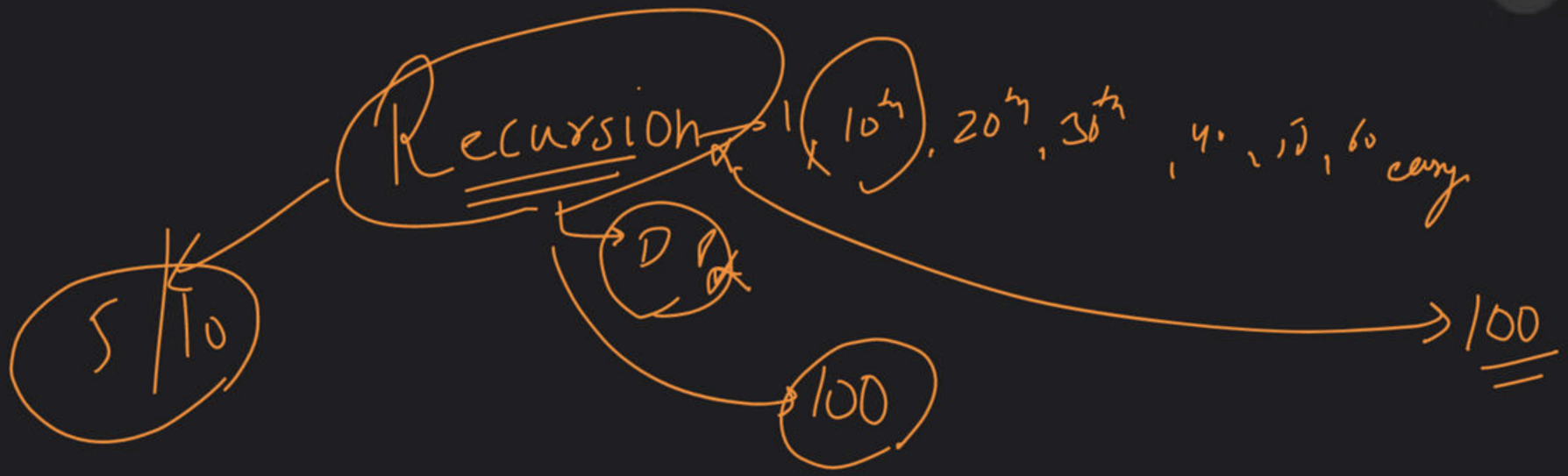
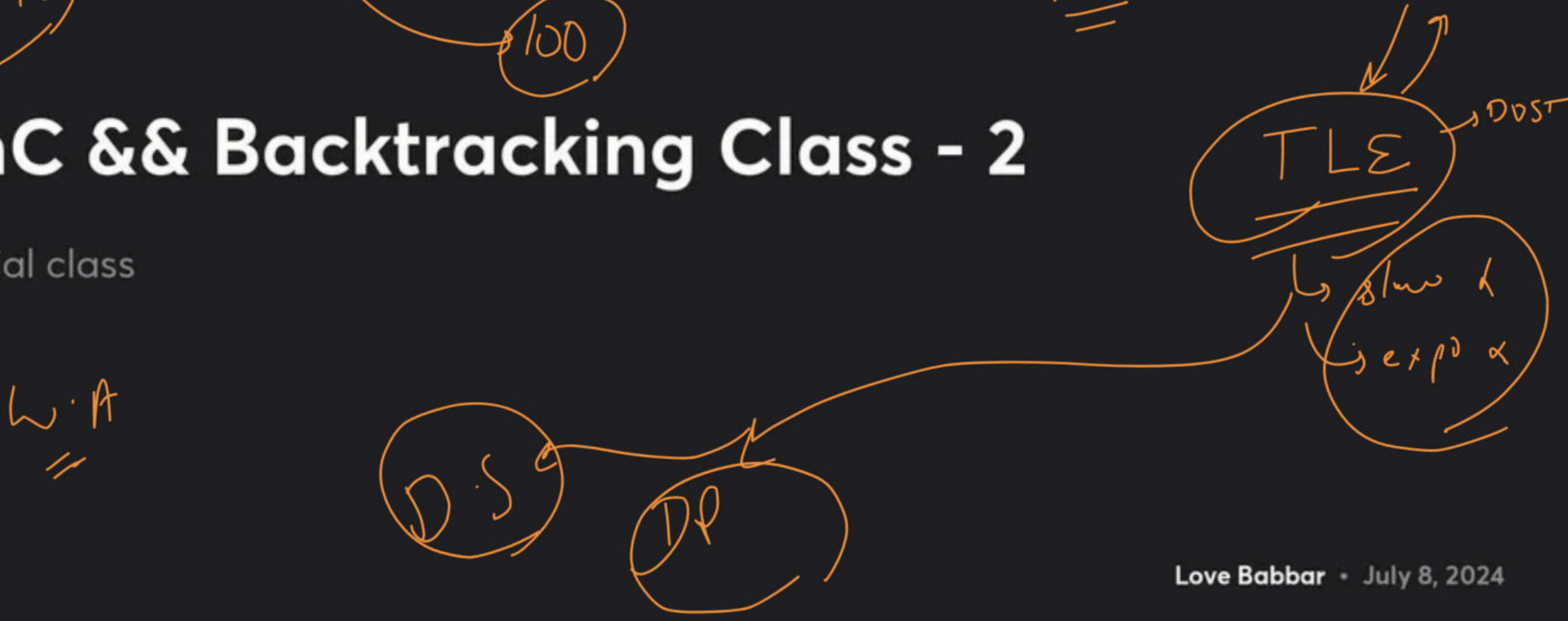
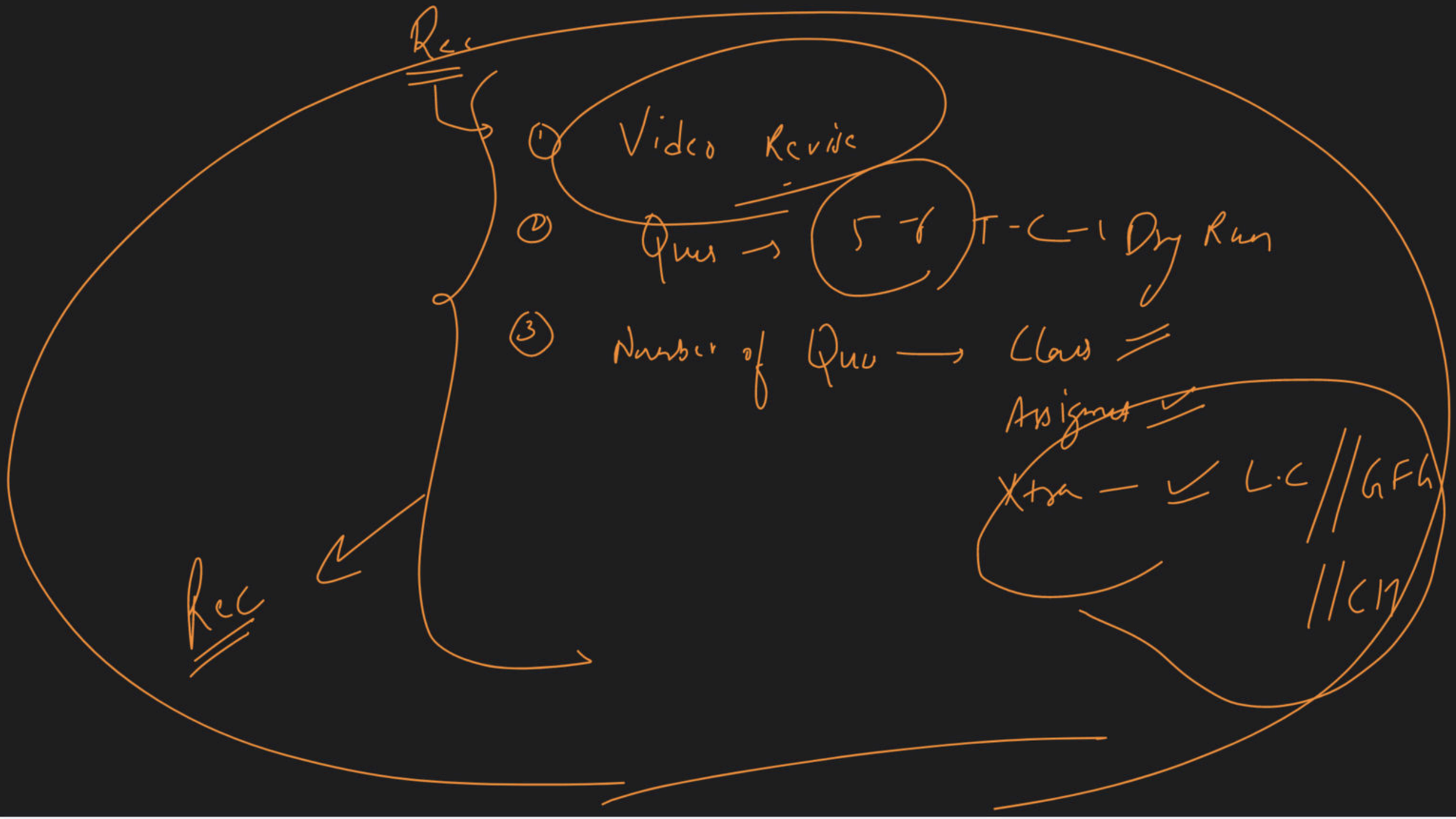


DnC && Backtracking Class - 2

Special class

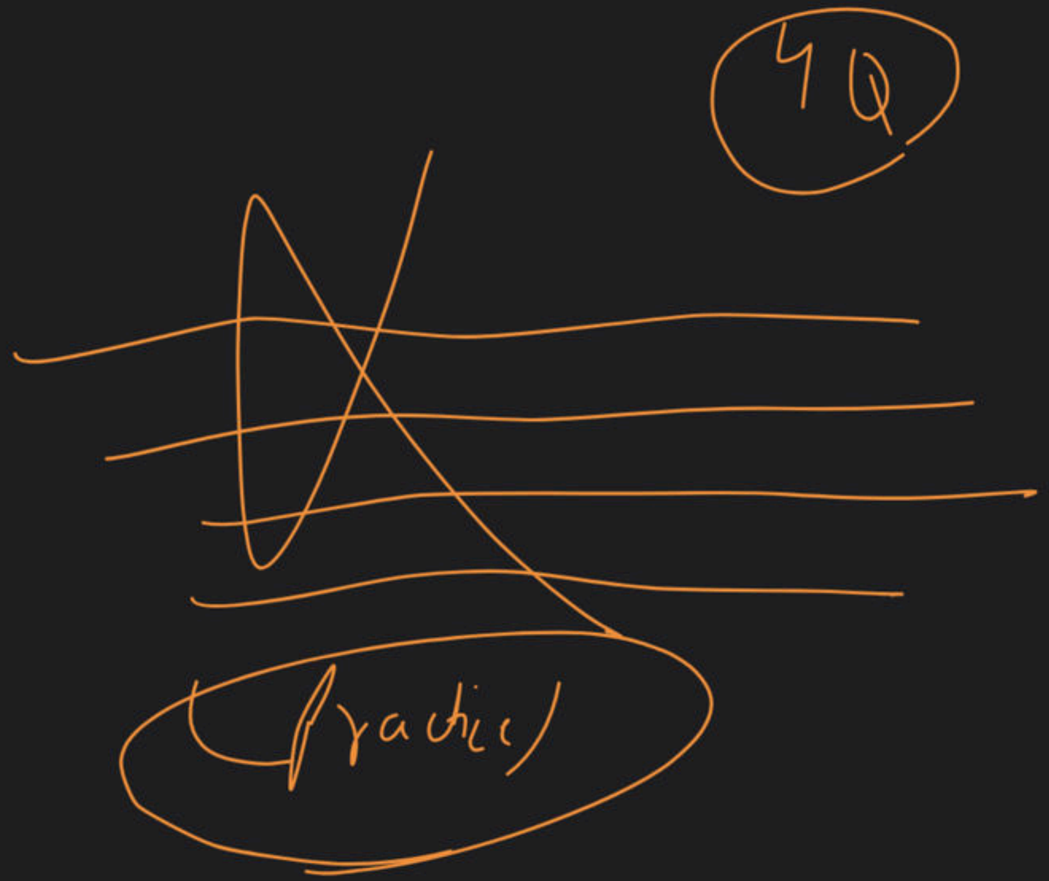


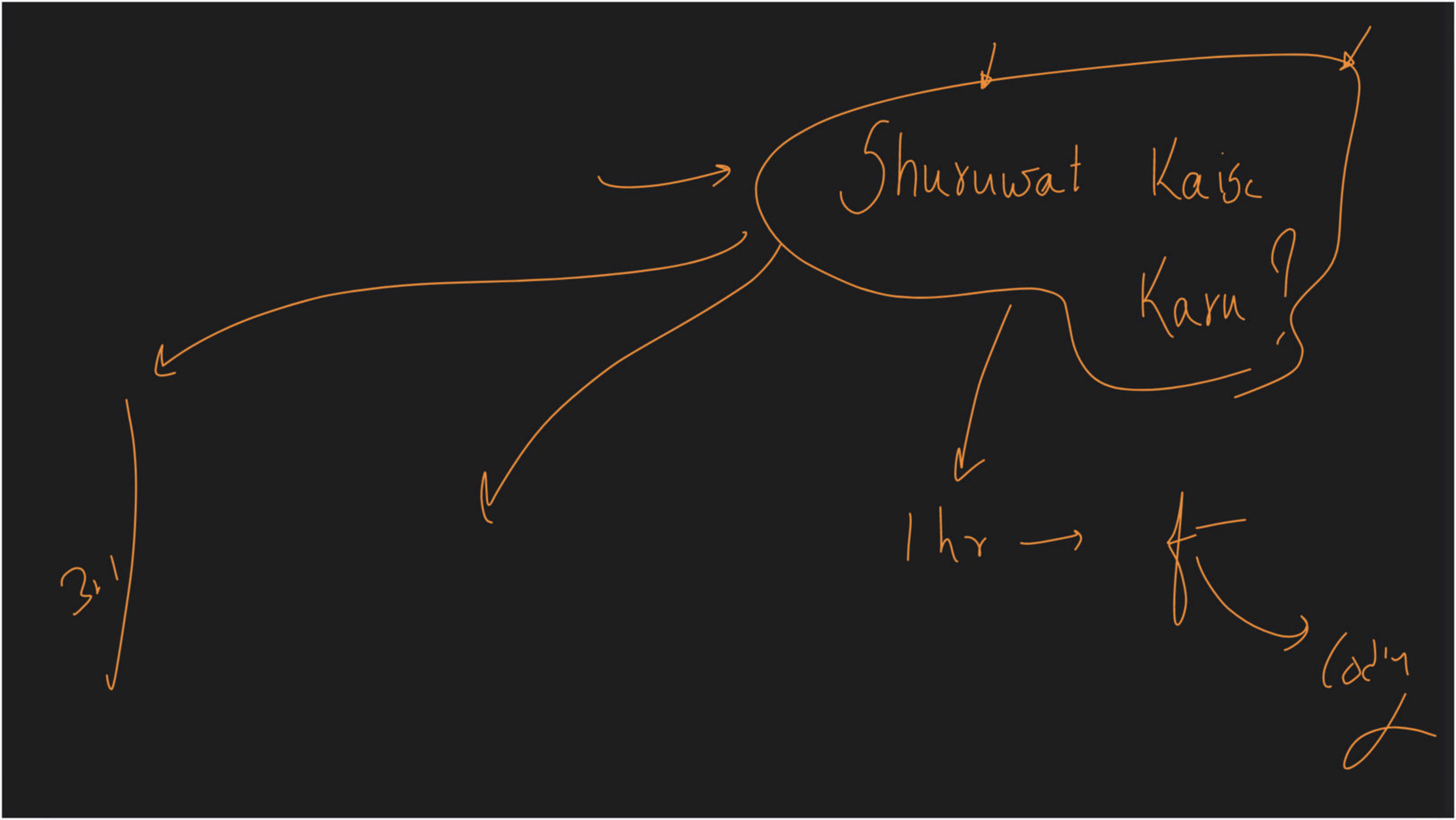
Love Babbar • July 8, 2024

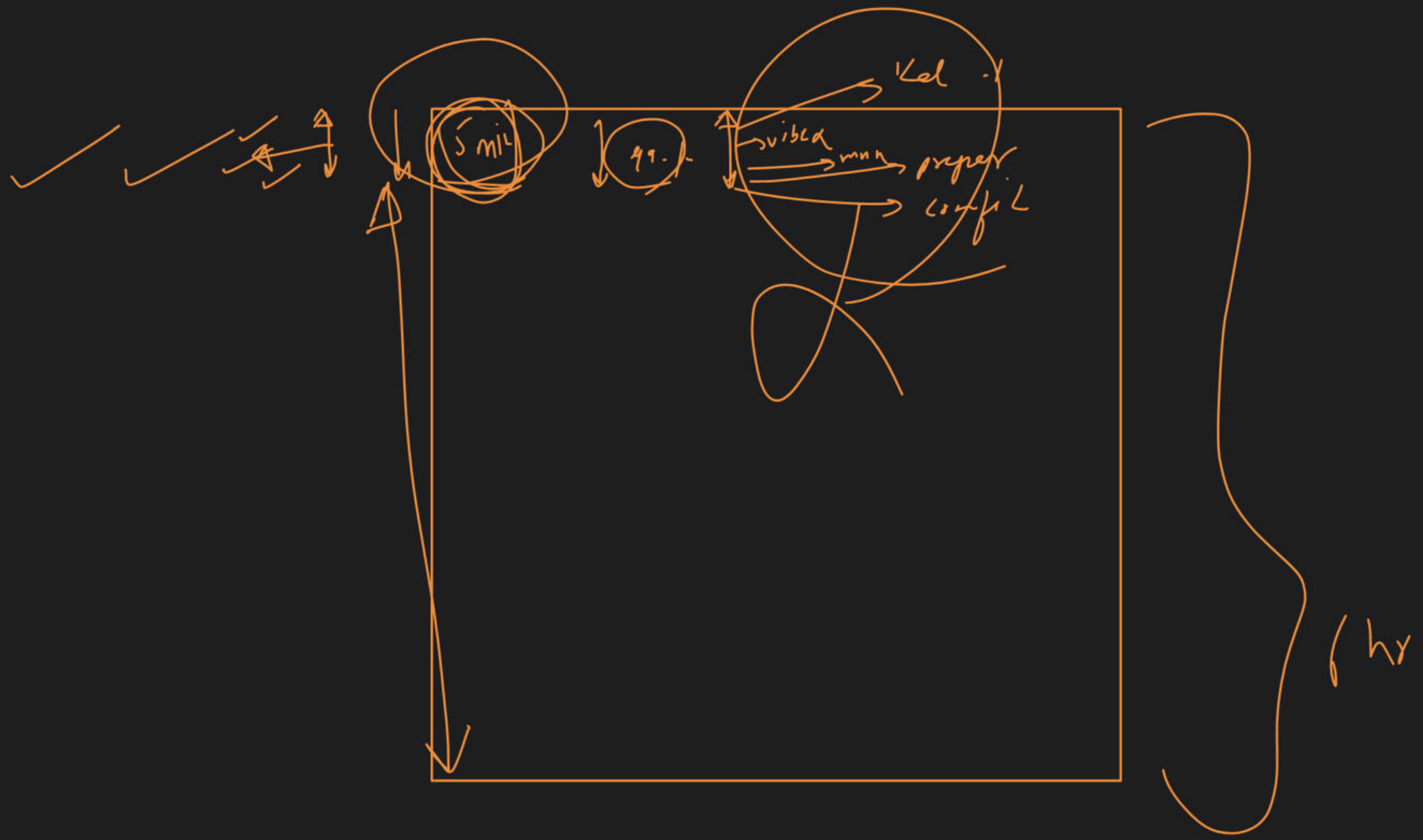

Rec
1. Video Revise
2. Ques → 5-6 T-C-I Dry Run
3. Number of Ques → Class
Assign
Xtra → L.C // GFG
// CIT
Rec

