* Insert JavaScript – Put scripts directly before the closing body tag!

<script>

// JavaScript gose here

</script>

</body>

* Or Link to an external js file:

<script src='example.js'></script>

</body>

* To open a console:

Mac: Command+Option+J

Windows: Control+Shift+J

* Getting results onto your screen:

Open a popup box:

alert('Hello World!');

Display message in console:

console.log("Hello World!");

Add message to the page:

document.write('Hello World!');

TERNARY OPERATOR

//the ternary operator and switch statements

var firstName = 'John';

var age = 16;

age >= 18? console.log(firstName+' drinks beer.')

:console.log(firstName+' drinks juice.');

var drink = age >= 18? 'beer' : 'juice';

console.log(drink);

//same as

if (age>= 18){

var drink = 'beer';

} else {

var drink = 'juice';

}

console.log(drink);

SWITCH STATEMENT

//switch statment

var job='teacher';

switch(job){

case 'teacher':

case 'instructor':

console.log(firstName+' teaches kids how to code.');

break;

case 'driver':

console.log(firstName+' drives an uber in Lisbon.');

break;

case 'designer':

console.log(firstName+' designs beautiful websites.');

break;

default:

console.log(firstName+' does something else.');

}

Another switch statement example:

var firstName = 'John';

var age = 40;

switch(true){

case age<13:

console.log(firstName+' is a boy!');

break;

case age>=13 && age <20:

console.log(firstName+' is a teenager!');

break;

case age>=20 && age<30:

console.log(firstName+' is a young man!');

break;

default:

console.log(firstName+' is a man!');

}

// falsy values: undefined, null, 0, '', NaN (not a number)

// truthy values: NOT falsy values

var height;

height = 0;

if (height || height===0){

console.log('Variable is defined');

} else{

console.log('Variable has not been defined');

}

FUNCTIONS

//functions

function calculateAge(birthYear){

return 2018 - birthYear;

}

var ageJohn = calculateAge(1990);

var ageMike = calculateAge(1992);

var ageMary = calculateAge(1994);

console.log(ageJohn, ageMike, ageMary);

function yearsUntilRetirement(year, firstName){

var age = calculateAge(year);

var retirement = 65 - age;

if (retirement>0){

console.log(firstName+' retires in '+ retirement+' years.');

} else {

console.log(firstName+' is already retired!');

}

}

yearsUntilRetirement(1990, 'John');

yearsUntilRetirement(1952, ‘Mike’);

Array

//array from element #0

//initialize new array

var names =['John','Mark','Jane'];

var years = new Array (1990, 1969, 1948);

console.log(names[0]);

console.log(names);

console.log(names.length);

//mutate array data

names[1]='Ben';

names[names.length]='Mary';

names[5]='Mary';

console.log(names);

//different data types

var john = ['John', 'Smith', 1990, 'teacher', false];

//add an element to the end of array

john.push('blue');

//add an element to the start of array

john.unshift('Mr.');

console.log(john);

//delete the end element of the array

john.pop();

//delete the start element of the array

john.shift();

console.log(john);

//return the position of the elemment in array, or can test wether the element is in array

console.log(john.indexOf(1990));

var isDesigner = john.indexOf('designer') === -1 ? 'John is NOT a designer':'John IS a designer';

console.log(isDesigner);

//coding challenge 3 - tip calculator

function tipCalculator (bill){

var percentage;

if (bill<50){

percentage = 0.2;

} else if (bill>=50 && bill<200){

percentage = 0.15;

} else {

percentage = 0.1;

}

return percentage \* bill;

}

console.log(tipCalculator(10));

var bills = [124, 48, 268];

var tips = [tipCalculator(bills[0]), tipCalculator(bills[1]), tipCalculator(bills[2])];

var finalValues = [bills[0]+tips[0], bills[1]+tips[1], bills[2]+tips[2]];

console.log(tips);

console.log(finalValues);

objects and properties

//objects and properties

//object literal with curly braces

var john = {

firstName:'John',

lastName:'Smith',

birthYear:1990,

family:['Jane','Mark','Bob','Emily'],

job:'teacher',

isMarried:false

};

console.log(john.firstName);

console.log(john['lastName']);

var x = 'birthYear';

console.log(john[x]);

john.job = 'designer';

john['isMarried']=true;

console.log(john);

//new object syntax

var jane = new Object ();

jane.firstName = 'Jane';

jane.birthYear = '1969';

jane['lastName']='Smith';

console.log(jane);

Adding function to objects

//objects and methods - attach functions to objects

var john = {

firstName:'John',

lastName:'Smith',

birthYear:1992,

family:['Jane','Mark','Bob','Emily'],

job:'teacher',

isMarried:false,

calcAge: function(){

this.age = 2018 - this.birthYear;

}

};

john.calcAge();

console.log(john);

loop => i+=2 add 2 everytime in the loop

//loops and iteration

for (var i=5; i<=10; i+=2) {

console.log(i);

}

Continue and break and loop backward

//continue statements

var john = ['John', 'Smith', 1990, 'teacher', false];

for (var i=0; i<john.length; i++){

if (typeof john[i] !== 'string') {

continue;

}

console.log(john[i]);

}

//break statements

var john = ['John', 'Smith', 1990, 'teacher', false];

for (var i=0; i<john.length; i++){

if (typeof john[i] !== 'string'){

break;

}

console.log(john[i]);

}

//looping backwards

var john = ['John', 'Smith', 1990, 'teacher', false];

for (var i=john.length-1; i>=0; i--){

console.log(john[i]);

}

Tips calculator

//coding challenge 5

var john = {

fullName: 'John Smith',

bills:[124,48,268,180,42],

calcTips: function(){

this.tips = [];

this.finalValues=[];

for(var i=0; i<this.bills.length; i++){

//determin percentage based on tipping rules

var percentage;

var bill = this.bills[i];

if(bill<50){

percentage = 0.2;

} else if(bill>=50 && bill<200){

percentage = 0.15;

} else {

percentage = 0.1;

}

//add results to the corresponding arrays

this.tips[i] = bill \* percentage;

this.finalValues[i]=bill+bill\*percentage;

}

}

}

john.calcTips();

console.log(john);