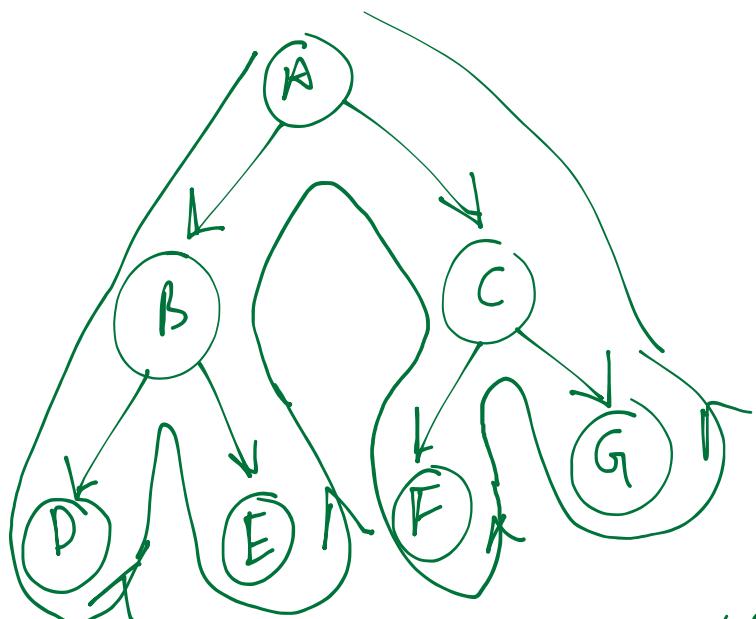
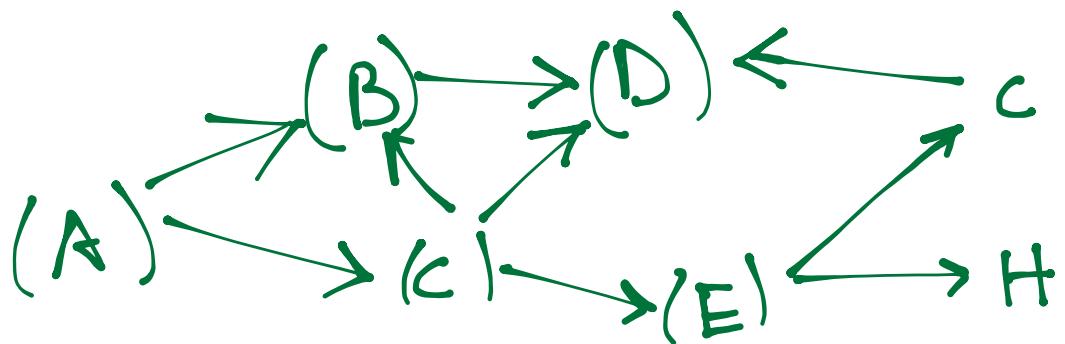
