

ASSIGNMENT - 4

classmate

Date _____
Page _____

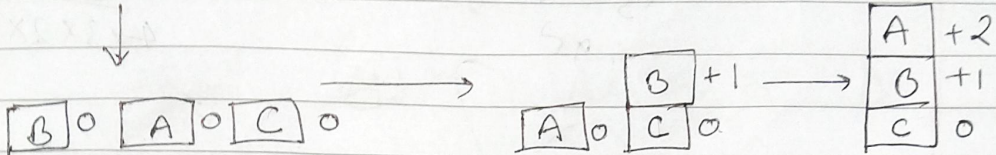
Q1.

| | | | |
|---|---|---|----|
| B | 0 | C | -1 |
| | A | 0 | |

START

| | |
|---|----|
| A | +2 |
| B | +1 |
| C | 0 |

GOAL



Q2

| | | |
|---|---|---|
| 2 | 8 | 3 |
| 1 | 6 | 4 |
| 7 | | 5 |

INITIAL

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 8 | | 4 |
| 7 | 6 | 5 |

GOAL

$$f(n) = g(n) + h(n)$$

| | | |
|---|---|---|
| 2 | 8 | 3 |
| 1 | 6 | 4 |
| 7 | | 5 |

$g=1$
 $h=5$
 $f=6$

| | | |
|---|---|---|
| 2 | 8 | 3 |
| 1 | | 4 |
| 7 | 6 | 5 |

$g=1$
 $h=3$
 $f=4$

| | | |
|---|---|---|
| 2 | 8 | 3 |
| 1 | 6 | 4 |
| 7 | 5 | |

$g=1$
 $h=5$
 $f=6$

| | | |
|---|---|---|
| 2 | 8 | 3 |
| | 1 | 4 |
| 7 | 6 | 5 |

$g=2$
 $h=3$
 $f=5$

| | | |
|---|---|---|
| 2 | | 3 |
| 1 | 8 | 4 |
| 7 | 6 | 5 |

$g=2$
 $h=3$
 $f=5$

| | | |
