

EXPERIMENT 3

Postlab

1. What is the time complexity of the Water Jug problem?
2. Why is DFS not used for solving a water jug problem?

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(1) What is time complexity of Water Jug Problem?

The time complexity of water jug problem using BFS or DFS is approximately $O(m \times n)$ where m and n are capacities of two jugs

(2) Why is DFS not used for solving a water jug problem?

DFS is not typically used for solving water jug problem because it may get stuck in deep branches without finding a solution. It does not guarantee finding the shortest path to the solution, may exhaust memory if search space is larger.