

# June 9

## JavaScript

### Joys of JavaScript

#### ECMAScript - Wikipedia

ECMAScript (or ES) is a trademarked scripting-language specification standardized by Ecma International in ECMA-262 and

W <https://en.wikipedia.org/wiki/ECMAScript>



### Ways to practice javascript

#### JavaScript Tutor - Visualize JavaScript code execution to learn JavaScript online

 <http://pythontutor.com/javascript.html#mode=edit>

### Things to understand:

- variables
- console.log
- alert
- prompt
- confirm
- if and else statements
- document.write
- arrays


### Variable Declarations

Var Keyword	Variable name	Assignment	Value	Termination
<b>var</b>	<b>name</b>	<b>=</b>	<b>"Snow White"</b>	<b>;</b>

single "=" means store this value on the right in the thing on the left. DO NOT FORGET it does not mean check if these things are equal.

"==" is a test for equality. It means are these things equal (*interview question*)

"===" is also a test for equality and the one you should probably use in your conditionals for reasons I will explain later. (*interview question*)

Which equals operator (== vs ===) should be used in  
I'm using JSLint to go through JavaScript, and it's returning many  
suggestions to replace == (two equals signs) with === (three  
 <https://stackoverflow.com/questions/359494/which-equals-op...>



===

	true	false	1	0	-1	"true"	"false"	"1"	"0"	"-1"	""	null	undefined	Infinity	-Infinity	[]	{}	[[[]]]	[0]	[1]	NaN
true																					
false																					
1																					
0																					
-1																					
"true"																					
"false"																					
"1"																					
"0"																					
"-1"																					
"																					
null																					
undefined																					
Infinity																					
-Infinity																					
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==

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[1]																					
NaN																					

## Truthy vs Falsy

The following values are **always falsy**:

- `false`
- `0` (zero)
- `''` or `""` (empty string)
- `null`
- `undefined`
- `NaN` (e.g. the result of `1/0`)

Everything else is **truthy**. That includes:

- `'0'` (a string containing a single zero)
- `'false'` (a string containing the text "false")
- `[]` (an empty array)
- `{}` (an empty object)
- `function(){} (an "empty" function)`

## Hoisting (*interview question*)

Variables are loaded before the program even starts and are set to undefined.

*What the computer sees before any lines of code have been run*

```
petAge: undefined
petIsCat: undefined
petName: undefined
petType: undefined
```

```
var petName = "Meeses"; var petType = "Tuxedo Cat"; var petAge =
5; var petIsCat = true;
```

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*What the computer sees after the code has been run*

```
petAge: 5
petIsCat: true
petName: "Meeses"
petType: "Tuxedo Cat"
```

## If and else (Conditional) (Control Flow Statement)

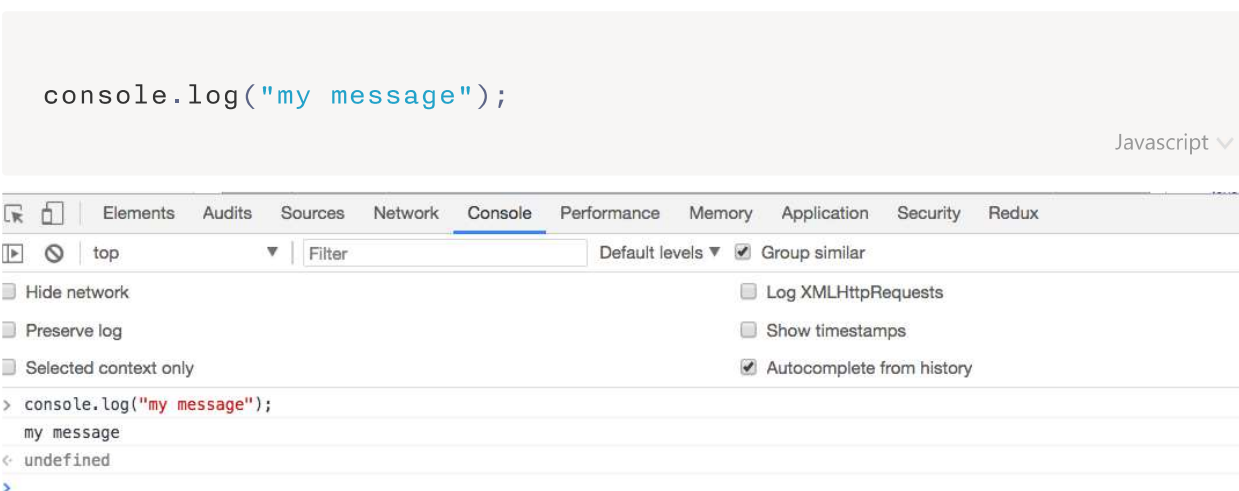
```
if(/* if this is true execute curly braces*/) { // do stuff } else
if(/* other conditional*/) { // do more stuff } else { // if is not
true // do stuff here }
```

