Intersecting Segments

Problem

Given an array of 2n numbers, each number from 1 to n in it occurs exactly twice. We say that the segment y intersects the segment x if exactly one occurrence of the number y is between the occurrences of the number x. Find for each segment i how many segments there are that intersect with it.

Constraints

$$1 <= n <= 10^5$$

Example input

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

Output

```
1 0 1 1 1
```

Number of segments lying partially inside = Number of segments between the $segment_i$ - 2*number of segments lying completely inside it.

$= (r_i - 1) - (l_i-1) + 1 - 2*query(1,0,2*n - 1,l_i,r_i)$

Approach

Slight modification in 'present sir' approach.

1. Sort all the intervals in increasing order of 'r' values.
2. Start from the left and after calculating ans for each interval, mark the 'l' on the number line as present.
3. Keep updating the query's response in the answer array.