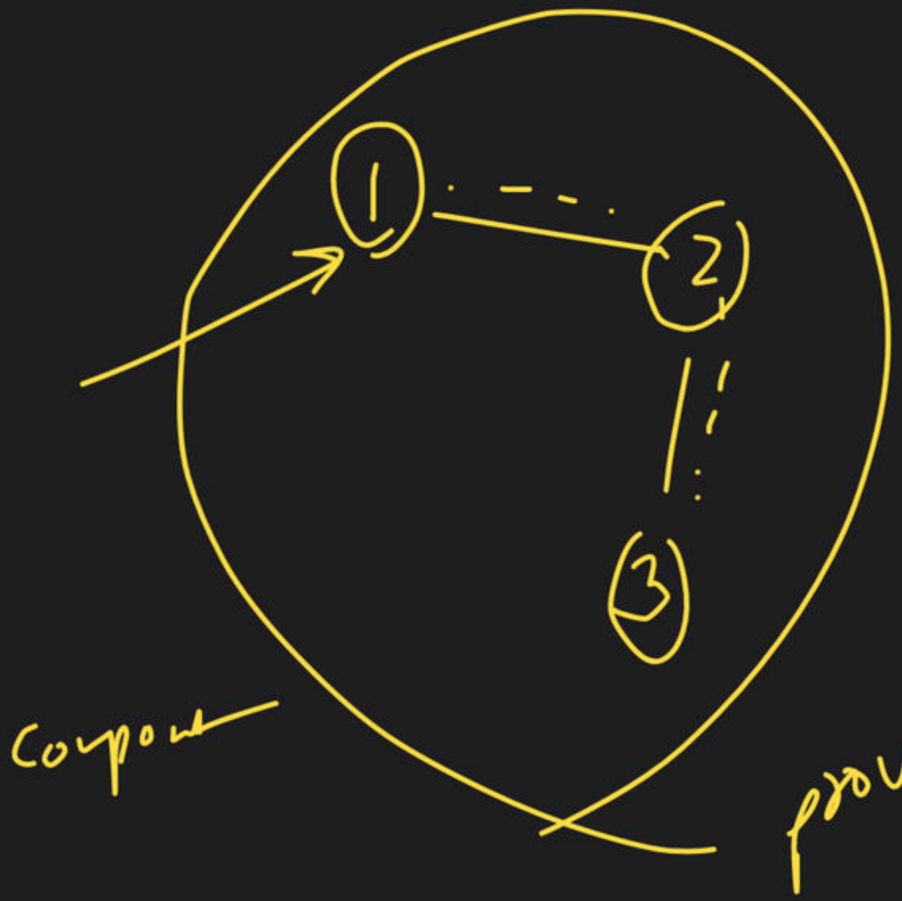
Graphs Class - 5

Special class

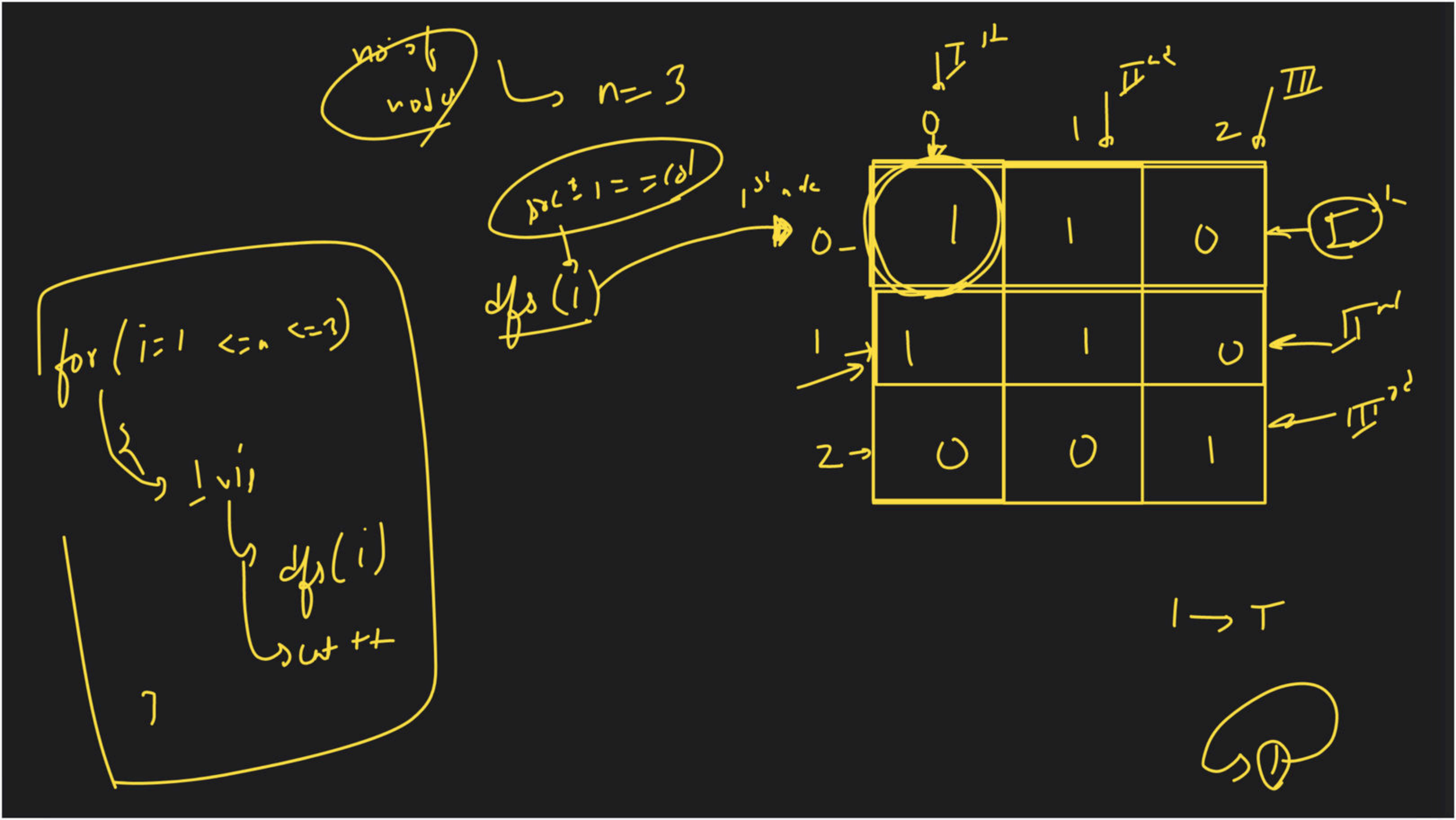
