# Javascript Cheat Sheet





x(?=y) x (only if x is followed by y) x(?!y) x (only if x is not followed by y)

## Cheat Sheet



argument required

argument optional

Emezeta com

n Number() = 42	s String() = 'text'	a Array() = [1, 2, 3]
PROPERTIES  1. POSITIVE_INFINITY +co equivalent 1. NEGATIVE_INFINITY -co equivalent 1. MAX_VALUE largest positive value 1. MIN_VALUE smallest positive value 1. EPSILON diff between 1 & smallest >1 2. NaN not-a-number value  METHODS 2. toExponential(dec) exp. notation 3. toFixed(dec) fixed-point notation 3. toPrecision(p) change precision 1. isFinite(n) check if number is finite 1. isInteger(n) check if number is nan 1. parseInt(s, radix) string to integer 1. parseFloat(s, radix) string to float	I.length string size  I.length string size  I.length string size  I.charAt(index) char at position II.charCodeAt(index) unicode at pos. II.codePointAt(index) cp at position III.codePoint(n1, n2) code to char III.codePoint(n1, n2) cp to char III.comcodePoint(n1, n2) cp to char III.comcodePoint(str, size) check beginning III.comcodePoint(str, size) check ending III.comcode substring III	D. length number of elements  D. isArray(obj) check if obj is array D. includes(obj, from) include element? D. indexOf(obj, from) find elem. index D. lastIndexOf(obj, from) find from end D. lastIndexOf(obj, from) find elem. index D. lastIn
r Regexp() = /.+/ig  PROPERTIES  1. lastIndex index to start global regexp  5. flags active flags of current regexp  b. global flag g (search all matches)  b. ignoreCase flag i (match lower/upper)  b. multiline flag m (match multiple lines)  b. sticky flag y (search from lastIndex)  b. unicode flag u (enable unicode feat.)  s. source current regexp (w/o slashs)  METHODS  a. exec(str) exec search for a match  b. test(str) check if regexp match w/str  CLASSES  . any character	n.localeCompare(str, locale, options) a.match(regex) matches against string a.matchAll(regex) return iterator w/all s.normalize(form) unicode normalize s.padEnd(len, pad) add end padding s.padStart(len, pad) add start padding s.repeat(n) repeat string n times s.replace(str regex, newstr func) s.slice(ini, end) str between ini/end s.substr(ini, len) substr of len length s.substring(ini, end) substr fragment a.split(sep regex, limit) divide string s.toLowerCase() string to lowercase s.toUpperCase() string to uppercase s.trim() remove space from begin/end s.trimEnd() remove space from begin s.trimStart() remove space from begin s.raw`` template strings with \${vars}	a.splice(ini, del, o1, o2) del&add elemiteration methods a.entries() iterate key/value pair array a.keys() iterate only keys array a.values() iterate only values array callback for each methods b.every(cb(e,i,a), arg) test until false b.some(cb(e,i,a), arg) test until true a.map(cb(e,i,a), arg) make array a.filter(cb(e,i,a), arg) make array w/true c.find(cb(e,i,a), arg) return elem w/true c.findlndex(cb(e,i,a), arg) return index a.flatMap(cb(e,i,a), arg) map + flat(1) c.forEach(cb(e,i,a), arg) exec for each c.reduce(cb(p,e,i,a), arg) accumulative c.reduceRight(cb(p,e,i,a), arg) from end
\w any alphanumeric char [A-Za-z0-9_] \W no alphanumeric char [^A-Za-z0-9_] \s any space char (space, tab, enter) \S no space char (space, tab, enter) \XN char with code N [\b] backspace \uN char with unicode N \0 NUL char  CHARACTER SETS OR ALTERNATION  [abc] match any character set [^abc] match any char. set not enclosed a b match a or b  BOUNDARIES  ^ begin of input \$ end of input \b zero-width word boundary \B zero-width non-word boundary  GROUPING  (x) capture group (?:x) no capture group \n reference to group n captured	Date()  METHODS  1. UTC(y, m, d, h, i, s, ms) timestamp 1. now() timestamp of current time 1. parse(str) convert str to timestamp 1. setTime(ts) set UNIX timestamp 1. getTime() return UNIX timestamp  UNIT GETTERS (ALSO getUTC*() / setUTC*() / 1. get / .setFullYear(y, m, d) (yyyy) 1. get / .setMonth(m, d) (0-11) 1. get / .setMonth(m, d) (1-31) 1. get / .setHours(h, m, s, ms) (0-23) 1. get / .setMinutes(m, s, ms) (0-59) 1. get / .setSeconds(s, ms) (0-59) 1. get / .setMilliseconds(ms) (0-999) 1. getDay() return day of week (0-6)	o .pop() remove & return last element n .push(o1, o2) add elem & return length o .shift() remove & return first element n .unshift(o1, o2) add elem & return len  Function() = function(a, b) { }  PROPERTIES o .length return number of arguments s .name return name of function o .prototype prototype object  METHODS o .call(newthis, arg1, arg2) change this o .apply(newthis, arg1, arg2) bound function o .bind(newthis, arg1, arg2) bound function
x* preceding x 0 or more times {0,} x* preceding x 1 or more times {1,} x? preceding x 0 or 1 times {0,1} x{n} n ocurrences of x x{n,} at least n ocurrences of x x{n,m} between n & m ocurrences of x ASSERTIONS x(?=v) x (only if x is followed by v)	n.getTimezoneOffset() offset in mins s.toLocaleDateString(locale, options) s.toLocaleTimeString(locale, options) s.toLocaleString(locale, options) s.toUTCString() return UTC date s.toDateString() return American date s.toTimeString() return American time s.toISOString() return ISO8601 date	n number  NaN (not-a-number) regular expresion string function boolean (true/false) array undefined available on ECMAScript 2015 or higher static (ex: Math.random()) non-static (ex: new Date().getDate())

