Tree Center

Time limit: 1.00 s/Memory limit: 512 MB

You are given a tree consisting of nodes. The diameter of a tree is the maximum distance between two nodes. The tree center is the center of the diameter. Your task is to determine the center of the tree. (if center has two nodes, choose the smaller one)

● INPUT

The first input line contains an integer n: the number of nodes. The nodes are numbered $1, 2, 3, \ldots . n$.
Then there are $n - 1$ lines describing the edges. Each line contains two integers a and b: there is an edge between nodes a and b.

● OUTPUT

Print one integer: the center of the tree.

● Constraints

- $1 \leq n \leq 2 * 10^5$
- $1 \leq a, b \leq 10^5$

範例輸入1	範例輸出1
5 1 2 1 3 3 4 3 5	1