**Exercise 1: Configuring a Basic Spring Application**

**Scenario:**

Your company is developing a web application for managing a library. You need to use the Spring Framework to handle the backend operations.

**Spring application is using XML-based configuration :-**

App.java :-

package org.example1;  
  
  
  
import org.example1.service.BookService;  
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 = context.getBean("bookService", BookService.class);  
 bookService.displayBook(1);  
 }  
}

**BookService.java :-**

package org.example1.service;  
  
  
import org.example1.repository.BookRepository;  
  
public class BookService {  
  
 private BookRepository bookRepository;  
  
 // Setter for dependency injection  
 public void setBookRepository(BookRepository bookRepository) {  
 this.bookRepository = bookRepository;  
 }  
  
 public void displayBook(int id) {  
 String book = bookRepository.getBookById(id);  
 System.*out*.println("Retrieved: " + book);  
 }  
}

**BookRepository.java :-**

package org.example1.repository;  
  
  
  
public class BookRepository {  
  
 public String getBookById(int id) {  
 return "Book#" + id + " - Clean Code by Robert C. Martin";  
 }  
}

**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="org.example1.repository.BookRepository"/>  
 <bean id="bookService" class="org.example1.service.BookService">  
 <property name="bookRepository" ref="bookRepository"/>  
 </bean>  
  
</beans>

**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 http://maven.apache.org/xsd/maven-4.0.0.xsd">  
 <modelVersion>4.0.0</modelVersion>  
  
 <groupId>org.example1</groupId>  
 <artifactId>LibraryManagement</artifactId>  
 <version>1.0-SNAPSHOT</version>  
 <packaging>jar</packaging>  
  
 <name>LibraryManagement</name>  
 <url>http://maven.apache.org</url>  
  
 <properties>  
 <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>  
 </properties>  
  
 <dependencies>  
 <dependency>  
 <groupId>junit</groupId>  
 <artifactId>junit</artifactId>  
 <version>3.8.1</version>  
 <scope>test</scope>  
 </dependency>  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>6.0.12</version>  
 </dependency>  
 </dependencies>  
</project>

**Output :-**

