

# Presidential Security

## Assignment 1

Computer Programming

Due date: 15 January, 2020

**Problem Statement:** There are ongoing conflicts in ByteLand as well and the President of ByteLand is in danger. You are in charge of the security of the President during the transition from ByteLand to BitLand for some time. BitLand is smaller than ByteLand but a fundamental unit of ByteLand, hence security is tight. There are  $N$  security cars, numbered from 1 to  $N$ , and the President can be in any one of the car. To enter the BitLand, all the cars have to be in the increasing order when they arrive at the secure entrance of BitLand, or else none of the cars will get the entry. In hurry, the cars left without increasing order from ByteLand. There is only one way highway to the BitLand with a sidelane. The sidelane has a width of one car only and only one entrance from the highway. A car can enter entrance on your order, pushing back the other cars, if present, deep into the sidelane, and only the car which is present at the entrance can leave. Your task is to check if the cars will arrive in increasing order at the BitLand secure entrance through highway and sidelane.

### Note

Sidelane is long enough to park all cars.

### Input

First line contains  $T$ , the number of test cases. Then for each test case - $i$  First line contains  $N$ , the number of security cars. The next line contains  $N$  space separated integers, indicating the number of each car in the order they leave the ByteLand for BitLand.

### Output

Print "Yes" without quotes, if all cars arrive the BitLand in increasing order, "No" otherwise.

### Constraints

$$0 \leq T \leq 10^5$$

$$1 \leq N \leq 10^2$$

$$1 \leq A[i] \leq N$$

**Time Limit:** 1 sec

**Memory Limit:** 256 MB

### Sample Test Case

Input	Output
4	Yes
2	Yes
1 2	Yes
4	No
1 3 2 4	
4	
4 3 2 1	
4	
1 3 4 2	