

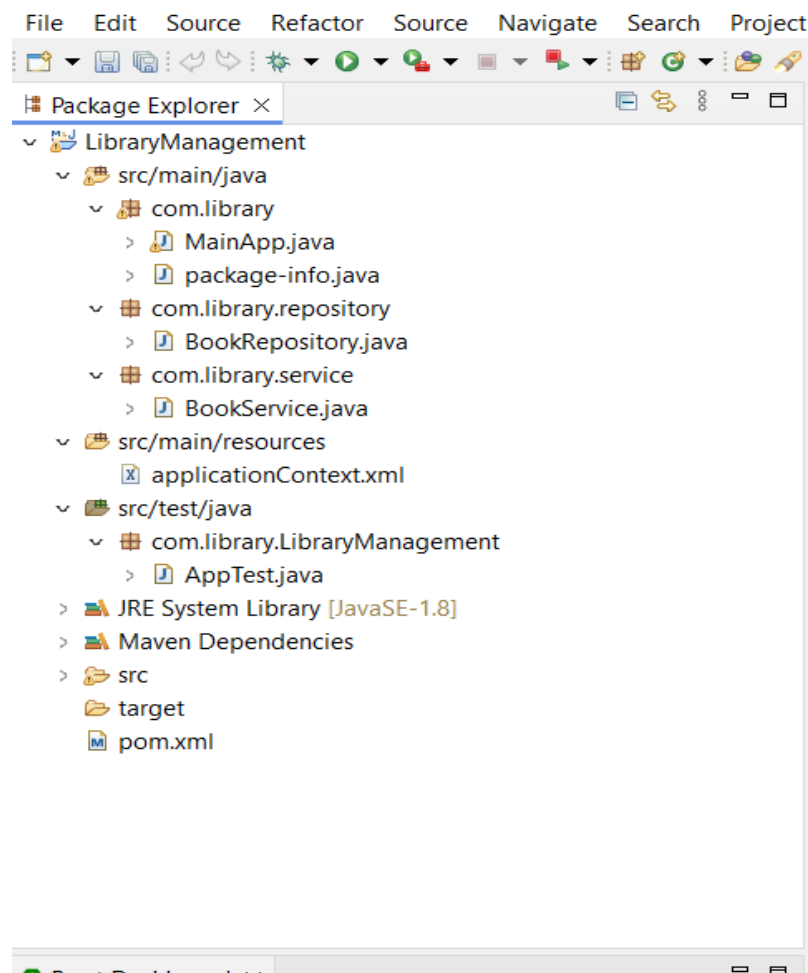
## Exercise 1: Configuring a Basic Spring Application

### FROM FILE : Spring Core Maven

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#### **In Spring Tool Suite 4 – Platform**

- . Createing a Maven project named LibraryManagement.
- .Create an XML configuration file named applicationContext.xml in the src/main/resources directory.
- .Create a package com.library.service and add a class BookService.
- .Create a package com.library.repository and add a class BookRepository.



