JavaScript

JS (JavaScript) is Case Sensitive

- All JS identifiers are **case sensitive**.
- Variables age and Age, are two different variables.

JS Character Set

- JS uses the **Unicode** character set.
- Unicode covers almost all the characters, punctuations, and symbols in the world.

JS and Camel Case

- Developer have used different ways of joining multiple words into one name…

first-name, last-name

first_name, last_name

FirstName, LastName

firstName, lastName

JavaScript Comments

- Comments can be used to explain JS code.

- Single Line Comments

  Single line comments start with //

- Multi-line Comments

  Multi-line comments start with /* and end with */.

JS Variables

JavaScript variables are containers for storing data values.

Example :

```
    var  i = 15;
    var  j = 10;
```

Example

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

<script>
var i = 15;
var j = 10;
var total = i + j;

document.getElementById("demo").innerHTML = "Total is " + total;
</script>
```

JS Identifiers

- All JavaScript **variables** must be **identified** with **unique names**.

- These unique names are called **identifiers**.

Rules for Declaring variables

- Names can contain letters, digits, underscores, and dollar signs.
- Names must begin with a letter.
- Names can also begin with $ and _ .
- Names are case sensitive (i and I are different variables).
- Reserved words cannot be used as variable name.

Assignment Operator

- In JS (JavaScript), the equal sign (=) is an "assignment" operator, not an "equal to" operator.

- It is use to assign value to variables

```
var  i = 50;
```

One Statement Code

- You can declare many variables in one single line.

```
var  user = “Felix ",  city= “Pune",  number = 987654;
```

or

```
var  user = “Felix ",
        city= “Pune",
        number = 987654;
```

JavaScript Operators

- Operators is a symbol that used to perform some operation.

Arithmetic Operators

Operator	Description
+	Addition
-	Subtraction
*	Multiplication
**	Exponentiation
/	Division
%	Modulus (Division Remainder)
++	Increment
--	Decrement

JavaScript Assignment Operators

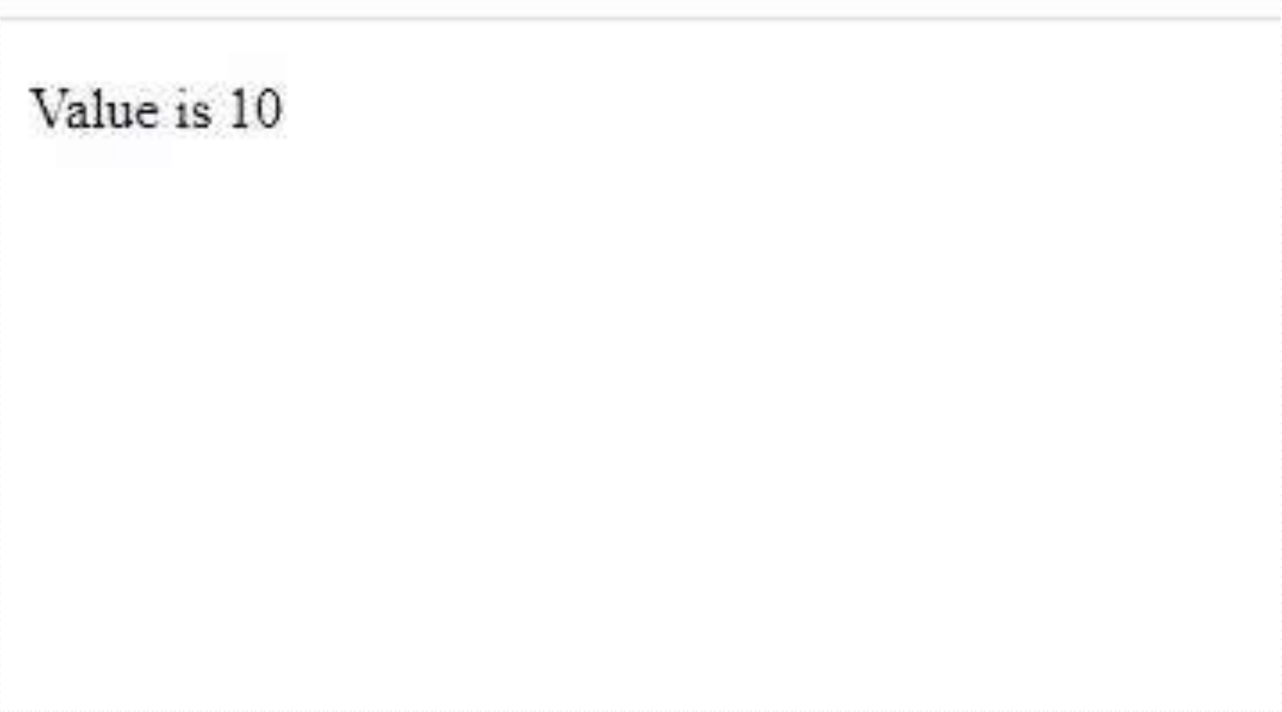
Operator	Example	Same As
=	x = y	x = y
+=	x += y	x = x + y
-=	x -= y	x = x - y
*=	x *= y	x = x * y
/=	x /= y	x = x / y
%=	x %= y	x = x % y
**=	x **= y	x = x ** y

Example

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

<script>
    var i = 5;
    var j = 2;
    var value = i * j;
    document.getElementById("demo").innerHTML = "Value is " + value;
</script>
```

