

Rat in a Maze :-

A 4x4 grid representing a 2D array. The grid contains the following numbers:

1	0	0	0
1	1	0	1
1	1	0	0
0	1	1	1

Colored lines indicate indices:

- Yellow lines:** A vertical line at column index 1 and a horizontal line at row index 1, intersecting at the value 1.
- Purple lines:** A vertical line at column index 0 and a horizontal line at row index 2, intersecting at the value 1.

D R D D R R
D D R D R R

- fat can move
V D L R ($\uparrow \downarrow \rightarrow$)
- one step at
a time

1	0	0	0
1	1	0	1
1	1	0	0
0	1	1	1

(row) $i = 0 \neq 3$
(col) $j = 0 \neq 3$

$$\begin{aligned} U &= i - 1 \\ R &= j + 1 \\ D &= i + 1 \\ L &= j - 1 \end{aligned}$$

- Set it to 0
- Go to possible dir
- Reset it

Queens

	0	1	2	3
0	F	T	F	F
1	F	F	F	T
2	T	F	F	F
3	F	F	T	F

$n \times n$
 n queens

$$\begin{aligned} n &= 0 + 2^3 \\ C &= 0 + 0 + 2 + 0 + 2 \end{aligned}$$

- Check if you can place the Q
 - ↳ yes: a) Place it b) ... c) ...

	0	1	2	3
0	F	A	T	F
1	T	F	F	A

0	F	F	F	A
1	T	F	F	A
2	P	F	P	T
3	F	T	F	P

- Check if you can place it

↳ Yes:- a) Place it

b) Recursion call for next Row & Col

c) Unplace it

↳ No:- Move to next col