LEETCODE - (169) Majority Element.

→ Given an array nums of size 'n', return majority element. majority element is the element that appears more than n/2 times.

| code : Java |

```java
class Solution {
    public int majorityElement(int[] nums) {
        int frequency = 0;          // vote counter →
        int candidate = nums[0];    // possible majority →

        for(int i=0; i< nums.length ; i++) {
            if (frequency == 0) {
                candidate = nums[i];    // → take new candidate (other)
            }
            if (nums[i] == candidate) { // → element nums candidate ke equa then,
                frequency++;            // → add vote!
            } else {                    // varna,
                frequency--;            // → vote minus kardo.
            }
        }

        return candidate;
    }
}
```

Dry Run Example

$$0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6$$

Array = { 2, 2, 1, 1, 1, 2, 2 }

start :   frequeny = 0 , candidate = 2 .

$i = 0$ →   2 = candidate, frequeny = 1

$i = 1$ →   2 = candidate, frequeny = 2.

$i = 2$ →   1 != candidate, frequeny = 1

$i = 3$ →   1 != candidate, frequeny = 0.

$i = 4$ →   frequeny = 0 → candidate = 1, frequeny = 1.

$i = 5$ →   2 != candidate, frequeny = 0.

$i = 6$ →   frequeny = 0 → candidate = 2, frequeny = 1.

final candidate = ②.