**Exercise 1: Online Bookstore - Setting Up RESTful Services**

**1. Setting up the Spring Boot Project (BookstoreAPI)**

* **Initialize Spring Boot Project:**
  + We can use [Spring Initializer](https://start.spring.io/) to quickly generate the project.
  + **Steps:**
    - Project: Maven
    - Language: Java
    - Spring Boot Version: 3.x.x
    - Project Name: BookstoreAPI
    - Packaging: Jar
    - Dependencies:
      * Spring Web
      * Spring Boot DevTools
      * Lombok

**2. Project Structure**

Once the project is generated, we'll see the following structure:

BookstoreAPI

src

main

java/com/example/bookstoreapi

BookstoreApiApplication.java # Main class to bootstrap the Spring Boot app

resources

application.properties # Configuration file

test

java/com/example/bookstoreapi

BookstoreApiApplicationTests.java # Default test class

pom.xml # Project dependencies & configurations

**3. What's New in Spring Boot 3?**

Spring Boot 3.x introduced several new features and improvements, including:

* **Java 17+ Baseline**: Spring Boot 3.x now requires Java 17 or newer as the baseline, taking advantage of modern Java features and performance improvements.
* **Native Image Support (GraalVM)**: One of the most exciting features is support for **native images** with **GraalVM**, allowing us to compile Spring Boot applications to native executables for faster startup and lower memory usage.
* **Jakarta EE Namespace**: With Spring Boot 3.x, Spring has fully migrated from the javax.\* packages to jakarta.\* namespaces in alignment with the latest Jakarta EE specifications.
* **Observability & Micrometer**: Spring Boot 3 comes with enhanced observability features, including integration with **Micrometer** to support metrics and tracing across different libraries. This enables better insights into the performance of our applications.
* **Problem-Spring-Web Integration**: Enhanced error handling for RESTful services using **RFC7807 Problem Details** support. This makes error handling and debugging more standardized and informative.
* **Improved Security Defaults**: Spring Boot 3 also introduces better security defaults, like secure application configuration, and updated cryptography features in line with modern best practices.