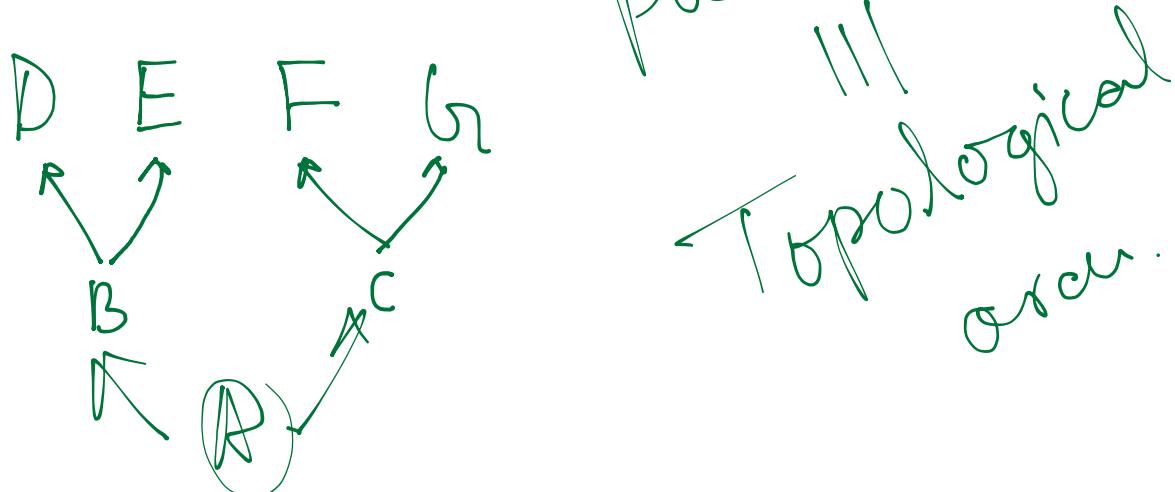
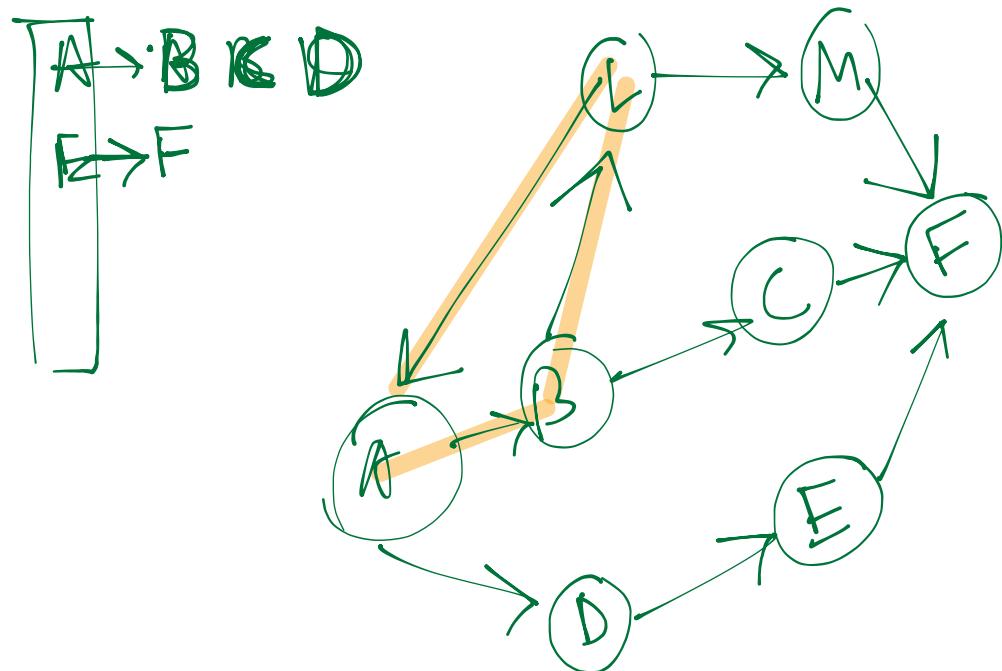


