

Median

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

points: 100 · problem code: median · author: jbroeksteeg

You are given an array a of n elements. Furthermore, there are q queries. Each query is of the form $l\ r$: What is the median element in the range $[l, r]$. In this case, we consider the median of an even length list the minimum of the two middle values.

Input Format

The first line is $n\ q$, the number of elements and queries. The next line contains the array a . The next q lines each contain two integers $l\ r$, a query.

Sample Input

```
5 1
1 2 3 4 5
1 4
```

Sample Output

```
3
```

Constraints

$1 \leq n, q \leq 1e5$ $1 \leq a[i] \leq 1e4$