**Library Management Application - Spring Maven Project**

# Project Structure

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# pom.xml

<project xmlns="http://maven.apache.org/POM/4.0.0"  
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
 xsi:schemaLocation="http://maven.apache.org/POM/4.0.0   
 https://maven.apache.org/xsd/maven-4.0.0.xsd">  
  
 <modelVersion>4.0.0</modelVersion>  
 <groupId>com.library</groupId>  
 <artifactId>LibraryManagement</artifactId>  
 <version>0.0.1-SNAPSHOT</version>  
 <packaging>war</packaging>  
  
 <properties>  
 <java.version>1.8</java.version>  
 </properties>  
  
 <dependencies>  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>5.3.29</version>  
 </dependency>  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-aop</artifactId>  
 <version>5.3.29</version>  
 </dependency>  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-webmvc</artifactId>  
 <version>5.3.29</version>  
 </dependency>  
 <dependency>  
 <groupId>javax.servlet</groupId>  
 <artifactId>javax.servlet-api</artifactId>  
 <version>4.0.1</version>  
 <scope>provided</scope>  
 </dependency>  
 </dependencies>  
  
 <build>  
 <plugins>  
 <plugin>  
 <artifactId>maven-compiler-plugin</artifactId>  
 <version>3.8.1</version>  
 <configuration>  
 <source>${java.version}</source>  
 <target>${java.version}</target>  
 </configuration>  
 </plugin>  
 </plugins>  
 </build>  
</project>

# BookRepository.java

package com.library.repository;  
  
public class BookRepository {  
 public String[] getBooks() {  
 return new String[] { "The Alchemist", "Clean Code", "Spring in Action" };  
 }  
}

# BookService.java

package com.library.service;  
  
import com.library.repository.BookRepository;  
  
public class BookService {  
 private BookRepository bookRepository;  
  
 public void setBookRepository(BookRepository bookRepository) {  
 this.bookRepository = bookRepository;  
 }  
  
 public void listBooks() {  
 System.out.println("Listing books from BookService:");  
 for (String book : bookRepository.getBooks()) {  
 System.out.println("- " + book);  
 }  
 }  
}

# BookController.java

package com.library.controller;  
  
import com.library.service.BookService;  
  
public class BookController {  
 private BookService bookService;  
  
 public void setBookService(BookService bookService) {  
 this.bookService = bookService;  
 }  
  
 public void showBooks() {  
 bookService.listBooks();  
 }  
}

# LoggingAspect.java

package com.library.aspect;  
  
import org.aspectj.lang.JoinPoint;  
import org.aspectj.lang.annotation.Aspect;  
import org.aspectj.lang.annotation.Before;  
  
@Aspect  
public class LoggingAspect {  
 @Before("execution(\* com.library.service.\*.\*(..))")  
 public void logBefore(JoinPoint joinPoint) {  
 System.out.println("[LOG] Before executing: " + joinPoint.getSignature().getName());  
 }  
}

# LibraryManagementApplication.java

package com.library;  
  
import com.library.controller.BookController;  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
  
public class LibraryManagementApplication {  
 public static void main(String[] args) {  
 ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");  
 BookController controller = (BookController) context.getBean("bookController");  
 controller.showBooks();  
 }  
}

# applicationContext.xml

<beans xmlns="http://www.springframework.org/schema/beans"  
 xmlns:aop="http://www.springframework.org/schema/aop"  
 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  
 http://www.springframework.org/schema/aop   
 http://www.springframework.org/schema/aop/spring-aop.xsd">  
  
 <bean id="bookRepository" class="com.library.repository.BookRepository" />  
 <bean id="bookService" class="com.library.service.BookService">  
 <property name="bookRepository" ref="bookRepository"/>  
 </bean>  
 <bean id="bookController" class="com.library.controller.BookController">  
 <property name="bookService" ref="bookService"/>  
 </bean>  
  
 <bean id="loggingAspect" class="com.library.aspect.LoggingAspect" />  
 <aop:aspectj-autoproxy />  
</beans>

# web.xml

<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"  
 version="3.1">  
 <display-name>Library Management App</display-name>  
</web-app>