

Bitwise Operators

Ints are stored in binary (2 complement)



min 1000...0 = -2^{31}

max 0111...1 = $2^{31} - 1$

Think of an int as a broken array of size upto 32.

23 : 0...010111
 FFTFTTT
 ...6543210

23: 10111
 & 14: 01110

 00110 (6)

45: 101101
11: 001011
 101111 (47)

23: 10111
 ^ 14: 01110

 11001 (25)

Reg Logical Ops

- && and
- || or
- ! not

Bitwise ops

- & and
- | or
- ^ xor
- ~ not

$x \gg y$ right shift

$x \ll y$ left shift

~ 23 : 111...101000
 23 : 00...010111
 -23 : 111...101001
 → and these, you get the lowest 1 bit.

