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Subtrees falling in a range

locked

Problem

Submissions

Leaderboard

Discussions

Given a binary search tree and a range $[V1, V2]$. You are required to find all subtrees that fall within the range when the root node and all its children from left and right also fall within the same range.

Input Format

- The first line contains $V1$
- The second line contains $V2$
- The third line contains the value of the root node.
- The fourth line contains E (the number of edges)
- The next E lines contain all the edges in the following format
 - 'R' $N1$ $N2$ where 'R' or 'L' refers to the edge direction (right or left) $N1$ is the parent value and $N2$ is the child value

Constraints

- the number of nodes N between 1 and 1000000
- $1 \leq V1 \leq V2 \leq N$
- $V1$ and $V2$ are inclusive in the range

Output Format

- One line containing the number of subtrees falling in the given range

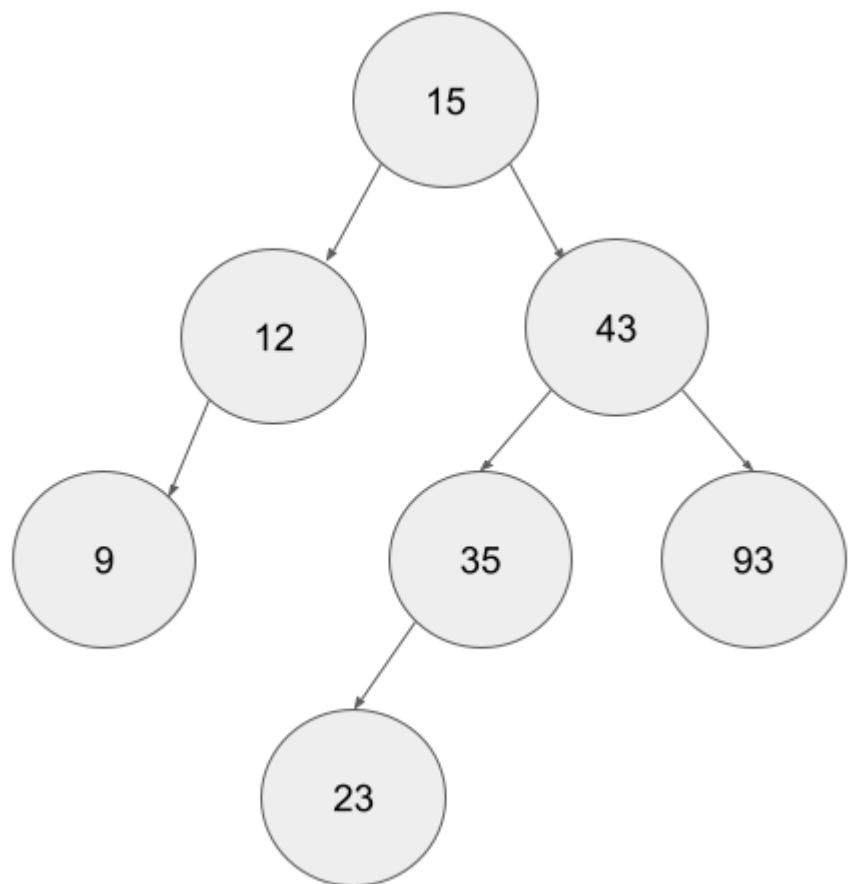
Sample Input 0

59
15
6
L 15 12
L 12 9
R 15 43
L 43 35
L 35 23
R 43 93

Sample Output 0

2

Explanation 0



Since the range is from 12 to 59 only the tree rooted at 23 and the tree rooted at 35 falls in t