Joshua Cords

Fang

CS 420

24 October 2016

**A\* Program Output**

**Example 1:**

Solution length: 12

204 Nodes generated

Initial State:

2 4 0

1 8 5

3 6 7

2 4 5

1 8 0

3 6 7

2 4 5

1 0 8

3 6 7

2 0 5

1 4 8

3 6 7

0 2 5

1 4 8

3 6 7

1 2 5

0 4 8

3 6 7

1 2 5

3 4 8

0 6 7

1 2 5

3 4 8

6 0 7

1 2 5

3 4 8

6 7 0

1 2 5

3 4 0

6 7 8

1 2 0

3 4 5

6 7 8

1 0 2

3 4 5

6 7 8

0 1 2

3 4 5

6 7 8

**Example 2:**

Solution length: 16

295 Nodes generated

Initial State:

4 2 3

1 8 5

6 7 0

4 2 3

1 8 0

6 7 5

4 2 0

1 8 3

6 7 5

4 0 2

1 8 3

6 7 5

0 4 2

1 8 3

6 7 5

1 4 2

0 8 3

6 7 5

1 4 2

6 8 3

0 7 5

1 4 2

6 8 3

7 0 5

1 4 2

6 0 3

7 8 5

1 4 2

6 3 0

7 8 5

1 4 2

6 3 5

7 8 0

1 4 2

6 3 5

7 0 8

1 4 2

6 3 5

0 7 8

1 4 2

0 3 5

6 7 8

1 4 2

3 0 5

6 7 8

1 0 2

3 4 5

6 7 8

0 1 2

3 4 5

6 7 8

**Example 3:**

Solution length: 22

18790 Nodes generated

Initial State:

1 2 3

4 5 6

7 8 0

1 2 3

4 5 6

7 0 8

1 2 3

4 0 6

7 5 8

1 2 3

4 6 0

7 5 8

1 2 0

4 6 3

7 5 8

1 0 2

4 6 3

7 5 8

0 1 2

4 6 3

7 5 8

4 1 2

0 6 3

7 5 8

4 1 2

6 0 3

7 5 8

4 1 2

6 3 0

7 5 8

4 1 0

6 3 2

7 5 8

4 0 1

6 3 2

7 5 8

4 3 1

6 0 2

7 5 8

4 3 1

6 5 2

7 0 8

4 3 1

6 5 2

0 7 8

4 3 1

0 5 2

6 7 8

0 3 1

4 5 2

6 7 8

3 0 1

4 5 2

6 7 8

3 1 0

4 5 2

6 7 8

3 1 2

4 5 0

6 7 8

3 1 2

4 0 5

6 7 8

3 1 2

0 4 5

6 7 8

0 1 2

3 4 5

6 7 8