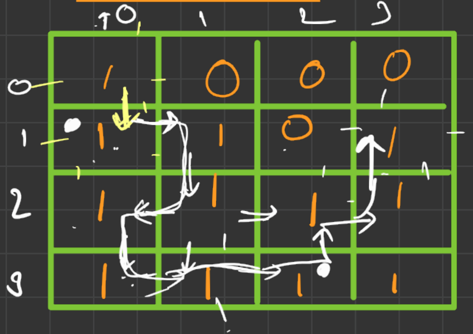
RAT in a Maze

up : U
down : D
left : L
right : R



	0	1	2	3
0	1	0	0	0
1	1	1	0	1
2	1	1	1	1
3	1	1	1	1

Path :- $\boxed{\text{DRDLDRRR}}$

Path :- DRDLDRRURD

DRDLDRRURU

① Matrix ke bahr nahi ja sakta

② 0 Block pe nahi ja sakta

③ Already visited path not allowed

up = i-1, j+0   (-1,0)

Down = i+1, j+0   (1,0)   i = n-1

Left = i+0, j-1   (0,-1)   j = n-1

Right = i+0, j+1   (0,1)

vector <string>

	0	1	2	3
0	1	0	0	0
1	1	1	0	0
2	1	1	1	1
3	1 ✓	1	1	1

```
Total (vector<vector<int>> & matrix, int i, int j,
       int n, string path, vector<string> & ans,
       vector<vector<bool> & visited){

  if (i==n-1 && j=n-1){
      ans.push_back(path);
      return;
  }

 visited[i][j]=1;
 for (k=0; k<4 ; k++) {
 if(valid(i+row[k],j+col[k],n),&&matrix[i+row[k]][j+col[k]] &&!visited[i+row[k]][j+col[k]])
  {
  path.push_back(dir[k]);
  Total(matrix,i+row[k],j+col[k],n,path,ans, visited);
 path.pop_back();
 }
 visited[i][j]=0;
```

```
row = {-1, 1, 0, 0}
col = {0, 0, -1, 1}
dir = "UDLR"

(i -1, j+0)
```

```
bool valid (int i, int j, int n) {
    return i>=0 && j>=0 && i<n && j<n;
}
```

T.C

S.C

N^2

$3\times3\times3\times3$

$\boxed{3^{N^2}}$