

6105. Maximum XOR After Operations

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You are given a **0-indexed** integer array `nums` . In one operation, select **any** non-negative integer `x` and an index `i` , then **update** `nums[i]` to be equal to `nums[i] AND (nums[i] XOR x)` .

Note that `AND` is the bitwise AND operation and `XOR` is the bitwise XOR operation.

Return the **maximum** possible bitwise XOR of all elements of `nums` after applying the operation **any number** of times.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

Input: `nums = [3,2,4,6]`
Output: `7`
Explanation: Apply the operation with `x = 4` and `i = 3`, `num[3] = 6 AND (6 XOR 4) = 6 AND 2 = 2`. Now, `nums = [3, 2, 4, 2]` and the bitwise XOR of all the elements = `3 XOR 2 XOR 4 XOR 2 = 7`. It can be shown that 7 is the maximum possible bitwise XOR.
Note that other operations may be used to achieve a bitwise XOR of 7.

Example 2:

Input: `nums = [1,2,3,9,2]`
Output: `11`
Explanation: Apply the operation zero times. The bitwise XOR of all the elements = `1 XOR 2 XOR 3 XOR 9 XOR 2 = 11`. It can be shown that 11 is the maximum possible bitwise XOR.

Constraints:

- `1 <= nums.length <= 105`
- `0 <= nums[i] <= 108`

JavaScript

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⚙️

1

2

3

4

5

const maximumXOR = (a) => {
 let res = 0;
 for (const x of a) res |= x;
 return res;
};

☐ Custom Testcase

Use Example Testcases

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