**WEEK-3**

**SOLUTIONS OF SPRING CORE and MAVEN**

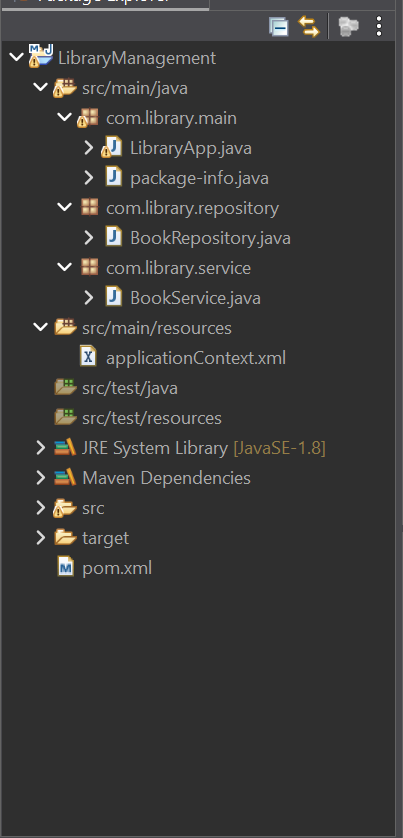
**Exercise 1: Configuring a Basic Spring Application**

**Scenario:**

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

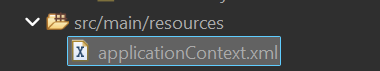
Sol->

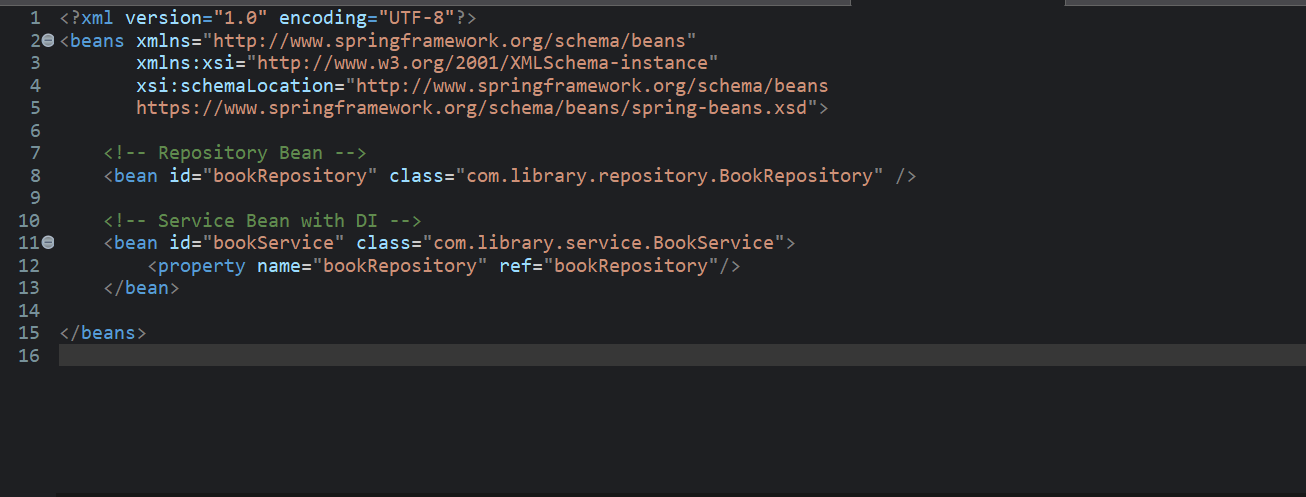
1. Set Up a Spring Project**:**



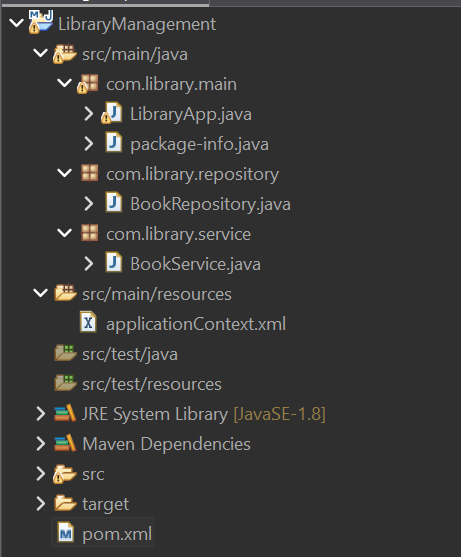


1. Configure the Application Context:

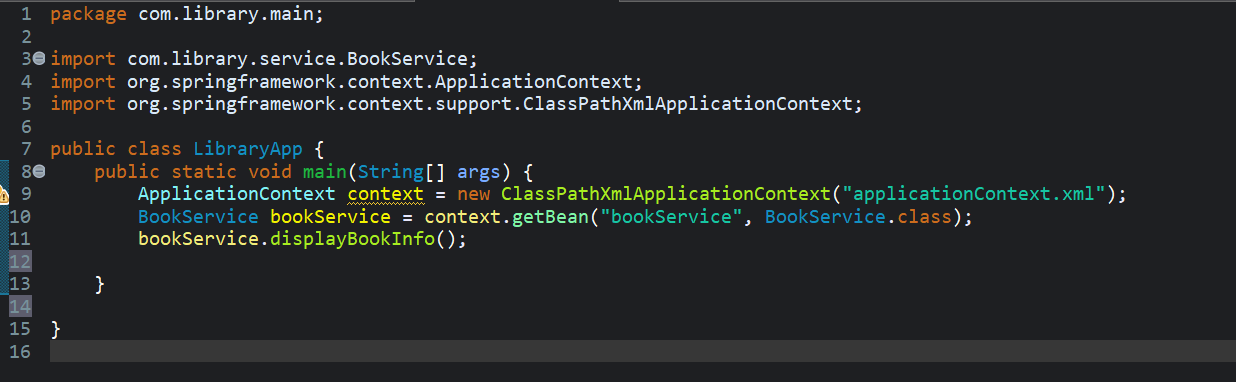




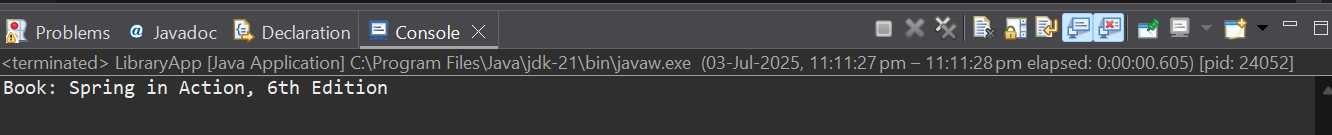
1. Define Service and Repository Classes:



