**Exercise 8: Implementing Basic AOP with Spring**

**LoggingAspect.java**

package com.library.aspect;

import org.aspectj.lang.annotation.After;

import org.aspectj.lang.annotation.Aspect;

import org.aspectj.lang.annotation.Before;

import org.springframework.stereotype.Component;

@Aspect

@Component

public class LoggingAspect {

@Before("execution(\* com.library.service.\*.\*(..))")

public void logBeforeMethod() {

System.out.println("LoggingAspect: Before method execution");

}

@After("execution(\* com.library.service.\*.\*(..))")

public void logAfterMethod() {

System.out.println("LoggingAspect: After method execution");

}

}

**applicationcontent.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:context="http://www.springframework.org/schema/context"

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

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

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

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

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

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

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

<constructor-arg ref="bookRepository"/>

</bean>

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

<aop:aspectj-autoproxy/>

</beans>

**Main.java**

package com.library;

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

bookService.performService();

}

}

**OUTPUT :**

LoggingAspect: Before method execution

Repository operation is being performed.

LoggingAspect: After method execution