Computer Science 1

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Binary

Conversions

Binary is a base-2 numbering system, just as **decimal** is base-10. This means that binary makes use of only two unique symbols to denote digits, being 1's and 0's.
A base-n system can be read left-to-right. Each digit is multiplied by n to the power of 1 less than the number of digits from the right. This applies to binary as well.
The **one's complement** of a binary number is the result of "flipping" each of its digits, turning 0's to 1's and vice versa.

The one's complements of four-bit numbers are as follows:

0000	0001	0010	0100	0101	0110	0111	1000
1111	1110	1101	1011	1010	1001	1000	0111
1001	1010	1011	1100	1101	1110	1111	