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10 Javascript Exercises with Objects

Andrei Borisov · Follow

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Continuing the idea of ten exercises for arrays, I made a collection of tasks for objects. Like the previous one, this collection is oriented for junior and middle javascript developers.

For every task, I will provide a description, expected result, and solution. I do not claim every solution is the best approach to solve the exercises, but I hope it eventually would help you to improve your skills.

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. **isPlainObject** - Write a method that verifies an argument is a plain object, not an array or null

```
/**
 * Task description: Write a method that verifies an argument is a
plain object, not an array or null
 * Expected Result: True if object is plain, false otherwise.
     ({ a: 1 }) => true,
     ([1, 2, 3]) => false
 * Task complexity: 1 of 5
 * @param element - element to verify
 * @returns {boolean}
 */
export const isPlainObject = (element) => {
  throw new Error(`put your solution here ${element}`);
};

const data = { a: 1 };

console.log(isPlainObject(data)); // true
```

"IsPlainObject" function solution.

2. **MakePairs** - Write a method that returns a deep array like [[key, value]]

```
/**
  * Task description: Write a method that returns a deep array like
[[key, value]]
  * Expected Result: ({ a: 1, b: 2 }) => [['a', 1], ['b', 2]]
  * Task complexity: 1 of 5
  * @param {Object} object - Any object to transform into array
  * @returns {Array} - a deep array
*/
export const makePairs = (object) => {
```

```
  throw new Error(`put your solution here ${object}`);
};

const data = { a: 1, b: 2 };

console.log(makePairs(data)); // [['a', 1], ['b', 2]]
```

“MakePairs” function solution.

3. **Without** - Write a method that returns a new object without provided properties

```
/**
  * Task description: Write a method that returns new object without
provided properties
  * Expected Result: ({ a: 1, b: 2 }, 'b') => { a: 1 }
  * Task complexity: 2 of 5
  * @param {Object} object - Any object
  * @param {?} args - list of properties to remove from object
  * @returns {Object} - New object without listed values
*/
export const without = (object, ...args) => {
  throw new Error(`put your solution here ${object} ${args}`);
};

const data = { a: 1, b: 2 };

console.log(without(data, 'b')); // { a: 1 }
```

“Without” function solution.

4. **IsEmpty** - Write a method that makes a shallow check is object empty

```
/**
  * Task description: Write a method that makes a shallow check is
object empty
  * Expected Result: ({}) => true, ({ a: undefined }) => true,
      ({ a: 1 }) => false
  * Empty values: '', null, NaN, undefined
  * Task complexity: 2 of 5
  * @param {Object} object - Object with values of primitive data
types
  * @returns {boolean}
*/
export const isEmpty = (object) => {
```

```
  throw new Error(`put your solution here ${object}`);
};

const data = { a: 1, b: undefined };
const data2 = { a: undefined };

console.log(isEmpty(data)); // false
console.log(isEmpty(data2)); // true
```

“IsEmpty” function solution.

5. **IsEqual** - Write a method that makes a shallow compare of two objects

```
/**
  * Task description: Write a method that makes a shallow compare of
two objects
  * Expected Result: True if objects are identical, false if objects
are different ({ a: 1, b: 1 }, { a: 1, b: 1 }) => true
  * Task complexity: 2 of 5
  * @param {Object<string | number>} firstObj - Object with values of
primitive data types
  * @param {Object<string | number>} secondObj - Object with values of
primitive data types
  * @returns {boolean}
*/
export const isEqual = (firstObject, secondObject) => {
  throw new Error(`put your solution here ${firstObject}
${secondObject}`);
};

const data = { a: 1, b: 1 };
const data2 = { a: 1, b: 1 };
const data3 = { a: 1, b: 2 };

console.log(isEqual(data, data2)); // true
console.log(isEqual(data, data3)); // false
```

“IsEqual” function solution.

6. **Invoke** - Write a method that invokes an array method on a specific path

```
/**
  * Task description: Write a method that invokes an array method on a
specific path
```

```
  * Expected Result: ({ a: { b: [1, 2, 3] } }, 'a.b', splice, [1, 2])
=> [2, 3]
  * Task complexity: 3 of 5
  * @param {Object} object
  * @param {String} path - path in an object to property
  * @param {String} func - function to invoke
  * @param {Array} [args] - list of args
  * @returns {?}
*/
export const invoke = (object, path, func, args) => {
  throw new Error(`put your solution here ${object} ${path} ${func}
${args}`);
};

const data = { a: { b: [1, 2, 3] } }

console.log(invoke(data, 'a.b', 'splice', [1, 2])); // [2, 3]
```

“Invoke” function solution.

