

## JavaScript cheatsheet – v5.4.3 – <https://github.com/Serrin/Celestra/>

Web Storage api and JSON	element.dataset & data-* attributes	TypedArray
<p>IE8+</p> <p><b>localStorage:</b>          localStorage.length;          localStorage.key(index);          localStorage.getItem(key);          localStorage.setItem(key, data);          localStorage.removeItem(key);          localStorage.clear();</p> <p><b>sessionStorage:</b>          sessionStorage.length;          sessionStorage.key(index);          sessionStorage.getItem(key);          sessionStorage.setItem(key, data);          sessionStorage.removeItem(key);          sessionStorage.clear();</p> <p><b>hasItem:</b>          localStorage.getItem(key) !== null          sessionStorage.getItem(key) !== null</p> <p><b>setJSON:</b>          localStorage.setItem(key, JSON.stringify(object));          sessionStorage.setItem(key, JSON.stringify(object));</p> <p><b>getJSON:</b>          JSON.parse(localStorage.getItem(key));          JSON.parse(sessionStorage.getItem(key));</p>	<p>- IE11 compatible          - element data-* attributes          - no methods and events</p> <p><b>camelcase:</b>          element.data-name          -&gt; element.dataset.name          element.data-first-second          -&gt; element.dataset.firstSecond</p> <p><b>set:</b>          element.dataset.name = "value";          element.dataset["name"] = "value";          element.setAttribute("data-name", "value");          element["data-name"] = "value";</p> <p><b>get:</b>          element.dataset.name;          element.dataset["name"];          element.getAttribute("data-name");          element["data-name"];</p> <p><b>remove:</b>          element.removeAttribute("data-name");</p> <p><b>check:</b>          element.hasAttribute("data-name");</p>	<p>IE10+11 compatible</p> <p>new &lt;TypedArray&gt;(); <i>ES2017</i>          new &lt;TypedArray&gt;(length);          new &lt;TypedArray&gt;(typedArray);          new &lt;TypedArray&gt;(object);          new &lt;TypedArray&gt;(buffer[,byteOffset[,len]]);</p> <p><b>Int8Array();</b>          -128 to 127, 1 byte, int8_t, Shortint</p> <p><b>Uint8Array();</b>          0 to 255, 1 byte, uint8_t, Byte</p> <p><b>Uint8ClampedArray(); - not in IE10-11</b>          0 to 255, 1 byte, uint8_t, Byte</p> <p><b>Int16Array();</b>          -32768 to 32767, 2 byte, int16_t, Smallint</p> <p><b>Uint16Array();</b>          0 to 65535, 2 byte, uint16_t, Word</p> <p><b>Int32Array();</b>          -2147483648 to 2147483647, 4 byte, int32_t</p> <p><b>Uint32Array();</b>          0 to 4294967295, 4 byte, uint32_t, Longword</p> <p><b>BigInt64Array(); - not in IE10-11</b>          -2**63 to 2**63-1, 8 byte, int64_t, Int64</p> <p><b>BigUint64Array(); - not in IE10-11</b>          0 to 2**64-1, 8 byte, uint64_t, QWord</p> <p><b>Float32Array();</b>          1.2x10-38 to 3.4x1038, 4 byte, float, Real</p> <p><b>Float64Array();</b>          5.0x10-324 to 1.8x10308, 8 byte, Double</p>
DOM events		
target.addEventListener(<type>,<listener>[,useCapture]); or target.addEventListener(<type>,<listener>[,options]); target.removeEventListener(<type>,<listener>[,useCapture]); or target.removeEventListener(<type>,<listener>[,options]); target.dispatchEvent(<event>); target.type(); or target["type"]();		

