

HW3 - Javascript 1

0. Leetcode

<https://leetcode.com/problem-list/oizxjoit/>

每天1-3道题，需要用JavaScript或者TypeScript

1. 问答练习(八股)

准备以下八股题目答案, 写在 `note.md` 里

1. What is dynamic typing?
2. Explain the difference between var, let, & const.
3. What is immutability? What data types in JS are immutable?
4. What is the difference between == and ===?
5. What are some examples of falsy values in JS?
6. Explain hoisting in JavaScript.
7. Explain variable shadowing in Javascript.
8. What is a callback function?
9. What's the difference between primitive data types and reference data types in JS?
10. What's the difference between array for loop and forEach?
11. What's the difference between array map and forEach?
12. What is the difference between array slice and splice?
13. What is 'use strict'? What are the major effects that it has?
14. What is an arguments object?

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2. Coding

Do not use for loop. Use the built-in methods

1.

```
const itemsObject = [  
  { quantity: 1, price: 200 },  
  { quantity: 3, price: 350 },  
  { quantity: 5, price: 400 },  
];
```

- Given the array, implement a function for generating a new array which doubles the quantity and price in each object.
- Given the array, implement a function for generating a new array which contains item quantity > 2 and price > 300 only.
- Given the array, implement a function to calculate the total value of the items.

2. `const string =`

`" Perhaps The Easiest-to-understand Case For Reduce Is To Return The Sum Of All The Elements In An Array ";`

- Given the string, implement a function to remove all the non-alphabet characters and extra space in the string and convert the string to all lowercase.

3.

```
const first = [  
  { uuid: 2, name: "test" },  
  { uuid: 5, name: "test5" },  
  { uuid: 3, name: "test3" }  
];  
  
const second = [  
  { uuid: 6, role: "pm" },  
  { uuid: 4, role: "engineer" },  
];
```

```
{ uuid: 1, role: "manager" },  
{ uuid: 2, role: "associate" }  
];
```

- Implement a function to merge two arrays of objects on uuid, but first has uuid and name, second has uuid and role. With the not existing property, fill with null. Sort according to uuid after merge.