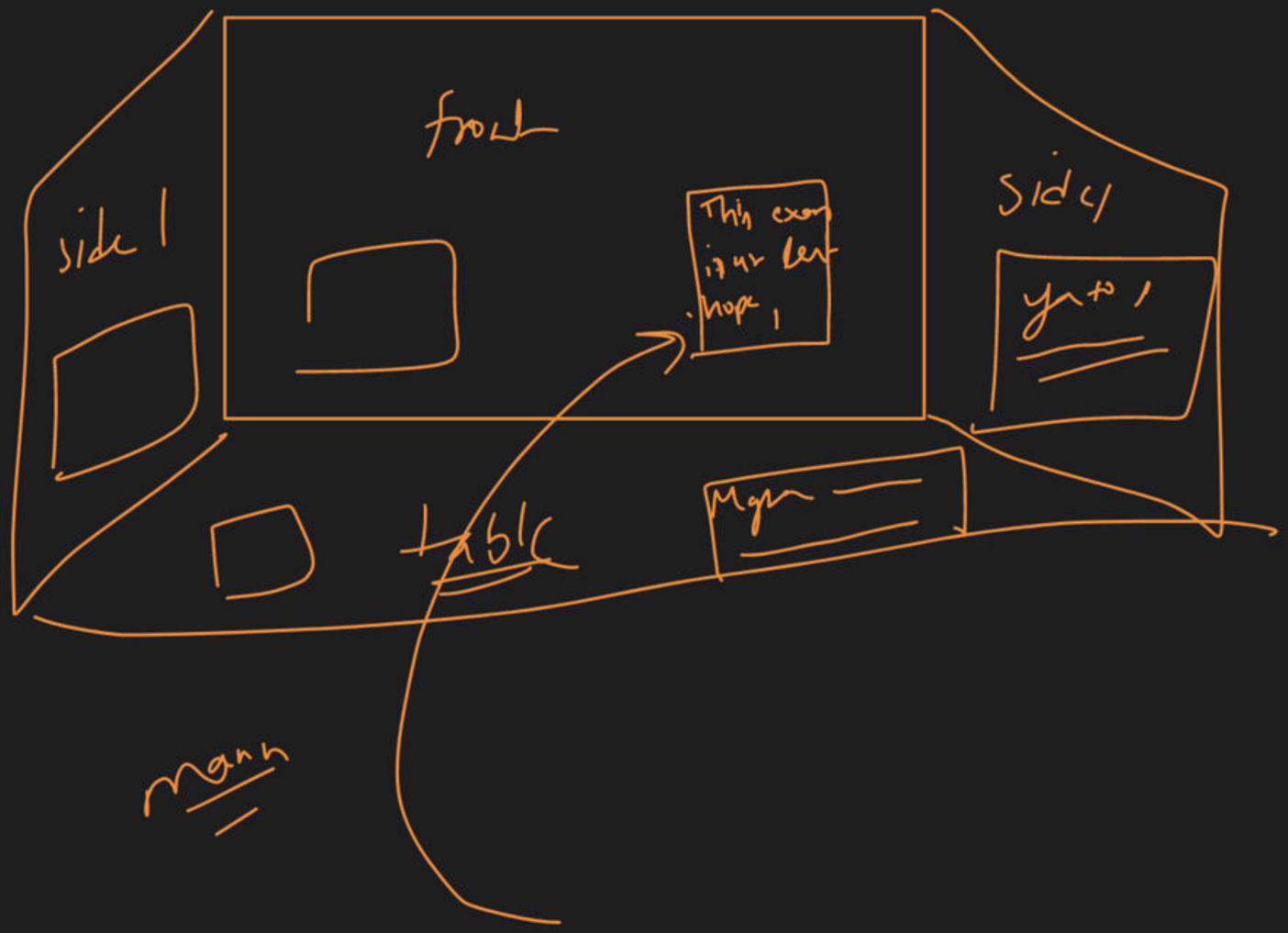
Context → 1

Google/Amz/MS




Shuruwat Kaise Karu ?
3+1
1 hr → ft
Coding




front
side 1
side 2
table
main


Recursion
DP
No. of Ques

Backtracking :-

- explore all possible ways
- way → already explored ✗

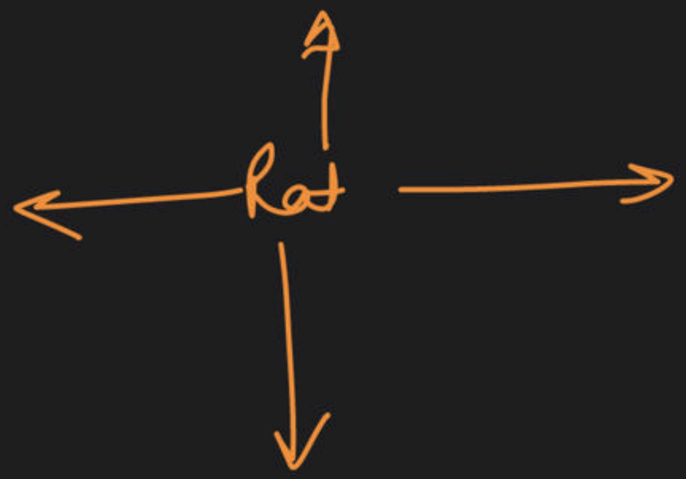
Rat in a maze :-

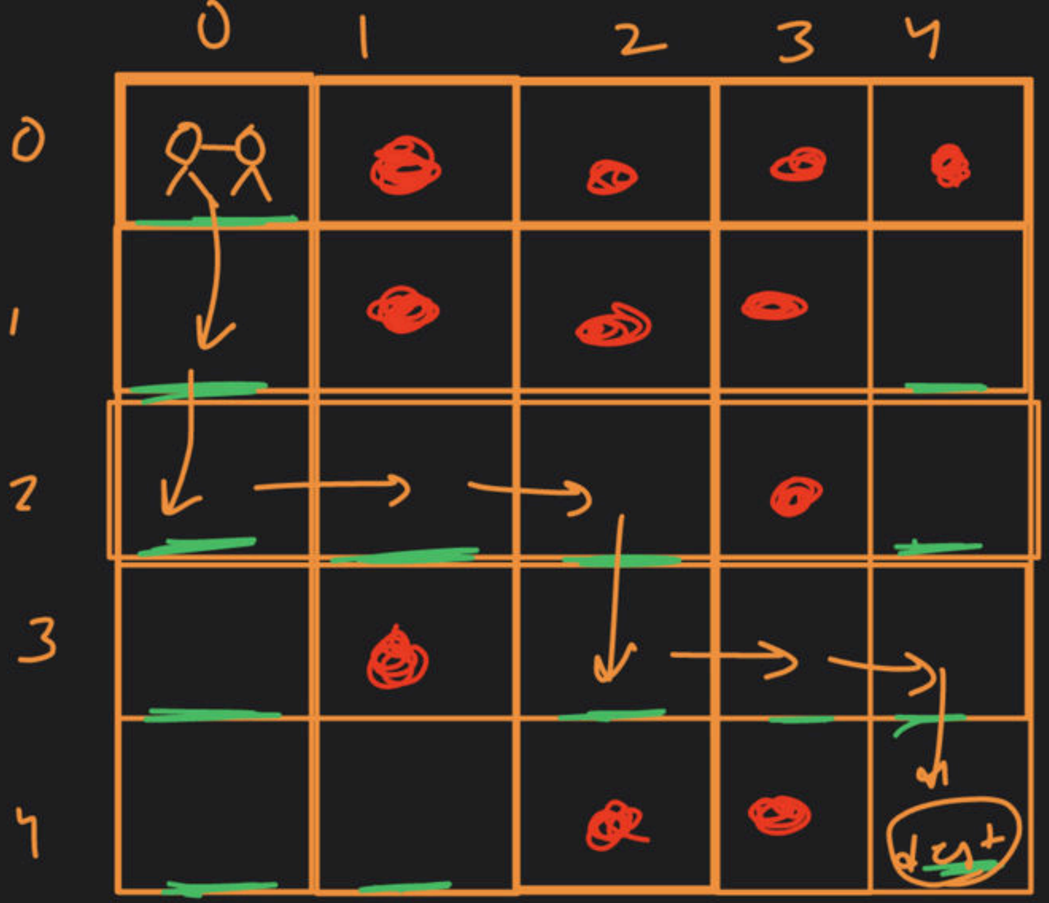
— → empty space

● → closed space

Rat → src → (0, 0)

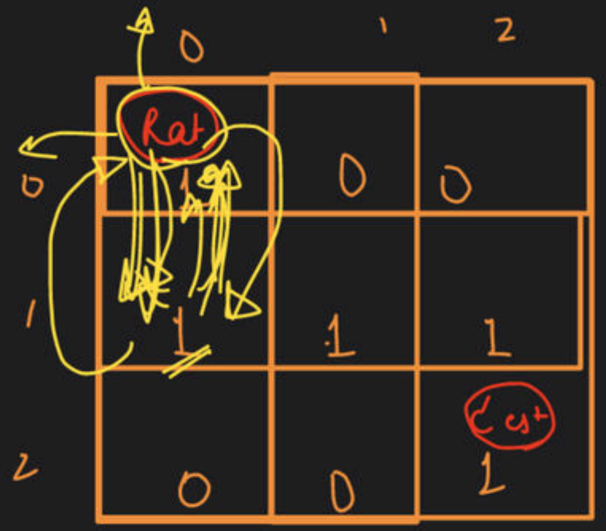
→ dest → (n-1, n-1)





D D R R D R D

· how r u going to reach the destination → path



0 → Blocked space

1 → Empty space

src → (0, 0)

dst → (2, 2)

