3141. Maximum Hamming Distances Premium

Hard Topics Hint

Given an array `nums` and an integer `m`, with each element `nums[i]` satisfying `0 <= nums[i] < 2^m`, return an array `answer`. The `answer` array should be of the same length as `nums`, where each element `answer[i]` represents the *maximum* **Hamming distance** between `nums[i]` and any other element `nums[j]` in the array.

The **Hamming distance** between two binary integers is defined as the number of positions at which the corresponding bits differ (add leading zeroes if needed).

Example 1:

> **Input:** `nums = [9,12,9,11], m = 4`
>
> **Output:** `[2,3,2,3]`
>
> **Explanation:**
>
> The binary representation of `nums = [1001,1100,1001,1011]`.
>
> The maximum hamming distances for each index are:
>
> - `nums[0]` : 1001 and 1100 have a distance of 2.
> - `nums[1]` : 1100 and 1011 have a distance of 3.
> - `nums[2]` : 1001 and 1100 have a distance of 2.
> - `nums[3]` : 1011 and 1100 have a distance of 3.

Example 2: