CSC120
Homework 6
Due Thursday, 10/25/2018

To be complete each program must be commented and indented to make it readable. Run the program as requested and copy the output as a comment to the bottom of the program.

Part 1: QuizMaker

This is a sample transcript of what your program should do. Items in bold are user input and should not be put on the screen by your program. For each question, have a response for a right and wrong answer. You can hardcode the questions.

Sample Output for Part 1
Enter your name: Tom
Welcome Tom! Please answer the following questions:

4 + 6 = 10
Correct!

4 * 6 = 24
Correct!

4 / 6 = 1
Wrong!
The correct answer is 0

4 % 6 = 4
Correct!

You got 3 correct answers
That's 75.0 percent!

Each question is to have a right and wrong answer branch. Keep track of the correct answers and calculate the percentage right. Declare a variable count as an int. Initialize it to 0 and if the answer is right, increment count.

Hints - Think about how it might flow - (after the initial introduction)
1) Write out a question (System.out.print (“4 + 6 =”); )
2) Read in answer (ans=keyboard.nextInt();)
3) Check the answer(if - else)
4) Write out response for right or wrong answer
5) Keep track of the right or wrong answer count
6) Write out the next question and repeat (no loop)
7) Write out the percentage correct
Part 2: Guessing Game using random number generator

**Requires a while loop.**
Use the random number generator to get a random number. Then in a loop ask for inputs from the keyboard. Give the user back a message if their guess is too high, too low or they got it right. Count the number of tries. Here is a sample exchange - user inputs in **bold**

Enter guess
1
You guessed too low
Enter guess
2
You guessed too low
Enter guess
3
You guessed too low
Enter guess
5
You guessed too high
Enter guess
4
Right!!!
You guessed right in 5 tries

Here is some sample code to set up the Random Number Generator.
```java
import java.util.Random;
import java.util.Scanner;

class GuessingGame {
    public static void main (String [] args){
        Random randGen = new Random();
        Scanner scnr = new Scanner(System.in);
        int numberToGuess=rand.nextInt(5) + 1; // Random number between 0 and 4. Add 1 to get to 5.
```
**Part 3: Prize Determination**

You have three identical prizes to give to contestants 1-30. You are to randomly select three winners. You have to make sure you do not select the same contestant twice. Write a java program that selects the winners then displays one message to the screen with the three unique contestant numbers displayed. It is to be done in a while loop.

Steps

1. Setup random number generator
2. Get 3 random numbers in the range specified
3. While number1 equals number2 or number 2 equals number3 or number1 equals number3
   --Get new numbers
4. When loop done - meaning none of them are equal to each other print them out.
5. To test you need to shrink the range down to force them to be the same. Change the range to numbers between 1 and 4 and run.

Sample Output

The winners are 28  23  13

Sample after I shrink the range to 5 so I can make sure I keep picking new numbers until none of them match

The winners are 3  2  1
The winners are 2  1  4