Love Babbar • June 24, 2023

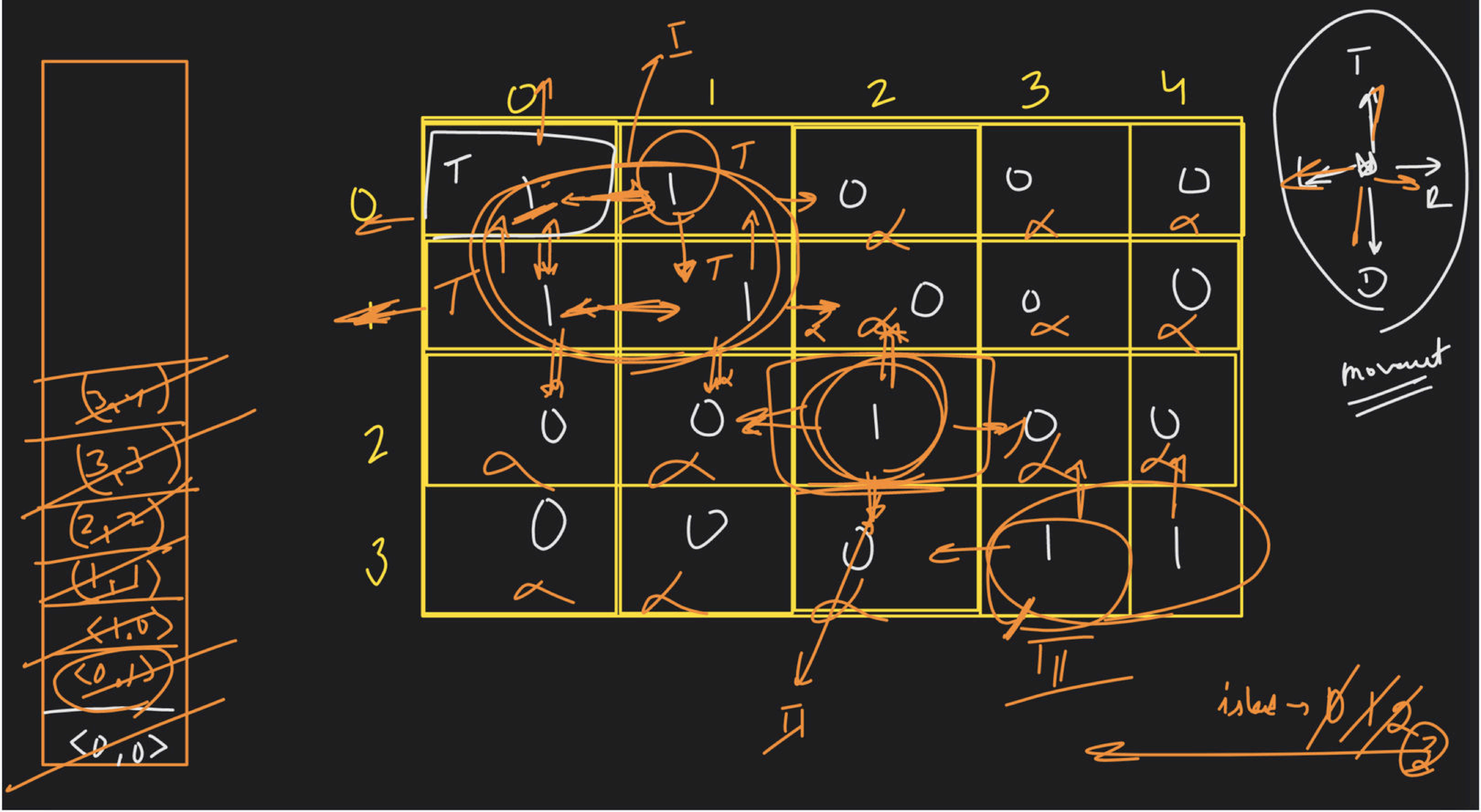
Number of provinces



