

Assignment - 12

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Code:

```
void dfs(int i, vector<int>& visited, stack<int>& st, vector<int> adj[]){  
    visited[i] = 1;
```

```
    for(auto it : adj[i]){  
        if(visited[it] == 0){  
            dfs(it, visited, st, adj);  
        }  
    }  
}
```

```
    st.push(i);  
}
```

//Function to return list containing vertices in Topological order.

```
vector<int> topoSort(int V, vector<int> adj[])
```

```
{
```

```
// code here
```

```
    vector<int> visited(V);
```

```
    stack<int> st;
```

```
    for(int i = 0; i < V; i++){
```

```
        if(visited[i] == 0){
```

```
        dfs(i, visited, st, adj);
    }
}

vector<int> ans;
while(!st.empty()){
    ans.push_back(st.top());
    st.pop();
}

return ans;
}
```

Output:

Graph:

3 4

3 0

1 0

2 0

Topological order: 0 3 2 1 4