element.classList	JSON
<p>IE10+IE11 don't have support for classList on SVG or MathML elements.</p> <p><b>element.classList.add(String[,String]);</b> IE10+11: yes (except the multiple arguments)</p> <p><b>element.classList.remove(String[,String]);</b> IE10+11: yes (except the multiple arguments) - Removing a class that does not exist, does NOT throw an error.</p> <p><b>element.classList.contains(String);</b> IE10+11: yes</p> <p><b>element.classList.toggle(String[,force]);</b> IE10+11: yes (except the second argument) - When only one argument is present: Toggle class value; if class exists then remove it and return false, if not, then add it and return true. - When a second argument is present: If the second argument evaluates to true, add specified class value, and if it evaluates to false, remove it.</p> <p><b>element.classList.item(Number);</b> IE10+11: yes</p> <p><b>element.classList.length;</b> IE10+11: yes</p> <p><b>element.classList.replace(oldClass, newClass);</b> IE10+11: No and the method isn't compatible with the Safari and mobile browsers too.</p> <p><b>Remove all classes:</b> element.className = "";</p>	<p>IE8+</p> <p><b>Valid Data Types</b></p> <ul style="list-style-type: none"> <li>- string</li> <li>- number</li> <li>- object (containing valid JSON values)</li> <li>- array</li> <li>- boolean</li> <li>- date</li> <li>- null</li> </ul> <p><b>Invalid Data Types</b></p> <ul style="list-style-type: none"> <li>- function</li> <li>- Symbol</li> <li>- NaN, Infinity, undefined - <i>will be "null"</i></li> <li>- an object with method(s) (functions)</li> <li>- Map, Set, WeakMap, WeakSet - <i>fix: convert to array</i></li> <li>- BigInt - <i>fixed in Celestra - BigInt.prototype.toJSON();</i></li> </ul> <p><b>JSON.stringify(value[,replacer[,space]]);</b> Convert a JavaScript object to a JSON string.</p> <p>JSON.stringify( { a: 1, b: "2", c: true } ); // -&gt; '{"a":1,"b":"2","c":true}'</p> <p>JSON.stringify( [1, 2, 3, 4, 5] ); // -&gt; "[1,2,3,4,5]"</p> <p><b>JSON.parse(text[,reviver]);</b> Parses a JSON string and returns a JavaScript object.</p> <p>JSON.parse(JSON.stringify( {a: 1, b: "2", c: true} )); // -&gt; Object { a: 1, b: "2", c: true }</p> <p>JSON.parse(JSON.stringify( [1, 2, 3, 4, 5] )); // -&gt; Array(5) [ 1, 2, 3, 4, 5 ]</p>



Fetch	Fetch POST
<pre> Firefox 39, Chrome 42, Edgel4, Opera29 , Safari 10.1, Samsung I. 4.0  // Example GET method implementation with TEXT: fetch("https://api.coindesk.com/v1/bpi/currentprice.json")   .then( response =&gt; response.text() )   .then( data =&gt; console.log(data) )   .catch( error =&gt; console.log(error) );  // Example GET method implementation with JSON: fetch("https://api.coindesk.com/v1/bpi/currentprice.json")   .then( response =&gt; response.json() )   .then( data =&gt; console.log(data.bpi.USD.rate) )   .catch( error =&gt; console.log(error) );  // Example GET method implementation with TEXT and JSON: fetch("https://api.coindesk.com/v1/bpi/currentprice.json")   .then( response =&gt; response.text() )   .then(text =&gt; console.log(JSON.parse(text).bpi.USD.rate+"\n"+text))   .catch( error =&gt; console.log(error) );  // Example POST method implementation with upload JSON data: const data = { username: "example" }; fetch("https://example.com/profile", {   method: "POST", // or "PUT"   headers: { "Content-Type": "application/json", },   body: JSON.stringify(data), })   .then(response =&gt; response.json())   .then(data =&gt; { console.log("Success:", data); })   .catch((error) =&gt; { console.error("Error:", error); }); </pre>	<pre> // Example POST method implementation: // Default options are marked with * async function postData(url = "url", data = {}) {   const response = await fetch(url, {     method: "POST",     // *GET, POST, PUT, DELETE, etc.     mode: "cors",     // no-cors, *cors, same-origin     cache: "no-cache",     // *default, no-cache, reload, force-cache,     only-if-cached     credentials: "same-origin",     // include, *same-origin, omit     headers: {"Content-Type": "application/json"},     // "Content-Type": "application/x-www-form-     urlencoded"     redirect: "follow",     // manual, *follow, error     referrerPolicy: "no-referrer",     // no-referrer, *no-referrer-when-downgrade,     origin, origin-when-cross-origin, same-origin,     strict-origin, strict-origin-when-cross-origin,     unsafe-url     body: JSON.stringify(data)     // body data type must match "Content-Type"     header   });   return response.json();   // parses JSON response into native JavaScript   objects }  postData("https://example.com/answer", { answer: 42 })   .then(data =&gt; { console.log(data); });   // JSON data parsed by `data.json()` call </pre>