|---|---|---|
| 2 | 8 | 3 |
| 1 | 4 | |
| 7 | 6 | 5 |

$g=2$
 $h=4$
 $f=6$

| | | |
|---|---|---|
| | 8 | 3 |
| 2 | 1 | 4 |
| 7 | 6 | 5 |

$g=3$
 $h=3$
 $f=6$

| | | |
|---|---|---|
| 2 | 8 | 3 |
| 7 | 1 | 4 |
| | 6 | 5 |

$g=3$
 $h=4$
 $f=7$

| | | |
|---|---|---|
| | 2 | 3 |
| 1 | 8 | 4 |
| 7 | 6 | 5 |

$g=3$
 $h=2$
 $f=5$

| | | |
|---|---|---|
| 2 | 3 | |
| 1 | 8 | 4 |
| 7 | 6 | 5 |

$g=3$
 $h=4$
 $f=7$

| | | |
|---|---|---|
| | 2 | 3 |
| | 8 | 4 |
| 7 | 6 | 5 |

$g=4$
 $h=1$
 $f=5$

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 8 | | 4 |
| 7 | 6 | 5 |

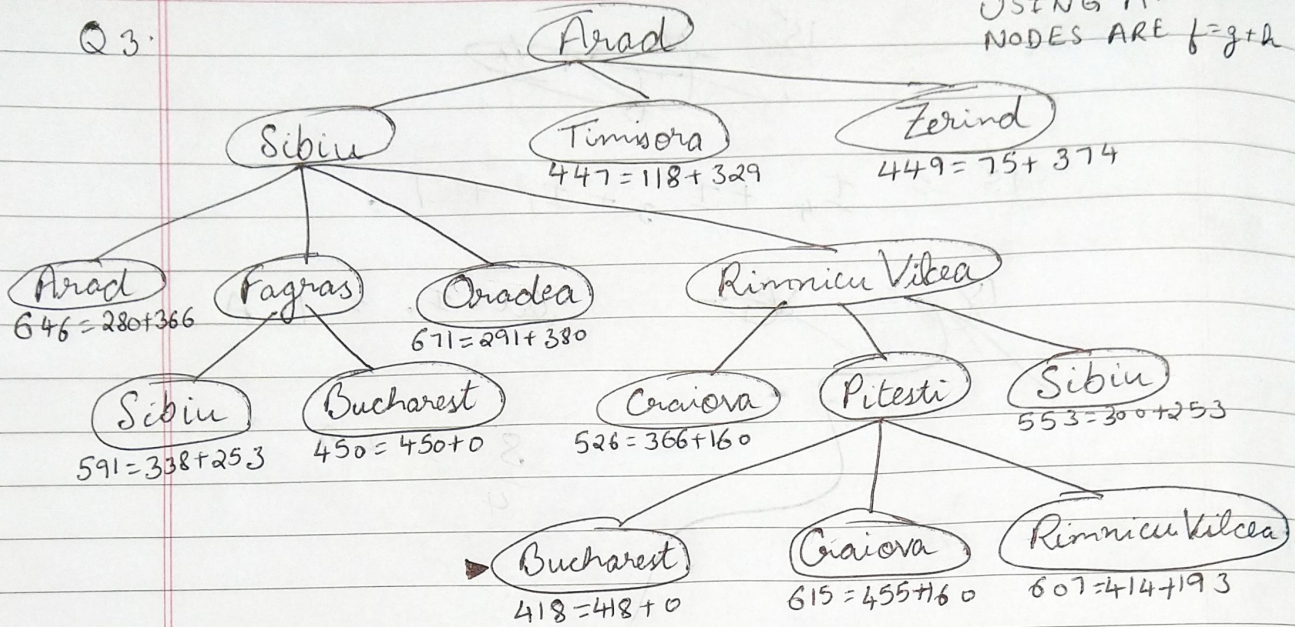
$g=5$
 $h=0$
 $f=5$

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 7 | 8 | 4 |
| | 6 | 5 |

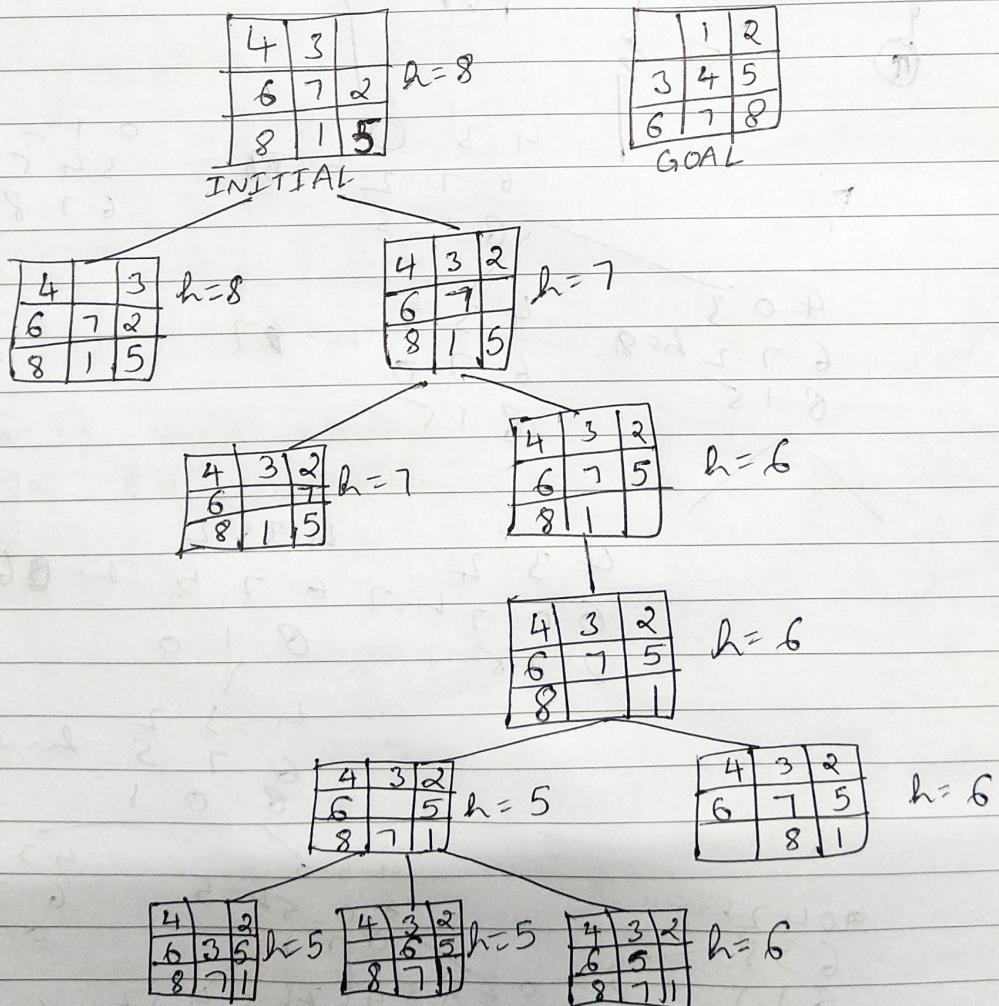
$g=5$
 $h=2$
 $f=7$

GOAL STATE

USING A*
NODES ARE $f = g + h$



Q 4.



Stuck at local maxima