**Centennial College**

**COMP 228: Java Programming**
**LAB #1 – Java Class**

Purpose:        The purpose of this Lab assignment is to:
▪ Practice the use of Java classes

References:     Learning materials for week 1 and 2, textbook, and other references (if any)

This material provides the necessary information you need to complete the exercises.

Be sure to read the following general instructions carefully:

- This lab should be completed individually by all the students.
- You will have to demonstrate your solution in a scheduled lab session and submitting the code through **dropbox link on eCentennial**.

You must name your Eclipse project according to the following rule:

**YourFullName_COMP228Labnumber**
Example: **JohSmith_COMP228Lab2**

Each exercise should be placed in a separate package named *exercise1*, *exercise2*, etc.

Submit your assignment in a **zip file** that is named according to the following rule:
**YourLastName_COMP228Labnumber.zip**
Example: **JohSmith_COMP228Lab2.zip**

Apply the naming conventions for variables, methods, classes, and packages:
- *variable names* start with a *lowercase* character
- *classes* start with an *uppercase* character
- **packages** use only *lowercase* characters
- *methods* start with a *lowercase* character

## Exercise 1:

Write a Java application that creates a Java console application to keep records of singers and displays stored record. Follow the following instructions to develop the application:

Create a class named Singers with the following specifications:
- 5 instance variables that would store the following singer data (Use recommended variable naming conventions and appropriate data type for each instance variable):
  - Singer's id
  - Singer's name
  - Singer's address
  - Date of birth
  - Number of albums published
- Several constructors that would allow you to construct Singer object with no arguments, 1 argument, 2 arguments, 3 arguments, 4 arguments, and 5 arguments.

- Create Setters and getters for all the instance variables of class Singer. Make sure to have several setters that would allow you to set the values of individual instance variables of the singer object. Also create one setter that would allow you to set all the values of the instance variables at once. Create several getters that would allow you to get the current individual values of each instance variables of the Singer object.
- Create the driver class that would create 1 Singer (singer1) object with the help of the no argument constructor. Display the default values of the instance variables of this object singer1.
- Set the values of each instance variables with the help of setters. Display the values.

**Evaluation:**

| Functionality | |
|---|---|
| Correct implementation of classes (instance variable declarations, constructors, getter and setter methods, etc.) | 45% |
| Correct implementation of driver classes (declaring and creating objects, calling their methods, interacting with user, displaying results) | 45% |
| **Friendly input/output** | 10% |
| **Total** | 100% |