**SPRING DATA JPA -EXAMPLE-LIBRARY MANAGEMENT:**

**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.example</groupId>

<artifactId>LibraryManagement</artifactId>

<version>0.0.1-SNAPSHOT</version>

<parent>

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

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

<version>2.7.18</version>

</parent>

<dependencies>

<dependency>

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

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

</dependency>

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

</dependency>

<dependency>

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

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

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

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

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

</plugin>

</plugins>

</build>

</project>

**application.properties**

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

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

**LibraryManagementApplication.java**

package com.example.library;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class LibraryManagementApplication {

public static void main(String[] args) {

SpringApplication.run(LibraryManagementApplication.class, args);

}

**model/Book.java**

package com.example.library.model;

import javax.persistence.\*;

@Entity

public class Book {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

private Long id;

private String title;

private String author;

public Book() {}

public Book(String title, String author) {

this.title = title;

this.author = author;

}

// Getters and Setters

public Long getId() { return id; }

public void setId(Long id) { this.id = id; }

public String getTitle() { return title; }

public void setTitle(String title) { this.title = title; }

public String getAuthor() { return author; }

public void setAuthor(String author) { this.author = author; }

}

**repository/BookRepository.java**

java

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package com.example.library.repository;

import com.example.library.model.Book;

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

import java.util.List;

public interface BookRepository extends JpaRepository<Book, Long> {

List<Book> findByAuthor(String author);

}

**controller/BookController.java**

package com.example.library.controller;

import com.example.library.model.Book;

import com.example.library.repository.BookRepository;

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

import org.springframework.web.bind.annotation.\*;

import java.util.List;

@RestController

@RequestMapping("/books")

public class BookController {

@Autowired

private BookRepository repository;

@PostMapping

public Book addBook(@RequestBody Book book) {

return repository.save(book);

}

@GetMapping

public List<Book> getAllBooks() {

return repository.findAll();

}

@GetMapping("/author/{author}")

public List<Book> getBooksByAuthor(@PathVariable String author) {

return repository.findByAuthor(author);

}

}