CSCI-241 Assignment 1 **High-Low Game**
Due: Thursday, February 11, 2021 *at 11:59 p.m.*

Description

Before you can write your own programs, we want you to learn how to edit, compile and run existing programs.

For this assignment, you will enter, compile and run the Java class found in the printout from your course pack. (Note: It is a separate document found after these instructions.)

Part of your points on this assignment come from successful and complete submission to your instructor. You must submit this assignment in two ways: transferring the entire BlueJ project to your Computer Science lab account (and submitting from there) and uploading your **`HighLow.java`** file to the "dropbox" in Canvas. **It is VERY IMPORTANT to follow submission guidelines for both!**

1. Use **BlueJ** to create a new project called **`Assign1Game`**.
2. After creating the project, create a new class, called **`HighLow`**. Open it in the editor and enter the program that you were given on paper. Remember to include your individual information at the top of the program.

But – don't follow the same indentation as the original!
You will correct the original program's terrible indentation, which is non-existent throughout the program. Follow one basic rule:

Indent everything inside each set of braces { } by 2-4 spaces. If you have a set of braces inside another set, indent everything inside by 2-4 *more* spaces than the previous one.

For example, a set of lines in the printed copy of the program looks like:

```
private static int generateSecretNumber( )
{
double temp = Math.random();
int num = (int) Math.floor(temp * 100) + 1;
return num;
}
```

Your version should look like:

```
private static int generateSecretNumber( )
{
   double temp = Math.random();
   int num = (int) Math.floor(temp * 100) + 1;
   return num;
}
```

BlueJ can help you with the indentation; just press the TAB key after each opening brace. It will add 4 spaces with each tab press.

After typing the code, compile your **`HighLow`** class. If you have copied everything accurately from the paper copy, it will compile successfully. However, most of us would make a few mistakes while typing. Read the error messages given by **BlueJ**. Compare your handout, *line by line*, with your typed code on and around the line **BlueJ** highlights. Keep fixing typographical errors until the code compiles. Every space and character counts (and capitalization, too)!

Run your program by right-clicking the class icon in the BlueJ window and selecting the **`Run Main Method`** line. The program is designed to choose random numbers, so it is impossible to show you the exact output you will see each time. However, your BlueJ output window should show lines of text which look *very close to* what you see in the example below.

Here is an example of what was printed when I ran my program. Note that you will need to enter a Y or N at various times. In the box, all information *typed by you* (input) is **`bold and underlined`** to distinguish it from what the program prints.

```
*** WELCOME TO THE HIGH-LOW GAME ***
The objective of this game is for you
to guess the secret number (any
integer between 1 and 100) with the
least number of tries.  The maximum
number of tries allowed is six.  If
your guess is higher than the secret
number, the program will reply High.
If your guess is lower, the program
will reply Low.
Ready?  Type Y to play, N to quit:  Y

Enter guess between 1 and 100:  50
Your guess is Low
Enter guess between 1 and 100:  75
Your guess is High
Enter guess between 1 and 100:  66
Your guess is High
Enter guess between 1 and 100:  58
Your guess is High
Enter guess between 1 and 100:  54
Your guess is High
Enter guess between 1 and 100:  52
Congratulations!  You guessed it in 6 tries.
Another game?
Type Y to play, N to quit:  N
```

Your output should match this <u>exactly</u>. *Spacing, capitalization, indentation <u>and</u> spelling MATTER.* If your output does not look like this, compare your program to the original and change it so that it does.

Submission Requirements

1. Once you have this class working correctly, upload and submit your `HighLow.java` file into Canvas. I can make notations on that copy when I grade it.

2. You must also submit this same file electronically FROM YOUR LAB ACCOUNT (not from home). This will take a few steps:

    a. Use the SSH (Secure Shell) file transfer program to transfer the entire BlueJ project into your Computer Science lab account.
    b. Use Remote Desktop Login to log into your lab account. Once there, start running BlueJ and open the project you transferred there.

    - From within **BlueJ** choose **Tools** -> **Submit**.
    - If the *Scheme* is empty, click the *Browse* button and choose *Submit for Grading*.
    - Finally, click on the *Submit* button.

    If you discover after submission that you want to change your program and then resubmit, go ahead. The new program will then replace the old.

    If you wish to double-check that your submission succeeded, enter this command (**replacing the *???* with your own Computer Science lab login name**):

```
more /home/student/Submit/Cs241/???/Assign1Game/HighLow.java
```

This goes to the has-been-submitted location and displays the copy of your program found there.

Grading Criteria

Your program MUST compile ERROR FREE to receive any credit!

Correct submission of project (BOTH CS lab account and Canvas)	3 pts
Corrected indentation	3 pts
Program contents and output match original	4 pts
TOTAL:	10 pts