# Jupyter Notebook: task6.ipynb

Below is the extracted content from the Jupyter notebook:

## Markdown Cell

### \*\*1. BFS without queue and without node\*\*

## Code Cell

graph = {  
 'A': ['D', 'C','B'],  
 'B': ['G', 'E'],  
 'C': ['F'],  
 'D': ['X','Y'],  
 'E': [],  
 'F': [],  
 'G': [],  
 'X': [],  
 'Y': []  
}  
def without\_queue(graph,start,visited=['A']):  
 child = []  
 for i in start:  
 for neighbour in graph[i]:  
 if neighbour not in visited:  
 visited.append(neighbour)  
 child.append(neighbour)  
   
 if child:  
 without\_queue(graph,child,visited)  
 return visited  
without\_queue(graph, 'A')

## Markdown Cell

### \*\*1. BFS with queue and with node\*\*

## Code Cell

graph = {  
 'A': ['D', 'C','B'],  
 'B': ['G', 'E'],  
 'C': ['F'],  
 'D': ['X','Y'],  
 'E': [],  
 'F': [],  
 'G': [],  
 'X': [],  
 'Y': []  
}  
  
queue = ['A']   
visited = []   
  
while queue:   
 i = queue.pop(0)   
 if i not in visited:  
 visited.append(i)  
 queue.extend(g[i])   
 print("Visited:", visited, "| Queue:", queue)  
  
print("Finally :", visited)