
```
procedure DFS( $G, v$ )  
   $S \leftarrow$  empty stack  
  Push  $v$  to  $S$   
  Mark  $v$  as visited  
  while  $S \neq \emptyset$  do  
     $u \leftarrow$  pop top from  $S$   
    for all  $c \in u.children$  do  
      if  $c$  is not visited then  
        Mark  $c$  as visited  
        Push  $c$  to  $S$ 
```

```
procedure DFS_RECURSIVE( $G, v$ )  
  Mark  $v$  as visited  
  for all  $c \in v.children$  do  
    if  $c$  is not visited then  
      Recursively call  $DFS\_Recursive(G, c)$ 
```

```
procedure BFS( $G, v$ )  
   $Q \leftarrow$  empty queue  
  Enqueue  $v$  to  $Q$   
  Mark  $v$  as visited  
  while  $Q \neq \emptyset$  do  
     $u \leftarrow$  dequeue from  $Q$   
    for all  $c \in u.children$  do  
      if  $c$  is not visited then  
        Mark  $c$  as visited  
        Enqueue  $c$  to  $Q$ 
```