Nullish coalescing operator <code>x ?? y</code>	Logical nullish assignment <code>x ??= y</code>	Logical AND assignment <code>x &amp;&amp;= y</code>	Logical OR assignment <code>x   = y</code>
FF 72, Chrome and Edge 80, Safari 13.1, Safari on iOS 13.4, Samsung Internet 13	FF 79, Chrome and Edge 85, Safari 14, Samsung Internet 14		
The nullish coalescing operator (??) is a logical operator that <b>returns its right-hand side operand when its left-hand side operand is null or undefined, and otherwise returns its left-hand side operand.</b>	The logical nullish assignment operator <b>only assigns if x is nullish (null or undefined).</b>	The logical AND assignment operator <b>only assigns if x is truthy.</b>	The logical OR assignment operator <b>only assigns if x is falsy.</b>  (false, 0, -0, 0n, "", '', ``, null, undefined, NaN)
<pre>const nullValue = null; const emptyText = ""; // falsy const someNumber = 42;  const valA = nullValue ?? "defaultA"; // "defaultA"  const valB = emptyText ?? "default B"; // "" (empty string is not null or undefined)  const valC = someNumber ?? 0; // 42</pre>	<pre>function config (options) {   options.duration ??= 100;   options.speed ??= 25;   return options; }  config({duration: 125}); // {duration: 125, speed: 25}  config({}); // {duration: 100, speed: 25}</pre>	<pre>let x = 0; let y = 1;  x &amp;&amp;= 0; // 0 x &amp;&amp;= 1; // 0 y &amp;&amp;= 1; // 1 y &amp;&amp;= 0; // 0</pre>	<pre>const a = {   duration: 50,   title: "" };  a.duration   = 10; // 5  a.title   = "title is empty."; // "title is empty"</pre>
<pre>let count = 0; let text = ""; let qty = count    42; // 42 let message = text    "hi!"; // "hi!"</pre>	<pre>const a = { duration: 50 }; a.duration ??= 10; // 50 a.speed ??= 25; // 25</pre>	<pre>let a = 1; let b = 0; a &amp;&amp;= 2; // 2 b &amp;&amp;= 2; // 0</pre>	
		equivalent	not equivalent
<b>Nullish coalescing operator (??)</b>	<b><code>x ?? y</code></b>	<code>(x !== null) ? x : y</code>	
<b>Logical nullish assignment (??=)</b>	<b><code>x ??= y</code></b>	<code>x ?? (x = y);</code>	<code>x = x ?? y;</code>
<b>Logical AND assignment (&amp;&amp;=)</b>	<b><code>x &amp;&amp;= y</code></b>	<code>x &amp;&amp; (x = y);</code>	<code>x = x &amp;&amp; y;</code>
<b>Logical OR assignment (  =)</b>	<b><code>x   = y</code></b>	<code>x    (x = y);</code>	<code>x = x    y;</code>

Reflect object		
ES6, no IE11 support - FF 42, Chrome 49, Edge 12, Safari 10, Safari on iOS 10, Samsung Internet 5.0		
Function	Description	equivalent
<code>Reflect.apply(target, thisArgument, argumentsList);</code>	Calls a target function with arguments as specified by the argumentsList parameter.	<code>Function.prototype.apply();</code>
<code>Reflect.construct(target, argumentsList [,newTarget]);</code>	The new operator as a function.	<code>new target(...argumentsList);</code>
<code>Reflect.defineProperty(target,propertyKey, attributes);</code>	Similar to <code>Object.defineProperty()</code> . Returns a boolean that is true if the property was successfully defined.	<code>Object.defineProperty(target, propertyKey, attributes);</code>
<code>Reflect.deleteProperty(target,propertyKey);</code>	The delete operator as a function.	<code>delete target[propertyKey];</code>
<code>Reflect.get(target,propertyKey[, receiver]);</code>	Returns the value of the property of the object.	<code>target[propertyKey];</code>
<code>Reflect.getOwnPropertyDescriptor(target, propertyKey);</code>	Returns a property descriptor of the given property if it exists on the object, undefined otherwise.	<code>Object.getOwnPropertyDescriptor(target, propertyKey);</code>
<code>Reflect.getPrototypeOf(target);</code>	<code>Object.getPrototypeOf(target);</code>	<code>Object.getPrototypeOf(target);</code>
<code>Reflect.has(target,propertyKey);</code>	Returns a boolean whether the target has the property.	<code>propertyKey in target;</code>
<code>Reflect.isExtensible(target);</code>	Returns a boolean that is true if the target is extensible.	<code>Object.isExtensible(target);</code>
<code>Reflect.ownKeys(target);</code>	Returns an array of the target object's own (not inherited) property keys.	<code>Object.getOwnPropertyNames(target).concat(Object.getOwnPropertySymbols(target));</code>
<code>Reflect.preventExtensions(target);</code>	Prevents new properties from ever being added to an object. Similar to <code>Object.preventExtensions()</code> .	<code>Object.preventExtensions(target);</code>
<code>Reflect.set(target,propertyKey,value [, receiver]);</code>	Assigns values to properties. Returns a boolean that is true if the update was successful.	<code>target[propertyKey] = value;</code>
<code>Reflect.setPrototypeOf(target,prototype);</code>	Sets the prototype of an object. Returns a boolean that is true if the update was successful.	<code>Object.setPrototypeOf(target,prototype);</code>