.toISOString() return ISO8601 date

.toJSON() return date ready for JSON

## Cheat Sheet



### Math

### PROPERTIES

- E Euler's constant
- .LN2 natural logarithm of 2
- LN10 natural logarithm of 10
- LOG2E base 2 logarithm of E
- LOG10E base 10 logarithm of E
- n.PI ratio circumference/diameter
- .SQRT1\_2 square root of 1/2
- SQRT2 square root of 2.

- abs(x) absolute value
- n.cbrt(x) cube root
- n.clz32(x) return leading zero bits (32)
- .exp(x) return e<sup>x</sup>
- .expm1(x) return ex-1
- hypot(x1, x2...) length of hypotenuse
- .imul(a, b) signed multiply
- log(x) natural logarithm (base e)
- n.log1p(x) natural logarithm (1+x)
- 10.log10(x) base 10 logarithm
- log2(x) base 2 logarithm
- max(x1, x2...) return max number
- n.min(x1, x2...) return min number
- pow(base, exp) return base<sup>exp</sup>
- n.random() float random number [0,1)
- n.sign(x) return sign of number
- sqrt(x) square root of number

- ceil(x) superior round (smallest) ① .floor(x) inferior round (largest)
- n.fround(x) nearest single precision
- n.round(x) round (nearest integer)
- 1. trunc(x) remove fractional digits TRIGONOMETRIC METHODS

- n.acos(x) arccosine
- n.acosh(x) n.asinh(x)
- n.asin(x) arcsine
- ① .atan(x) arctangent ① .atanh(x)
- .cos(x) cosine
- .cosh(x)
- .sin(x) sine

- n.sinh(x)
- n.tan(x) tangent
- .tanh(x)
- atan2(x, y) arctangent of quotient x/y

### BigInt()

= 9007199254740992n

ES Modules modules

import {m1, m2 as name} from "./file.js" import obj from "./file.js" default import export {m1, m2} export objs as modules pimport("./file.js") dynamic import

### **JSON**

ison file manipulation

### METHODS

parse(str, tf(k,v)) parse string to object stringify(obj, repf|wl, sp) convert to str

### e Error()

- s.name return name of error
- .message return description of error
- EvalError(), InternalError(), RangeError(), URIError(), ReferenceError(), SyntaxError(), TypeError()

o Object() = {key: value, key2: value2}

o.constructor return ref. to object func.