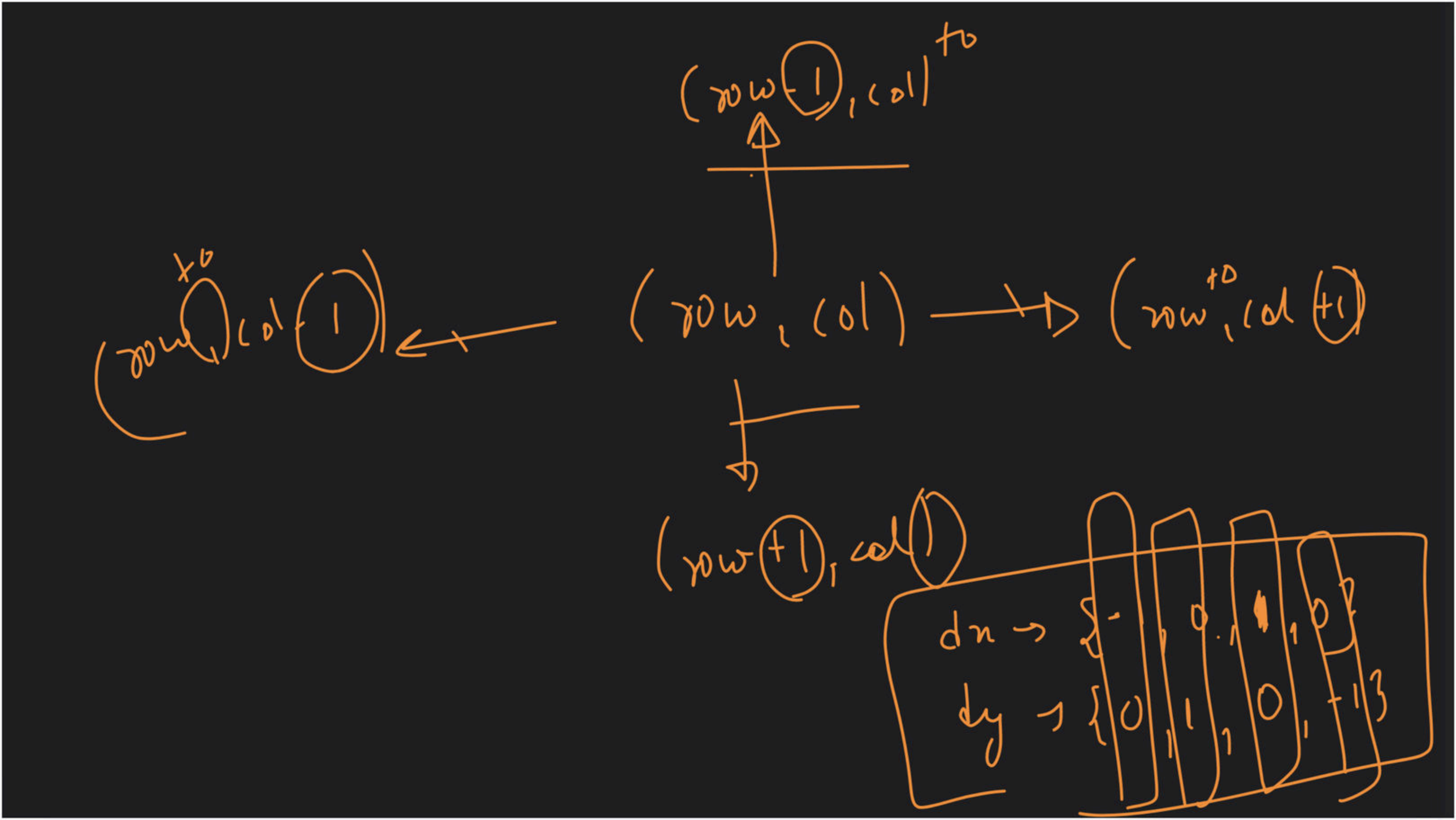
→ find no. of compon-

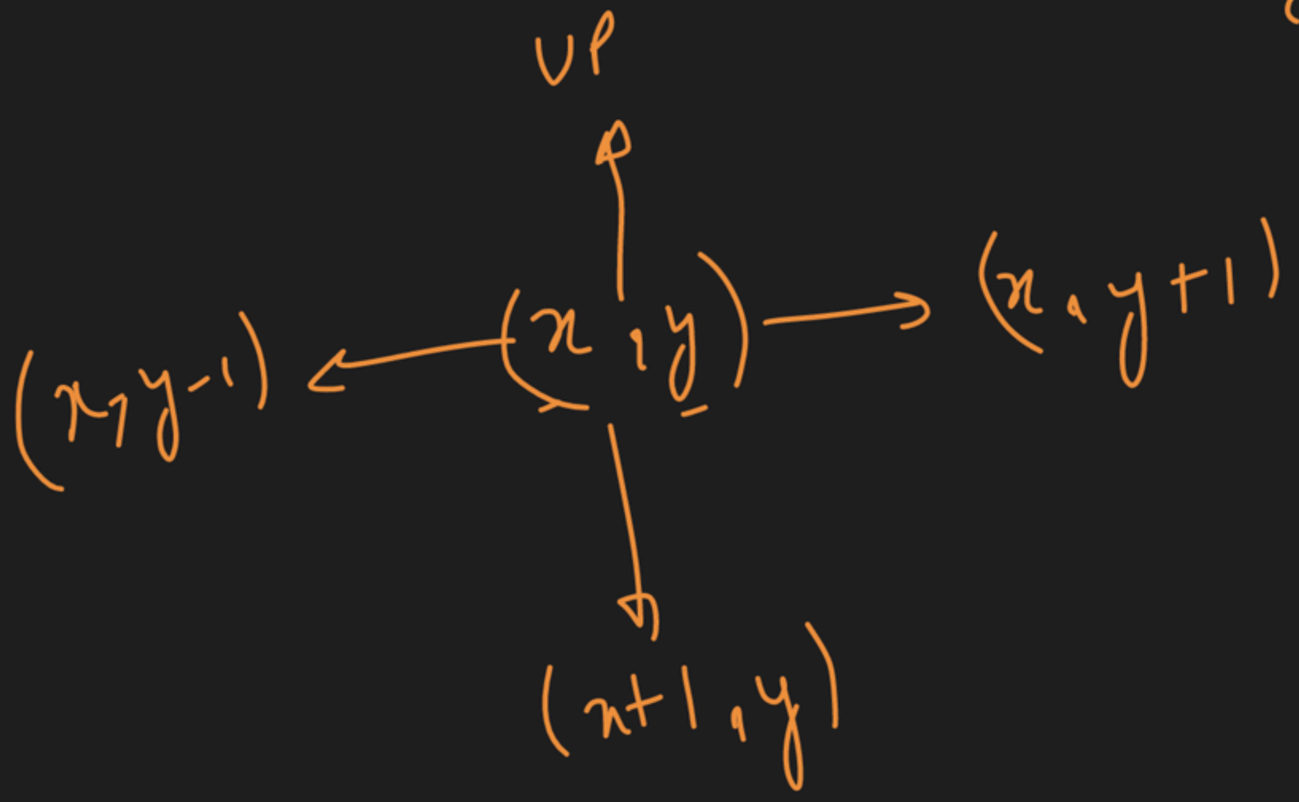
```
for (i=0; <n)
{
  if (!vis(i))
  {
    dfs() // bfs()
    cnt++;
  }
}
```


