

## 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;
}
```