CMSC 131 Quiz 2 Worksheet

The second quiz for the course will be on Fri, Feb 23. The following list provides additional information about the quiz:

- The quiz will be a written quiz (no computer).
- **The quiz will be in the lecture session.**
- Closed book, closed notes quiz.
- Answers must be neat and legible.
- The quiz has a maximum duration of 25 minutes.
- Bring your student id.
- You must take your quiz in your assigned lecture session and not show up to the other one. We will not grade quizzes taken in the incorrect sections.
- Please do not discuss the quiz after you have taken it.

The following exercises gives you practice with concepts that <u>may show up</u> on the quiz. Solutions to these exercises will not be provided, but you are welcome to discuss your solutions with the TAs during office hours. It is recommended that you try these exercises on paper first (without using a computer).

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: #
$$                                     ##
****                                   ****
$$$$$$$$                               ########
                                       ****************
```

You need to know all material covered in lecture/lab in Week 1 to Week 4. Including nested loop!
Writing your own static methods will not be on quiz 2. You will write your code in main.
Go to lab on Thurs, 2/22 if you want to take Q2 from Spring 23 as a practice quiz!

Here are some old quizzes: https://www.cs.umd.edu/class/spring2024/cmsc131/quizzes/oldQuiz2.zip