2 Questions Total score

Your test will end in 2 minutes. Ensure that you have submitted all your answers.

Max. score 30.00

2 Programming Questions

1. Counting subarrays + 30.0

2. XOR queries + 30.0

## Counting subarrays

You are given an array that contains $N$ positive integers $a_1, a_2, a_3, \ldots, a_N$ where all $a_i$ are pairwise distinct. For each $a_i$, you are required to determine the number of subarrays such that the minimum value of that subarray is $a_i$.

A subarray is a contiguous set of elements of an array.

### Input format

- The first line contains an integer $T$ denoting the number of test cases.
- The first line of each test case contains an integer $N$ denoting the length of the array.
- The second line of each test case contains $N$ space-separated integers $a_1, a_2, a_3, \ldots, a_N$.

### Output format

For each test case, print $N$ space-separated integers where the $i^{th}$ element denotes the number of subarrays in which the minimum value is $a[i]$.

### Constraints

$1 \leq T \leq 10$
$1 \leq N \leq 10^5$
$1 \leq a_i \leq 10^5, a_i != a_j, 1 \leq i \leq N, 1 \leq j \leq N, i != j$

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× notes the number of subarrays in which the minimum value is $a[i]$.

### Constraints

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### Sample input 1 Copy

```
1
5
3 2 4 1 5
```

### Sample output 1 Copy

```
1 4 1 8 1
```

### Explanation

For the first element 3, there is only 1 subarray in which 3 is the minimum element. This subarray is {3}.
For the second element 2, there are 4 subarrays in which 2 is the minimum element. These subarrays are {2}, {3, 2}, {2, 4}, {3, 2, 4}.
For the third element 4, there is only 1 subarray in which 4 is the minimum element. This subarray is {4}.
For the fourth element 1, there are 8 subarrays in which 1 is the minimum element. These subarrays are {3, 2, 4, 1}, {3, 2, 4, 1, 5}, {2, 4, 1}, {2, 4, 1, 5}, {4, 1}, {4, 1, 5}, {1}, {1, 5}.
For the fifth element 5, there is only 1 subarray in which 5 is the minimum element. This subarray is {5}.

ghd2020.hackerearth.com/challenges/test/GOCC11_coding_in_internship/problems/39ff3ef8c1d84e02add8f48fc25435fa/

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End test

2 Questions

Total score

Your test will end in 1 minute. Ensure that you have submitted all your answers.

2 Programming Questions

1. Counting subarrays + 30.0

2. XOR queries + 30.0

```
4
2
95 89
2
90 9
7
85 32 30 21 68 59 82
7
20 64 52 70 6 88 53
```

```
1 2
1 2
1 2 3 16 1 4 1
4 1 4 1 15 1 2
```

Copy

**Note:** Your code must be able to print the sample output from the provided sample input. However, your code is run against multiple hidden test cases. Therefore, your code must pass these hidden test cases to solve the problem statement.

Time Limit: 5.0 sec(s) for each input file

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Score is assigned if any testcase passes

Allowed Languages: Bash, C, C++, C++14, C++17, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, Java 14, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, Python 3.8, Racket, Ruby, Rust, Scala, Swift 4.1, Swift, TypeScript, Visual Basic

New Submission

All Submissions

Save C++17 (g++ 5.4.0)

```
1 #include <bits/stdc++.h>
```

ENG 4:50 PM 8/16/2020