

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

            <version>8.3.0</version> <!-- upgraded to address security vulnerabilities -->

            <scope>runtime</scope>

        </dependency>

        <dependency>

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

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

        </dependency>

        <dependency>

            <groupId>org.slf4j</groupId>

            <artifactId>slf4j-api</artifactId>

        </dependency>

    </dependencies>

    <build>

    <plugins>

        <plugin>

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

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

            <configuration>

                <mainClass>com.cognizant.ormlearn.OrmLearnApplication</mainClass>

            </configuration>

        </plugin>

    </plugins>

</build>

</project>

**Output:**

