PRACTICAL 2: Depth First Search

1. Without set():

```
graph1 = {
    'A':set(['B', 'C']),
    'B':set(['A', 'D','E']),
    'C':set(['A', 'F']),
    'D':set(['B']),
    'E':set(['B', 'F']),
    'F':set(['C', 'E'])
}

def dfs(graph, node, visited):
    if node not in visited:
        visited.append(node)
        for n in graph[node]:
            dfs(graph, n, visited)
    return visited

visited = dfs(graph1, 'A', [])
print(visited)
```

```
>>>
['A', 'B', 'E', 'F', 'C', 'D']
>>>
>>>
```

PRACTICAL 2: Depth First Search

2. With set():

```
graph1 = {
    'A':['B', 'C'],
    'B':['A', 'D','E'],
    'C':['A', 'F'],
    'D':['B'],
    'E':['B', 'F'],
    'F':['C', 'E']
}

def dfs(graph, node, visited):
    if node not in visited:
        visited.append(node)
        for n in graph[node]:
            dfs(graph, n, visited)
    return visited

visited = dfs(graph1, 'A', [])
print(visited)
```

```
>>>
['A', 'B', 'D', 'E', 'F', 'C']
```