

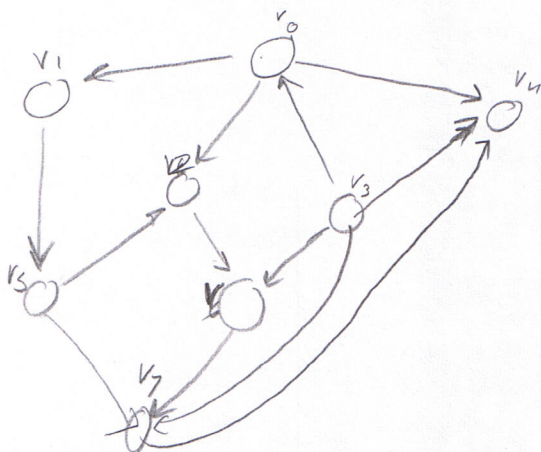
RAMP 338

①

11.19.09

## Depth First Search (Traversal)

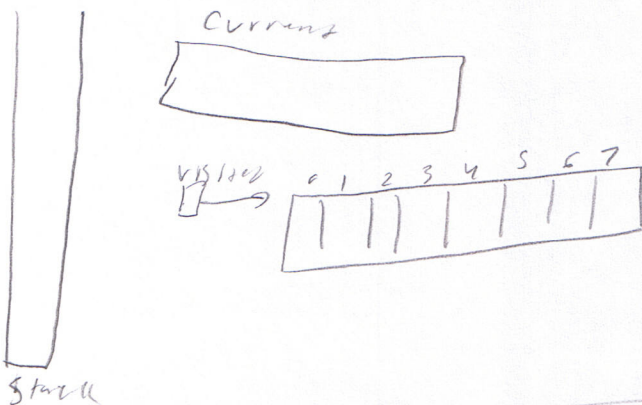
Make an Agency number Set and Graph (can be on sheet)



Adj

	v	0	1	2	3	4	5	6	7
0					✓				
1	✓								
2							✓		
3									
4	✓				✓				✓
5		✓							
6	✓		✓	✓					
7				✓		✓	✓	✓	

## Depth First Search (Traversal)



1. Create a Stack  
2. Create a visited LIS  
3. Create a record of the current vertex

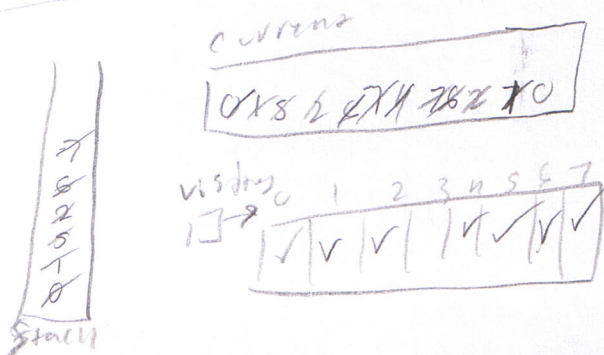
while loop

Repeat until  
curr's none  
forward  
to other  
new  
vertex

See current to the starting vertex and mark it visited

From the current vertex place a vertex that can be reached directly and has not been visited and go there

(1.1) place the current vertex on the stack as well as the new vertex current or mark it visited.



Cmp 338

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11.19.2020

3 step each time

Pop the stack and make the popped value current

Current

0 4 6 2 8 7 4 2 0 5 10

visited

0 1 2 3 4 5 6 7  
☒ ☒ ☒ ☒ ☒ ☒ ☒ ☒

Stack

Breadth First Search (Traversal)

w/ Queue

Current

0 4 6 2 5 6 7

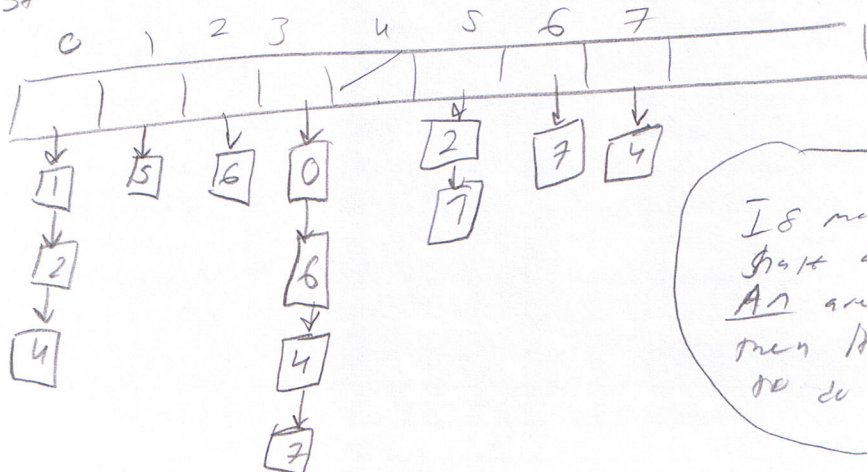
visited

0 1 2 3 4 5 6 7  
☒ ☒ ☒ ☐ ☒ ☒ ☒ ☒

Queue

w/ edge list

EL  
☒

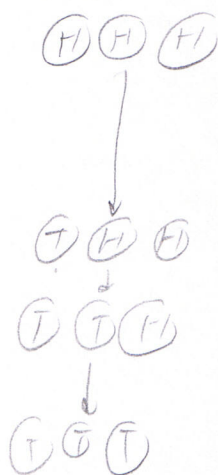


If more than  
 half of the  
 AN are false  
 then it's better  
 to do edge list



- Create a Queue
- Create a Visited list
- Create a record of the current vertex
- Enqueue the starting vertex and mark it visited

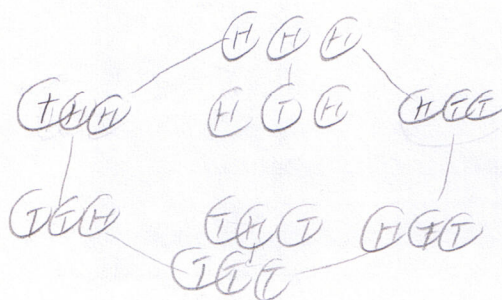
- ① Dequeue a vertex and mark it current
- ② Enqueue all vertices directly reachable from current and mark them all visited.
- ③ Repeat until the queue is empty when an attempt to dequeue is made;



### Coin Flipping Game

Rules:

- ① you can only flip one of the two coins to the other side
- ② you can flip the middle coin any time.



possible  
start  
of the  
game

The Edges  
rep the  
moves of  
the game