Kingdom of Paharpur

Problem Submissions Discussions

Time Limit: 2s, Memory Limit: 512MB

Problem Statement

Long ago, the kingdom of Paharpur was famous for its sacred Mountain of Whispers, a mystical range of N peaks. Each peak i had a certain height hi, measured in magical units.

Legends say that travelers who reach a Silent Peak are granted wisdom — but only if the peak is chosen correctly.

A Silent Peak is a mountain m inside a contiguous segment of the range [l, r] satisfying all of these ancient rules:

Unique Majesty: Peak m must be the tallest in the segment, and no other peak in the segment may match its height.

Gentle Climb: From the start of the segment l to m, the path never descends — climbers always move upwards or stay level.

Soft Descent: From m to the end of the segment r, the path never rises — climbers always move downwards or stay level.

The Paharpuri Council gives you Q requests. Each request is a pair of integers [l,r] representing a segment of mountains a traveler wants to attempt.

Your task is to tell the Council whether each segment contains a Silent Peak, so travelers know if their expedition will succeed.

Input Format

- The first line: two integers N and Q.
- The second line: N integers h1, h2, ..., hN, the heights of the mountains.
- The next Q lines: two integers l and r per line.

Constraints

1 ≤ N, Q ≤ 200000

1 ≤ hi ≤ 1000000000

Output Format

- For each query, print "YES" if there exists a Silent Peak in that segment, otherwise "NO".

Sample Input 0

```
9 4
1 2 2 5 4 4 3 2 1
1 9
1 3
6 9
5 6
```

Sample Output 0

```
YES
NO
YES
NO
```


C++

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}
```

Line: 1 Col: 1

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