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10 Javascript Exercises with Arrays

Andrei Borisov · Follow

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Basically, this article could be useful for junior and middle Javascript software engineers. I prepared ten exercises with arrays, which I hope will help you to improve your coding skills.

Each task provided has an explanation, expected result, and solution. I do not affirm my solutions are the best ways to solve each of the exercises, but I believe they could help you to find some new ideas if you stuck.

Also, I would like to mention that I won't handle all the error cases, like passing undefined, null, or wrong data types. I provide a basic solution, not writing a library for production.

You can start in your repository or clone mine. In that repository, you can find a full list of exercises and solutions. Also, you can easily check your solutions with pre-created tests. Link: https://github.com/andrewborisov/javascript-practice.

1. **Fill.** Write a function that creates a new array with given values

```
/**
  * Task description: Write a method that creates a new array with given
values
  * Expected Result: (3, 'a') => ['a', 'a', 'a']
  * Task Complexity: 1 of 5
  * @param {number} arraySize - size of array
  * @param {?} value - value to fill
  * @returns {Array}
*/
const fill = (arraySize, value) => {
 throw new Error('Put your solution here');
}

const data = 3;
const valueToFill = 'a';

console.log(fill(data, valueToFill)) // ['a', 'a', 'a']
```

"Fill" function solution.

2. **Reverse.** Write a function that reverts the input array. Please, do not use `array.reverse();` to make this task more enjoyable.

```
/**
  * Task description: Write a method that reverts input array
  * Expected Result: [1, 2, 3] => [3, 2, 1]
  * Task Complexity: 1 of 5
  * @param {Array} array - Array of any elements
  * @returns {Array}
*/
const reverse = (array) => {
 throw new Error('Put your solution here');
}

const data = [1, 2, 3];

console.log(reverse(data)); // [3, 2, 1]
```

“Reverse” function solution.

3. **Compact.** Write a method that clears array from all unnecessary elements, like false, undefined, empty strings, zero, null

```
/**
  * Task description: Write a method that clears array from all
unnecessary elements, like false, undefined, empty strings, zero, null
  * Expected Result: [0, 1, false, 2, undefined, '', 3, null] => [1, 2,
3]
  * Task Complexity: 1 of 5
  * @param {Array} array - An array of any elements
  * @returns {Array}
*/
const compact = (array) => {
 throw new Error('Put your solution here');
}

const data = [0, 1, false, 2, undefined, '', 3, null];

console.log(compact(data)) // [1, 2, 3]
```

“Compact” function solution.

4. **From Pairs.** Write a method that returns an object composed of key-value pairs.

```
/**
  * Task description: Write a method that returns an object composed of
key-value pairs.
  * Expected Result: [['a', 1], ['b', 2]] => { a: 1, b: 2 }
  * Task Complexity: 2 of 5
  * @param {Array} array - a deep array of pairs
  * @returns {Array}
*/
const fromPairs = (array) => {
 throw new Error('Put your solution here');
}
```

```
const data = [['a', 1], ['b', 2]];

console.log(fromPairs(data)) // { 'a': 1, 'b': 2 }
```

“From Pairs” function solution.

5. **Without.** The method should return an array without listed values. Let’s try to find a solution when input data only primitive data types.

```
/**
  * Task description: Write a method that returns an array without
listed values
  * Expected Result: [1, 2, 3, 1, 2] without 1, 2 => [3]
  * Task Complexity: 2 of 5
  * @param {Array} array - Array of primitive data types
  * @param {?} args list of values to remove
  * @returns {Array}
*/
const without = (array, ...args) => {
 throw new Error('Put your solution here');
}

const data = [1, 2, 3, 1, 2];

console.log(without(data, 1, 2)); // [3]
```

“Without” function solution.

6. **Unique.** Write a method that returns a duplicate-free array

```
/**
  * Task description: Write a method that returns a duplicate-free array
  * Expected Result: Duplicate-free array [1, 2, 3, 1, 2] => [1, 2, 3]
  * Task Complexity: 2 of 5
  * @param {Array<string | number>} array - Array of primitive data
types
  * @returns {Array}
*/
const unique = (array) => {
 throw new Error('Put your solution here');
}

const data = [1, 2, 1, 2, 3];
```

```
console.log(unique(data)); // [1, 2, 3]
```

“Unique” function solution.

7. IsEqual. Write a function that compares two arrays and returns true if they are identical.

```
/**
  * Task description: Write a method that makes a shallow compare of two
arrays and returns true if they are identical.
```

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```
*/
const isEqual = (firstArray, secondArray) => {
  throw new Error('Put your solution here');
}

const arr1 = [1, 2, 3, 4];
const arr2 = [1, 2, 3, 4];
const arr3 = [1, 2, 3, 5];
const arr4 = [1, 2, 3, 4, 5];

console.log(isEqual(arr1, arr2)); // true
console.log(isEqual(arr1, arr3)); // false
console.log(isEqual(arr1, arr4)); // false
```

“IsEqual” function solution.

8. **Flatten.** Write a function that turns a deep array into a plain array. Please, do not use `array.flat();` to make this task more enjoyable.

```
/**
  * Task description: Write a method that turns a deep array into a
plain array
  * Expected Result: [1, 2, [3, 4, [5]]] => [1, 2, 3, 4, 5]
  * Task complexity: 3 of 5
  * @param {Array} array - A deep array
  * @returns {Array}
*/
const flatten = (array) => {
 throw new Error('Put your solution here');
}

const data = [1, 2, [3, 4, [5]]];

console.log(flatten(data)); // [1, 2, 3, 4, 5]
```

“Flatten” function solution.

9. **Chunk.** Write a method that splits an array into parts of determined size

```
/**
  * Task description: Write a method that splits an array into parts of
determined size
  * Expected Result: ([1, 2, 3, 4, 5], 2) => [[1, 2], [3, 4], [5]]
  * Task complexity: 3 of 5
  * @param {Array} array - An array of any elements
  * @param {number} size - size of chunks
  * @returns {Array}
*/
const chunk = (array, size) => {
 throw new Error('Put your solution here');
}

const data = [1, 2, 3, 4, 5, 6, 7];

console.log(chunk(data, 2)) // [[1, 2], [3, 4], [5, 6], [7]]
console.log(chunk(data, 3)) // [[1, 2, 3], [4, 5, 6], [7]]
```

“Chunk” function solution.

10. **Intersection.** Create an array of unique values that are included in all given arrays. Let’s start with primitive data types.

```
/**
  * Task description: Write a method that creates an array of unique
values that are included in all given arrays
  * Expected Result: ([1, 2], [2, 3]) => [2]
  * Task complexity: 4 of 5
  * @param {?} arrays - Arrays of primitive data types
  * @returns {Array}
*/
const intersection = (...arrays) => {
 throw new Error('Put your solution here');
}

const arr1 = [1, 2];
const arr2 = [2, 3];

const arr3 = ['a', 'b'];
const arr4 = ['b', 'c'];
const arr5 = ['b', 'e', 'c'];

const arr6 = ['b', 'b', 'e'];
const arr7 = ['b', 'c', 'e'];
const arr8 = ['b', 'e', 'c'];

