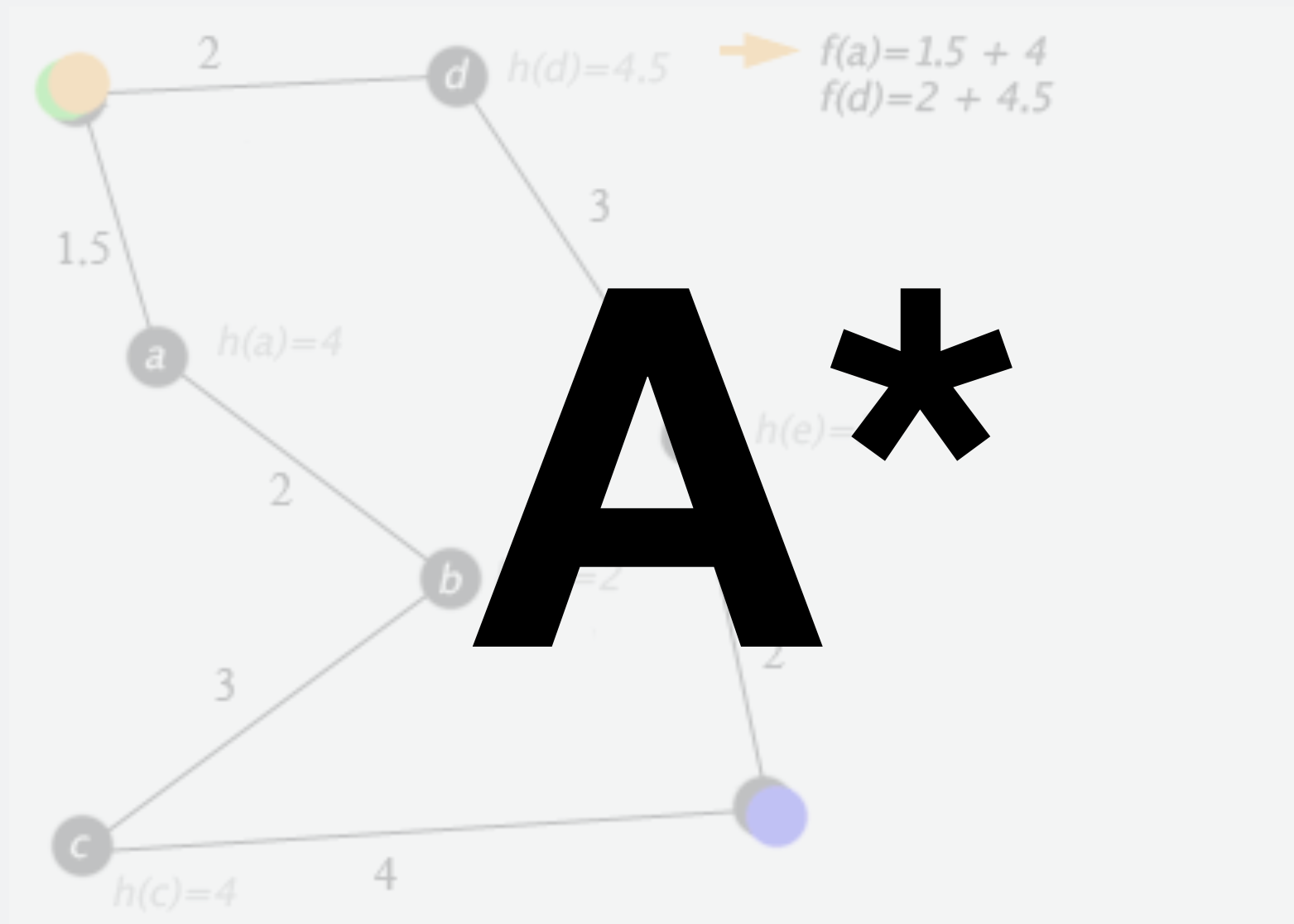


14조 - 슬라이딩 퍼즐 알고리즘 발표

강민성 김현진 박수빈

안계환 최연웅 최희재



Solvable / Unsolvable

1	8	2
	4	3
7	6	5

Given State

Solvable

We can reach goal state by sliding tiles using blank space.

