**Spring Core and Maven**

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

**Developing a web application for managing a library. Using the Spring Framework to handle the backend operations.**

* **Spring Core Dependencies to pom.xml**

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-context</artifactId>

<version>5.3.36</version>

</dependency>

**src/main/resources**

**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

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

<!-- Define BookRepository bean -->

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

<!-- Define BookService bean and inject BookRepository -->

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

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

</bean>

</beans>

**src/main/java/com.library.repository**

**BookRepository.java**

package com.library.repository;

public class BookRepository {

public void displayBooks() {

System.out.println("Displaying books from the repository.");

}

}

**src/main/java/com.library.service**

**BookService.java**

package com.library.service;

import com.library.repository.BookRepository;

public class BookService {

private BookRepository bookRepository;

// Setter for dependency injection

public void setBookRepository(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

public void listBooks() {

bookRepository.displayBooks();

}

}

**src/main/java/com.library**

**LibraryApp.java**

package com.library;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

import com.library.service.BookService;

public class LibraryApp {

public static void main(String[] args) {

// Load application context from XML

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

// Retrieve BookService bean

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

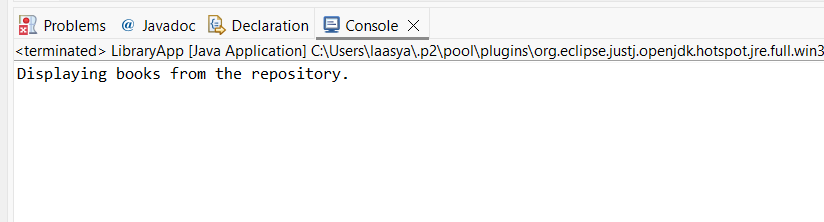
// Call method to list books

bookService.listBooks();

}

}

**OUTPUT:**

****