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

**CODE:**

**BookService Class: -**

package org.Library.service;  
import org.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: Service Name = "+serviceName);  
 }  
 //Setter Injection  
 public void setBookRepository(BookRepository bookRepository) {  
 this.bookRepository = bookRepository;  
 System.*out*.println("Setter Injection: BookRepository set.");  
 }  
  
 public void addBook(String title){  
 System.*out*.println("[" + serviceName + "] Saving book...");  
 bookRepository.saveBook(title);  
 }  
}

**BookRepository Class: -**

package org.Library.repository;   
  
public class BookRepository {  
 public void saveBook(String title){  
 System.*out*.println("Saved Book: "+title);  
 }  
}

**applicationContext.xml file: -**

<?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  
 https://www.springframework.org/schema/beans/spring-beans.xsd">  
  
 <bean id="bookRepository" class="org.Library.repository.BookRepository"/>  
  
 <bean id="bookService" class="org.Library.service.BookService">  
 <!-- Constructor injection -->  
 <constructor-arg value="Library Management Service"/>  
 <!-- Setter injection -->  
 <property name="bookRepository" ref="bookRepository"/>  
 </bean>  
  
</beans>

**LibraryManagementApplication.java Class: -**

package org.Library;  
import org.Library.service.BookService;  
import org.springframework.context.ApplicationContext;  
import org.springframework.context.support.ClassPathXmlApplicationContext;  
  
public class LibraryManagementApplication {  
 public static void main(String[] args) {  
 ApplicationContext context= new ClassPathXmlApplicationContext("applicationContext.xml");  
  
 BookService bookService=(BookService) context.getBean("bookService");  
 bookService.addBook("All about Spring Core");  
 }  
}

**OUTPUT:**

