**Exercise 6: Configuring Beans with Annotations**

**Scenario:**

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

**Steps:**

1. **Enable Component Scanning:**
   * Update **applicationContext.xml** to include component scanning for the **com.library** package.
2. **Annotate Classes:**
   * Use **@Service** annotation for the **BookService** class.
   * Use **@Repository** annotation for the **BookRepository** class.
3. **Test the Configuration:**

Run the **LibraryManagementApplication** main class to verify the annotation-based configuration.

**Step 1 :**

**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"

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

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/aop

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

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

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

//<aop:aspectj-autoproxy/>

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

//<bean id="loggingAspect" class="com.library.aspect.LoggingAspect" />

</beans>

**Step 2 :**

**BookService.java**

package com.library.service;

public interface BookService {

void performService();

}

**BookServiceImpl.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 BookServiceImpl implements BookService {

private final BookRepository bookRepository;

@Autowired

public BookServiceImpl(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

@Override

public void performService() {

System.out.println("Performing service in BookService.");

bookRepository.performRepositoryTask();

}

}

**BookRepository.java**

package com.library.repository;

import org.springframework.stereotype.Repository;

@Repository

public class BookRepository {

public void performRepositoryTask() {

System.out.println("Performing repository task in BookRepository.");

}

}

**Step 3 :**

**Main.java**

package com.library.librarymanagement;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class Main {

public static void main(String[] args)

{

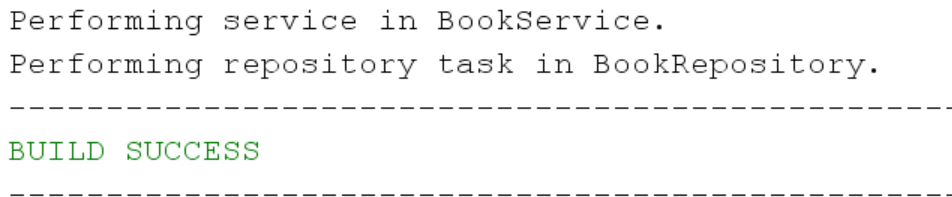
ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");

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

bookService.performService();

}

}

****