**Exercise 1: Configuring a Basic Spring Application**

**LibrarymanagementApplication.java**

package com.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);

}}

**BookController.java**

package com.library.controller;

import com.library.service.BookService;

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

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

@RestController

@RequestMapping("/books")

public class BookController {

@Autowired

private BookService bookService;

@GetMapping("/add")

public String addBook(@RequestParam String name) {

bookService.addBook(name);

return "Book added: " + name;

}}

**BookRepository.java**

package com.library.repository;

import org.springframework.stereotype.Repository;

@Repository

public class BookRepository {

public void saveBook(String name) {

System.*out*.println("Book '" + name + "' saved to the repository.");

}}

**BookService.java**

package com.library.service;

import com.library.repository.BookRepository;

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

import org.springframework.stereotype.Service;

@Service

public class BookService {

@Autowired

private BookRepository bookRepository;

public void addBook(String name) {

System.*out*.println("Service: Processing book...");

bookRepository.saveBook(name);

}}

**Exercise 2: Implementing Dependency Injection**

**pom.xml**

<dependencies>

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-context</artifactId>

<version>5.3.33</version>

</dependency>

</dependencies>

**applicationContext.xml**

<?xml version="1.0" encoding="UTF-8"?>

<beans xmlns="http://www.springframework.org/schema/beans"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="

http://www.springframework.org/schema/beans

http://www.springframework.org/schema/beans/spring-beans.xsd">

<bean id="bookRepository" class="com.library.repository.BookRepository" />

<bean id="bookService" class="com.library.service.BookService">

<property name="bookRepository" ref="bookRepository"/>

</bean>

</beans>

**BookRepository.java**

package com.library.repository;

public class BookRepository {

public void saveBook(String bookName) {

System.out.println("Repository: Book saved - " + bookName);

}}

**BookService.java**

package com.library.service;

import com.library.repository.BookRepository;

public class BookService {

private BookRepository bookRepository;

public void setBookRepository(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

public void addBook(String name) {

System.out.println("Service: Adding book");

bookRepository.saveBook(name);

}}

**MainApp.java**

package com.library;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class MainApp {

public static void main(String[] args) {

ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");

BookService bookService = (BookService) context.getBean("bookService");

bookService.addBook("Wings of Fire");

}}

**Exercise 4: Creating and Configuring a Maven Project**

**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.library</groupId>

<artifactId>LibraryManagement</artifactId>

<version>1.0-SNAPSHOT</version>

<dependencies>

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-context</artifactId>

<version>5.3.33</version>

</dependency>

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-aop</artifactId>

<version>5.3.33</version>

</dependency>

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-webmvc</artifactId>

<version>5.3.33</version>

</dependency>

<dependency>

<groupId>javax.servlet</groupId>

<artifactId>javax.servlet-api</artifactId>

<version>4.0.1</version>

<scope>provided</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.8.1</version>

<configuration>

<source>1.8</source>

<target>1.8</target>

</configuration>

</plugin>

</plugins>

</build>

</project>