

(Video 30) Bitwise Operators in C (Part 4)

Outline

→ Bitwise XOR Operator

→ Example

→ Homeworks.

1100 0000 = 8

Inclusive OR

vs

Exclusive OR / XOR

→ Either A is 1 or B is 1 Both are 1.

→ Including BOTH.

A	B	OR
0	0	0
0	1	1
1	0	1
1	1	1

→ Either A is 1 or B is 1, then the output is 1. But when both are 1, the output is 0.

→ Excluding BOTH

→ Same result 0.

A	B	XOR
0	0	0
0	1	1
1	0	1
1	1	0

→ Bitwise XOR (\wedge) is Binary Operator.

It takes two numbers and perform bitwise XOR.

→ Result of XOR is 1

When two bits are different

otherwise the result is zero.

$$\begin{array}{r} 7 \rightarrow 0111 \\ 4 \rightarrow \wedge 0100 \\ \hline 0011 \rightarrow 3 \end{array}$$

$$7 \wedge 4 = 3$$

Code:

```
#include <stdio.h>
int main()
{
    int a = 4, b = 3;
    a = a ^ b;
    b = a ^ b;
    a = a ^ b;
    printf("After XOR, a = %d and b = %d, a, b);
    return 0;
}
```