

## Constraints

- $2 \leq g\_nodes \leq 10^5$
- $1 \leq g\_from[i], g\_to[i] \leq g\_nodes$
- $g\_edges = g\_nodes - 1$
- It is guaranteed that the edges form a tree.

## ▼ Input Format For Custom Testing

The first line contains two space-separated integers,  $g\_nodes$  and  $g\_edges$  ( $= g\_nodes - 1$ ), the number of influencers and edges in the tree.

Each of the next  $g\_edges$  lines contains two space-separated integers,  $g\_from[i]$  and  $g\_to[i]$ .

## ▼ Sample Case 0

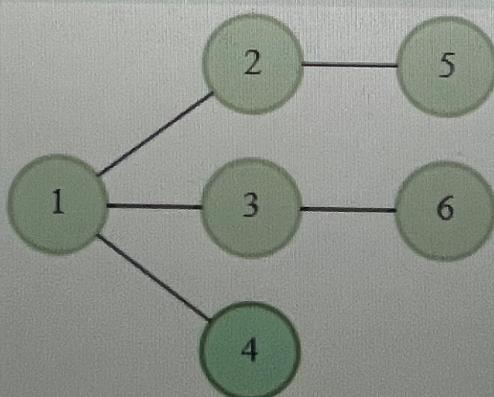
### Sample Input For Custom Testing

STDIN	FUNCTION
-----	-----
6 5	$\rightarrow g\_nodes = 6, g\_edges = g\_nodes - 1 = 5$
1 2	$\rightarrow g\_from = [1, 1, 1, 2, 3], g\_to = [2, 3, 4, 5, 6]$
1 3	
1 4	
2 5	
3 6	

### Sample Output

4

### Explanation



The maximum distance between any two influencers is 4 for the pair (5, 6). The influencers on the path 5->2->1->3-> 6 are primary. The only secondary influencer is number 4.