**Exercise 6: Configuring Beans with Annotations**

**Scenario:**

You need to simplify the configuration of beans in the library management application using annotations.

**applicationContext.xml**

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

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

xmlns:context="http://www.springframework.org/schema/context"

xsi:schemaLocation="http://www.springframework.org/schema/beans

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

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

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

<!-- Enable component scanning -->

<context:component-scan base-package="com.library" />

</beans>

// BookService.java

package com.library.service;

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

import org.springframework.stereotype.Service;

import com.library.repository.BookRepository;

@Service

public class BookService {

private final BookRepository bookRepository;

@Autowired

public BookService(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

public void performService() {

System.out.println("Performing service operations...");

// Example interaction with the repository

// bookRepository.someRepositoryMethod();

}

}

// BookRepository.java

package com.library.repository;

import org.springframework.stereotype.Repository;

@Repository

public class BookRepository {

public void findBooks() {

System.out.println("Finding books...");

}

// Other repository methods

}

// LibraryManagementApplication.java

package com.library;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.annotation.AnnotationConfigApplicationContext;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

public class LibraryManagementApplication {

private static final Logger logger = LoggerFactory.getLogger(LibraryManagementApplication.class);

public static void main(String[] args) {

ApplicationContext context = new AnnotationConfigApplicationContext(AppConfig.class);

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

// Example service call

bookService.performService();

logger.info("Library Management Application is running...");

}

}