## Pom.xml:

### Added dependency:

<dependency>

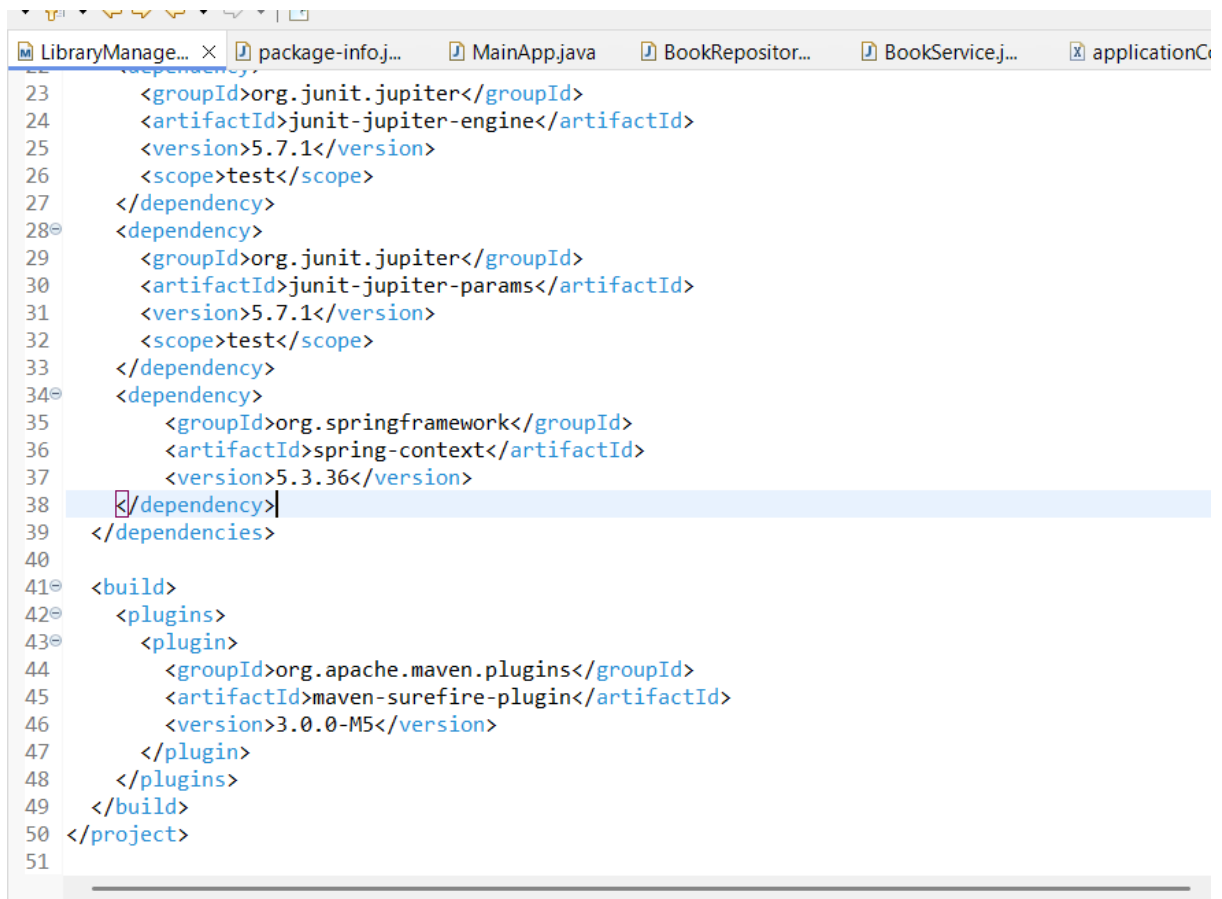
    <groupId>org.springframework</groupId>

    <artifactId>spring-context</artifactId>

    <version>5.3.36</version>

</dependency>

### Pic from SpringTool:

A screenshot of an IDE window showing a Maven pom.xml file. The file is open in a tab titled 'package-info.j...'. The code is as follows:

```
23     <groupId>org.junit.jupiter</groupId>
24     <artifactId>junit-jupiter-engine</artifactId>
25     <version>5.7.1</version>
26     <scope>test</scope>
27 </dependency>
28 <dependency>
29     <groupId>org.junit.jupiter</groupId>
30     <artifactId>junit-jupiter-params</artifactId>
31     <version>5.7.1</version>
32     <scope>test</scope>
33 </dependency>
34 <dependency>
35     <groupId>org.springframework</groupId>
36     <artifactId>spring-context</artifactId>
37     <version>5.3.36</version>
38 </dependency>
39 </dependencies>
40
41 <build>
42     <plugins>
43         <plugin>
44             <groupId>org.apache.maven.plugins</groupId>
45             <artifactId>maven-surefire-plugin</artifactId>
46             <version>3.0.0-M5</version>
47         </plugin>
48     </plugins>
49 </build>
50 </project>
51
```

The line numbers 23 through 51 are visible on the left side of the editor. The IDE interface includes a toolbar at the top and several open tabs: 'LibraryManage...', 'package-info.j...', 'MainApp.java', 'BookRepositor...', 'BookService.j...', and 'applicationC...'. The 'package-info.j...' tab is currently active.

