**Exercise 2: Implementing Dependency Injection**

**Scenario:**

In the library management application, you need to manage the dependencies between the BookService and BookRepository classes using Spring's IoC and DI.

**Steps:**

1. **Modify the XML Configuration:**
   * Update **applicationContext.xml** to wire **BookRepository** into **BookService**.

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"*></**property**>

</**bean**>

</**beans**>

1. **Update the BookService Class:**
   * Ensure that **BookService** class has a setter method for **BookRepository**.

BookService.java

package com.library.service;

import com.library.repository.\*;

public class BookService{

private BookRepository bookRepository;

public void setBookRepository(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

public void display() {

System.***out***.println("Book service.........");

bookRepository.display();

}

}

1. **Test the Configuration:**
   * Run the **LibraryManagementApplication** main class to verify the dependency injection.

App.java

package DigitalNurture.LibraryManagement;

import com.library.repository.\*;

import com.library.service.\*;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class App

{

public static void main(String[] args) {

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

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

// BookRepository bookRepository = (BookRepository) context.getBean("bookRepository");

// bookRepository.display();

bookService.display();

}

}

Output

