

Exercise 1: Configuring a Basic Spring Application

Code:

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>
        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-context</artifactId>
            <version>5.3.36</version>
        </dependency>

        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-beans</artifactId>
            <version>5.3.36</version>
        </dependency>
    </dependencies>

</project>
```

BookRepository.java:

```
package com.library.repository;

public class BookRepository {

    public void saveBook(String bookName) {

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

```
}
```

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 addBook(String bookName) {

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

        bookRepository.saveBook(bookName);

    }

}
```

LibraryApp.java:

```
package com.libraries;

import com.library.service.BookService;
import org.springframework.context.ApplicationContext;
import org.springframework.context.support.ClassPathXmlApplicationContext;

public class LibraryApp {

    public static void main(String[] args) {

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

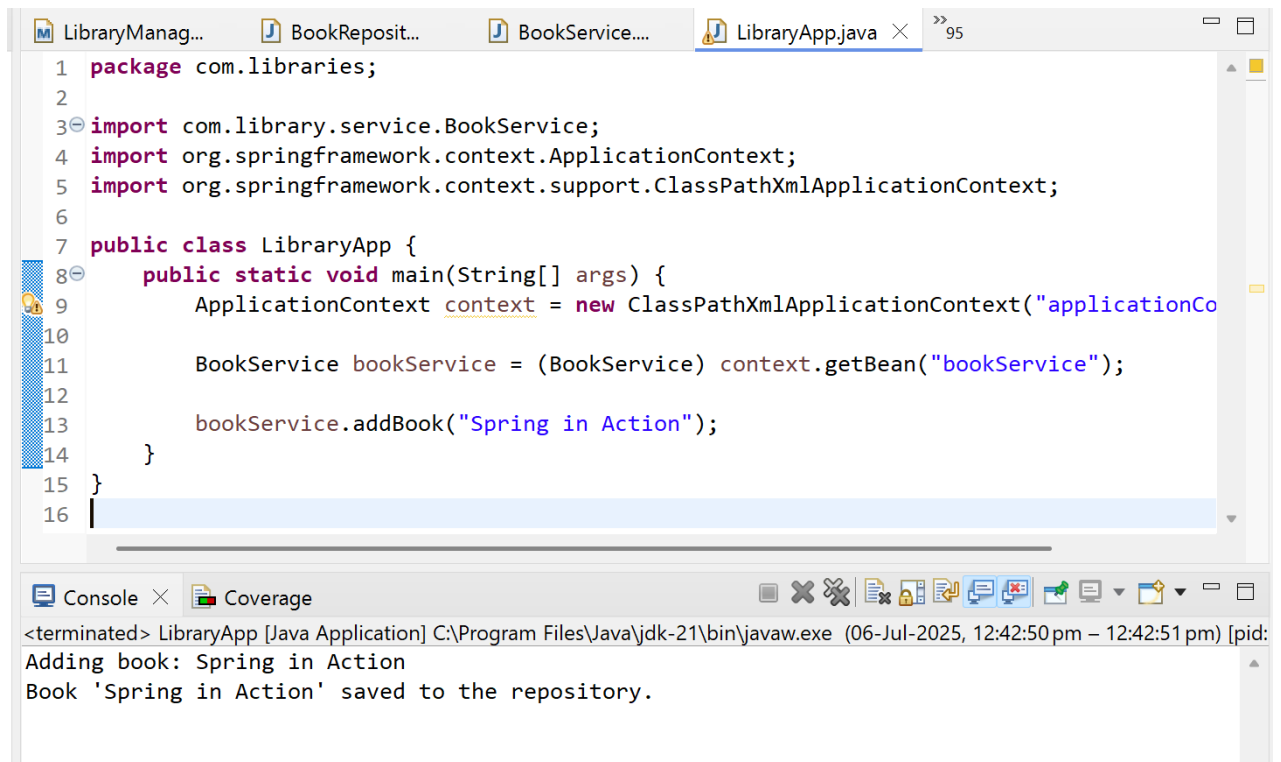
        BookService bookService = (BookService) context.getBean("bookService");

        bookService.addBook("Spring in Action");

    }

}
```

Output:



The screenshot shows an IDE with four tabs: LibraryManag..., BookReposit..., BookService..., and LibraryApp.java. The LibraryApp.java tab is active, displaying the following Java code:

```
1 package com.libraries;
2
3 import com.library.service.BookService;
4 import org.springframework.context.ApplicationContext;
5 import org.springframework.context.support.ClassPathXmlApplicationContext;
6
7 public class LibraryApp {
8     public static void main(String[] args) {
9         ApplicationContext context = new ClassPathXmlApplicationContext("applicationCo
10
11         BookService bookService = (BookService) context.getBean("bookService");
12
13         bookService.addBook("Spring in Action");
14     }
15 }
16
```

Below the code editor, the Console tab is active, showing the following output:

```
<terminated> LibraryApp [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (06-Jul-2025, 12:42:50 pm – 12:42:51 pm) [pid:
Adding book: Spring in Action
Book 'Spring in Action' saved to the repository.
```