

## BS on 2D arrays

$O(n \times m)$

① Row with max ones

- # BF -
- iterate through each ~~row~~ <sup>row</sup> element in the matrix
  - count no of 1s in each row & after counting each row's 1s now update maxi (max 1s row tracker)
  - then again reset count of 1s to 0 for next row & repeat for all rows
  - & return the row no & its count.

- # OP -
- basically traverse through the rows using a for loop
  - and send each row as its own ~~row~~ 1D array to count 1 function
  - get count of 1 in that particular row update maxi & row tracker if
  - & then return row & count of max 1s
- $O(n \times \log m)$

② & ③

Search for ele in matrix i & j  
traverse through each row & send each row for binary search.

$O(n \times \log m)$