Spring Core and Maven:

Exercise 9: Creating a Spring Boot Application

CODE:

BookController.java:

package com.example.LibraryManagement.controller;

import com.example.LibraryManagement.model.Book;

import com.example.LibraryManagement.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 bookRepository;

// GET /books

@GetMapping

public List<Book> getAllBooks() {

return bookRepository.findAll();

}

// POST /books

@PostMapping

public Book createBook(@RequestBody Book book) {

return bookRepository.save(book);

}

// GET /books/{id}

@GetMapping("/{id}")

public Book getBookById(@PathVariable Long id) {

return bookRepository.findById(id).orElse(null);

}

// PUT /books/{id}

@PutMapping("/{id}")

public Book updateBook(@PathVariable Long id, @RequestBody Book bookDetails) {

Book book = bookRepository.findById(id).orElse(null);

if (book != null) {

book.setTitle(bookDetails.getTitle());

book.setAuthor(bookDetails.getAuthor());

return bookRepository.save(book);

}

return null;

}

// DELETE /books/{id}

@DeleteMapping("/{id}")

public void deleteBook(@PathVariable Long id) {

bookRepository.deleteById(id);

}

}

Book.java:

package com.example.LibraryManagement.model;

import jakarta.persistence.Entity;

import jakarta.persistence.GeneratedValue;

import jakarta.persistence.GenerationType;

import jakarta.persistence.Id;

@Entity

public class Book {

@Id

@GeneratedValue(strategy = GenerationType.*IDENTITY*)

private Long id;

private String title;

private String author;

// Default constructor

public Book() {

}

// Constructor

public Book(String title, String author) {

this.title = title;

this.author = author;

}

// Getters and setters

public Long getId() {

return id;

}

public String getTitle() {

return title;

}

public String getAuthor() {

return author;

}

public void setId(Long id) {

this.id = id;

}

public void setTitle(String title) {

this.title = title;

}

public void setAuthor(String author) {

this.author = author;

}

}

BookRepository.java:

package com.example.LibraryManagement.repository;

import com.example.LibraryManagement.model.Book;

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

import org.springframework.stereotype.Repository;

@Repository

public interface BookRepository extends JpaRepository<Book, Long> {

}

LibraryManagementApplication.java:

package com.example.LibraryManagement;

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);

}

}

OUTPUT:

