**Вопросы 💎**

1. **Какими способами можно объявлять массивы в JS?**

An empty array can easily be described using square brackets:

let items = [ ];

You can also immediately create an array with the values of the items:

let fruits = [ ``Apple'', ``Orange'', ``Plum''];

Another variation on the syntax for creating an array:

let arr = \*new Array\*( „Apple'“, „Pear“', „etc“');

//create an empty array

const array1 = Array();

//create and initialize array

const array2 = Array(1,2);

//creation of an array with a specified length

const array3 = Array(3);

1. **Приведите 3 примера, из тех, которые не были озвучены в материалах, что могло бы быть массивом?**

***Как может выглядеть ваш ответ: например, список книг в приложении "Библиотека" - это массив. Список людей в паспортном столе - это массив. Список полей в форме регистрации - это массив.***

For example,

e-cars, which are currently sold with an action price at XX dealer

OR

clothes, which are sold on a website with the label Recycled Polyaster

OR

Countries with the highest level of corona infections in 2020

1. Каким еще способом, кроме pop и shift можно удалять элементы из массивов?

JavaScript Array elements can be removed from the end of an array by setting the length property to a value less than the current value. Any element whose index is greater than or equal to the new length will be removed.

var ar = [1, 2, 3, 4, 5, 6];

ar.length = 4; // set length to remove elements

console.log( ar ); // [1, 2, 3, 4]

The splice method can be used to add or remove elements from an array. The first argument specifies the location at which to begin adding or removing elements. The second argument specifies the number of elements to remove. The third and subsequent arguments are optional; they specify elements to be added to the array.

Here we use the splice method to remove two elements starting from position three (zero based index):

var arr = [1, 2, 3, 4, 5, 6, 7, 8, 9, 0];

var removed = arr.splice(2,2);

An array containing the removed elements is returned by the splice method. You can see the removed array contains [3, 4] and the original array contains the remaining values.

The splice method can also be used to remove a range of elements from an array.

var list = ["bar", "baz", "foo", "qux"];

list.splice(0, 2);

// Starting at index position 0, remove two elements ["bar", "baz"] and retains ["foo", "qux"].

If you know the value you want to remove from an array you can use the splice method. First you must identify the index of the target item. You then use the index as the start element and remove just one element.

var arr = [1, 2, 3, 4, 5, 6, 7, 8, 9, 0];

for( var i = 0; i < arr.length; i++){

if ( arr[i] === 5) {

arr.splice(i, 1);

}

}

//=> [1, 2, 3, 4, 6, 7, 8, 9, 0]

1. Можно ли пропускать части **for**? Что получится, если написать for(;;)?

Any part of for can be skipped.

For example, we can skip the beginning if we don't need to do anything before the start of the loop.

Like this:

let i = 0; // we already have a declared i with an assigned value

for (; i < 3; i++) { // we don't need to "start

alert( i ); // 0, 1, 2

}

We can remove the step as well:

let i = 0;

for (; i < 3;) {

alert( i++ )

}

This will make the loop look like while (i < 3).

Or we can remove the whole thing and get an endless loop:

**for (;;)** {

// it will be executed forever

}

The semicolons themselves ; must be present, otherwise there will be a syntax error.

1. Самостоятельно разберитесь, как работает цикл while и приведите два примера кода с его использованием.

The JavaScript while statement creates a loop that executes a block of code as long as the test condition evaluates to true.

The following illustrates the syntax of the while statement.

while (expression) {

// statement

}

The while statement evaluates the expression before each iteration of the loop.

If the expression evaluates to true, the while statement executes the statement. If the expression evaluates to false, execution continues with the statement after the while loop.

The while loop evaluates the expression before each iteration, therefore, the while loop is known as a pretest loop. For this reason, it is possible that the statement inside the while loop is never executed.

See the following example that uses the while statement:

let count = 1;

while (count < 10) {

console.log(count);

count +=2;

}

How the script works

* First, outside of the loop, the count variable is set to 1.
* Second, before the first iteration begins, the while statement checks if count is less than 10 and execute the statements inside the loop body.
* Third, in each iteration, the loop increments count by 2 and after 5 iterations, the condition count < 10 is no longer true, so the loop terminates.

The output of the script in the console window is as follows:

1

3

5

7

9

// program to find the sum of positive numbers

// if the user enters a negative numbers, the loop ends

// the negative number entered is not added to sum

let sum = 0;

// take input from the user

let number = parseInt(prompt('Enter a number: '));

while(number >= 0) {

// add all positive numbers

sum += number;

// take input again if the number is positive

number = parseInt(prompt('Enter a number: '));

}

// display the sum

console.log(`The sum is ${sum}.`);

**Output**

Enter a number: 2

Enter a number: 5

Enter a number: 7

Enter a number: 0

Enter a number: -3

The sum is 14.

In the above program, the user is prompted to enter a number.

Here, parseInt() is used because prompt() takes input from the user as a string. And when numeric strings are added, it behaves as a string. For example, '2' + '3' = '23'. So parseInt() converts a numeric string to number.

The while loop continues until the user enters a negative number. During each iteration, the number entered by the user is added to the sum variable.

When the user enters a negative number, the loop terminates. Finally, the total sum is displayed.

1. Какой получится массив, если создать его вот так new Array(5)?

It will be an array with 5 undefined elements.

alert( arr.length ); // length 5

1. Как вывести чётные числа от 2 до 10 при помощи цикла for?

for (let i = 1; i < 10; i++) {

if (i % 2 !== 0)

continue;

alert(i);

}

The result will be 2,4,6,8 because we start with i=1, however, since 1%2 !==0 , this part of code will be skipped and the directive moves further on to i=2 and in this case 1%2 ==0, so the console will show us 2. And same steps are done further on, till i=9. So, this means that the directive continue stops executing the loop statement and turnes to a next iteration for with the new i. So, alert is done only for even figures.

1. Каков будет результат выполнения этого кода? Почему?

let arr = ["a", "b"];

arr.push(function() {

alert( this );

})

arr[2](); // ?

The result will be

(function() {alert( this )

because this element was added at the end of the given array by using the command push.

1. Три основных способа перебора элементов массива?

Cycle for (traditional).

Cycle for ... of

forEach method (appeared in ES5)

1. Как можно выбрать все инпуты из вашей формы регистрации из прошлого ДЗ с помощью querySelector\*?

let elements = document.querySelectorAll('input');

console.log(elements);

1. Самостоятельно разберитесь, как можно проще всего сделать сортировку в массиве на JS? *Пожалуйста, не усложняйте ответ на этот вопрос* 😸

Sorting arrays in JavaScript is done using the array.sort() method.

// Alphabetical sorting in ascending order:

var myarray=["Bob", "Bully", "Amy"]

myarray.sort() // Array becomes ["Amy", "Bob", "Bully"]

// Alphabetical sorting in descending order:

var myarray=["Bob", "Bully", "Amy"]

myarray.sort()

myarray.reverse() //The array becomes ["Bully", "Bob", "Amy"]

Now, look at what happens when we call array.sort() on an array of numbers:

var myarray=[7, 40, 300]

myarray.sort() //It now becomes [300,40,7]

Although 7 is numerically smaller than 40 or 300, in lexicographical order, 7 is larger, so it is at the rightmost position in the sorted array. Always keep in mind that by default array.sort() sorts the elements in lexicographic order.

1. Как можно принудительно остановить выполнение цикла?

The break statement "jumps out" of a loop.