7. **IsEmptyDeep** - Write a method that makes a deep check is an object empty

```
/**
  * Task description: Write a method that makes a deep check is an
object empty
  * Empty values: '', null, NaN, undefined, [], {}
  * Expected Result: ({}) => true,
      ({ a: { b: undefined } }) => true,
      ({ a: { b: [] } }) => true
  * Task complexity: 3 of 5
  * @param {?} element - Object with values of any data types
  * @returns {boolean}
*/
export const isEmptyDeep = (element) => {
  throw new Error(`put your solution here ${element}`);
};

const data = { a: { b: undefined } };

console.log(isEmptyDeep(data)); // true
```

“IsEmptyDeep” function solution.

8. **IsEqualDeep** - Write a method that makes a deep compare of two objects

```
/**
  * Task description: Write a method that makes a deep compare of two
objects
  * Expected Result: True if objects are equal, false if objects are
different ({ a: 1, b: { c: 1 } }, { a: 1, b: { c: 1 } }) => true
  * @param {Object} firstObj - Object of any values
  * @param {Object} secondObj - Object of any values
  * @returns {boolean}
*/
export const isEqualDeep = (element) => {
  throw new Error(`put your solution here ${element}`);
};

const data = { a: 1, b: { c: 1 } };
const data2 = { a: 1, b: { c: 1 } };
const data3 = { a: 1, b: { c: 2 } };

console.log(isEqualDeep(data, data2)); // true
console.log(isEqualDeep(data, data3)); // false
```

“IsEqualDeep” function solution.

9. **Intersection** - Write a method that finds shallow intersections of objects

```
/**
  * Task description: Write a method that finds shallow intersections
of objects
  * Expected Result: ({ a: 1, b: 2 }, { c: 1, b: 2 }) => { b: 2 }
  * @param {Object<string | number>} firstObj - Object with values of
primitive data types
  * @param {Object<string | number>} secondObj - Object with values of
primitive data types
  * @returns {Object}
*/
export const intersection = (firstObject, secondObject) => {
  throw new Error(`put your solution here ${firstObject},
${secondObject}`);
};

const data = { a: 1, b: 2 };
const data2 = { c: 1, b: 2 };

console.log(intersection(data, data2)); // { b: 2 }
```

“Intersection” function solution.

10. **IntersectionDeep** - Write a method that finds all intersections of objects

```
/**
  * Task description: Write a method that finds all intersections of
objects
  * Expected Result: ({ a: 1, b: { c: 3 } }, { c: 1, b: { c: 3 } }) =>
{ b: { c: 3 } }
  * @param {Object} firstObj - Object with values of any data types
  * @param {Object} secondObj - Object with values of any data types
  * @returns {Object}
*/
export const intersectionDeep = (firstObject, secondObject) => {
  throw new Error(`put your solution here ${firstObject},
${secondObject}`);
};

const data = { a: 1, b: { c: 3 } };
const data2 = { c: 1, b: { c: 3 } };

console.log(intersectionDeep(data, data2)); // { b: { c: 3 } }
```

“IntersectionDeep” function solution.

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

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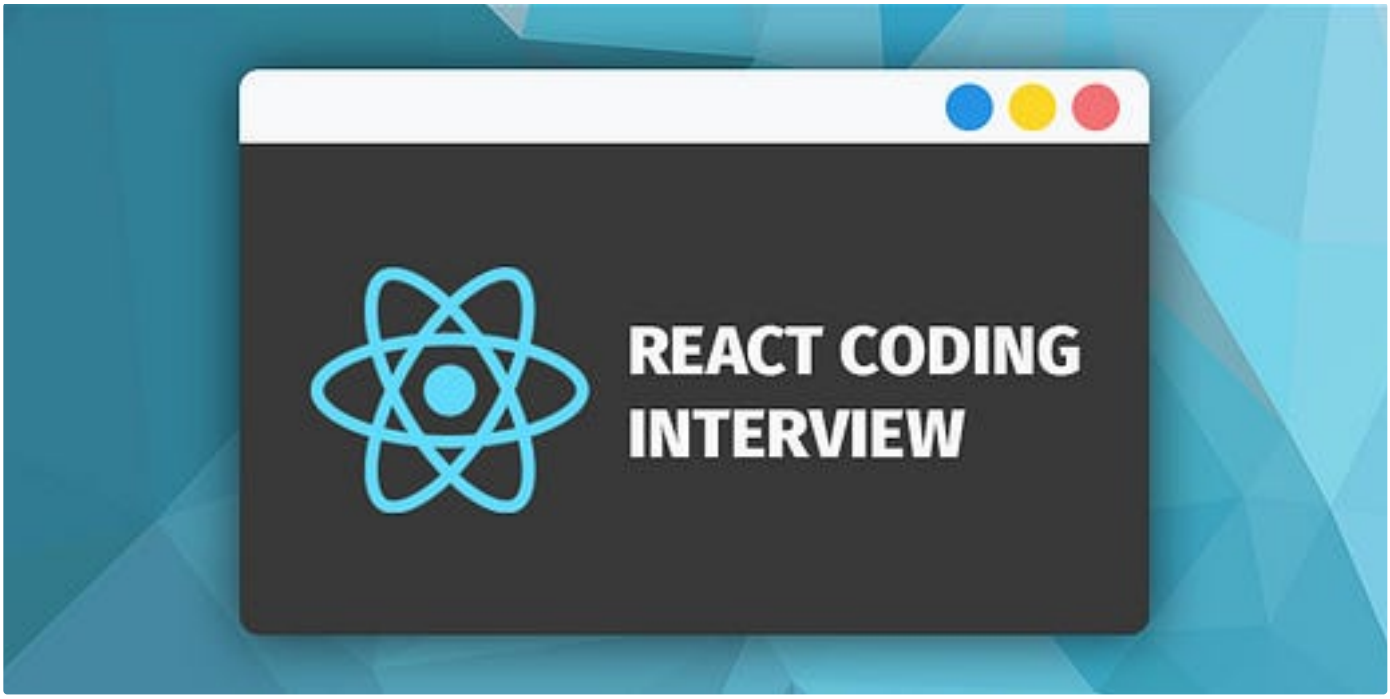