Topological Order [Graph]



POST order





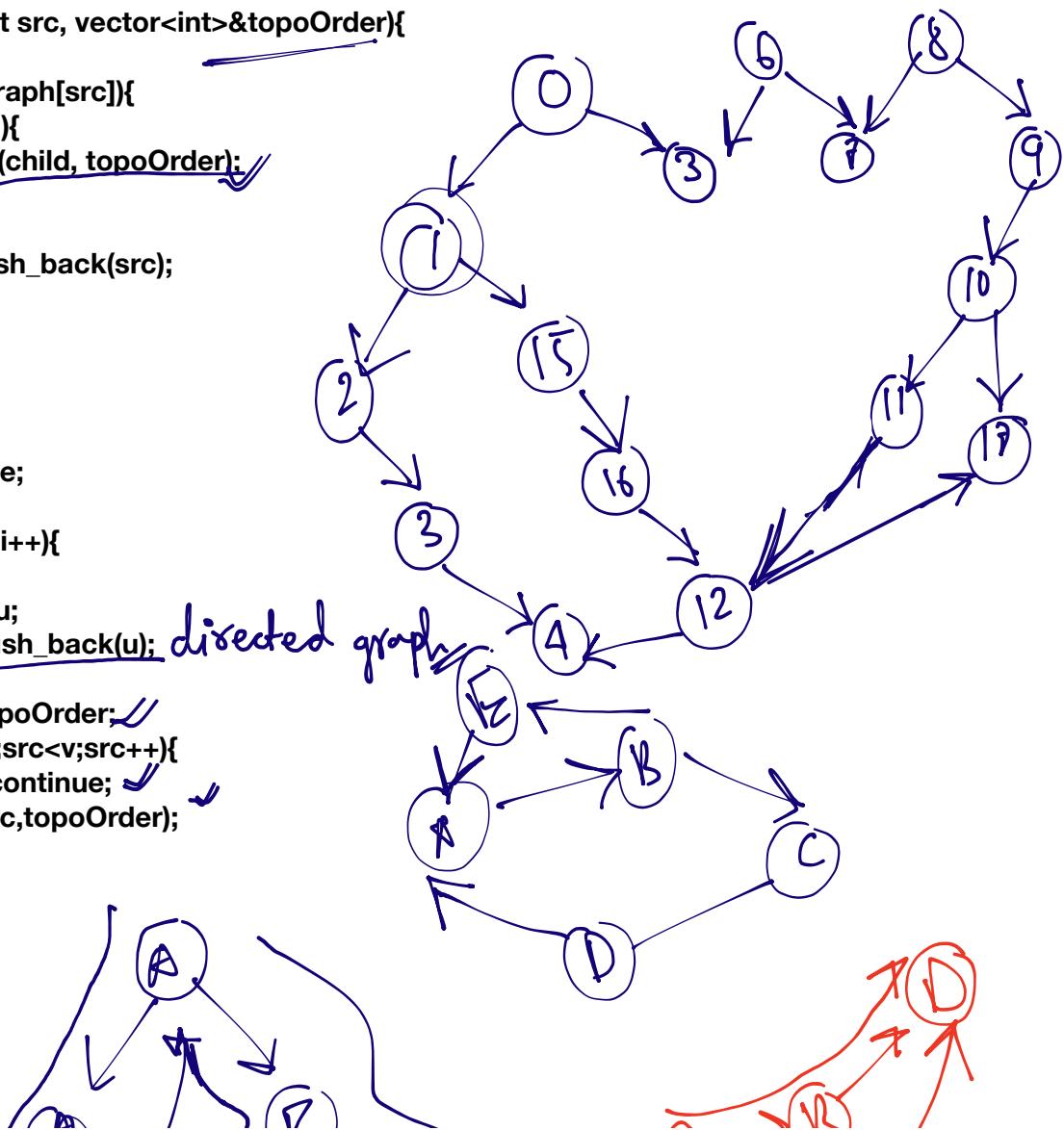
```

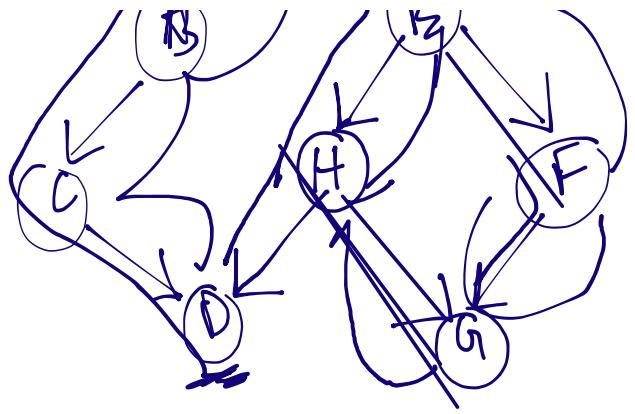
void topoDFS(int src, vector<int>& topoOrder){
    vis[src] = 1;
    for(int child:graph[src]){
        if(!vis[child]){
            topoDFS(child, topoOrder);
        }
    }
    topoOrder.push_back(src);
}

int main(){
    file_i_o();
    int v, e;
    cin >> v >> e;

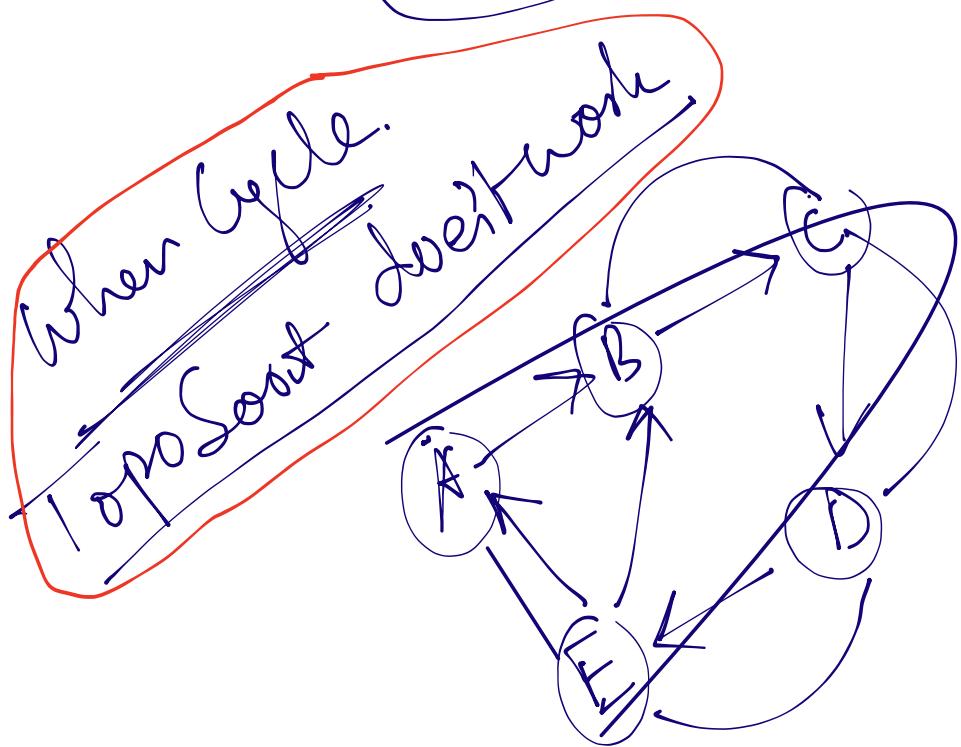
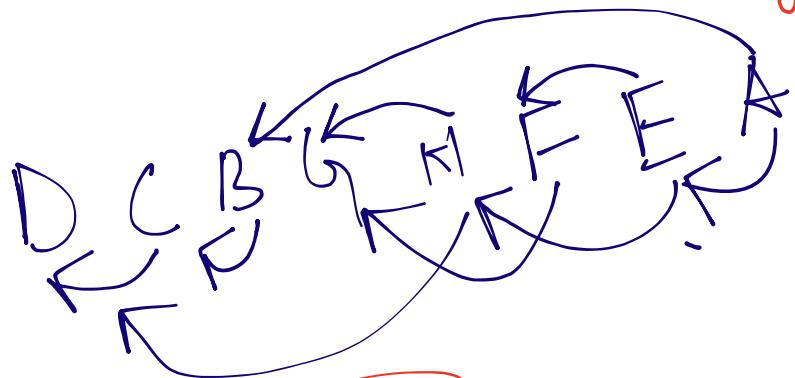
    for(int i=0;i<e;i++){
        int v , u;
        cin >> v >> u;
        graph[v].push_back(u);
    }
    vector<int> topoOrder;
    for(int src = 0;src<v;src++){
        if(vis[src]) continue;
        topoDFS(src,topoOrder);
    }
}

