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  $\operatorname{red}(r)$  or  $\operatorname{black}(b)$  color. He is interested in knowing how many triplets(a,b,c) of vertices are there , such that, there is at least 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**

 $1 < N < 10^5$ 

A node is numbered between 1 to N.

### **Sample Input**

5

1 2 b

2 3 r

3 4 r

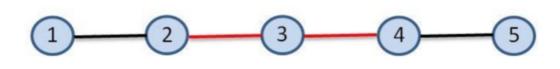
4 5 b

# **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 at least 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.