Coolguy and Two Subsequences

by erdemkiraz

Coolguy gives you a simple problem. Given a 1-indexed array, A, containing N elements, what will ans be after this pseudocode is implemented and executed? Print $ans \% (10^9 + 7)$.

```
//f(a, b) is a function that returns the minimum element in interval [a, b]

ans = 0

for a -> [1, n]
    for b -> [a, n]
        for c -> [b + 1, n]
            for d -> [c, n]
                ans = ans + min(f(a, b), f(c, d))
```

Input Format

The first line contains N (the size of array A).
The second line contains N space-separated integers describing A.

Constraints

- $1 \le N \le 2 \times 10^5$
- $1 \le A_i \le 10^9$

Note: A is 1-indexed (i.e.: $A = \{A_1, A_2, \ldots, A_{N-1}, A_N\}$).

Output Format

Print the integer result of $ans \% (10^9 + 7)$.

Sample Input

```
3
3 2 1
```

Sample Output

```
6
```

Explanation

$min(\ f(1,1),\ f(2,2)\ ) = 2$
$min(\ f(1,1),\ f(2,3)\ ) = 1$
$min(\ f(1,1),\ f(3,3)\ ) = 1$
$min(\ f(1,2),\ f(3,3)\ ) = 1$
$min(\ f(2,2),\ f(3,3)\ ) = 1$

We then sum these numbers ($2+1+1+1+1=6$) and print $6 \% (10^9+7)$, which is 6.

Submissions:93

Max Score:120

Difficulty: Advanced

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Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code