Summer Lesson

locked

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Among all students planning to enroll to summer school at a university, each student wants to take exactly one out of all the available classes. To help the university in planning, your task is to find out how many students are taking each class.

Complete the function `howManyStudents` which takes in an integer denoting the number of available classes, and an integer array denoting index of each class as input. The function must return an integer array where each element in the array represents the number of students that want to take each class.

Input Format

The first line contains two space-separated integers n, denoting the total number of students and m, denoting the number of available classes.

The second line contains n space-separated integers $c[0], c[1], \ldots, c[n-1]$, where $c[i]$ represents the index of the class that student i wants to take.

Note: We index the students 0 to $n-1$ and we index the classes 0 to $m-1$.

Constraints

- $1 \leq n, m \leq 1000$
- $0 \leq c[i] < m$

Output Format

Print a single line containing m space-separated integers $s[0], s[1], \ldots, s[m-1]$,where $s[j]$ represents the number of students that want to take class j.

Sample Input 0

```
4 3
2 2 0 2
```

Sample Output 0

```
1 0 3
```

Explanation 0

There are $n = 4$ students and $m = 3$ classes. We have $c = [2, 2, 0, 2]$, which means that:

- Student 0 wants to take class 2.
- Student 1 wants to take class 2.
- Student 2 wants to take class 0.
- Student 3 wants to take class 2.

This means that:

- 1 student wants to take class 0.
- 0 students want to take class 1.

- 3 students want to take class 2.

Hence, we must print the array $s = [1, 0, 3]$.

Current Buffer (saved locally, editable) C++14

```
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;


int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code