

Prelab Exercises

Sections Chapter 3.0-3.2

1. Rewrite each condition below in valid Java syntax (give a boolean expression):
 - a. $x > y > z$
 - b. x and y are both less than 0
 - c. neither x nor y is less than 0
 - d. x is equal to y but not equal to z
2. Suppose *gpa* is a variable containing the grade point average of a student. Suppose the goal of a program is to let a student know if he/she made the Dean's list (the gpa must be 3.5 or above). Write an *if... else...* statement that prints out the appropriate message (either "Congratulations—you made the Dean's List" or "Sorry you didn't make the Dean's List").
3. Complete the following program to determine the raise and new salary for an employee by adding *if ... else* statements to compute the raise. The input to the program includes the current annual salary for the employee and a number indicating the performance rating (1=excellent, 2=good, and 3=poor). An employee with a rating of 1 will receive a 6% raise, an employee with a rating of 2 will receive a 4% raise, and one with a rating of 3 will receive a 1.5% raise.

```
// *****
//   Salary.java
//   Computes the raise and new salary for an employee
// *****
import java.util.Scanner;

public class Salary
{
    public static void main (String[] args)
    {
        double currentSalary; // current annual salary
        double rating;        // performance rating
        double raise;         // dollar amount of the raise

        Scanner scan = new Scanner(System.in);

        // Get the current salary and performance rating
        System.out.print ("Enter the current salary: ");
        currentSalary = scan.nextDouble();
        System.out.print ("Enter the performance rating: ");
        rating = scan.nextDouble();

        // Compute the raise -- Use if ... else ...

        // Print the results
        System.out.println ("Amount of your raise: $" + raise);
        System.out.println ("Your new salary: $" + currentSalary + raise);
    }
}
```