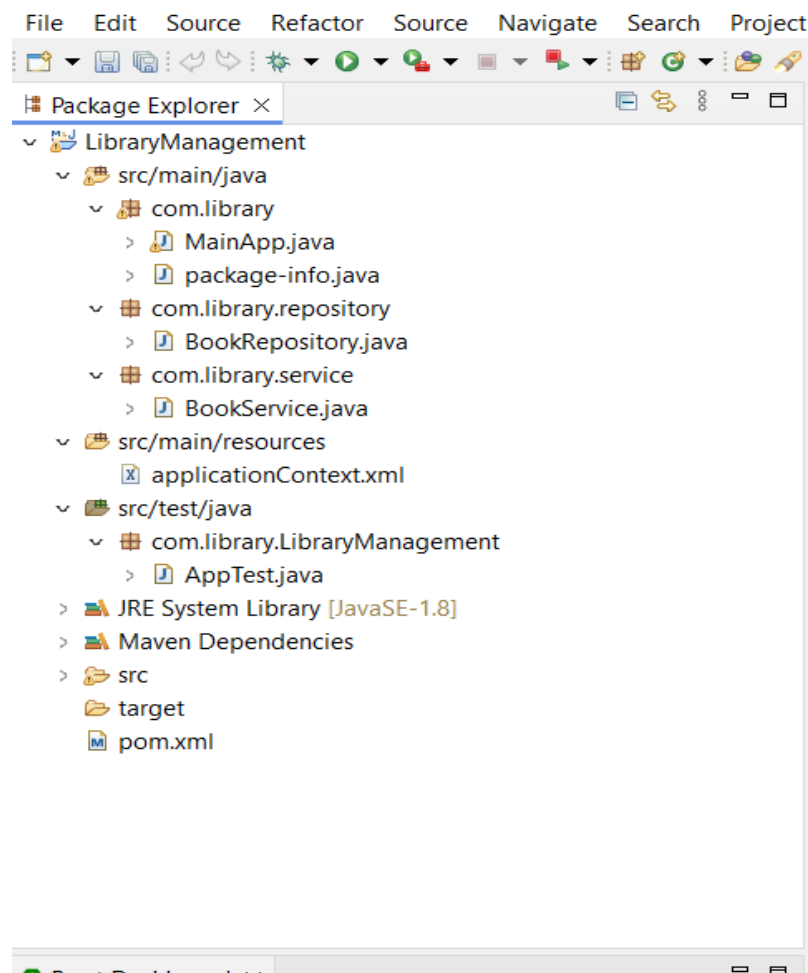# Exercise 1: Configuring a Basic Spring Application