8	1	2
	4	3
7	6	5

Given State

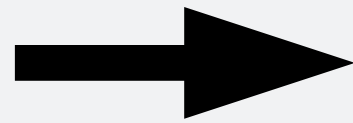
Not Solvable

We can not reach goal state by sliding tiles using blank space.

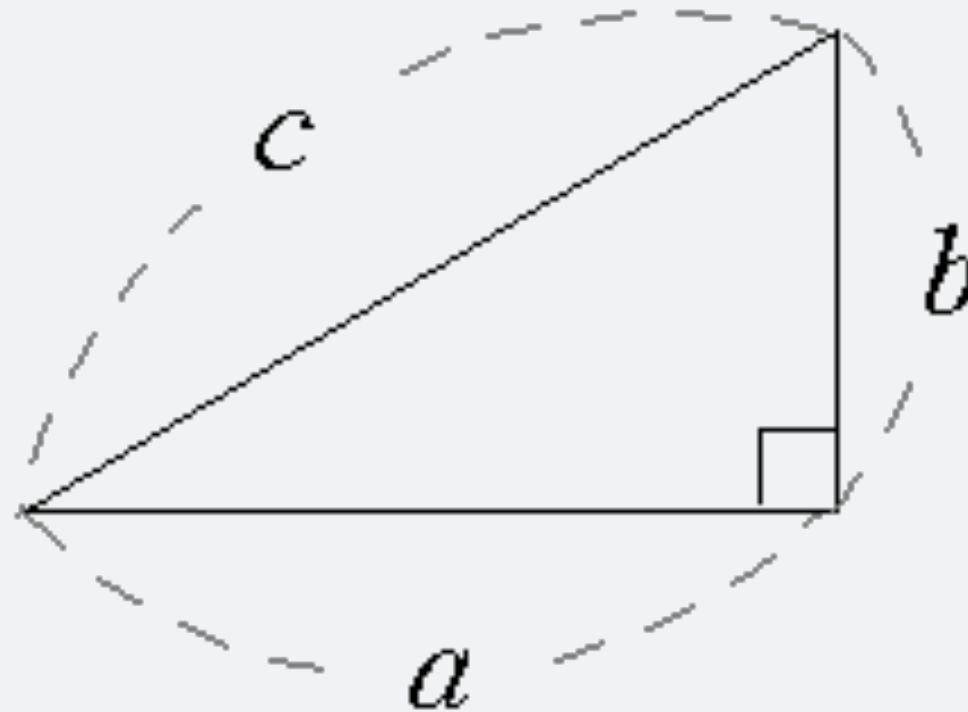
