CSCI 2330 – Binary Exercises

1. How many values can be represented using a 9-bit binary number?

2. Write decimal value 230 in (a) binary, and (b) hex.

3. Write binary value 0b10001111 in (a) decimal, and (b) hex.

4. Write hex value 0x55 in (a) decimal, and (b) binary.

5. Compute 0x69 | 0x55 and write your answer in hex.

6. Compute 0x69 || 0x55 and write your answer in hex.

7. Assuming 8-bit numbers, compute (a) 5 << 1, (b) 5 << 2, and (c) 5 << 3. Write your answers in decimal. What do you notice?

8. C does not provide a logical XOR operator (which you might reasonably expect to be ^^). How could you compute the logical XOR of two ints **x** and **y** using existing logical operators (==, !=, ||, &&, and !)?