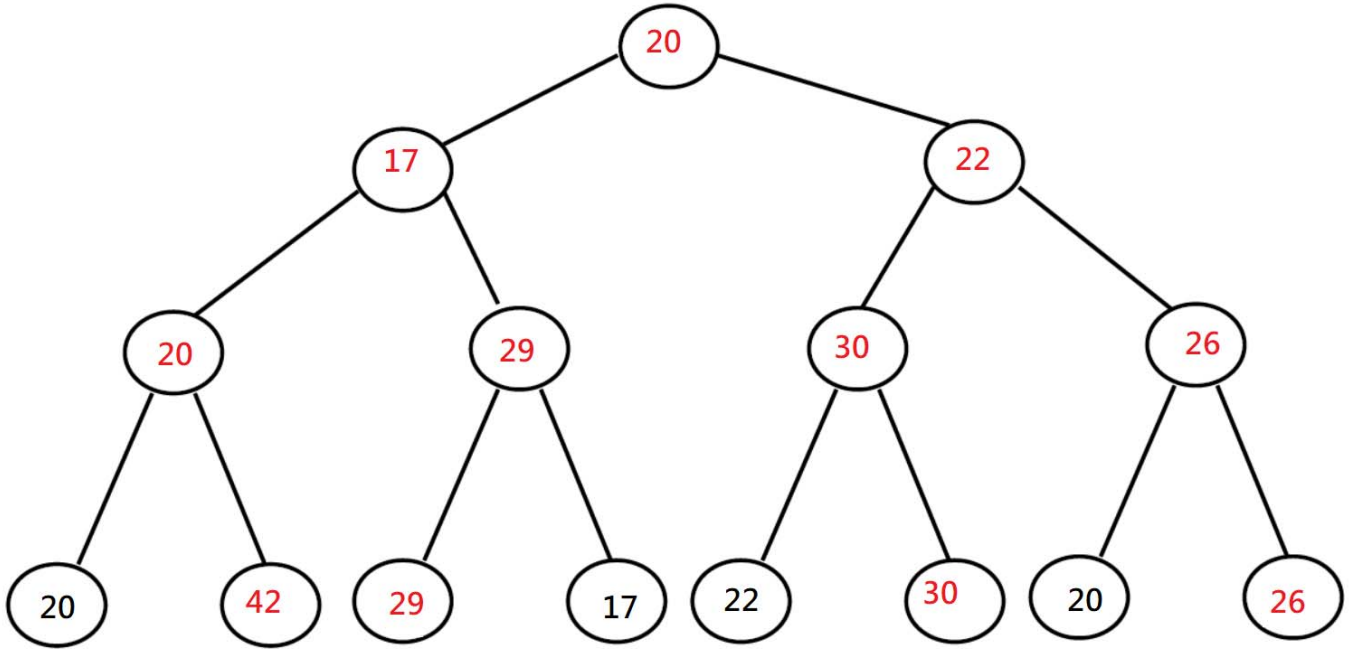
Data Structure HW5

41147009S 陳炫佑

Q1

8、10、11、15



Q2

(A)