```

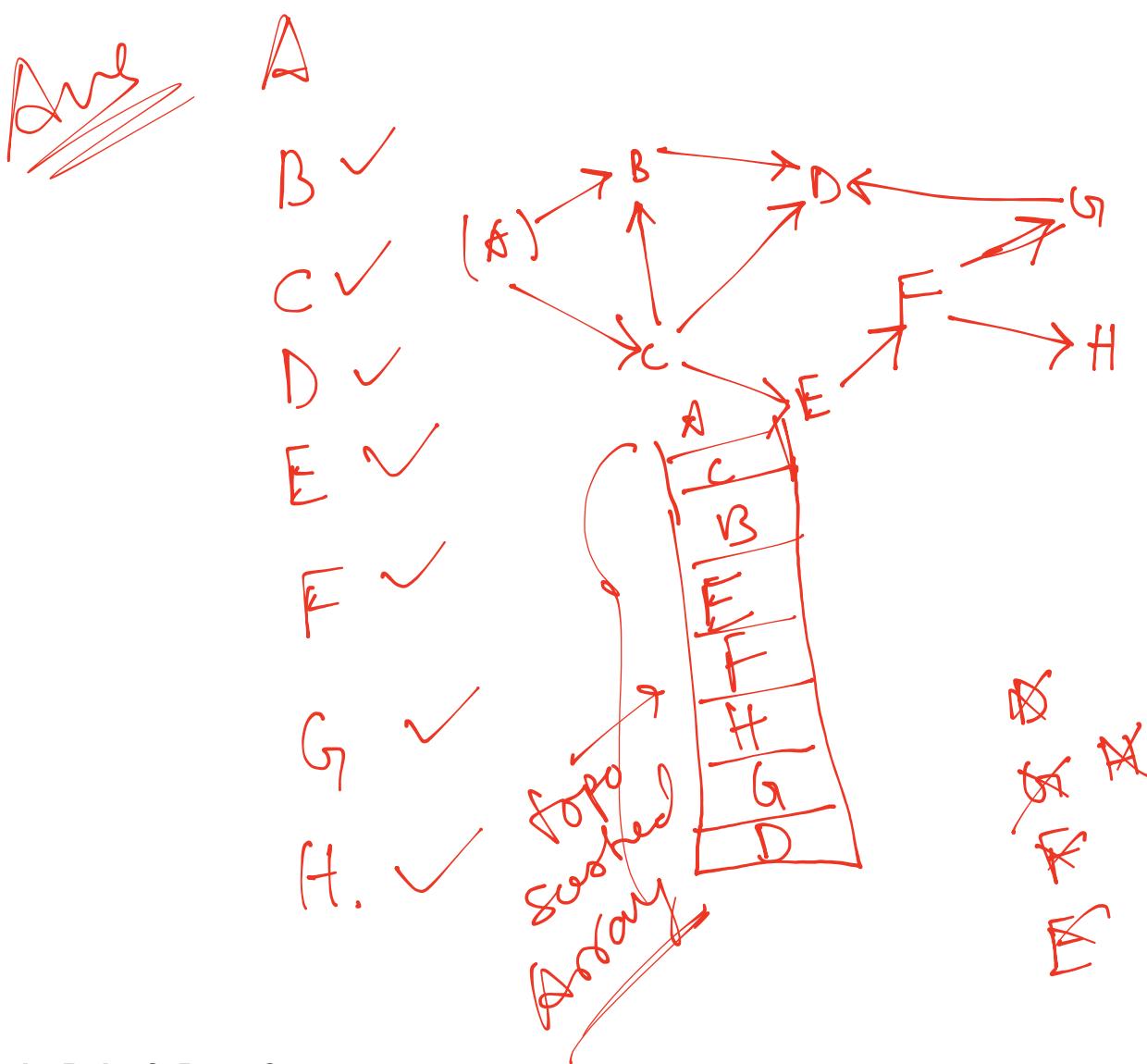




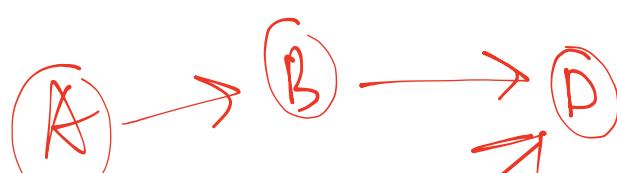
In visit checked
graph to
avoid
repetition
of node
Visited
nodes are
marked

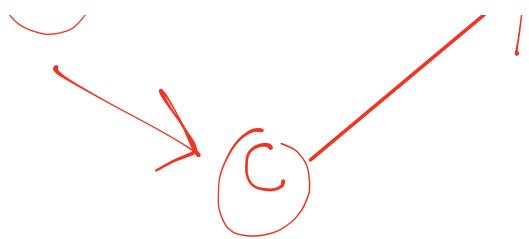


Q) Can random graph traversal on a directed graph return a topsorted array? 