Output



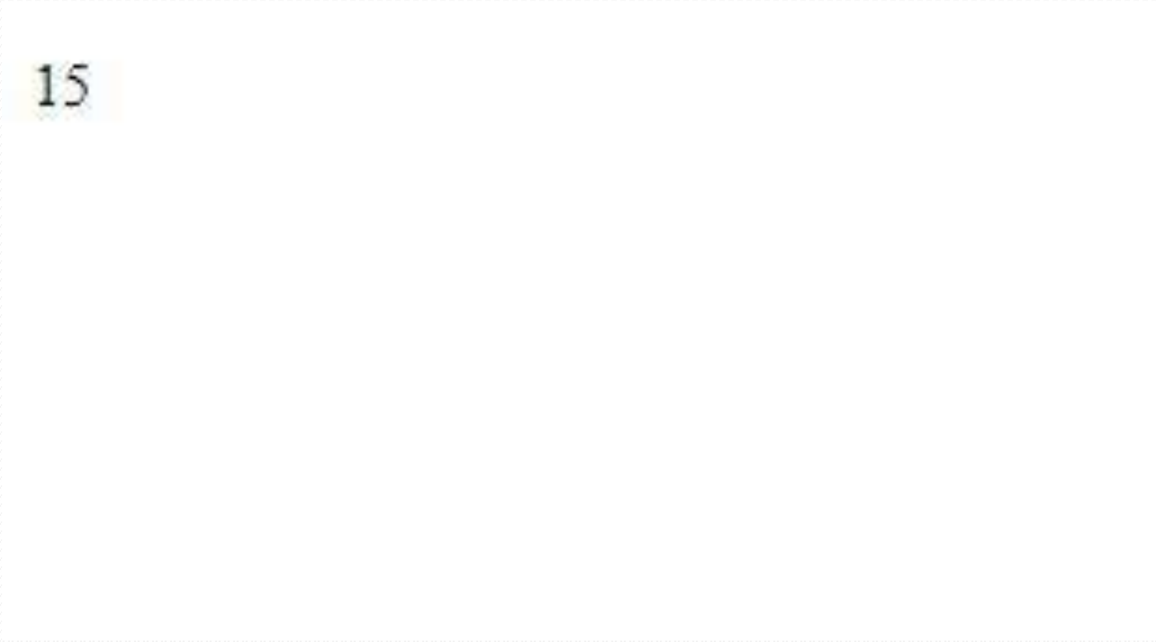
```
Value is 10
```

Example

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

<script>
    var x = 10;
    x += 5;
    document.getElementById("demo").innerHTML = x;
</script>
```

Output



```
15
```

JavaScript Comparison Operators

Operator	Description
==	equal to
===	equal value and equal type
!=	not equal
!==	not equal value or not equal type
>	greater than
<	less than
>=	greater than or equal to
<=	less than or equal to
?	ternary operator

JavaScript Logical Operators

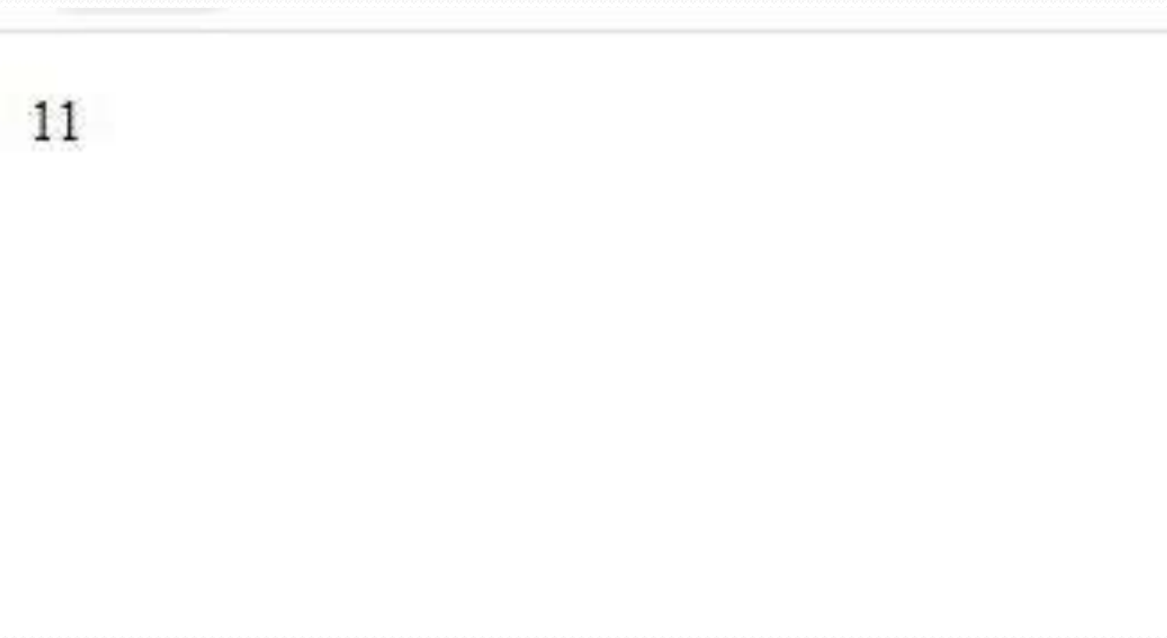
Operator	Description
&&	logical and
||	logical or
!	logical not

Example

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

 <script>
     var x = 10;
     x++;
     var z = x;
     document.getElementById("demo").innerHTML = z;
 </script>
```

Output



```
11
```

JS Data Types

JS variables can hold many **data types** like

numbers,

strings,

objects and more…

Data Types in JS

```
<script>
    var i = 16;                                         // Number
    var name = "Felix";                                 // String
    var obj = {firstName: "John", lastName: "Doe"};     // Object
</script>
```

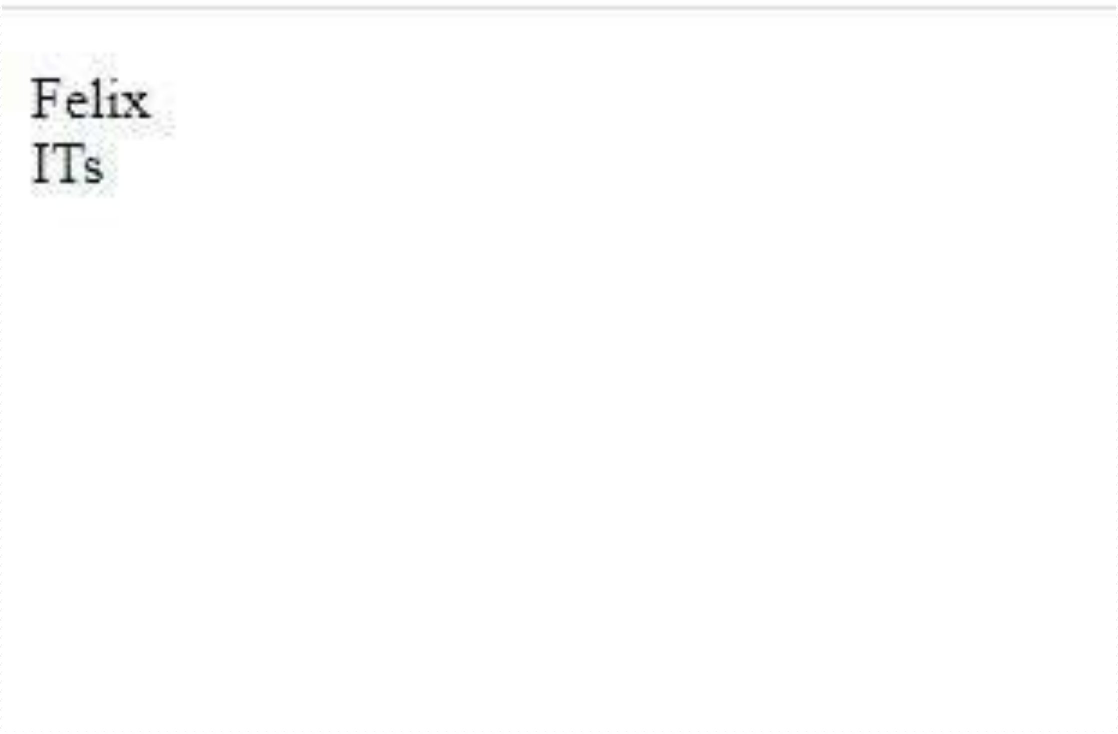
Example

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

 <script>
     var first = "Felix";
     var second = 'ITs';

     document.getElementById("demo").innerHTML =
               first + "<br>" +
               second;
 </script>
```

Output



```
Felix
ITs
```

JavaScript Arrays

- JavaScript arrays are written with square brackets.
- Array items are separated by commas.

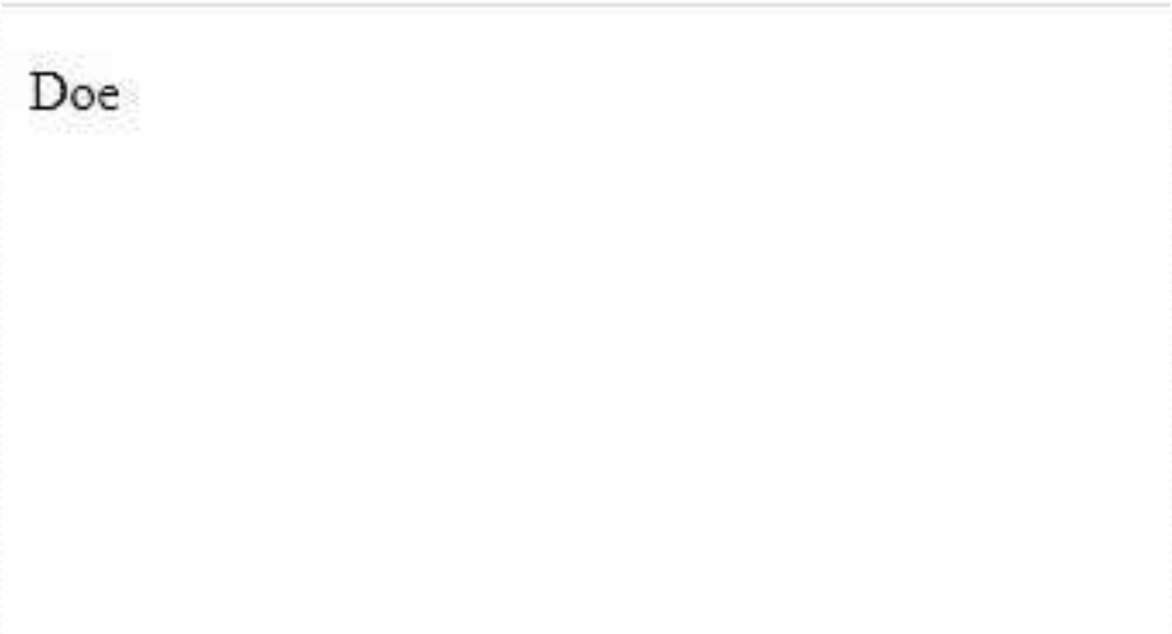
Example

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

<script>
    var names = ["John", "Doe", "Andy"];

    document.getElementById("demo").innerHTML = names[1];
</script>
```

Output



```
Doe
```

JavaScript Objects

- JavaScript objects are written with curly braces {}.

- Object properties are written as name:value pairs, separated by commas.

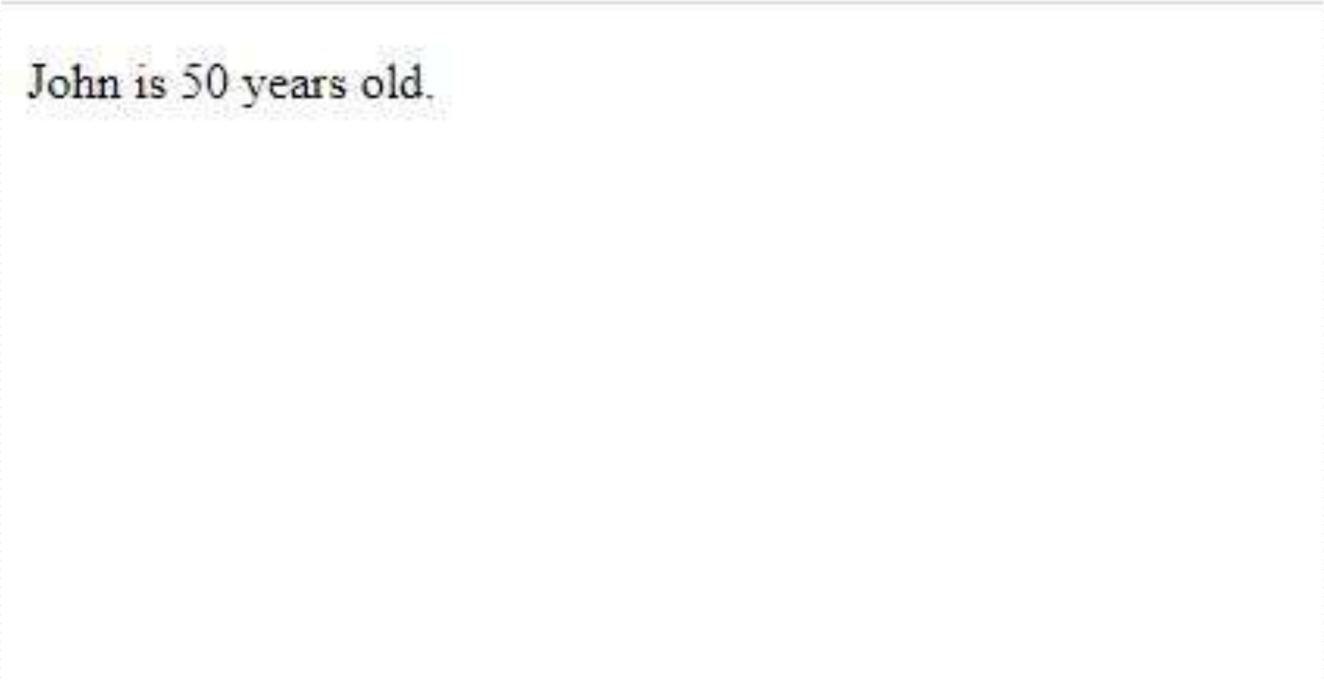
Example

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

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

    document.getElementById("demo").innerHTML =
            person.firstName + " is " + person.age + " years old.";
</script>
```

Output



```
John is 50 years old.
```

typeof Operator

You can use the JS typeof operator to find the type of a JS variable.

Example

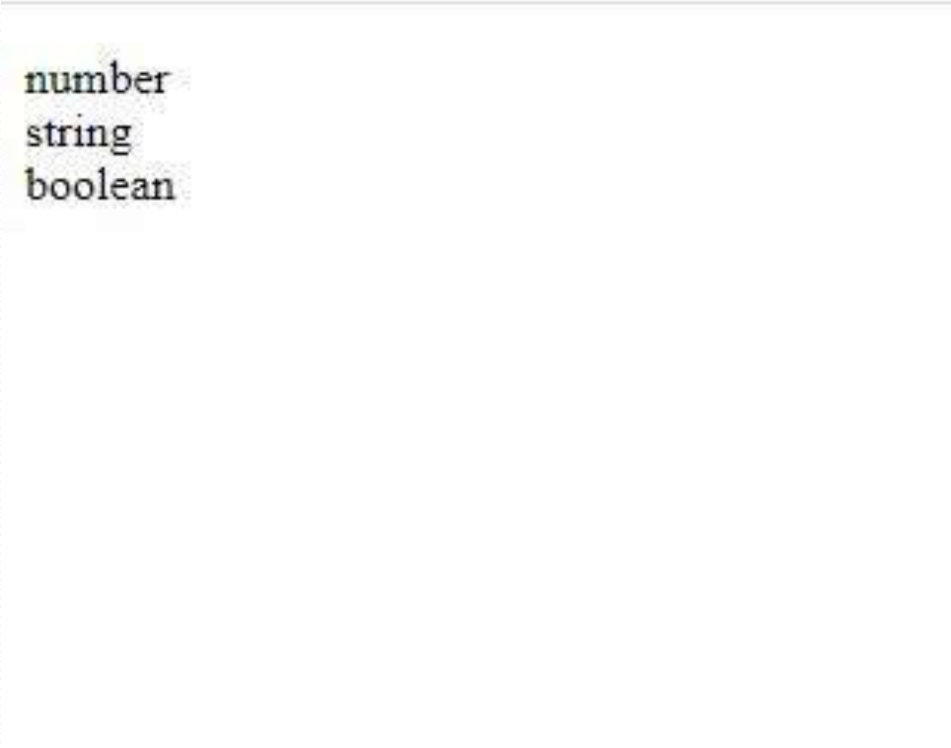
```
<p id="demo"></p>

 <script>

    var i = 10;
    var name = "Felix";
    var j = false;

    document.getElementById("demo").innerHTML =
           typeof i + "<br>" +
           typeof name + "<br>" +
           typeof j;
 </script>
```

Output



```
number
string
boolean
```

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