

Encoding Bytes

Hex	Decimal	Binary
0	0	0000
1	1	0001
2	2	0010
3	3	0011
4	4	0100
5	5	0101
6	6	0110
7	7	0111
8	8	1000
9	9	1001
A	10	1010
B	11	1011
C	12	1100
D	13	1101
E	14	1110
F	15	1111

Data	Bytes
char	1
short	2
int	4
long	8
float	4
double	8

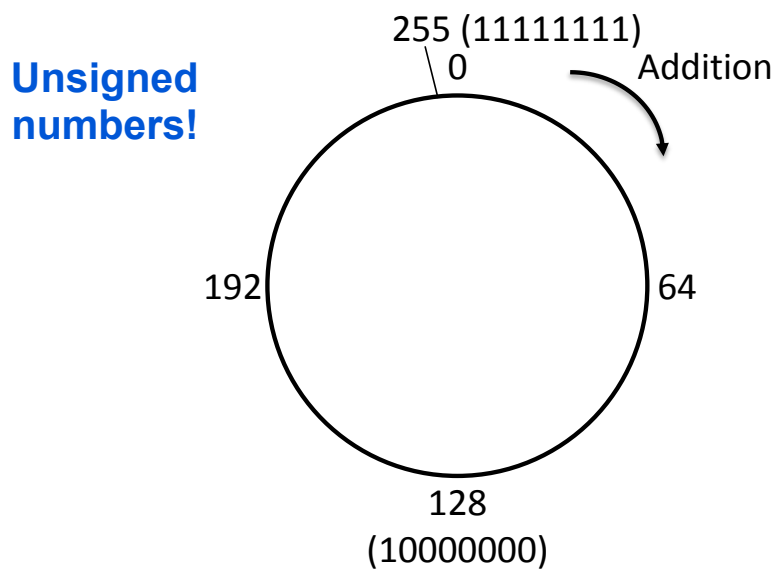
C Puzzle: Logical XOR

- C does not provide a logical XOR operator (which you might reasonably expect to be \wedge). How could you compute the logical XOR of two ints **a** and **b** using existing logical operators?

Binary Arithmetic

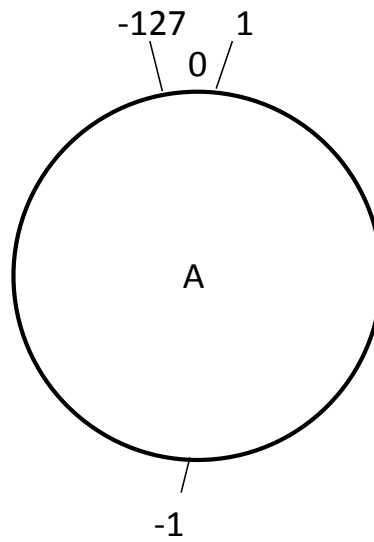
$$\begin{array}{r} 1 \\ 0110 \\ + 0100 \\ \hline 1010 \end{array} \qquad \begin{array}{r} 6 \\ + 4 \\ \hline 10 \end{array}$$

Modular Arithmetic



Signed Magnitude

1 = 00000001
-1 = 10000001



Two's Complement

1 = 00000001
-1 = 11111111