- o.assign(dst, src1, src2...) copy values
- create(proto, prop) create obj w/prop
- defineProperties(obj, prop)
- defineProperty(obj, prop, desc)
- o .freeze(obj) avoid properties changes
- getOwnPropertyDescriptor(obj, prop)
- .getOwnPropertyNames(obj)
- .getOwnPropertySymbols(obj)
- getPrototypeOf(obj) return prototype
- (b).is(val1, val2) check if are same value
- (b).isExtensible(obj) check if can add prop isFrozen(obj) check if obj is frozen
- isSealed(obj) check if obj is sealed
- (a).keys(obj) return only keys of object
- preventExtensions(obj) avoid extend
- seal(obj) prop are non-configurable
- setPrototypeOf(obj, prot) change prot
- b.hasOwnProperty(prop) check if exist
- isPrototypeOf(obj) test in another obj
- b.propertylsEnumerable(prop)
- .toString() return equivalent string
- .toLocaleString() return locale version o.valueOf() return primitive value
- p Promise() async/await async functions
- (D.all(obj) return promise
- p.catch(onRejected(s)) = .then(undef,s)
- p.finally(onFinish()) exec callback always
- then(onFulfilled(v), onRejected(s))
- race(obj) return greedy promise (res/rej)
- nesolve(obj) return resolved promise
- neject(reason) return rejected promise
- (D.allSettled(obj) return all fullfill/reject
- p Proxy()

Reflect same methods (not func)

### METHODS

- o .apply(obj, arg, arglist) trap function call
- o.construct(obj, arglist) trap new oper
- o.defineProperty(obj, prop, desc)
- .deleteProperty(obj, prop) trap delete
- .enumerate(obj) trap for...in
- .get(obj, prop, rec) trap get property
- .getOwnPropertyDescriptor(obj, prop)
- o .getPrototypeOf(obj)
- o.has(obj, prop) trap in operator
- o.ownKeys(obj)
- o .preventExtensions(obj)
- o .set(obj, prop, value) trap set property o.setPrototypeOf(obj, proto)

### Symbol()

- .iterator specifies default iterator
- .match specifies match of regexp
- S.species specifies constructor function
- - .for(key) search existing symbols
- .keyFor(sym) return key from global reg

s Set()

n .size return number of items

- s .add(item) add item to set
- b.has(item) check if item exists
- b .delete(item) del item & return if del ws
- .clear() remove all items from set

- si .entries() iterate items
- si .values() iterate only value of items
- .forEach(cb(e,i,a), arg) exec for each
- m Map()

WeakMap only obj as keys

n.size return number of elements

- m.set(key, value) add pair key=value wm
- o .get(key) return value of key
- b .has(key) check if key exist
- b .delete(key) del elem. & return if ok wm .clear() remove all elements from map

- m.entries() iterate elements
- m.keys() iterate only keys m.values() iterate only values
- .forEach(cb(e,i,a), arg) exec for each
- g Generator() = function\* () { ... }

### METHODS

- o .next(value) return obj w/{value,done}
- o .return(value) return value & true done
- .throw(except) throw an error

### globals includes isFinite, isNaN, parseInt & parseFloat

- METHODS
- o eval(str) evaluate javascript code
- encodeURIComponent(URI) = to %3D decodeURIComponent(URI) %3D to =

### Others

var deprecated variable let block scope const declare constant (read-only)