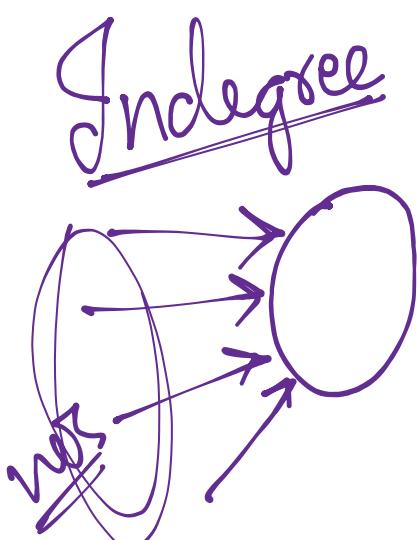


A->B, A->C, B->D, C->D

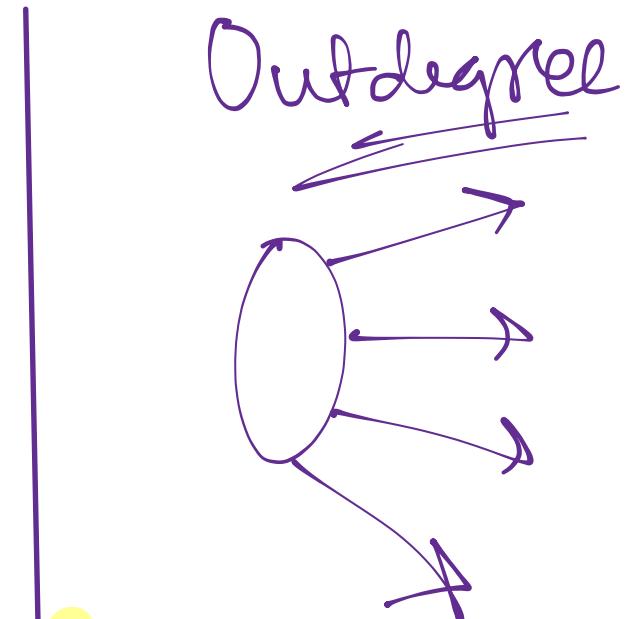




Khan's algo used to
detect if the
topological order is
valid

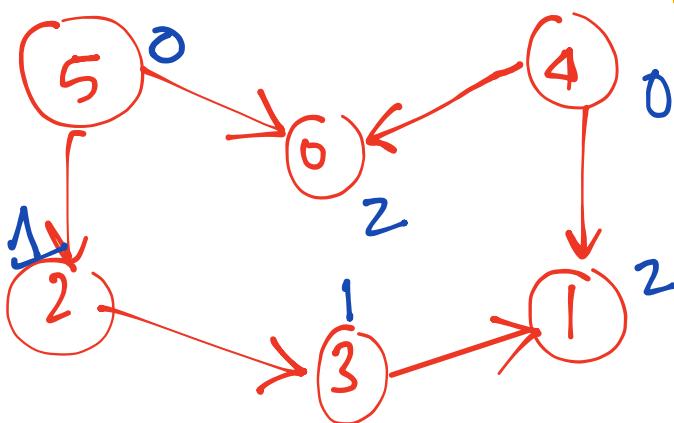


how many are dependent
on me



I am dependent
on how many

Khan's Algo

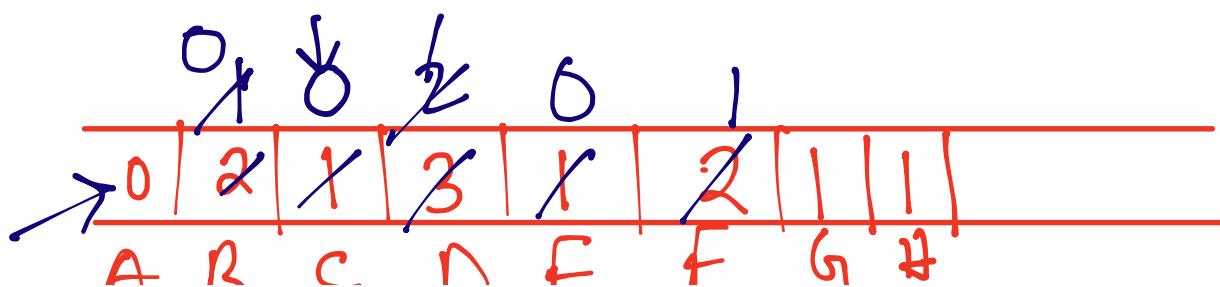
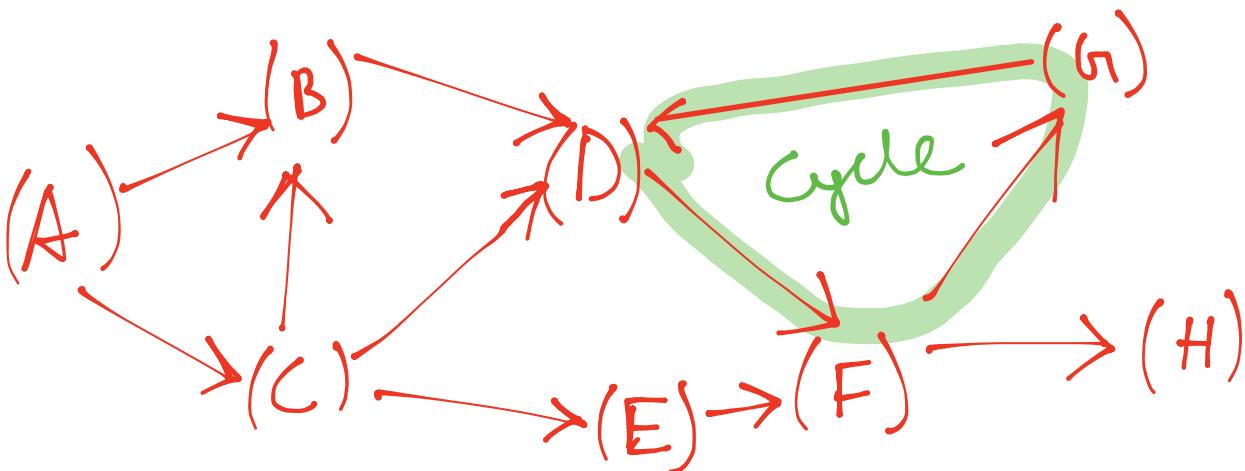


