CSE141 Introduction to Programming
Fall'16

Assignment #1 Due: Sep 03, 2016

Instructions

- Write your name and ERP id on top of each sumbitted file.
- For questions 1–4, upload a single text file (`.txt`) with your answers.
- For programming problems, upload a separate `.java` file for each program.
- Late submission: There will be 20% penalty for up to *one* day late submissions, 50% for *two* days late submissions. *No submission will be accepted after two days past the due date.*
- Plagiarism: Students are expected to perform their work individually unless otherwise specified by the instructor. Assignments may be discussed in general terms with other students and the students may receive assistance from the instructor, TA, or classmates. Assistance does not mean obtaining solutions and modifying them; this is considered plagiarism.

1. Suppose that `a` and `b` are **`int`** values. What does the following sequence of statements do? Explain.

```
int t = a;
b = t;
a = b;
```

2. Suppose that `a` and `b` are **`int`** values. Simplify the following expression:

```
( !(a < b) && !(a > b) )
```

3. What do each of the following print?
   (a) `System.out.println(2 + "be");`
   (b) `System.out.println(2 + 3 + "be");`
   (c) `System.out.println((2 + 3)+ "be");`
   (d) `System.out.println("bc"+ (2 + 3));`
   (e) `System.out.println("be"+ 2 + 3);`

   Explain your answers.

4. Why does `10/3` give `3` and not `3.333333333`?

5. Write a program to convert a temperature in Fahrenheit to Celsius. You may hardcode the Fahrenheit temperature, or take it as input via command line. Print the converted temperature in Celsius

6. Write a program that takes three integer command-line arguments and prints `equal` if all three are equal, and `not equal` otherwise.

7. Write a more general and more robust version of `Quadratic` (Program 1.2.3 in the textbook) that prints the roots of the polynomial $ax^2 + bx + c$, prints an appropriate message if the discriminant is negative, and behaves appropriately (avoiding division by zero) if a is zero.