Practical 1

Q1) Demonstrate DFS Algorithm

Ans:

dfs.py

```
"""
dfs.py
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Practical: 1
Objective: Demonstrate DFS Algorithm
"""

def dfsRecursive(graph, start, visited=None):
    if visited is None:
        visited = set()
    visited.add(start)
    print(start, end=" ")
    for next in graph[start] - visited:
        dfsRecursive(graph, next, visited)
    return visited

big_graph= {
    "a": set(["k", "c", "l"]),
    "b": set(["k", "j"]),
    "c": set(["a"]),
    "d": set(["k", "g"]),
    "e": set(["j"]),
    "f": set(["h", "i"]),
    "g": set(["d", "f"]),
    "h": set(["f"]),
    "i": set(["f"]),
    "j": set(["b", "e"]),
    "k": set(["a", "b", "d"]),
    "l": set(["a"]),
}

dfsRecursive(big_graph, 'a')
print("\n")
```

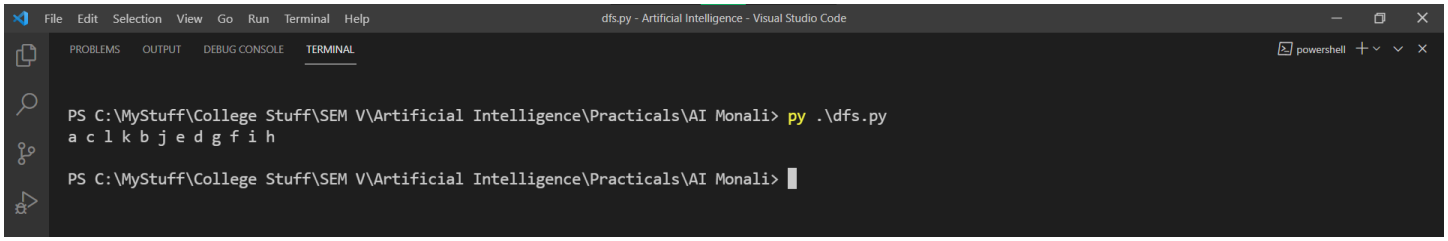
File Edit Selection View Go Run Terminal Help
dfs.py - Artificial Intelligence - Visual Studio Code
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
powershell
PS C:\MyStuff\College Stuff\SEM V\Artificial Intelligence\Practicals\AI Monali> py .\dfs.py
a c l k b j e d g f i h
PS C:\MyStuff\College Stuff\SEM V\Artificial Intelligence\Practicals\AI Monali>