


Stack

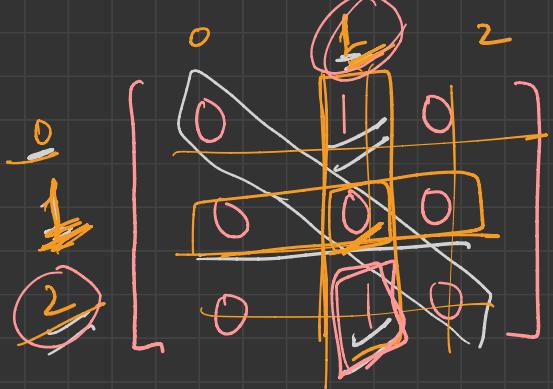


→ Celebrity Problem :-

→ everyone knows celebrity

→ celebrity known NO-one

Person → 0, 1, 2



① Ignore Diagonal

$L \rightarrow$ Known No One ✓
anyone knows L ✓

$\Rightarrow L$ is a celebrity

Solve → ?

Approach:-

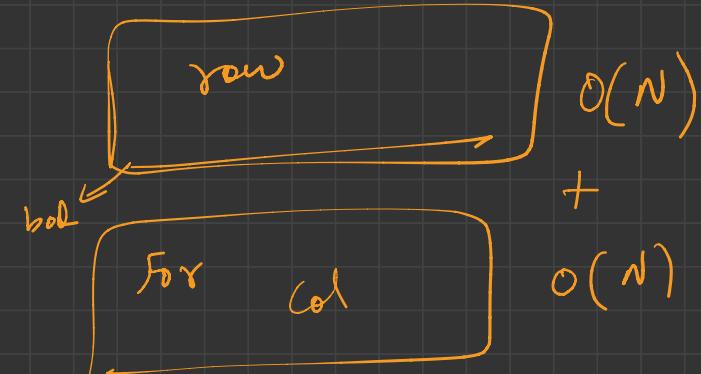
Brute force

→ celebrity → row → all 0's //
→ celebrity → col → all 1's except
diagonal elements

— n element
|
n rows n col

for (int i = 0 $\leq n$)

{



+

$O(n)$

T.C $\rightarrow \underline{\underline{O(n^2)}}$

$\underline{\underline{O(n)}}$

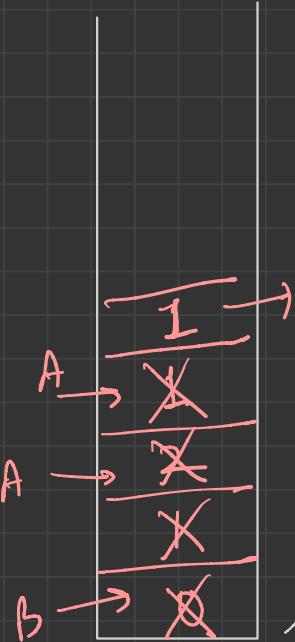
}

if (bool)

1 or Not

Approach #2

$$\begin{aligned} A &= 1 \\ B &= 0 \end{aligned}$$



Algo:-

put all element inside stack

→ Jab stack size != 1

→ A → s.top() → s.pop()
→ B → s.top → s.pop()

→ if (A knows B)

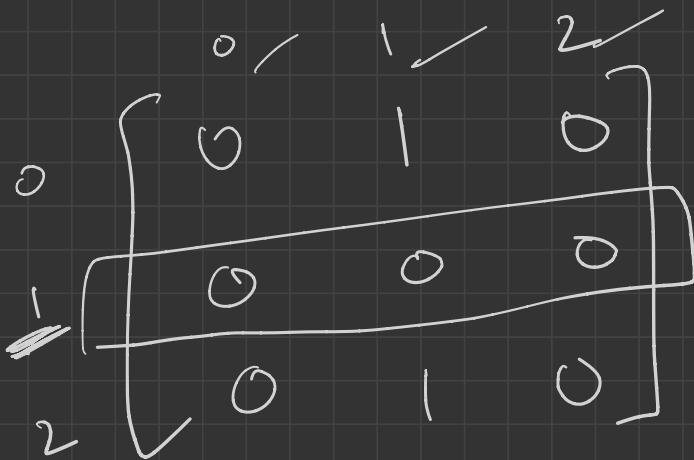
A ~~X~~, B → waps push kisi

→ if (B knows A)

B ~~X~~, A → waps add do

→ To single element bache hua h,

vo ck "Potential Celebrity"
ho skta hai



→ Verify

→ Celebrity know N-1
~~not~~ rows check → all 0's
 → Everyone know celeb
~~col~~ → all 1's
 except diagonal
 direct

$T \in \mathcal{O}(N)$

$H/\omega \rightarrow$ more approaches exploration

→ Max Rectangle in Binary matrix with all 1's

rows 0 1 2 3

 0 1 2 3 cols

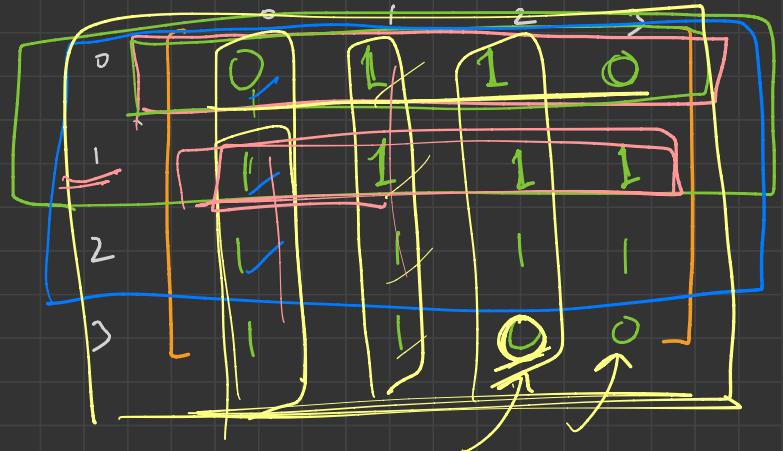
0	0	1	1	0
1	1	1	1	1
2	1	1	1	1
3	1	1	0	0

→ Largest Area
in Histogram

[assumption]

Approach → ?

col

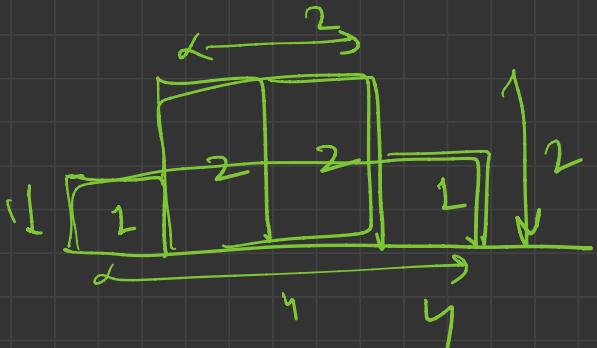
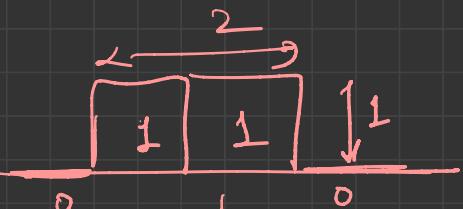


Alg:

$\rightarrow 1^{st}$ row

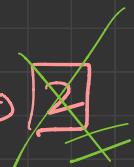


(II)

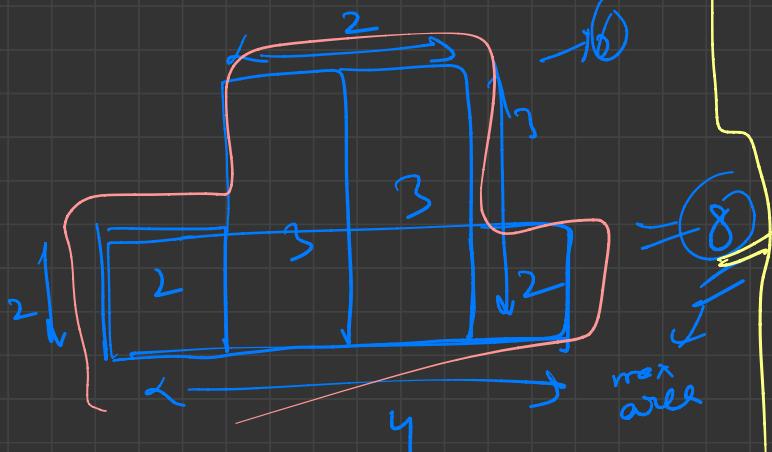
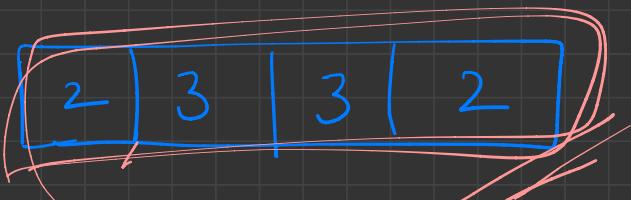


max-area \rightarrow (4)

max-area \rightarrow 2

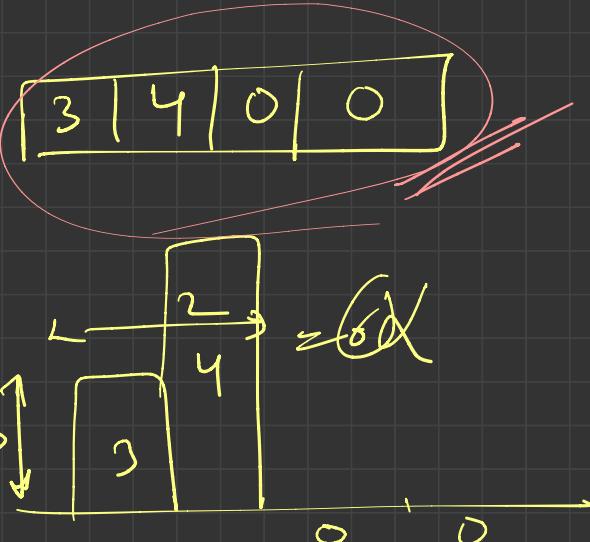


III



⑧

IV



max area

⑧ =

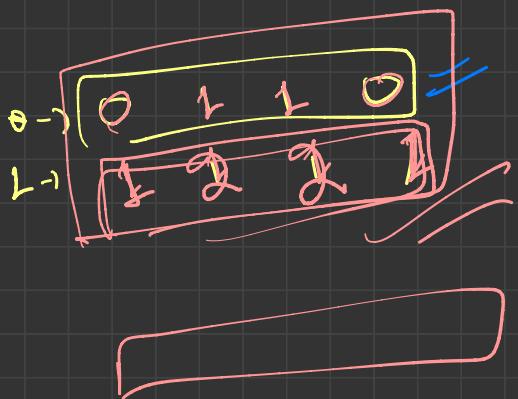
POC



compute max-area for i^{th} row

II

For every remaining row



up to vali row k element
ko add karو current row

area compute karو

$T \leftarrow O(n \times m)$

\downarrow \downarrow

row col

$S \leftarrow O(m)$

\downarrow

col =

