

Frequency Array

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

Given **2** numbers N , M and an array A of N numbers. For every number from **1** to M , print how many times this number **appears** in this array.

Input

First line contains two numbers N , M ($1 \leq N \leq 10^5, 1 \leq M \leq 10^5$).

Second line contains N numbers ($1 \leq A_i \leq M$).

Output

Print M lines, the i_{th} line should contain number of times that the number i appears in A

Example

standard input	standard output
10 5	2
1 2 3 4 5 3 2 1 5 3	2
	3
	1
	2

Note

Numbers from 1 to 5 appearance are :

- 1 appears **2** times in the array .
- 2 appears **2** times in the array.
- 3 appears **3** times in the array.
- 4 appears **once** in the array.
- 5 appears **2** times in the array.