PROGRAM [4]:

```
from collections import defaultdict
class Graph:
    def __init__(self):
        self.graph = defaultdict(list)
    def add_edge(self, u, v):
        self.graph[u].append(v)
    def dfs_util(self, v, visited):
        visited[v] = True
        print(v, end=" ")
        for i in self.graph[v]:
            if not visited[i]:
                self.dfs_util(i, visited)
    def dfs(self):
        V = len(self.graph)
        visited = [False] * V
        for i in range(V):
            if not visited[i]:
                self.dfs_util(i, visited)
g = Graph()
g.add_edge(0, 1)
g.add_edge(0, 2)
g.add_edge(1, 2)
g.add_edge(2, 0)
g.add_edge(2, 3)
g.add_edge(3, 3)
```

OUTPUT [4]:

```
Following is Depth First Traversal:
0 1 2 3
```

```
Edge    Weight
0 - 1    2
1 - 2    3
0 - 3    6
1 - 4    5
```

```
print("Following is Depth First Traversal:")
g.dfs()
```