

Assignment 3: Pathfinding Algorithms

UofK AI Lectures 2024-2025

1 State Space Diagram

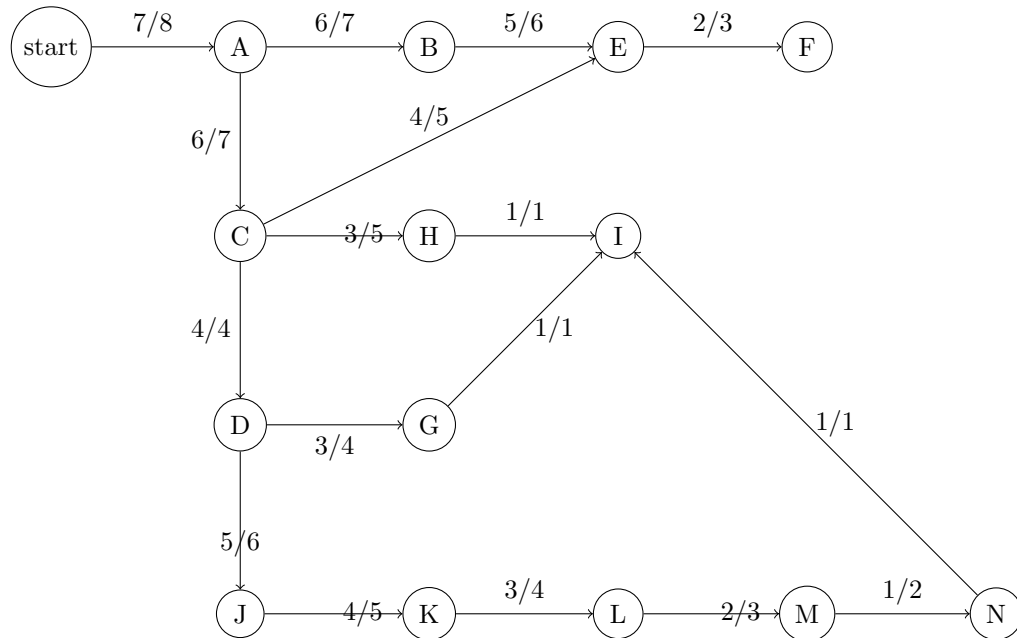


Figure 1: State Space Diagram

2 State Space Diagram with Loops

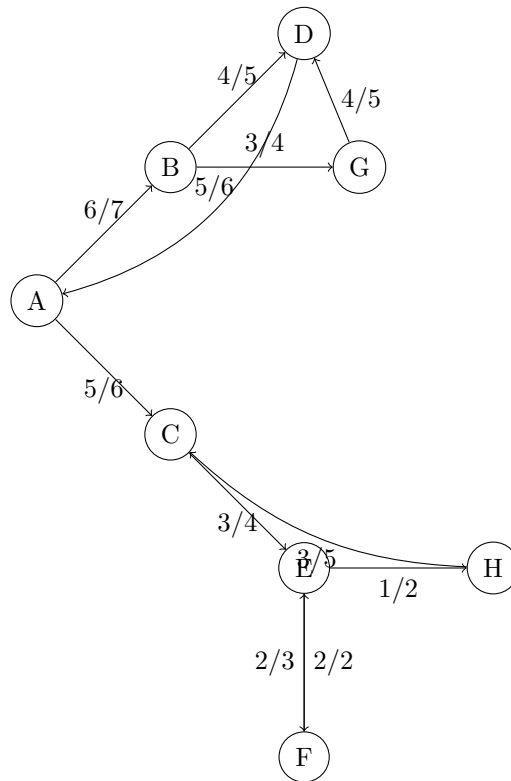


Figure 2: State Space Diagram with Loops

Question 1 (Greedy Search) Find the shortest path from the 'start' state to the 'I' in figure 1 and f in figure 2 state using a greedy search algorithm. What is the total cost of this path?

Question 2 (A* Search) Find the shortest path from the 'start' state to the 'I' in figure 1 and F in figure 2 state using the A* search algorithm. Verify the total cost and ensure the heuristic is admissible.