**WEEK-3**

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

**Scenario:**

Your company is developing a web application for managing a library. You need to use the Spring Framework to handle the backend operations.

**Steps:**

1. **Set Up a Spring Project:**
   * Create a Maven project named **LibraryManagement**.
   * Add Spring Core dependencies in the **pom.xml** file.
2. **Configure the Application Context:**
   * Create an XML configuration file named **applicationContext.xml** in the **src/main/resources** directory.
   * Define beans for **BookService** and **BookRepository** in the XML file.
3. **Define Service and Repository Classes:**
   * Create a package **com.library.service** and add a class **BookService**.
   * Create a package **com.library.repository** and add a class **BookRepository**.
4. **Run the Application:**

Create a main class to load the Spring context and test the configuration

**Pom.xml**

<!-- Spring Core Dependency -->

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-context</artifactId>

<version>5.3.29</version>

</dependency>

**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"*/>

</**beans**>

**BookService1.java**

package com.library.service;

public class BookService1 {

public void addBook(String bookName) {

System.***out***.println("Adding book: " + bookName);

}

}

**BookRepository1.java**

package com.library.repository;

public class BookRepository1 {

public void saveBook(String bookName) {

System.*out*.println("Saving book: " + bookName);

}

}

**MainApp1.java**

package com.libray;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class MainApp1 {

public static void main(String[] args) {

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

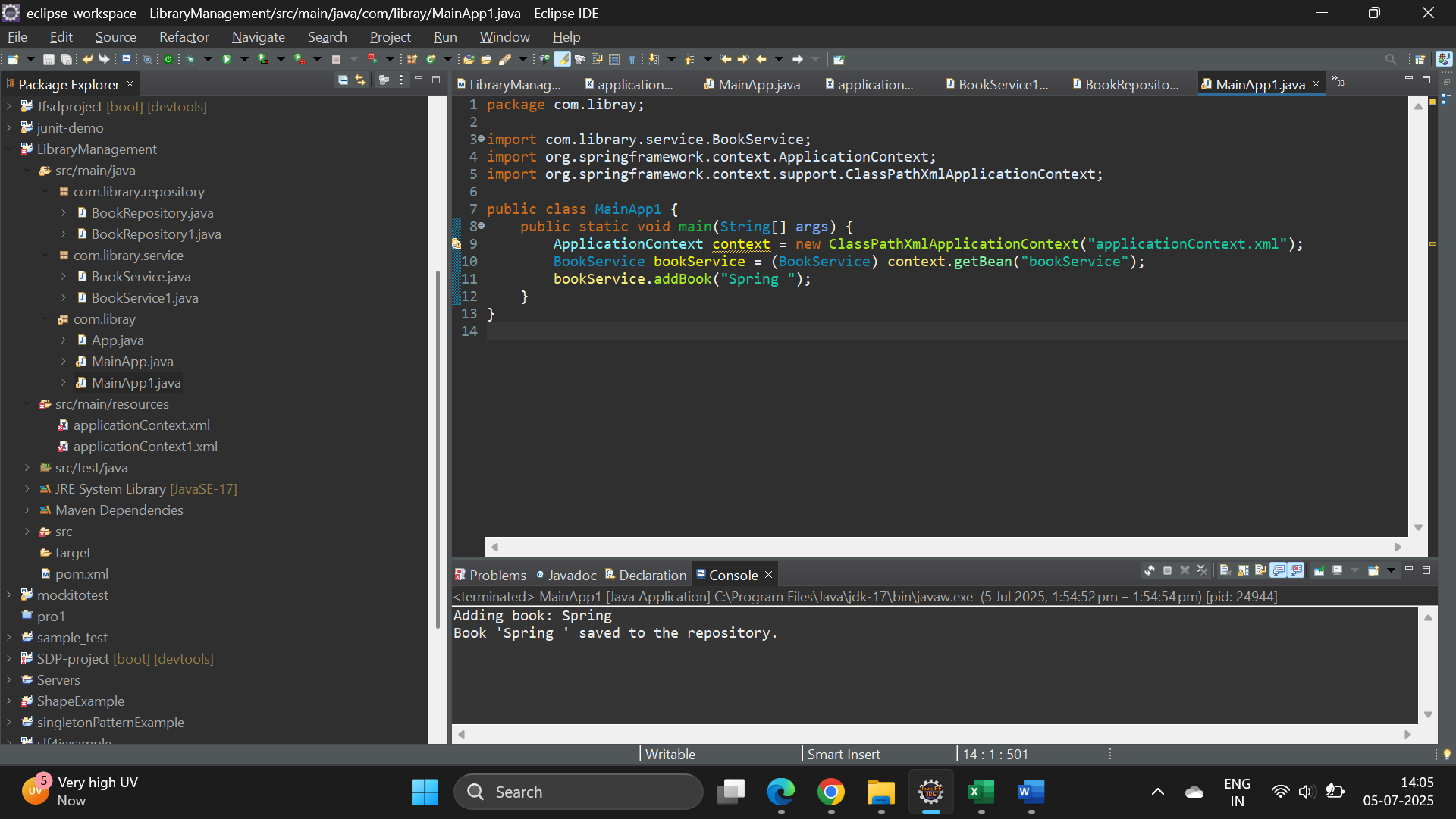
BookService bookService = (BookService) context.getBean("bookService");

bookService.addBook("Spring ");

}

}

OUTPUT

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