

# Mock CCO '18 Contest 3 Problem 4 - Roger Solves A Classic Segment Tree Problem

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Roger is training for CCO and has decided to practice implementing segment trees. He decides to solve a classic problem that is solvable with segment trees.

Given an array with  $N$  integers and  $Q$  subarray queries, compute the range of each subarray.

## Constraints

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$$1 \leq N \leq 5 \cdot 10^4$$

$$1 \leq Q \leq 2 \cdot 10^5$$

$$1 \leq a_i \leq b_i \leq N$$

$$a_i, b_i \in \mathbb{C}$$

The elements of the array are positive integers up to a million.

## Input Specification

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The first line contains two integers,  $N$  and  $Q$ .

Each of the next  $N$  lines contains a single integer. These  $N$  lines constitute the values of the array in order.

Each of the next  $Q$  lines contains two integers,  $a_i$  and  $b_i$ , indicating a 1-indexed query.

## Output Specification

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For each query, print on a separate line the range of the subarray with leftmost index  $a_i$  and rightmost index  $b_i$ .

## Sample Input

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```
6 3
1
7
3
4
2
5
1 5
4 6
2 2
```

## Sample Output

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```
6
3
0
```