OTHS Coding Competition 3 (Mock CCC) S4 - Magic Library

Time limit: 3.0s	**Memory limit:** 512M
Java: 5.0s	Java: 1G
Python: 5.0s	Python: 1G

Patchouli's magic library contains N books, where each book has a label A_i to keep things organized. Due to the overwhelmingly large amount of books, Patchouli asks you to help her keep track of the book's labels as she does Q operations in the library.

The operations are of the following types t_i:

1. Set the label of all books from book l_i to book r_i, inclusive, to v_i.
2. Query the number of books with a label equal to v_i from book l_i to book r_i, inclusive.

Constraints

$1 \leq N \leq 10^6$

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

$1 \leq l_i \leq r_i \leq N$

$1 \leq A_i, v_i \leq 500$

$t_i \in \{1, 2\}$

Subtask 1 [2/15]

$1 \leq N, Q \leq 100$

Subtask 2 [6/15]

$l_i = r_i$ for all queries of type 1.

Subtask 3 [7/15]

No additional constraints.

Input Specification

The first line of input contains 2 space separated integers, N and Q, the number of books and the number of operations respectively.

The second line of input contains N space separated integers, A_i, the label of each book in order.

The next Q lines of input contains 4 integers each, t_i, l_i, r_i, and v_i, the parameters for each operation.

Output Specification

For each type 2 operation, output 1 integer on its own line, the answer to that query.

Sample Input

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

Sample Output

```
2
4
1
```

Explanation for Sample Output

In the first operation, the queried books have labels $[4, 3, 4]$, 2 of which have a label equal to 4.

In the second operation, the book's labels become $[1, 1, 1, 1, 6, 6]$.