**JavaScript Basics**

**Javascript is case sensitive. Single and double inverted comma’s both works.**

**To modify the HTML Text-**

document.getElementById("demo").**innerHTML** = "Hello JavaScript";

**To modify image source-**

document.getElementById('myImage').src='pic\_bulboff.gif’;

**To modify CSS-**

document.getElementById("demo").style.fontSize = "35px";

document.getElementById("demo").style.display = "none";

**document.write**

document.write(5 + 6); //Should only be used for testing.

Using document.write() after an HTML document is fully loaded, will delete all existing HTML

**To show alert**

window.alert(5 + 6);

**To show log**

console.log(5 + 6);

**To link external JS file in html**

<script type="text/javascript" src="myScript.js"></script>

**JavaScript Display Possibilities**

JavaScript can "display" data in different ways:

* Writing into an HTML element, using **innerHTML**.
* Writing into the HTML output using **document.write()**.
* Writing into an alert box, using **window.alert()**.
* Writing into the browser console, using **console.log()**.

**Function Initialization**

function myFunction() {

document.getElementById("demo").innerHTML = "VSR - EVS.";

}

**Function Calling**

<button type="button" onclick="myFunction()">Try it</button>

**Variable Assignment**

var x, y, z; // Statement 1

x = 5; // Statement 2

y = 6; // Statement 3

z = x + y; // Statement 4

document.getElementById("demo").innerHTML = "The value of z is "+z;

**Note:**

* A **JavaScript program** is a list of programming **statements**.
* Fixed values are called **literals**. Variable values are called **variables**.

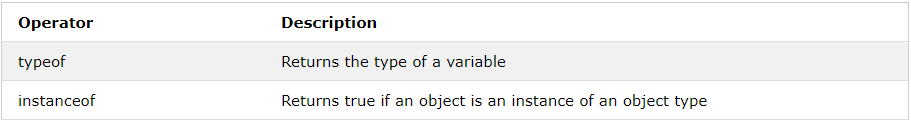
**JavaScript Comments**

* Code after double slashes **//** or between **/\*** and **\*/** is treated as a **comment**.

## **JavaScript Identifiers**

* In JavaScript, the first character must be a letter, or an underscore (\_), or a dollar sign ($).
* Numbers are not allowed as the first character.
* All JavaScript identifiers are **case sensitive**.
* JavaScript uses the **Unicode** character set.

## **JavaScript Type Operators**



## **JavaScript Arrays**

* var cars = ["Saab", "Volvo", "BMW"];

## **JavaScript Objects**

* var person = {firstName:"John", lastName:"Doe", age:50, eyeColor:"blue"};

## **Primitive Data**

typeof "John" // Returns "string"

typeof 3.14 // Returns "number"

typeof true // Returns "boolean"

typeof false // Returns "boolean"

typeof x // Returns "undefined" (if x has no value)

## **Complex Data**

The **typeof** operator can return one of two complex types:

* function
* object

The typeof operator returns object for both objects, arrays, and null.

typeof {name:'John', age:34} // Returns "object"

typeof [1,2,3,4] // Returns "object" (not "array", see note below)

typeof null // Returns "object"

typeof function myFunc(){} // Returns "function"

# **JavaScript Functions**

var x = myFunction(4, 3); // Function is called, return value will end up in x

function myFunction(a, b) {

return a \* b; // Function returns the product of a and b

}

## **JavaScript Scope**

## Automatically Global

If you assign a value to a variable that has not been declared, it will automatically become a **GLOBAL** variable.

This code example will declare a global variable **carName**, even if the value is assigned inside a function.

myFunction();

// code here can use carName

function myFunction() {

carName = "Volvo";

}

## **Accessing Object Properties**

***Way to access the object:***

*objectName.propertyName*

*objectName["propertyName"]*

var person = {

firstName: "John",

lastName : "Doe",

id : 5566

};

document.getElementById("demo").innerHTML = person.firstName + " " + person.lastName;

## **Accessing Object Methods**

*objectName.methodName()*

name = person.fullName();

var person = {

firstName: "John",

lastName : "Doe",

id : 5566,

fullName : function() {

return this.firstName + " " + this.lastName;

}

};

document.getElementById("demo").innerHTML = person.fullName;

**Javascript Events**

Here is a list of some common HTML events:

|  |  |
| --- | --- |
| **Event** | **Description** |
| onchange | An HTML element has been changed |
| onclick | The user clicks an HTML element |
| onmouseover | The user moves the mouse over an HTML element |
| onmouseout | The user moves the mouse away from an HTML element |
| onkeydown | The user pushes a keyboard key |
| onload | The browser has finished loading the page |

**To hide a HTML element**

document.getElementById("demo").innerHTML = "hidden"; //to hide using element id

document.getElementByClass("demo").innerHTML = "hidden"; //to hide using element class

document.querySelector("demo").innerHTML = "hidden"; //to hide using selector

**Q. When the variable count is larger than 10, the function decreament should be called using the parameters count and 1.**

var count;

        if(count > 10) {

            decreament(count, 1);

        }

**Q. In a loop from 1 to 10, in each iteration the first character of the variable longword shall be appended to the end of the variable longword**

var longword = "longword";

for(int i=0; i<10; i++) {

    longword = longword + longword.charAt(1);

}