# Assignment: Understanding Access Modifiers and Encapsulation with Library Books

Step-by-Step Instructions:

## Introduction

Welcome to this assignment. We will create a Java program to manage library books. This project will help you understand access modifiers and encapsulation in Java.

## Define the Book Class

1. Open your Java IDE or a text editor.
2. Create a new Java file named Book.java.
3. Define the Book class with the following private data members:
4. title (String): to store the title of the book.
5. author (String): to store the author of the book.
6. isbn (String): to store the ISBN number of the book.

## Encapsulate the Data Fields

1. Ensure that the fields title, author, and isbn are private. This means they cannot be accessed directly from outside the Book class.

## Provide Setter and Getter Methods

Add public setter and getter methods for each private data field. These methods will allow other classes to access and modify the fields in a controlled manner.

## Implement Constructors

Implement two constructors: a default constructor and a parameterized constructor that initializes the title, author, and isbn fields.

## Demonstrate Usage of Access Modifiers

1. Modify the access modifiers to understand their impact:
2. Keep title as private.
3. Change author to protected.
4. Change isbn to public.

## Create a Test Class

1. Create a new Java file named LibraryTest.java.
2. Define a LibraryTest class with a main method to test the functionality of the Book class.
3. In this class, create instances of Book, set values using setter methods, and retrieve values using getter methods.

## Test the Program

1. Compile and run the LibraryTest class.
2. Create multiple instances of Book objects with different values.
3. Verify the behavior of getter and setter methods.
4. Observe how access modifiers affect the accessibility of fields.