JAVASCRIPT VISUAL REFERENCE

Variables

Variable names (labels) are case sensitive and can only start with a letter (A-Z, a-z), an underscore (_) or $

```
var box2 = 24;          var name = true;
    box3 = 24;          var box2 = null;
```

Reserved keywords

break	return	class
case	switch	const
catch	this	enum
continue	throw	export
debugger	try	extends
default	typeof	import
delete	var	super
do	void	implements
else	while	let
finally		private
for		public
function		yield
if		interface
in		package
instanceof		protected
new		static
		arguments
		eval

Bit operators

Operators

```
//Arithmetic Operators        //Assignment Operators
2 * 3                         a = b = 2
4 / 2                         a += 2
4 + 3                         a *= 2
4 - 3
4 % 3

//Bitwise Operators          //Comparison Operators
a & b;                       a === b;
a | b;                       a > b;
a ^ b;
```

Binary Operators

```
var a = 8;
console.log(a++);   //8

var b = 8;
console.log(++b);   //9

var a = true;
!a;         //false
```

a = -b;   //attempts to convert b to a number, if its not: returns NaN, //if it is, negates the value of b and assigns it to a. b retains it's value

a = +b;   //attempts to convert b to a number, if it's not: returns NaN. b retains its value

Precedence
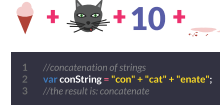

String Escape Characters

```
\'      \r
\"      \t
\\      \b
\n      \f
```
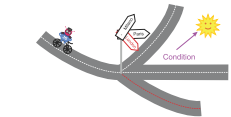
cone + cat + ten + ate


```
1    //concatenation of strings
2    var conString = "con" + "cat" + "enate";
3    //the result is: concatenate
```

String properties

charAt()	Returns the character at the specified index (position)
charCodeAt()	Returns the Unicode of the character at the specified index
concat()	Joins two or more strings, and returns a copy of the joined strings
fromCharCode()	Converts Unicode values to characters
indexOf()	Returns the position of the first found occurrence of a specified value in a string
lastIndexOf()	Returns the position of the last found occurrence of a specified value in a string
localeCompare()	Compares two strings in the current locale
match()	Searches a string for a match against a regular expression, and returns the matches
replace()	Searches a string for a value and returns a new string with the value replaced
search()	Searches a string for a value and returns the position of the match
slice()	Extracts a part of a string and returns a new string
split()	Splits a string into an array of substrings
substr()	Extracts a part of a string from a start position through a number of characters
substring()	Extracts a part of a string between two specified positions
toLocaleLowerCase()	Converts a string to lower case letters, according to the host's locale
toLocaleUpperCase()	Converts a string to upper case letters, according to the host's locale
toLowerCase()	Converts a string to lowercase letters
toString()	Returns the value of a String object
toUpperCase()	Converts a string to upper case letters
trim()	Removes whitespace from both ends of a string
valueOf()	Returns the primitive value of a String object

Conditionals


```
if else if else
1    var sunny = true,
2        rainy = false;
3    if (rainy) {           //if true
4        console.log("keep straight");
5    }
6    } else if (sunny) {    //if true
7        console.log("turn right");
8    }
9    } else {               //if false
10       console.log("turn left");
11   }
```

```
switch
1    var where = "London";
2    switch (where)
3    {
4        case "London":     //if true
5            console.log("turn right");
6            break;
7        case "Paris":      //if true
8            console.log("keep straight");
9            break;
10       default:           //if false
11           console.log("turn left");
12   }
```

Loops
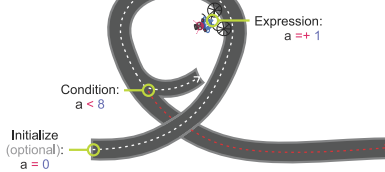

```
for
1    //add 1 to "a" until "a" is no longer less than 8
2    //initialize; condition; expression
3    for (var a = 0; a < 8; a = a + 1) {
4        alert(a);
5    }
6    //if "a" is equal or greater than 8, go here
```

