**HTML / HTML5 capabilities**

HTML5 is the newest hyper text markup language for websites from the World Wide Web Consortium (W3C).

* *Semantics*: allowing you to describe more precisely what your content is.
* *Connectivity*: allowing you to communicate with the server in new and innovative ways.
* *Offline and storage*: allowing webpages to store data on the client-side locally and operate offline more efficiently.
* *Multimedia*: making video and audio first-class citizens in the Open Web.
* *2D/3D graphics  and effects*: allowing a much more diverse range of presentation options.
* *Performance and integration*: providing greater speed optimization and better usage of computer hardware.
* *Device access*: allowing for the usage of various input and output devices.
* *Styling*: letting authors write more sophisticated themes.

SEMANTICS

[**Sections and outlines in HTML5**](https://developer.mozilla.org/en-US/docs/Sections_and_Outlines_of_an_HTML5_document)

A look at the new outlining and sectioning elements in HTML5: [<section>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/section), [<article>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/article), [<nav>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/nav),[<header>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/header), [<footer>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/footer) and [<aside>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/aside).

[**Using HTML5 audio and video**](https://developer.mozilla.org/en-US/docs/Using_HTML5_audio_and_video)

The [<audio>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/audio) and [<video>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video) elements embed and allow the manipulation of new multimedia content.

[**Forms in HTML5**](https://developer.mozilla.org/en-US/docs/HTML/Forms_in_HTML)

A look at improvements to web forms in HTML5: the constraint validation API, several new attributes, new values for the [<input>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input) attribute [type](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input#attr-type) and the new [<output>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/output) element.

**New semantic elements**

Beside sections, media and forms elements, there are numerous new elements, like [<mark>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/mark),[<figure>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/figure), [<figcaption>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/figcaption), [<data>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/data), [<time>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/time), [<output>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/output), [<progress>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/progress), or [<meter>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/meter) and [<main>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/main), increasing the amount of [valid HTML5 elements](https://developer.mozilla.org/en-US/docs/HTML/HTML5/HTML5_element_list).

CONNECTIVITY

[**Web Sockets**](https://developer.mozilla.org/en-US/docs/WebSockets)

Allows creating a permanent connection between the page and the server and to exchange non-HTML data through that means.

[**Server-sent events**](https://developer.mozilla.org/en-US/docs/Server-sent_events/Using_server-sent_events)

Allows a server to push events to a client, rather than the classical paradigm where the server could send data only in response to a client's request.

[**WebRTC**](https://developer.mozilla.org/en-US/docs/WebRTC)

This technology, where RTC stands for Real-Time Communication, allows connecting to other people and controlling videoconferencing directly in the browser, without the need for a plugin or an external application.

[**Offline resources: The application cache**](https://developer.mozilla.org/en-US/docs/HTML/Using_the_application_cache)

Firefox fully supports the HTML5 offline resource specification. Most others have offline resource support at some level.

[**Online and offline events**](https://developer.mozilla.org/en-US/docs/Online_and_offline_events)

Firefox 3 supports WHATWG online and offline events, which let applications and extensions detect whether or not there's an active Internet connection, as well as to detect when the connection goes up and down.

[**WHATWG client-side session and persistent storage (aka DOM storage)**](https://developer.mozilla.org/en-US/docs/DOM/Storage)

Client-side session and persistent storage allows web applications to store structured data on the client side.

[**IndexedDB**](https://developer.mozilla.org/en-US/docs/IndexedDB)

IndexedDB is a web standard for the storage of significant amounts of structured data in the browser and for high performance searches on this data using indexes.

[**Using files from web applications**](https://developer.mozilla.org/en-US/docs/Using_files_from_web_applications)

Support for the new HTML5 File API has been added to Gecko, making it possible for web applications to access local files selected by the user. This includes support for selecting multiple files using the [<input>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input) of [**type**](https://developer.mozilla.org/en-US/docs/HTML/Element/Input#attr-type) file HTML element's new [**multiple**](https://developer.mozilla.org/en-US/docs/HTML/Element/Input#attr-multiple) attribute. There also is [FileReader](https://developer.mozilla.org/en-US/docs/DOM/FileReader" \o "DOM/FileReader).

MULTIMEDIA

[**Using HTML5 audio and video**](https://developer.mozilla.org/en-US/docs/Using_HTML5_audio_and_video)

The [<audio>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/audio) and [<video>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video) elements embed and allow the manipulation of new multimedia content.

[**WebRTC**](https://developer.mozilla.org/en-US/docs/WebRTC)

This technology, where RTC stands for Real-Time Communication, allows connecting to other people and controlling videoconferencing directly in the browser, without the need for a plugin or an external application.

[**Using the Camera API**](https://developer.mozilla.org/en-US/docs/DOM/Using_the_Camera_API)

Allows using, manipulating, and storing an image from the computer's camera.

**Track and WebVTT**

The [<track>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/track) element allows subtitles and chapters. [WebVTT](https://developer.mozilla.org/en-US/docs/HTML/WebVTT" \o "HTML/WebVTT) is a text track format.

3D GRAPHICS AND EFFECTS

[**HTML5 Text API for <canvas> elements**](https://developer.mozilla.org/en-US/docs/Drawing_text_using_a_canvas)

The HTML5 text API is now supported by [<canvas>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/canvas) elements.

[**WebGL**](https://developer.mozilla.org/en-US/docs/WebGL)

WebGL brings 3D graphics to the Web by introducing an API that closely conforms to OpenGL ES 2.0 that can be used in HTML5 [<canvas>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/canvas) elements.

[**SVG**](https://developer.mozilla.org/en-US/docs/SVG)

An XML-based format of vectorial images that can directly be embedded in the HTML.

