## Exercise 1: Configuring a Basic Spring Application Scenario:

## 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>com.library</groupId>  
 <artifactId>LibraryManagement</artifactId>  
 <version>1.0</version>  
  
 <dependencies>  
 <!-- Spring Core Context -->  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>5.3.34</version>  
 </dependency>  
 </dependencies>  
</project>

**BookRepository.java (src/main/java/com/library/repository)**

package com.library.repository;  
  
public class BookRepository {  
 public void getBook() {  
 System.out.println("Fetching book from repository...");  
 }  
}

## BookService.java (src/main/java/com/library/service)

package com.library.service;  
  
import com.library.repository.BookRepository;  
  
public class BookService {  
 private BookRepository repository;  
  
 // Setter method for Dependency Injection  
 public void setRepository(BookRepository repository) {  
 this.repository = repository;  
 }  
  
 public void displayBook() {  
 repository.getBook();  
 }  
}

## 4. MainApp.java (src/main/java/com/library)

package com.library;  
  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
import com.library.service.BookService;  
  
public class MainApp {  
 public static void main(String[] args) {  
 // Load Spring application context from XML  
 ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");  
  
 // Get the bookService bean  
 BookService bookService = context.getBean("bookService", BookService.class);  
  
 // Call service method  
 bookService.displayBook();  
 }  
}

## applicationContext.xml (src/main/resources)

<?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 for BookRepository -->  
 <bean id="bookRepository" class="com.library.repository.BookRepository" />  
  
 <!-- Bean for BookService -->  
 <bean id="bookService" class="com.library.service.BookService">  
 <property name="repository" ref="bookRepository" />  
 </bean>  
  
</beans>

## Output (from MainApp.java)

