

Sort Data

You are given data in a tabular format. The data contains N rows, and each row contains M space separated elements.

You can imagine the M items to be different attributes, (like height, weight, energy, etc.) and each of the N rows as an instance or a sample.

Your task is to sort the table on the K^{th} attribute and print the final resulting table.

Note: If two attributes are the same for different rows, print the row that appeared first in the input.

Input Format

The first line contains N and M separated by a space.

The next N lines each contain M elements.

The last line contains K .

Constraints

$1 \leq N, M \leq 1000$

$0 \leq K < M$

Each element ≤ 1000

Output Format

Print the N lines of the sorted table. Each line should contain the space separated elements. Check the sample below for clarity.

Sample Input

```
5 3
10 2 5
7 1 0
9 9 9
1 23 12
6 5 9
1
```

Sample Output

```
7 1 0
10 2 5
6 5 9
9 9 9
1 23 12
```

Explanation

The table is sorted on the second attribute shown as $K=1$ because it's 0 -indexed.