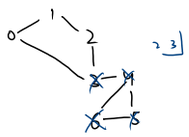
```
7
8
0 1 10
1 2 10
2 3 10
0 3 10
3 4 10
4 5 10
5 6 10
4 6 10
6
3
```



You are the owner of a grocery store. You have a report of sales of `N` products of the store over the last `M` days.

Given this data, you must calculate the best selling product *cumulatively* on each day. If there is a tie, you must print the product with the smallest index.

Input Format

The first line contains two integers `M` and `N`, denoting the number of days and the number of products, respectively.

The `i`th of the next `M` lines contains `N` space-separated integers, `A[i][j]`, where `A[i][j]` denotes the number of units of the `j`th product sold on the `i`th day.

Output Format

Print `M` lines, where the `i`th line contains the index of the best selling product on the `i`th day.

```
3 5
2 1 9 1 9
8 1 0 2 7
4 5 2 1 0 3
```