?? nullish coalescing operator

### ?. optional chaining

func(a=1) default parameter value

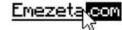
func(...a) rest argument (spread operator) (a) => { ... } function fat arrow (w/o this)

'string \${a}' template with variables

Obn binary (2) number n to decimal Oon octal (8) number n to decimal

0xn hexadecimal (16) number n to decimal for (i in array) { ... } iterate array, i = index

for (e of array) { ... } iterate array, e = value class B extends A () { } class sugar syntax



## Cheat Sheet



### window

= Browser global object

### PROPERTIES

- b .closed check if window is closed
- n.devicePixelRatio ratio vertical size pix
- b .fullScreen check if window is fullscreen
- n .innerWidth width size (incl. scrollbar)
- n innerHeight height size (incl. scrollbar)
- n.outerWidth width size (incl. browser) n .outerHeight height size (incl. browser)
- n .length number of frames
- .name inner name of window
- status bottom statusbar text

- applicationCache offline resources API
- o .console console browser API
- crypto cryptographic API
- history session page history API
- location information about URL API
- o.localStorage storage for site domain
- sessionStorage storage until closed
- o .navigator information about browser
- o.performance data about performance

- o.screen information about screen
- n.screenX horizontal pos browser/screen
- n.screenY vertical pos browser/screen
- n.pageXOffset horizontal pixels scrolled
- n.pageYOffset vertical pixels scrolled

- opener window that opened this window
- o .parent parent of current window/frame
- o .self this window (equal to .window)
- o.top top window of current win/frame

### METHODS

- .btoa(str) encode string to base64
- stob(str) decode base64 string to text
- .focus() request send window to front
- .blur() remove focus from window
- getSelection(id) return Selection object
- \_\_\_\_\_.postMessage(msg, dst, transf) send
- o.open(url, name, options) open popup
- .stop() stop window loading
- b .find(str, case, back, wrap, word, fr, d)
- .print() open print document window

- n.requestAnimationFrame(cb(n))
- .cancelAnimationFrame(reqID)

- n.setTimeout(f(a...), ms, a...) delay&run
- .clearTimeout(id) remove timeout
- .setInterval(f(a...), ms, a...) run every
- .clearInterval(id) remove interval

- scrollBy(x, y) scroll x,y pixels (relative)
- .scrollTo(x, y) scroll x,y pixels (absolute)
- .moveBy(x, y) move window by x,y (rel)
- .moveTo(x, y) move window to x,y (abs)
- .resizeBy(x, y) resize win by x,y (rel)
- .resizeTo(w, h) resize win to WxX (abs)
- getComputedStyle(elem, pseudelem)
- a .matchMedia(mediaq) match CSSMQ

### screen = info about screen / resolution

- n.availTop top-from space available
- n .availLeft left-from space available
- n .availWidth width space available
- n .availHeight height space available
- n.width screen width resolution n.height screen height resolution
- colorDepth screen color depth (bits)
- n.pixelDepth screen pixel depth (bits)

- .lockOrientation(mode|modearray)
- b.unlockOrientation() remove locks

### console = unofficial console browser API

- .assert(cond, str1|obj1...) set a assert
- .count(str) count (show number times) .dir(obj) show object (expanded debug)
- .group() open new message group
- .groupCollapsed() open new group coll.
- .groupEnd() close previous group
- .table(array|obj, colnames) show table
- .trace() show code trace
- .timeStamp(str) put time on timeline

- \_\_\_\_\_.profile(name) start performance profile
- \_\_\_\_\_\_.profileEnd(name) stop perf. profile
- .time(name) start performance timer
- .timeEnd(name) stop perf. timer

- .log(str1|obj1...) output message
- .info(str1|obj1...) output information
- .warn(str1|obj1...) output warning
- .error(str1|obj1...) output error

window = global interaction func.