FROM FILE : Spring Core_Maven

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.
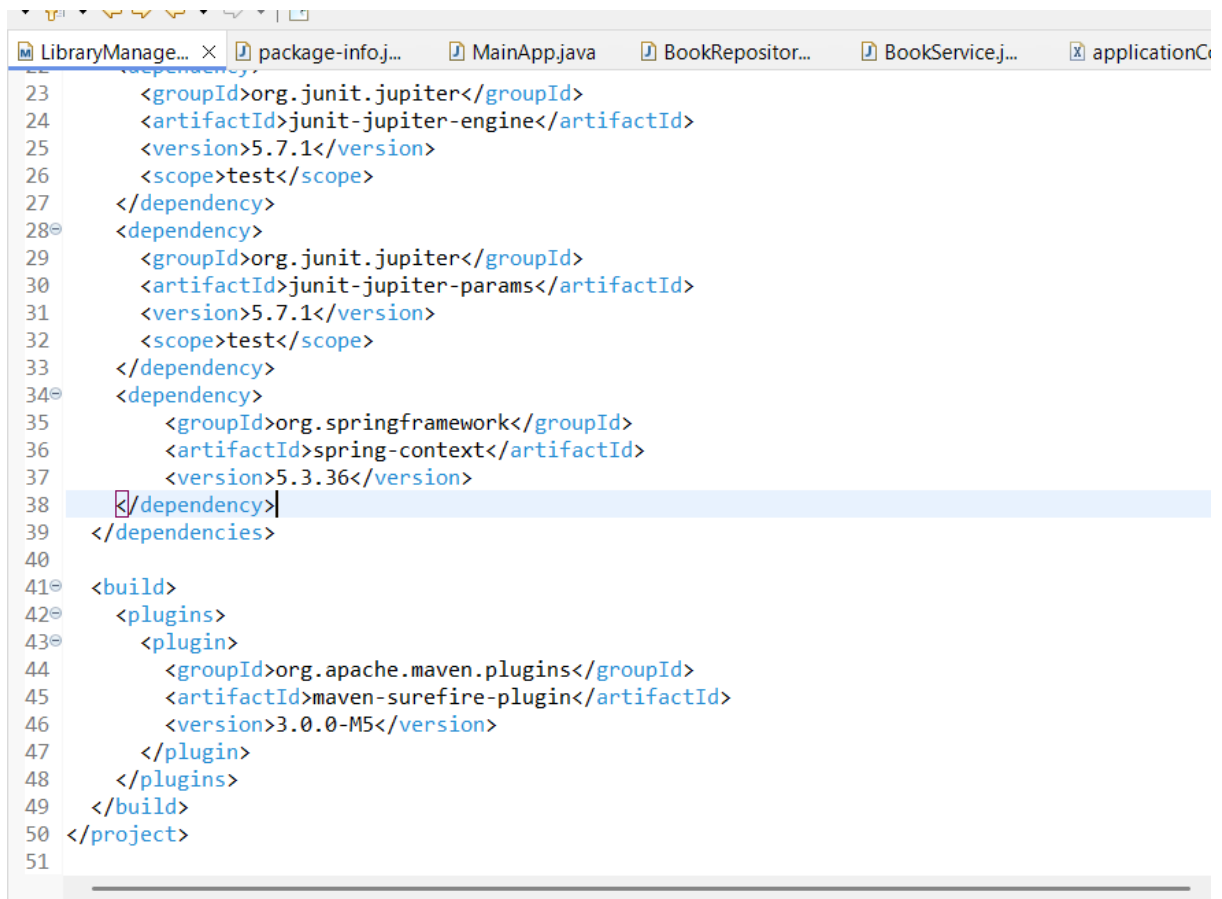
Pom.xml:

Added dependency:

```xml
<dependency>

    <groupId>org.springframework</groupId>

    <artifactId>spring-context</artifactId>

    <version>5.3.36</version>

</dependency>
```

Pic from SpringTool:


```xml
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
```

Book.Repository.java :

