INFORMED SEARCH STRATEGIES
In-Class-Exercise

VACUUM WORLD STATE SPACE GRAPH

Initial State: State 1  
State 2  
State 3  
State 4  
State 5  
State 6  
Goal: State 7  
Goal: State 8
EXERCISES

1. Invent a heuristic function $h()$ for the Vacuum-World problem. $h$ should be admissible. Use A* tree-search from the initial state to the goal state. Show the sequence of nodes that the algorithm will consider and the $f$, $g$, and $h$ score for each node.

2. Invent an objective function $Value()$ for the Vacuum-World problem. Use hill-climbing search from the initial state. Explain whether your hill-climbing search algorithm can find the optimal solution.