



INNOMATICS
RESEARCH LABS

JavaScript

Array



Intro

1. In computer science **arrays are indexed data structures** starting at zero.
2. In basic definition **data structure determines how data is stored in a computer memory.**
3. When you use the right data structure at the right time in your application you'll get the best performance possible



Array declaration

- The square bracket notation \rightarrow `[]`

```
1 //create an array
2 var a = [1,2,3]
```

- The new `Array()` syntax \rightarrow `new Array()`

```
1 //create an array
2 var a = new Array(1,2,3)
3 console.log(a)
```



Accessing Array

We can access an array element using index number:

```
2  var a = ["manju", "akhila", "swaroop"]
3
4  console.log(a[1])           // Output: akhila
5
6  var b = new Array(10,20,30,40);
7
8  console.log(b[3])           // Output: 40
9
10 //Changing array value
11 a[2] = "atul"
12
13 console.log(a)               // Output:["manju", "akhila", "atul"]
```



Array Iteration

- using loops (for, while, do while)

```
var a = [1,2,3,4,5,6]

//using for loop
for(var i = 0; i < a.length ; ++i){
    console.log(a[i]);
}

//using while loop
var i = 0;
while(i < a.lenght){
    console.log(a[i]);
    ++i;
}
```



- using `forEach()`

```
var a = [1,2,3,4,5,6]

a.forEach((val) => {
  console.log(val)
})
```



push() & pop() method

- push()
 - When we want to add an element to the end of your array

```
var a = [1,2,3,4]

a.push(99)           // it will add 99 in the end of array

console.log(a)       //output- [1,2,3,4,99]
```



- pop()
 - When we want to remove an element to the end of your array

```
var a = [1,2,3,4]

a.pop()           // it will remove last element of array i.e 4

console.log(a)     //output- [1,2,3]

var b = ["cat","dog","mouse"]

b.pop()

console.log(b)     // output - ["cat","dog"]
```



shift() & unshift() method

- unshift()
 - When we want to add an element to the start of your array

```
var a = [1,2,3,4]

a.unshift(50)           // it will add 50 element in the starting of array

console.log(a)          // output: [50,1,2,3,4]

a.unshift(32,44)        // it will add 32 & 44 element in the starting of array

console.log(a)          // output: [32,44,50,1,2,3,4]
```



- shift()
 - When we want to remove an element to the start of your array

```
var a = [1,2,3,4]

a.shift()           // it will remove first element of array i.e 1

console.log(a)      //output- [2,3,4]

var b = ["cat","dog","mouse"]

b.shift()

console.log(b)      // output - ["dog", "mouse"]
```



THANK YOU !

