

1 Graph

Is there a path from root a to node b ? Let's algorithmize!

```
// Recursive
pathSearch(Graph G, start, goal, visited nodes) {
    if start == goal { return true; }

    add started to visited nodes
    for every neighbor x of start not in visited nodes
        solved = pathSearch(G, x, goal, visited nodes)
        if solved {
            return true
        }

    return false;
}

// Not Recursive
pathSearch(Graph G, start, goal, Visited) {
    stack of nodes S
    push(S, start)

    while (S is not empty) {
        X = top(S)
        pop(S);

        if (X == goal)
            return true

        add X to visited

        for every neighbor y of X, not in visited
            push (S, y)
    }

    return false;
}
```