

Guide to JavaScript Code

JavaScript Coding examples learn the fundamentals of JavaScript code

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Console Commenting and Alert

```
<!DOCTYPE html>
<html>
  <head>
    <title>JavaScript Code</title>
  </head>
  <body>
    <script src="app.js"></script>
  </body>
</html>
```

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```
console.log('window');
alert('hello');
console.log('Hello1');
//console.log('Hello2');
console.error('error');
console.warn('warning');
console.info('info'); //info message
{
  console.log('1');
  console.log('2');
}
/*
multiple lines
#1
#2
*/
```

JavaScript Code Variables let and const

Rules for variables

- Must be unique
- Cannot use reserved Keywords
- Can start with letter, dollar sign or underscore only no numbers
- Cannot have spaces within the name
- Can use numbers and letters within the name
- Variable names are case Sensitive do
- To make it more readable use camelCase or underscores to separate the words.

string	<u>app.js:17</u>
boolean	<u>app.js:19</u>
undefined	<u>app.js:21</u>
string	<u>app.js:24</u>
string	<u>app.js:25</u>
object	<u>app.js:26</u>
undefined	<u>app.js:27</u>

```
//let val = prompt('How are you?');
let $_val$_20 = 'great';
//console.log(val);
let first = 'Laurence';
const last = 'Svekis';
let spaceChar = ' ';
console.log(first + spaceChar + last);
let fullName = first + spaceChar + last;
first = 'Mike';
console.log(first + spaceChar + last);
let a,b,c,d;
console.log(a);
console.log(fullName);
let counter = 5;
```

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```
console.log(typeof(counter));  
counter = '5';  
console.log(typeof(counter));  
let boo = true;  
console.log(typeof(boo));  
let temp;  
console.log(typeof(temp));  
let val1 = null;  
let val2;  
console.log(typeof(fullName));  
console.log(typeof(counter));  
console.log(typeof(val1));  
console.log(typeof(val2));
```

JavaScript comparison and assignment Operators

```
let a = 5;  
let b = 10;  
let c = a + b;  
a = a + b;  
console.log(a);  
console.log(a+b);  
console.log(a*b);  
console.log(a-b);  
console.log(a/b);  
a+=5;  
console.log(a);
```

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```
a = a +5;
console.log(a);
a *= 10;
console.log(a);

let first = 'Laurence';
let last = 'Svekis';
let full = first + ' ' + last;
console.log(full);

let d = '5';
let e = 9;
console.log(e+e+e+d);
console.log(d+e+e+e);
//console.log(first-last);

let boo = (4==4);
boo = (4!=4);
boo = (4>4);
boo = (4>=4);
boo = ('4' === 4);
boo = ('4' !== 4);

console.log(boo);
```

JavaScript Arrays and Objects

```
const arr = ['one',5,true,[1,2,3]];
const arr1 = arr;
```

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```
console.log(arr.length);
arr[1] = 100;
arr[50] = 'test';
console.log(arr[1]);
console.log(arr.length);
arr.push('end');
let val = arr.pop();
arr.unshift('Start');
let val1 = arr.shift();
console.log(arr);
console.log(val);
console.log(val1);
arr1[10] = 'UPDATED';
console.log(arr);
console.log(arr1);
```

```
const obj1 = {
  first: 'Mike',
  first : 'Laurence',
  last : 'Svekis',
  id : 100,
  status:true,
  arr : arr,
  'full name' : 'LSvekis'
};
console.log(obj1);
console.log(obj1.first);
console.log(obj1['first']);
console.log(obj1['full name']);
```

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```
const obj2 = obj1;  
obj2.arr[4] = 'Hello World';  
console.log(obj1.arr);
```

JavaScript Function Expression and Declaration

