# Quiz 2 (2017-11-21)

For this quiz, you will be writing a Java program that helps a library keep track of its collection. You must complete four classes by creating member variables and writing code for the member functions. Starter code is available on Moodle.

## Program Overview

For an example of how the classes will be used, a look at the `ExampleMain` class. If your code is correct, the `main` of `ExampleMain` should run without modification and print out the following exactly:

```
Pride and Prejudice, written by Jane Austen
Perks of Being a Wallflower, written by Stephen Chbosky
Wonder, directed by Stephen Chbosky
Wonder Woman, directed by Patty Jenkins
Breaking Dawn, written by Stephenie Meyer
Frankenstein, written by Anonymous

There are 2 works by Steven Chbosky in the library.
There are 1 works by Jane Austen in the library.
There are 0 works by Stephen King in the library.
```

## Classes Overview

The `LibraryItem` class serves as the superclass to represent all items available for checkout in a library. It has the following methods:

- The constructor, which takes the name and creator of an item.
- `getName` and `setName`, which gets and sets the name of an item respectively.
- `getCreator` and `setCreator`, which gets and sets the creator of an item respectively.
- `getAttributionLine`, which returns a line that appropriate describes how the creator made the object. This function has been written for you.

You must create two subclasses of `LibraryItem`: `Book` and `Film`:

- Both classes have constructors that take the name and creator of that item.
- The `Book` and `Film` classes must override the `getAttributionLine` method, to say that they were "written" and "directed" by their creators respectively.
- Additionally, the `Book` class must be able to handle an anonymous author. This means that if the provided creator is the empty string, it should be treated as `"Anonymous"`. Look at Frankenstein in `ExampleMain` as an example. (Frankenstein was originally published anonymously by Mary Shelley.) How you do this (ie. what methods to override in `Book`, if any) is up to you.

Finally, the `Library` class uses the above three classes to represent a library's collection. It has the following methods:

- The constructor, which initialize an empty collection.
- `addToCollection`, which adds an instance of `LibraryItem` to the collection.

- `printCollection`, which prints out all `LibraryItem`s in the collection.
- `countCreatorWorks`, which returns the number of `LibraryItem`s in the collection made by a specified creator.

## Submission

Submit your classes to the autograder.