Problem E
As the Squirrel Hops
Time Limit: *3 Seconds*

Problem Description

Jamie has taken aerial photos of several wooded areas and began wondering if any of those areas would qualify as a forest. Digging through some books revealed that there is single technical definition of a forest, which means Jamie is free to make one up.

While walking through some of the wooded areas, Jamie notices squirrels hopping from one tree to another and decides that squirrel hopping would provide a good basis for defining a forest. In this way, a forest would be a wooded area where a squirrel makes at least H hops among trees without revisiting any tree.

This definition immediately ran into problems as each wooded area has the property that a squirrel can reach any tree from any other tree in the area. Even without repeating trees, this means that the number of hops can quickly exceed H for small copses that Jamie doesn't think should be a forest. To avoid this, Jamie modifies the definition of forest to be an area that has a pair of trees at least H hops apart such that the number of hops is minimized. While Jamie knows which trees that squirrels can hop between, computing the minimum number of hops is too difficult to do by hand. That's where you come in.

Jamie will provide all the pairs of trees that a squirrel could hop between. You need to figure out if there's a pair of trees such that the shortest path between the two is at least H hops.

Input File Format

Input is a series of test cases, each representing a wooded area. Each test case begins with a pair of integers, P and H where P is the number of pairs of trees that a squirrel could hop between and H is the threshold for determining if the area is a forest. P lines of input follow, each giving a pair of trees that are a single hop apart. Trees are numbered from 1 to 200, though trees are not numbered consecutively. Input ends with a line of `"0 0"` for P and H.

Output Format

For each test case, print "yes" or "no" (without the quotes) depending on whether the area qualifies as a forest.

Sample Input

```
5 3
100 12
12 3
3 4
4 12
4 100
9 2
1 3
3 5
5 6
6 3
4 3
4 2
4 1
1 2
3 2
3 3
1 2
1 4
3 5
0 0
```

Output for the Sample Input

```
no
yes
no
```