Problem G. Edge Groups

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Given an undirected connected graph of n vertices and $n-1$ edges, where n is guaranteed to be odd. You want to divide all the $n-1$ edges to $\frac{n-1}{2}$ groups under following constraints:

- There are exactly 2 edges in each group
- The 2 edges in the same group share a common vertex

Determine the number of valid dividing schemes modulo 998244353. Two schemes are considered different if there are 2 edges that are in the same group in one scheme but not in the same group in the other scheme.

Input

The first line contains one integer $n\,(3 \le n \le 10^5)$, denoting the number of vertices.

Following $n-1$ lines each contains two integers $u, v\,(1 \le u < v \le n)$, denoting that vertex u, v are undirectedly connected by an edge.

It is guaranteed that n is odd and that the given graph is connected.

Output

Output one line containing one integer, denoting the number of valid dividing schemes modulo 998244353.

Example

standard input	standard output
7 1 2 1 3 1 7 4 7 5 7 6 7	3

Note

The 3 schemes are:

- The 3 edge groups are $\{1 \leftrightarrow 2, 1 \leftrightarrow 3\}, \{1 \leftrightarrow 7, 4 \leftrightarrow 7\}, \{5 \leftrightarrow 7, 6 \leftrightarrow 7\}$
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