## Book.Repository.java :

### Code:

```
package com.library.repository;
```

```
public class BookRepository {
```

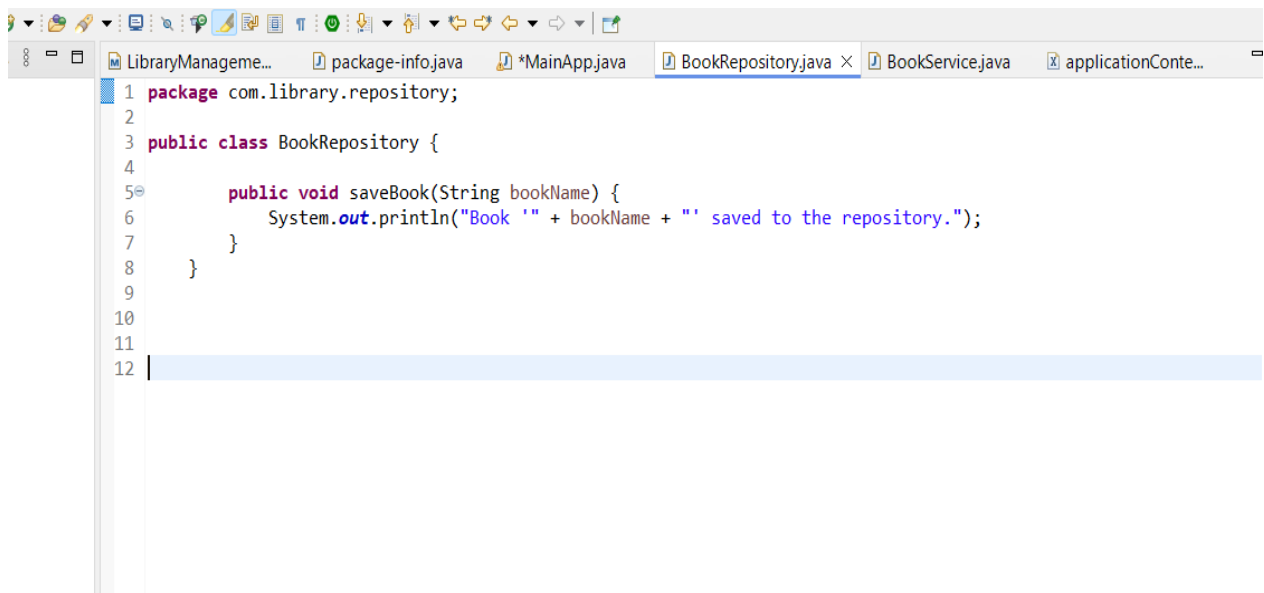
```
    public void saveBook(String bookName) {
```

```
        System.out.println("Book " + bookName + " saved to the  
repository.");
```

```
    }
```

```
}
```

### Pic from SpringTool:



## **BookService.java :**

### **Code:**

```
package com.library.service;

import com.library.repository.BookRepository;

public class BookService {

    private BookRepository bookRepository;

    // Setter Injection

    public void setBookRepository(BookRepository
bookRepository) {

        this.bookRepository = bookRepository;
    }

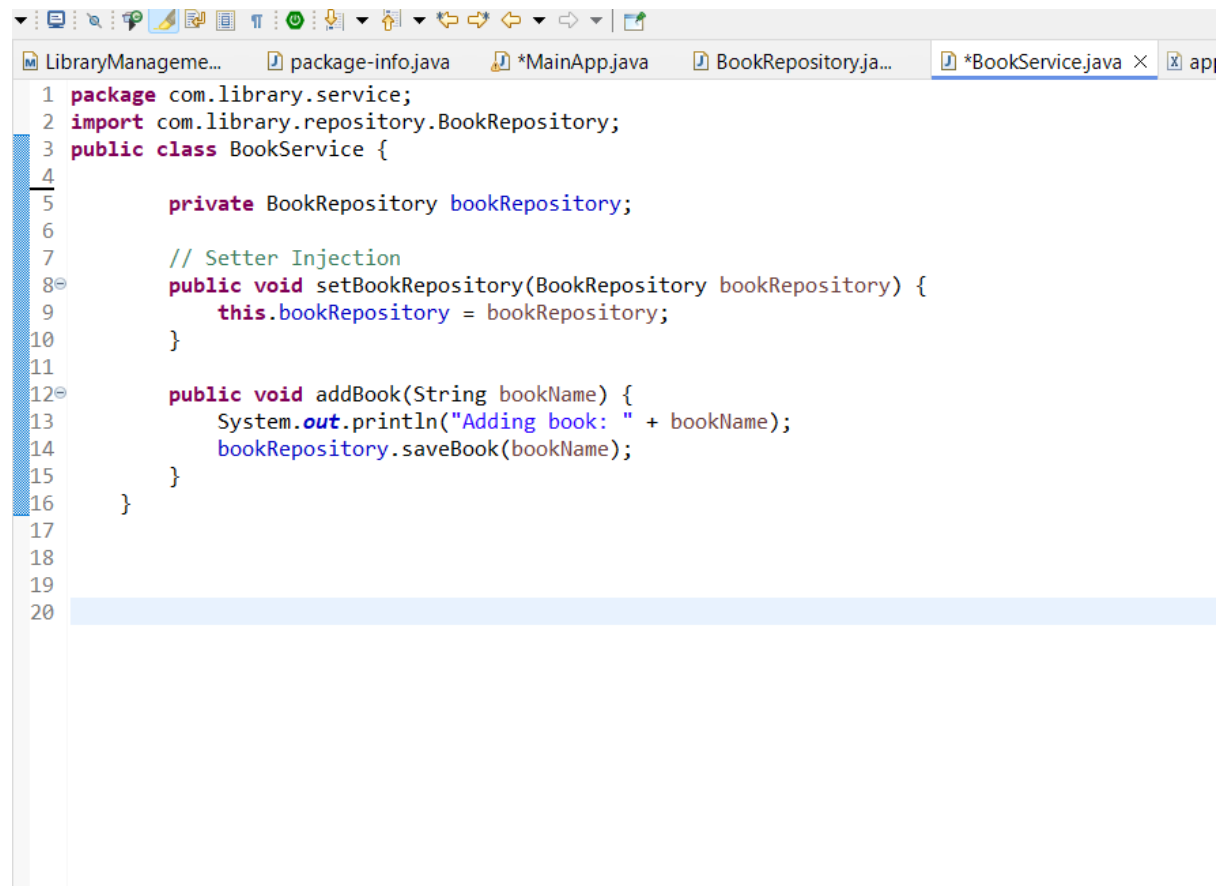
    public void addBook(String bookName) {

        System.out.println("Adding book: " + bookName);

        bookRepository.saveBook(bookName);
    }

}
```

