

Kundu is true tree lover. Tree is a connected graph having  $N$  vertices and  $N-1$  edges. Today when he got a tree, he colored each edge with one of either red(r) or black(b) color. He is interested in knowing how many triplets(a,b,c) of vertices are there , such that, there is atleast one edge having red color on all the three paths i.e. from vertex  $a$  to  $b$ , vertex  $b$  to  $c$  and vertex  $c$  to  $a$  . Note that (a,b,c), (b,a,c) and all such permutations will be considered as the same triplet.

If the answer is greater than  $10^9 + 7$ , print the answer modulo  $(\%) 10^9 + 7$ .

### Input Format

The first line contains an integer  $N$ , i.e., the number of vertices in tree.

The next  $N-1$  lines represent edges: 2 space separated integers denoting an edge followed by a color of the edge. A color of an edge is denoted by a small letter of English alphabet, and it can be either red(r) or black(b).

### Output Format

Print a single number i.e. the number of triplets.

### Constraints

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

A node is numbered between 1 to  $N$ .

### Sample Input

```
5
1 2 b
2 3 r
3 4 r
4 5 b
```

### Sample Output

```
4
```

### Explanation

Given tree is something like this.



(2,3,4) is one such triplet because on all paths i.e 2 to 3, 3 to 4 and 2 to 4 there is atleast one edge having red color.

(2,3,5), (1,3,4) and (1,3,5) are other such triplets.

Note that (1,2,3) is NOT a triplet, because the path from 1 to 2 does not have an edge with red color.