CHEAT SHEET

JAVASCRIPT WEB PROGRAMMING

Created by @Manz (http://twitter.com/Manz)

http://www.emezeta.com/

n Number() = 42

PROPERTIES

- n .POSITIVE_INFINITY +∞ equivalent
- n .NEGATIVE_INFINITY -∞ equivalent
- n .MAX_VALUE largest positive value
- n .MIN_VALUE smallest positive value
- n .EPSILON diff between 1 & smallest >1
- ⊘ .NaN not-a-number value

METHODS

- s .toExponential(dec) exp. notation
- s .toFixed(dec) fixed-point notation
- s .toPrecision(p) change precision
- b .isFinite(n) check if number is finite
- b .isInteger(n) check if number is int.
- b .isNaN(n) check if number is NaN
- n .parseInt(s, radix) string to integer
- n .parseFloat(s, radix) string to float

r Regexp() = /.+/ig

PROPERTIES

- n .lastIndex index to start global regexp
- s .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 slashes)

METHODS

- a .exec(str) exec search for a match
- b .test(str) check if regexp match w/str

CLASSES

. any character	\t tabulator
\d digit [0-9]	\r carriage return
\D no digit [^0-9]	\n line feed
\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

QUANTIFIERS

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

s String() = 'text'

PROPERTIES

- n .length string size

METHODS

- s .charAt(index) char at position [i]
- n .charCodeAt(index) unicode at pos.
- s .fromCharCode(n1, n2...) code to char
- s .concat(str1, str2...) combine text +
- b .startsWith(str, size) check beginning
- b .endsWith(str, size) check ending
- b .includes(str, from) include substring?
- n .indexOf(str, from) find substr index
- n .lastIndexOf(str, from) find from end
- n .search(regex) search & return index
- n .localeCompare(str, locale, options)
- a .match(regex) matches against string
- 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 .raw`` template strings with ${vars}

d Date()

METHODS

- n .UTC(y, m, d, h, i, s, ms) timestamp
- n .now() timestamp of current time
- n .parse(str) convert str to timestamp
- n .setTime(ts) set UNIX timestamp
- n .getTime() return UNIX timestamp

UNIT SETTERS (ALSO .setUTC*() methods)

- n .setFullYear(y, m, d) set year (yyyy)
- n .setMonth(m, d) set month (0-11)
- n .setDate(d) set day (1-31)
- n .setHours(h, m, s, ms) set hour (0-23)
- n .setMinutes(m, s, ms) set min (0-59)
- n .setSeconds(s, ms) set sec (0-59)
- n .setMilliseconds(ms) set ms (0-999)

UNIT GETTERS (ALSO .getUTC*() methods)

- n .getDate() return day (1-31)
- n .getDay() return day of week (0-6)
- n .getMonth() return month (0-11)
- n .getFullYear() return year (yyyy)
- n .getHours() return hour (0-23)
- n .getMinutes() return minutes (0-59)
- n .getSeconds() return seconds (0-59)
- n .getMilliseconds() return ms (0-999)

LOCALE & TIMEZONE METHODS

- 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
- s .toJSON() return date ready for JSON

a Array() = [1, 2, 3]

PROPERTIES

- n .length number of elements

METHODS

- b .isArray(obj) check if obj is array
- b .includes(obj, from) include element?
- n .indexOf(obj, from) find elem. index
- n .lastIndexOf(obj, from) find from end
- s .join(sep) join elements w/separator
- a .slice(ini, end) return array portion
- a .concat(obj1, obj2...) return joined array

MODIFY SOURCE ARRAY METHODS

- a .copyWithin(pos, ini, end) copy elems
- a .fill(obj, ini, end) fill array with obj
- a .reverse() reverse array & return it
- a .sort(cf(a,b)) sort array (unicode sort)
- a .splice(ini, del, o1, o2...) del&add elem

ITERATION METHODS

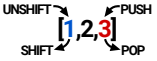
- ai .entries() iterate key/value pair array
- ai .keys() iterate only keys array
- ai .values() iterate only values array

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
- o .find(cb(e,i,a), arg) return elem w/true
- n .findIndex(cb(e,i,a), arg) return index
- ⁄ .forEach(cb(e,i,a), arg) exec for each
- o .reduce(cb(p,e,i,a), arg) accumulative
- o .reduceRight(cb(p,e,i,a), arg) from end

ADD/REMOVE METHODS

- o .pop() remove & return last element
- n .push(o1, o2...) add element & return length
- o .shift() remove & return first element
- n .unshift(o1, o2...) add element & return len



b Boolean() = true / false

no own properties or methods

f 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) with args array
- o .bind(newthis, arg1, arg2...) bound func

n number	d date
⊘ NaN (not-a-number)	r regular expresion
s string	f function
b boolean (true/false)	o object
a array	⁄ undefined

only available on ECMAScript 6

n static (ex: Math.random())
n non-static (ex: new Date().getDate())
argument required
argument optional

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Math

PROPERTIES

- n .E Euler's constant
- n .LN2 natural logarithm of 2
- n .LN10 natural logarithm of 10
- n .LOG2E base 2 logarithm of E
- n .LOG10E base 10 logarithm of E
- n .PI ratio circumference/diameter
- n .SQRT1_2 square root of 1/2
- n .SQRT2 square root of 2

METHODS

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

ROUND METHODS

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

TRIGONOMETRIC METHODS

- n .acos(x) arccosine
- n .acosh(x) hyperbolic arccosine
- n .asin(x) arcsine
- n .asinh(x) hyperbolic arcsine
- n .atan(x) arctangent
- n .atan2(x, y) arctangent of quotient x/y
- n .atanh(x) hyperbolic arctangent
- n .cos(x) cosine
- n .cosh(x) hyperbolic cosine
- n .sin(x) sine
- n .sinh(x) hyperbolic sine
- n .tan(x) tangent
- n .tanh(x) hyperbolic tangent

JSON

METHODS

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

e Error()

PROPERTIES

- s .name return name of error
- s .message return description of error

EvalError(), InternalError(), RangeError(), URIError(), ReferenceError(), SyntaxError(), TypeError()

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

PROPERTIES

- o .constructor return ref. to object func.

METHODS

- o .assign(dst, src1, src2...) copy values
- o .create(proto, prop) create obj w/prop
- o .defineProperties(obj, prop)
- o .defineProperty(obj, prop, desc)
- o .freeze(obj) avoid properties changes
- o .getOwnPropertyDescriptor(obj, prop)
- a .getOwnPropertyNames(obj)
- a .getOwnPropertySymbols(obj)
- o .getPrototypeOf(obj) return prototype
- b .is(val1, val2) check if are same value
- b .isExtensible(obj) check if can add prop
- b .isFrozen(obj) check if obj is frozen
- b .isSealed(obj) check if obj is sealed
- a .keys(obj) return only keys of object
- o .preventExtensions(obj) avoid extend
- o .seal(obj) prop are non-configurable
- o .setPrototypeOf(obj, prot) change prot

INSTANCE METHODS

- b .hasOwnProperty(prop) check if exist
- b .isPrototypeOf(obj) test in another obj
- b .propertyIsEnumerable(prop)
- s .toString() return equivalent string
- s .toLocaleString() return locale version
- o .valueOf() return primitive value

p Promise()

METHODS

- p .all(obj) return promise
- p .catch(onRejected(s)) = .then(undef,s)
- p .then(onFulfilled(v), onRejected(s))
- p .race(obj) return greedy promise (res/rej)
- p .resolve(obj) return resolved promise
- p .reject(reason) return rejected promise

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)
- o .deleteProperty(obj, prop) trap delete
- o .enumerate(obj) trap for...in
- o .get(obj, prop, rec) trap get property
- o .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)

globals

METHODS

- o eval(str) evaluate javascript code
- b isFinite(obj) check if is a finite number
- b isNaN(obj) check if is not a number
- n parseInt(s, radix) string to integer
- n parseFloat(s, radix) string to float
- s encodeURIComponent(URI) = to %3D
- s decodeURIComponent(URI) %3D to =

s Set() WeakSet only obj as items

PROPERTIES

- n .size return number of items

METHODS

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

ITERATION METHODS

- si .entries() iterate items
- si .values() iterate only value of items

CALLBACK FOR EACH METHODS

- .forEach(cb(e,i,a), arg) exec for each

m Map() WeakMap only obj as keys

PROPERTIES

- n .size return number of elements

METHODS

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

ITERATION METHODS

- mi .entries() iterate elements
- mi .keys() iterate only keys
- mi .values() iterate only values

CALLBACK FOR EACH METHODS

- .forEach(cb(e,i,a), arg) exec for each

Symbol()

PROPERTIES

- s .iterator specifies default iterator
- s .match specifies match of regexp
- s .species specifies constructor function

METHODS

- s .for(key) search existing symbols
- s .keyFor(sym) return key from global reg

g Generator() = function* () { ... }

METHODS

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

Others

FAST TIPS

- var declare variable
- let declare block scope local variable
- const declare constant (read-only)
- func(a=1) default parameter value
- func(...a) rest argument (spread operator)
- (a) => { ... } function equivalent (fat arrow)
- `string ${a}` template with variables
- 0bn binary (2) number n to decimal
- 0on 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