Shopee Programming Contest #2

LIVE INVITE ONLY ACCESS

Jul 25, 2020, 02:00 PM CST - Jul 25, 2020, 05:15 PM CST

03 : 13 : 14
HRS MIN SEC

Highest Mountain

Max. score: 10

Victor is assigned a task for planning quarterly team outings in Shopee. He is trying to organize an outdoor activity to climb the highest mountain among a mountain range. However, it is difficult to tell which mountain is the highest in the mountain range from a distance. Help Victor to identify the highest mountain given the height of the mountains.

In order to climb a mountain, the mountain needs to either increase or decrease consistently by 1 and has at least one side to be able to be seen connected to the ground. Given that 1 is ground level, “2324” is not a valid mountain to be climbed, while “1234” and “4321” are valid mountains with height of 4.

Find the height of the highest climbable mountain.

Input

The first line will specify the N number of mountain ranges

Subsequent N sets will have length L and a series of numbers separated by space representing the height (H)

Height: 1 <= H <= 1000

Length: 1 <= L <= 1000

Output

Integer specifying the height (H) of the highest mountain and index (I) of the peak. If there are multiple mountains with the same height, return the leftmost mountain.

If the height or index is not available, return -1. Return the result for each case with format “Case #{N}: H I”

SAMPLE INPUT

```
6

10
1 2 3 2 3 4 2 3 2 5

10
3 2 3 2 3 4 3 2 1 4

5
1 1 1 1 1

10
10 9 8 7 6 5 4 3 2 1

1
5

1
1
```

SAMPLE OUTPUT

```
Case #1: 3 2
Case #2: 4 5
Case #3: 1 0
Case #4: 10 0
Case #5: -1 -1
Case #6: 1 0
```

Explanation

1 2 3 2 3 4 2 3 2 5

3 has a way to enter from the ground while 4 and 5 doesn’t.

The highest mountain will be "1 2 3" with the height of 3 because a mountain can only be either increase or decrease consistently by 1 and not both. When it increase from 1 to 3, it cannot decrease to 2 again.

3 2 3 2 3 4 3 2 1 4

4 has a way to enter from the ground and it is decreasing consistently by 1.

2 3 4 5 6

There is no way to enter from the ground.

1 2 4 5

The mountain is unable to jump from 2 to 4.

Time Limit:	1.0 sec(s) for each input file.
Memory Limit:	64 MB
Source Limit:	1024 KB
Marking Scheme:	Score is assigned when all the testcases pass.
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, R(RScript), Racket, Ruby, Rust, Scala, Swift-4.1, Swift, TypeScript, Visual Basic

RECENT SUBMISSIONS

DEVELOPERS	RESULT	LANGUAGE

View All

CODE EDITOR

Save C (gcc 5.4.0)

```c
/*
// Sample code to perform I/O:
#include <stdio.h>

int main(){
    int num;
    scanf("%d", &num);                          // Reading input from STDIN
    printf("Input number is %d.\n", num);       // Writing output to STDOUT
}

// Warning: Printing unwanted or ill-formatted data to output will cause the test cases to fail
*/

// Write your code here

```

1:1 vscode

Provide custom input

COMPILE & TEST SUBMIT

Tip: You can submit any number of times you want. Your best submission is considered for computing total score.

Your Rating:

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