

DFS:

Problems	Missionaries and Cannibals	Farmer, Fox, Chicken, and Grain	4-Disk Towers of Hanoi
Path found from start to goal	<p>M on left:3 C on left:3 M on right:0 C on right:0 boat is on the left.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the right.</p> <p>M on left:3 C on left:2 M on right:0 C on right:1 boat is on the left.</p> <p>M on left:0 C on left:2 M on right:3 C on right:1 boat is on the right.</p> <p>M on left:2 C on left:2 M on right:1 C on right:1 boat is on the left.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the right.</p> <p>M on left:3 C on left:1 M on right:0 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:1 M on right:3 C on right:2 boat is on the right.</p> <p>M on left:1 C on left:1 M on right:2 C on right:2 boat is on the left.</p> <p>M on left:0 C on left:0 M on right:3 C on right:3 boat is on the right.</p>	<p>[['F', 'f', 'c', 'g'], []]</p> <p>[['f', 'g'], ['F', 'c']]</p> <p>[['F', 'f', 'g'], ['c']]</p> <p>[['g'], ['F', 'f', 'c']]</p> <p>[['F', 'c', 'g'], ['f']]</p> <p>[['c'], ['F', 'f', 'g']]</p> <p>[['F', 'c'], ['f', 'g']]</p> <p>[[], ['F', 'f', 'c', 'g']]</p>	<p>[[4, 3, 2, 1], [], []]</p> <p>[[4, 3, 2], [1], []]</p> <p>[[4, 3], [1], [2]]</p> <p>[[4, 3, 1], [], [2]]</p> <p>[[4, 3], [], [2, 1]]</p> <p>[[4], [3], [2, 1]]</p> <p>[[4, 1], [3], [2]]</p> <p>[[4], [3, 1], [2]]</p> <p>[[4, 2], [3, 1], []]</p> <p>[[4, 2, 1], [3], []]</p> <p>[[4, 2], [3], [1]]</p> <p>[[4], [3, 2], [1]]</p> <p>[[4, 1], [3, 2], []]</p> <p>[[4], [3, 2, 1], []]</p> <p>[[], [3, 2, 1], [4]]</p> <p>[[1], [3, 2], [4]]</p> <p>[[], [3, 2], [4, 1]]</p> <p>[[2], [3], [4, 1]]</p> <p>[[2, 1], [3], [4]]</p> <p>[[2], [3, 1], [4]]</p> <p>[[], [3, 1], [4, 2]]</p> <p>[[1], [3], [4, 2]]</p> <p>[[], [3], [4, 2, 1]]</p> <p>[[3], [], [4, 2, 1]]</p> <p>[[3, 1], [], [4, 2]]</p> <p>[[3], [1], [4, 2]]</p> <p>[[3, 2], [1], [4]]</p> <p>[[3, 2, 1], [], [4]]</p> <p>[[3, 2], [], [4, 1]]</p> <p>[[3], [2], [4, 1]]</p> <p>[[3, 1], [2], [4]]</p> <p>[[3], [2, 1], [4]]</p> <p>[[], [2, 1], [4, 3]]</p> <p>[[1], [2], [4, 3]]</p> <p>[[], [2], [4, 3, 1]]</p> <p>[[2], [], [4, 3, 1]]</p> <p>[[2, 1], [], [4, 3]]</p> <p>[[2], [1], [4, 3]]</p> <p>[[], [1], [4, 3, 2]]</p> <p>[[1], [], [4, 3, 2]]</p> <p>[[], [], [4, 3, 2, 1]]</p>
Length of the path	9 edges	7 edges	40 edges
Number of nodes expanded	10 states expanded	7 states expanded	40 states expanded

BFS:

Problems	Missionaries and Cannibals	Farmer, Fox, Chicken, and Grain	4-Disk Towers of Hanoi
Path found from start to goal	M on left:3 C on left:3 M on right:0 C on right:0 boat is on the left. M on left:2 C on left:2 M on right:1 C on right:1 boat is on the right. M on left:3 C on left:2 M on right:0 C on right:1 boat is on the left. M on left:1 C on left:1 M on right:2 C on right:2 boat is on the right. M on left:3 C on left:1 M on right:0 C on right:2 boat is on the left. M on left:0 C on left:1 M on right:3 C on right:2 boat is on the right. M on left:1 C on left:1 M on right:2 C on right:2 boat is on the left. M on left:0 C on left:0 M on right:3 C on right:3	[['F', 'f', 'c', 'g'], []] [['f', 'g'], ['F', 'c']] [['F', 'f', 'g'], ['c']] [['f'], ['F', 'c', 'g']] [['F', 'f', 'c'], ['g']] [['c'], ['F', 'f', 'g']] [['F', 'c'], ['f', 'g']] [[], ['F', 'f', 'c', 'g']]	[[4, 3, 2, 1], [], []] [[4, 3, 2], [1], []] [[4, 3], [1], [2]] [[4, 3, 1], [], [2]] [[4, 3], [], [2, 1]] [[4], [3], [2, 1]] [[4, 1], [3], [2]] [[4, 1], [3, 2], []] [[4], [3, 2, 1], []] [[], [3, 2, 1], [4]] [[1], [3, 2], [4]] [[], [3, 2], [4, 1]] [[2], [3], [4, 1]] [[2, 1], [3], [4]] [[2, 1], [], [4, 3]] [[2], [1], [4, 3]] [[], [1], [4, 3, 2]] [[1], [], [4, 3, 2]] [[], [], [4, 3, 2, 1]]
Length of the path	7 edges	7 edges	18 edges
Number of nodes expanded	10 states expanded	9 states expanded	70 states expanded