Unordered List

$$\mathbf{f}(\mathbf{x}) = \mathbf{g}(\mathbf{x}) + \mathbf{h}(\mathbf{x})$$

Heuristic



**Manhattan
Distance**

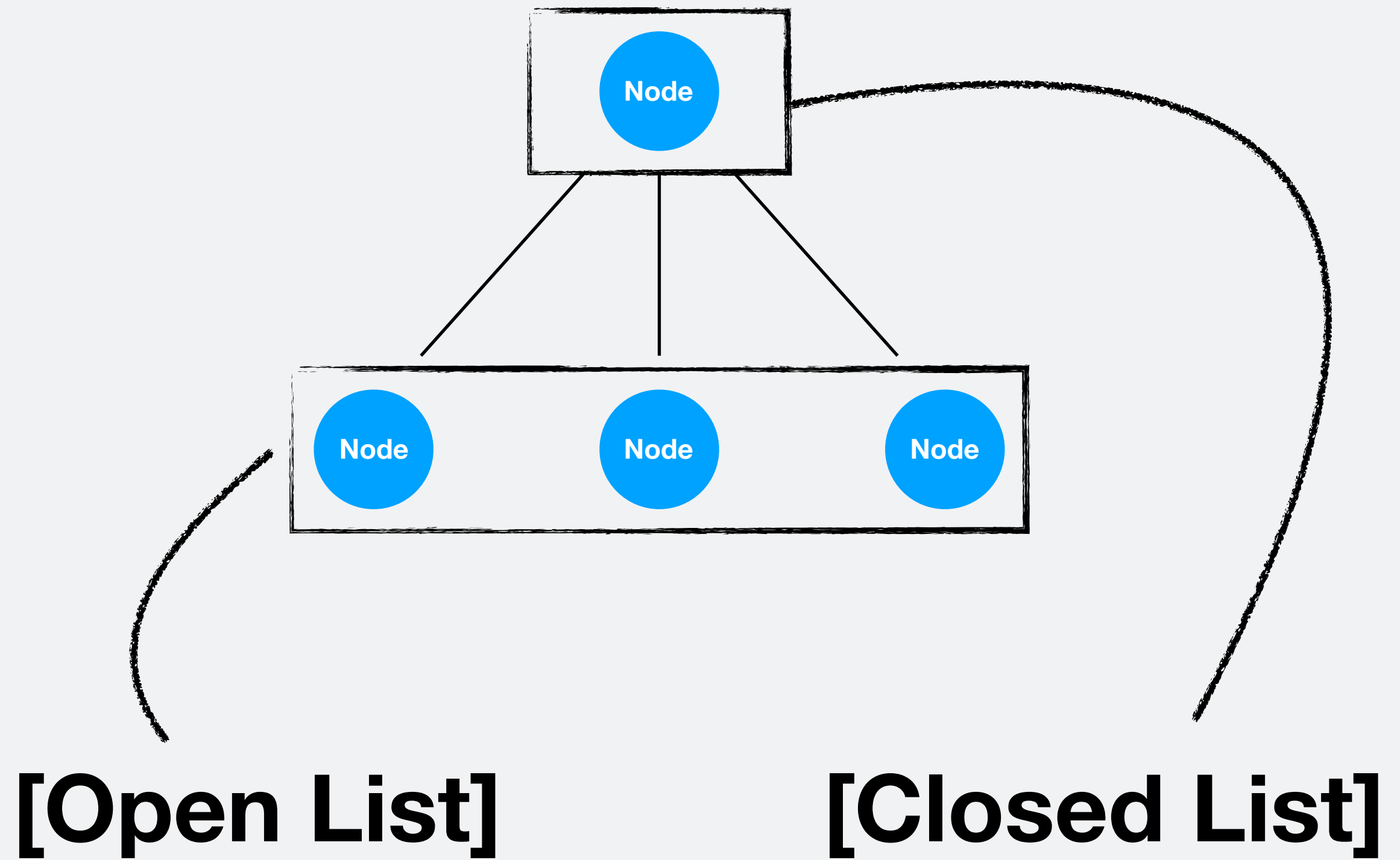


[Open List]

