

## RMQSQ - Range Minimum Query

<https://www.spoj.com/problems/RMQSQ/>

You are given a list of **N** numbers and **Q** queries. Each query is specified by two numbers *i* and *j*; the answer to each query is the minimum number between the range [*i*, *j*] (inclusive).

*Note:* the query ranges are specified using 0-based indexing.

### Input

The first line contains **N**, the number of integers in our list ( $N \leq 100,000$ ). The next line holds **N** numbers that are guaranteed to fit inside an integer. Following the list is a number **Q** ( $Q \leq 10,000$ ). The next **Q** lines each contain two numbers *i* and *j* which specify a query you must answer ( $0 \leq i, j \leq N-1$ ).

### Output

For each query, output the answer to that query on its own line in the order the queries were made.

Example

#### Input:

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

#### Output:

```
4
1
```

[github.com/andy489](https://github.com/andy489)