PERFORMANCE AND INTEGRATION

[**Web Workers**](https://developer.mozilla.org/en-US/docs/DOM/Using_web_workers)

Allows delegation of JavaScript evaluation to background threads, allowing these activities to prevent slowing down interactive events.

[**XMLHttpRequest**](https://developer.mozilla.org/en-US/docs/DOM/XMLHttpRequest)**level 2**

Allows fetching asynchronously some parts of the page, allowing it to display dynamic content, varying according to the time and user actions. This is the technology behind [Ajax](https://developer.mozilla.org/en-US/docs/AJAX).

**JIT-compiling JavaScript engines**

The new generation of JavaScript engines is much more powerful, leading to greater performance.

[**History API**](https://developer.mozilla.org/en-US/docs/DOM/Manipulating_the_browser_history)

Allows the manipulation of the browser history. This is especially useful for pages loading interactively new information.

[**The contentEditable Attribute: Transform your website to a wiki!**](https://developer.mozilla.org/en-US/docs/HTML/Content_Editable)

HTML5 has standardized the contentEditable attribute. Learn more about this feature.

[**Drag and drop**](https://developer.mozilla.org/en-US/docs/DragDrop/Drag_and_Drop)

The HTML5 drag and drop API allows support for dragging and dropping items within and between web sites. This also provides a simpler API for use by extensions and Mozilla-based applications.

[**Focus management in HTML**](https://developer.mozilla.org/en-US/docs/Focus_management_in_HTML)

The new HTML5 activeElement and hasFocus attributes are supported.

[**Web-based protocol handlers**](https://developer.mozilla.org/en-US/docs/Web-based_protocol_handlers)

You can now register web applications as protocol handlers using thenavigator.registerProtocolHandler() method.

[**requestAnimationFrame**](https://developer.mozilla.org/en-US/docs/Web/API/Window/requestAnimationFrame)

Allows control of animations rendering to obtain optimal performance.

[**Fullscreen API**](https://developer.mozilla.org/en-US/docs/DOM/Using_full-screen_mode)

Controls the usage of the whole screen for a Web page or application, without the browser UI displayed.

[**Pointer Lock API**](https://developer.mozilla.org/en-US/docs/API/Pointer_Lock_API)

Allows locking the pointer to the content, so games and similar applications don't lose focus when the pointer reaches the window limit.

[**Online and offline events**](https://developer.mozilla.org/en-US/docs/Online_and_offline_events)

In order to build a good offline-capable web application, you need to know when your application is actually offline. Incidentally, you also need to know when your application has returned to an online status again.

DEVICE ACCESS

[**Using the Camera API**](https://developer.mozilla.org/en-US/docs/DOM/Using_the_Camera_API)

Allows using, manipulating, and storing an image from the computer's camera.

[**Touch events**](https://developer.mozilla.org/en-US/docs/DOM/Touch_events)

Handlers to react to events created by a user pressing touch screens.

[**Using geolocation**](https://developer.mozilla.org/en-US/docs/Using_geolocation)

Let browsers locate the position of the user using geolocation.

[**Detecting device orientation**](https://developer.mozilla.org/en-US/docs/Detecting_device_orientation)

Get the information when the device on which the browser runs changes orientation. This can be used as an input device (e.g., to make games that react to the position of the device) or to adapt the layout of a page to the orientation of the screen (portrait or landscape).

[**Pointer Lock API**](https://developer.mozilla.org/en-US/docs/API/Pointer_Lock_API)

Allows locking the pointer to the content, so games and similar application don't lose focus when the pointer reaches the window limit.

STYLING

[CSS](https://developer.mozilla.org/en-US/docs/CSS) has been extended to be able to style elements in a much more complex way. This is often referred as [CSS3](https://developer.mozilla.org/en-US/docs/CSS/CSS3), though CSS is not a monolithic specification any more and the different modules are not all at level 3: some are at level 1 and others at level 4, with all the intermediate levels covered.

**New background styling features**

It is now possible to put a shadow to a box, using [box-shadow](https://developer.mozilla.org/en-US/docs/Web/CSS/box-shadow) and [multiple backgrounds](https://developer.mozilla.org/en-US/docs/CSS/Multiple_backgrounds) can be set.

**More fancy borders**

Not only it is now possible to use images to style borders, using [border-image](https://developer.mozilla.org/en-US/docs/Web/CSS/border-image) and its associated longhand properties, but rounded borders are supported via the [border-radius](https://developer.mozilla.org/en-US/docs/Web/CSS/border-radius) property.

**Animating your style**

Using [CSS Transitions](https://developer.mozilla.org/en-US/docs/CSS/Using_CSS_transitions) to animate between different states or using [CSS Animations](https://developer.mozilla.org/en-US/docs/CSS/Using_CSS_animations) to animate parts of the page without a triggering event, you can now control mobile elements on your page.

**Typography improvement**

Authors have better control to reach better typography. They can control [text-overflow](https://developer.mozilla.org/en-US/docs/Web/CSS/text-overflow) and[hyphenation](https://developer.mozilla.org/en-US/docs/CSS/hyphens), but also can add a [shadow](https://developer.mozilla.org/en-US/docs/CSS/text-shadow) to it or control more precisely its [decorations](https://developer.mozilla.org/en-US/docs/CSS/text-decoration). Custom typefaces can be downloaded and applied thanks to the new [@font-face](https://developer.mozilla.org/en-US/docs/Web/CSS/@font-face) at-rule.

**New presentational layouts**

In order to improve the flexibility of designs, two new layouts have been added: the [CSS multi-column layouts](https://developer.mozilla.org/en-US/docs/CSS/Using_CSS_multi-column_layouts) and [CSS flexible box layout](https://developer.mozilla.org/en-US/docs/CSS/Flexbox).