

1829. Maximum XOR for Each Query

Description

- You are given a **sorted** array `nums` of `n` non-negative integers and an integer `maximumBit`. You want to perform the following query `n` **times** :
- Find a non-negative integer `k < 2maximumBit` such that `nums[0] XOR nums[1] XOR ... XOR nums[nums.length-1] XOR k` is **maximized**. `k` is the answer to the `ith` query.
 - Remove the **last** element from the current array `nums`.

Return *an array* `answer`, *where* `answer[i]` *is the answer to the* `ith` *query*.

Example 1:

Input: `nums = [0,1,1,3]`, `maximumBit = 2`

Output: `[0,3,2,3]`

Explanation: The queries are answered as follows:

1st query: `nums = [0,1,1,3]`, `k = 0` since `0 XOR 1 XOR 1 XOR 3 XOR 0 = 3`.

2nd query: `nums = [0,1,1]`, `k = 3` since `0 XOR 1 XOR 1 XOR 3 = 3`.

3rd query: `nums = [0,1]`, `k = 2` since `0 XOR 1 XOR 2 = 3`.

4th query: `nums = [0]`, `k = 3` since `0 XOR 3 = 3`.

Example 2:

Input: `nums = [2,3,4,7]`, `maximumBit = 3`

Output: `[5,2,6,5]`

Explanation: The queries are answered as follows:

1st query: `nums = [2,3,4,7]`, `k = 5` since `2 XOR 3 XOR 4 XOR 7 XOR 5 = 7`.

2nd query: `nums = [2,3,4]`, `k = 2` since `2 XOR 3 XOR 4 XOR 2 = 7`.

3rd query: `nums = [2,3]`, `k = 6` since `2 XOR 3 XOR 6 = 7`.

4th query: `nums = [2]`, `k = 5` since `2 XOR 5 = 7`.

Example 3:

Input: `nums = [0,1,2,2,5,7]`, `maximumBit = 3`

Output: `[4,3,6,4,6,7]`

Constraints:

- `nums.length == n`
- `1 <= n <= 105`
- `1 <= maximumBit <= 20`
- `0 <= nums[i] < 2maximumBit`
- `nums` is sorted in **ascending** order.

