**Spring Core Maven**

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

**Source Code**

**In Eclipse:**

* File → New → Maven Project
  + Package name **-> /LibraryComboInjection**
  + Add Spring Dependencies to **pom.xml**

1. <project xmlns="http://maven.apache.org/POM/4.0.0"
2. xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3. xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
4. https://maven.apache.org/xsd/maven-4.0.0.xsd">
5. <modelVersion>4.0.0</modelVersion>
6. <groupId>com.library</groupId>
7. <artifactId>LibraryComboInjection</artifactId>
8. <version>0.0.1-SNAPSHOT</version>
9. <properties>
10. <maven.compiler.source>1.8</maven.compiler.source>
11. <maven.compiler.target>1.8</maven.compiler.target>
12. </properties>
13. <dependencies>
14. <dependency>
15. <groupId>org.springframework</groupId>
16. <artifactId>spring-context</artifactId>
17. <version>5.3.32</version>
18. </dependency>
19. <dependency>
20. <groupId>commons-logging</groupId>
21. <artifactId>commons-logging</artifactId>
22. <version>1.2</version>
23. </dependency>
24. </dependencies>
25. </project>

**✅ Right-click the project → Maven → Update Projec**

**Make sure dependencies are downloaded**

* + **Create Packages and Classes:**
* **Create 3 packages:**
* Right-click src/main/java → New → Package
* Create:
* com.library.repository
* com.library.service
* com.library.main
  + BookRepository.java 🡪 com.library.repository

package com.library.repository;

public class BookRepository {

public void saveBook(String title) {

System.***out***.println("Book saved: " + title);

}

}

* + BookService.java 🡪 com.library.service

package com.library.service;

import com.library.repository.BookRepository;

public class BookService {

private BookRepository bookRepository;

private String serviceName;

// Constructor Injection

public BookService(String serviceName) {

this.serviceName = serviceName;

System.***out***.println("Constructor Injection: " + serviceName);

}

// Setter Injection

public void setBookRepository(BookRepository bookRepository) {

this.bookRepository = bookRepository;

}

public void addBook(String title) {

System.***out***.println(serviceName + " - Adding book: " + title);

bookRepository.saveBook(title);

}

}

* + LibraryApp.java 🡪 com.library.main

package com.library.main;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class LibraryApp {

public static void main(String[] args) {

ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");

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

bookService.addBook("Spring Combo Injection");

}

}

* + Create XML Configuration File.

* src/main/resources → Create **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="com.library.repository.BookRepository" />

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

<constructor-arg value="Library Service (Constructor)" />

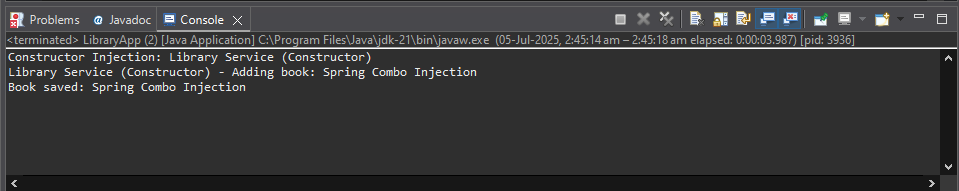
<property name="bookRepository" ref="bookRepository" />

</bean>

</beans>

* + Run the Application.
* Right-click LibraryApp.java → **Run As → Java Application**

**Output**

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