

## → week 3 lecture Assimenter

→ Introduction to graph Traversal &

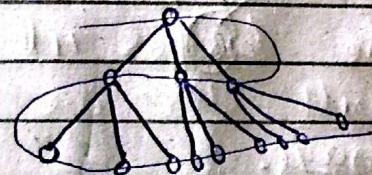
The process of visiting and exploring a graph  
for processing is called graph Traversal.

→ visiting means reaching on that vertex.

→ exploring means, on what other vertex it is connected with? means their neighbors.

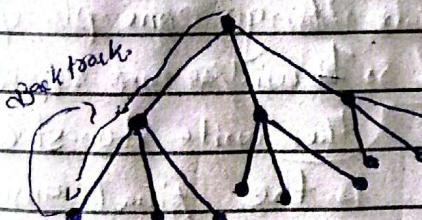
→ Breadth First Search (BFS)

ex:-



so BFS visit the nodes  
level wise.

ex:- Depth First search (DFS)



ex:- of BFS -

→ we use BFS in

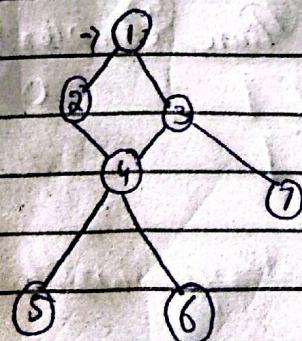
queue Data structure

start from 

1	2	3	4	5	6
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visited

then write it on outside



and then explore its that what nodes are connected with it and write

1

it on queue & and

so Now we reach on 2 then explore it.

so you can write

1, 2

any number

1, 2, 3

but.

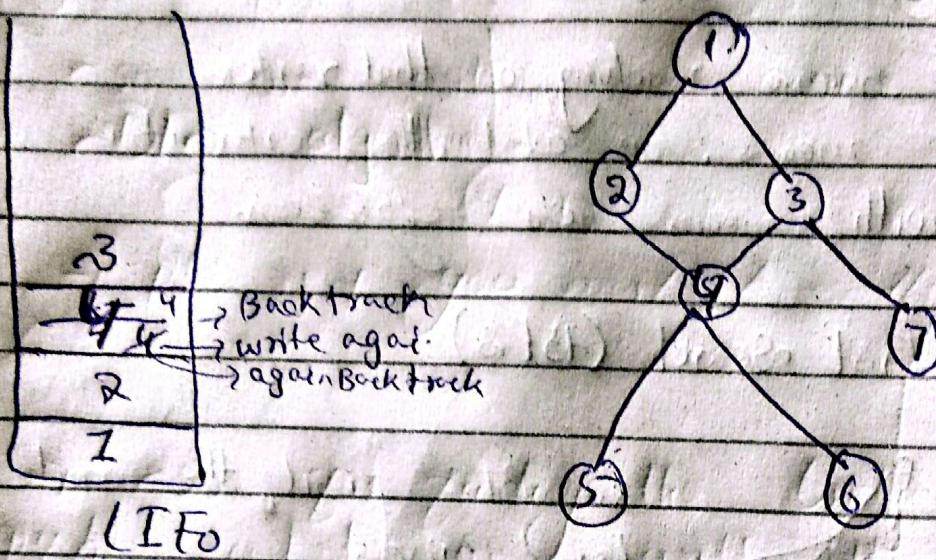
1, 2, 3, 4

1, 2, 3, 4, 5, 6. so this is final answer

BFS (queue).

→ so Now For DFS-

1) Use the stack, Data structures



so lets assume start with one-

so we visit 1 first then explore it, so we have

two option 2 and 3. so we have to go one place/Node.

so when you reached on 2, so 1st will become suspend and

1, 2, 4, 5, 6, 3, 7

then write it on stack.

so this is the final answer.

so Both Time complexity is same

$$O(V+E)$$