

Algorithm: Topological Sort (**Tological Ordering. This can be done DFS only**)

Input: A simple connected **directed graph** $G = (V, E)$

Output: An array with topologically sorted vertices from 1 to n.

Initialize a stack S

TopSort[1..n] //Arrays are initialize to 0

Mark[1..n] //n the number of vertices in our class notes

index \leftarrow n

Pick a starting vertex s and Mark[s] \leftarrow 1

S.push(s)

while $S \neq \emptyset$ **do**

 v \leftarrow S.peek()

if some vertex adjacent to v not yet visited **then**

 w \leftarrow next unvisited vertex adjacent to v

 Mark[w] \leftarrow 1

 S.push(w)

else

 TopSort[index--] \leftarrow S.pop()

// DFS completed

return TopSort
