Kundu and Tree

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.