Problem B1
Dynamic Order Statistic Queries (Easy Version)

Time limit: 1 second
Memory limit: 2048 megabytes

Problem Description

Given an empty array, a fixed positive integer k and q queries to be performed on the array. Each query belongs to one of the following two types:

1. 1 x_i —Append x_i to the end of the array.
2. 2 —Find the k-th order statistic of the numbers from the array and remove **one copy** of it. If there are fewer than k elements in the array, nothing is done to the array.

Can you answer all these queries?

Input Format

The first line of the input contains two integers q and k. The i-th of the following q lines contains the i-th query in the format as in the problem description.

Output Format

For each query of type 2, output the k-th order statistic in one line. If there are fewer than k elements in the array, output -1.

Technical Specification

- $1 \leq q \leq 1000$
- $1 \leq x_i \leq 10^9$ for $i = 1, 2, \ldots, q$ of query type 1
- It is guaranteed that there is at least one query of type 2 in the input.

Sample Input 1

```
15 2
2
1 5
2
1 7
2
1 3
1 1
2
1 9
1 12
2
2
2
2
2
```

Sample Output 1

```
-1
-1
7
3
5
9
12
-1
-1
```

Sample Input 2

```
7 1
1 1000000000
1 1000000000
2
2
2
1 1000000000
2
```

Sample Output 2

```
1000000000
1000000000
-1
1000000000
```

Hint

Two heaps are required in this problem. One is a max heap holding the k smallest values, and the other one is a min heap holding other values.