school of **computing, informatics, & decision systems engineering**

CSE 110 – Assignment #1

Maximum points: 20 pts

Topics

- Compiling and running a Java program
- Using `System.out.println ()` and `System.out.print()` methods
- Java syntax
- Recognizing syntax and logic errors

Important Note:

All submitted assignments must begin with the descriptive comment block similar to the one shown below under Part 1, Program #1. It must contain your name and the other information illustrated. To avoid losing trivial points, make sure this comment header is included in every assignment you submit, and that it is updated accordingly from assignment to assignment

Your programming assignments require individual work and effort to be of any benefit. Every student must work independently on his or her assignments. This means that every student must ensure that neither a soft copy nor a hard copy of their work gets into the hands of another student. Sharing your assignments with others in any way is **NOT** permitted. Violations of the University Academic Integrity policy will not be ignored. The university academic integrity policy is found at http://www.asu.edu/studentlife/judicial/integrity.html

Part 1: Program#1 Compile and Run: (5 pts)

Type the following code into a file called **TotalAndAverage.java**. After the program is entered, compile and run the application to make sure it works. Once you see it working correctly, answer questions a)-e) below. (The comment block shown here is a good example to base yours off of for Part 2, Program #2, namely Assignment1.java). <u>DO NOT submit this file</u>.

```
//********************************************************
// Name: ASU CSE110 Instructor
// Title: TotalAndAverage.java
// Author: (if not you, put the name of author here)
// Description: Calculate the total and average scores.
// Time spent: 20 minutes
// Date: 8/24/2014
//********************************************************
```

```
public class TotalAndAverage {

  public static void main (String[] args)
   {

     final int count = 5;
     int score0 = 98;
     int score1 = 100;
     int score2 = 80;
     int score3 = 62;
     int score4 = 77;
     double total = score0 + score1 + score2 + score3 + score4;
     double average = total/count;

     System.out.println ("Total Score is: " + total);
     System.out.println ("Average Score is: " + average);
   }
}
```

There are numerous opportunities for errors in any program, many times in places that seem too simple to require close attention.

Questions: Introduce the following errors, one at a time, in the program **TotalAndAverage.java.** Explain any error messages that the compiler produces in your own words. Fix the previous error each time before you introduce a new one. If no error messages are produced, try to run the code and explain what happens. If still no errors are produced, explain whether the output is valid or not and why.

a. Change `TotalAndAverage` to `totalAndAverage`.
b. Remove the first quotation mark in the first string literal in the first `println( )` statement.
c. Add three more semicolons (;) at the end of the first `println( )` statement.
d. Remove the last brace in the program.
e. Change the variable type of total from `double` to `int`.

Note: The answers to the 5 questions (a through e) above should be typed in the block of comments in the Assignemnt1.java file such as;

```
/*
a) It was not compiled successfully because …
b) It does not generate any compile-error, but…
…
*/
```

Program #2: Programming (15 pts)

Write a Java program called **Assignment1.java**, which prints the calendar of your birthday month. Declare the variables and initialize the values of: 1) your first name, 2) last name, and 3) birthday. Use the **println** and **print** methods and show the information in the following format.

The first and second lines print the first name and last name **(3 pts).** The third line shows the birthday and year with double- quotations (") **(3 pts).** The forth line is a blank line **(3 pts)**. From the fifth line, display the calendar of your birthday month **(3 pts)**. Use "\t" to set the alignments for each day of week as shown in the example below **(3 pts for alignments).** You can find the calendar of your birthday year at http://www.timeanddate.com/.

*) A backslash (\) is used as an escape character in String literals. It causes an "escape" from the normal way characters are interpreted by the complier. For example, a character set of backslash and double-quotation \ " in string literals is recognized as a double-quotation " by the compiler. The backslash and letter-t (\t) and the backslash and letter-n (\n) are used to make an indent and change the line.

Example Execution:
The following is an example output. Use the other game character.

```
First Name: Barack
Last Name: Obama
Birthday: "August 1st, 1961"

August 1961
SU    M     T     W     TH    F     SA
----  ----  ----  ----  ----  ----  ----
            1     2     3     4     5
6     7     8     9     10    11    12
13    14    15    16    17    18    19
20    21    22    23    24    25    26
27    28    29    30    31
```

For this and all subsequent assignments, provide a heading (in comments) described above and demonstrated in Program#1. Make sure your program is called Assignment1.java