Depth First Search

AIM:

To Solve any problem using Depth First Search

Program:

```
def dfs(graph, node, visited=None):
    if visited is None:
        visited = set()
    visited.add(node)
    print(node, end=" ")
    for neighbor in graph[node]:
        if neighbor not in visited:
            dfs(graph, neighbor, visited)
graph = {
    0: [1, 2],
    1: [0, 3, 4],
    2: [0],
    3: [1],
    4: [1]
}
print("DFS traversal starting from node 0:")
dfs(graph, 0)
```

Output:

```
DFS traversal starting from node 0:
0 1 3 4 2
```

Result:

The problem is solved and the output is verified