范围查询(Range)

Descriptioin

Let S be a set of n integral points on the x-axis. For each given interval [a, b], you are asked to count the points lying inside.

Input

The first line contains two integers: n (size of S) and m (the number of queries).

The second line enumerates all the n points in S.

Each of the following m lines consists of two integers a and b and defines an query interval [a, b].

Output

The number of points in S lying inside each of the m query intervals.

Example

Input

```
5 2
1 3 7 9 11
4 6
7 12
```

Output

```
0
3
```

Restrictions

0 <= n, m <= 5 * 10^5

For each query interval [a, b], it is guaranteed that a <= b.

Points in S are distinct from each other.

Coordinates of each point as well as the query interval boundaries a and b are non-negative integers not greater than 10^7.

Time: 2 sec

Memory: 256 MB

描述

数轴上有n个点，对于任一闭区间 [a, b]，试计算落在其内的点数。

输入

第一行包括两个整数：点的总数n，查询的次数m。

第二行包含n个数，为各个点的坐标。

以下m行，各包含两个整数：查询区间的左、右边界a和b。

输出

对每次查询，输出落在闭区间[a, b]内点的个数。

样例

见英文题面

限制

$0 \le n, m \le 5 \times 10^5$

对于每次查询的区间[a, b]，都有$a \le b$

各点的坐标互异

各点的坐标、查询区间的边界a、b，均为不超过10^7的非负整数

时间：2 sec

内存：256 MB