Out of Bound

infinite loop

(0,0) → ~~U~~ | ~~L~~ | D | R

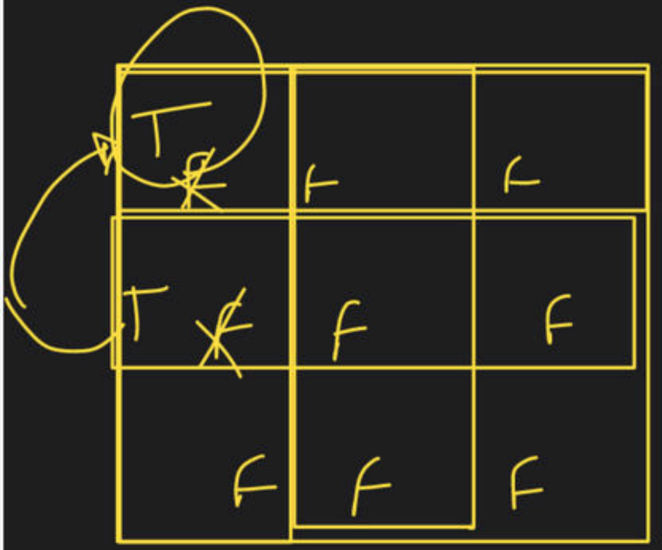
(1,0) → U | L | D | R

(0,1) → ~~U~~ | ~~L~~ | D | R

(1,0) → U | L | D | R

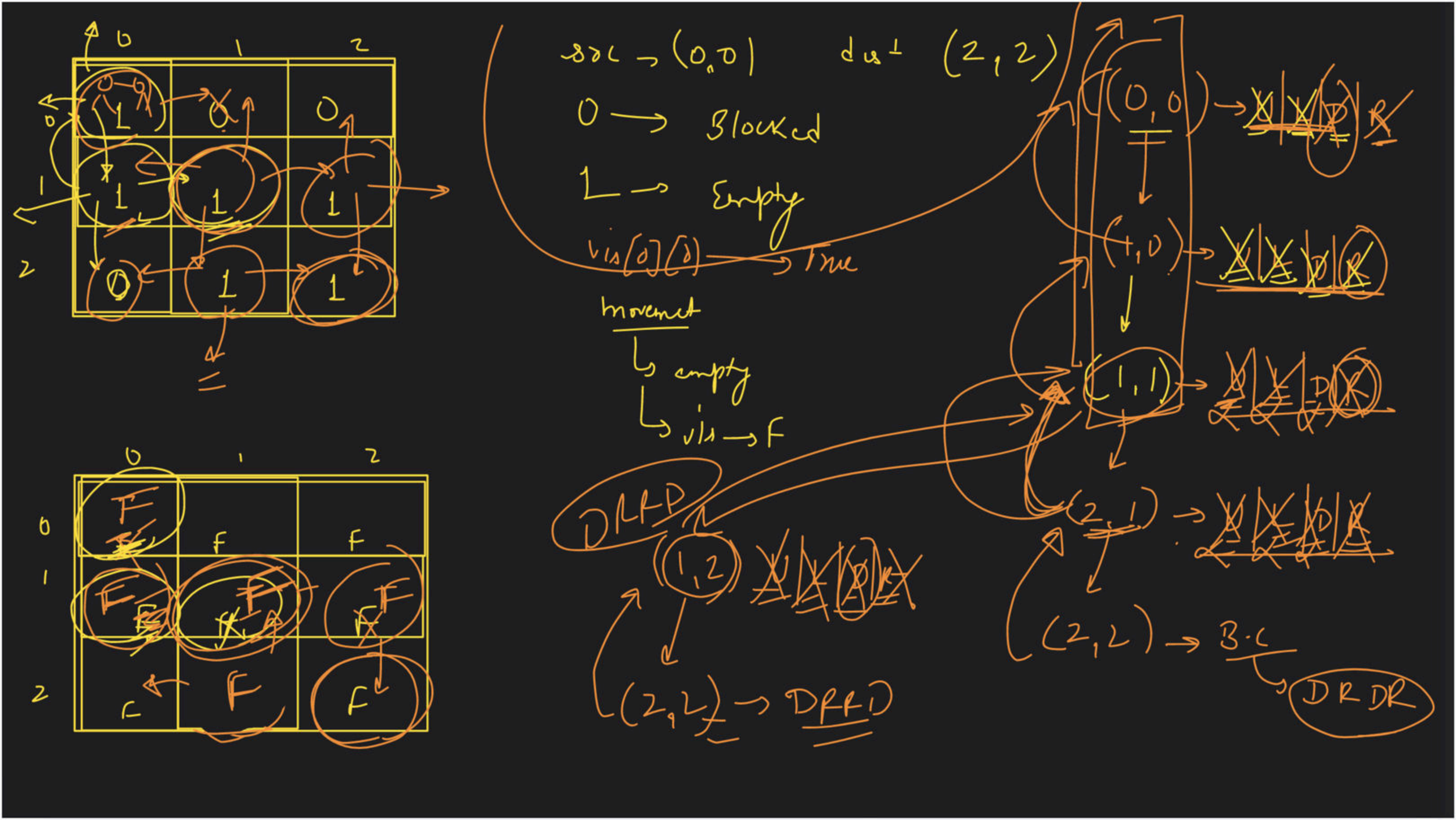
Visit status

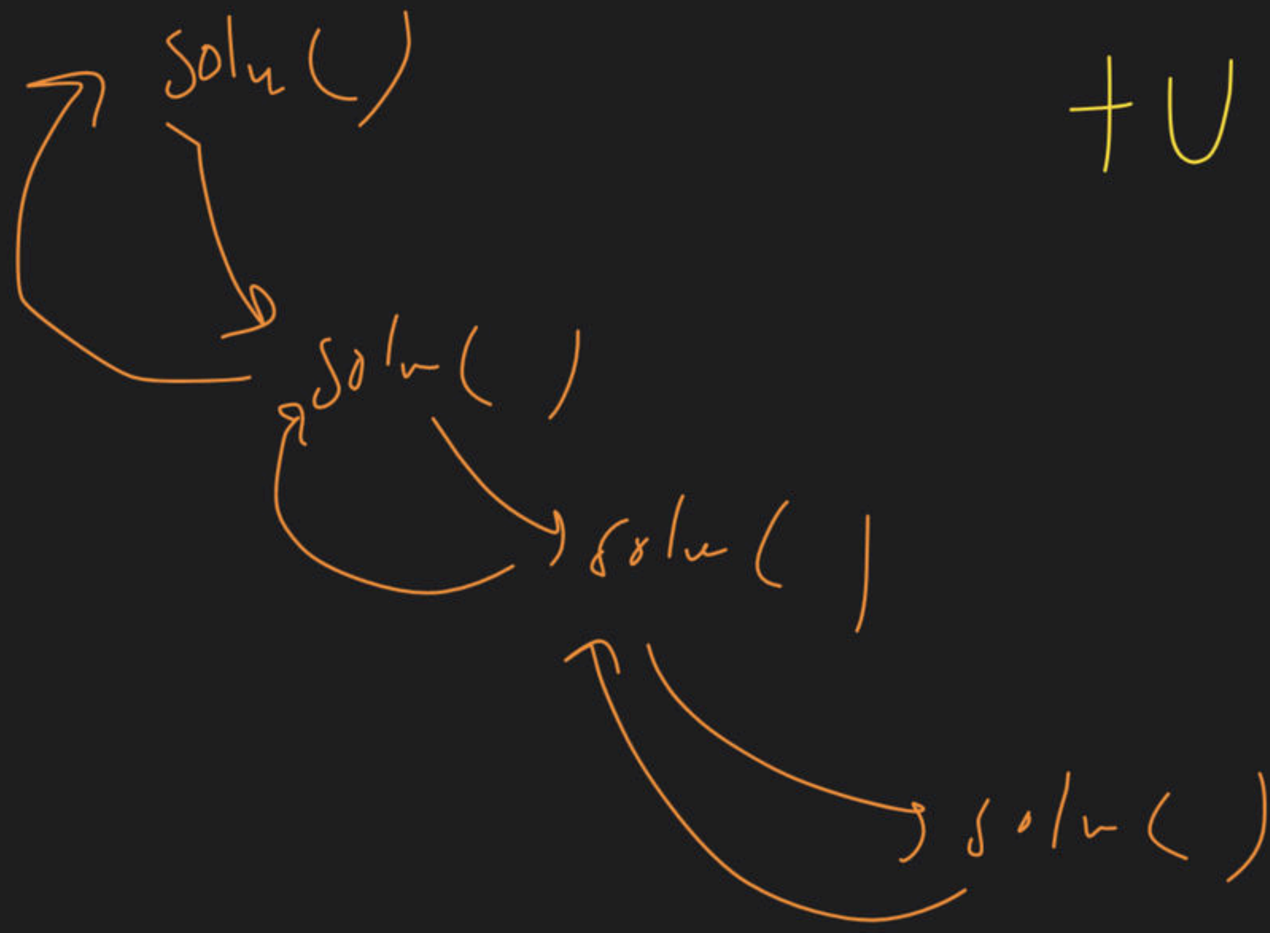
Track

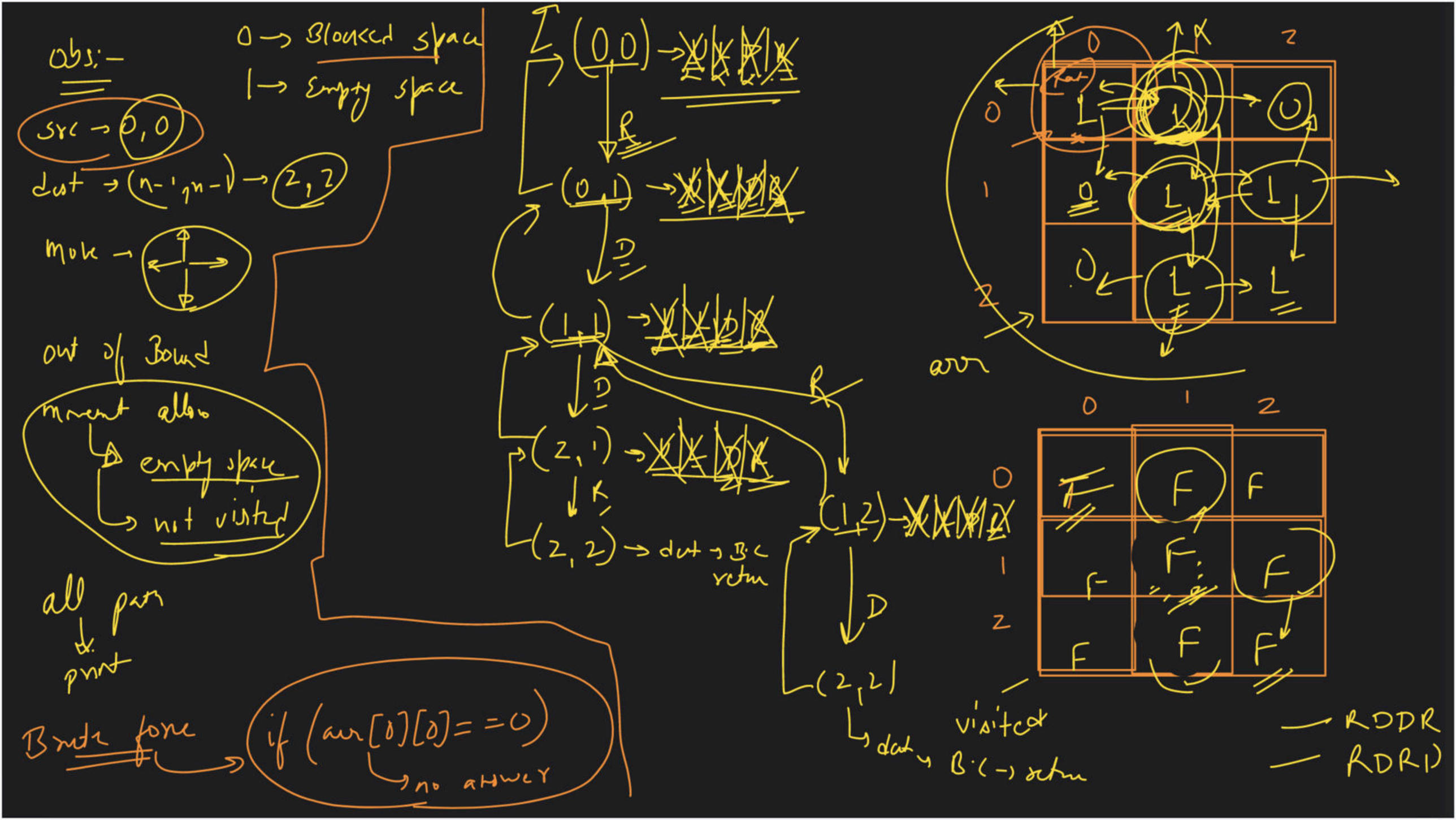


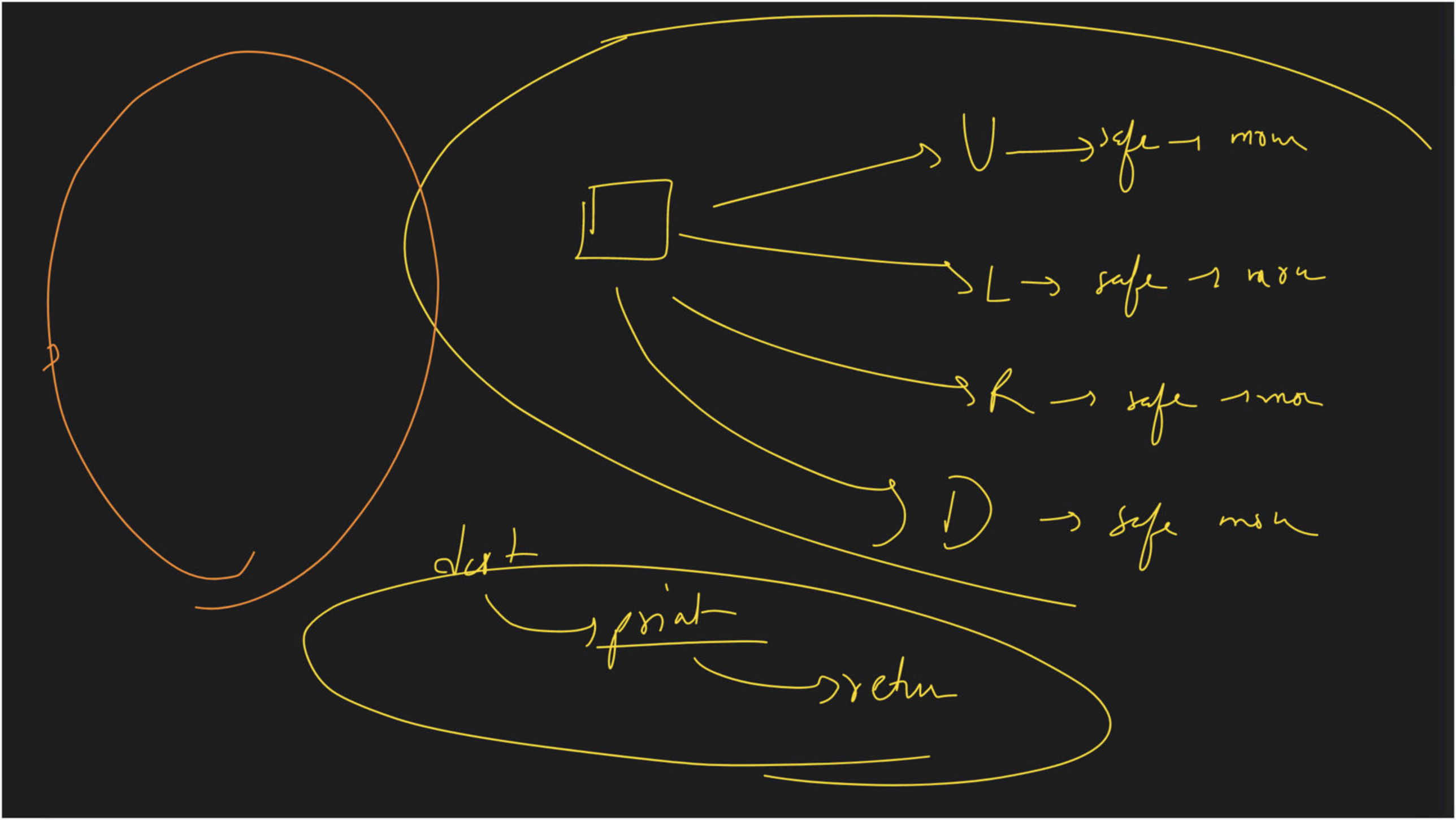
Boolean value in each cell

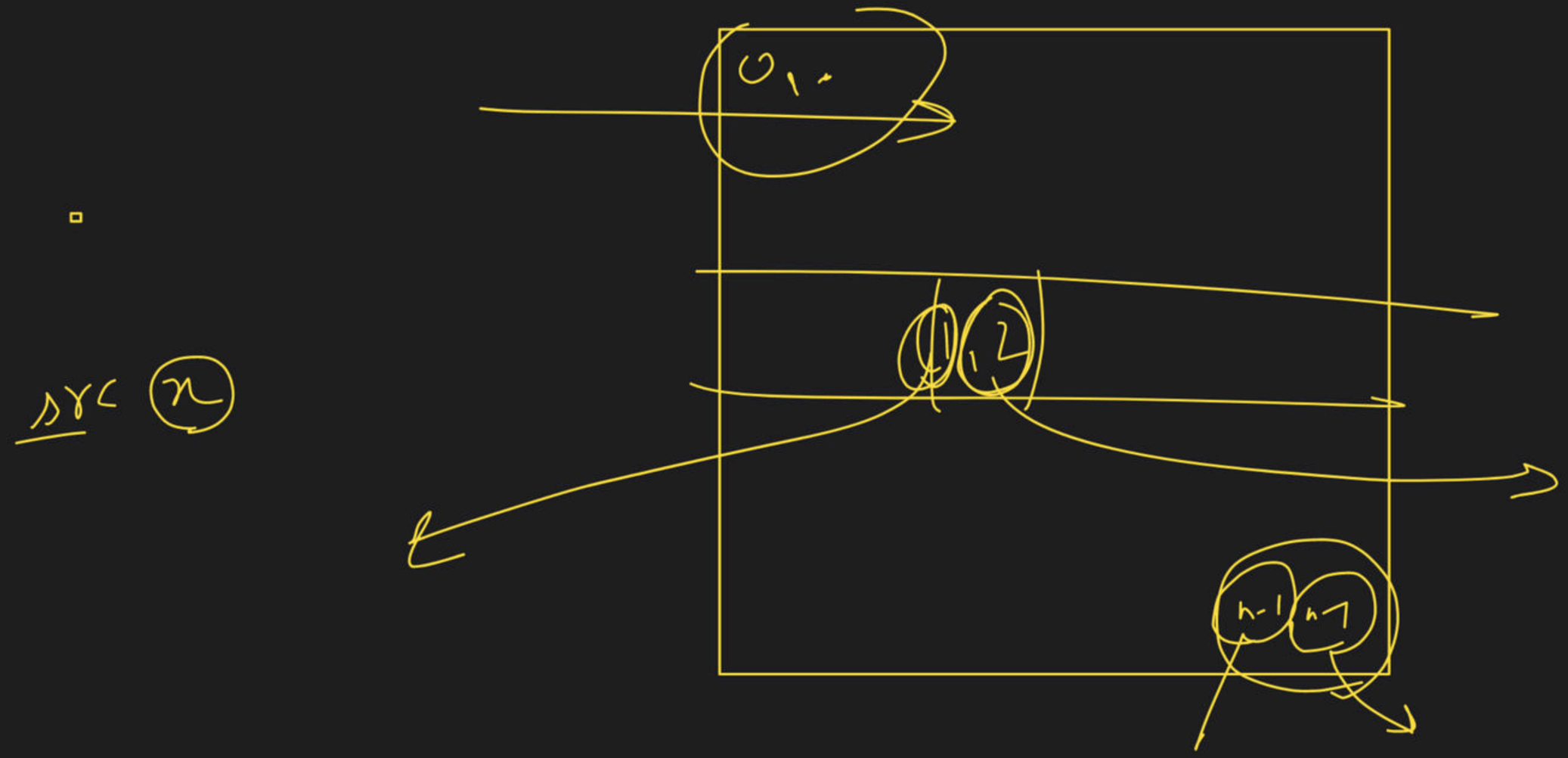
DFS !!!

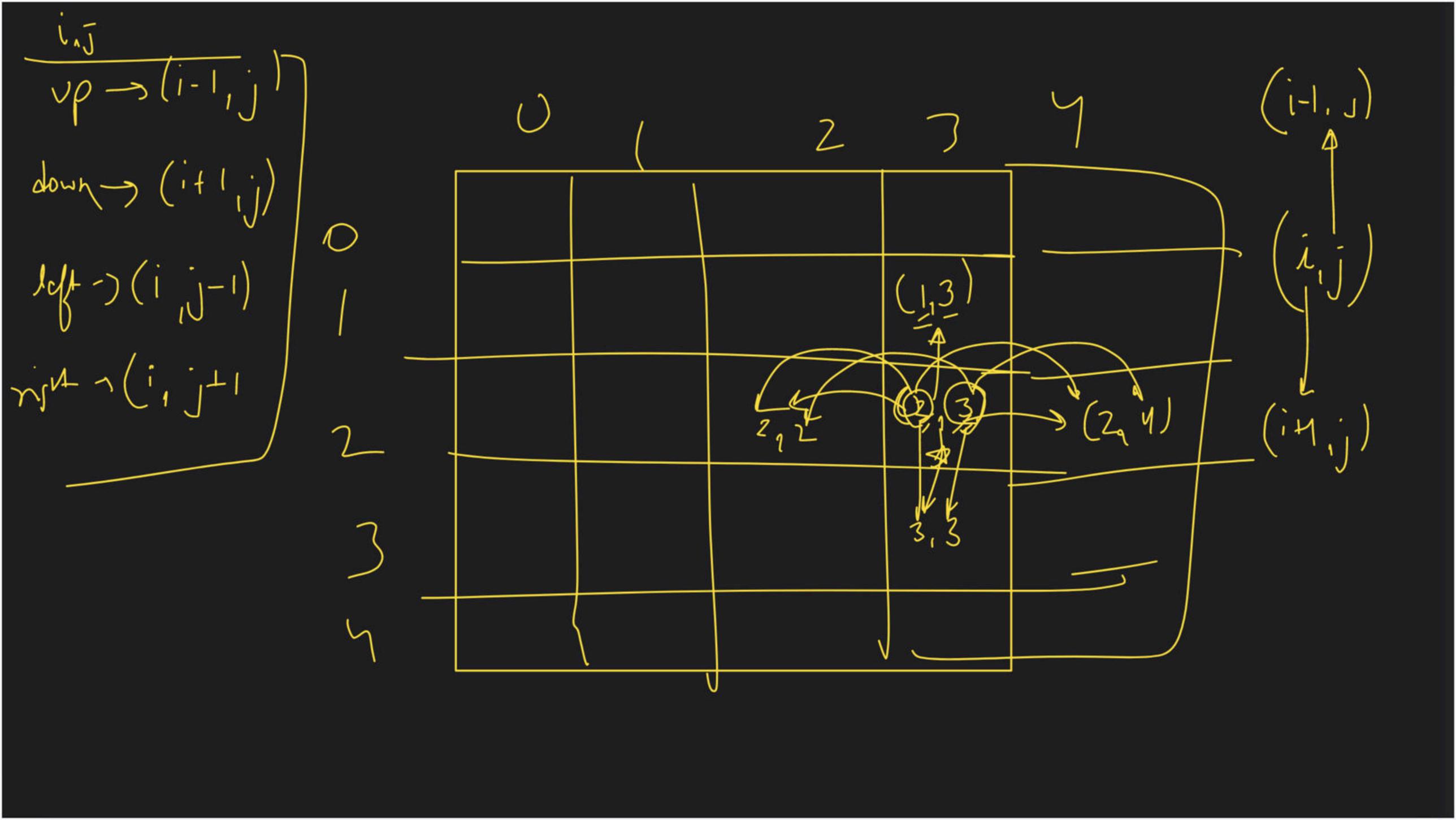

0 1 2
0 1 2
src → (0,0) dst (2,2)
0 → Blocked
1 → Empty
vis[0][0] → True
movement
empty
vis → F
DRRD
(1,2)
(2,2) → DRRD
(0,0)
(1,0)
(1,1)
(2,1)
(2,2) → B.C
DRDR