1. Run the Application**:**



OUTPUT->

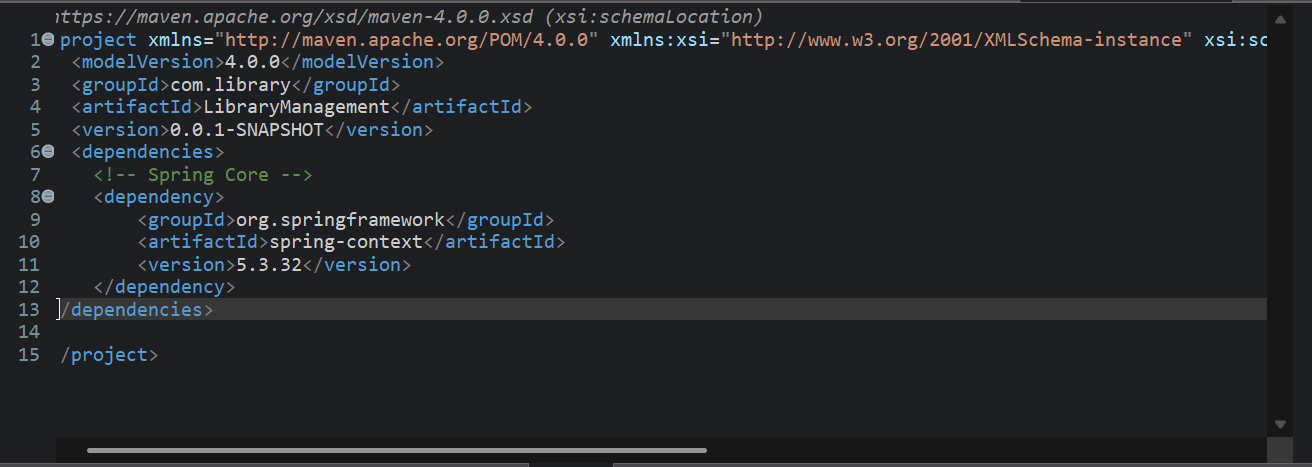


**Exercise 2: Implementing Dependency Injection**

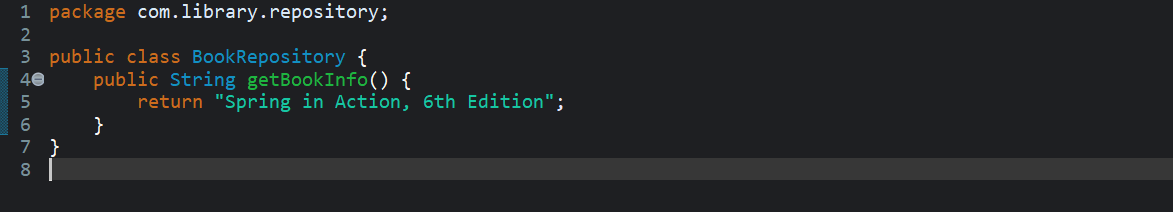
**Scenario:**

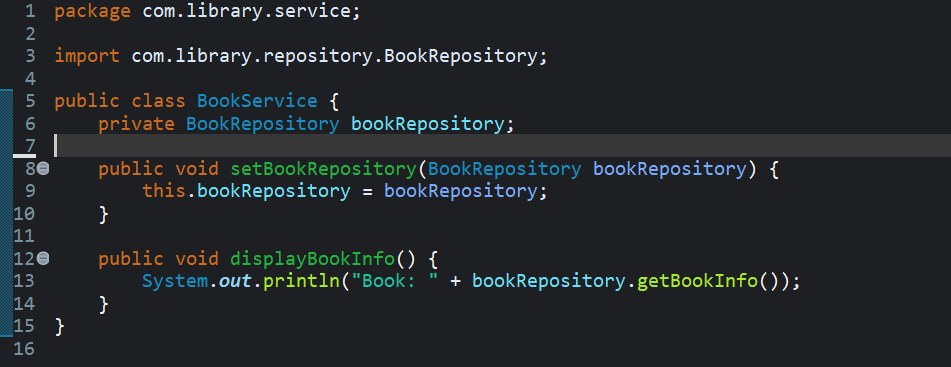
In the library management application, you need to manage the dependencies between the BookService and BookRepository classes using Spring's IoC and DI.

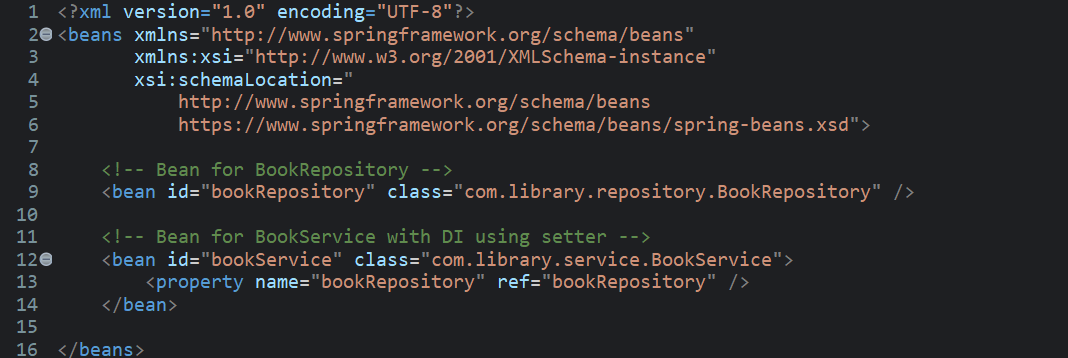
a)Modify the XML Configuration:



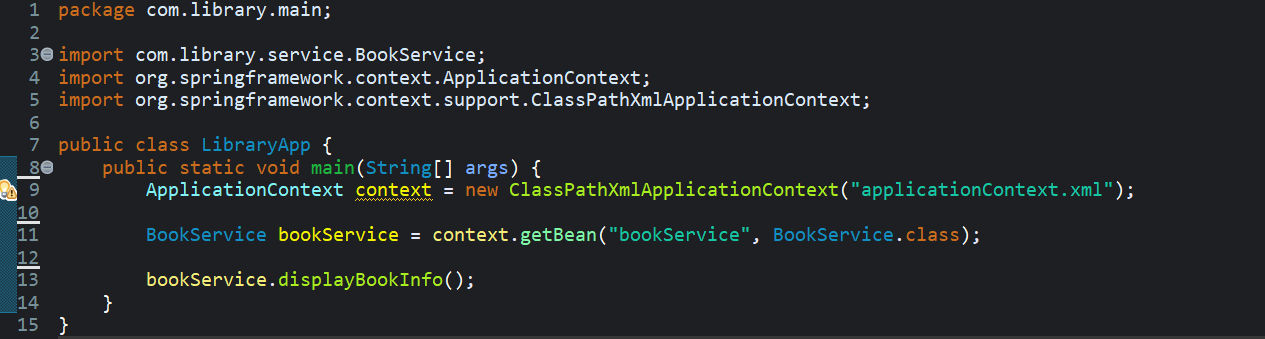
b)Update the BookService Class:



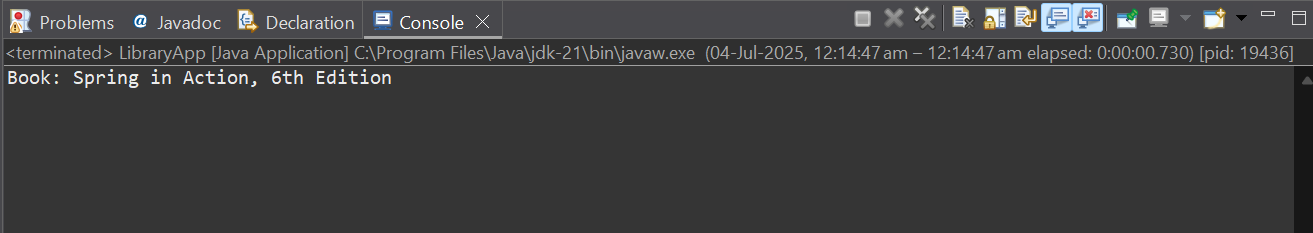




c)Test the Configuration:



OUTPUT:

