

Name: _____ Date of demonstration: _____ Marks earned: /5

Assignment (Due by 10 AM on November 25)

Maximum Points: 5, Weight: 5%

To complete the lab, please follow the instructions below. Not following these instructions may result in deduction of marks.

1. To receive any credit, you need to:
 - a. Demonstrate your work during the week 13 lab; Please print this handout, write your name and date of demonstration, and bring the printout with you for demonstration;
 - b. Upload your work to eConestoga as instructed in step 2 by the deadline.
2. Once you complete this assignment, add weekly status report to the Visual Studio solution folder. Compress the entire solution folder to create a file with “.zip” extension. Upload the “zip” file to the appropriate assignment folder on eConestoga. You will not receive any credit if you fail to upload this file, even if you have finished and demonstrated your work. No credit is awarded without demonstration.
3. At the top of each C file, add your name and date of program creation.
4. Any variables or functions you create must be named following “camelCase” notation. Variables must be initialized before use. In case of multiple variables, define only one variable per line.
5. Program the following in one C file:
 - a. [1 points] Write a program whose “main” function calls a function with the following prototype:

`void countFunction();`

This function prints the number of times it is called. This must be done by using a printf statement inside the function (that is, do not print the number of times the function is called from the main function). You must not use any global variables. Test your program by calling it from the “main” function several times.
 - b. [4 points] Write a program that prompts the user to enter an unsigned integer (32-bit). Your program uses the function with the following prototype to print the input number with its bits reversed in both integer and binary representations:

`unsigned int reverseBinary(unsigned int num);`

A sample run of part b is shown below:

Please enter an unsigned integer: 1111

You entered 1111 with bits: 00000000 00000000 00000100 01010111

The reversed-bit number is: 3927965696 with bits: 11101010 00100000 00000000 00000000

Please be prepared to answer any questions during the demo. You are expected to correctly understand your programs. Any lack of understanding may result in deduction of points.