

2017 NCTU Annual Programming Contest 國立交通大學程式設計年度賽

Problem B Smart Elevator

Time limit: 1 second Memory limit: 512 megabytes

Problem Description

The tallest building in NCTU, Hsinchu 202, has 202 floors and a smart elevator. In order to save energy, the smart elevator will stop at as less floors as possible. It observes that all visitors to Hsinchu 202 are willing to walk from floor i to floor i-1 for $i \in \{2,3,\ldots,202\}$, and it also finds that no visitors are willing to walk from floor i to floor j if $j \notin \{i-1,i\}$. Therefore, it can just stop at floor i if there are visitors going to floor i and visitors going to floor i-1.

Now, there are n visitors just arrive floor 1, and the destination of visitor j is floor a_j . Except floor 1, how many floors should the smart elevator stop at?

Input Format

The first line of the input contains a positive integer T indicating the number of test cases. Each test case consists of two lines. The first line is a line containing exactly one non-negative integer n where n is the number of visitors just arriving floor 1. The second line contains n integers a_1, \ldots, a_n separated by blanks.

You may assume:

- $1 \le T \le 100$ • $0 \le n \le 10^4$
- $a_1, \ldots, a_n \in \{1, 2, \ldots, 202\}$

Output Format

For each test case, output the number of floors at which the smart elevator stop except floor 1.

Sample Input

2 5 1 2 3 4 4 10 1 2 4 5 7 9 10 10 1 1

Sample Output

2 4