

October 2022

Continuous Assessment 1– Preparation Exercise

Lecturer: Dr. Jason Barron

Problem:

Create a new java class called **Book**. The `Book` class should be able to store the following data:

Book name, Author, ISBN, Genre, Status, Number of books created in library.

The ISBN number will be maintained automatically by the class. It should be an `int` starting at 1 and get assigned within the constructor. All other fields should only be accessible via getter and setter methods which you should provide in the class. The constructor should use the setter methods. The Status field should either be 'A' for available or 'B' for borrowed. Create a class method called `Borrow()` which will set the Status to 'B' for a book.

Write a driver program called **Library** which will allow the user to enter details of 3 books. Invoke the Borrow method for one of the objects.

Write an appropriate `toString()` for the `Book` class and call it for each of the object instances you created at the end of the program.

Write a static method which returns the number of `Book` objects created, and call it after each `Book` has been created.

Deliverables:

1. A java program implementing the above algorithm (100%)
 - a. Your program should be called **Library**
 - b. Marks for:
 - i. A running program
 - ii. Output nicely formatted
 - iii. Good programming practices (variable names, comments, indentation, readability)
 - iv. Additional frills
2. Only submit the java source files.