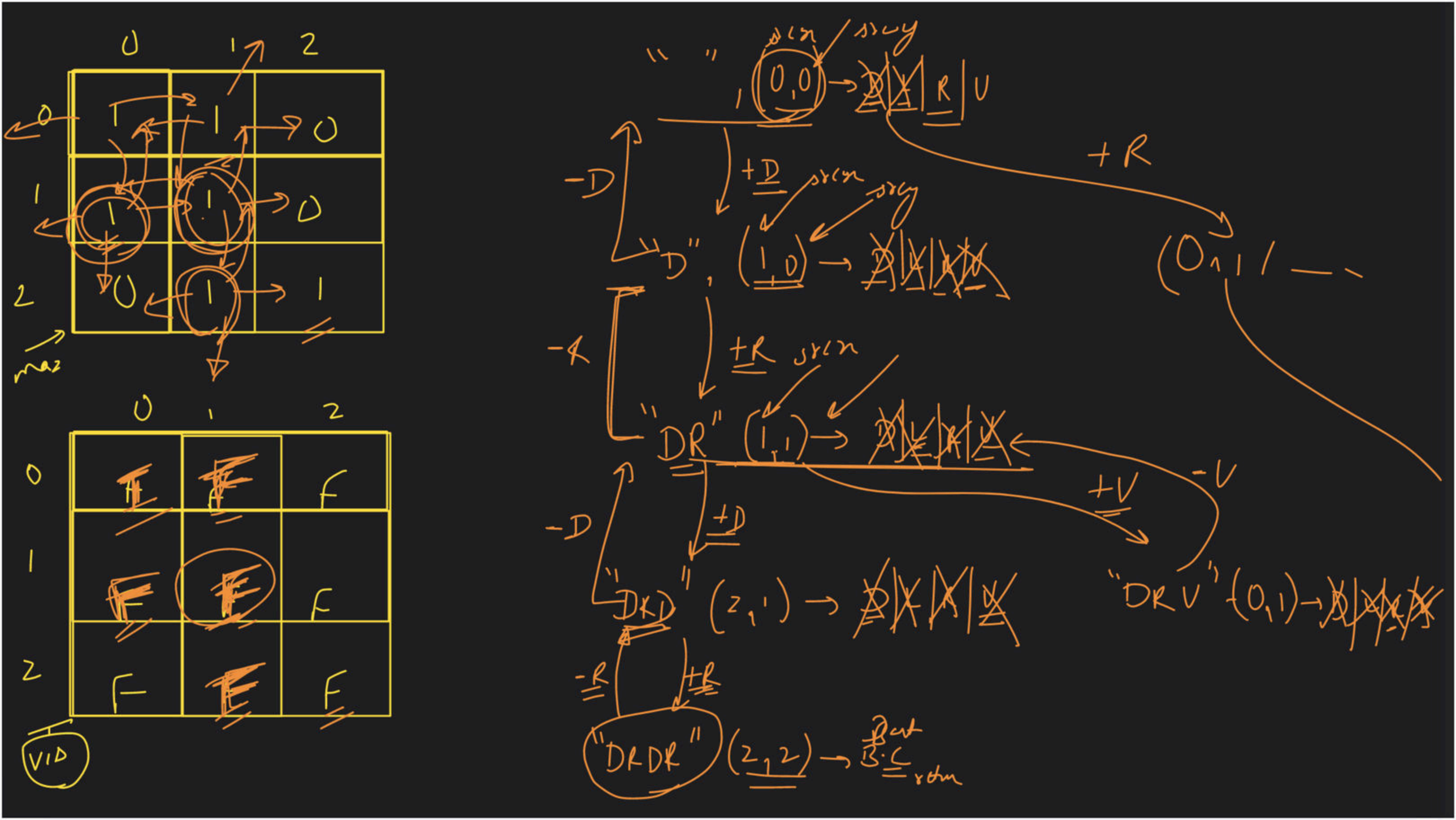

Solve()
+U

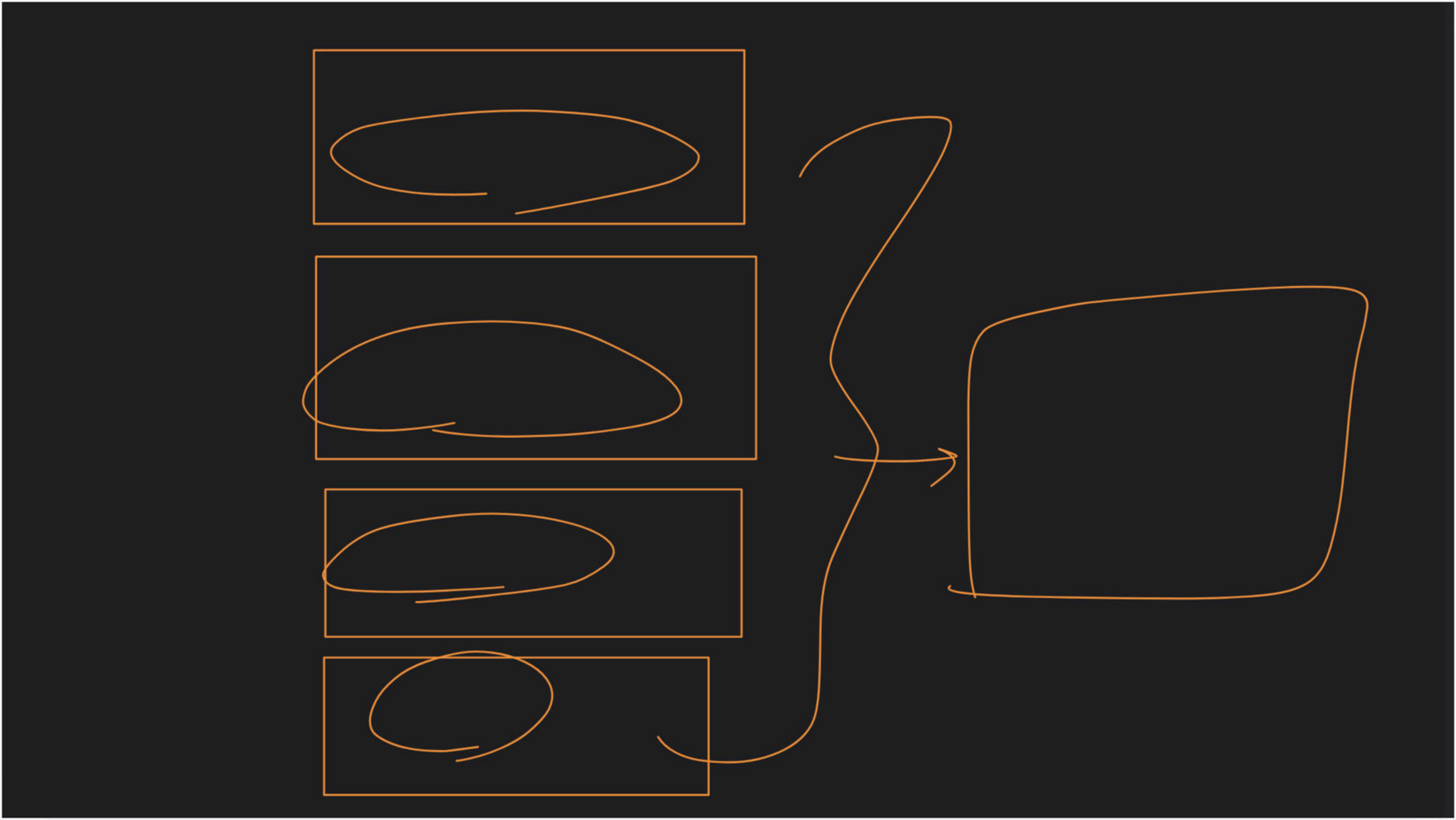

Obs:-
0 → Blocked space
1 → Empty space
src → 0,0
dest → (n-1, m-1) → 2,2
Move →
out of Bound
Movement allow
empty space
not visited
all path
to
print
Brute force
if (arr[0][0] == 0)
no answer
(0,0)
R
(0,1)
D
(1,1)
D
R
(2,1)
R
(2,2) → dest → B.C return
(1,2)
D
(2,2)
dest → B.C return
arr
visited
RDDR
RDRD