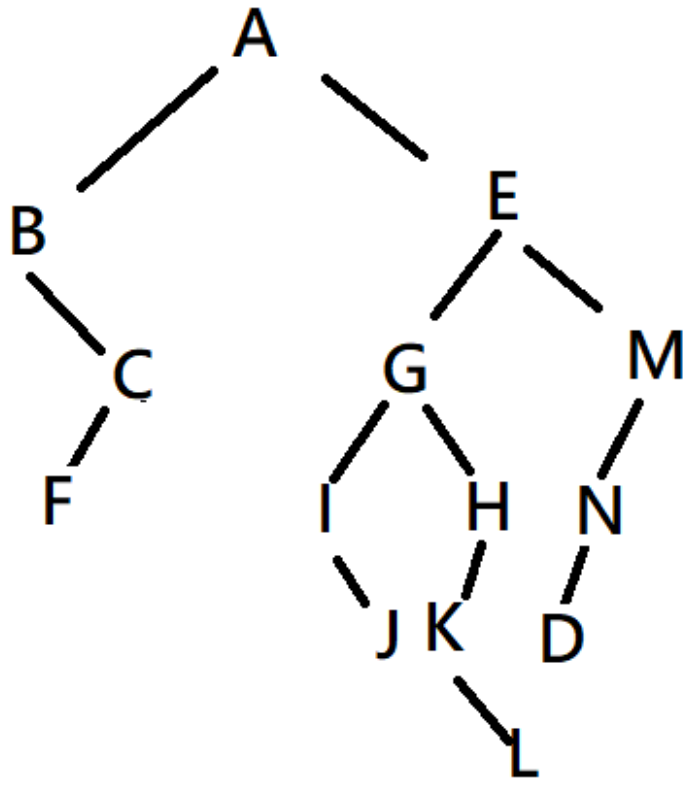
preorder

ABCFEGIJHKLMND

postorder

FCBJILKHGDNMEA

(b)



(c)

YES

Q3

(a)

0, 1, 0, 0, 1, 0, 0, 0, 0, 0
1, 0, 1, 0, 0, 0, 0, 1, 0, 1
0, 1, 0, 0, 0, 0, 0, 1, 0, 0
0, 0, 0, 0, 0, 1, 0, 0, 0, 0
1, 0, 0, 0, 0, 0, 0, 0, 1, 1
0, 0, 0, 1, 0, 0, 0, 0, 0, 1
0, 0, 0, 0, 0, 0, 0, 0, 1, 0
0, 1, 1, 0, 0, 0, 0, 0, 0, 0
0, 0, 0, 0, 1, 0, 1, 0, 0, 0
0, 1, 0, 0, 1, 1, 0, 0, 0, 0

(b)

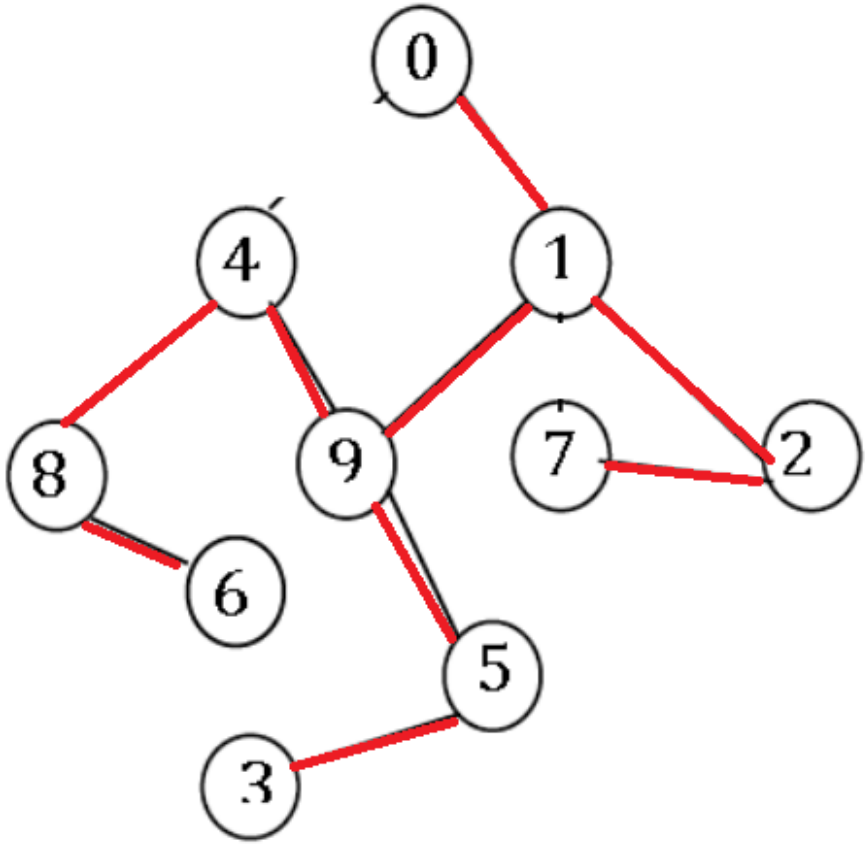
header:

```
0->M 1
1->M 1
2->M 3
3->M 7
4->M 2
5->M 7
6->M11
7->M 4
8->M 8
9->M 5
```

