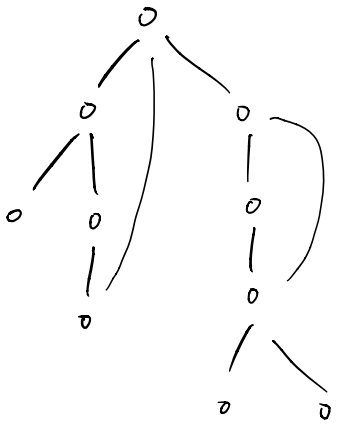


A vertex is an articulation point if:

① if it's root of dfs tree,

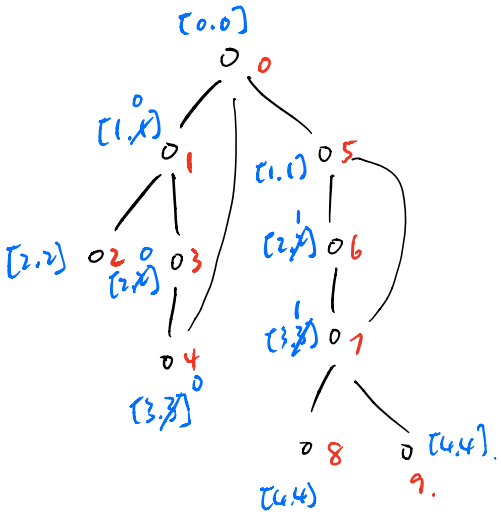
⇒ there exists two children

not yet visited nodes adjacent to u.

② if it's not root,

⇒ there exists a back edge from any descendants to its ancestors

by maintaining a low value which is the lowest depth a node can reach



[i, j]

i: depth of the node.

j: low value of node.

0. ⇒ it's root with ≥ children.

1. 5. 7 ⇒ it's not root, but there exists descendant such that

low[v] >= visited[u]

ex: for point 1, low[2] >= visited[1]

5, low[6] >= visited[5]

7. low[8] >= visited[7]