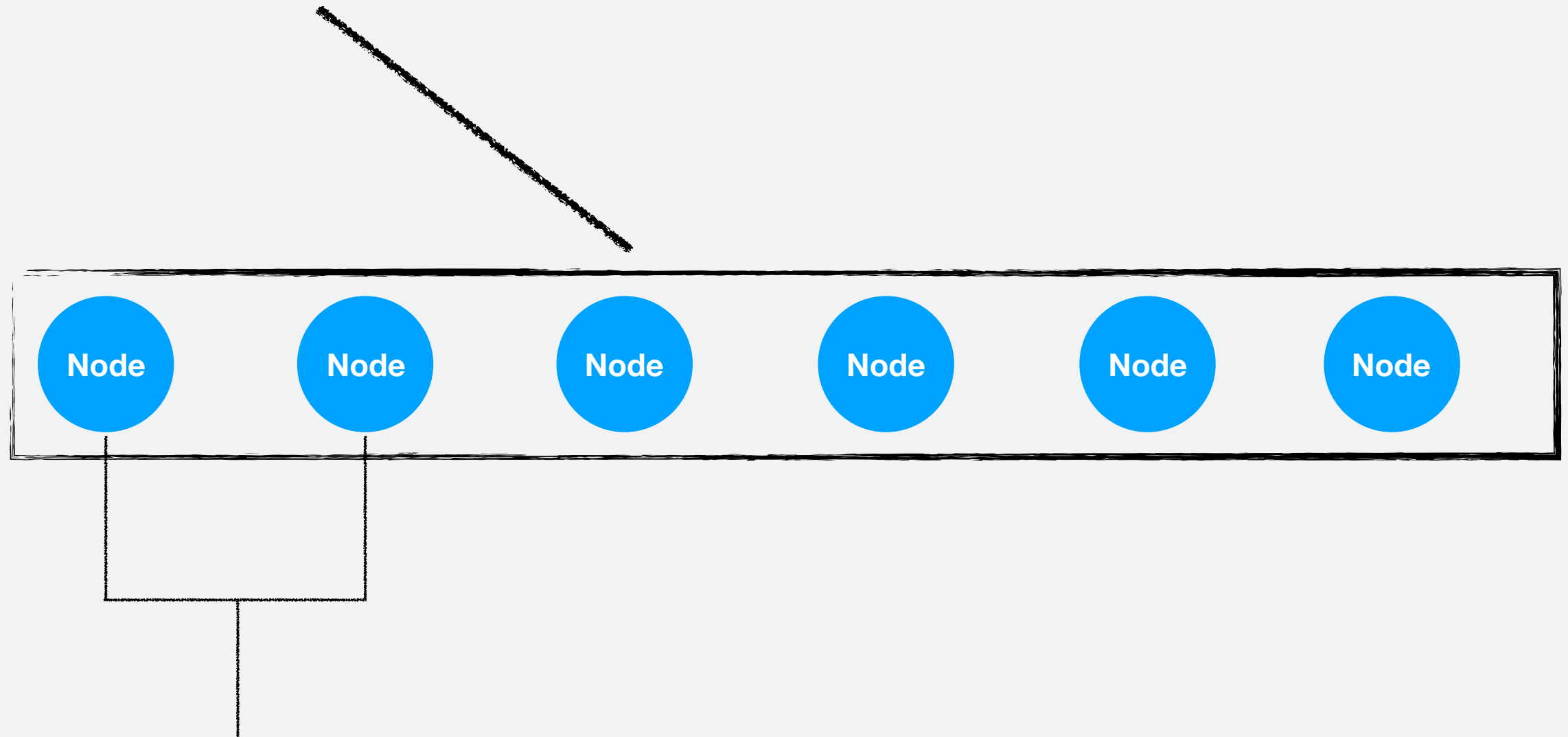
최소 f 값을 가지고 있는 노드를
확장 시켰을 때 **자식** 노드의 집합

[Closed List]

