

LEETCODE - (136.) Single Number.

⑩ Non-empty array — `nums`.

every element appears twice except one.  
find that one element.

class Solution {

public:

int singleNumber(vector<int> (1) `nums`) {

int `ans` = 0;

for (int `val` : `nums`) {

`ans` = `ans` ^ `val`;

}

return `ans`;

}

used to.  
→ "pass by reference" (so that changes are reflected in array)  
og array

Explanation (136)

eg:

$$\begin{array}{|c|c|c|c|c|} \hline 4 & 1 & 2 & 1 & 2 \\ \hline \end{array}$$
↑  
unique?

we use Bitwise XOR

we know,  $0 \wedge 0 = 0$  $1 \wedge 0 = 1$  $1 \wedge 1 = 0$  $0 \wedge 1 = 1$ So,  $n \wedge n = 0$  (A)

Now

we take XOR of whole array,

i.e.,  $4 \wedge 1 \wedge 2 \wedge 1 \wedge 2$  $\Rightarrow 4 \wedge 0$   
 $100 \wedge 000 = 100 = (4) \rightarrow \text{unique}$  $n \wedge 0 = n$  (A)