## Pic from SpringTool:



## applicationContext.xml file:

### code:

```
<?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="
```

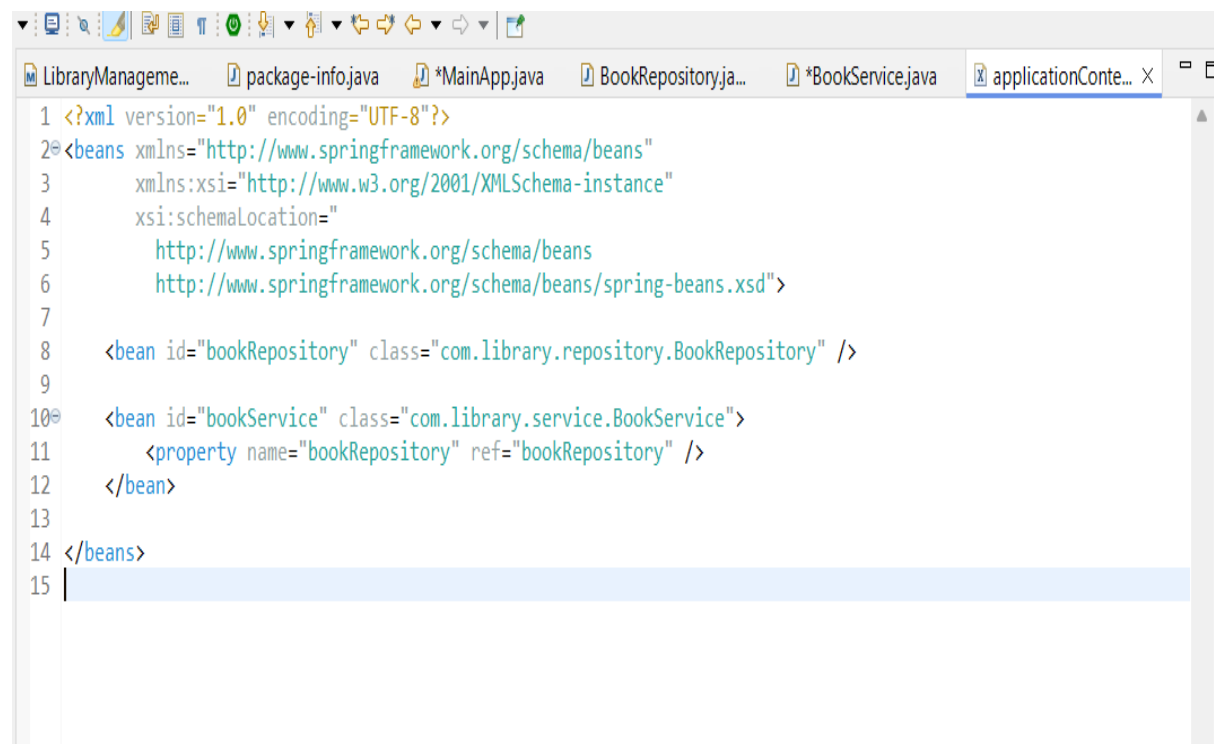
```
        http://www.springframework.org/schema/beans
```

```
        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>
```

