

Question 1: XOR of All Subarrays

Problem

Given an integer array, compute the XOR of all elements for every possible non-empty subarray. Then take the XOR of all those results and return the final value.

Function Description

Complete the function *calculateArrayXOR*.

Sample Input

```
4
1
2
3
4
```

Sample Output

```
0
```

JavaScript Solution

```
function calculateArrayXOR(arr) {
    const n = arr.length;

    if (n % 2 === 0) return 0;

    let result = 0;
    for (let i = 0; i < n; i += 2) {
        result ^= arr[i];
    }

    return result;
}
```

Question 2: Feature Map Compression Loss

Problem

A binary feature map is repeatedly reduced using bitwise AND on adjacent elements until one element remains. The compression loss is the sum of all arrays generated during this process.

Sample Input

```
4
0
0
1
1
```

Sample Output

```
3
```

JavaScript Solution

```
function computeCompressionLoss(featureMap) {
    let total = 0;
    let onesCount = 0;

    for (let i = 0; i < featureMap.length; i++) {
        if (featureMap[i] === 1) {
            onesCount++;
        } else {
            total += (onesCount * (onesCount + 1)) / 2;
            onesCount = 0;
        }
    }
    if (onesCount > 0) {
```

```
    total += (onesCount * (onesCount + 1)) / 2;  
}  
  
return total;  
}
```