

```
id = -1 # init to start at id = 0
g = adjacency list with undirected edges
n = size of the graph
oec = 0 # root outEdgeCount during DFS
# In these arrays index i represents node i
low = [0, 0, ... 0, 0] # Length n
ids = [0, 0, ... 0, 0] # Length n
visited = [false, ..., false] # Length n
isArt = [false, ..., false] # Length n
findArtPoints()
print(isArt)
```

```
function findArtPoints():
    for (i = 0; i < n; i = i + 1):
        if (!visited[i]):
            id, oec = dfs(root=i, at=i, id, oec=0)
            isArt[i] = (oec>1) # Override with T/F
    return
```

Perform DFS to find articulation points.

function dfs(root, at, id, oec):

visited[at] = **true**

id += 1

low[at] = ids[at] = id

For each edge from node 'at' to node 'to'

for (to : g[at]):

if (!visited[to]):

if at == root:

oec += 1 # Count outgoing edges for root

g[to].remove(at) # remove backward link

id, oec = **dfs**(root, to, id, oec)

low[at] = **min**(low[at], low[to])

Articulation point found via bridge with <

and cycle with ==

if (ids[at] <= low[to]:

isArt[at] = **true**

else:

low[at] = **min**(low[at], ids[to])

Return id, oec