

6 Problems on array:-

①

// Altitude question \rightarrow doubt

① Cells with odd values in Matrix

ek m*n matrix hai

given $m=2$
 $n=3$

$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix} \text{ --- ①}$$

indices \rightarrow $\begin{bmatrix} r_i & c_j \\ 0 & 0 \end{bmatrix}$

row

 0^{th} index ko ise bdhaoegⁿ ① become

$$\begin{bmatrix} 0+1 & 0+1 & 0+1 \\ 0 & 0 & 0 \end{bmatrix} \Rightarrow \begin{bmatrix} 1 & 1 & 1 \\ 0 & 0 & 0 \end{bmatrix} \text{ --- ②}$$

 1^{st} column ko ise increment kro.

② becomes

$$\begin{bmatrix} 1 & 1+1 & \phi \\ 0 & 0+1 & 0 \end{bmatrix} \Rightarrow \begin{bmatrix} 1 & 2 & \phi \\ 0 & 1 & 0 \end{bmatrix} \text{ --- ③}$$

 1^{st} column row ko ise increment kro.

③ becomes

$$\begin{bmatrix} 1+1 & 2+1 & \phi+1 \\ 0+1 & 1+1 & 0+1 \end{bmatrix} \Rightarrow \begin{bmatrix} 2 & 3 & 1 \\ 1 & 2 & 1 \end{bmatrix} \text{ --- ④}$$

 1^{st} column ko 1^{st} se increment kro

④ become

$$\begin{bmatrix} 1 & 2+1 & 0 \\ 1 & 2+1 & 1 \end{bmatrix} \Rightarrow \begin{bmatrix} 1 & 3 & 0 \\ 1 & 3 & 1 \end{bmatrix}$$

final answer array
ab ise array me (final wale se) kitane
elements odd hai.

6 elements are odd.

∴ 6 is answer

Bruteforce approach code

// first step:- make an array ~~is~~ 'ons' of size 'm x n'
`int[][] ons = new int[m][n];`

indices.length

// Now ~~run~~ for loop `i < 0 < n` iske ander ~~run~~
// Jo bhi hamara number hoga use 1 se badhayenge

`for (int i = 0; i < indices.length; i++) {`

// Yaha pe hamne do chije kar rahi hai

// Jo hamne row change kar rahi hai tab column
some rhkni hai some for column.

~~for~~ `for (int j = 0; j < n; j++) {`

`ons[indices[i][0]][j] ++;`

row = constant

`for (int j = 0; j < n; j++) {`

`ons[j][indices[i][1]] ++;`

↓
क्या आपका 0 ani 1 ek hi hai?

किसी indices ke 2x2 matrix ke

column
update
hoge yaha

for (i = 0; i < m; i++) {

for (j = 0; j < n; j++) {

if (arr[i][j] % 2 != 0) {

count++;

}

}

}

return count;

T.C $\Rightarrow O(i \times (m+n))$

S.C $\Rightarrow O(m \times n)$