- .alert(str) show message (ok button)
- .prompt(str, def) ask answer to user
- b.confirm(str) show message (ok, cancel)

### history

= page history on tab

- n .length number of pages in historytab
- n state return state top history stack

- .back() go prev page (same as .go(-1))
- forward() go next page (same as .go(1))
- .go(n) go n page (positive or negative)
- \_\_\_\_.pushState(obj, title, url) insert state .replaceState(obj, title, url) repl. state

storage localStorage / sessionStorage

### .length number of items in storage

- METHODS
- .key(n) return key name on position n .getItem(key) return value of item key
- .setItem(key, value) set or update key .removeltem(key) delete item with key
- .clear() delete all items for current site

performance = info about performance

### PROPERTIES

- o.navigation info about redir/type nav.
- timing info about latency-load perf.

now() high precision timestamp

### navigator

- = info about browser
- b.cookieEnabled browser cookies on? .doNotTrack DNT privacy enabled?
- o.geolocation user-info geolocation
- .language language in browser
- n.maxTouchPoints max on device
- b.onLine browser work in online mode? .userAgent identify browser of user

n .vibrate(n pattern) use device vibration

### location = info about current URL

- .href full document url
- .protocol https://www.emezeta.com/
- .username https://user:pass@www
- .password https://user:pass@www
- .host https://emezeta.com:81/
- .hostname https://emezeta.com:81/
- .port https://emezeta.com:81/
- .pathname http://emezeta.com/42/
- s .hash http://emezeta.com/#contacto
- .search http://google.com/?q=emezeta o .searchParams search params object
- .origin source origin of document url

onClick="..." (HTML) .onclick = (JS func) 'click' (Listener)

### e events (only popular events)

- onClick onDblClick
- onMouseDown .onMouseUp
  - onMouseEnter .onMouseLeave
- onMouseMove .onMouseOver

### onMouseOut

- onKeyDown

- .onKeyUp
- .onKeyPress

.onLoad

onWheel

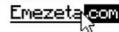
- .onDOMContentLoaded
- onAbort 🖸 .onResize
- e .onError .onScroll .onUnload
- .onBeforeUnload
  - - .onFocus
- .onBlur .onChange onInvalid
- OnInput .onSelect
- onReset

.onDragEnter

.onDragLeave

onSubmit

- .onDragStart .onDragEnd onDragOver o.onDrag o.onDrop
- NIMATION/TRANSITION EVE onAnimationStart .onAnimationEnd
- onAnimationIteration .transitionEnd



## Cheat Sheet



### document

= Document object

- .characterSet document charset .compatMode guirks or standard mode
- .cookie return all cookies doc string
- .designMode return design mode status
- .dir return direction text: "rtl" or "ltr"
- .doctype return document type (DTD)
- .domain return document domain
- .documentURI return document URL
- .lastModified return date/time modific.
- .origin return document's origin
- .readyState return current load status
- .referrer return previous page (referrer)
- .title return document title
- .URL return HTML document URL
- location information about URL

- o .activeElement focused element
- o.body return body element
- o .currentScript return active script
- o .defaultView return window element
- documentElement first element (root)
- o .head return head element
- o .scrollingElement first scrollable elem.

- a .anchors array of images elements
- a .applets array of applets elements a .embeds array of embeds elements
- a .forms array of forms elements
- a .images array of images elements
- a .links array of links elements
- a .plugins array of plugins elements
- a .scripts array of scripts elements

### STYLESHEET PROPERTI

- a .styleSheets array of style files elem
- preferredStyleSheetSet preferred css
- selectedStyleSheetSet selected css

- adoptNode(node) adopt from ext doc o.createAttribute(name) create Attr obj
- createDocumentFragment()
- o.createElement(tag) create Element obj
- o .createEvent(type) create Event object createRange() create Range object
- createTextNode(text) create TextNode
- enableStyleSheetsForSet(name)
- o .importNode(node, desc) import copy
- o .getElementById(id) find elem with id
- a .getElementsByName(name) w/ name
- getSelection(id) return Selection object
- r ClientRect() = Coords of element

- n.top top coord of surrounding rect n .right right coord of surrounding rect
- n .bottom bottom coord of surrounding r.
- n .left left coord of surrounding rect
- .width width coord of surrounding rect
- n .height height coord of surrounding r.

