โจทย์ช้อที่ 10

Js Multiplicity of Numbers   •••

Write a function that returns an array of elements [number, multiplicity]. The multiplicity of a number refers to the
number of times it occurs in the array. To illustrate: [5, 5, 1, 1, 5, 5, 3] [[5, 4], [1, 2], [3, 1]] // Since 5 appears 4 times, 1
appears twice, and 3 appears once. The final array should only include un ...

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introductions

Multiplicity of Numbers

Published by **Helen Yu** in **JavaScript ▾**

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Write a function that returns an array of elements `[number, multiplicity]`. The
`multiplicity` of a number refers to the number of times it occurs in the array.

To illustrate:

```
[5, 5, 1, 1, 5, 5, 3]
[[5, 4], [1, 2], [3, 1]]

// Since 5 appears 4 times, 1 appears twice, and 3 appears once.
```

The final array should only include unique elements, and the elements should be ordered by
when they first appeared in the original array.

Examples

```
multiplicity([1, 1, 1, 2, 2, 3]) → [[1, 3], [2, 2], [3, 1]]

multiplicity([1, 1, 1, 1, 1]) → [[1, 5]]

multiplicity([1, 5, 4, 3, 2]) → [[1, 1], [5, 1], [4, 1], [3, 1], [2, 1]]
```

Notes

N/A

Code

```javascript
function multiplicity(arr) {
    let result = [];
    result.push([arr[0],0]);
    for(x=0;x<arr.length;x++){
        let t = false;
        for(y=0;y<result.length;y++){
            if(arr[x]!=result[y][0]){
                t = true;
            }
            if(arr[x]==result[y][0]){
                result[y][1]++;
                t = false;
            }
        }
        if(t){ //new
            result.push([arr[x],1]);
        }
    }
    return result;
}

console.log(multiplicity([1, 1, 1, 2, 2, 3]))//, [[1, 3], [2, 2], [3, 1]])
console.log(multiplicity([1, 1, 1, 1, 1]))//, [[1, 5]])
console.log(multiplicity([1, 5, 4, 3, 2]))//, [[1, 1], [5, 1], [4, 1], [3, 1], [2, 1]])
console.log(multiplicity([5, 5, 5, 5, 8]))//, [[5, 4], [8, 1]])
console.log(multiplicity([3, 3, 3, 0]))//, [[3, 3], [0, 1]])
console.log(multiplicity([1, 1, 2, 2, 3, 3, 4, 4]))//, [[1, 2], [2, 2], [3, 2], [4, 2]])
console.log(multiplicity([4, 4, 3, 3, 2, 2, 1, 1]))//, [[4, 2], [3, 2], [2, 2], [1, 2]])
```

Run

```
PS C:\Users\Admin\Desktop\JSpilot\JavaScript\assign> node .\Multiplicity_of_Numbers.js
[ [ 1, 3 ], [ 2, 2 ], [ 3, 1 ] ]
[ [ 1, 5 ] ]
[ [ 1, 1 ], [ 5, 1 ], [ 4, 1 ], [ 3, 1 ], [ 2, 1 ] ]
[ [ 5, 4 ], [ 8, 1 ] ]
[ [ 3, 3 ], [ 0, 1 ] ]
[ [ 1, 2 ], [ 2, 2 ], [ 3, 2 ], [ 4, 2 ] ]
[ [ 4, 2 ], [ 3, 2 ], [ 2, 2 ], [ 1, 2 ] ]
PS C:\Users\Admin\Desktop\JSpilot\JavaScript\assign>
```