

# Filter Elements



Given a list of  $N$  integers  $A = [a_1, a_2, \dots, a_N]$ , you have to find those integers which are repeated at least  $K$  times. In case no such element exists you have to print **-1**.

If there are multiple elements in  $A$  which are repeated at least  $K$  times, then print these elements ordered by their first occurrence in the list.

Let's say  $A = [4, 5, 2, 5, 4, 3, 1, 3, 4]$  and  $K = 2$ . Then the output is

```
4 5 3
```

because these numbers have appeared at least 2 times.

Among these numbers,

4 has appeared first at position 1,

5 has appeared next at position 2,

and 3 has appeared thereafter at position 6.

That's why, we print in the order 4, 5 and finally 3.

## Input

First line contains an integer,  $T$ , the number of test cases. Then  $T$  test cases follow.

Each test case consist of two lines. First line will contain two space separated integers,  $N$  and  $K$ , where  $N$  is the size of list  $A$ , and  $K$  represents the repetition count. In the second line, there are  $N$  space separated integers which represent the elements of list  $A = [a_1, a_2, \dots, a_N]$ .

## Output

For each test case, you have to print all those integers which have appeared in the list at least  $K$  times in the order of their first appearance, separated by space. If no such element exists, then print **-1**.

## Constraints

$1 \leq T \leq 10$

$1 \leq N \leq 10000$

$1 \leq K \leq N$

$1 \leq a_i \leq 10^9$

## Sample Input

```
3
9 2
4 5 2 5 4 3 1 3 4
9 4
4 5 2 5 4 3 1 3 4
10 2
5 4 3 2 1 1 2 3 4 5
```

## Sample Output

```
4 5 3
-1
5 4 3 2 1
```

## Explanation

*Sample Case #01:* This is the same example mentioned in the problem statement above.

*Sample Case #02:* As no elements repeats more than 3 times, we don't have any elements satisfying the

criteria of minimum  $K$  times.

*Sample Case #03:* All elements are repeated 2 times. So we print all of them according to their order of occurrence, which is 5 -> 4 -> 3 -> 2 -> 1.