CS150 Assignment 3

The Guessing Game

Date assigned: Monday, October 2, 2006
Date due: Monday, October 9, 2006
Total points: 40

Problem

Your pesky little brother is driving you batty, so you decide to write a computer game to keep him busy for a while. This game challenges him to guess a number. Every time he guesses, the computer will tell him if he's too low, too high or correct.

Output

The output for this program should look like this (sample input given in bold):

```
/****************************************************/
/*                The Guessing Game                 */
/****************************************************/

Hello.  Welcome to the computer guessing game.
Please enter your name:  Billy
Welcome, Billy.

Please enter two integers to define the range of numbers:
0 100

I am thinking of a random number from 0 to 100.
What is your guess?
20
Billy, your guess is too low.
What is your guess?
45
Billy, you guessed my number in 2 tries.  Congratulations!
```

Notes

It seems pretty straightforward, but here are some important points to add to the game. Ideally, you'd like your brother to be allowed to guess forever, but realistically you need to set a limit on the number of guesses. So, if he doesn't guess in allotted number of tries, he should get a message that says this:

Sorry, Billy, you lose. The number was 45.

If the user guesses outside the range, it shouldn't count towards his total number of guesses, but he should get an error message that looks like this:

`Billy, you entered a number outside the range.  Try again!`

The user should set the range, and your program should generate a random number within that range for the user to guess. We will cover how you should generate random numbers in class.

To complete this assignment you must

1. Create a new C++ project in Visual Studio. Name your project "03Gamexxxxxxxx", where xxxxxxxx should be replaced by your PU Net Id. As an example, my project would be called "03Gamekhoj0332". It is vital that you name your project correctly!
2. Type the solution (fully documented/commented) to the problem into your project.
3. Remember to enter in your name as the author of the program.
4. Make sure that your program compiles and runs correctly. If you get any errors, double check that you typed everything correctly. Be aware that C++ is case-sensitive.
5. Once you are sure that the program works correctly it is time to submit your program. You do this by logging on to Turing and placing your complete project folder in the CS150-01 drop folder. Make sure that you copy your program folder and don't move it. If you move it, then you will not have your own copy!

Notes

1. You must use loops.
2. You must use constants when possible.
3. You may only use the C++ programming concepts covered thus far in class. Do not use any more advanced concepts that we have not covered or any other programming concepts that you have had experience with.
4. You will need to test this program thoroughly to make sure that you catch all the possible errors.
5. Your output must look exactly like the sample given.
6. You must comment your code appropriately.
7. You must follow the coding standards.
8. Refer to the syllabus for what constitutes plagiarism, and the consequences for plagiarizing.

To receive full credit for this assignment, your project must be in the drop box by 1pm on the day that it is due. Anything later will be considered late. Further, you must bring a hard copy of your program to class and place it on the instructor's desk by 1pm.

Good luck! And remember, if you have any problems, come and see me straight away.

START EARLY!!