**WEEK-3**

**SPRING CORE AND MAVEN**

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

**1.pom.xml:**

<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>

    <dependencies>

        <!-- Spring Core (includes context for ApplicationContext) -->

        <dependency>

            <groupId>org.springframework</groupId>

            <artifactId>spring-context</artifactId>

            <version>5.3.32</version>

        </dependency>

    </dependencies>

    <build>

        <plugins>

            <!-- Plugin to run main class via mvn exec:java -->

            <plugin>

                <groupId>org.codehaus.mojo</groupId>

                <artifactId>exec-maven-plugin</artifactId>

                <version>3.1.0</version>

                <configuration>

                    <mainClass>com.library.MainApp</mainClass>

                </configuration>

            </plugin>

        </plugins>

    </build>

</project>

**2.BookRepository.java:**

package com.library.repository;

public class BookRepository {

    public void fetchBooks() {

        System.out.println("Fetching books from the repository");

    }

}

**3.BookService.java:**

package com.library.service;

import com.library.repository.BookRepository;

public class BookService {

    private BookRepository bookRepository;

    public void setBookRepository(BookRepository bookRepository) {

        this.bookRepository = bookRepository;

    }

    public void listBooks() {

        System.out.println("BookService: assigning to BookRepository");

        bookRepository.fetchBooks();

    }

}

**4.MainApp.java:**

package com.library;

import com.library.service.BookService;

import org.springframework.context.ApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class MainApp {

    public static void main(String[] args) {

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

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

        bookService.listBooks();

    }

}

**5.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">

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

    </bean>

</beans>

**Output:**

