JavaScript Objects

A javaScript object is an entity having state and behavior (properties and method). For example: car, pen, bike, chair, glass, keyboard, monitor etc.

JavaScript is an object-based language. Everything is an object in JavaScript.

JavaScript is template based not class based. Here, we don't create class to get the object. But, we direct create objects.

## **Creating Objects in JavaScript**

There are 3 ways to create objects.

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

## **1) JavaScript Object by object literal**

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

1. object={property1:value1,property2:value2.....propertyN:valueN}

As you can see, property and value is separated by : (colon).

Let’s see the simple example of creating object in JavaScript.

<html>

<body>

<script>

emp={id:102,name:"Shyam Kumar",salary:40000}

document.write(emp.id+" "+emp.name+" "+emp.salary);

</script>

</body>

</html>

## **2) By creating instance of Object**

The syntax of creating object directly is given below:

1. var objectname=new Object();

Here, **new keyword** is used to create object.

Let’s see the example of creating object directly.

1. **<script>**
2. var emp=new Object();
3. emp.id=101;
4. emp.name="Ravi Malik";
5. emp.salary=50000;
6. document.write(emp.id+" "+emp.name+" "+emp.salary);
7. **</script>**

## **3) By using an Object constructor**

Here, you need to create function with arguments. Each argument value can be assigned in the current object by using this keyword.

The **this keyword** refers to the current object.

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

1. **<script>**
2. function emp(id,name,salary){
3. this.id=id;
4. this.name=name;
5. this.salary=salary;
6. }
7. e=new emp(103,"Vimal Jaiswal",30000);
9. document.write(e.id+" "+e.name+" "+e.salary);
10. **</script>**

# JavaScript Array

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

## **1) JavaScript array literal**

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

1. 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.

1. **<script>**
2. var emp=["Sonoo","Vimal","Ratan"];
3. for (i=0;i**<emp.length**;i++){
4. document.write(emp[i] + "**<br/>**");
5. }
6. **</script>**

## **2) JavaScript Array directly (new keyword)**

1. **<script>**
2. var i;
3. var emp = new Array();
4. emp[0] = "Arun";
5. emp[1] = "Varun";
6. emp[2] = "John";
8. for (i=0;i**<emp.length**;i++){
9. document.write(emp[i] + "**<br>**");
10. }
11. **</script>**

## **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.

1. **<script>**
2. var emp=new Array("Jai","Vijay","Smith");
3. for (i=0;i**<emp.length**;i++){
4. document.write(emp[i] + "**<br>**");
5. }
6. **</script>**