Code:

```java
package com.library.repository;


public class BookRepository {


    public void saveBook(String bookName) {
        System.out.println("Book '" + bookName + "' saved to the repository.");
    }

}
```
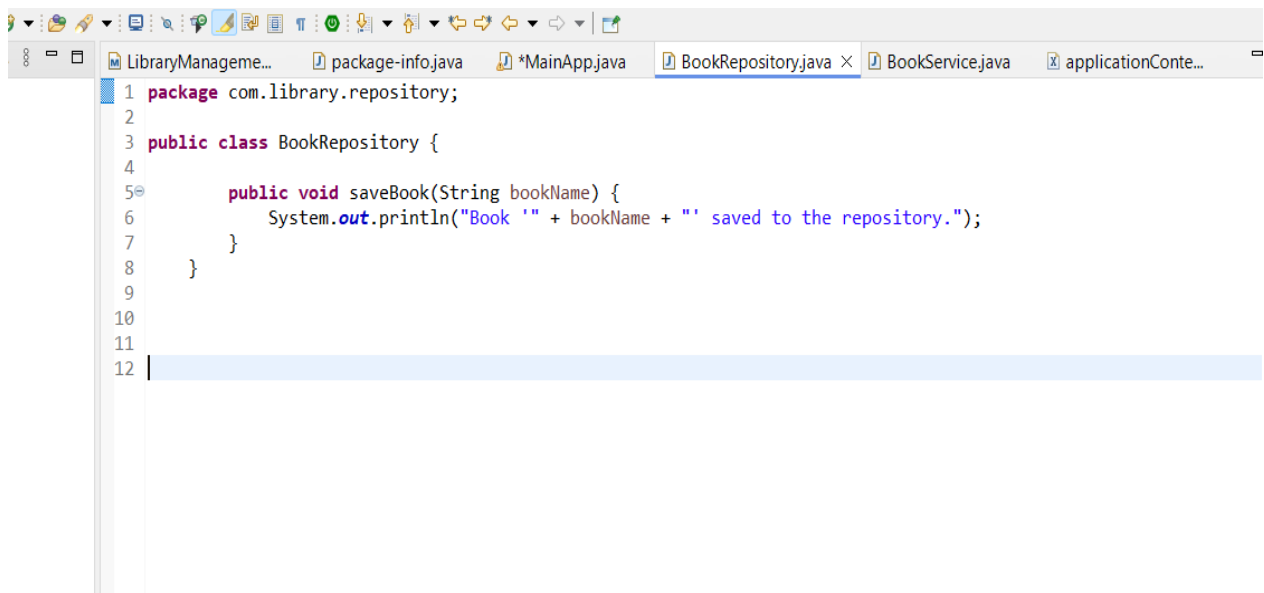
Pic from SpringTool:

BookService.java :

Code:

```java
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:


```java
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);
    }
}
```
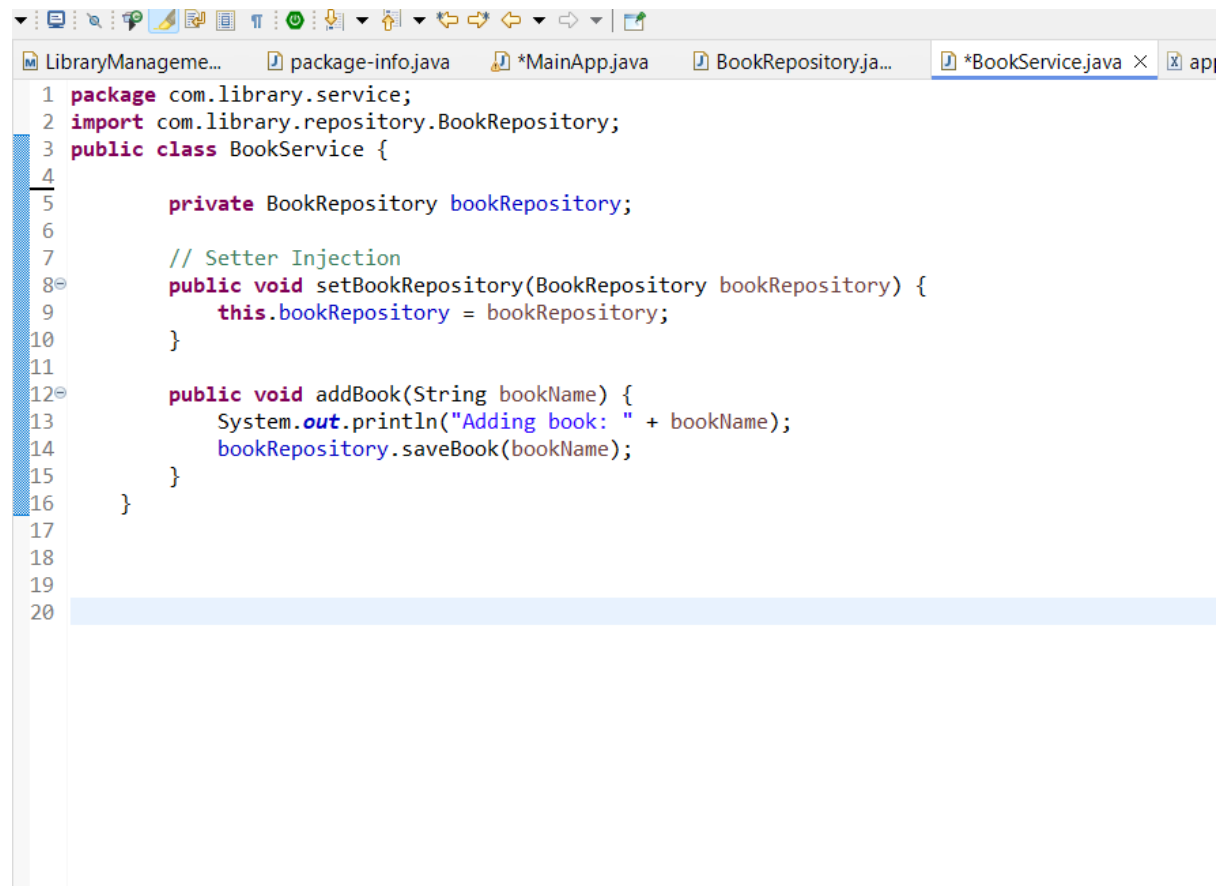
applicationContext.xml file:

code:

```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">
```
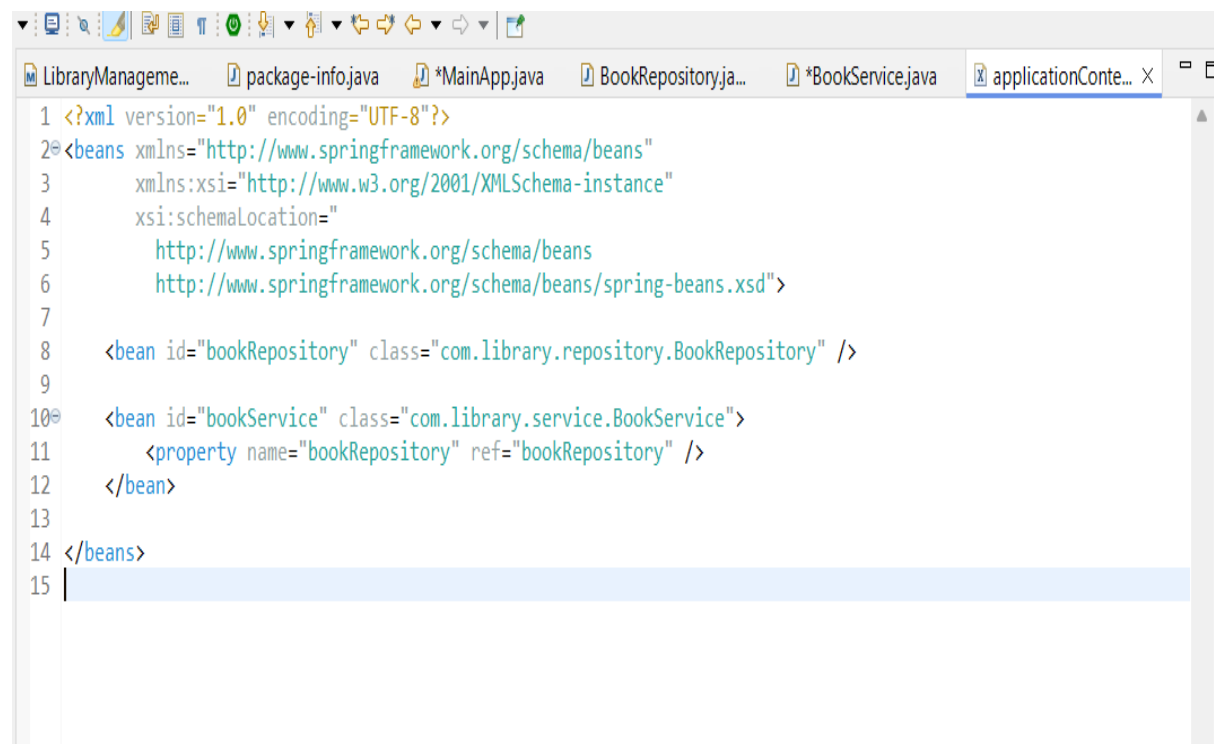
```xml
    <bean id="bookRepository"
class="com.library.repository.BookRepository" />


