Vanier College, Continuing Education

Programming in Java

Winter 2015, Assignment-1

Teacher: Shamima Mithun **Due Date: March 6, 2015**

Objectives: String Literal, Integer and Floating point arithmetic

Question 1 (String Literals):

a) Write a Java program that uses four `System.out.println` statements to generate the following output:

```
In Java, a String literal is a sequence of characters inside a pair of
double quotation marks, such as "Java is fun". Java programmers should
understand the difference between " and \" as well as the difference
between ' and ".
```

b) Write a Java program that uses one `System.out.println` statement to generate the following output:

```
In Java, a String literal is a sequence of characters inside a pair of
double quotation marks, such as "Java is fun". Java programmers should
understand the difference between " and \" as well as the difference
between ' and ".
```

Question 2 (String Literals):

a) Write a Java program that displays the following pattern:

```
   *
  ***
 *****
*******
 *****
  ***
   *
```

b) Write a Java program that generates the following output:

Question 3 (Data type, Variable, String Literals):

Write a Java program that declares the following:

- A `String` variable named `studentName`
- An `int` variable named `age`
- A `double` variable named `annualPay`

Store your name, age, and desired annual income as literals in these variables. The program should display these values on the screen in a manner similar to the following (texts shown in the blue are the literals value stored in the variables in this sample run):

My name is Joe Mahoney, My age is 26 and

I hope to earn $100000.0 per year.

Question 4 (Data type, User input, Variables, String Literals)

Write a Java program that plays a word game with the user. The program should ask the user to enter the following:

- His or her name
- His or her age
- The name of a city
- The name of a college
- A profession
- A type of animal
- A pet's name

After the user has entered these items, the program should display the following story, inserting the user's input into the appropriate locations (texts shown in blue, which serving as place holder):

> There once was a person named ***NAME*** who lived in ***CITY***. At the age of ***AGE,*** ***NAME*** went to college at ***COLLEGE***. ***NAME*** graduated and went to work as a ***PROFESSION***. Then, ***NAME*** adopted a (n) ***ANIMAL*** named ***PETNAME***. They both lived happily ever after!

Question 5 (Type casting)

The idea here is for you to learn how to convert (type cast) a `double` value to an `int` value, and vice versa.

Write a Java program that inputs a price as a floating-point value and then extracts and prints the dollars and cents from that value.

A sample run of your program should produce the following output (the user's input is shown in blue text):

```
Enter the price: 248.75
The price is 248 dollars and 75 cents.
```

Question 6 (Arithmetic Operations)

Write a Java program that prompt the user to input the elapsed time for an event in seconds. The program then outputs the elapsed time in hours, minutes, and seconds.

A sample run of your program should generate the following output (user input is shown in blue text):

Enter elapsed time: 9630
Output: 2 : 40 : 30

--End--