

Palindrome in a Tree

John has got a tree with N vertices. The vertices are numbered from 1 to N . He considers vertex 1 as the root of the tree. Each vertex of the tree contains a character C .

Now John is doing a weird experiment with this tree.

He often changes the character of a node in the tree and then sometimes he randomly selects a node v and tries to form a palindrome with all the characters in the subtree of node v .

But since John is very busy man and has a lot of other important experiments to do he needs your help on this one.

INPUT:

First line of the input contains an integer N ($1 \leq N \leq 100000$) denoting the number of vertices.

Next $N-1$ lines contains two integers A and B ($1 \leq A, B \leq N$) which means there is an edge between vertex A and B .

Next line contains a string of length N . The i th character of this string denotes the character in node i .

Then there will be an integer M ($1 \leq M \leq 100000$) in a separate line denoting the number of queries. Next M lines will contain a query.

Each query will be in one of the following form:

0 x C: which means the character of node x has been changed to C .

1 x: which means you are asked to answer if a palindrome can be formed with all the characters in the sub tree of node x . There will be at least one query of this type.

OUTPUT:

For each query of the form “**1 x**” print “YES” if a palindrome can be formed with all the characters in subtree of node x . Otherwise print “NO” (without the quotes).

(All the characters in the input will be small letters of English alphabet. i.e. a, b, c... x, y, z).

See sample input /sample output for details.

Sample Input	Sample Output
7	NO
5 4	YES
1 5	YES
6 3	YES
1 7	NO
5 6	
6 2	
abdaabc	
7	
1 1	
1 5	
1 3	

0 7 a	
1 1	
0 4 z	
1 5	

In the 2nd query, the formed palindrome can be “badab” or “abdba”

In the 3rd query, there is only 1 character “d”, which is palindrome.