



JavaScript

— Dynamic and Interactive Content —

What is JavaScript

Dynamic programming language that, when applied to an HTML document, can provide dynamic interactivity on websites.

Tools used within this course.

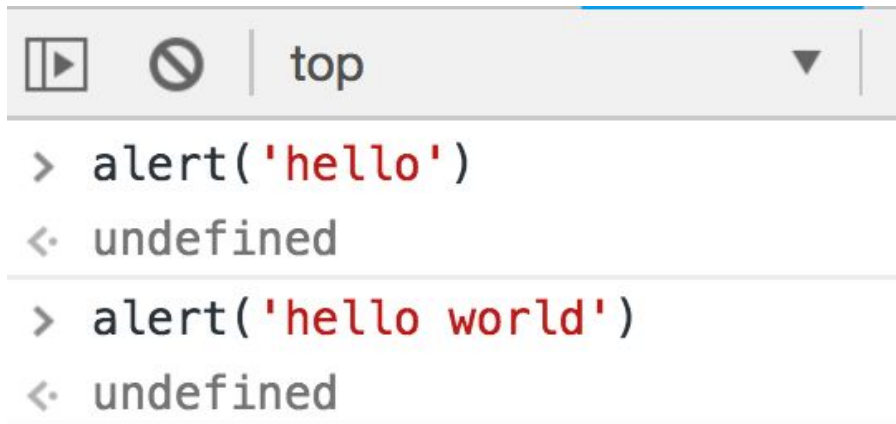
<http://brackets.io/>

<https://developers.google.com/web/tools/chrome-devtools/>

Welcome to JavaScript

Write an alert in your browser.

Try it in your browser console.



The image shows a browser console interface. At the top, there is a toolbar with a play button icon, a no-interaction icon (a circle with a slash), and a dropdown menu currently showing 'top'. Below the toolbar, the console displays two lines of code execution. The first line is '> alert('hello')' followed by '< undefined'. The second line is '> alert('hello world')' followed by '< undefined'. The text is styled with a light gray background and a thin horizontal line separating the two execution blocks.

```
> alert('hello')  
< undefined  
  
> alert('hello world')  
< undefined
```

Where can you write JavaScript

As attributes

In script tag (head section or in body)

As a linked js file

Write JavaScript

```
console.dir(document);
```

```
console.log('hello');
```

```
document.querySelector('h2').innerHTML = "hello world";
```

JavaScript Code

White space

Comment blocks

Comments

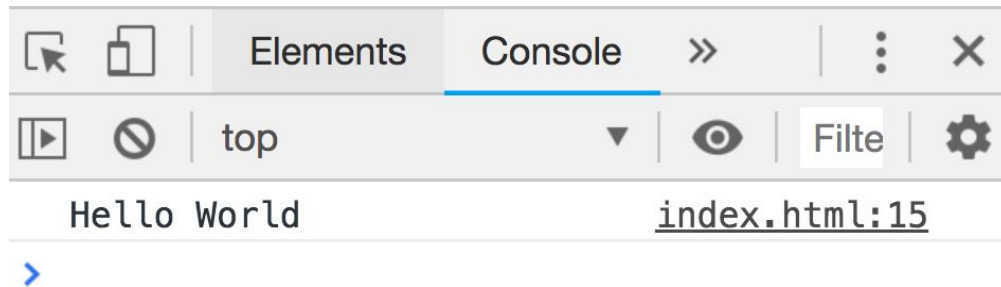
Quotes single and double

Spacing on code

Reserved words

JavaScript Variables

Used to store data



Variables in Action

Rules

- Names can only contain letters, digits, underscores or dollar signs
- Must begin with a letter or \$ or _
- Cannot use a reserved word in JavaScript
- Names are case sensitive

Assignment operator

= assigns a value to Variable

Variables in Action

Variables need to be declared

Can declare empty

Can declare with other variables separated by comma

Data Types

Datatypes are used to solve

Types are dynamic in JavaScript

You can use double or single quotes for strings

Numbers have no quotes can be decimal as well

Booleans are either true or false

Arrays and Objects get covered later in the course

Find the type by using `typeof` "string"

Operators and Assignments

Math operators + - * /

Increment ++ --

Modulus %

Assignment operators

= += -= *= /=

Operators

Comparison Operators - used to check equal == greater than > less than < returns Boolean value

Logical Operators - used to combine and compare

Functions

Function allow you to execute a block of code.

Functions are one of the fundamental building blocks in JavaScript.

```
function message(a){  
  var b = 0;  
  b++;  
  var output = a + ' ' + b;  
  document.querySelector('h2').inne  
  console.log(a);  
}  
  
function add(a,b){  
  return a + b;  
}
```

Exercise #2

Exercise #2

1. Create 3 buttons and 3 variables
2. Each button invokes a separate function
3. Each function adds one every time a button is clicked.
4. All the 3 variable values are output to the h2 element

JavaScript Objects

Contain more values in a single variable. Combination of properties with values.

```
var person = {};  
person.first = "Laurence";  
person.last = "Svekis";  
person.message = function(){  
    return 'hello ' + person.first;  
}  
person.age = 30;  
person.alive = true;
```

Exercise 3

Favorite Things Object

Select something, your computer, car, house, friend and describe them as a JavaScript object. What are their properties and what are those values?

Arrays and Array methods

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array

```
var myArray1 = ['Laurence', 'Sveki', 30,  
var val1 = myArray1.push('test');  
console.log(myArray1);  
var val2 = myArray1.pop();  
console.log(val2);  
var val3 = myArray1.shift();  
myArray1.unshift('First');  
var val4 = myArray1.splice(1,1);
```

JavaScript Conditions

Lets you apply logic

```
function check(num){  
  console.log(num);  
  if(num > tempVal){  
    message(num+ ' was mo  
  }else if(num == tempVal){  
    message(num + ' equal to  
  }else{  
    message(num + ' was les  
  }  
}
```

JavaScript Switch

Execute code depending on the value of the switch statement

```
function check(val){  
  console.log(val);  
  switch (val){  
    case 'one':  
      message('was one');  
      break;  
    case 'hello':  
      message('Say Hello');  
      break;  
    case 'two':  
    case '2':  
    case 2:  
      message('output TWO');  
      console.log('was a value');
```

JavaScript Loops

For loop

Loop Array data

Iterate through Object Data

Do Loop

While Loop

```
var myObj = { first:"Laurence", la
for(var x in myObj){
    console.log(myObj[x] + ' ' + x)
}

var x = 0;
while(x<10){
    console.log(x);
    x++;
}

var i = 10;
do {
```

Document Object Model

Selecting elements

Adding eventListeners

Updating HTML content

```
const myBtn =  
document.querySelector('#testButton');  
const myEle = document.querySelector('h2')  
  
myBtn.addEventListener('click',message);
```

Thank you

Thank you for taking the course, and reading this PDF. If you have any questions or suggestions please connect with me on Udemy.

<https://www.udemy.com/user/lars51/>

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