n=3
dfs(i)
for(i=1 <=n <=3)
if vi
dfs(i)
cnt ++
1 → T



0 1 2 3 4
0 1 2 3
T
L R
D
movement
<0,0>
<0,1>
<1,0>
I
II
III


(row-1, col)
(row, col-1)
(row, col)
(row, col+1)
(row+1, col)
dx → {-1, 0, 1, 0}
dy → {0, 1, 0, -1}



$dx = \{-1, 0, 1, 0\}$

$dy = \{0, 1, 0, -1\}$

UP R D L

nxt, y-1

x, y-1

nxt, nyt

(x+1, y)

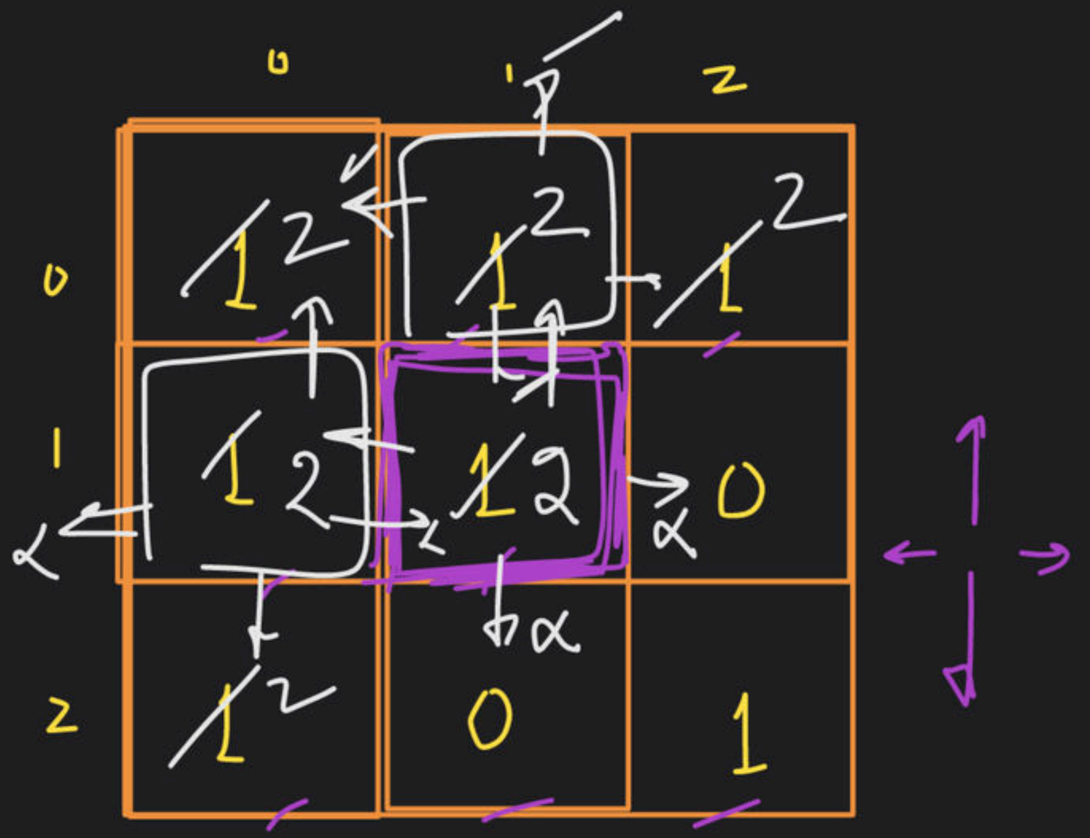
x-1, y

nxt, nyt

x, y+1

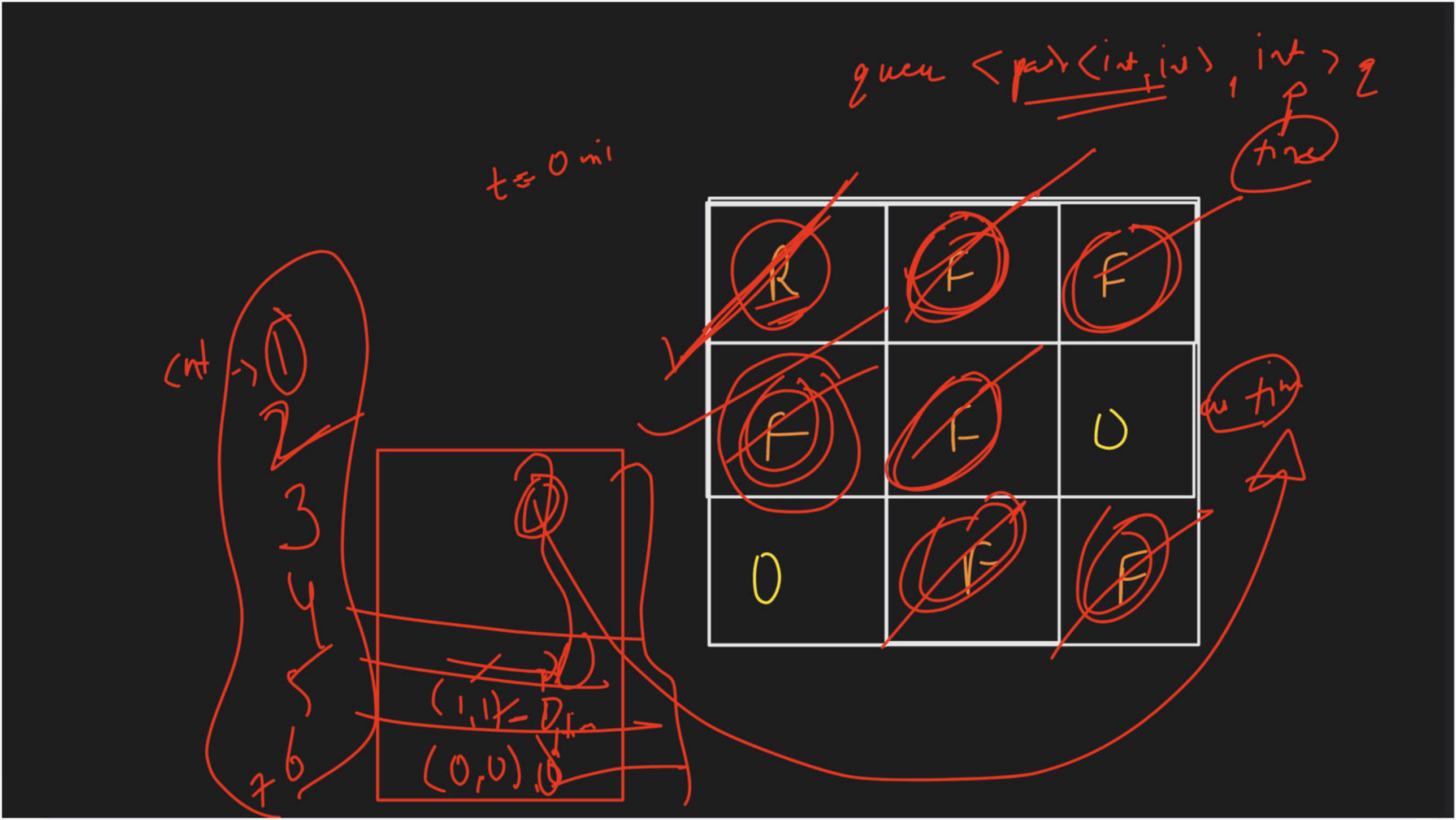
2	2	2
2	2	0
2	0	1

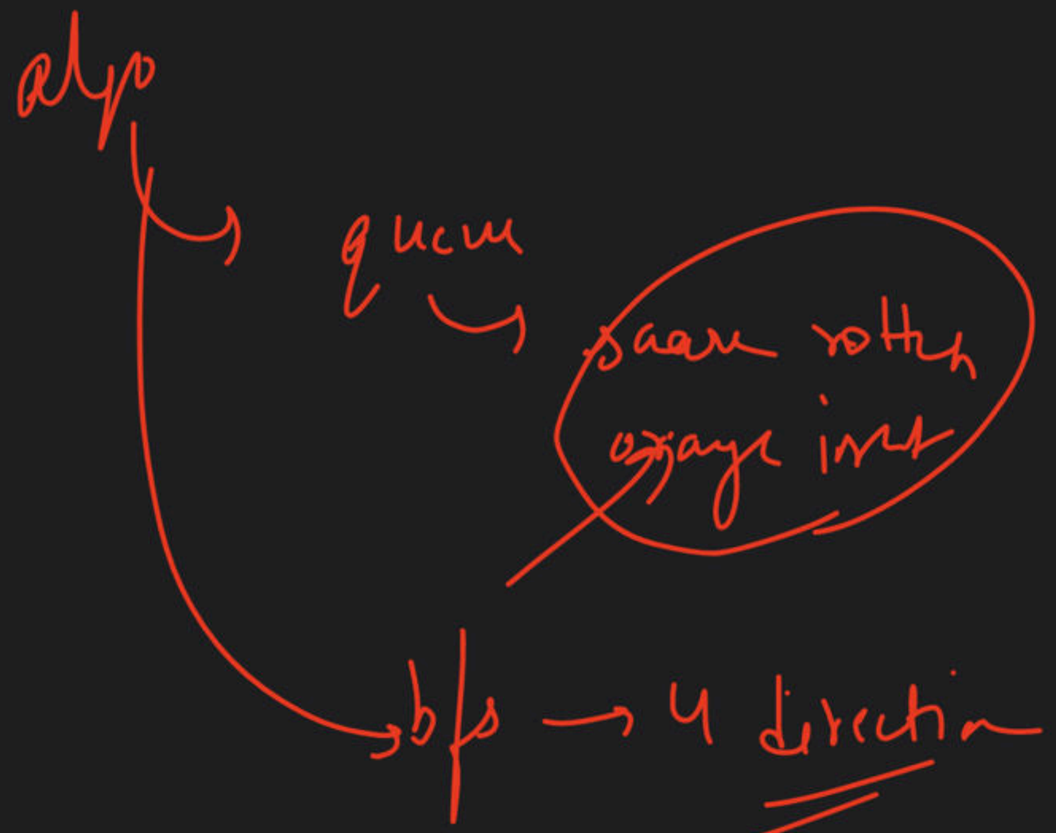
mazak !

