Exercise 1: Configuring a Basic Spring Application

# Overview

This document describes the steps followed to complete Exercise 1 for setting up a basic Spring application using Spring Core with XML configuration. The project simulates a simple library management backend setup using Spring beans, dependency injection, and modular code structure.

# Step 1: Maven Project Setup

A Maven project named 'LibraryManagement' was created using IntelliJ and start.spring.io

# Step 2: XML Configuration

An XML configuration file named 'applicationContext.xml' was created in src/main/resources directory with the following content:

<?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 -->  
 <bean id="bookService" class="com.library.service.BookService"/>  
  
</beans>

# Step 3: Created Java Packages and Classes

## BookRepository.java

package com.library.repository;  
  
public class BookRepository {  
 public void saveBook() {  
 System.*out*.println("BookRepository: Saving book to the database...");  
 }  
}

## and

## BookService.java

package com.library.service;  
  
public class BookService {  
 public void performOperation() {  
 System.*out*.println("BookService: Performing book operation...");  
 }  
}

# Step 4: Running the Application

# LibraryManagementApplication.java

package com.exercise1.LibraryManagement;  
  
import com.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 = context.getBean("bookService", BookService.class);  
 bookService.performOperation();  
 }  
}

# Execution Result

The Application is running