USACO 2016 December Contest, Silver

Problem 1. Counting Haybales

Zadanie pochodzi z platformy USACO – Amerykańskiej Olimpiady Informatycznej:

https://usaco.org/index.php?page=viewproblem2&cpid=666

Farmer John has just arranged his N haybales ($1 \leq N \leq 100,000$) at various points along the one-dimensional road running across his farm. To make sure they are spaced out appropriately, please help him answer Q queries ($1 \leq Q \leq 100,000$), each asking for the number of haybales within a specific interval along the road.

INPUT FORMAT (file haybales.in):

The first line contains N and Q.

The next line contains N distinct integers, each in the range $0 \ldots 1,000,000,000$, indicating that there is a haybale at each of those locations.

Each of the next Q lines contains two integers A and B ($0 \leq A \leq B \leq 1,000,000,000$) giving a query for the number of haybales between A and B, inclusive.

OUTPUT FORMAT (file haybales.out):

You should write Q lines of output. For each query, output the number of haybales in its respective interval.

SAMPLE INPUT:
```
4 6
3 2 7 5
2 3
2 4
2 5
2 7
4 6
8 10
```

SAMPLE OUTPUT:
```
2
2
3
4
1
0
```

Note: Many issues (e.g., uninitialized variables, out-of-bounds memory access) can cause a program to produce different output when run multiple times; if your program behaves in a manner inconsistent with the official contest results, you should probably look for one of these issues. Timing can also differ slightly from run to run, so it is possible for a program timing out in the official results to occasionally run just under the time limit in analysis mode, and vice versa. Note also that we have recently changed grading servers, and since our new servers run at different speeds from the servers used during older contests, timing results for older contest problems may be slightly off until we manage to re-calibrate everything properly.