## Emezeta con

### e Element() = Element object

- .accessKey if exist, shortcut key
- o .attributes array of Attr objects
- o .classList DOMTokenList of classes
- s.className classes list to string
- .id id string of element
- .name name string of element
- stagName HTML tag of element

### AND SCROLL PROPERT

- n.clientTop top border width element
- n.clientLeft left border width element
- n.clientWidth inner width element
- n.clientHeight inner height element
- n.scrollTop top-position in document
- n.scrollLeft left-position in document
- n.scrollWidth width of element n.scrollHeight height of element

- .innerHTML get/set HTML inside elem souterHTML get/set HTML (incl. elem)

- o .closest(selec) closest ancestor
- a .getElementsByClassName(class)
- a .getElementsByTagName(tag)
- o .querySelector(selec) return first elem
- a .querySelectorAll(selec) return elems
- b .matches(selec) match with this elem?
- .insertAdjacentHTML(posstr, html)

- b.hasAttributes() exists attributes?
- b.hasAttribute(name) exist attribute?
- .getAttribute(name) return value
- .removeAttribute(name) del attribute
- .setAttribute(name, value) set attrib.

- getBoundingClientRect() return pos.
- a .getClientRects() return pos/size array

e Event() = Event on action

### PROPERTIES

- b.bubbles true=bubble, false=captures
- b.cancelable event is cancelable?
- o.currentTarget current element
- defaultPrevented preventDefault() call
- n .detail additional event info
- n .eventPhase current stage (0-3)
- b .isTrusted user action or dispatched o .target reference to dispatched object
- n .timeStamp time when was created
- s.type type of event

- .preventDefault() cancel event
- .stopImmediatePropagation()
- .stopPropagation() prevent being called

### t EventTarget (use over elements)

- .addEventListener(ev, cb(ev), capt)
- .removeEventListener(ev, cb(ev), capt)
- b.dispatchEvent(ev)

### a Attr() = Attribute object

- .name name of element attribute
- .value value of element attribute

### t DOMTokenList() = List of classes

n.length number of items

- b .contains(item) check if item exists
- .add(item) add item to list
- .item(n) return item number n
- .remove(item) del item from list
- b .toggle(item) del item if exist, add else
- n Node() = Minor element (elem. or text)

- .baseURI absolute base URL of node
- .namespaceURI namespace of node
- InodeName name of node
- .nodeType 1=element, 2=text, 9=doc .nodeValue value of node
- .prefix namespace prefix of node .textContent text of node and children

- o.childNodes children nodes collection
- o .firstChild first children (include text)
- o .lastChild last children (include text)
- o.nextSibling immediate next node
- o .previousSibling immediate prev node
- .parentElement immediate parent elem
- o .parentNode immediate parent node o.ownerDocument return document

- o .appendChild(node) add node to end
- o.cloneNode(child) duplicate node
- o.compareDocumentPosition(node)
- b.contains(node) node is descendant?
- b.hasChildNodes() node has childs?
- insertBefore(newnode, node) b.isDefaultNamespace(nsURI)
- b.isEqualNode(node) check if are equal
- .lookupNamespaceURI() ret namesp.
- s.lookupPrefix() return prefix for a ns .normalize() normalize-form children
- o .removeChild(node) del node & return .replaceChild(newnode, oldnode)

### ChildNode()

remove() remove specified node

### p ParentNode()

### PROPERTIES

- n.childElementCount number of children
- o.children children elements o .firstElementChild first children elem.
- o lastElementChild last children elem.

### n NonDocumentTypeChildNode()

- o .nextElementSibling next element
- o .previousElementSibling prev element