**Exercise 7: Implementing Constructor and Setter Injection**

**Scenario:**

The library management application requires both constructor and setter injection for better control over bean initialization.

***src/main/java/com/library/service/BookService.java***

package com.library.service;

import com.library.repository.BookRepository;

public class BookService {

private BookRepository bookRepository;

private String message;

public BookService(String message) {

this.message = message;

public void setBookRepository(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

public void displayBook() {

System.out.println("Message: " + message);

System.out.println("Book fetched: " + bookRepository.getBookTitle());

}

}

***src/main/resources/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">

<!-- BookRepository Bean -->

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

<!-- BookService Bean using both constructor and setter injection -->

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

<!-- Constructor Injection -->

<constructor-arg value="Welcome to Library Service" />

<!-- Setter Injection -->

<property name="bookRepository" ref="bookRepository" />

</bean>

</beans>

***src/main/java/com/library/MainApp.java***

package com.library;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class MainApp {

public static void main(String[] args) {

ApplicationContext context =

new ClassPathXmlApplicationContext("applicationContext.xml");

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

bookService.displayBook();

}

}

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

package com.library.repository;

public class BookRepository {

public String getBookTitle() {

return "Spring in Action by Craig Walls";

}

}

**OUTPUT:**

Message: Welcome to Library Service

Book fetched: Spring in Action by Craig Walls