

Cory Miljour

Data Structures II - Winter 2018

HW 7A

adj[]

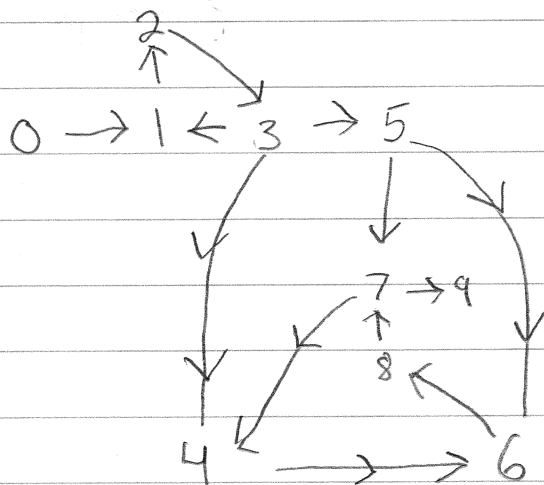
1.] 4.1.2	0	2, 6	8	1, 11, 7, 4
	1	4, 8, 11	9	
	2	5, 6, 0, 3	10	5, 3
	3	10, 6, 2	11	8, 7, 1
	4	1, 8		
	5	10, 2		
	6	2, 3, 0		
	7	8, 11		

2.] 4.1.4

```
public boolean hasEdge(int v, int w) {  
    for (int i : adj(v)) {  
        if (i == w) return true; }  
    return false; }
```

3.] 4.1.12

4.



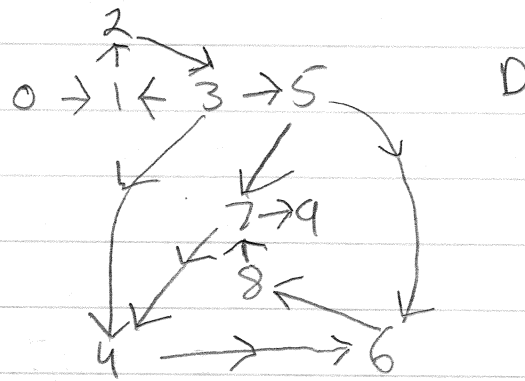
5. cycle: 1 → 2 → 3  
4 → 6 → 8 → 7

CONT. on BACK

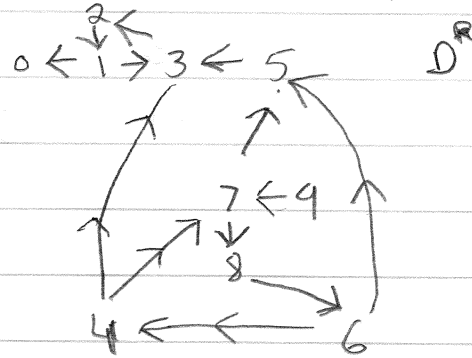
6. Path from 1-6

$1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 6$

$1 \rightarrow 2 \rightarrow 3 \rightarrow 5 \rightarrow 6$



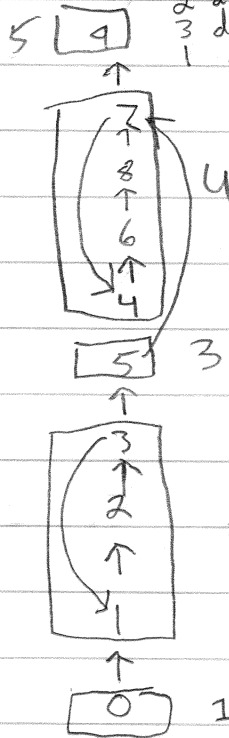
7. post order  $D^R$



9, 4, 7, 8, 6, 5, 1, 3, 2, 0

dfs 0  
0 done  
dfs 1  
dfs 3  
dfs 2  
check 1  
2 done  
3 done  
1 done

dfs 4  
check 3  
dfs 7  
dfs 5  
check 3  
5 done  
dfs 8  
dfs 6  
check 5  
check 4  
done 6  
done 8  
done 7  
done 4  
dfs 9  
done 9



8.

dfs 9  
9 done  
dfs 4  
dfs 6  
dfs 8  
dfs 7  
check 9  
check 4  
done 7  
done 8  
done 6  
done 4  
dfs 5  
check 6  
check 7  
done 5  
dfs 1  
dfs 2  
dfs 3  
check 5  
check 4  
done 3  
done 2  
done 1  
dfs 0  
done 0

9. Strong CC  
5 components