1442. Count Triplets That Can Form Two Arrays of Equal XOR

Solved

Medium

Topics

Companies

Hint

Given an array of integers arr.

We want to select three indices i, j and k where (0 <= i < j <= k < arr.length).

Let's define a and b as follows:

a = arr[i] ^ arr[i + 1] ^ ... ^ arr[j - 1]

b = arr[j] ^ arr[j + 1] ^ ... ^ arr[k]

Note that ^ denotes the bitwise-xor operation.

Return the number of triplets (i, j and k) Where a == b.

Example 1:

Input: arr = [2,3,1,6,7]

Output: 4

Explanation: The triplets are (0,1,2), (0,2,2), (2,3,4) and (2,4,4)

Example 2:

Input: arr = [1,1,1,1,1]

Output: 10

Constraints:

1 <= arr.length <= 300

1 <= arr[i] <= 108

Code

class Solution {

public int countTriplets(int[] arr) {

int count = 0;

int n = arr.length;

for (int i = 0; i < n; i++) {

for (int j = i + 1; j < n; j++) {

int a = 0;

for (int k = i; k < j; k++) {

a ^= arr[k];

}

int b = 0;

for (int k = j; k < n; k++) {

b ^= arr[k];

if (a == b) {

count++;

}

}

}

}

return count;

}

}