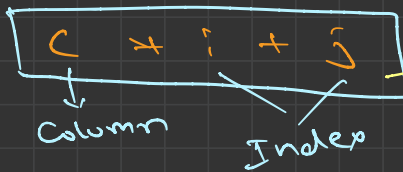



Binary Search on 2D array

2D \rightarrow 1D conversion



\rightarrow to find index of element in memory

$s = 0$

	0	1	2
0	2	4	6
1	10	12	14
2	18	20	22

$mid = 4$

$e = 8$

$n = \text{rows}$
 $m = \text{columns}$

How to find row Index & col Index with the help of mid;

$$col = 3$$

$$\text{row Index} = mid / col$$

$$\Rightarrow 4 / 3 = 1$$

$$col \text{ Index} = mid \% col \Rightarrow$$

$$\Rightarrow 4 \% 3 = 1$$

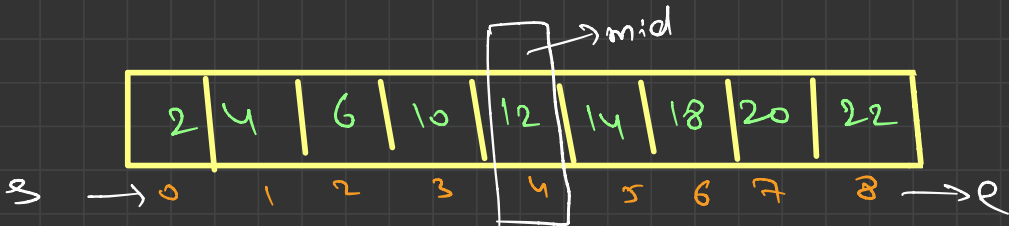
$$s = 0$$

$$e = n \times m - 1$$

$$n = 3; m = 3$$

$$e = 3 \times 3 - 1 = 8$$

$$mid = s + e / 2 = 4$$



$$\text{arr}[1][1] \Rightarrow 3 \times 1 + 1 \Rightarrow 3 + 1 \Rightarrow 4$$

mid