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

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>org.example.library</groupId>

<artifactId>LibraryManagement</artifactId>

<version>1.0.0</version>

<packaging>jar</packaging>

<name>Library Management System</name>

<description>A Spring Boot-based library application</description>

<parent>

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

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

<version>3.2.5</version>

<relativePath/> <!-- Automatically fetches parent from repository -->

</parent>

<properties>

<java.version>17</java.version>

</properties>

<dependencies>

<!-- RESTful Web support -->

<dependency>

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

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

</dependency>

<!-- JPA for database interaction -->

<dependency>

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

<artifactId>spring-boot-starter-data-jpa</artifactId>

</dependency>

<!-- H2 in-memory DB for quick testing -->

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<scope>runtime</scope>

</dependency>

<!-- Live reload during development -->

<dependency>

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

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

<scope>runtime</scope>

</dependency>

<!-- Testing utilities -->

<dependency>

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

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

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<!-- Enables Spring Boot's packaging and execution features -->

<plugin>

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

<artifactId>spring-boot-maven-plugin</artifactId>

</plugin>

</plugins>

</build>

</project>

LibraryApp.java

package org.example.library;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class LibraryApp {

public static void main(String[] args) {

SpringApplication.run(LibraryApp.class, args);

}

}

**Output**

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