**Spring Data JPA - Quick Example**

**SpringDataJpaDemoApplication.java**

package org.example;

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

import org.springframework.boot.CommandLineRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import java.util.List;

@SpringBootApplication

public class SpringDataJpaDemoApplication implements CommandLineRunner {

@Autowired

private UserRepository userRepository;

public static void main(String[] args) {

SpringApplication.run(SpringDataJpaDemoApplication.class, args);

}

@Override

public void run(String... args) {

// Save users

userRepository.save(new User("Alice", "alice@example.com"));

userRepository.save(new User("Bob", "bob@example.com"));

userRepository.save(new User("Alice", "alice123@example.com"));

// Fetch users by name

List<User> users = userRepository.findByName("Alice");

users.forEach(System.out::println);

}

}

**User.java**

package org.example;

import jakarta.persistence.\*;

@Entity

@Table(name = "users") // avoid using reserved keyword "user"

public class User {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

private String name;

private String email;

public User() {}

public User(String name, String email) {

this.name = name;

this.email = email;

}

@Override

public String toString() {

return "User{id=" + id + ", name='" + name + "', email='" + email + "'}";

}

}

**UserRepository.java**

package org.example;

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

import java.util.List;

public interface UserRepository extends JpaRepository<User, Long> {

List<User> findByName(String name);

}

**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>org.example</groupId>

<artifactId>springdatajpa</artifactId>

<version>1.0-SNAPSHOT</version>

<name>spring-data-jpa-demo</name>

<packaging>jar</packaging>

<parent>

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

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

<version>3.2.4</version>

</parent>

<properties>

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

</properties>

<dependencies>

<!-- Spring Boot Starter -->

<dependency>

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

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

</dependency>

<!-- Spring Data JPA -->

<dependency>

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

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

</dependency>

<!-- H2 In-Memory DB -->

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<scope>runtime</scope>

</dependency>

</dependencies>

<build>

<plugins>

<!-- Spring Boot Maven Plugin -->

<plugin>

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

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

</plugin>

</plugins>

</build>

</project>

**OUTPUT:**