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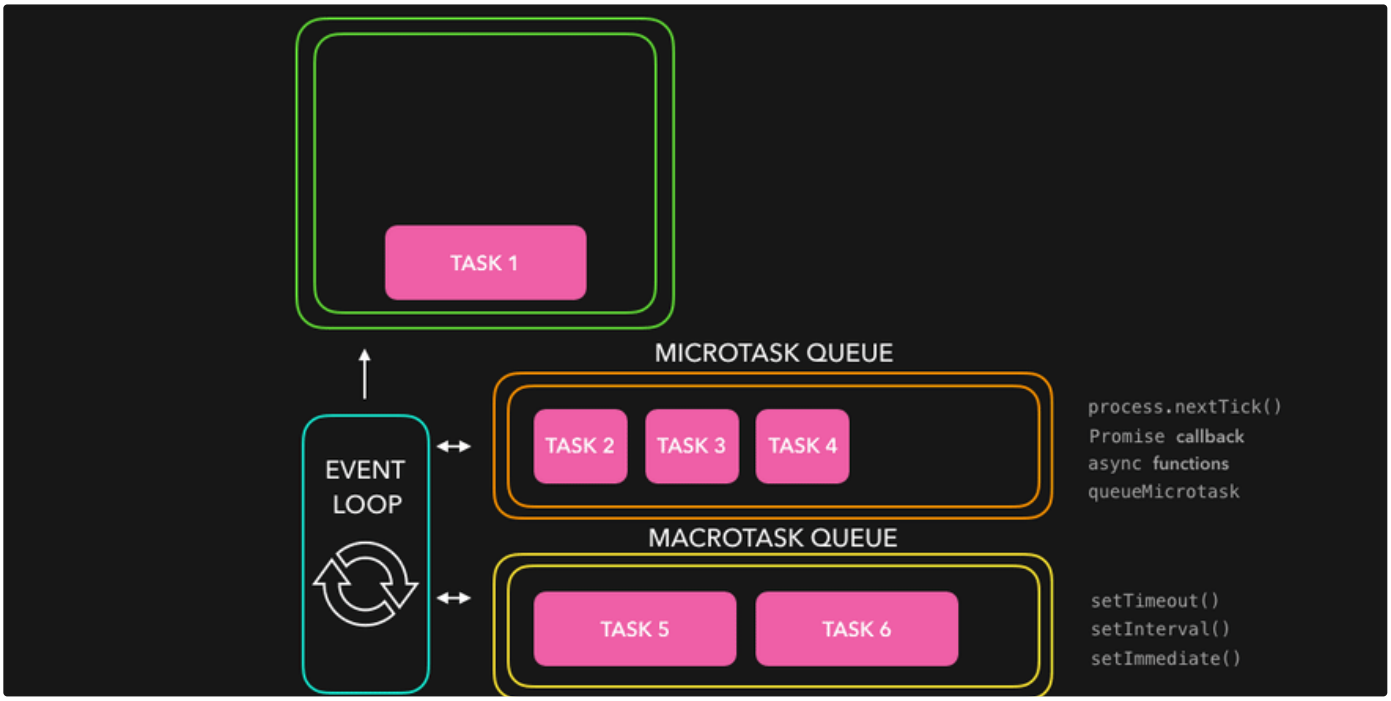

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