JavaScript Array

JavaScript array is an object that represents a collection of similar type of elements.

There are 3 ways to construct array in JavaScript

1. By array literal
2. By creating instance of Array directly (using new keyword)
3. By using an Array constructor (using new keyword)

1) JavaScript array literal

The syntax of creating array using array literal is given below:

var arrayname=[value1,value2.....valueN];

As you can see, values are contained inside [ ] and separated by , (comma).

Let's see the simple example of creating and using array in JavaScript.

```
<script>
var emp=["Sonoo","Vimal","Ratan"];
for (i=0;i<emp.length;i++){
document.write(emp[i] + "<br/>");
}
</script>
```

The .length property returns the length of an array.

Output of the above example

```
Sonoo
Vimal
Ratan
```

2) JavaScript Array directly (new keyword)

The syntax of creating array directly is given below:

var arrayname=new Array();

Here, **new keyword** is used to create instance of array.

Let's see the example of creating array directly.

```
<script>
var i;
var emp = new Array();
emp[0] = "Arun";
emp[1] = "Varun";
emp[2] = "John";

for (i=0;i<emp.length;i++){
document.write(emp[i] + "<br>");
}
</script>
```

Output of the above example

```
Arun
Varun
John
```

3) JavaScript array constructor (new keyword)

Here, you need to create instance of array by passing arguments in constructor so that we don't have to provide value explicitly.

The example of creating object by array constructor is given below.

```
<script>
var emp=new Array("Jai","Vijay","Smith");
for (i=0;i<emp.length;i++){
document.write(emp[i] + "<br>");
}
</script>
```

Output of the above example

```
Jai
Vijay
Smith
```

JavaScript Array Methods

Let's see the list of JavaScript array methods with their description.

Methods	Description
concat()	It returns a new array object that contains two or more merged arrays.
copywithin()	It copies the part of the given array with its own elements and returns the modified array.
every()	It determines whether all the elements of an array are satisfying the provided function conditions.
fill()	It fills elements into an array with static values.
filter()	It returns the new array containing the elements that pass the provided function conditions.
find()	It returns the value of the first element in the given array that satisfies the specified condition.
findIndex()	It returns the index value of the first element in the given array that satisfies the specified condition.
forEach()	It invokes the provided function once for each element of an array.
includes()	It checks whether the given array contains the specified element.
indexOf()	It searches the specified element in the given array and returns the index of the first match.
join()	It joins the elements of an array as a string.

lastIndexOf()	It searches the specified element in the given array and returns the index of the last match.
map()	It calls the specified function for every array element and returns the new array
pop()	It removes and returns the last element of an array.
push()	It adds one or more elements to the end of an array.
reverse()	It reverses the elements of given array.
shift()	It removes and returns the first element of an array.
slice()	It returns a new array containing the copy of the part of the given array.
sort()	It returns the element of the given array in a sorted order.
splice()	It add/remove elements to/from the given array.
unshift()	It adds one or more elements in the beginning of the given array.