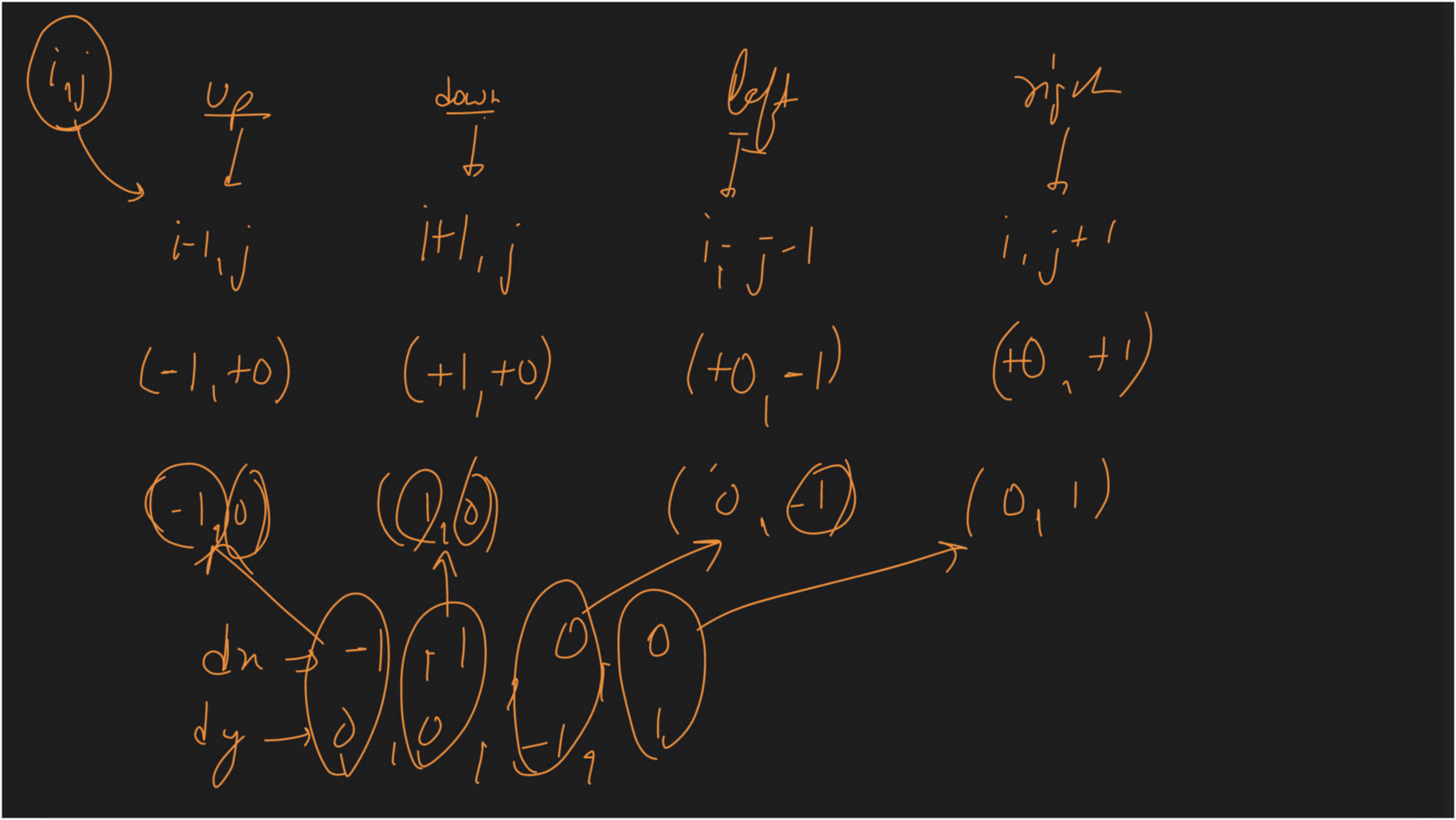

U → safe → move
L → safe → move
R → safe → move
D → safe move
def
print
return


1
2
n-1
n

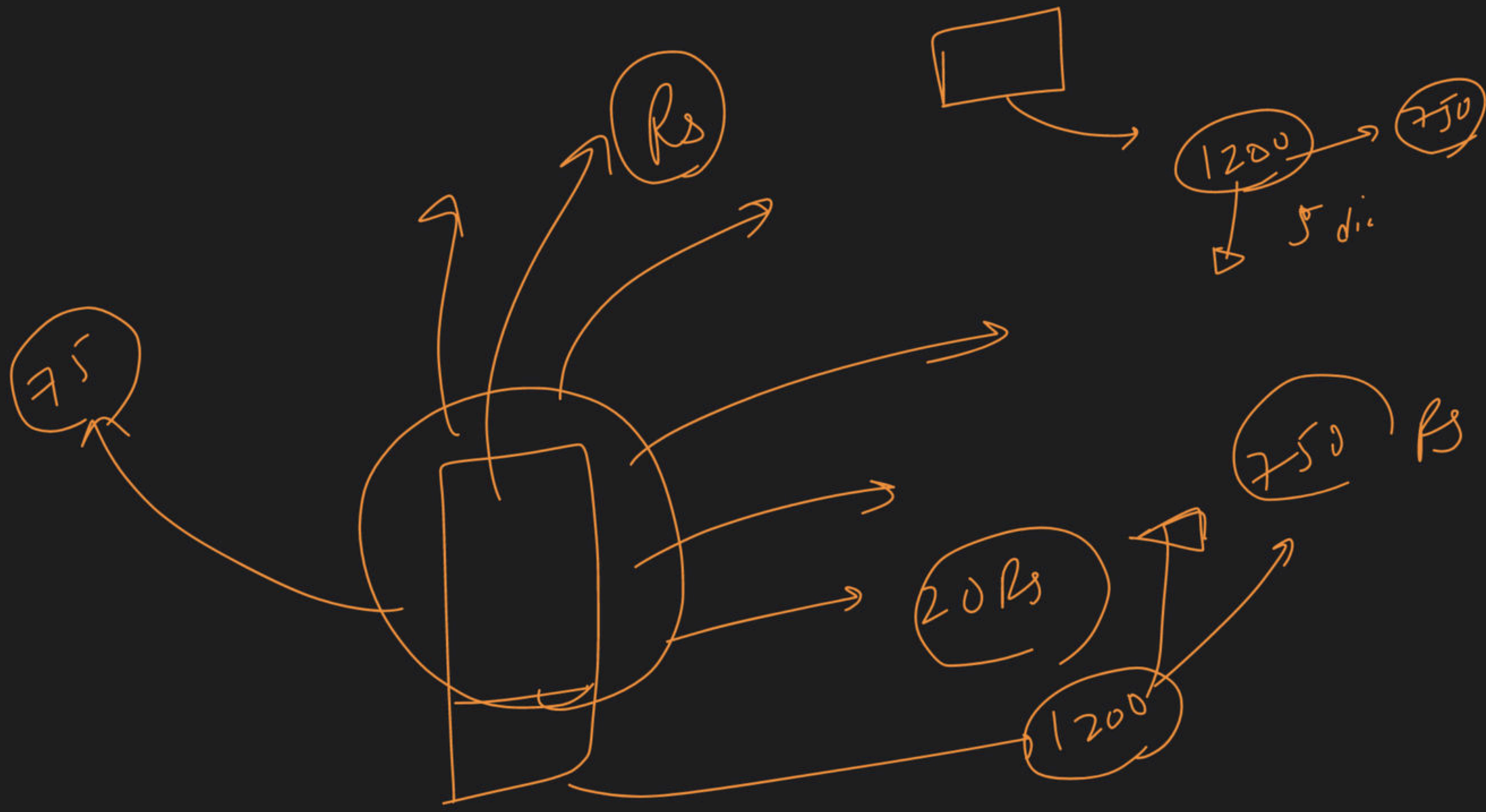

i, j
up → (i-1, j)
down → (i+1, j)
left → (i, j-1)
right → (i, j+1)
0
1
2
3
4
0
1
2
3
4
(1, 3)
(2, 2)
(2, 4)
(3, 3)
(i-1, j)
(i, j)
(i+1, j)

