Exercise 2: Implementing Dependency Injection

Code:

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"  
 xsi:schemaLocation="  
 http://www.springframework.org/schema/beans  
 http://www.springframework.org/schema/beans/spring-beans.xsd">  
  
 <!-- Repository Bean -->  
 <bean id="bookRepository" class="com.example.repository.BookRepository" />  
  
 <!-- Service Bean -->  
 <bean id="bookService" class="com.example.service.BookService">  
 <!-- Dependency Injection using setter -->  
 <property name="bookRepository" ref="bookRepository" />  
 </bean>  
  
</beans>

BookService.java

package com.example.service;  
  
import com.example.repository.BookRepository;  
  
public class BookService {  
  
 private BookRepository bookRepository;  
  
 // Setter for Dependency Injection  
 public void setBookRepository(BookRepository bookRepository) {  
 this.bookRepository = bookRepository;  
 }  
  
 public void addBook(String bookName) {  
 System.*out*.println("Adding book: " + bookName);  
 bookRepository.save(bookName);  
 }  
}

LibraryApp.java

package com.example;  
  
import com.example.service.BookService;  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
import java.util.\*;  
  
public class LibraryApp {  
 public static void main(String[] args) {  
 // Load Spring context  
 ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");  
  
 // Get BookService bean  
 BookService bookService = (BookService) context.getBean("bookService");  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.print("Enter the bookName: ");  
 String name = sc.nextLine();  
  
 // Use BookService  
 bookService.addBook(name);  
 }  
}

Output:

A black rectangular object with a black stripe

AI-generated content may be incorrect.

A black rectangular object with a white border

AI-generated content may be incorrect.