**Spring core and Maven Exercises**

I have made a single program implementing all the mandatory features.

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

Set up a basic Spring project with XML configuration.

What I did:

Created a Maven project named LibraryManagement.

Added Spring core dependencies (spring-context) to pom.xml.

Created applicationContext.xml in src/main/resources.

Defined beans for:

BookService

BookRepository

Created com.cognizant.LibraryManagement.service.BookService and com.cognizant.LibraryManagement.repository.BookRepository.

Created LibraryManagementApplication.java to:

Load the Spring context using ClassPathXmlApplicationContext

Retrieve and use the BookService bean.

**Exercise 2**: **Implementing Dependency Injection**

Connect BookService and BookRepository using Spring’s IoC container.

What I did:

Modified applicationContext.xml to wire bookRepository into bookService using:

Constructor injection with <constructor-arg>

Setter injection with <property>

Updated BookService.java to include:

A constructor accepting BookRepository

A setter method for BookRepository

Verified injection by calling a method from BookService in LibraryManagementApplication.

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

Setup project and dependencies.

What I did:

Created Maven project LibraryManagement.

Added dependencies in pom.xml:

spring-context

spring-aop

spring-webmvc

Configured Maven Compiler Plugin

