**Homework 1003: Reverse the Bits**

Due: Sunday, 3 October, noon

**Homework Assignment**

This assignment must be completed entirely in a Unix environment, either Linux or Mac OS.

[Here](https://borax.truman.edu/250/1003/revbits.c) is a file with a complete main program, missing the implementation of two functions revbits() and atoh. The assignment is to implement the two functions so that the main program works correctly. Do not modify the main function in any way. Locate your function implementations after main, and use doxygen format to document your functions.

The purpose of revbits() is to accept an unsigned 8-bit value as a parameter and return the value that results when the bits of the parameter are mirror-image reversed left-to right. So, if the parameter’s bits are 1010 1100 then the return value should be 0011 0101. In hexadecimal, 0xac would be converted into 0x35.

A run of the program should look exactly like this:

$ ./revbits 0xac

0xac reversed is 0x35

You will need to use bitwise operators to implement the functions. There should be no for loop in your code. You should strive for simple, clean, efficient, understandable code. There should be no warnings or errors when your program is compiled with  
clang -Weverything -std=c89 -pedantic-errors -O0 -o revbits revbits.c.

Make sure your code adheres to the [coding style guide](https://borax.truman.edu/250/coding_rules.html). In particular, note 2 space indents, brace formatting, no tab characters, and the line length limit.

Submit your .c file to the [homework submission](https://borax.truman.edu/250/submit.php) page.