Arrays

Array is a block of memory which is used to store multiple values of hetrogeneous type .

Creation of arrays
In js array is an object.

We can create array object in three different ways.

1. Using array literal.
    a. Syntax

```
let arr = [value1, value2,    ];
```

Eg:

```
let arr = [10,20,30];
console.log(typeof arr);
```

2. By creating an instance of array using new operator.

```
let arr2 = new Array();
```

3. By creating an instance of array and initializing the elements using array can stopped.

```
let arr = new Array(10,20,30);
```

To access the array element

We can access the array element with the help of array object reference and array operator and index.

```
array_object_ref[index];
```

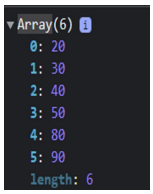
Index

It is a number which starts with 0 and ends with length of the array object -1.
Eg:

```
let arr1= [10,20,30];
//To print 2nd element, index is 2-1=1
console.log(arr1[1]);
```

Shift method will help to remove from first index.

```
var arr=[10,20,30,40,50,80,90];
arr.shift();
console.log(arr);
```



Unshift will add item in first index.

To retrieve element from array we use index.

indexOf()

The indexOf method returns the index of a particular element which is passed to it.

```
var hobbies
=['reading','singing','cycling','sleeping','coding','travellin
g','cricket'];
console.log(hobbies.indexOf('cricket'));
```


```
console.log(hobbies.indexOf('eating'));
```

includes()

The includes method of array weather the search element is present in an array, along with its index value.

Syntax

```
includes(search value , from index)
```

From index is not compulsory.

Example 1

```
var hobbies
=['reading','singing','cycling','sleeping','coding','travellin
```

```
g','cricket'];
console.log(hobbies.includes('cricket'));

Output : true
```

Example 2

```
var hobbies
=['reading','singing','cycling','sleeping','coding','travellin
g','cricket'];
console.log(hobbies.includes('eating'));

Output : false
```

Splice()- It helps to Modify an array.

In the splice() method,

- The first argument is the index of an array to start removing an item from.
- The second argument is the number of elements that you want to remove from the index element.

Syntax: Splice(start index , delete count, items);

```
var num=[2,3,5,9,12,15,23];
console.log(num);
num.splice(1,2,300);
console.log(num);

Output:
▶ (7) [2, 3, 5, 9, 12, 15, 23]
▶ (6) [2, 300, 9, 12, 15, 23]
```

```
var num=[2,3,5,9,12,15,23];
console.log(num);
num.splice(2,2,50)
console.log(num);
Output:
▶ (7) [2, 3, 5, 9, 12, 15, 23]
▶ (6) [2, 3, 50, 12, 15, 23]
```

```
var num=[2,3,5,9,12,15,23];
console.log(num);
num.splice(1,3)
console.log(num);
```

Output:

```
(7) [2, 3, 5, 9, 12, 15, 23]
(4) [2, 12, 15, 23]
```

```
var num=[2,3,5,9,12,15,23];
console.log(num);
num.splice(2,3,0)
console.log(num);
```

Output:

```
(7) [2, 3, 5, 9, 12, 15, 23]
(5) [2, 3, 0, 15, 23]
```

slice()

It create new array instead of modifying in same array.
It will not consider the last element.
Slice method consider start index and end index element will be ignore while slicing.

Syntax: Slice(start index , end index);

- Difference between splice and slice

splice	slice
Original will be modified	It create new array
Syntax: Splice(start index , delete count, items);	Syntax: Splice(start index , end index);
Splice accept negative values	Slice will accept negative value and give empty string when we write -ve in starting index.