

Easy Problem from Rujia Liu?

Given an array, your task is to find the k -th occurrence (from left to right) of an integer v . To make the problem more difficult (and interesting!), you'll have to answer m such queries.

Input

There are several test cases. The first line of each test case contains two integers n, m ($1 \leq n, m \leq 100,000$), the number of elements in the array, and the number of queries. The next line contains n positive integers not larger than 1,000,000. Each of the following m lines contains two integers k and v ($1 \leq k \leq n, 1 \leq v \leq 1,000,000$). The input is terminated by end-of-file (EOF). The size of input file does not exceed 5MB.

Output

For each query, print the 1-based location of the occurrence. If there is no such element, output 0 instead.

Sample Input

```
8 4
1 3 2 2 4 3 2 1
1 3
2 4
3 2
4 2
```

Sample Output

```
2
0
7
0
```