최소 f 값을 가지고 있는 노드를
확장 시켰을 때 **부모** 노드의 집합

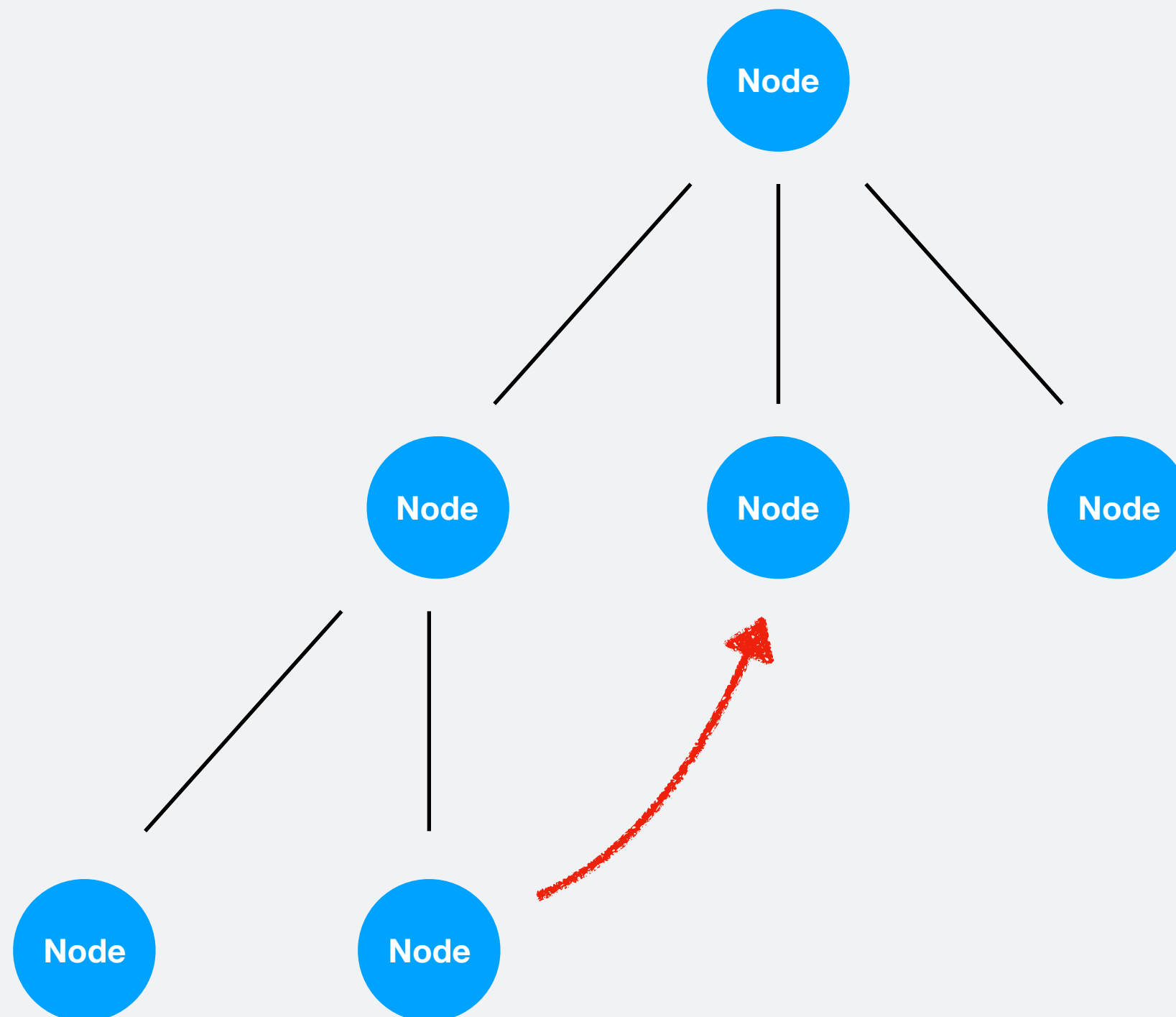


[Closed List]



