B. Little Elephant and Array

time limit per test: 4 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

The Little Elephant loves playing with arrays. He has array a, consisting of n positive integers, indexed from 1 to n. Let's denote the number with index i as a_i.

Additionally the Little Elephant has m queries to the array, each query is characterised by a pair of integers l_j and r_j $(1 \le l_j \le r_j \le n)$. For each query l_j, r_j the Little Elephant has to count, how many numbers x exist, such that number x occurs exactly x times among numbers $a_{l_j}, a_{l_j+1}, ..., a_{r_j}$.

Help the Little Elephant to count the answers to all queries.

Input

The first line contains two space-separated integers n and m $(1 \le n, m \le 10^5)$ — the size of array a and the number of queries to it. The next line contains n space-separated positive integers $a_1, a_2, ..., a_n$ $(1 \le a_i \le 10^9)$. Next m lines contain descriptions of queries, one per line. The j-th of these lines contains the description of the j-th query as two space-separated integers l_j and r_j $(1 \le l_j \le r_j \le n)$.

Output

In m lines print m integers — the answers to the queries. The j-th line should contain the answer to the j-th query.

Examples

input
7 2 3 1 2 2 3 3 7 1 7 3 4

output
3 1