JavaScript Operators

Operators:

In JavaScript, an operator is **a special symbol used to perform operations on operands (values and variables)**. For example, 2 + 3; // 5. Here + is an operator that performs addition, and 2 and 3 are operands.

The **Assignment Operator** (=) assigns a value to a variable.

// Assign the value 5 to x  
let x = 5;  
// Assign the value 2 to y  
let y = 2;  
// Assign the value x + y to z:  
let z = x + y;

## **Types of JavaScript Operators**

There are different types of JavaScript operators:

* Arithmetic Operators
* Assignment Operators
* Comparison Operators
* Logical Operators
* Conditional Operators
* Type Operators

|  |  |
| --- | --- |
| **Operator** | **Description** |
| + | Addition |
| - | Subtraction |
| \* | Multiplication |
| \*\* | Exponentiation ([ES2016](https://www.w3schools.com/js/js_2016.asp)) |
| / | Division |
| % | Modulus (Division Remainder) |
| ++ | Increment |
| -- | Decrement |

Example 1

<!DOCTYPE html>

<html>

<body>

<h1>JavaScript Operators</h1>

<h2>The Assignment (=) Operator</h2>

<p id="demo"></p>

<script>

// Assign the value 5 to x

let x = 5;

// Assign the value 2 to y

let y = 2;

// Assign the value x + y to z

let z = x + y;

//Will do same for all operators

// Display z

document.getElementById("demo").innerHTML = "The sum of x + y is: " + z;

</script>

</body>

</html>

Example 2

<!DOCTYPE html>

<html>

<body>

<h1>JavaScript Arithmetic</h1>

<h2>The += Operator</h2>

<p id="demo"></p>

<script>

var x = 10;

x += 5;

document.getElementById("demo").innerHTML = x;

</script>

</body>

</html>

# JavaScript Data Types

let length = 16;                               // Number  
let lastName = "Johnson";                      // String  
let x = {firstName:"John", lastName:"Doe"};    // Object

# Javascript 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

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. For example:

1. var a=40;//holding number
2. var b="Rahul";//holding string

**Example :**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript</h2>

<p>When adding a number and a string, JavaScript will treat the number as a string.</p>

<p id="demo"></p>

<script>

let x = 16 + "Volvo";

document.getElementById("demo").innerHTML = x;

</script>

</body>

</html>

**JavaScript has dynamic types. This means that the same variable can be used to hold different data types**

**Example :**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Data Types</h2>

<p>JavaScript has dynamic types. This means that the same variable can be used to hold different data types:</p>

<p id="demo"></p>

<script>

let x; // Now x is undefined

x = 5; // Now x is a Number

x = "John"; // Now x is a String

document.getElementById("demo").innerHTML = x;

</script>

</body>

</html>

## **JavaScript primitive data types**

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

|  |  |
| --- | --- |
| **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 |

## **JavaScript non-primitive data types**

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 |

/\* let a=10;

let b=5;

let c=a%b;

let d=a/b;

document.write(c);

document.write(d); \*/

/\* const number = prompt("enter the number :");

if(number%2==0){

document.write("the number is even");

}else{

    document.write("the number is odd");

} \*/

/\* let x=20;

x +=5;

document.write(x); \*/

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <h1 id="demo"></h1>

    <script>

function product(x,y){

    return x+y;

}

document.getElementById("demo").innerHTML=product(5,6);

    </script>

</body>

</html>