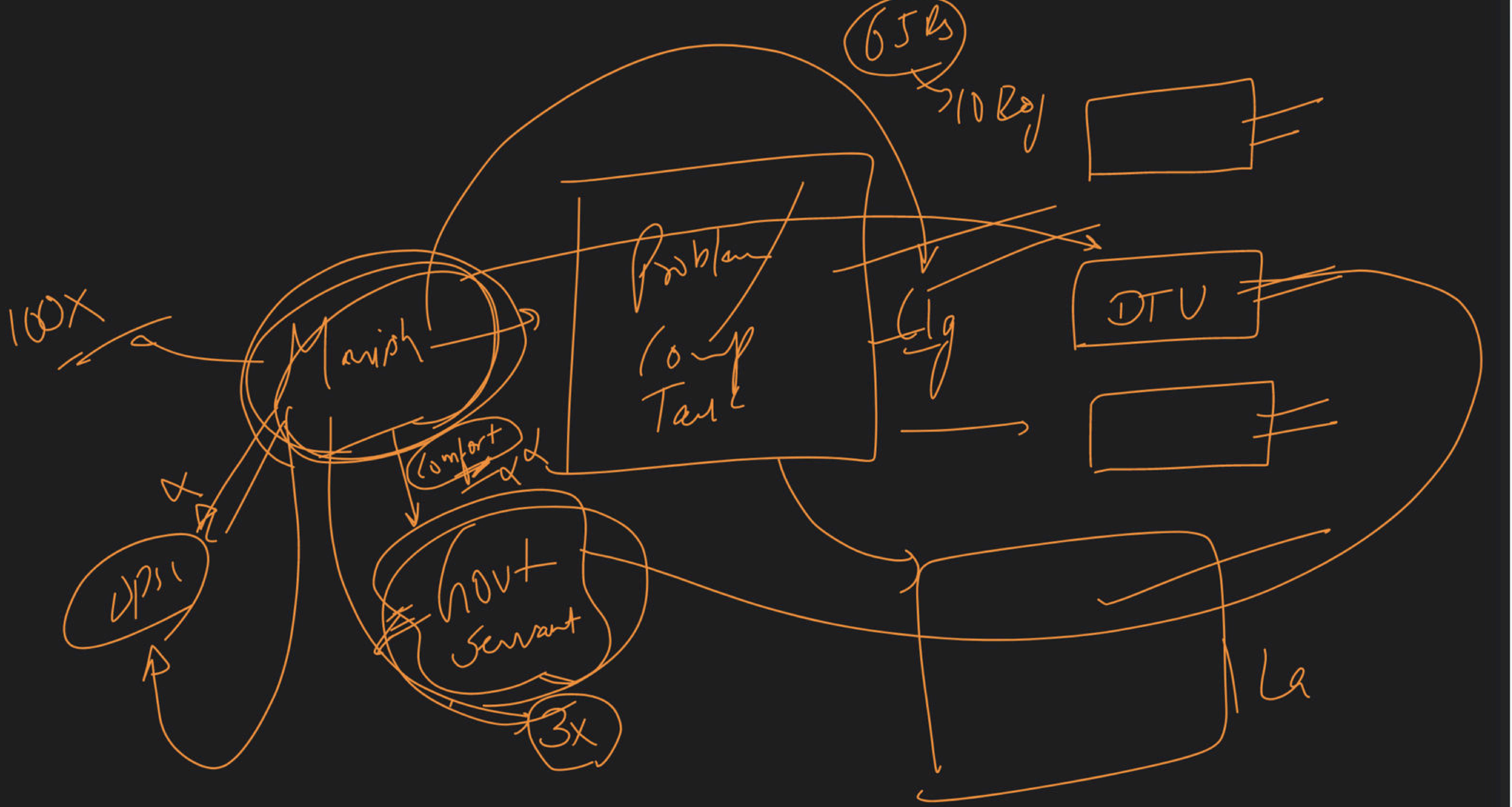

0 1 2
maz
0 1 2
VID
""
+D
-D
+R
-R
"DR"
+V
-V
"DRD"
"DRV"
"DRDR"
Best
return

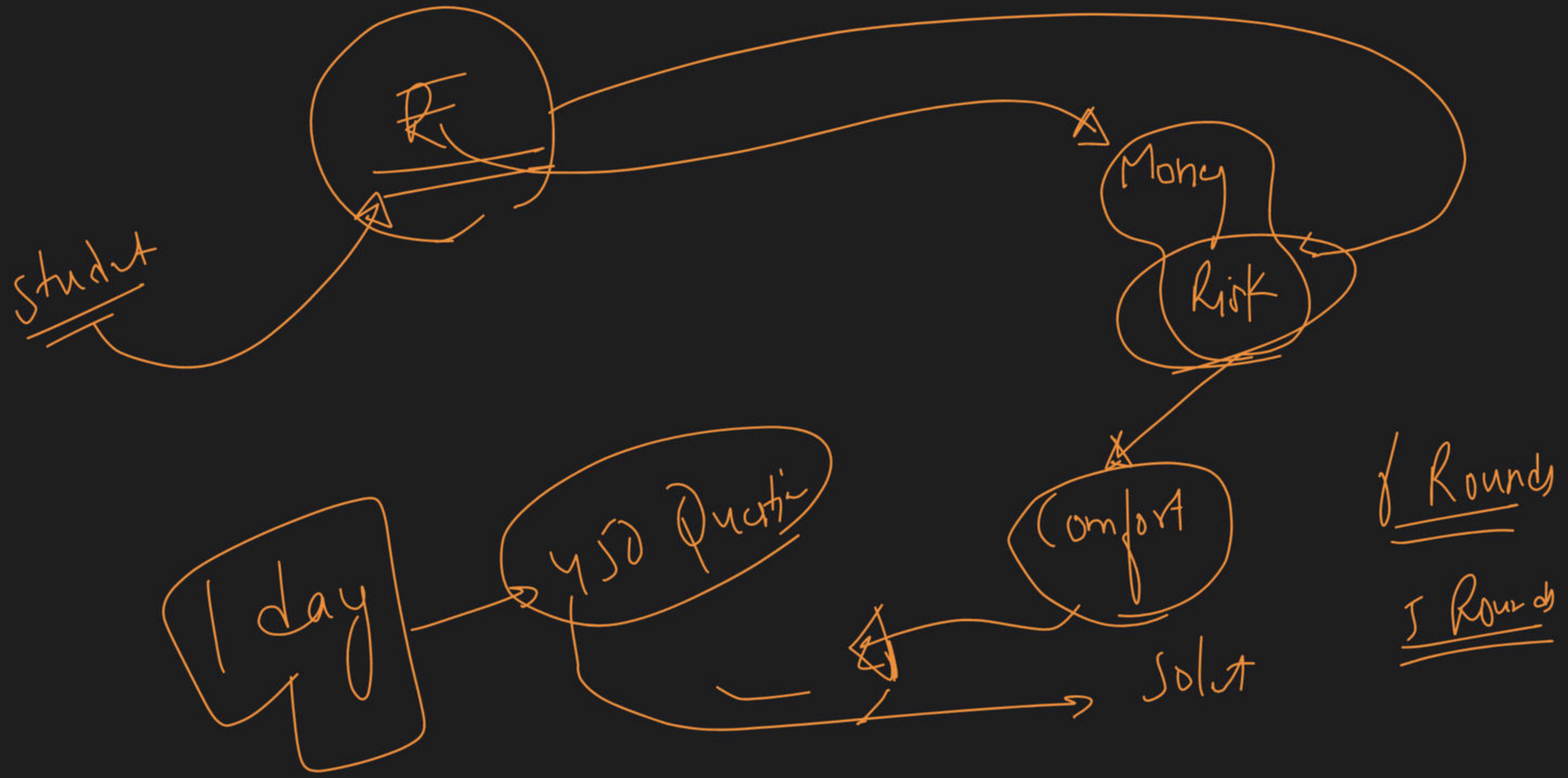


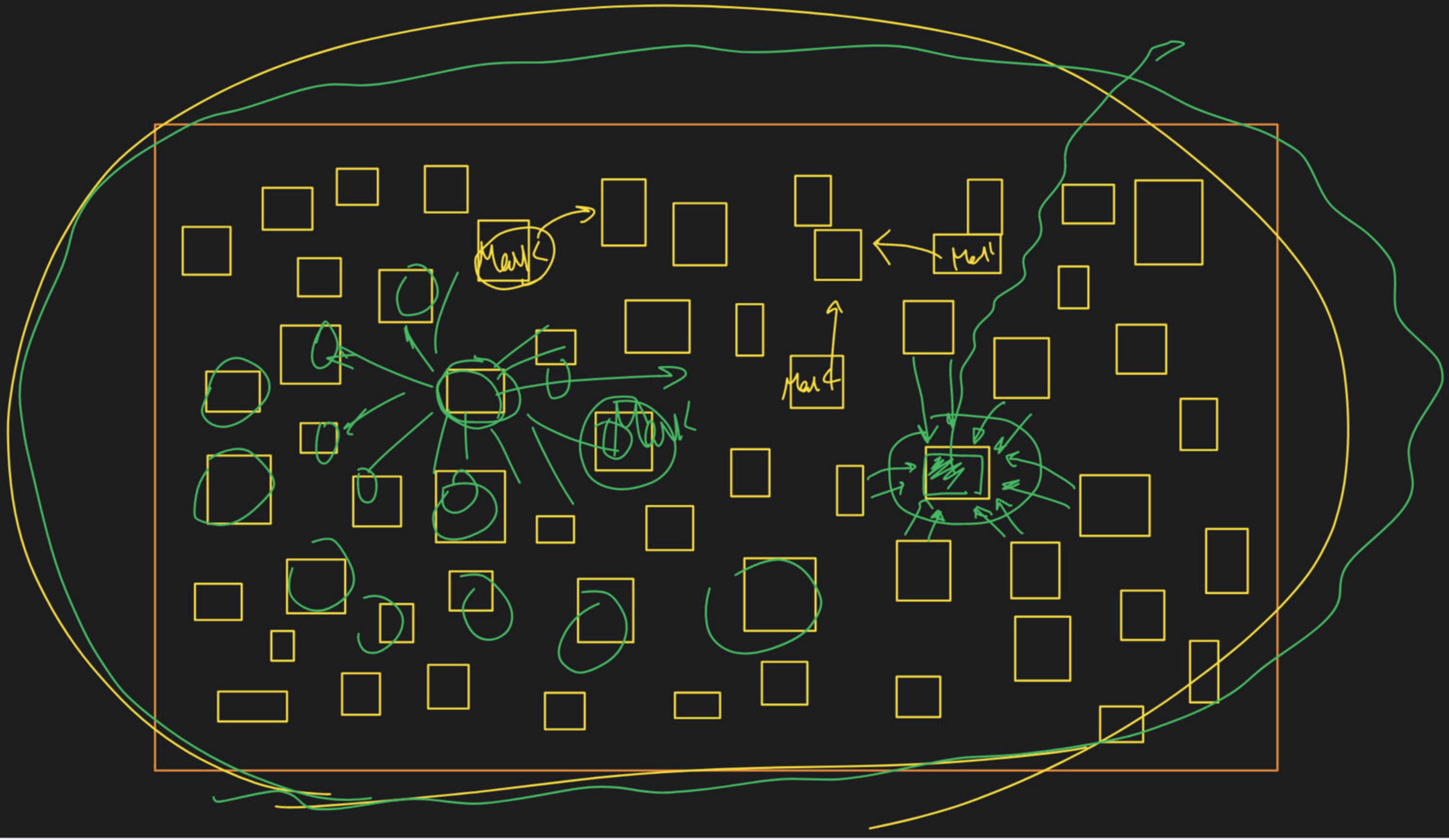

i, j
up
down
left
right
i-1, j
i+1, j
i, j-1
i, j+1
(-1, +0)
(+1, +0)
(+0, -1)
(+0, +1)
(-1, 0)
(1, 0)
(0, -1)
(0, 1)
dx → -1 1 0 0
dy → 0 0 -1 1

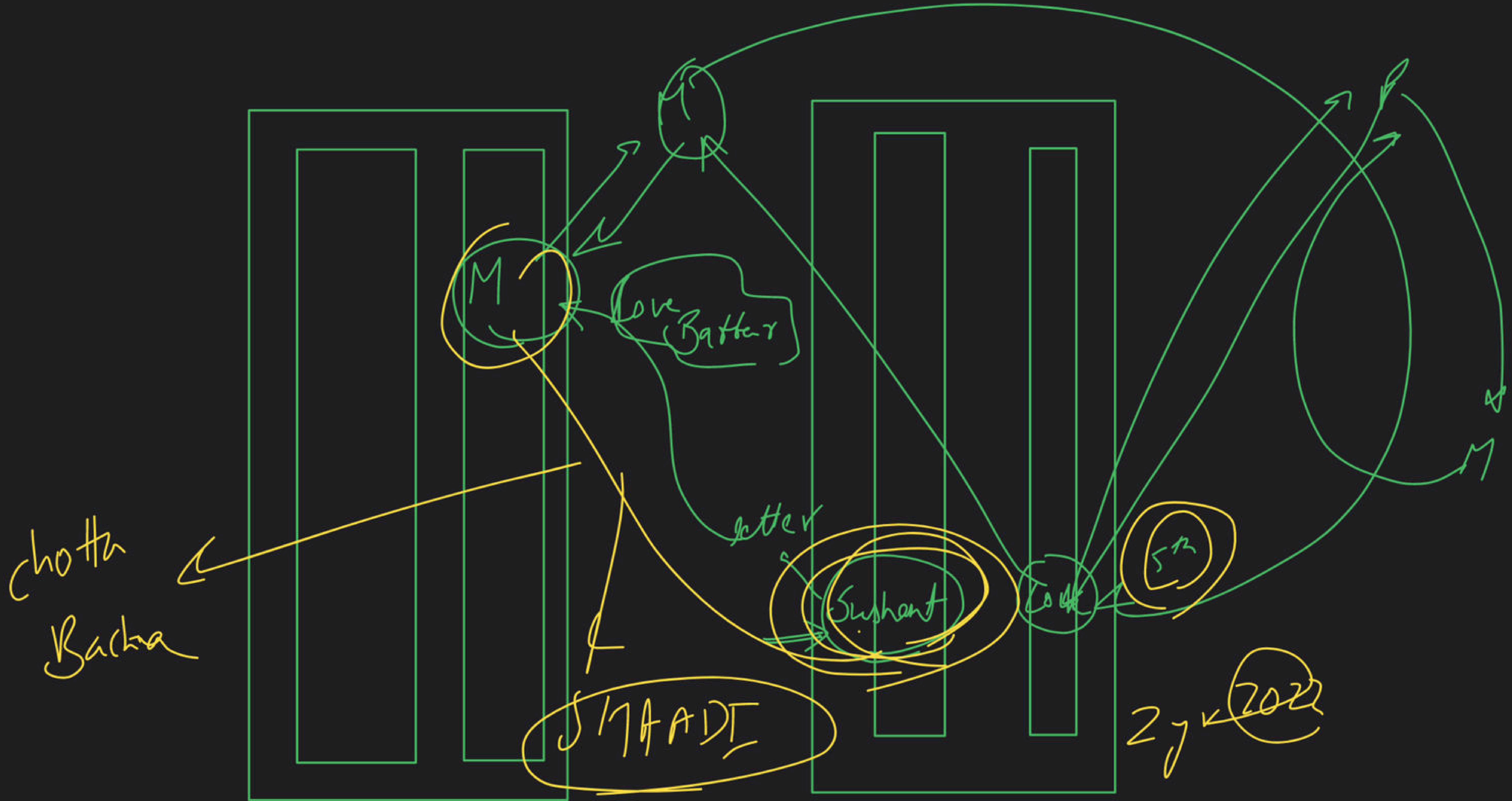
Permutations of a String

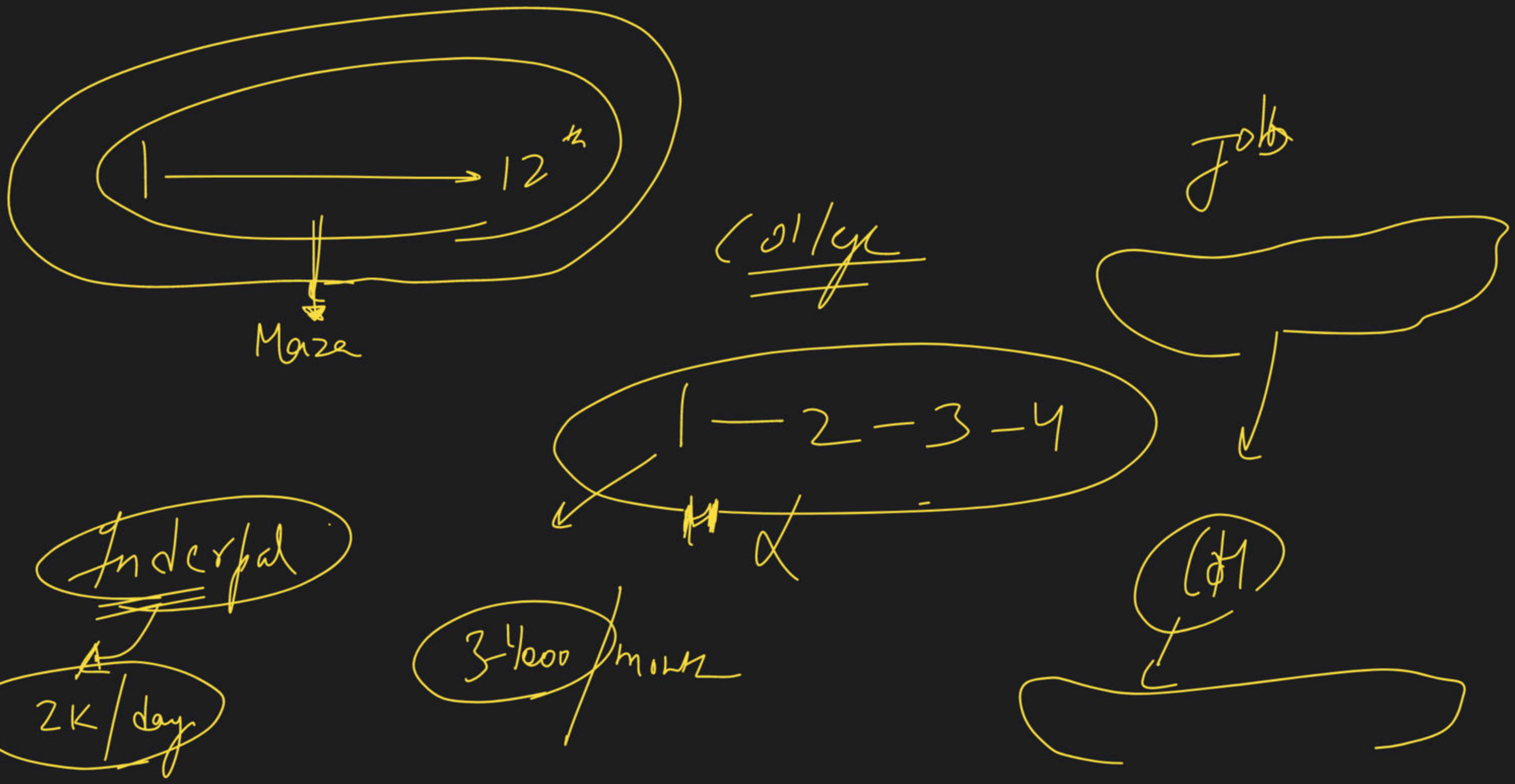

Rs
1200
750
5 dis
75
750 Rs
20 Rs
1200


65Rs
10Rs
100X
Manish
Problem
Clg
DTU
Comfort
Servant
3X


R
Money
Risk
Student
1 day
4 to 5 Practice
Comfort
Solve
1 Round
1 Round


Mark
Mark
Mark
Mark


M
M
Love Batter
letter
Sushant
chotta Bacha
SHADI
2 yr
2022


1
12th
Maze
College
Job
1-2-3-4
Internal
2K/day
3-4000/month
CTC