name: Keyi Zhong

student number:1766286

Assignment 3 Report -- Heuristic Search

CSE 415: Introduction to Artificial Intelligence
Spring, 2019

1. Heuristics for the Eight Puzzle

Puzzle	Heuristic	Solved?	# Soln Edges	Soln Cost	# Expanded	Max OPEN
A	none (UCS)	Y	7	7	166	101
A	Hamming	Y	7	7	7	6
A	Manhattan	Y	7	7	7	6
B	none (UCS)	Y	12	12	1490	898
B	Hamming	Y	12	12	94	72
B	Manhattan	Y	12	12	33	25
C	none (UCS)	Y	14	14	4070	2290
C	Hamming	Y	14	14	189	127
C	Manhattan	Y	14	14	56	39
D	none (UCS)	Y	16	16	7980	4700
D	Hamming	Y	16	16	589	368
D	Manhattan	Y	16	16	148	96

Puzzle A: [3,0,1,6,4,2,7,8,5]
Puzzle B: [3,1,2,6,8,7,5,4,0]
Puzzle C: [4,5,0,1,2,8,3,7,6]
Puzzle D: [0,8,2,1,7,4,3,6,5]

2. (Optional) Evaluating My Custom Heuristics