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## Console.log

Use to log messages to console

...to log messages to console



## Alert

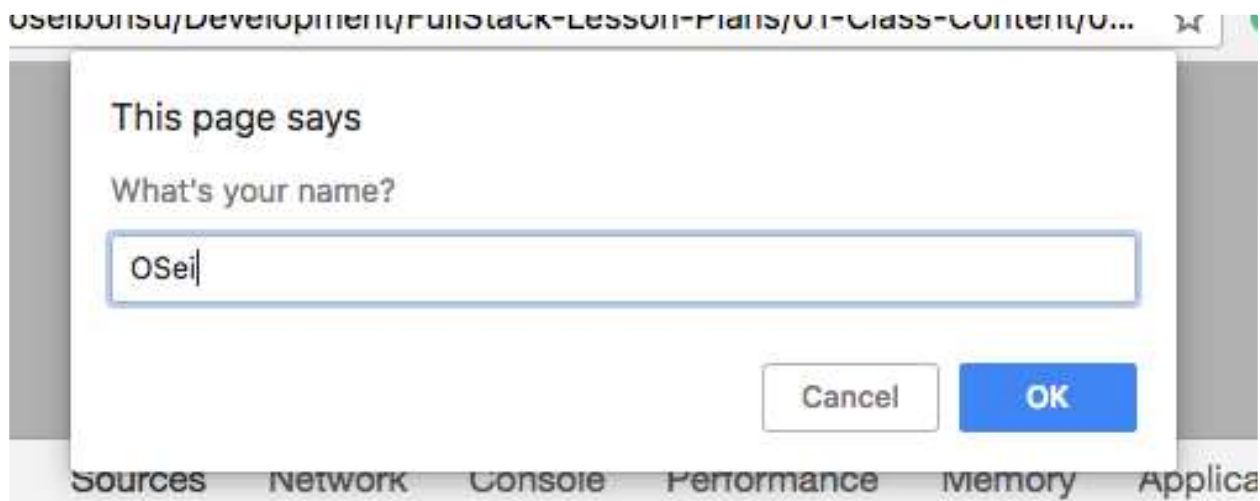
A function that opens a modal to display a value



## Prompt

function that opens up a prompt and allows you type in text and returns a string (text) value



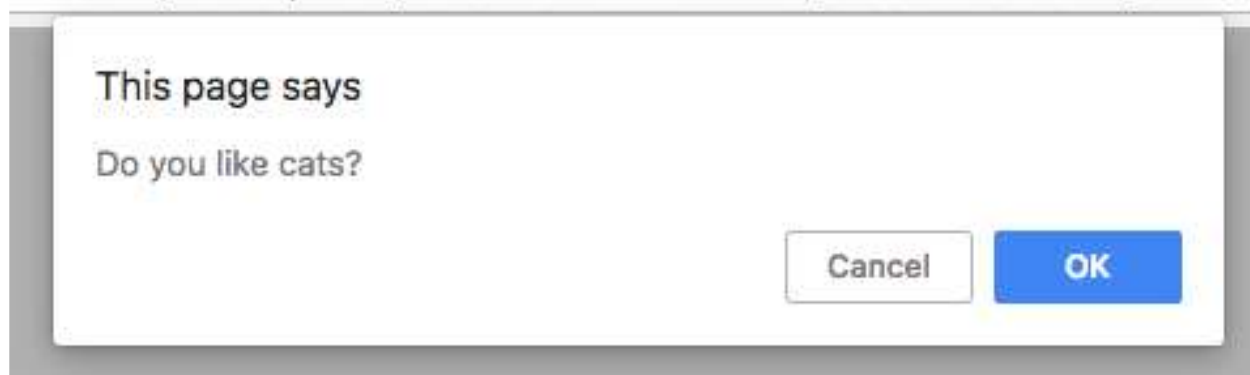


## Confirm

function that opens up a prompt and allows you to click OK or Cancel and returns a boolean value (Boolean values are only true or false) (basically 0 or 1)

```
var confirmCats = confirm("Do you like cats?");
```

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```
petAge: undefined  
petIsCat: undefined  
petName: undefined  
petType: undefined
```

```
petAge: 5  
petIsCat: true  
petName: "Meeses"  
petType: "Tuxedo Cat"
```

## document.write

Function to add to the page. Will write whatever you give it to the end of the page

```
document.write('<h1>Hello</h1>') document.write('<a  
href="http://www.google.com">Hello</a>')
```

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```
> document.write('<h1>Hello</h1>')  
< undefined  
> document.write('<a href="http://www.google.com">Hello</a>')  
< undefined  
> |
```



## Arrays

An array is a list of things that has an order

0 based index → First element is at 0 (offset)

```
var zooAnimals = ["Lion", "Tiger", "Zebra", "Elephant"];  
zooAnimals[0] // Lion zooAnimals[1] // Tiger zooAnimals[2] //  
Zebra zooAnimals[3] // Elephant zooAnimals.length // Equals 4 //  
  
zooAnimals.length - 1 == the last index of an element in the  
array // array.indexOf(thing) returns index of thing if it can't  
find it returns -1 zooAnimals.indexOf("nothing") // -1
```



```
zooAnimals.indexOf("Lion") // 0 zooAnimals.indexOf("Tiger") // 1
```

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