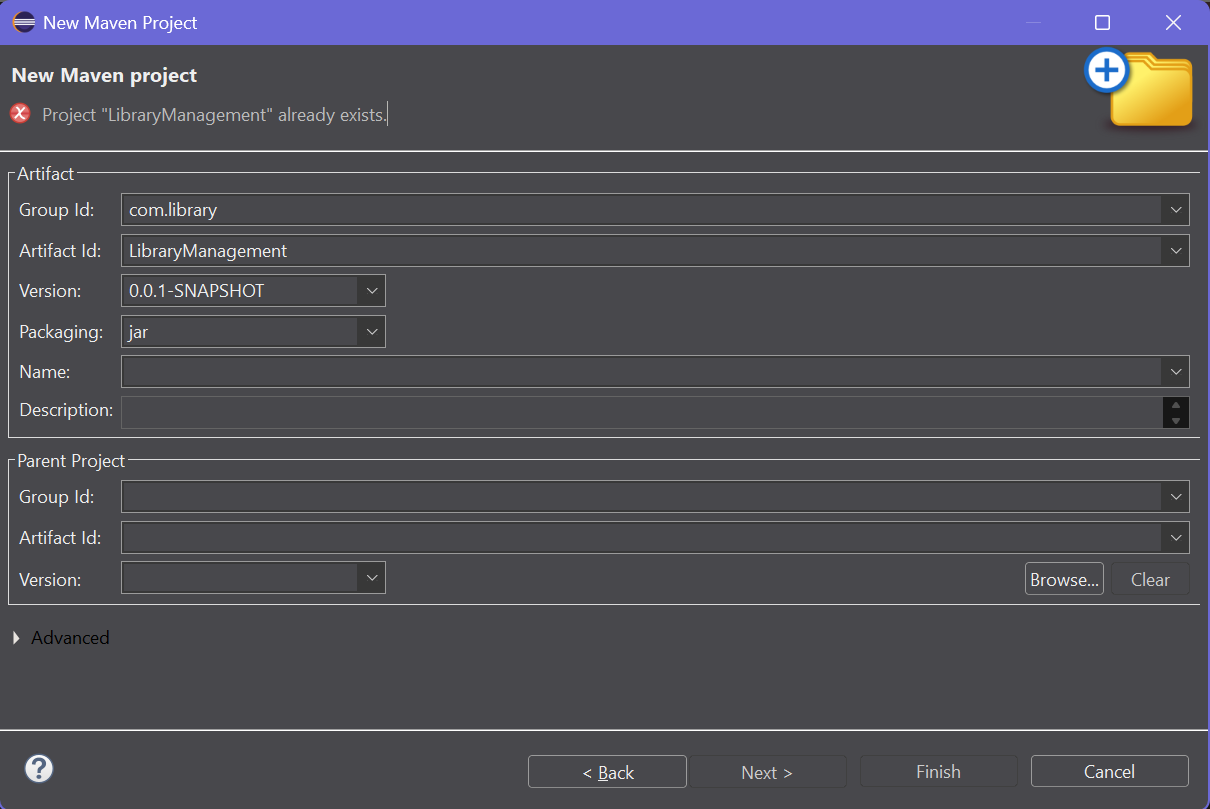


**Exercise 4: Creating and Configuring a Maven Project**

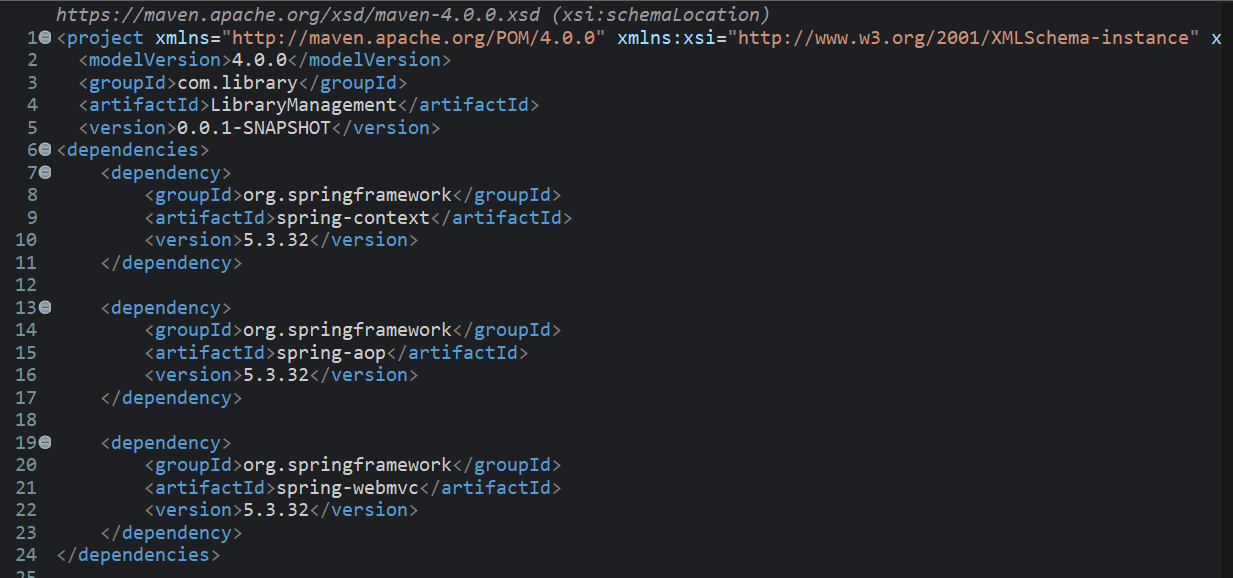
**Scenario:**

You need to set up a new Maven project for the library management application and add Spring dependencies.

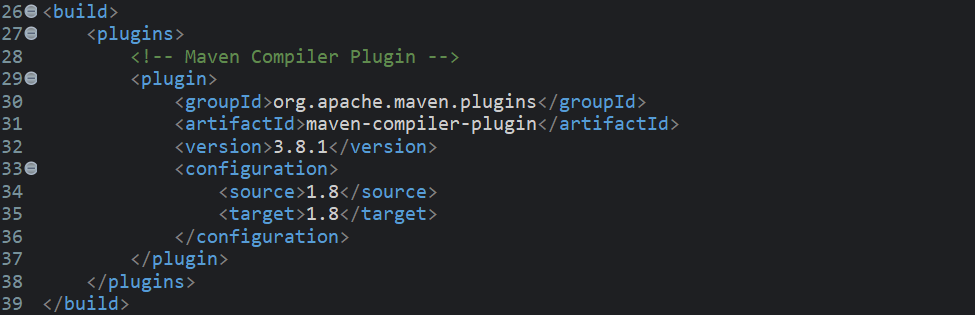
a)Create a new Maven Project

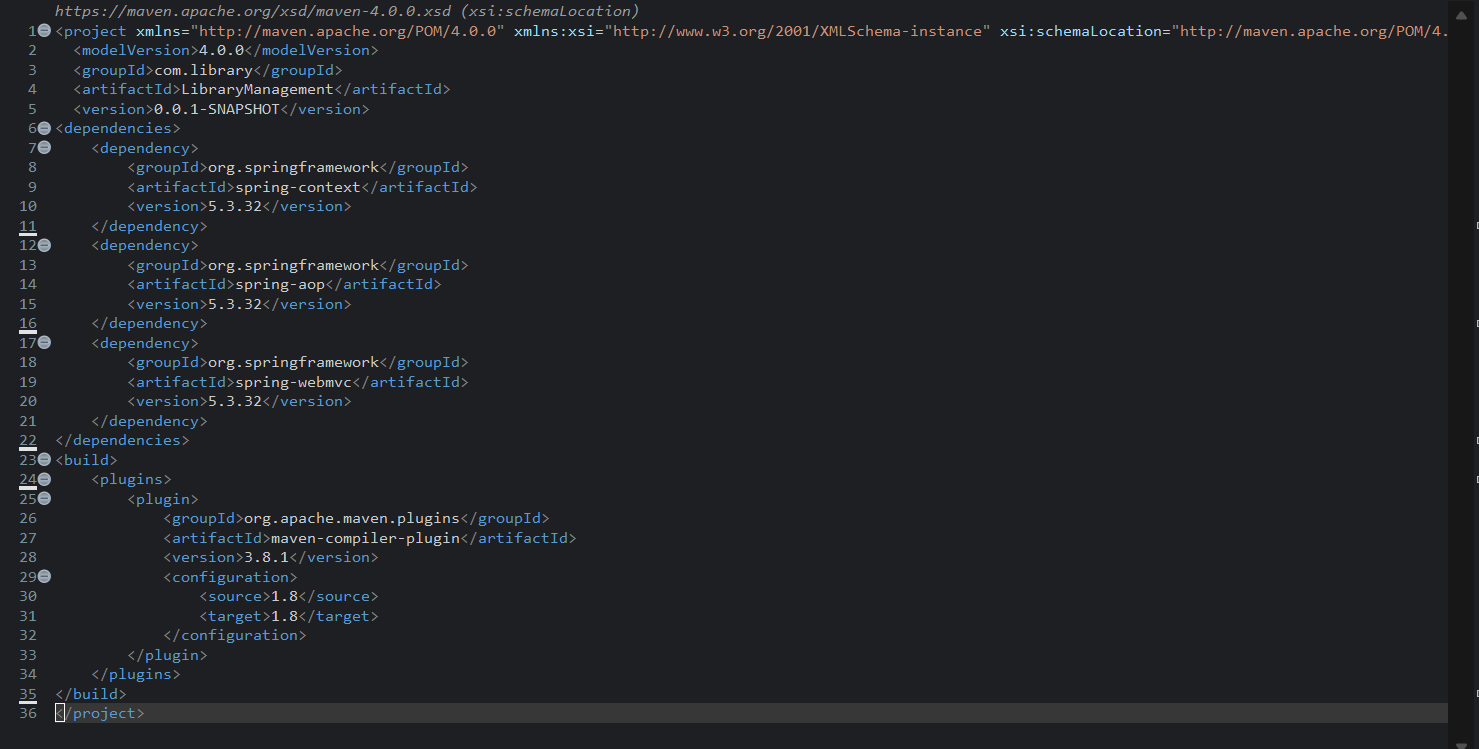


b) Add Spring Dependencies in pom.xml:



c) Configure Maven Plugins:

Final pom.xml



**Exercise 5: Configuring the Spring IoC Container**

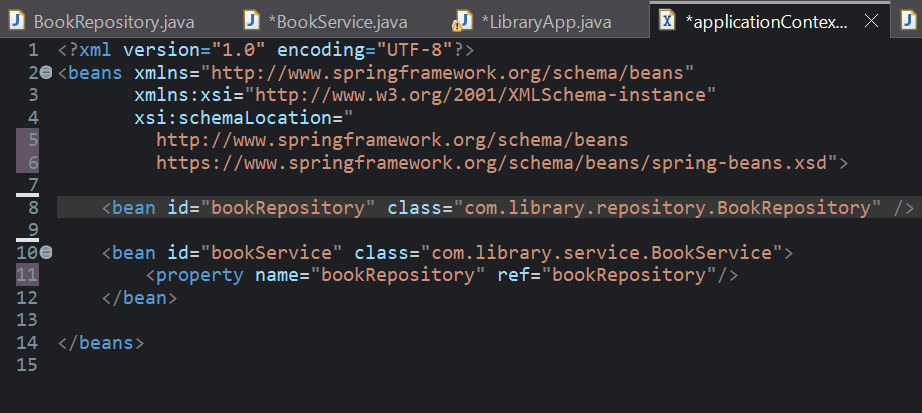
**Scenario:**

The library management application requires a central configuration for beans and dependencies

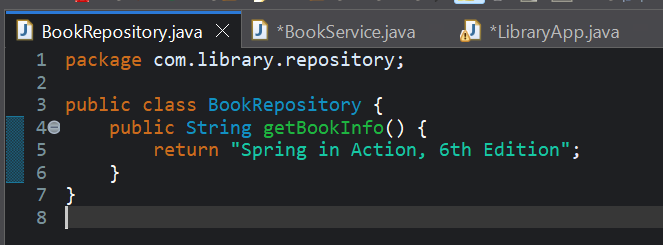
Sol->

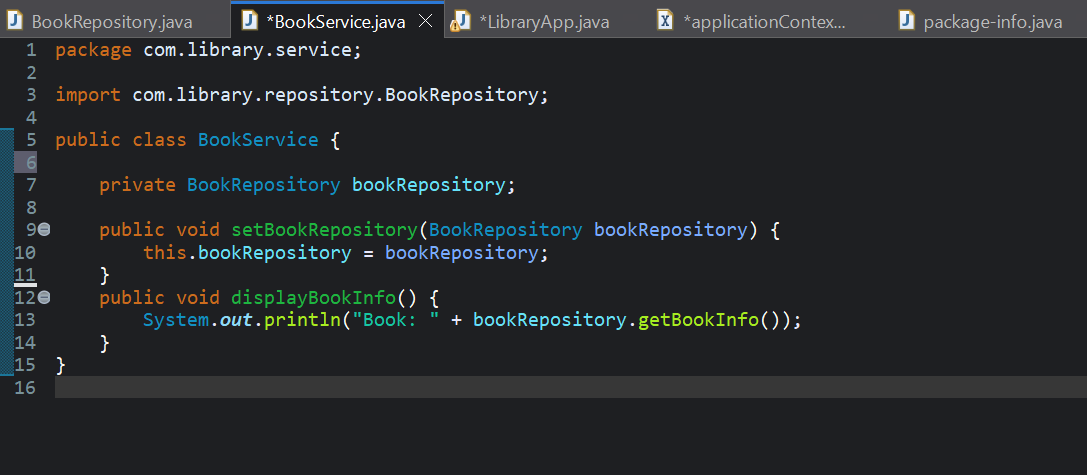
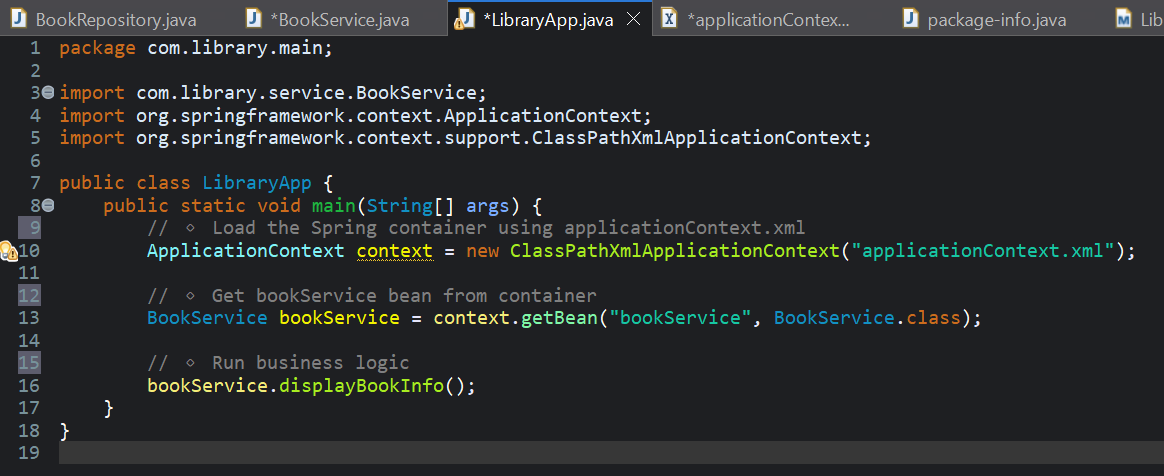
a)Create Spring Configuration File:



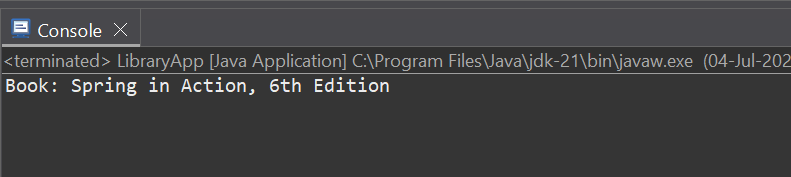


b)Update the BookService Class:



  
c)Run the Application**:** ****

OUTPUT:

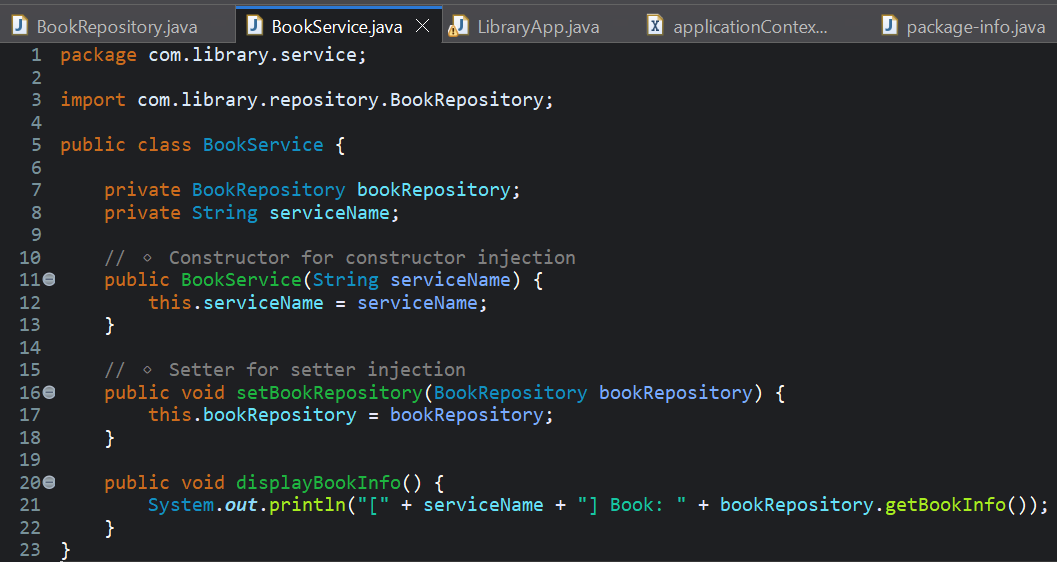


**Exercise 7: Implementing Constructor and Setter Injection**

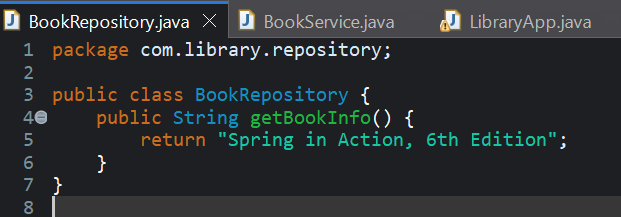
**Scenario:**

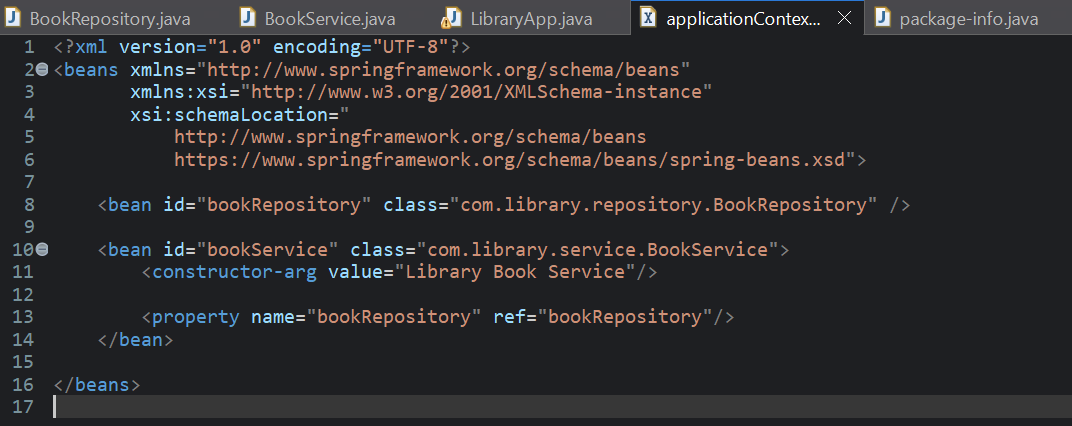
The library management application requires both constructor and setter injection for better control over bean initialization.

1. Configure Constructor Injection:

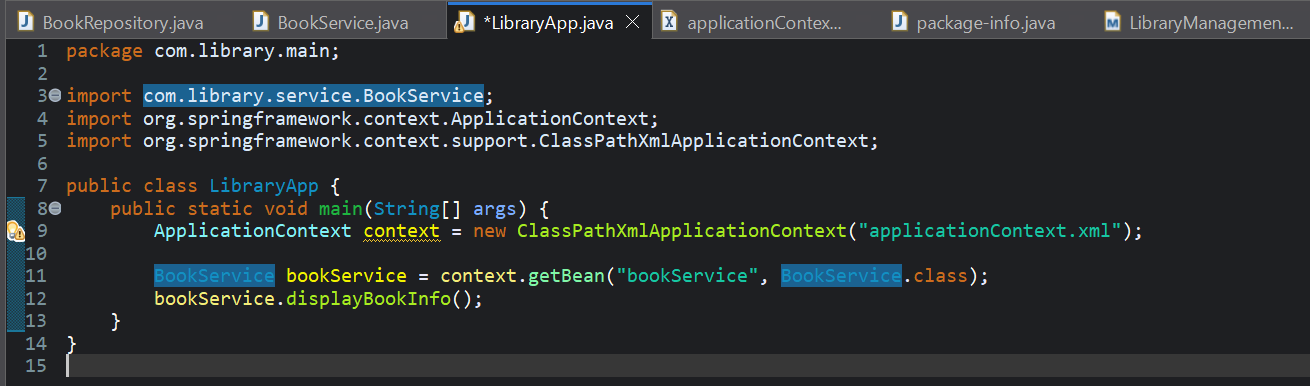


b)Configure Setter Injection:

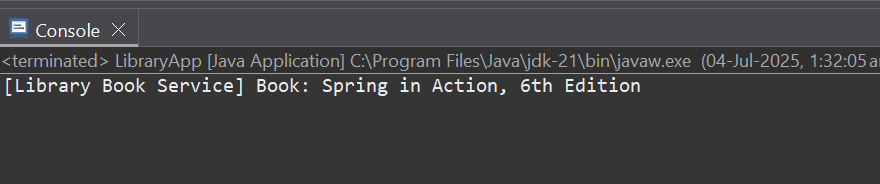




c)Test the Injection:



OUTPUT:



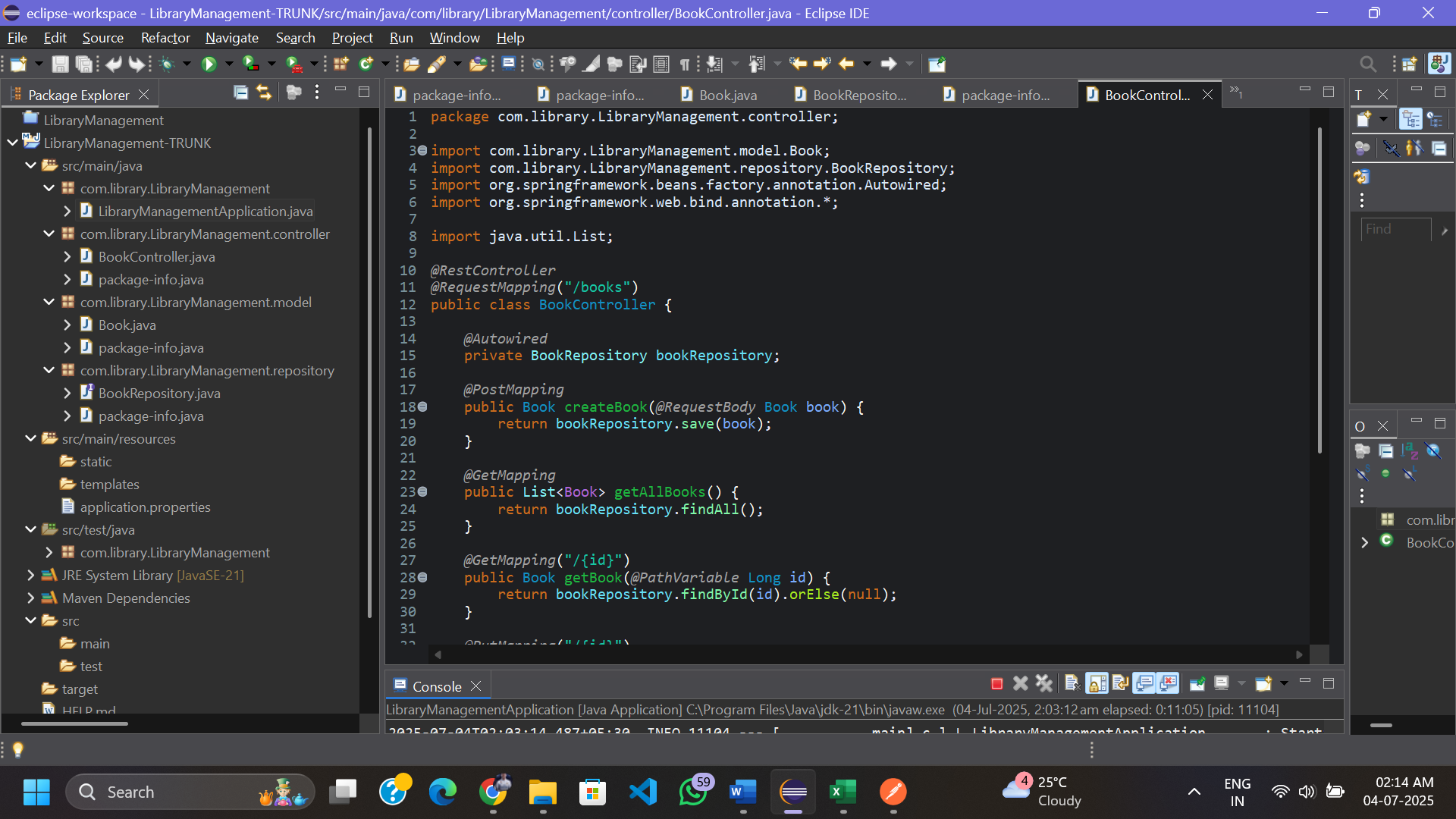
**Exercise 9: Creating a Spring Boot Application**

**Scenario:**

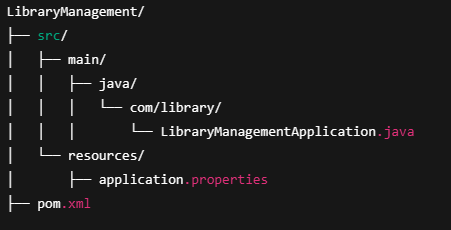
You need to create a Spring Boot application for the library management system to simplify configuration and deployment.

Sol->

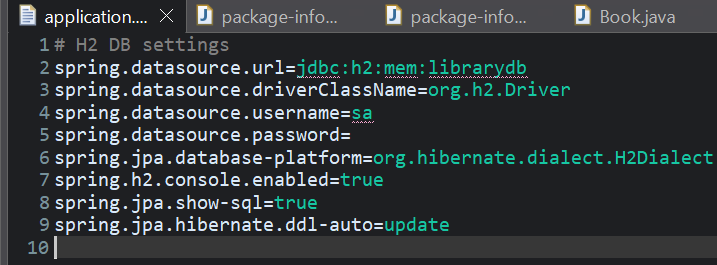
a)Create a Spring Boot Project:



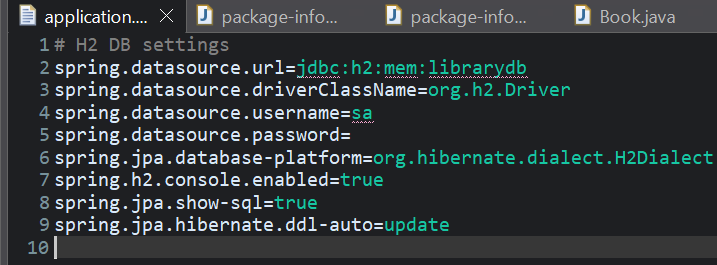
Project structure->



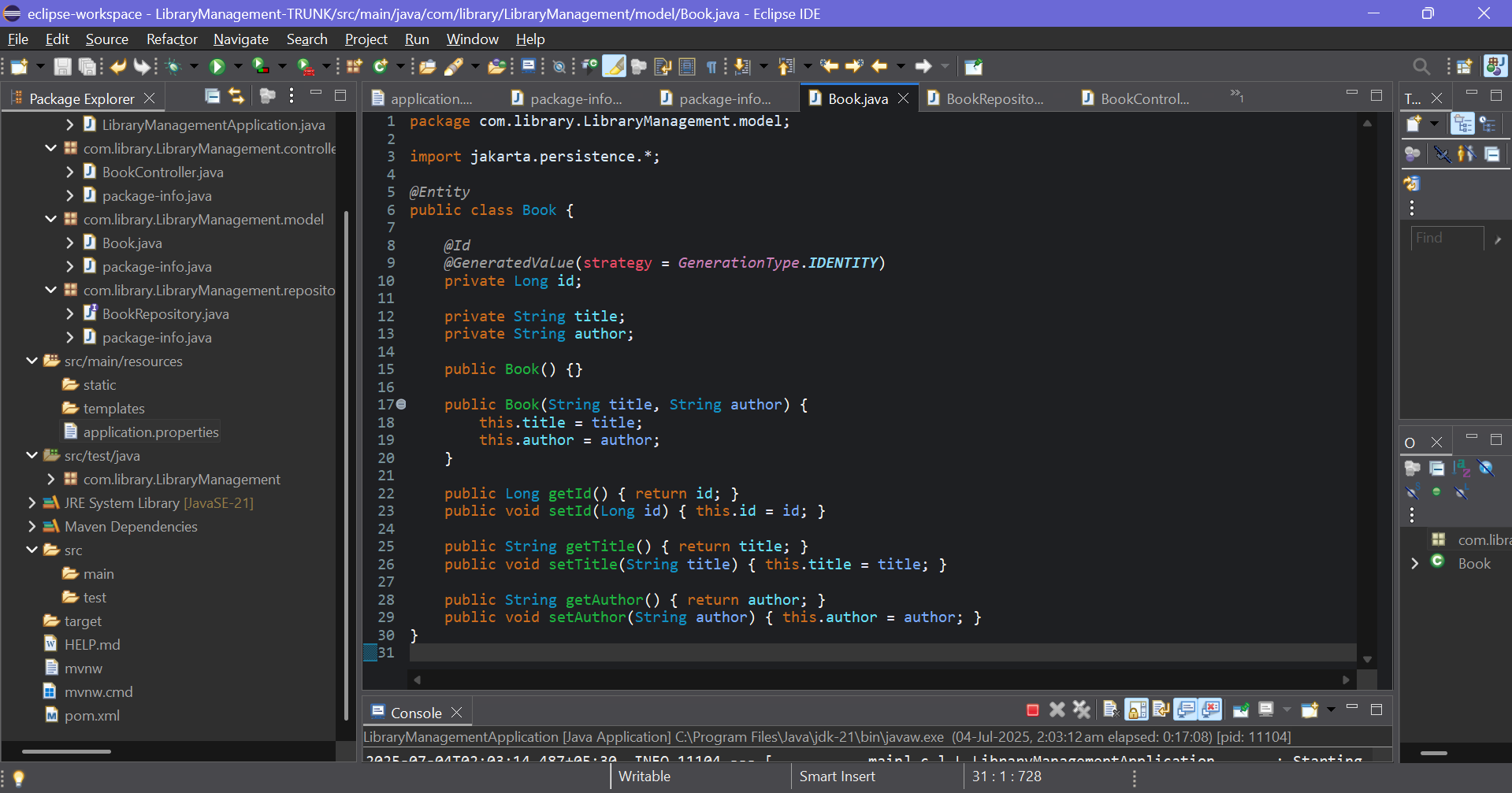
1. Add Dependencies:

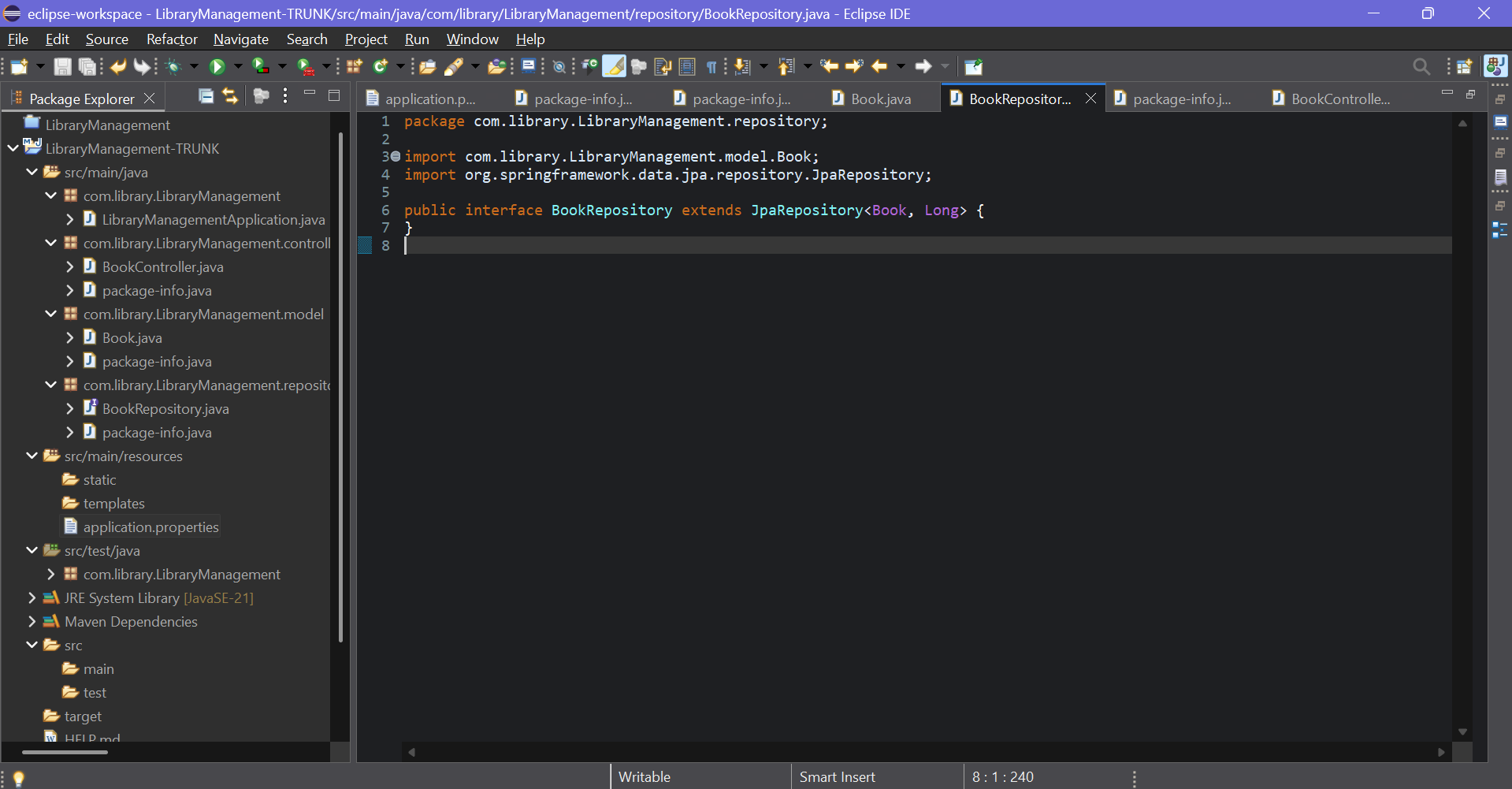


c)Create Application Properties:

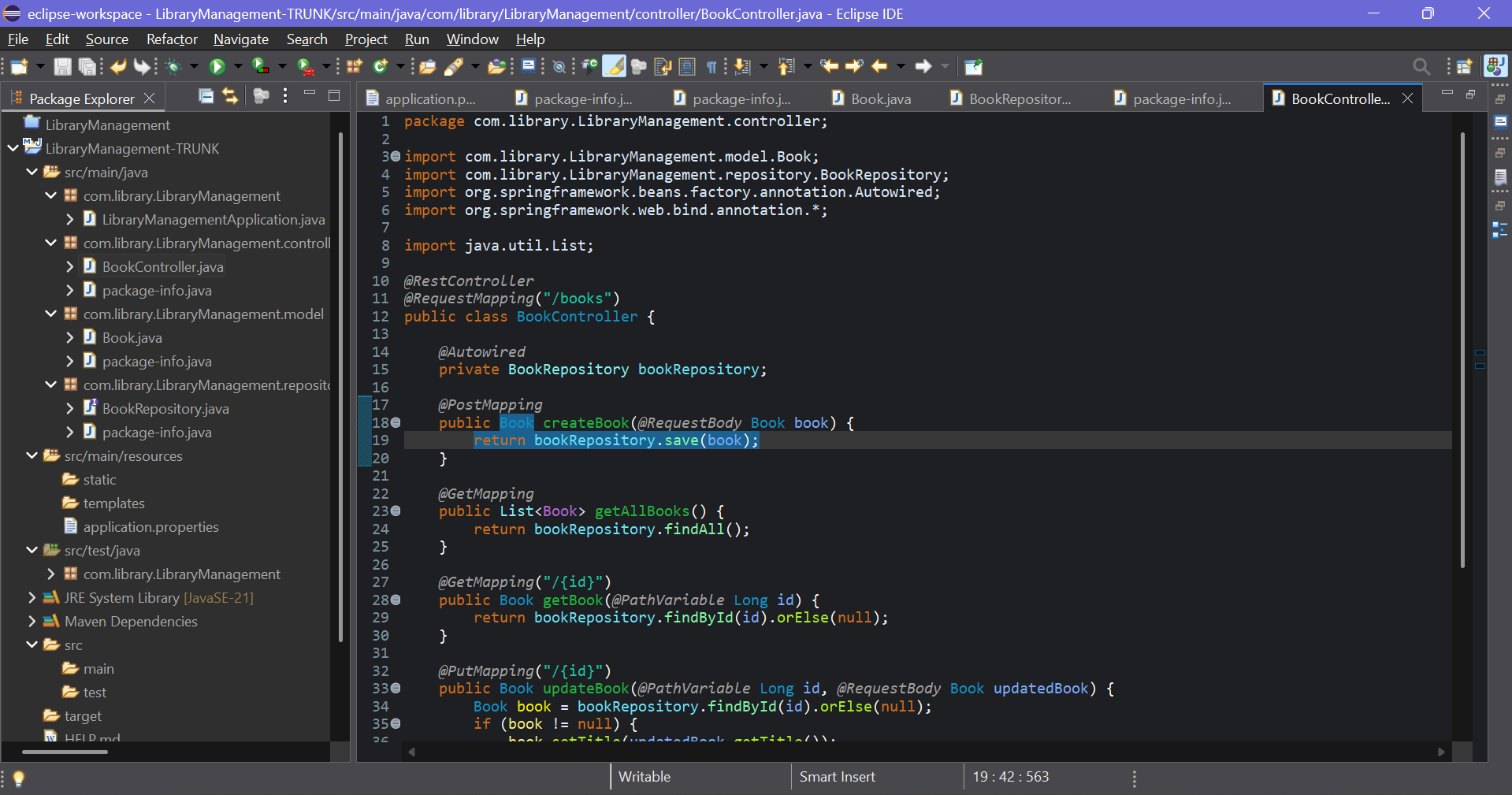
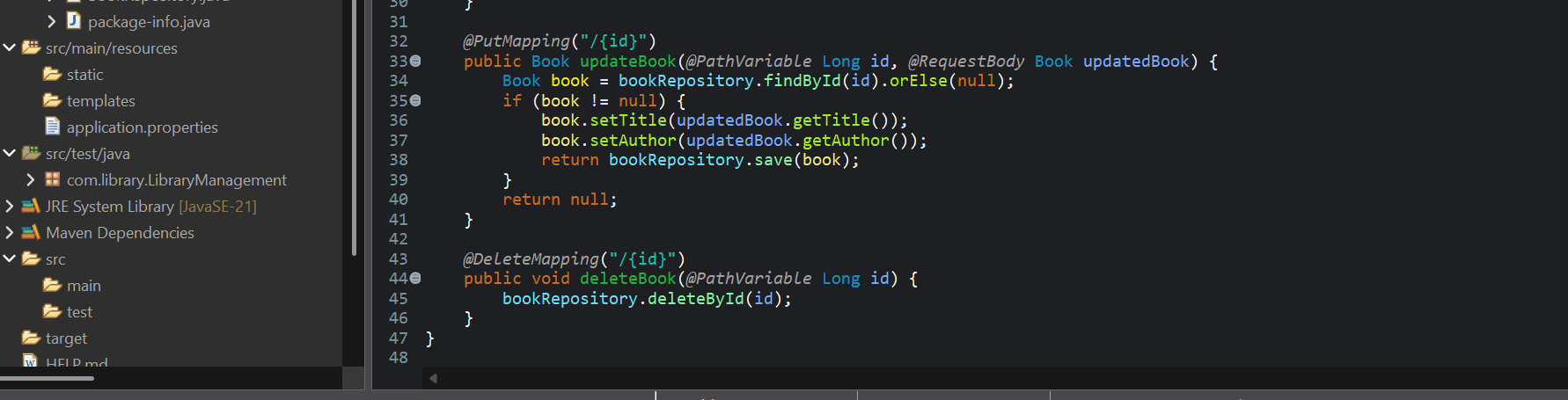


d)Define Entities and Repositories:

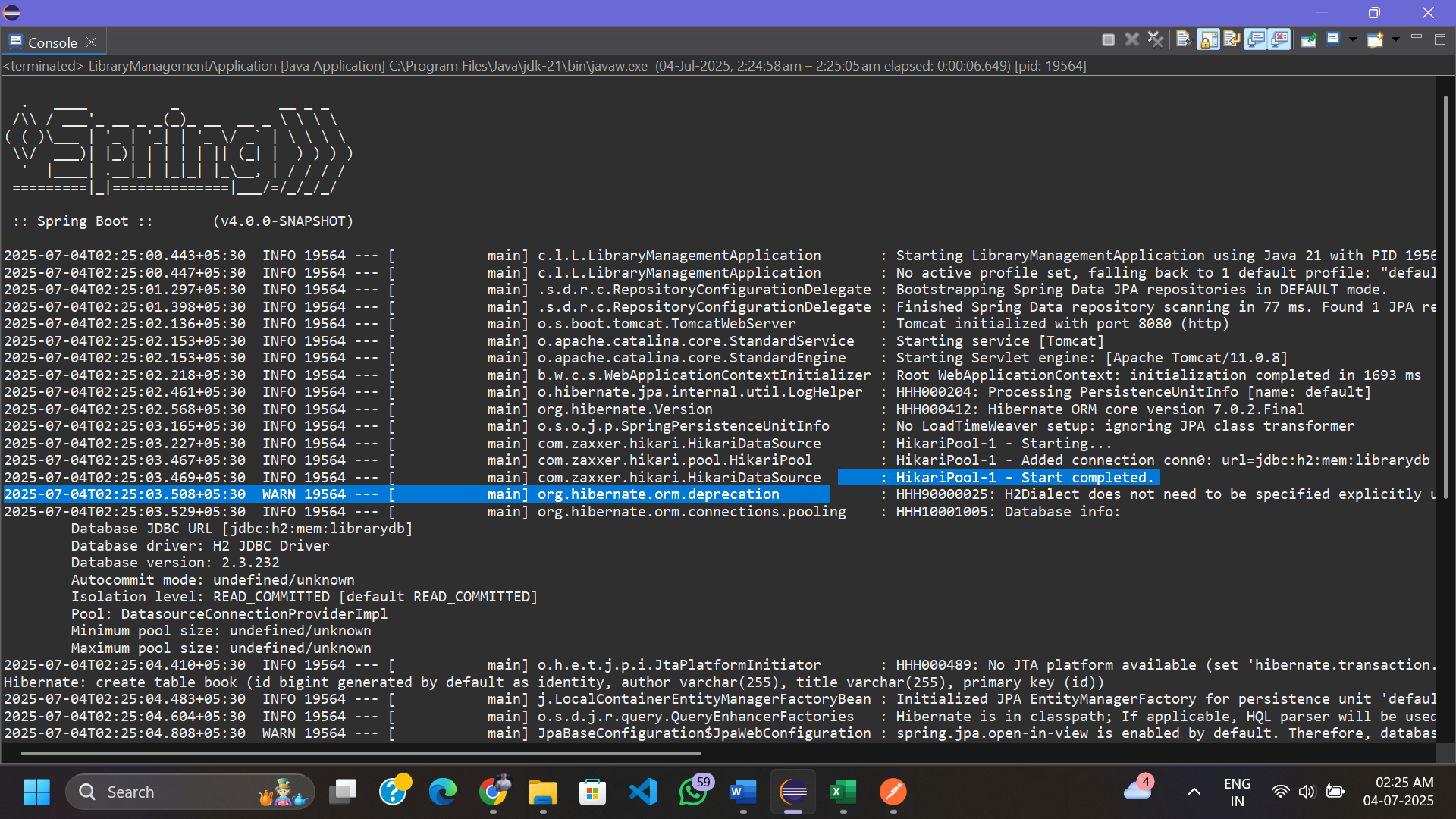


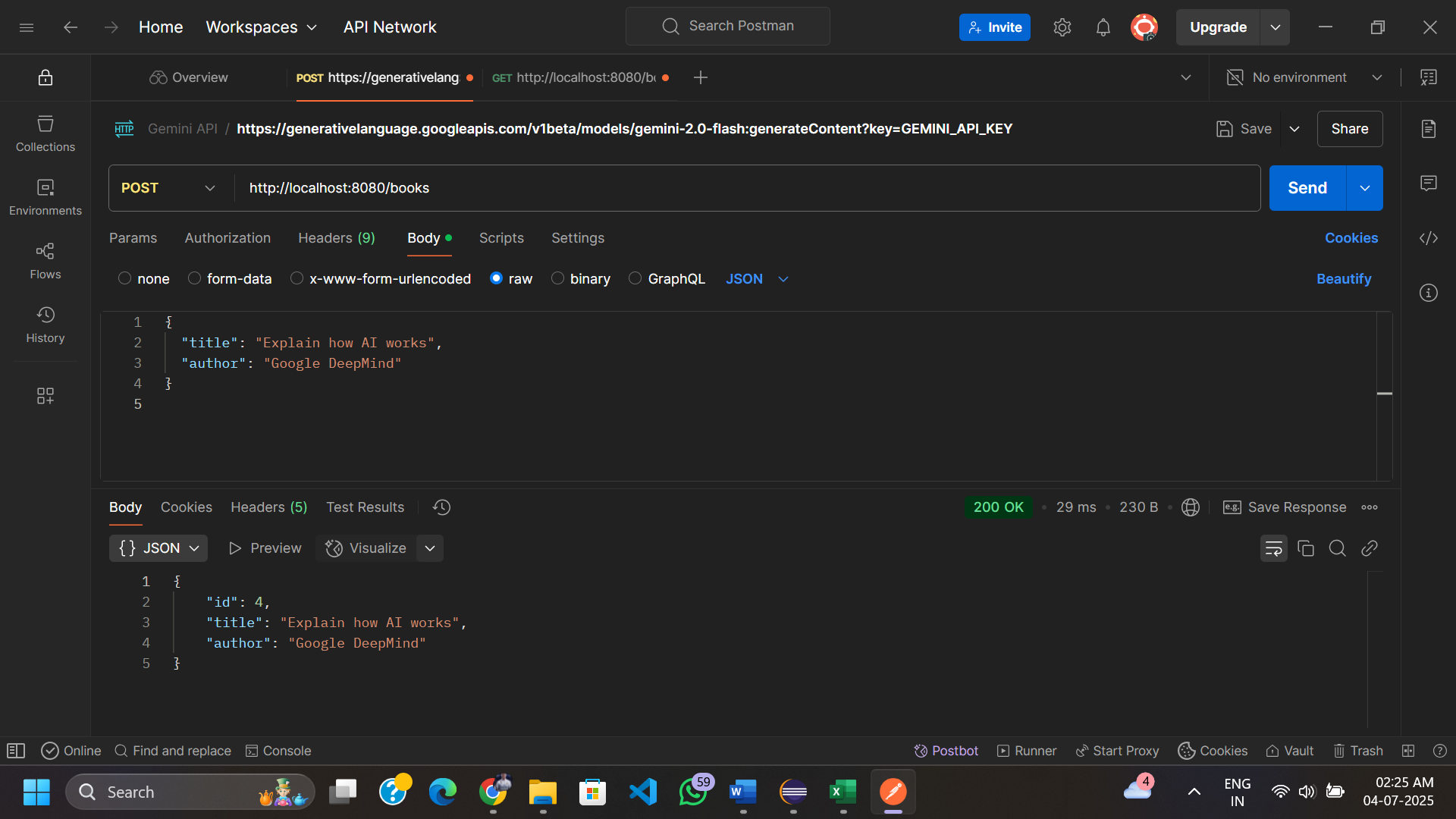


1. Create a REST Controller:



f)Run the Application





Using Postman for performing and checking the CRUD operations.