**EXERCISE 1**

**Project Structure**

**Description of Key Directories:**

* **controller/**: This is where you will create the REST controllers that handle HTTP requests.
* **model/**: This folder contains your domain models or entities like Book, Author, and Customer.
* **repository/**: This is where you define interfaces that extend Spring Data JPA repositories to handle CRUD operations with the database.
* **service/**: This is where you’ll place service classes that contain business logic, serving as an intermediary between the controllers and repositories.
* **resources/**: Contains application configuration files such as application.properties.

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

Spring Boot 3 introduces several key updates:

* **Java 17 Baseline:** Spring Boot 3 requires Java 17, leveraging its new language features and performance improvements.
* **Jakarta EE 9+:** Migration from javax.\* to jakarta.\* namespaces due to the shift from Java EE to Jakarta EE.
* **Enhanced Observability:** Improved observability with Micrometer 2.0, including better integration with OpenTelemetry for distributed tracing and enhanced metrics.
* **GraalVM Native Image Support:** Easier and better support for building native images with GraalVM, which helps in creating lightweight, fast-startup applications.
* **Kotlin 1.6:** Improved support for Kotlin 1.6, enabling the use of the latest Kotlin features within Spring Boot applications.
* **Security Enhancements:** New features in Spring Security, including updates to OAuth2 and OpenID Connect, along with better encryption algorithm support.
* **Configuration Enhancements:** New annotations and configuration properties to make customizing and configuring your Spring Boot applications more straightforward.