$f(x) = g(x) ??$

Special Point



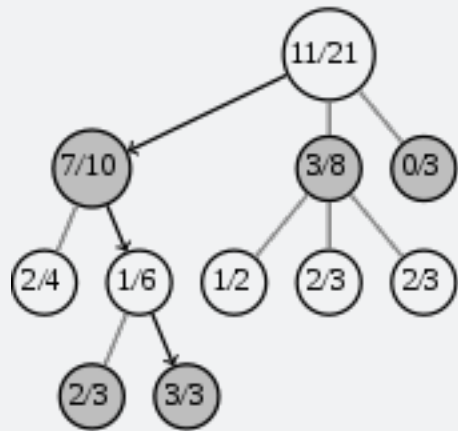
Special Point

	4		2	
--	---	--	---	--

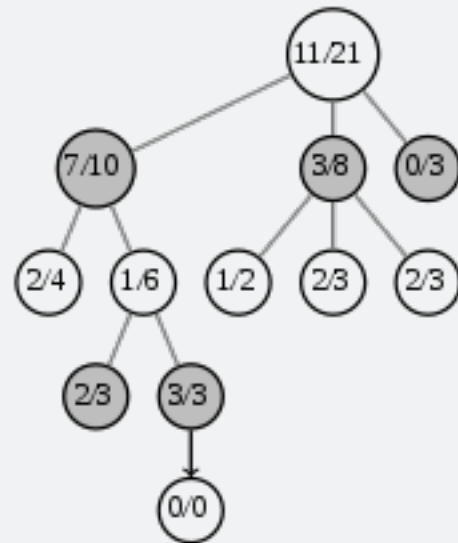
More

Monte Carlo Tree Search

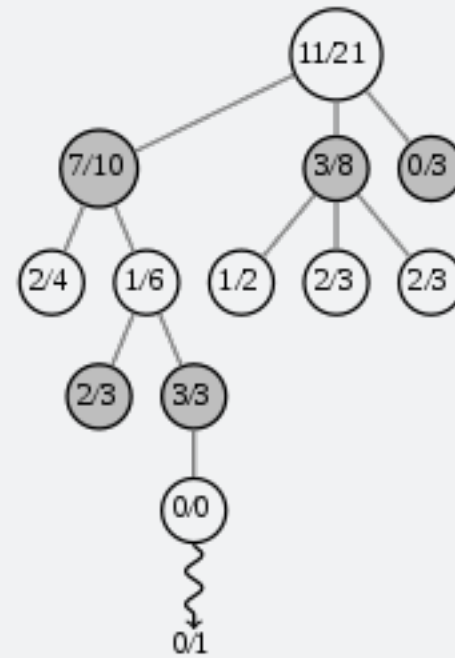
Selection



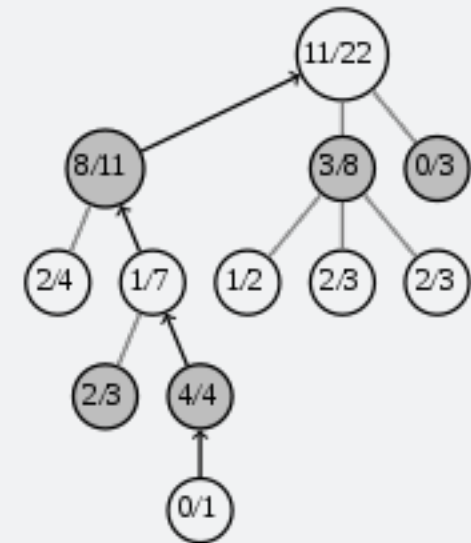
Expansion



Simulation



Backpropagation



Selection (확률에 기반)



