**Lab 06 - Calculator**

Open BlueJ, and create a new BlueJ project titled **Lab06-Calculator** in your CS\LABS folder (H:\CS\LABS).

Create a new class with this code skeleton:

//Name:

import java.util.\*;

public class PracticeProblems

{

public static void main(String[] args)

{

Scanner console = new Scanner(System.in);

}

}

**Before each problem, insert a COMMENT with the problem number.**

1. Declare an integer variable called a and get its value from the keyboard. Write an if statement that will print "Good number!" if a is equal to 9. Print nothing otherwise.

/\* test all of your if statements with different inputs to ensure they work -

syntactically correct code that compiles but doesn’t work… isn’t very useful \*/

1. Declare an integer variable called b and get its value from the keyboard. Write an if statement that will print "that's a big number" if b is larger than 100. Print nothing otherwise.
2. Declare an integer variable called c and get its value from the keyboard. Write code that will print "binary!" if c is equal to 0 or 1. Print nothing otherwise.
3. (Riddle) 9 = L of a C
4. Declare an integer variable called d and get its value from the keyboard. Write an if statement that will print "that's not a 4" if d is NOT equal to 4. Print nothing otherwise.
5. Declare a double variable called e and get its value from the keyboard. Write an if statement that will print "big" if eis larger than 10, but will print "small" otherwise.
6. Imagine you’re writing the code for a fantasy game where you can assign your character ‘stats points’ (values) for three characteristics - strength, charm, and magic. Declare integer variables for each attribute and get their values from the keyboard. In this game, players get to allocate 15 stat points as they see fit.

**After user input is provided, print the stats in a single line.**

**Players aren’t required to use all 15 points, but if they try to assign more than 15 points**, the default value of 5 should be assigned for each stat. (Don’t just say it’s 5. Actually make it 5.) Sample run below (**user input shown in red**):

Welcome to Mr. McCoy's Quest for Salsa!

Assign stats to your character (max 15 points TOTAL)

Enter strength >>> **3**

Enter charm >>> **2**

Enter magic >>> **6**

strength = 3, charm = 2, magic = 6

Alternate sample run (showing what happens if you go over 15)

Welcome to Mr. McCoy's Quest for Salsa!

Assign stats to your character (max 15 points TOTAL)

Enter strength >>> **8**

Enter charm >>> **4**

Enter magic >>> **6**

Point limit exceeded! Default values assigned.

strength = 5, charm = 5, magic = 5

1. (Riddle) Tear one off and scratch my head. What was red, now black instead.
2. Complete the ‘Interactive WS – If Statements #1’ (Excel file). Make sure to save it when done.

**Calculator app**

Create a new class in your Lab06 project with this code skeleton:

//Name:

import java.util.\*;

public class Calculator

{

public static void main(String[] args)

{

Scanner console = new Scanner(System.in);

}

}

Write a program that will create a text-based calculator app. First, print a ‘menu’ to the console (screen), that will show users the calculator menu, like the following (**user input shown in red**):

1 - addition (+)

2 - subtraction (-)

3 - multiplication (\*)

4 - division (/)

5 - modulus (%)

Choose an operation from the menu >>> **1**

After the user chooses the desired operation, ask them to input the values for the calculation:

Enter first number >>> **2**

Enter second number >>> **4.2**

Finally, print out the result of the calculation:

2.0 + 4.2 = 6.2