Topological Sorting

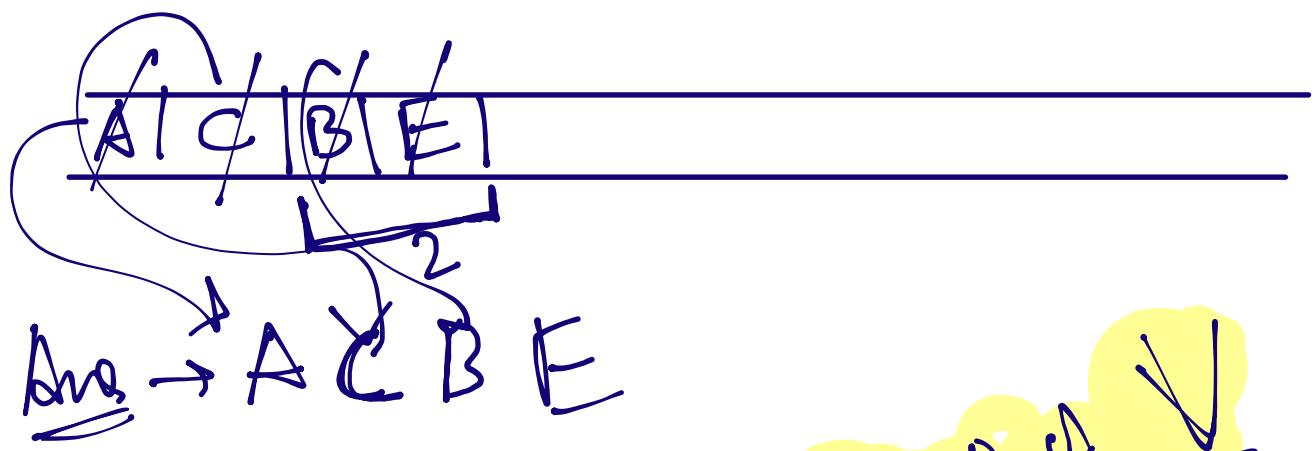
directed acyclic graph
 DFS
 post order traversal of a graph give me TopSort

Steps

- ① Calculate the Indegrees



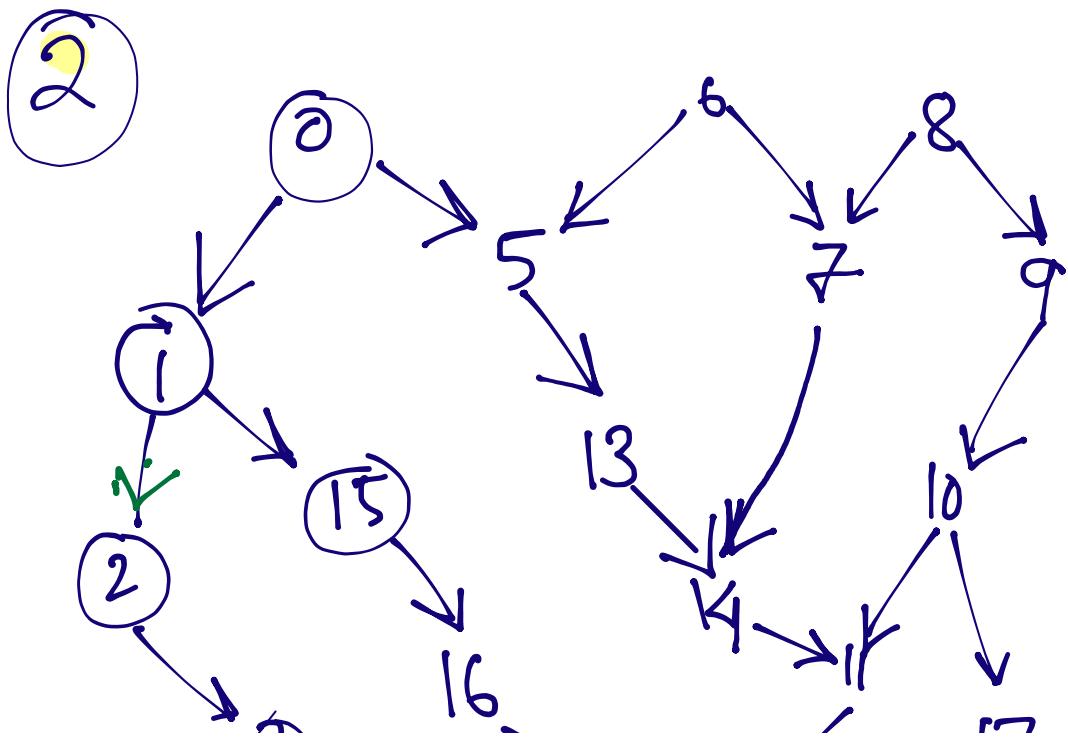
N U - U L . . .

