6th Mar ‘20

<https://www.youtube.com/watch?v=PkZNo7MFNFg> freeCodecamp.org

code editors: sublime, Code visual studio, atom.

Online editors: codepen, scrimba. Codepen.com [okstamps@gmail.com](mailto:okstamps@gmail.com) 1@678582

Js ignore comments. Inline comments: // comment

Multi line comment /\* text \*/

Data types and variables: 7 data types: undefined, string, number, Boolean, null, symbol, object

Symbol is an immutable primitive value that is unique. Object can store key:value pairs

Declare variable is 3 ways: var <varName> = value (global scope). let <varName> = value (local scope)

const <varName> = value (cannot change the value) // var a; every js statement ends in ‘;’ semi colon

console.log allows to see things in the console.

Variable names and function names in Js is **case sensitive**

myVar++ , compound assignment var += can be used. If a number divided by 2 is 0, then the number is even.

Backtick ‘`’ can be used in include single and double quotation marks inside a string.

Concatenate strings with ‘+’. A variable can be considered as a ‘box’.

Strings are immutable.

var myVar

function formSentence(noun, proNoun, adjective, adVerb) {

myVar = "The " + noun + proNoun + adjective + adVerb // variable has function scope

return myVar

}

var text = formSentence("quick", "brown", "fox", "jumped")

console.log(text)

console.log(myVar)

output: "The quickbrownfoxjumped"

"The quickbrownfoxjumped"

--

Array can store any datatype. Arrays are mutable. Array.push()

var myArray = [ ["Jaison", "Jacob", 10], ["Sonia", "Jaison"], ["Esther", "Sarah"]]

myArray.push("Hello", "world")

console.log(myArray)

array.pop() pops the last element. // array.shift() removes the first element from the array.

Array.unshift() adds element to the beginning of the array. Typeof – used to find the type of a variable.

**If a variable is defined without ‘var’ or other specifiers, it becomes ‘global’** automatically.

Variables defined inside a function and parameters has a ‘local’ scope.

‘undefined’ is the default return value of a function.

var myArray = [1,2,3,4,0,5];

console.log(myArray);

myArray.push(6,7);

console.log(myArray);

myArray.pop();

console.log(myArray);

myArray.shift();

console.log(myArray);

var js = JSON.**stringify**(myArray);

console.log(js);

Always use ‘paratheses’ for an ‘if’ condition. true / false is lowercase.

Strict equality check ‘===’ uses no type conversion before the comparison it does with like ‘==’

function checkVal(a) {

if (a === 10) {

return 'a == 10'

} else if (a > 10) {

return 'a > 10'

} else

return 'a < 10'

}

console.log(checkVal(10))

function switchCase(val) {

var answer = " ";

switch (val) {

case "a":

answer = "Apple";

break;

case "b":

answer = "Banana";

break;

case "c":

answer = "Carrot";

break;

case "d":

anwer = "Dango";

break;

default:

answer = "Happy"

break;

}

return answer;

}

var res = switchCase("a");

console.log(res)

objects use properties to access data.

Properties can be accessed using object.propertyname or object[property name]

Delete object.property can be used to delete the property.

randomRagne(), parseInt(string, base). Ternary: <condition> ? ‘return if true’ : ‘return if false’

function checkSign(num) {

return num > 0 ? "positive" : num < 0 ? "negative" : "zero"; // see the usage like 'else if'

}

console.log(checkSign(0));

‘let’ will not allow a variable to be declared twice in the same scope. let maps only to its ‘scope’

“use strict” at the top of the programs to catch coding errors.

Can mutate an array declared with ‘const’

Object.freeze(objectconstVARIABLE) immutates the variable.

// anonymous function

Const var just = function () {

return new Date();

};

// another form

var just = () {

return new Date();

};

// another form

var just = () => new Date();

console.log(just);

--

Rest operator is 3 dots’ …’

It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions. In this path you will learn the basics of JavaScript as well as more advanced topics such as promises, asynchronous programming, proxies and reflection.

17th March ‘20

Modern JavasScript from the beinning. [**Brad Traversy**](https://www.udemy.com/user/brad-traversy/) (Udemy)

**JQuery** is a JavaScript library, a framework that helps you use JavaScript to simplify common web tasks. **Ajax** is a technique using JavaScript to construct an XMLHttpRequest.

Node.js is an open-source, cross-platform, JavaScript runtime environment that executes JavaScript code outside of a browser.

Ajax is a set of web development techniques using many web technologies on the client side to create asynchronous web applications. With Ajax, web applications can send and retrieve data from a server asynchronously without interfering with the display and behavior of the existing page

Es2015 // es5 prototypes es6 classes, react, angular // arrow functions // Materialize CSS, Skelton CSS, Webpack & Babel to compile code to older es5 js.

Visual studio code – live server – local host port#5500 //live server // bracket pair colorizer // Atom live server

127.0.0.1 is loopback address

document.querySelector("h1").style.color = "red" // use f12 to access chrome browser console.

console.table({a:1,b:2,c:3})

console.error(“This is an error”) // console.clear(); // console.warn(“This is a warning”) // console.time(); console.timeEnd();

variable definitions using var, (let, const introduced in es6 2015)

variables defined with var, let can be reassigned

variable names can include only letters, numbers, \_, $. Cannot start with a number

private variables in js uses \_variablename notation. Multi name variables use camelCase notation

php\_case, PascalCase.

Let is identical to var in ‘global scope’, but has advantage when it comes to ‘block scope’

Select text, ‘ctrl+//’ to comment out the text

Cannot reassign variables defined with ‘const’ modifier. Const variables has to be initialized upon declaration.

Data inside a ‘const object’ can be reassigned. But cannot redeclare the object itself.

Const data ={name:”Jaison”, age:44} // data.name=”Jacob” is valid

Array.push(value) – to add an element to an array.

Data types: Primitive and reference types.

primitive– stored where the variable directly accesses – on the stack (string, number, Boolean, null, undefined, symbos(es6)

Reference – objects that are stored on the heap (dynamically allocated memory) – a pointer to a location in memory (arrays, object literals, functions, dates, anything else)

Object wrappers for strings and numbers.

JS is a dynamically typed language – means datatypes are associated with the values, not with the variables.

Java, C# are statically typed – means datatype is associated with the variable, not with the value

TypeScript, Flow are superset of JS, which allows additional features such as static typing.

Console.log(typeof variable) // Boolean ‘true / false’ are lower case. // typeof null is an object, which is a bug. // const sym = Symbol() // ‘length’ is a property of string datatype

Programmer doesType conversion and JS does type coercion. String(value), object.toString()

Object.toFixed() – works only on numbers; can give decimals. parseInt(‘100’), parseFloat(‘100.30’)

The null value is zero // JavaScript engine.

String.concat(,) string.toUpperCase(); string.toLowerCase(); indexOf(<char of a string>); lastIndexOf(char); charAt(2); string.substring(0,4); slice(0,4); str.split(<char>); str.replace(arg1, arg2);

Str.includes(‘string’) – returns true/false

Slice is mostly used with arrays to pull things out, also can be used with strings.

Document.body.innerHTML

Template strings(es6): uses backtick and ${} notation.

Constructors use ‘new’ always.

Array.push(val) – adds val to the end. Array.unshift(val) – adds val to the front.

Array.pop() – removes from end. Array.shift() – removes from front. Array.splice(fromindex, toindex) – removes elements // Array.reverse() // val = Array.concat(array)

Array sorting:

var a= [10,20,30,15,25,35,50,3]

//sorting takes a function

**val = a.sort(function(x,y){return x - y})**

console.log(val)

output: [ 3, 10, 15, 20, 25, 30, 35, 50 ]

-------------

Array.find(val)

var a= [10,20,30,15,25,35,50,3]

function over50(num){

return num >28

}

**x = a.find(over50)**

console.log(x)

output:30

To reference a property inside an object, use ‘this’. In JS, dictionaries are called ‘object literals’

Month January starts as 0 for year in Date object. So December will be 11.

Today.getMonth(), today.getFullYear(), today.getHours(), today.getMilliseconds(), today.getTime() – returns seconds past 1st jan 1970.

Date.setMonth(val), date.setDate(val)

To check the value and type in a comparison, use triple equals. ‘===’.

If else if else // logical ‘and’ is represented as && and ‘or’ as ||.

Ternary is - <condition>? True : False // 10 > 5? ’10 is greater’: ’10 is lesser’

Curly braces are optional in if statement.

Switch is a different way of using ‘if’.

xcross