#1. Next larger element

Given an array **A** of size **N** having distinct elements, the task is to find the next greater element for each element of the array in order of their appearance in the array. If no such element exists, output **-1**

Input:
The first line of input contains a single integer **T** denoting the number of test cases.Then **T** test cases follow. Each test case consists of two lines. The first line contains an integer **N** denoting the size of the array. The Second line of each test case contains **N** space separated positive integers denoting the values/elements in the array **A**.

Output:
For each test case, print in a new line, the next greater element for each array element separated by space in order.

Constraints:
$1 <= T <= 100$
$1 <= N <= 10^7$
$1 <= A_i <= 10^{18}$
Example:
Input
2
4
1 3 2 4
4
4 3 2 1
Output
3 4 4 -1
-1 -1 -1 -1

Explanation:
Testcase1: In the array, the next larger element to 1 is 3 , 3 is 4 , 2 is 4 and for 4 ? since it doesn't exist hence -1.

#2. Remove repeated digits in a given number

Given an integer N, remove consecutive repeated digits from it.

Input:
The first line of input contains an integer T denoting the number of test cases. Then T test cases follow. The first line of each test case contains the integer N.

Output:
Print the number after removing consecutive digits. Print the answer for each test case in a new line.

Constraints:
1<= T <=100
1<= N <=10^{18}

Example:

Input:
1
12224

Output:
124

#3. Delete array elements which are smaller than next or become smaller

Given an array arr[] and a number k. The task is to delete k elements which are smaller than next element (i.e., we delete arr[i] if arr[i] < arr[i+1]) or become smaller than next because next element is deleted.

Input:
The first line contains an integer **T,** the number of test cases. For each test case, the first line contains an integer **n,** denoting the size of the array. Next line contains n space separated integers, followed by an integer **k**, denoting the number of elements to be deleted from the array.

Output:
For each test case, the output is the array arr[] after deleting the k elements from the array if possible, else print the left array as it is.

Constraints:
1<=T<=100
2<=n<=100
1<=k<=100

Example:
Input
4
3
3 100 1
1
5
20 10 25 30 40
2
5
23 45 11 77 18
3
2
2 5
2
Output
100 1
25 30 40
77 18
5

Explanation:
1. arr[0] < arr[1] means 3 is less than 100, so delete 3.
2. First we delete 10 because it follows arr[i] < arr[i+1]. Then we delete 20 because 25 is moved next to it and it also starts following the condition.
3. We delete 23, 45 and 11 as they follow the condition arr[i] < arr[i+1].
4. As after deleting 2, we are left with 5 only and hence 5 is the answer.