

## LEETCODE 73.

SetMatrixZero.

[ code : C++ ]

# include &lt;vector&gt;

using namespace std;

class Solution {

public :

void setZeros( vector&lt;vector&lt;int&gt;&gt; &amp;matrix) {

vector&lt;pair&lt;int, int&gt;&gt; ans;

int m = matrix.size();

int n = matrix[0].size();

for(int i=0; i&lt;m; i++) {

for(int j=0; j&lt;n; j++) {

if (matrix[i][j]==0) {

ans.push\_back({i,j});

}

}

for (auto it : ans) {

int row = it.first;

int col = it.second;

for(int j=0; j&lt;n; j++) {

matrix[row][j] = 0;

}

for(int i=0; i&lt;m; i++) {

matrix[i][col] = 0;

}

}

};

Description → Given an  $m \times n$  integer matrix, if an element is 0, set its entire row & column to 0.

① Eg:-  $\begin{matrix} 1 & 1 & 1 \\ 1 & 0 & 1 \\ 1 & 1 & 1 \end{matrix} \Rightarrow \begin{matrix} 1 & 0 & 1 \\ 0 & 0 & 0 \\ 1 & 0 & 1 \end{matrix}$

② Eg:-  $\begin{matrix} 0 & 1 & 2 & 0 \\ 3 & 4 & 5 & 2 \\ 1 & 3 & 1 & 5 \end{matrix} \Rightarrow \begin{matrix} 0 & 0 & 0 & 0 \\ 0 & 4 & 5 & 0 \\ 0 & 3 & 1 & 0 \end{matrix}$

→ Make list, which store zero (0) coordinates (row, column).  
 $m \rightarrow$  no. of rows,  $n \rightarrow$  no. of columns.

→ Traverse through the whole matrix.  
 Jaha bhi 0 milta hai, uska position  $(i, j)$   
 ans vector me store kar lete hai.

Now, jitne bhi zero positions stored hai,  
 uni puri row aur column 0 set kardo.  
 like,

In example ①,  $(1, 1)$  tha, to puri row-1  
 and col-1 zero ho jaegi.