DecInc

ZPRAC-16-17-Lab12

[DECINC] [40 Points]

ANNOUNCEMENT:
Up to 20% marks will be allotted for good programming practice. These include
- Comments for non trivial code
- Indentation: align your code properly
- Use dynamic memory allocation whenever memory is needed
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a is an array of size n which is first decreasing and then increasing. That is, there exists a k such that a[i-1] > a[i] for i ≤ k and a[j] < a[j+1] for all j ≥ k.

Given such an array, you have to search for q numbers inside this array.

Input:
The first line contains an integer n
the second line contains n integers denoting the array.
The third line has an integer q
The following q lines contain an integer each which needs to be searched for in the array.

Output:
q lines, each lines containing either "Yes" or "No" depending on wether

the corresponding number is present in the array.

Example:
Input:
6
7 5 2 1 2 4
3
4
3
2

Output:
Yes
No
Yes

Hint/Caution: You need to use binary search for searching inside the array, and also for finding the pivot k. Using any iterative method to search for the number or for the pivot k (even during input) will lead to 0 marks.