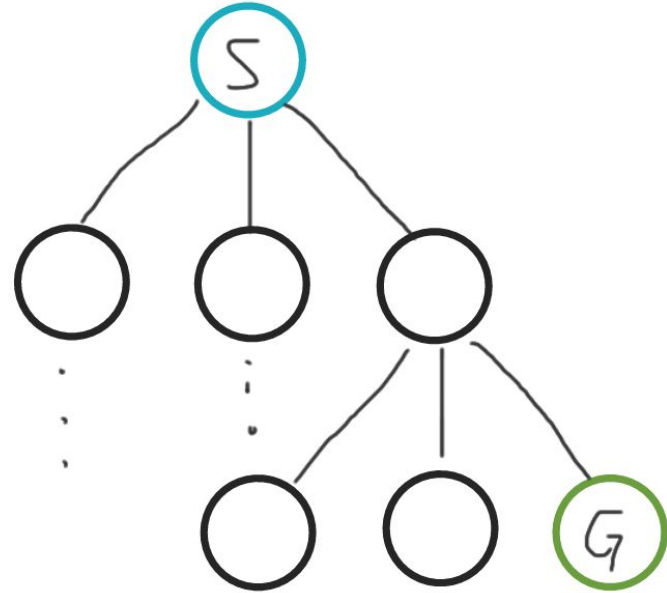# Uninformed Search

**Components of a search problem:**
- State space
- Start state
- Successor function
- Action cost
- Goal state

# Uninformed Search Algorithms

| Algorithm | Fringe | Complete? | Optimal? |
|---|---|---|---|
| Depth-first search: Explore a path fully before backtracking | Stack | Tree search: no Graph search: depends on size of state space | No |
| Breadth-first search: Search all children of the current node, level by level | Queue | Yes | No, unless all edge costs are the same |
| Uniform cost search: Explore the cheapest path first | Priority queue | Yes, if edge costs are positive | Yes, if edge costs are positive |