

### For b.csp file

Test case 1,2,3, 7 works well

Having problems in test case 4, 5, 6

### For a.csp file

Test case 1,2,4,7 works well

Having problems in test case 3, 5,6

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The converting code for b.csp is on line 260 and 261

The converting code for a.csp is on line 317 and 318

Settings will comment these line or not.

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### Test case 1

```
python wumpus2csp.py --input wumpus_maps/wumpus_01.json --action north --output wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_01_north_b.csp
```

```
python solver.py wumpus_outputs/wumpus_01_north_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_01.json --action east --output wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_01_east_b.csp
```

```
python solver.py wumpus_outputs/wumpus_01_east_a.csp
```

Test case 1	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
North_a.csp	1	0.0009	yes	Yse	unknown
North_b.csp	7	0.0009	no	Yse	unknown
East_a.csp	1	0.00099	yes	Yse	unknown
East_b.csp	4	0.00199	no	Yse	unknown

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### Test case 2

Test case 2 here I used my own n\_to\_bin.py to convert the binary constrain

```
python wumpus2csp.py --input wumpus_maps/wumpus_02.json --action north --output wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_02_north_b.csp
```

```
python solver.py wumpus_outputs/wumpus_02_north_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_02.json --action east --output wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_02_east_b.csp
```

```
python solver.py wumpus_outputs/wumpus_02_east_a.csp
```

Test case 2	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
North_a.csp	15	0.0009	yes	no	No solution

North_b.csp	9	0.0009	no	yes	safe
East_a.csp	15	0.00099	yes	yes	unsafe
East_b.csp	6	0.00099	no	no	No solution

---

### Test case 3

```
python wumpus2csp.py --input wumpus_maps/wumpus_03.json --action east --output
wumpus_outputs
python solver.py wumpus_outputs/wumpus_03_east_b.csp
python solver.py wumpus_outputs/wumpus_03_east_a.csp
```

Test case 3	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
East_a.csp	0	0	yes	No(show yes with null)	No solution
East_b.csp	2	0.0	no	yes	safe

---

### Test case 4

```
python wumpus2csp.py --input wumpus_maps/wumpus_04.json --action north --output
wumpus_outputs
python solver.py wumpus_outputs/wumpus_04_north_b.csp
python solver.py wumpus_outputs/wumpus_04_north_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_04.json --action east --output
wumpus_outputs
python solver.py wumpus_outputs/wumpus_04_east_b.csp
python solver.py wumpus_outputs/wumpus_04_east_a.csp
```

Test case 4	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
North_a.csp	15	0.000997	yes	yes	unknown
North_b.csp	9	0.0009	no	no	unknown
East_a.csp	15	0.0	yes	yes	unsafe
East_b.csp	6	0.00099	no	no	No solution

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### Test case 5

Test case 5 here I used my own n\_to\_bin.py to convert the binary constrain

Have problem in test case 5

```
python wumpus2csp.py --input wumpus_maps/wumpus_05.json --action north --output
wumpus_outputs
python solver.py wumpus_outputs/wumpus_05_north_b.csp
python solver.py wumpus_outputs/wumpus_05_north_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_05.json --action south --output
wumpus_outputs
python solver.py wumpus_outputs/wumpus_05_south_b.csp
```

python solver.py wumpus\_outputs/wumpus\_05\_south\_a.csp

Test case 5	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
North_a.csp	1	0.0019	yes	yes	unsafe
North_b.csp	4	0.0009	yes	yes	unsafe
South_a.csp	1	0.0	yes	yes	safe
South_b.csp	4	0.0	yes	yes	safe

---

### Test case 6

Test case 5 here I used my own n\_to\_bin.py to convert the binary constrain

Have problem in test case 5

```
python wumpus2csp.py --input wumpus_maps/wumpus_06.json --action east --output  
wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_06_north_b.csp
```

```
python solver.py wumpus_outputs/wumpus_06_north_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_06.json --action south --output  
wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_06_south_b.csp
```

```
python solver.py wumpus_outputs/wumpus_06_south_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_06.json --action west --output  
wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_06_west_b.csp
```

```
python solver.py wumpus_outputs/wumpus_06_west_a.csp
```

Test case 6	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
East_a.csp	216	0.0019	yes	yes	safe
East_b.csp	64	0.00099	yes	yes	safe
South_a.csp	216	0.000996	yes	yes	unsafe
South_b.csp	64	0.0039	yes	yes	unsafe
West_a.csp	217	0.0009	yes	yes	unsafe
West_b.csp	64	0.0019	yes	yes	unsafe

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### Test case 7

```
python wumpus2csp.py --input wumpus_maps/wumpus_07.json --action north --output  
wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_07_north_b.csp
```

```
python solver.py wumpus_outputs/wumpus_07_north_a.csp
```

```
python wumpus2csp.py --input wumpus_maps/wumpus_07.json --action east --output  
wumpus_outputs
```

```
python solver.py wumpus_outputs/wumpus_07_east_b.csp
```

python solver.py wumpus\_outputs/wumpus\_07\_east\_a.csp

Test case 7	Nodes expand	Time	Use reference_n_to_bin	Has solution	Actual result
North_a.csp	1	0.0	yes	yes	unknown
North_b.csp	5	0.0009	yes	yes	unknown
East_a.csp	1	0.0	yes	yes	unknown
East_b.csp	12	0.00099	yes	yes	unknown