AI23231-PRINCIPLES OF ARTIFICIAL INTELLIGENCE LAB

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Ex no : 01 b

Ex name : IMPLEMENTATION OF DEPTH FIRST SEARCH

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Problem:

```
def __init__(self, graph):

self.graph = graph
self.visited = set()

def dfs(self, current, goal, path=None):
if path is None:
path = []

self.visited.add(current)
path.append(current)

if current == goal:
return path

for neighbor in self.graph.get(current, []):
if neighbor not in self.visited:
result = self.dfs(neighbor, goal, path.copy())
if result:
return result
return None
warehouse_graph_data = {
'A': ['B', 'C'],
'B': ['D', 'E'],
'C': ['F'],
'D': [],
'E': ['F'],
'F': []
```

```
}
wg = WarehouseGraph(warehouse_graph_data)
start = 'A'
goal = 'F'
found_path = wg.dfs(start, goal)
print(f"DFS Path from {start} to {goal}: {found_path}")
```

OUTPUT: