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

**BookRepository.java**

package org.example;  
  
public class BookRepository {  
 public void displayBooks() {  
 System.*out*.println("Displaying all books from repository.");  
 }  
}

**BookService.java**

package org.example;  
  
  
public class BookService {  
 private String libraryName;  
 private BookRepository bookRepository;  
  
 // Constructor for constructor injection  
 public BookService(String libraryName) {  
 this.libraryName = libraryName;  
 }  
  
 // Setter for setter injection  
 public void setBookRepository(BookRepository bookRepository) {  
 this.bookRepository = bookRepository;  
 }  
  
 public void listBooks() {  
 System.*out*.println("Welcome to " + libraryName + " Library!");  
 bookRepository.displayBooks();  
 }  
}

**Main.java**

package org.example;  
  
  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
  
public class Main {  
 public static void main(String[] args) {  
 ApplicationContext context = new ClassPathXmlApplicationContext("applicationContext.xml");  
  
 BookService bookService = (BookService) context.getBean("bookService");  
 bookService.listBooks();  
 }  
}

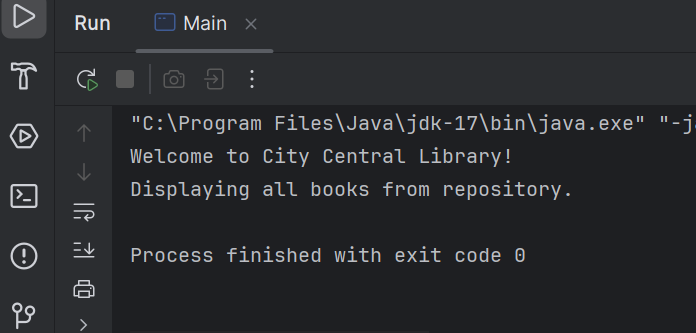
**applicationContext.xml**

<?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="org.example.BookRepository" />  
  
 <!-- BookService bean with constructor and setter injection -->  
 <bean id="bookService" class="org.example.BookService">  
 <!-- Constructor Injection -->  
 <constructor-arg value="City Central" />  
  
 <!-- Setter Injection -->  
 <property name="bookRepository" ref="bookRepository" />  
 </bean>  
  
</beans**>**

**Pom.xml**

<?xml version="1.0" encoding="UTF-8"?>  
<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.example</groupId>  
 <artifactId>Exercise5</artifactId>  
 <version>1.0-SNAPSHOT</version>  
  
 <properties>  
 <maven.compiler.source>17</maven.compiler.source>  
 <maven.compiler.target>17</maven.compiler.target>  
 <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>  
 </properties>  
 <dependencies><!-- Spring Context -->  
 <dependency>  
 <groupId>org.springframework</groupId>  
 <artifactId>spring-context</artifactId>  
 <version>5.3.36</version>  
 </dependency>  
 </dependencies>  
 <build>  
 <plugins>  
 <plugin>  
 <groupId>org.apache.maven.plugins</groupId>  
 <artifactId>maven-compiler-plugin</artifactId>  
 <version>3.8.1</version>  
 <configuration>  
 <source>1.8</source>  
 <target>1.8</target>  
 </configuration>  
 </plugin>  
 </plugins>  
 </build>  
  
  
</project>

**Output:**

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