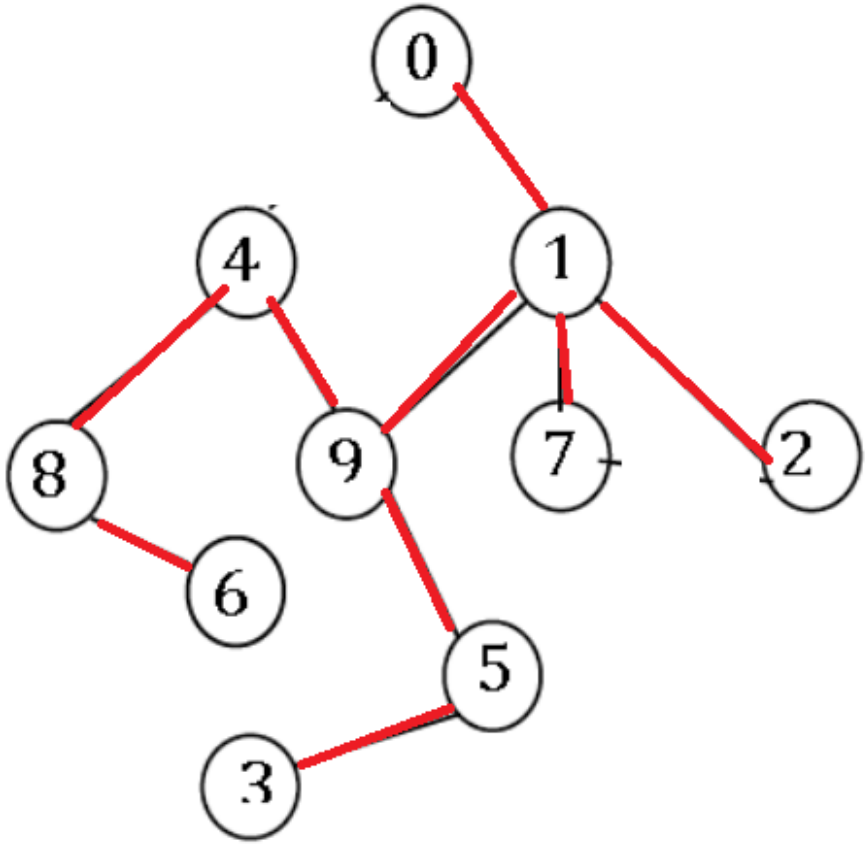
adjacency list

```
M 1:0->1->  M2->  M3
M 2:0->4->Null->  M8
M 3:1->2->  M4->  M6
M 4:1->7->  M5->  M6
M 5:1->9->Null->  M9
M 6:2->7->Null->Null
M 7:3->5->Null-> M10
M 8:4->8->  M9-> M11
M 9:4->9->Null-> M10
M10:5->9->Null->Null
M11:6->8->Null->Null
```

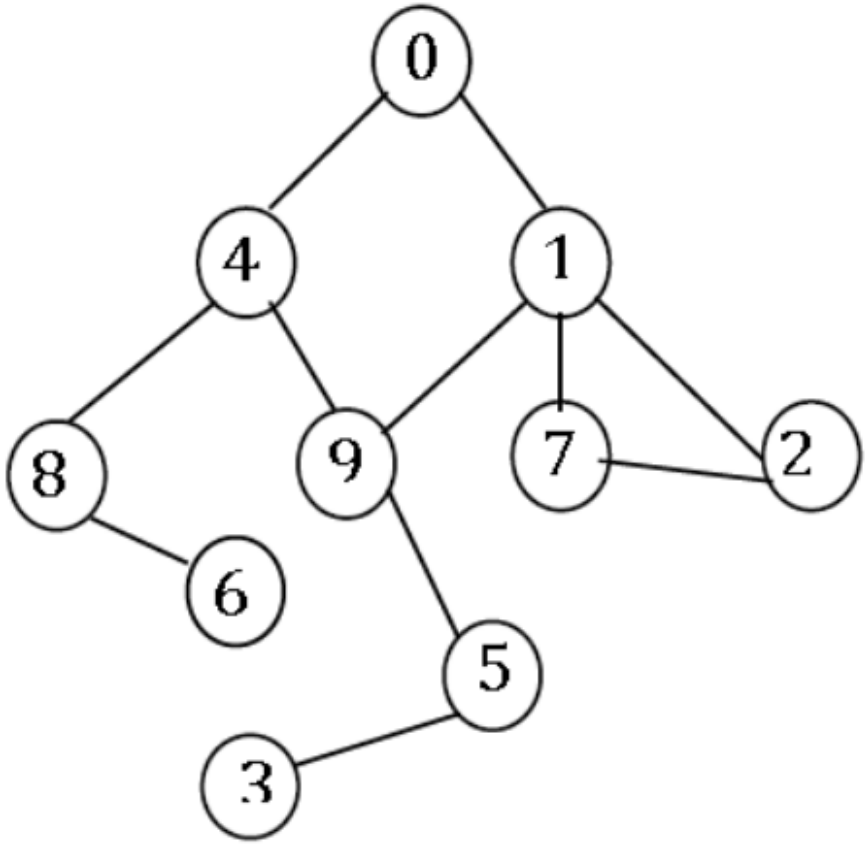
(c)