    <bean id="bookService" class="com.library.service.BookService">
        <property name="bookRepository" ref="bookRepository" />
    </bean>
</beans>
```

Pic from SpringTool:


```xml
 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
```
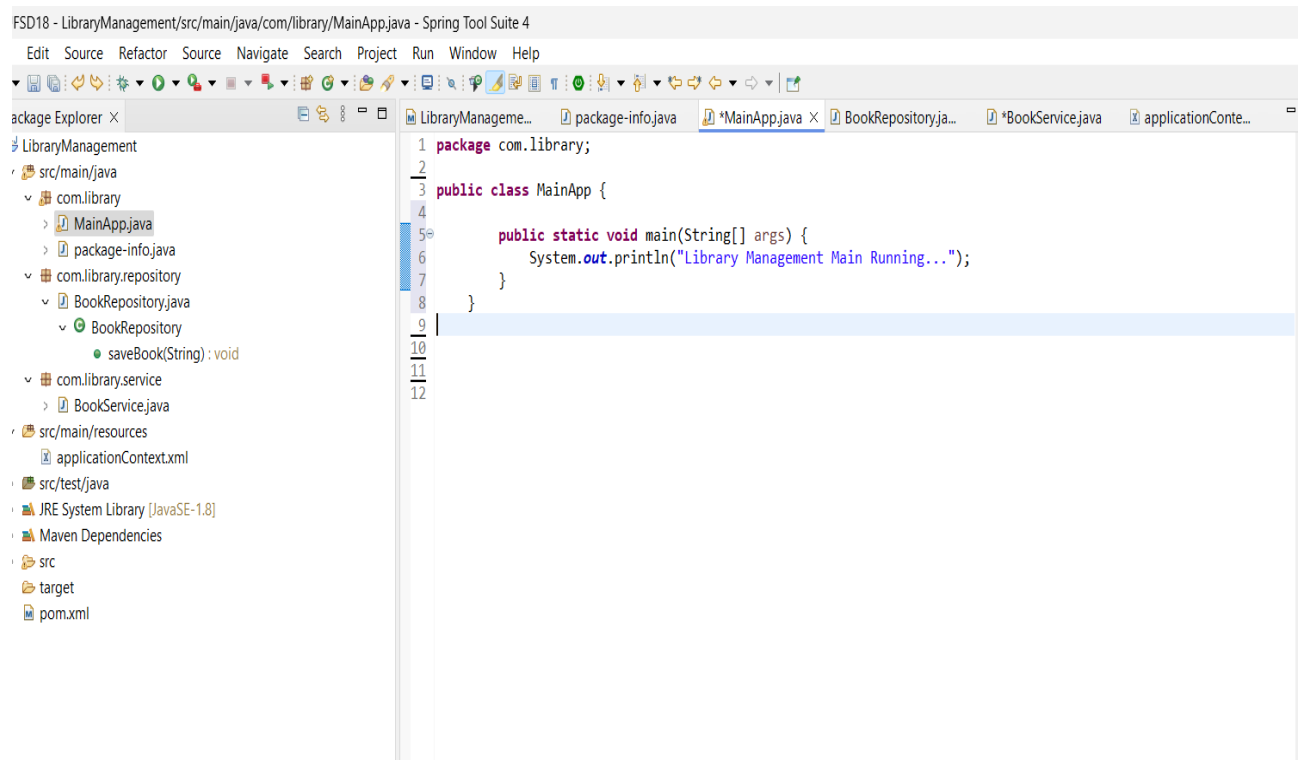
MainApp.java class:

Code:

```java
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: