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

**1. Setup Spring Boot Project**

**Initialize a New Spring Boot Project:**

1. **Using Spring Initializr:**
   * Go to [Spring Initializr](https://start.spring.io/).
   * Fill in the details:
     + **Project Name**: BookstoreAPI
     + **Dependencies**: Add Spring Web, Spring Boot DevTools, and Lombok.
     + **Java Version**: Use the latest stable version.
   * Generate the project and download the zip file.
   * Unzip the file and open it in your preferred IDE (e.g., IntelliJ IDEA, Eclipse).
2. **Using IDE (IntelliJ IDEA):**
   * Open IntelliJ IDEA.
   * Select "New Project" > "Spring Initializr".
   * Configure the project with the same details as above and finish.
3. **Maven Configuration:**

* The pom.xml should include the following dependencies:

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-devtools</artifactId>

</dependency>

<dependency>

<groupId>org.projectlombok</groupId>

<artifactId>lombok</artifactId>

<scope>provided</scope>

</dependency>

</dependencies>

**2. Project Structure**

**Understanding the Generated Project Structure:**

* **src/main/java**: Contains the Java code.
  + **com.example.bookstoreapi**: The main package, where the application logic resides.
  + **BookstoreApiApplication.java**: The entry point of the Spring Boot application.
* **src/main/resources**: Contains configuration files.
  + **application.properties**: The default configuration file.
* **src/test/java**: Contains test cases.
* **pom.xml**: The Maven build file, managing dependencies and project settings.

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

Spring Boot 3 introduced several new features and improvements. Here are some highlights:

1. **Java 17 Baseline**:
   * Spring Boot 3 requires a minimum of Java 17, bringing modern Java features like records, pattern matching, and more.
2. **GraalVM Native Image Support**:
   * Enhanced support for creating native images using GraalVM, reducing startup times and memory usage.
3. **Improved Observability**:
   * Enhanced metrics and tracing support with integration for Micrometer and distributed tracing systems.
4. **Spring Framework 6 Integration**:
   * Spring Boot 3 is built on top of Spring Framework 6, which brings improvements like a modular codebase and better Kotlin support.
5. **Security Enhancements**:
   * Updated security defaults, such as secure cookies by default and better password encryption.
6. **Improved Docker Support**:
   * Better integration with Docker and containerized applications, including support for building Docker images using the spring-boot-maven-plugin.
7. **New Configuration Properties**:
   * Introduction of new properties and improvements to existing ones for easier configuration.