**Bits, Bytes, Hexadecimals, Logic and Bitwise operators**

Please study the following material (google for more if necessary) in the order it appears below:

1. What are bits and bytes?

<https://www.youtube.com/watch?v=HRmfXA4EUBs>

<https://web.stanford.edu/class/cs101/bits-bytes.html>

1. How to convert decimal to binary?

<https://www.youtube.com/watch?v=rsxT4FfRBaM0>

<https://www.mathsisfun.com/binary-decimal-hexadecimal-converter.html>

1. How to convert binary to hexadecimal?

<https://www.youtube.com/watch?v=tSLKOKGQq0Y>

<https://www.mathsisfun.com/binary-decimal-hexadecimal-converter.html>

1. Bitwise operators (and, or, xor, not, shift left, shift right)

<https://www.youtube.com/watch?v=SSvHrrbhCCI>

<https://www.geeksforgeeks.org/bitwise-operators-in-c-cpp/>

<https://en.wikipedia.org/wiki/Bitwise_operations_in_C>

Tricks:

Swapping of 2 numbers using XOR

Fast Multiplication or Division by 2

How to determine if a number is a power of 2

<https://www.geeksforgeeks.org/bits-manipulation-important-tactics/>

<https://www.geeksforgeeks.org/bitwise-hacks-for-competitive-programming/>

<https://www.geeksforgeeks.org/bit-tricks-competitive-programming/>