Piling Up!

by sandyeep

There is a horizontal row of n cubes. The length of each cube is given. You need to create a new vertical pile of cubes. The new pile should follow these directions: if $cube_i$ is on top of $cube_j$ then $sideLength_j \geq sideLength_i$.

When stacking the cubes, you can only pick up either the leftmost or the rightmost cube each time. Print *"Yes"* if it is possible to stack the cubes. Otherwise, print *"No"*. Do not print the quotation marks.

Input Format

The first line contains a single integer T, the number of test cases.
For each test case, there are 2 lines.
The first line of each test case contains n, the number of cubes.
The second line contains n space separated integers, denoting the *sideLengths* of each cube in that order.

Constraints

$1 \leq T \leq 5$
$1 \leq n \leq 10^5$
$1 \leq sideLength < 2^{31}$

Output Format

For each test case, output a single line containing either *"Yes"* or *"No"* without the quotes.

Sample Input

```
2
6
4 3 2 1 3 4
3
1 3 2
```

Sample Output

```
Yes
No
```

Explanation

In the first test case, pick in this order: **left - 4, right - 4, left - 3, right - 3, left - 2, right - 1**.
In the second test case, no order gives an appropriate arrangement of vertical cubes. **3** will always come after either **1** or **2**.

Submissions: 7021

Max Score: 50

Difficulty: Medium

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Python 3

```
1  from collections import deque
2
3  def dq_pop_max(dq):
4      try:
5          if dq[0]>=dq[-1]:
6              return dq.popleft()
7          else:
8              return dq.pop()
9      except IndexError:
10         return None
11
12 def check_stack_dq(dq):
13     cur_value = pop_value = dq_pop_max(dq)
14     while(pop_value):
15         if cur_value>=pop_value:
16             cur_value, pop_value = pop_value,dq_pop_max(dq)
17         else:
18             return 'No'
19     return 'Yes'
20
21 testcases = int(input().strip())
22 dq_list = []
23 for i in range(testcases):
24     num = int(input().strip())
25     dq_list.append(deque([int(x) for x in input().strip().split(' ')]))
26
27 for dq in dq_list:
28     print(check_stack_dq(dq))
```

Line: 25 Col: 72

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

Congrats, you solved this challenge!

Challenge your friends:

- ✔ Test Case #0
- ✔ Test Case #1
- ✔ Test Case #2
- ✔ Test Case #3
- ✔ Test Case #4

You've earned 50.00 points. Next Challenge