CMSC 131 Quiz 2 Worksheet

The following exercises cover the material to be included in this quiz. Solutions to these exercises will not be provided, but you are welcome to discuss your solutions with the TAs or instructors during office hours. It is recommended that you try these exercises on paper first (without using the computer). For input use the Scanner class and for output System.out.println.

Exercises

1. When do we use a do while?
2. When do we use a for loop?
3. Write a program that reads two integer values and prints the even numbers in that range.
4. Write a program that computes the factorial of a number. For example, factorial of 4 (4!) is 24.
5. Write a program that prints the sum of odd numbers between min (inclusive) and max (inclusive). The program will read the values min and max and display the sum. You can assume min and max are integer values.   Use the Scanner class to read values.
6. Write a program that reads (using the Scanner class) an integer value representing the number of rows associated with a triangular diagram. After reading the value, your program will generate a triangular diagram with the specified number of rows. For example, if the user enters 4 your program will print:

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

7. Write a program that prints a triangle where each row has twice as many characters as the preceding one. The first row will have 2 characters. The program will read the size (an integer value) of the triangle and a character. It will then generate a triangle with a number of rows that corresponds to size and where the character provided is used for odd-numbered rows. Even-numbered rows will always use a *. We use the message "Enter size:" and "Enter character:" to read data. Use the Scanner class to read data. Below we have provided two examples of running the program. Notice your program must work for other values. Underlined text represent input provided by the user.

```
Enter size: 3                        Enter size: 4
Enter character: $                   Enter character: #
$$                                   ##
****                                 ****
$$$$$$$$                             ########
                                     ****************
```