

Mock CA2:

Problem Definition: Library Application

Develop an application that simulates the operations of a library. A book has a title, number of pages, author, isbn number and belongs to a library. A book also has a value associated with it to indicate whether that book is on loan or not. A library has an address and a contact number. The attributes of the 2 classes are below. Select the correct and most appropriate data type for each attribute.

Attributes	
Book	Library
<ul style="list-style-type: none">• title• number of pages• author• isbn number• book on loan• belonging library	<ul style="list-style-type: none">• address• contact number

Create separate classes to implement the functionality of the application. Create the getter and setter methods for all data members in each class, create default and overloaded constructors for the classes.

The library handles the borrowing of books. When a book is borrowed its on loan indicator changes to reflect this. When the book is returned to the library then the loan indicator is updated again. If somebody tries to borrow a book but it is already on loan an error message should be printed.

Create a main class containing a main method. Inside the main method declare a library object ensuring to populate its attributes with values. Declare and create three book objects, populating their attributes and setting their libraries to be the library you created.

Using the library object borrow all three books and try to borrow them a second time. Return all books to the library.

Provide comments to explain your code.