3199. Count Triplets with Even XOR Set Bits I Premium

Easy Topics Companies Hint

Given three integer arrays `a`, `b`, and `c`, return the number of triplets `(a[i], b[j], c[k])`, such that the bitwise `XOR` of the elements of each triplet has an **even** number of set bits.

Example 1:

> **Input:** `a = [1], b = [2], c = [3]`
>
> **Output:** 1
>
> **Explanation:**
>
> The only triplet is `(a[0], b[0], c[0])` and their `XOR` is: `1 XOR 2 XOR 3 = 00₂`.

Example 2:

> **Input:** `a = [1,1], b = [2,3], c = [1,5]`
>
> **Output:** 4
>
> **Explanation:**
>
> Consider these four triplets:
>
> - `(a[0], b[1], c[0])`: `1 XOR 3 XOR 1 = 011₂`
> - `(a[1], b[1], c[0])`: `1 XOR 3 XOR 1 = 011₂`
> - `(a[0], b[0], c[1])`: `1 XOR 2 XOR 5 = 110₂`
> - `(a[1], b[0], c[1])`: `1 XOR 2 XOR 5 = 110₂`

Constraints:

- `1 <= a.length, b.length, c.length <= 100`
- `0 <= a[i], b[i], c[i] <= 100`

Seen this question in a real interview before? 1/5

Yes No

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Topics

Array Bit Manipulation

Companies

0 - 6 months

Amazon 2

Hint 1

Iterate over all possible triplets and calculate its `XOR`.

Discussion (0)