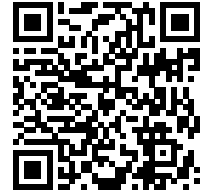


Worksheet: L04 – Informed Search

CSCI-534: Robot Planning & Manipulation

Spring 2020

<http://www.neil.dantam.name/rpm/B04-informed.pdf>



1. **Dijkstra’s Algorithm:** Use Dijkstra’s algorithm to solve the planning domain in Figure 1:

2. **Cost variations:** Modify Dijkstra’s algorithm to consider actions costs $C : \mathcal{U} \mapsto \mathbb{R}$:

2	3	4	5
1	2	1	2
0	1	3	1
	0	1	2

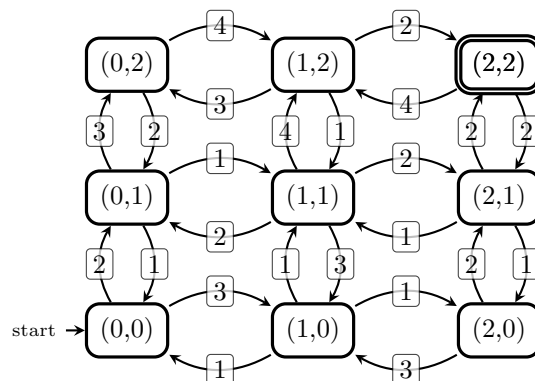


Figure 1: Example planning domain

Name:

3. **Heuristics:** Define a heuristic for Figure 1 based on Manhattan distance: $d = |x| + |y|$

4. **Greedy Search:** Use Greedy Search to solve the planning domain in Figure 1:

5. **A* Search:** Use A* solve the planning domain in Figure 1: