**Interaction with alert(),prompt() and confirm()**

These functions are used for displaying message box and input box.

**alert()**

This function display message window and waits until end user press ok. Until this window is not closed end user cannot communicate with web page.

Syntax: alert(message)

**Example:**

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

        alert("Alert Window")

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**prompt()**

This function display input window, where end user input value.

Syntax: <variable-name>=prompt(”prompt message”, ”default”)

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

       let name=prompt("Name","Name");

       alert(name)

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**Example:**

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

       let num1=prompt("Number1 ");

       let num2=prompt("Number2 ");

       let num3=num1+num2

       alert(num3);

       alert(typeof num1)

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**confirm()**

This function display confirm window

The function confirm shows a modal window with a question and two buttons: OK and Cancel.

This function returns Boolean value(True/False)

If end user click on Ok, it returns True

If end user click on Cancel, it returns False

**Syntax:** confirm(message)

**Example:**

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

       let num1=prompt("Number1 ");

       let num2=prompt("Number2 ");

       let b=confirm("Add Numbers?");

       if(b)

       {

        alert(num1+num2);

       }

       else

       {

        alert(num1+","+num2);

       }

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**Type conversions or type casting**

Type conversion or typecasting it is process converting one type of value to another type.

This type conversion is done using type conversion functions.

1. Number()
2. Boolean()
3. String()

**Number()**

It is predefined function provided by java script.

This function is used to perform the following conversions

1. Integer to integer (number to number)
2. Float to float (number to number)
3. String to number
4. Boolean to number

Syntax: Number(value)

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

        let a=Number(34);

        let b=Number(1.5);

        let c=Number("45");

        let d=Number("1.5");

        let e=Number(true);

        let f=Number(false);

        alert(a);

        alert(b);

        alert(c);

        alert(d);

        alert(e);

        alert(f);

        let g=Number("a");

        alert(g);

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

Example:

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

        let a=prompt("Enter First Number");

        let b=prompt("Enter Second Number");

        let c=Number(a)+Number(b);

        alert(c);

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**String()**

String is a predefined function in java script.

This function is used to convert others types into string type.

**Syntax:** String(value)

**Example:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

        let a=String(45);

        let b=String(1.5);

        let c=String("JS");

        let d=String(true);

        let f=String(false);

        alert(a+b+c+d+f);

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**Boolean()**

This function is used to convert other types into Boolean type (true/false).

**Syntax: Boolean(value)**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

        let a=Boolean(1);

        let b=Boolean(0);

        alert(a);

        alert(b);

        let c=Boolean(100);

        alert(c);

        let d=Boolean(1.5);

        alert(d);

        let e=Boolean("true");

        alert(e);

        let f=Boolean("false");

        alert(f);

        let g=Boolean("A");

        alert(g);

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**Operators**

An operator is special symbol used for performing operations.

Java script operators are classified into different categories.

1. Arithmetic Operators
2. Assignment Operators
3. Comparison Operators
4. String Operators
5. Logical Operators
6. Bitwise Operators
7. Ternary Operators
8. Type Operators

**Arithmetic Operators**

These operators are used for perform arithmetic operations.

|  |  |
| --- | --- |
| **Operators** | **Description** |
| **+** | **Adding and concatenation** |
| **-** | **Subtraction** |
| **\*** | **Multiplication** |
| **/** | **Division** |
| **%** | **Modular** |
| **\*\*** | **Power of** |

**Example:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

        let a=10;

        let b=20;

        let c=a+b;

        alert(c);

        let f1=1.5;

        let f2=1.3;

        let f3=f1+f2;

        alert(f3);

        let f4=a+f1;

        alert(f4);

        let x=15;

        let y="20";

        let z=x+y;

        alert(z);

        let p=f1+"1.2";

        alert(p);

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**Example:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Document</title>

    <script>

       alert(10+20);

       alert(10-5);

       alert(5\*3);

       alert(5/2);

       alert(5%2);

       alert(5\*\*2);

    </script>

</head>

<body>

    <h1>JavaScript</h1>

</body>

</html>

**Assignment Operators (OR) Update Operators**

**A single operator perform two operations**

1. **Binary Operation**
2. **Assignment**

|  |  |
| --- | --- |
| **Operator** | **Description** |
| = |  |
| += |  |
| -= |  |
| \*= |  |
| /= |  |
| %= |  |
| \*\*= |  |