2024 Fall

CS386-02

Assignment 2: Search - Question 1

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Algorithm	Time Complexity	Space Complexity	Complete?	Optimal?
BFS	$O(b^{d+1})$	$O(b^{d+1})$	O	O
UCS	$O(b^{\lceil \frac{C}{\epsilon} \rceil})$	$O(b^{\lceil \frac{C}{\epsilon} \rceil})$	O	O (if all edge costs are non-negative.)
DFS	$O(b^n)$	$O(bn)$	X	X
DLS	$O(b^l)$ l: limited depth	$O(l)$	X	X
IDS	$O(b^d)$	$O(bd)$	O	O
A*	$O(b^d)$	$O(b^d)$	O	O (in case where the heuristic is admissible)