Java OO Concepts Unit

Lesson 01: Lab 04: ConsoleIO Class Lab

SOFTWARE GUILD

Lab 04: ConsoleIO Class Lab

Objective:

The objective of this lab is to practice designing and implementing programs that have more than one class.

Requirements:

Design a class (no main method) that has methods to ask for and retrieve keyboard input from the user and to print information out to the console. You must have methods that do the following:

1. Display a prompt to the user and read in an integer. The prompt value should be passed in as a parameter and the value that is read in should be the return value of the method.

2. Display a prompt to the user and read in an integer between max value and min value. The prompt value, min, and max should be passed in as parameters. The value read in from the console should be the return value of the method. This method must keep asking the user for input until the value is in range.

3. Display a prompt to the user and read in a string. The prompt value should be passed in as a parameter and the value that is read in should be the return value of the method.

4. Display a prompt to the user and read in a float. The prompt value should be passed in as a parameter and the value that is read in should be the return value of the method.

5. Display a prompt to the user and read in a float between max value and min value. The prompt value, min, and max should be passed in as parameters. The value read in from the console should be the return value of the method. This method must keep asking the user for input until the value is in range.

6. Display a prompt to the user and read in a double. The prompt value should be passed in as a parameter and the value that is read in should be the return value of the method.

7. Display a prompt to the user and read in a double between max value and min value. The prompt value, min, and max should be passed in as parameters. The value read in from the console should be the return value of the method. This method must keep asking the user for input until the value is in range.

8. Print a given string to the console. The prompt value should be passed in as a parameter.

After completing this class, refactor your Simple Calculator program to use this object for all of its console input and output.

Before coding, you must create a flowchart and class diagram (in Dia) for your program.

Please show the diagrams to the instructor before coding.