**Pic from SpringTool:**

A screenshot of the SpringTool IDE interface. The top toolbar contains various icons for file operations and development. Below the toolbar, a tab bar shows several open files: 'LibraryManageme...', 'package-info.java', '\*MainApp.java', 'BookRepositoryja...', '\*BookService.java', and 'applicationConte...'. The 'applicationConte...' tab is active, displaying an XML configuration file. The XML content is as follows:

```
1 <?xml version="1.0" encoding="UTF-8"?>  
2 <beans xmlns="http://www.springframework.org/schema/beans"  
3     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
4     xsi:schemaLocation="  
5         http://www.springframework.org/schema/beans  
6         http://www.springframework.org/schema/beans/spring-beans.xsd">  
7  
8     <bean id="bookRepository" class="com.library.repository.BookRepository" />  
9  
10    <bean id="bookService" class="com.library.service.BookService">  
11        <property name="bookRepository" ref="bookRepository" />  
12    </bean>  
13  
14 </beans>  
15
```

## MainApp.java class:

### Code:

```
package com.library;
```

```
public class MainApp {
```

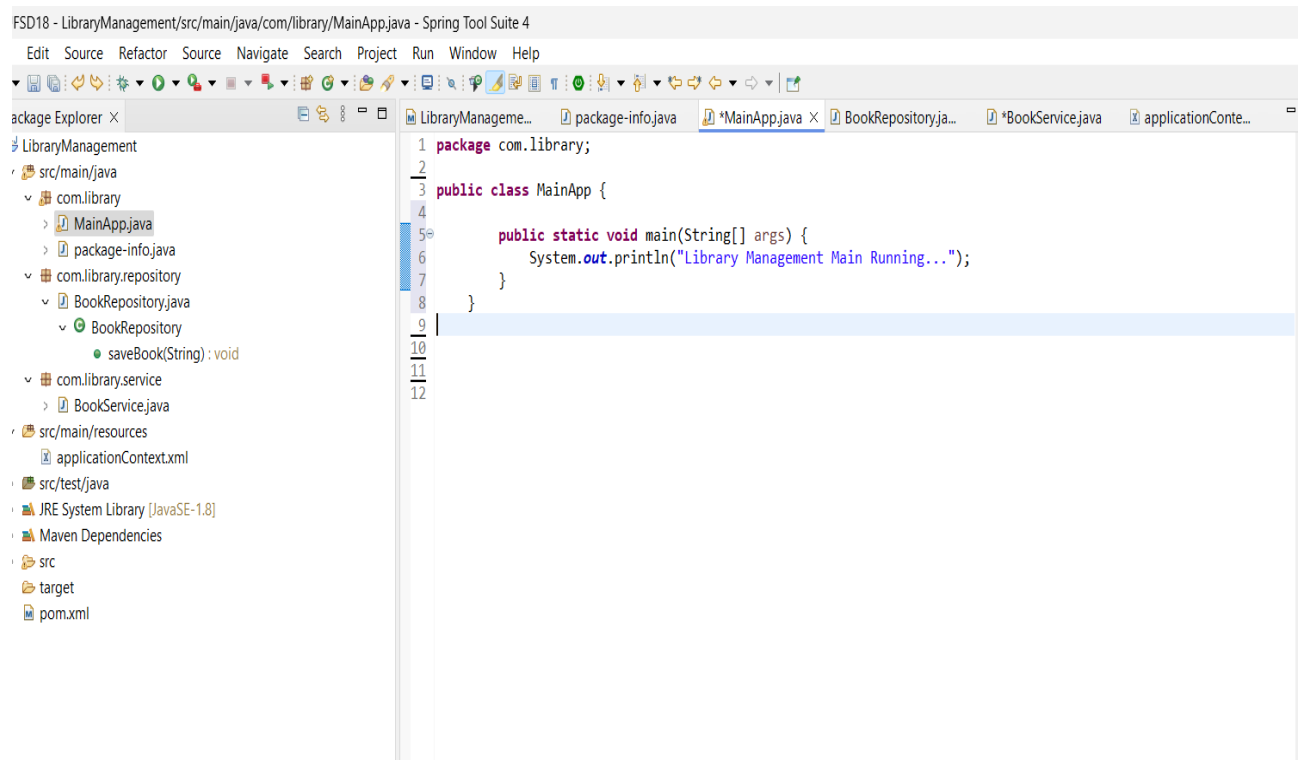
```
    public static void main(String[] args) {
```

```
        System.out.println("Library Management Main  
Running...");
```

```
    }
```

```
}
```

## Pic from SpringTool:



## Output: after running MainApp.java

Library Management Main Running...

## Pic from SpringTool:

