

Variables x

```
var a; // variable
var b = "init"; // string
var c = "Hi" + " " + "Joe"; // = "Hi Joe"
var d = 1 + 2 + "3"; // = "33"
var e = [2,3,5,8]; // array
var f = false; // boolean
var g = /()/; // RegEx
var h = function(){}; // function object
const PI = 3.14; // constant
var a = 1, b = 2, c = a + b; // one line
let z = 'zzz'; // block scope local
```

Arithmetic

```
a * (b + c) // grouping
person.age // member
person[age] // member
!(a == b) // logical not
a != b // not equal
typeof a // type (number, object, function...)
x << 2 x >> 3 // minary shifting
a = b // assignment
a == b // equals
a != b // unequal
a === b // strict equal
a !== b // strict unequal
a < b a > b // less and greater than
a <= b a >= b // less or equal, greater or eq
a += b // a = a + b (works with - * %...)
a && b // logical and
a || b // logical or
```

Data Types x

```
var age = 18; // number
var name = "Jane"; // string
var name = {first:"Jane", last:"Doe"}; // object
var truth = false; // boolean
var sheets = ["HTML","CSS","JS"]; // array
var a; typeof a; // undefined
var a = null; // value null
```

Objects

```
var student = { // object name
  firstName:"Jane", // list of properties and values
  lastName:"Doe",
  age:18,
  height:170,
  fullName : function() { // object function
    return this.firstName + " " + this.lastName;
  }
};
student.age = 19; // setting value
student[age]++; // incrementing
name = student.fullName(); // call object function
```

Loops ↻

For Loop

```
for (var i = 0; i < 10; i++) {
  document.write(i + " : " + i*3 + "<br />");
}
var sum = 0;
for (var i = 0; i < a.length; i++) {
  sum += a[i]; // parsing an array
}
html = "";
for (var i of custOrder) {
  html += "<li>" + i + "</li>";
}
```

While Loop

```
var i = 1;
while (i < 100) {
  i *= 2; // initialize
  // enters the cycle if statement :
  // increment to avoid infinite loop
  document.write(i + " , "); // output
}
```

Do While Loop

```
var i = 1;
do {
  i *= 2; // initialize
  // enters cycle at least once
  // increment to avoid infinite loop
  document.write(i + " , "); // output
} while (i < 100) // repeats cycle if statement is :
```

Break

```
for (var i = 0; i < 10; i++) {
  if (i == 5) { break; } // stops and exits the cycle
  document.write(i + " , "); // last output number is 4
}
```

Continue

```
for (var i = 0; i < 10; i++) {
  if (i == 5) { continue; } // skips the rest of the cycle
  document.write(i + " , "); // skips 5
}
```

If - Else ↕

```
if ((age >= 14) && (age < 19)) { // logical condition
  status = "Eligible."; // executed if condition is true
} else { // else block is optional
  status = "Not eligible."; // executed if condition is false
}
```

Switch Statement

```
switch (new Date().getDay()) { // input is current day
  case 6: // if (day == 6)
    text = "Saturday";
    break;
  case 0: // if (day == 0)
    text = "Sunday";
    break;
  default: // else...
    text = "Whatever";
}
```