Expression: a =+ 1
Condition: a < 8
Initialize (optional): a = 0
a >= 8

Arrays

shift, unshift as shamrock green

push, pop as period purple

letters

myLetters
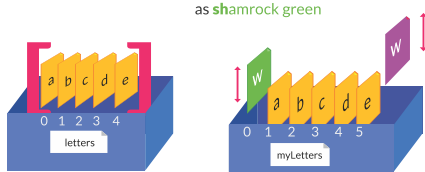
Arrays Methods

concat()	concat()
join()	join()
push()	add to the end
pop()	remove and return the last item
reverse()	reverse the order of array items
shift()	remove first item
slice()	create new array from existing array items
sort()	sort alphabetically
splice()	replace items
unshift()	add at the beginning
delete()	delete any element

RE

[abc]	find any character between the brackets
[0-9]	find any digit between the brackets
(x|y|z)	find any of the separated with | sign
\d	find a digit
\s	find any word
+	find one or more occurrences
^	beginning of the string
$	end of string
?	zero or one
.	find any character except newline

Functions

optional parameters:
return value
call
optional name
scope
body
myTea
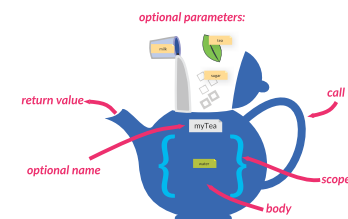
```
var myTea = function(tea, sugar, milk) {
    var water = "Hot water, ";
    return water + tea + ", " + sugar + " sugars" + ", " + milk + " milks";
};

//Call the function with custom parameters
myTea("green tea", 2, 3);
//Hot water, green tea, 2 sugars, 3 milks
```

Function statement
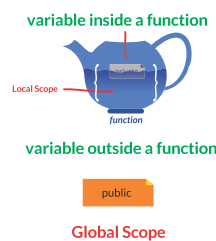
```
function foo() { return 8; }
```

Function expression

```
var foo = function foo() { return 8; };
var boo = function (x, y) { return x + y; };
( function doo() { return 8; }() );
```

IIFE


```
( function () {
    console.log("no need to call me");
}() );
```

Scope

variable inside a function
Local Scope
function
variable outside a function
public
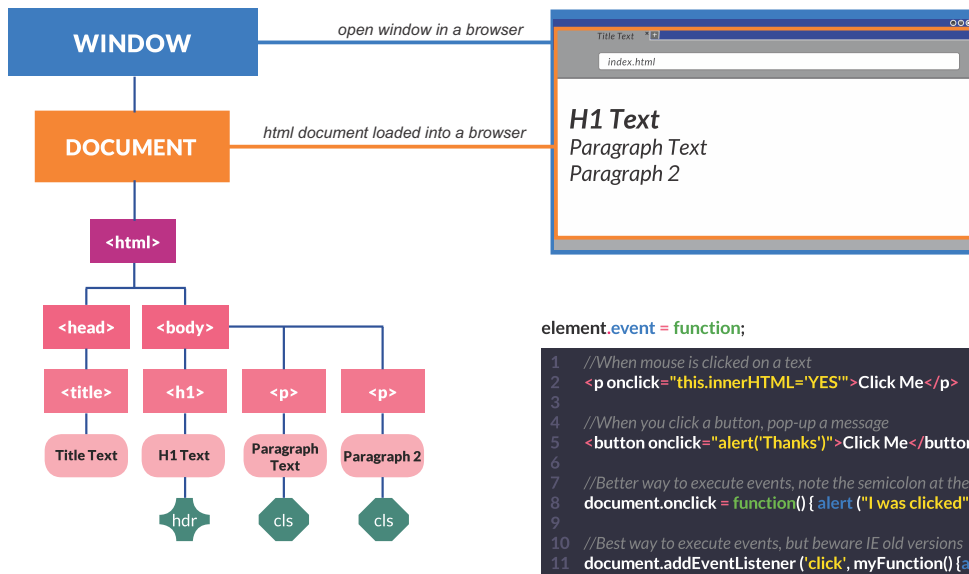Global Scope

```
//variable without the 'var' keyword
//is a global variable
function shadow() {
    public = "blue";
}
```

Closure
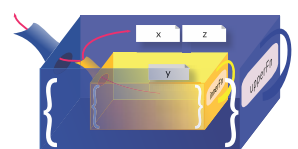

```
function upperFn(x) {
    var z = 8;      //local variable

    function innerFn(y) {        //closure
        console.log(x + y + z);
    }
    innerFn(3);                  //y = 3
}
upperFn(2);                      //x = 2
```