```
fun2(3,5);
```

```
function fun2(a,b){  
  console.log(a + b);  
}
```

```
const fun1 = function(a,b){  
  console.log(a + b);  
}
```

```
fun1(3,5);
```

```
fun1(6,7);
```

```
fun1(8,4);
```

```
fun1(2,6);
```

```
const fun3 = (a,b)=>{  
  console.log(a+b);  
}
```

```
fun3(8,4);
```

```
fun3(2,6);
```

```
const fun4 = (a,b)=> console.log(a+b);
```

```
fun4(8,4);
```

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```

fun4(2,6);

(function(){
  console.log('JS ready');
})(); //IIFE

(()=>{
  console.log('iife 1');
})();

(()=>console.log('iife 2'))();

console.clear();
function fun5(a,b){
  return a + b;
}

const val1 = fun5(5,7);
console.log(val1);
console.log(fun5(15,27));

let val2 = 100;
let val3 = 500;

function fun6(a,b){
  let val2=1000;
  console.log(val2);
  return a,b;
}

```

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```
console.log(fun6(9,3));  
console.log(val2);
```

```
console.log(fun7(9));  
console.log(fun8(8));
```

```
function fun7(a,b){  
  a = a || 10;  
  b = b || 50;  
  console.log(a,b);  
  return a + b;  
}
```

```
function fun8(a=10,b=50){  
  console.log(a,b);  
  return a + b;  
}
```

```
let counter = 0;  
console.log(add());  
console.log(add());  
console.log(add());  
function add(){  
  counter++;  
  return counter;  
}
```

JavaScript Conditions if statement and switch

not true	<u>app.js:8</u>
First one	<u>app.js:11</u>
None	<u>app.js:12</u>
Last	<u>app.js:13</u>
true str	<u>app.js:16</u>

```
let counter = 14;
```

```
if(counter < 5){  
  console.log('less than 5');  
}else if(counter == 10){  
  console.log('is equal to 10');  
}else{  
  console.log('not true');  
}
```

```
console.log(checker(0));  
console.log(checker(10));  
console.log(checker(2));
```

```
const val1 = (counter > 10) ? 'true str' : 'false str';  
console.log(val1);
```

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```
function checker(val){  
  let mes;  
  switch(val){  
    case 0:  
      mes = 'First one';  
      break;  
    case 1:  
      mes = 'Middle';  
      break;  
    case 2:  
      mes = 'Last';  
      break;  
    default:  
      mes = 'None';  
  }  
  return mes;  
}
```

```
checkId(16);  
checkId(20);  
checkId(21);
```

```
function checkId(age) {  
  let mes;  
  if (age < 18) {  
    mes = 'No entry too young.';  
  } else if (age < 21) {  
    mes = 'Can enter no drinking';  
  }  
}
```

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```
    } else {  
      mes = 'Looks like you are old enough';  
    }  
    console.log(mes);  
    return mes;  
  }  
}
```

JavaScript Loops for while forEach functions

```
for (let i = 0; i < 10; i++) {  
  console.log(i);  
}
```

```
for (let i = 10; i > 0; i--) {  
  console.log(i);  
}
```

```
let i = 10;  
while (i < 10) {  
  console.log(i);  
  i++;  
}  
i = 0;  
do {  
  console.log(i);  
  i++;  
}
```

```
while (i < 10);

const arr = ['Laurence', 'Svekis', 555, 323, 12];
for (let i = 0; i < arr.length; i++) {
  console.log(arr[i]);
}
```

```
i = 0;
while (i < arr.length) {
  console.log(arr[i]);
  i++;
}
```

```
arr.forEach((item, index, array) => {
  console.log(item);
})
```

```
for (val of arr) {
  console.log(val);
}
```

```
const obj1 = {
  first: 'Laurence',
  last: 'Svekis',
  id: 100
}
```

```
for (key in obj1) {
  console.log(obj1[key]);
}
```

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```
}

looper1(0);
looper2(0);

function looper1(x) {
  console.log(x);
  x++;
  if (x < 10) {
    return looper1(x);
  }
  return x;
}

function looper2(x) {
  console.log(x);
  x++;
  if (x < 10) {
    return looper2(x);
  }
}
```

JavaScript Array methods

```
const arr = ['Laurence', 'Svekis', 100, '', null];
arr.push('end');
arr.unshift('start');
```

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```
arr.pop();
arr.shift();
arr.forEach(val => console.log(val));

const arr1 = arr.map((item,index,array)=> `${index} ${item}`);

const arr2 = arr.concat(arr1,arr1);
const arr3 = arr.concat(['one','two']);

const arr4 = arr;
arr.push('new item');

const arr5 = arr.concat();
arr.push('new item 2');

arr5.length = 0;

const arr6 = arr.filter((val)=>{
  return (typeof val == 'number')
})

const arr7 = arr.filter(Boolean);
const str1 = arr.toString();
const str2 = arr.filter(Boolean).join(' - ');
console.log(str1);
console.log(str2);

console.log(arr);
console.log(arr1);
```

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```

console.log(arr2);
console.log(arr3);
console.log(arr4);
console.log(arr5);
console.log(arr6);
console.log(arr7);
arr7.sort();
console.log(arr7);
arr7.reverse();
console.log(arr7);
const arr8 = [5,6,78,32,5,54,7,7,7,45,54334];
arr8.sort((a,b)=>{
  return a-b});
console.log(arr8);
arr8.sort((a,b)=>{
  return b-a});
console.log(arr8);
arr8.sort((a,b)=>{return Math.random()-0.5})
console.log(arr8);
for(let x=0;x<10;x++){
  const ind = Math.floor(Math.random()*arr.length);
  console.log(arr[ind]);
}

console.clear();
const arr9 = [0,1,2,3,4,5,6];
const val1 = arr9.splice(3,2,'X','X');
console.log(val1);
console.log(arr9);

```

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```
const arr10 = arr9.slice(2);
console.log(arr10);
console.log(arr9);

const boo1 = arr9.includes('X');
console.log(boo1);

const ind1 = arr9.indexOf('X');
console.log(ind1);
const ind2 = arr9.lastIndexOf('X');
console.log(ind2);
const ind3 = arr9.findIndex((item)=>{
  if(item==='X'){
    return item;
  }
});
console.log(ind3);
```

JavaScript String Methods

```
const first = `lauREnce`;
const last = `svEKis`;
const fullName = `${first} ${last}`;
let val = `${4+5+6}
  test
  test`;
console.log(fullName);
console.log(val);
```

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```
console.log(fullName.length);

val = fullName.slice(0,8);
val = fullName.slice(-5);

val = fullName.substring(0,8);
val = fullName.substring(9);

val = fullName.toLowerCase();
val = fullName.toUpperCase();

val = fullName.replace('e','X');
val = fullName.replaceAll('e','X');

val = capWord(fullName);

function capWord(words){
  const arr = words.split(' ');
  const temp = [];
  arr.forEach(word =>{
    temp.push(word[0].toUpperCase()+word.slice(1).toLowerCase());
  })
  return temp.join(' ');
}

val = fullName.toLowerCase().indexOf('e');
val = fullName.toLowerCase().lastIndexOf('e');
val = fullName.toLowerCase().search('ve');
```

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```
console.log(val);
```

Math Random Object

```
let num1 = 5.49999;
```

```
console.log(Math.round(num1));
```

```
console.log(Math.ceil(num1));
```

```
console.log(Math.floor(num1));
```

```
for(let i=0;i<10;i++){
```

```
    let num2 = Math.floor(Math.random() * 10)+1;
```

```
    console.log( ranValue(1,5));
```

```
}
```

```
function ranValue(min,max){
```

```
    return Math.floor(Math.random() * (max-min+1) ) + min;
```

```
}
```

JavaScript and JSON

String value of JavaScript Object [{"first":"Laurence","last":"Svekis"},{"first":"Jack","last":"Doe"}]

```
const people = [{
```

```
    "first": "Laurence",
```

```
    "last": "Svekis"
```

```
}, {
```

```
    "first": "Jack",
```

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```
    "last": "Doe"
  }];

console.log(people);
people.forEach(person=>{
  const temp = `${person.first} ${person.last}`;
  console.log(temp);
})

const str1 = JSON.stringify(people);
console.log(str1);
const obj1 = JSON.parse(str1);
console.log(obj1[0].first);
```