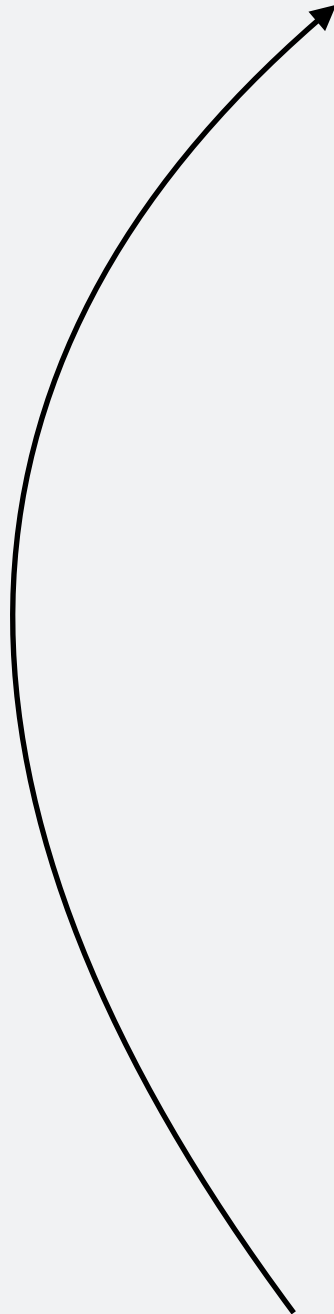
Expansion



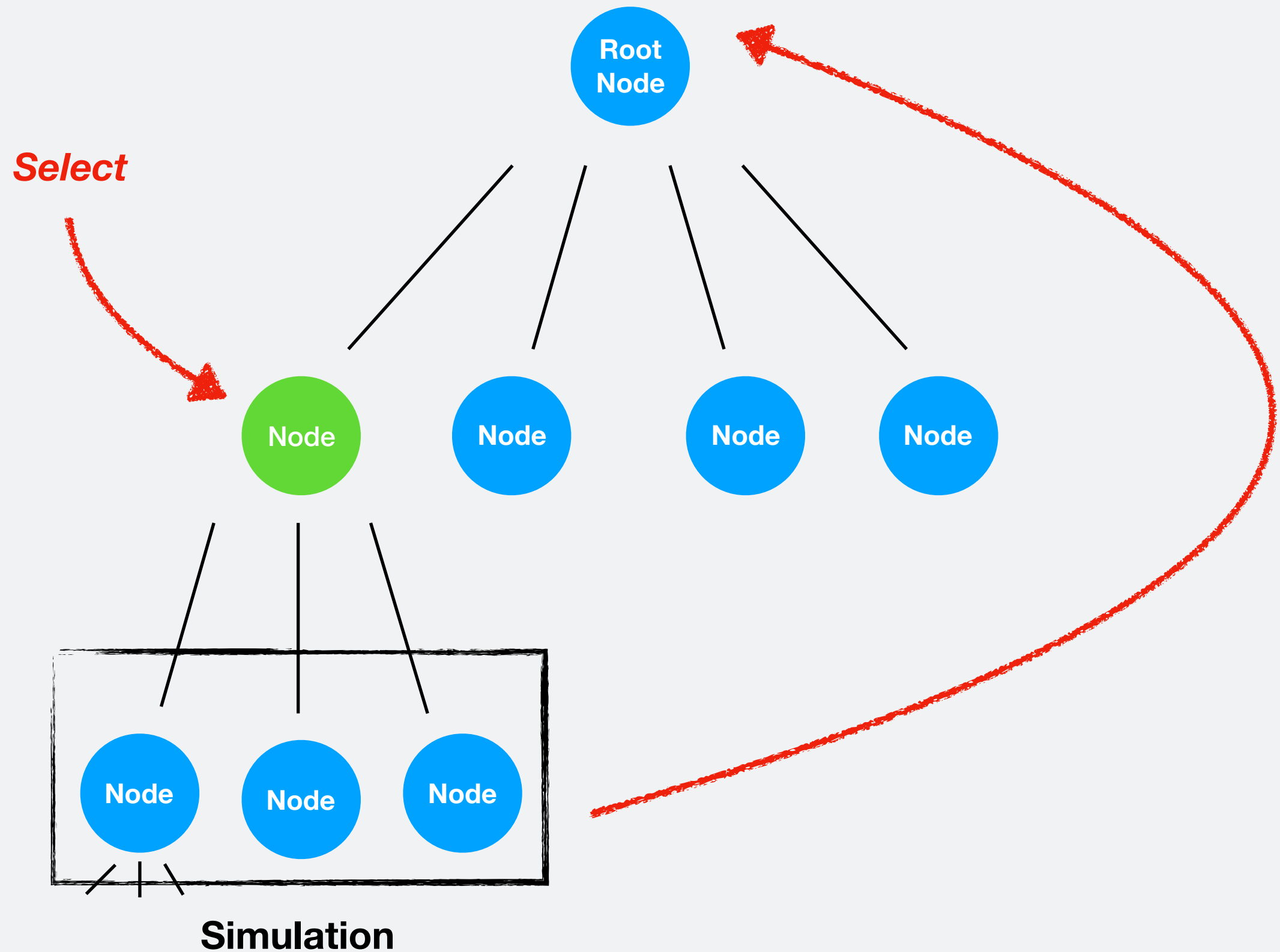
Simulation



BackPropagation



Best Search & Simulation



Q&A