N. Cutting Out

time limit per test: 3 seconds

memory limit per test: 256 megabytes

You are given an array s consisting of n integers.

You have to find **any** array t of length k such that you can cut out maximum number of copies of array t from array s.

Cutting out the copy of t means that for each element t_i of array t you have to find t_i in s and remove it from s. If for some t_i you cannot find such element in s, then you cannot cut out one more copy of t. The both arrays can contain duplicate elements.

For example, if $s = [1, 2, 3, 2, 4, 3, 1]$ and $k = 3$ then one of the possible answers is $t = [1, 2, 3]$. This array t can be cut out 2 times.

- To cut out the first copy of t you can use the elements $[1, \underline{\mathbf{2}}, 3, 2, 4, \underline{\mathbf{3}}, \underline{\mathbf{1}}]$ (use the highlighted elements). After cutting out the first copy of t the array s can look like $[1, 3, 2, 4]$.
- To cut out the second copy of t you can use the elements $[\underline{\mathbf{1}}, \underline{\mathbf{3}}, \underline{\mathbf{2}}, 4]$. After cutting out the second copy of t the array s will be $[4]$.

Your task is to find such array t that you can cut out the copy of t from s maximum number of times. If there are multiple answers, you may choose **any** of them.

Input

The first line of the input contains two integers n and k ($1 \le k \le n \le 2 \cdot 10^5$) — the number of elements in s and the desired number of elements in t, respectively.

The second line of the input contains exactly n integers $s_1, s_2, \ldots, s_n$ ($1 \le s_i \le 2 \cdot 10^5$).

Output

Print k integers — the elements of array t such that you can cut out maximum possible number of copies of this array from s. If there are multiple answers, print **any** of them. The required array t can contain duplicate elements. All the elements of t ($t_1, t_2, \ldots, t_k$) should satisfy the following condition: $1 \le t_i \le 2 \cdot 10^5$.

Examples

input Copy

```
7 3
1 2 3 2 4 3 1
```

output Copy

```
1 2 3
```

input Copy

```
10 4
1 3 1 3 10 3 7 7 12 3
```

output Copy

```
7 3 1 3
```

input Copy

```
15 2
1 2 1 1 1 2 1 1 2 1 2 1 1 1 1
```

output Copy

```
1 1
```

Note

The first example is described in the problem statement.

In the second example the only answer is $[7, 3, 1, 3]$ and any its permutations. It can be shown that you cannot choose any other array such that the maximum number of copies you can cut out would be equal to 2.

In the third example the array t can be cut out 5 times.

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- Juniors Phase 1 Practice #5 (Bitmask, Bitset, Bits)
- Juniors Phase 1 Practice #4 (Binary search , Two pointers)
- Juniors Phase 1 Practice #3 (STL 2)
- Juniors Phase 1 Practice #2 (STL 1)
- Juniors Phase 1 Practice #1 (Prefix sum , Frequency Array)

Juniors Phase 1 Practice #4 (Binary search , Two pointers)

Finished

Practice

→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.

→ Virtual participation

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Start virtual contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
312634281	Mar/27/2025 04:11	Accepted