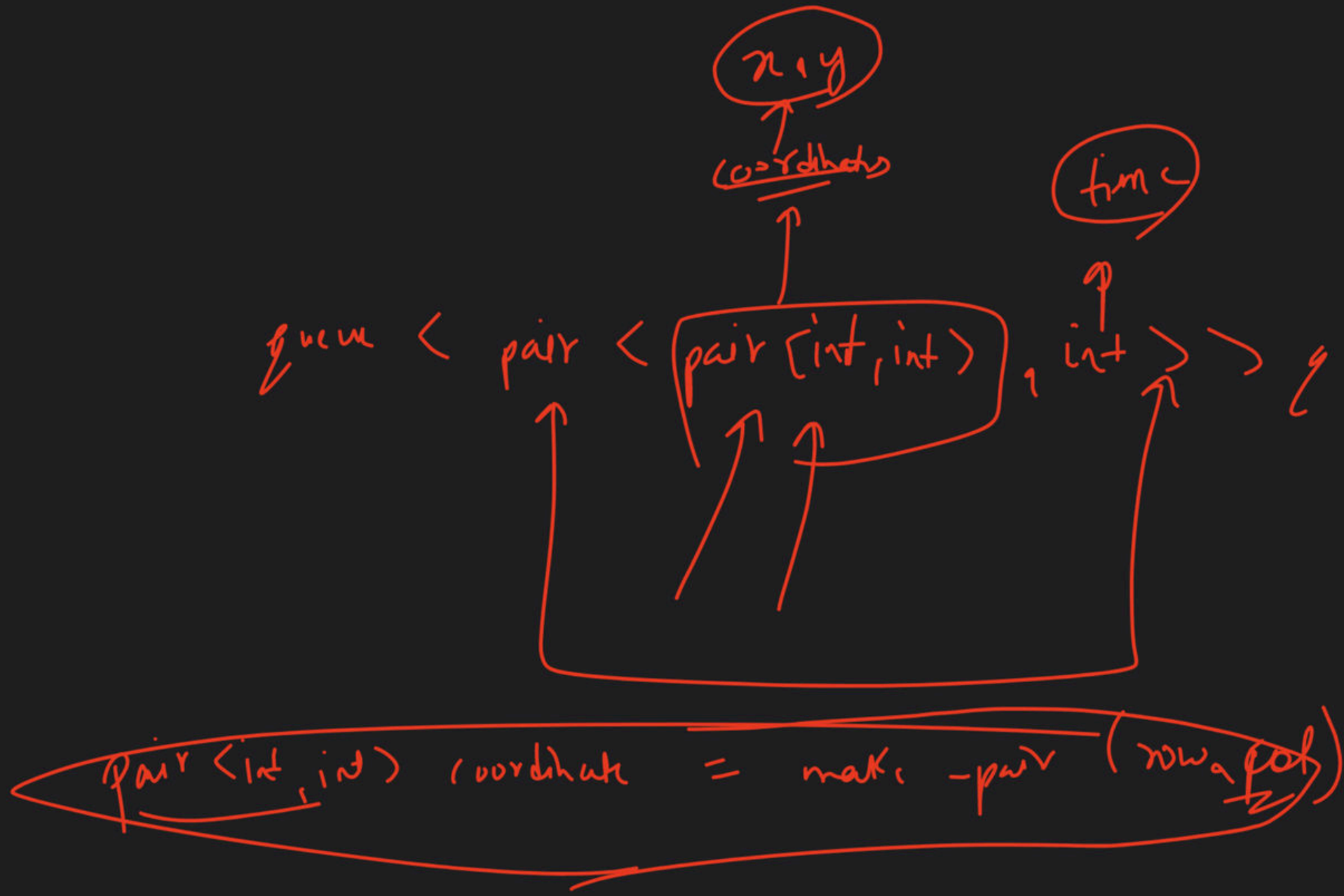


srow = 1
scol = 1
> (1,1)

color = 2


queue < pair<int, int>, int > q
t = 0 min
cnt
R
F
F
F
F
0
0
F
F
(1,1)
(0,0)


dfs
queue
same nothing
change into
bfs → 4 direction


x, y
coordinates
time
queue < pair < pair<int, int>, int > >
pair<int, int> coordinate = make_pair(row, col)

KAL

Twin

chutti

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