Practical 1

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Problem Statement: Implement depth first search algorithm and Breadth First Search algorithm, Use an undirected

graph and develop a recursive algorithm for searching all the vertices of a graph or tree data structure

#DFS

# Using a Python dictionary to act as an adjacency list

graph = {

'5' : ['3','7'],

'3' : ['2', '4'],

'7' : ['8'],

'2' : [],

'4' : ['8'],

'8' : []

}

visited = set() # Set to keep track of visited nodes of graph.

def dfs(visited, graph, node): #function for dfs

if node not in visited:

print (node)

visited.add(node)

for neighbour in graph[node]:

dfs(visited, graph, neighbour)

# Driver Code

print("Following is the Depth-First Search")

dfs(visited, graph, '5')

===================================================================

OUTPUT:

Following is the Depth-First Search

5

3

2

4

8

7