**Exercise 1: Configuring a Basic Spring Application**

**Scenario:**

**Your company is developing a web application for managing a library. You need to use the Spring Framework to handle the backend operations.**

**Main.java**

package com.lib;

import com.lib.repository.bookRepo;

import com.lib.service.bookServe;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class App

{

public static void main( String[] args )

{

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

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

BookRepository bookRepository = context.getBean(BookRepository.class);

}

}

**bookServe.java**

package com.lib.service;

public class bookServe {

public bookServe(){

System.out.println("This is a book service class");

}

}

**bookRepo.java**

package com.lib.repository;

public class bookRepo {

public bookRepo(){

System.out.println("This is a book repository class");

}

}

**AppTest.java**

package com.lib;

import static org.junit.Assert.assertTrue;

import org.junit.Test;

/\*\*

 \* Unit test for simple App.

 \*/

public class AppTest

{

    /\*\*

     \* Rigorous Test :-)

     \*/

    @Test

    public void shouldAnswerWithTrue()

    {

      assertTrue( true );

    }

}

**applicationContext.xml**

<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="bookService" class="com.lib.service.bookServe">

</bean>

<bean id="bookRepo" class="com.lib.repository.bookRepo">

</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>com.library</groupId>

<artifactId>LibraryManagement</artifactId>

<version>1.0-SNAPSHOT</version>

<name>LibraryManagement</name>

<!-- FIXME change it to the project's website -->

<url>http://www.example.com</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

<maven.compiler.source>1.7</maven.compiler.source>

<maven.compiler.target>1.7</maven.compiler.target>

</properties>

<dependencies>

<dependency>

<groupId>org.springframework</groupId>

<artifactId>spring-context</artifactId>

<version>6.1.11</version>

</dependency>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.11</version>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<pluginManagement><!-- lock down plugins versions to avoid using Maven defaults (may be moved to parent pom) -->

<plugins>

<!-- clean lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycles.html#clean\_Lifecycle -->

<plugin>

<artifactId>maven-clean-plugin</artifactId>

<version>3.1.0</version>

</plugin>

<!-- default lifecycle, jar packaging: see https://maven.apache.org/ref/current/maven-core/default-bindings.html#Plugin\_bindings\_for\_jar\_packaging -->

<plugin>

<artifactId>maven-resources-plugin</artifactId>

<version>3.0.2</version>

</plugin>

<plugin>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.8.0</version>

</plugin>

<plugin>

<artifactId>maven-surefire-plugin</artifactId>

<version>2.22.1</version>

</plugin>

<plugin>

<artifactId>maven-jar-plugin</artifactId>

<version>3.0.2</version>

</plugin>

<plugin>

<artifactId>maven-install-plugin</artifactId>

<version>2.5.2</version>

</plugin>

<plugin>

<artifactId>maven-deploy-plugin</artifactId>

<version>2.8.2</version>

</plugin>

<!-- site lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycles.html#site\_Lifecycle -->

<plugin>

<artifactId>maven-site-plugin</artifactId>

<version>3.7.1</version>

</plugin>

<plugin>

<artifactId>maven-project-info-reports-plugin</artifactId>

<version>3.0.0</version>

</plugin>

</plugins>

</pluginManagement>

</build>

</project>