CPSC1420 Programming and Problem Solving I

Fall 2020

Homework 2

Due: 6:00 pm, Wednesday, Oct. 7

Write a C++ program that plays an integer guessing game with the user. Your program should ask the user to provide a range (i.e. the minimum integer, and the maximum integer), then your program should generate a random number within the given range and ask the user to guess the number. For example, if the user input 10 for the minimum number and 100 for the maximum number, it means that the range is from 10 to 100, hence your program should generate a random number that is in the range of 10 to 100 and ask the user to guess the number. The user should be given an unlimited number of guesses and on each guess should be told whether their guess is too high, too low, or correct. The entire game should be repeated as many times as the user wishes.

When your program starts execution, it needs to display a welcome message that describes the program to user in a short, but clear message. Blank lines appear before and after the welcome message to help user read the screen. In addition, goodbye message should be displayed to wrap up the program before exiting. Again, blank lines appear before and after the goodbye message to help user read the screen.

Please see below for an example on how to generate a random number in C++. In order to use rand() function, your program needs to include <cstdlib> at the beginning.

```
#include <iostream>
#include <cstdlib>
using namespace std;

int main()
{
 int num;
 //generate 20 random numbers
 //between 10 and 100
 // rand() % (max – min + 1) + min
 for (int i = 0; i < 20; i++) {
    num = rand() % (100 – 10 + 1) + 10;
    cout << num << endl;
 }
 return 0;
}
```

Grading

The assignment will be graded in accordance with the "Labs and Programming Assignment Expectation" handout and the rubric posted on Canvas. Failure to adhere to the guideline could result in losing points.

Submitting your Program

Your program must be stored in a ***single*** file called '`hw2.cpp`'. Use Canvas to submit your program.

Failure to submit your program before the due date and time will result in a zero. **Programs that fail to compile will result in a zero.** You can submit your program multiple times - only the last submission before the due date and time will be graded.