exp_4_dfs

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1 Experiment 4: Part 2: DFS Algorithm

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[1]:

```python
def dfs(graph, start, end):
    visited = []
    stack = [[start]]
    if start == end:
        return "Start = End"
    while stack:
        path = stack.pop()
        node = path[-1]
        if node not in visited:
            neighbours = graph[node]
            for neighbour in neighbours:
                new_path = list(path)
                new_path.append(neighbour)
                print(f"Updated path is {new_path}")
                stack.append(new_path)
                if neighbour == end:
                    return new_path
            visited.append(node)
            print(f"Visited nodes currently: {visited}")
    return "Unreachable"

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

start = 'A'
end = 'F'
```

```

dfs(graph, start, end)
```

```
Updated path is ['A', 'B']
Updated path is ['A', 'C']
Visited nodes currently: ['A']
Updated path is ['A', 'C', 'A']
Updated path is ['A', 'C', 'F']
```

[1]:
```
['A', 'C', 'F']
```

[ ]:
```
```