console.log(intersection(arr1, arr2)) // [2]
console.log(intersection(arr3, arr4, arr5)) // ['b']
console.log(intersection(arr6, arr7, arr8)) // ['b', 'e']
```

“Intersection” function solution.

As I think, the coding practice gives you a significant impact on your skills, so for me, it is crucial to learn something new every day.

I hope the tasks mentioned above could help you to learn something new or just have some fun.

What’s next?

If you liked this one you can continue with the next collection of tasks for objects: https://medium.com/@andrey.igorevich.borisov/10-javascript-exercises-with-objects-8942cc502754

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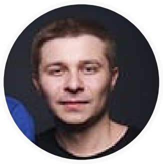

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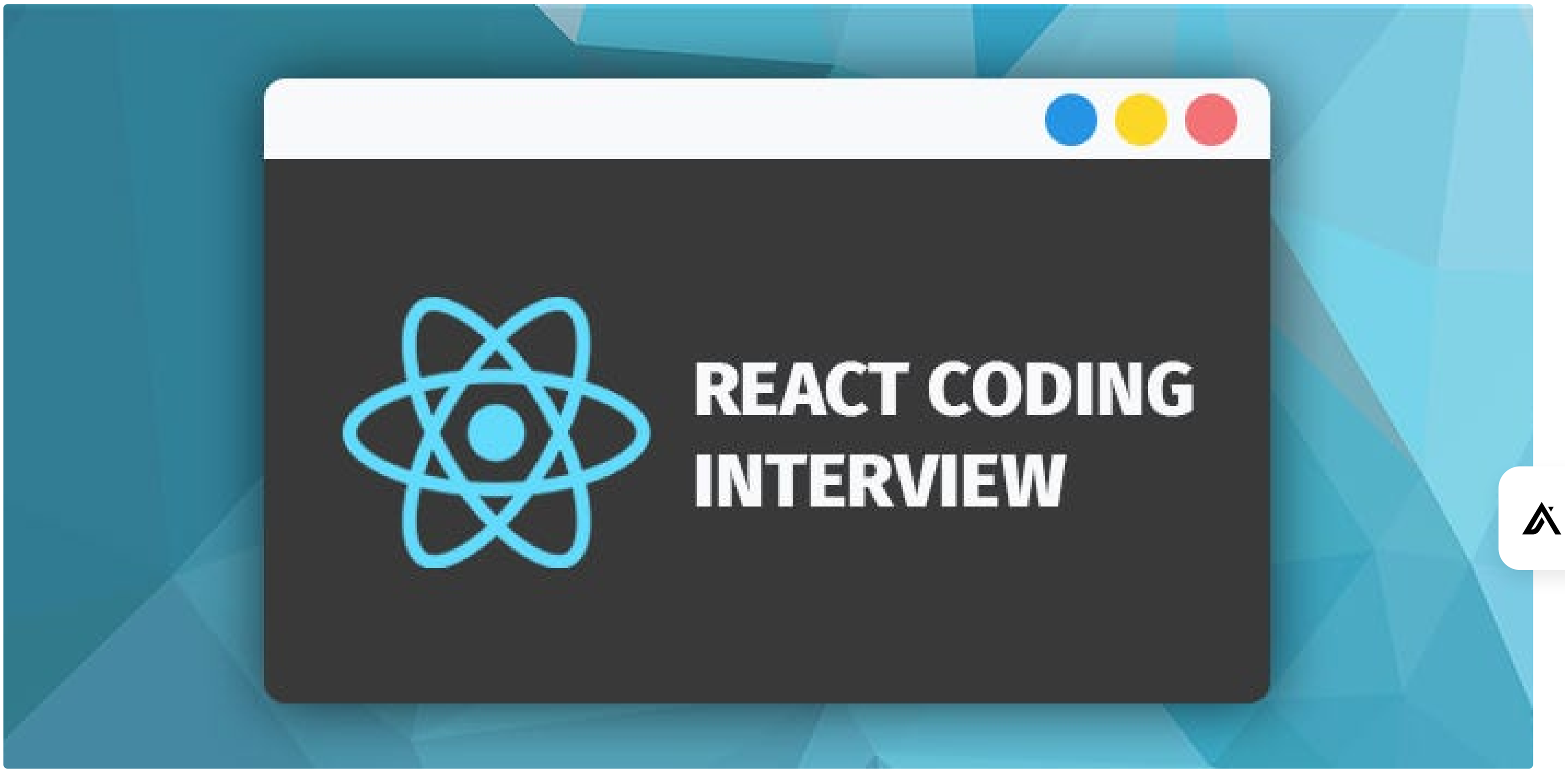

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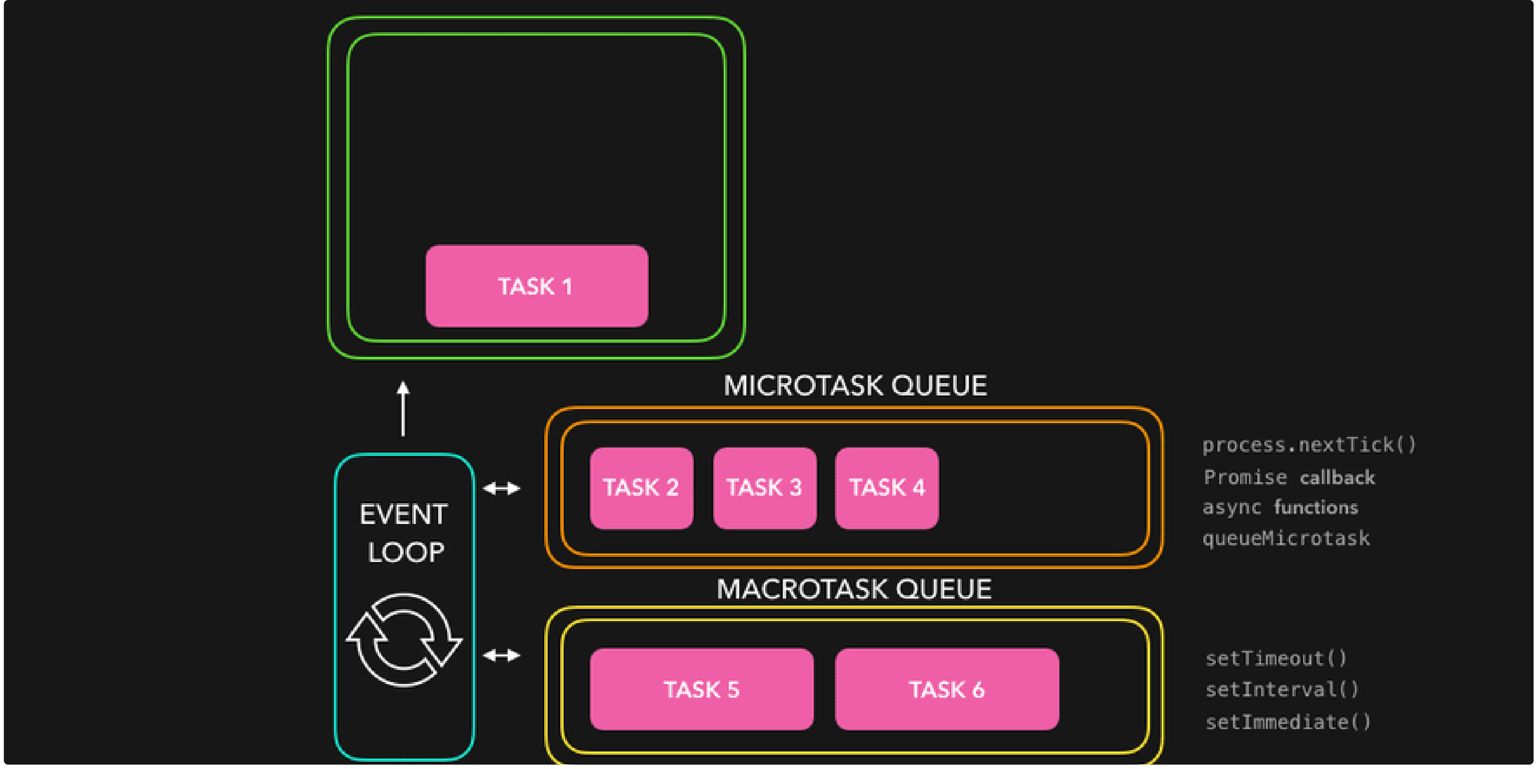

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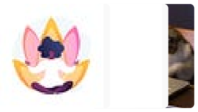

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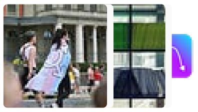

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