Java Programming

# Chapter 2: Programming Exercises

## Programming Exercises

1. What is the numeric value of each of the following expressions as evaluated by Java?
   1. 3 + 7 \* 2 = 17
   2. 18 / 3 + 4 = 10
   3. 9 / 3 + 12 / 4 = 6
   4. 15 / 2 = 7 o 7.5
   5. 14 / 3 = 4.66 o 5
   6. 29 / 10 = 2.9 o 3
   7. 14 % 2 = 0
   8. 15 % 2 = 1
   9. 31 % 7= 3
   10. 6 % 4 + 1 =2
   11. (5 + 6) \* 3 =33
   12. 25 / (3 + 2) = 5
   13. 13 % 1 = 0
2. What is the value of each of the following Boolean expressions?
   1. 5 < 8 TRUE
   2. 4 <= 9 FALSE
   3. 3 == 4 FALSE
   4. 12 >= 12 FALSE
   5. 3 + 4 == 8 FALSE
   6. 7 < 9 – 2 FALSE
   7. 5 != 5 FALSE
   8. 15 != 3 \* 5 FALSE
   9. 9 != –9 TRUE
   10. 3 + 5 \* 2 == 1 FALSE
3. Choose the best data type for each of the following so that any reasonable value is accommodated but no memory storage is wasted. Give an example of a typical value that would be held by the variable, and explain why you chose the type you did.
   1. the number of siblings you have
      1. Byte
   2. your final grade in this class
      1. Byte
   3. the population of Earth
      1. Long
   4. the population of a U.S. county
      1. Short
   5. The number of passengers on a bus
      1. Byte
   6. one player’s score in a Scrabble game
      1. Byte
   7. one team’s score in a Major League Baseball game
      1. byte