**JAVA SCRIPT**

**Java script :-**

* JavaScript is an **object-based scripting language** that is lightweight and cross-platform.
* JavaScript is **not compiled** but translated. The JavaScript Translator (embedded in browser) is responsible to translate the JavaScript code.

JavaScript is used to create **interactive websites**. It is mainly used for:

* Client-side validation
* Dynamic drop-down menus
* Displaying data and time
* Displaying popup windows and dialog boxes (like alert dialog box, confirm dialog box and prompt dialog box)
* Displaying clocks etc.

**Example :-**

**<h2>**Welcome to JavaScript**</h2>**

**<script>**

document.write("Hello JavaScript by JavaScript");

**</script>**

**Note :-**

JavaScript provides 3 places to put the JavaScript code: within **body tag, within head tag and external JavaScript file**.

* The **script** tag specifies that we are using JavaScript.
* The **text/javascript** is the content type that provides information to the browser about the data.
* The **document.write()** function is used to display dynamic content through JavaScript.

**Ex:-**

**<script** type="text/javascript"**>**

document.write("JavaScript is a simple language for javatpoint learners");

**</script>**

**Java script Variable**

There are two types of variables in JavaScript : **local variable and global variable.**

 rules of declaring a JavaScript variable are :-

1. Name must start with a letter (a to z or A to Z), underscore( \_ ), or dollar( $ ) sign.
2. After first letter we can use digits (0 to 9), for example value1.
3. JavaScript variables are case sensitive, for example x and X are different variables.

Ex :-

var  x = 10;

var  \_value="sonoo";

**Local variable :-**

A JavaScript local variable is declared inside block or function. It is accessible within the function or block only.

Ex :-

**<script>**

function abc()

{

var x=10;//local variable

}

**</script>**

**Global variable:-**

A **JavaScript global variable** is accessible from any function. A variable i.e. declared outside the function or declared with window object is known as global variable.

Note:-

To declare JavaScript global variables inside function, you need to use **window object**.

Ex:- window.value=90;

Ex:-

**<script>**

var value=50;//global variable

function a()

{

alert(value);

}

function b(){

alert(value);

}

**</script>**

**Java script Data Types**

JavaScript provides different **data types** to hold different types of values. There are two types of data types in JavaScript.

1. Primitive data type
2. Non-primitive (reference) data type

**Note :-** JavaScript is a **dynamic type language**, means you don't need to specify type of the variable because it is dynamically used by JavaScript engine. You need to use **var** here to specify the data type. It can hold any type of values such as numbers, strings etc.

Ex:-

var a=40;//holding number

var b="Rahul";//holding string

There are **five types** of primitive data types in JavaScript. They are :

|  |  |
| --- | --- |
| **Data Type** | **Description** |
| String | represents sequence of characters e.g. "hello" |
| Number | represents numeric values e.g. 100 |
| Boolean | represents boolean value either false or true |
| Undefined | represents undefined value |
| Null | represents null i.e. no value at all |

The non-primitive data types are as follows:

|  |  |
| --- | --- |
| **Data Type** | **Description** |
| Object | represents instance through which we can access members |
| Array | represents group of similar values |
| RegExp | represents regular expression |