

# Library Management System

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The library management system will enable librarian to manage resources in the library. The library might the following resources; books, journals, articles, etc. All of these resources all available to the general public on the term and condition of the library. The library also has some level of management. The people who are affiliated with library are librarian and user. Librarian is the manager of the library while as the users are individual who comes to the library either to read or borrow library resources.

Use the given project as your starter code for this library project.

```
Library
--> src
----> members
      Librarian.java
      Person.java
      User.java
----> resources
      Book.java
----> types
      BookType
----> utlis
```

Task:

1. Create private fields for a `Person` class:

- a. `id` of type `String`
- b. `name` of type `String`
- c. `email` of type `String`
- d. a static variable `count` of type `int` and assign `0` to it
- e. Create a constructor to initialize your instance variables. The constructor should take `id`, `name`, and `email` as inputs and initialize the fields except the static variable.
- f. Within the constructor the static should be incremented by 1.

- g. To allow access to the private fields create `getter` and `setter` method for all of the fields except the `static` field.
2. Create a `Librarian` and `User` class and make both classes extend the `Person` class hence they are subclass of `Person`. Create a constructor to match the superclass.
3. Create an Enum `BookGenres` and copy the following codes in it:

```
/*
    The possible book genre for our library
 */
FICTION,
NON_FICTION,
MYSTERY,
BIOGRAPHY,
SCIENCE_FICTION,
ROMANCE,
THRILLER,
HORROR,
HISTORY,
POETRY;

@Override
public String toString(){
    return name().charAt(0) +
name().substring(1).toLowerCase().replace("_", "");
}
```

4. Create `Book` class with the following private properties(fields);
- a. `id`, `title`, `author` of type `String`
  - b. `publishedDate` of type `Date`
  - c. `borrowed` of type `boolean`
  - d. `genre` of type `BookGenres`.
  - e. Add static variable `count` and assign `0` to it.
  - f. Create a `constructor` alone with `getter` and `setter` methods.
5. Create `LibraryManager` class to test your application with a `main` method.
6. Create a `Librarian` and a `User` object.

7. Create five Books make sure to use different `bookTypes`.
  - a. Consider this code for a published date `new Date(2007 - 1900, Calendar.JUNE, 8)` make sure you customize it.
  - b. To select a genre for a book: `BookGenres.BIOGRAPHY`
8. Within your `LibraryManager` class but outside of the `main` method create to List implementation of `ArrayList`. One to store Persons and the another one to store Books make sure the these are static variables.
9. Add your newly created objects (librarian, user, and books) to their respected list.
10. Print the information about your library.

Happy Coding!