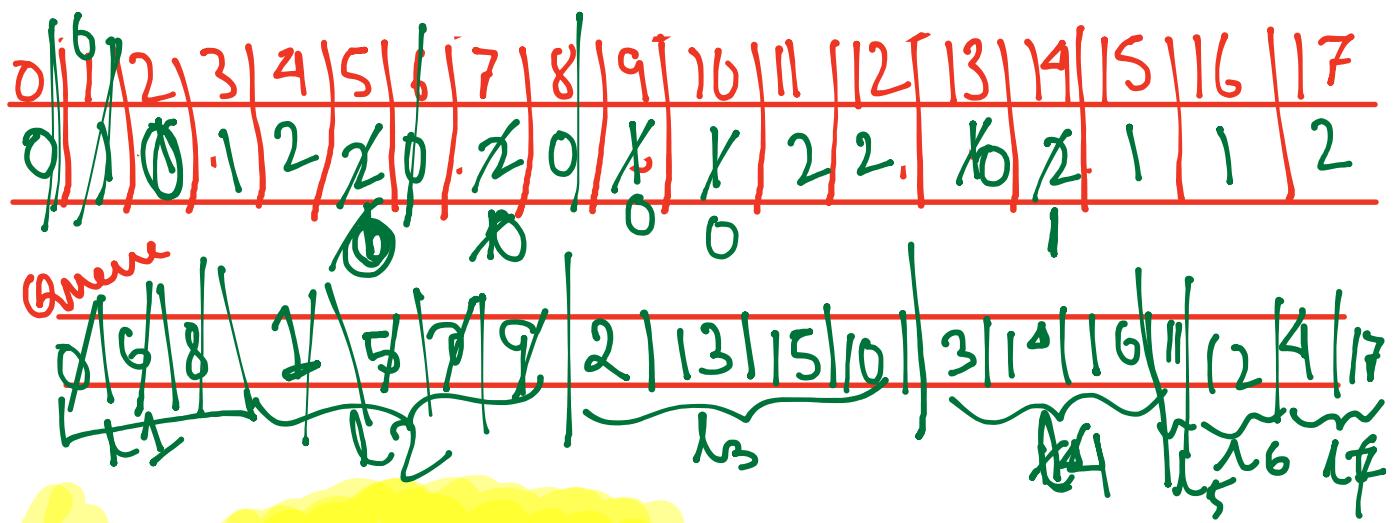
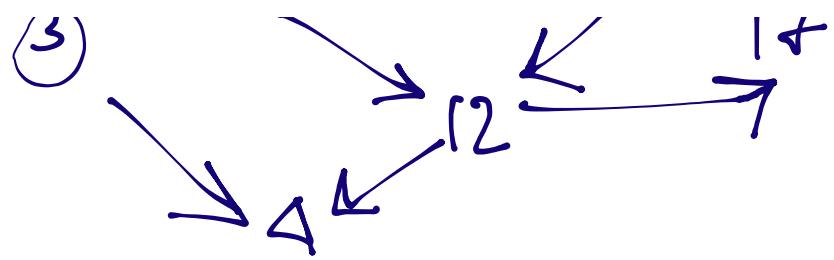


i 15

Ans size != no. of V

have a cycle





Ans → 0 6 8 15 7 9