(D)



(E)



start from node 0

Node	dfn	low
0	0	0
1	1	0
2	2	1
3	9	9
4	5	0
5	8	8
6	7	7
7	3	1
8	6	6
9	4	0

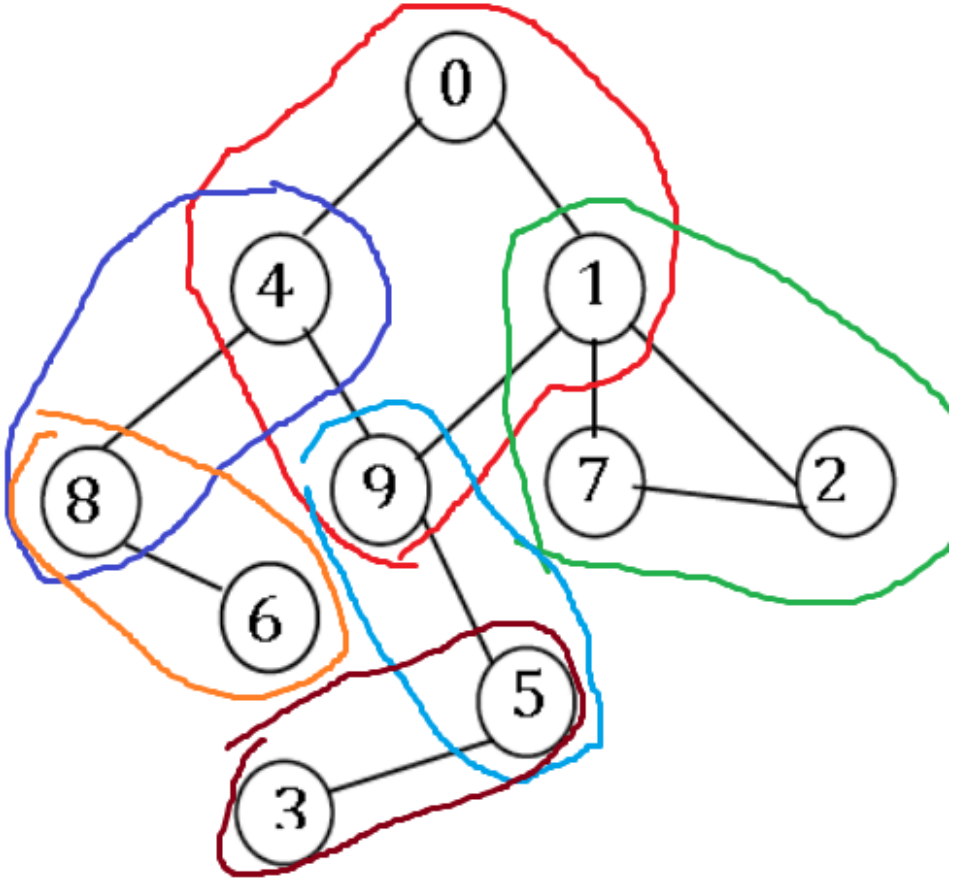
start from node 9

Node	dfn	low
0	2	0
1	1	0
2	6	1
3	9	9
4	3	0
5	8	8
6	5	5
7	7	1
8	4	4
9	0	0

articulation points:

1 4 5 8 9

(F)


0
4
1
8
9
7
2
6
5
3