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DOM

index.html

WINDOW — open window in a browser

DOCUMENT — html document loaded into a browser

Title Text
index.html

H1 Text
Paragraph Text
Paragraph 2

```html
1   <html>
2     <head>
3       <title>Title Text</title>
4     </head>
5     <body>
6       <h1 id="hdr">H1 Text</h1>
7       <p class="cls">Paragraph Text</p>
8       <p class="cls">Paragraph 2</p>
9       <script src = "main.js"></script>
10    </body>
11  </html>
```

DOM tree:
- <html>
  - <head>
    - <title> → Title Text
  - <body>
    - <h1> → H1 Text (hdr)
    - <p> → Paragraph Text (cls)
    - <p> → Paragraph 2 (cls)

element.event = function;

```
1   //When mouse is clicked on a text
2   <p onclick="this.innerHTML='YES'">Click Me</p>
3
4   //When you click a button, pop-up a message
5   <button onclick="alert('Thanks')">Click Me</button>
6
7   //Better way to execute events, note the semicolon at the end
8   document.onclick = function() { alert ("I was clicked"); };
9
10  //Best way to execute events, but beware IE old versions
11  document.addEventListener ('click', myFunction() {alert("wow"); } );
```

WINDOW Properties

Property	Description
closed	returns boolean whether window is opened or not
defaultStatus	get/set property of default window status bar
document	reference to the current document object
frames	returns an array of all frames in the current widow
history	returns URLs opened within the window
innerHeight	returns window's height in pixels
innerWidth	returns window's width in pixels
length	returns the number of frames in the current window
location	get/set the current URL
name	returns the name of the window
opener	reference to the window that opened a secondary window
outerHeight	returns entire window's height in pixels
outerWidth	returns entire window's width in pixels
parent	current window or frame set
screenLeft	
screenTop	X,Y coordinates of current window relative to user's screen
screenX	
screenY	
scrollX	returns scroll's X location from upper left corner
scrollY	returns scroll's Y location from upper left corner
self	current window
status	get/set the content of browser's status bar
top	topmost browser window

DOCUMENT Properties

cookie
documentMode
domain
lastModified
readyState
referrer
title
URL

EVENT Handlers

onAbort	onMouseDown
onBlur	onMouseMove
onChange	onMouseOut
onClick	onMouseOver
onDblClick	onMouseUp
onDragDrop	onMove
onError	onReset
onFocus	onResize
onKeyDown	onSelect
onKeyPress	onSubmit
onKeyUp	onUnload
onLoad	

WINDOW Methods

Method	Description
alert()	displays a dialog box with the specified message and OK button
blur()	removes focus from the window and brings it to the background
clearInterval()	clears a timer set with the setInterval() method
clearTimeout()	clears a timer set with the setTimeout() method
close()	closes a window
confirm()	displays a dialog box with the specified message and OK and Cancel buttons
focus()	sets focus to the window. Brings the window to the front
moveBy()	moves a window by the specified amount in pixels.
moveTo()	moves a window to the specified coordinates in pixels
open()	opens a new browser window
print()	prints the content of a window or frame
prompt()	displays a dialog box with a message and returns a string
resizeBy()	resizes a window by the specified amount in pixels
resizeTo()	resizes a window to the specified values in pixels
scrollBy()	scrolls a window by the specified amount in pixels
scrollTo()	scrolls a window to the specified values in pixels
setInterval()	calls a function or evaluates an expression at specified intervals (in milliseconds)
setTimeout()	calls a function or evaluates an expression after a specified time (in milliseconds)

DOCUMENT Methods

close()
open()
getElementById()
getElementByName()
getElementByTagName()
write()
writeln()

```
1   //returns all elements with the id "hdr"
2   getId = document.getElementById("hdr");
3   //<h1 id="hdr">H1 Text</h1>
4
5   //returns a node collection of all p tags
6   console.log(document.getElementsByTagName("p"));
7   //[p.cls, p.cls, item: function]
8
9   //returns all elements with the class name "cls"
10  console.log(document.getElementsByClassName("cls"));
11  //[p.cls, p.cls, item: function]
12
13  //Modify the content of the h1 element with the innerHTML property
14  getId.innerHTML = "Something Else";
15  //<h1 id="hdr">Something Else</h1>
```