

# What is DOCTYPE?

Asked 15 years, 11 months ago   Modified 4 years, 7 months ago

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180



- What is DOCTYPE and why do I want to use it?
- What are the different DOCTYPEs I can use?
- What is the difference between standards and quirks mode, and what are some quirks I may run into with differently set DOCTYPEs?



Lastly, what is the proper DOCTYPE that I should be using?

html

xhtml

doctype

dtd

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edited Jan 15, 2015 at 14:49



Jukka K. Korpela

201k ● 38 ● 279 ● 403

asked Jan 5, 2009 at 23:21



Bob

99.5k ● 30 ● 126 ● 131

10 Shouldn't this be a wiki? – Alex Jan 6, 2009 at 18:38



Basically, the DOCTYPE describes the HTML that will be used in your page.

79



Browsers also use the DOCTYPE to determine how to render a page. Not including a DOCTYPE or including an incorrect one can trigger quirks mode.



The kicker here is, that quirks mode in Internet Explorer is quite different from quirks mode in Firefox (and other browsers); meaning that you'll have a *much* harder job, trying to ensure your page renders consistently with all browsers if the quirks mode is triggered, than you will if it is rendered in standards mode.

Wikipedia has a more in-depth summary of the [differences in rendering when using various DOCTYPEs](#). XHTML is enabled by certain DOCTYPEs, and there is quite a bit of debate about the use of XHTML which is covered well in [XHTML — myths and reality](#).

There are subtle differences between different "standards compliant" rendering DOCTYPEs, such as the HTML5 DOCTYPE (`<!DOCTYPE html>`, prior to HTML5, only known as the "skinny doctype" which does not trigger standardized rendering in older browsers) and other DOCTYPEs such as this one for HTML 4.01 transitional:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional  
"http://www.w3.org/TR/html4/loose.dtd">
```

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Léa Gris

19.4k ● 4 ● 37 ● 49

answered Jan 6, 2009 at 0:06



Walter Rumsby

7,525 ● 6 ● 42 ● 37

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40 These days I favour the HTML5 DOCTYPE: `<!DOCTYPE html>` it works in all modern browsers, including IE6.  
– [Walter Rumsby](#) Mar 28, 2011 at 0:08

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64 IE6  $\nrightarrow$  modern browsers – user2176127 Nov 23, 2013 at 9:54

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29



The DOCTYPE tells the consuming user agent (web browsers, web crawlers, validation tools) what type of document the file is. Using it ensures that the consumer correctly parses the HTML as you intended it.

There are several different DOCTYPEs for HTML, XHTML, and Framesets and each of these has two modes Strict and Transitional. Strict says that your markup is using the defined standards exactly. See [W3C DTDs](#) page for further details.

Quirksmode is basically the layout method from the browser wars days when the standards were much less respected and defined. Generally a standards mode page, that is valid, will layout more consistently across various browsers, but may lack certain features that you

require. One such feature is the anchor tag's target attribute. The [Quirksmode](#) site is a great resource for these differences.

One final thought is that the new HTML5 standard proposes using a very simple DOCTYPE:

```
<!DOCTYPE html>
```

Using this DOCTYPE is a forward compatible way to specify that your pages are in standards mode, and are HTML. This is the method that Google uses, and is reasonably easy to remember. I recommend using this DOCTYPE unless you plan to use XHTML.

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edited Sep 17, 2015 at 3:55



**Moha Dehghan**

18.4k ● 3 ● 58 ● 72

answered Jan 5, 2009 at 23:39




**Rob**

3,746 ● 2 ● 35 ● 43

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2 Is DOCTYPE HTML tag? If so, then why do we need this to begin with? – [CuriousMind](#) Jan 13, 2015 at 15:07

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2 @vipinkoul the DOCTYPE tag specifies what type of HTML document you are sending the User-Agent. It could be HTML or XHTML or a Frameset. And it could be Strict HTML/XHTML/Frameset or Transitional HTML/XHTML/Frameset. Mostly this effects how the parser reacts when it encounters an error. – [Rob](#) May 14, 2015 at 0:03 

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6



A doctype defines which version of HTML/XHTML your document uses. You would want to use a doctype so that when you run your code through validators, the validators know which version of HTML/XHTML to check against.

This page provides a good overview:



[Don't forget to add a doctype](#)



Common doctypes you can use are listed here:

[Recommended list of DTDs](#)

Which doctype you should go with depends on the code you're using, but to get an idea, try running your code through the W3C validator and use the **Document Type** drop-down menu in the "More Options" menu to try different doctypes out.

[W3C Markup Validation Service](#)

answered Jan 5, 2009 at 23:24



GR1000



4



In HTML (including XHTML) as used on web pages, DOCTYPE is a string that triggers one of a few browser modes (quirks mode, standards mode, almost standards mode), depending on the exact spelling of the DOCTYPE. You want to use it to select a browser mode that best suits your page.

Formally, in SGML and XML, a DOCTYPE declaration is a reference to a Document Type Definition (DTD), which specifies the formal syntax rules of the markup language. No browser has ever used DTDs for anything or even accessed them. However, they are used by SGML and XML markup validators such as the [W3C Markup Validator](#), except in HTML5 mode. Therefore, the choice of DOCTYPE determines how a validator works if the document is submitted to it. However, the validator mode of operation can also be selected in its user interface. (SGML and XML processors may use DOCTYPEs in different other ways, too, but the question is apparently meant to be limited to the HTML context and to web browsers and closely related software.)

There is no authoritative list of DOCTYPEs. Each HTML specification or draft defines its own DOCTYPE, or DOCTYPEs. The set of DOCTYPEs recognized by

browsers when selecting mode varies by browser. In practice, there is no reason to use a DOCTYPE other than `<DOCTYPE html>` [as defined in HTML5](#), though HTML5 also lists a few “legacy DOCTYPEs”. You can use that DOCTYPE if you want standards mode (recommended for new pages) and use no DOCTYPE if you want quirks mode (which you may need for legacy pages).

“Standards mode” generally means the mode of operation where a browser follows HTML, CSS, DOM and other specifications the best it can. It does not usually mean full conformance. “Quirks mode” is different in different browsers, but generally it means an attempt at imitating the behavior of very old browsers like IE 5. The purpose is to keep old pages working, under the assumption that they may rely on features and bugs in the old browsers. See the description [What happens in Quirks Mode?](#) Note that there is a rather different, more limited concept of “quirks mode” in HTML5, which closely resembles the document called [Quirks Mode Living Standard](#).

A typical issue is that element widths are calculated differently in quirks mode and in standards mode. This means that the layout of a page may be more or less changed or even totally messed up, if a page designed to work in quirks mode is viewed in standards mode (or vice versa).

So you should use `<!DOCTYPE html>` for new pages and keep whatever DOCTYPE (if any) you have been using for old pages.

However, quirks mode means, in some browsers, that many new features of CSS are not supported. This means that if you want to enhance an old page with some CSS3 feature, it may well be necessary to switch to a DOCTYPE that triggers standards mode. In such a case, you need to review and test the page to see whether it will run in standards mode.

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answered Jan 15, 2015 at 15:19

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Jukka K. Korpela

201k ● 38 ● 279 ● 403

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Thanks for the extra details, specially these ones: «No browser has ever used DTDs for anything or even accessed them» and «there is no reason to use a DOCTYPE other than `<DOCTYPE html>` as [defined in HTML5](#)». – [Armfoot](#)  
Feb 16, 2016 at 15:14

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2



A doctype is a document that describes how the contents of a xhtml-like document can look like (like a webpage).

*Note: this defines only the syntax of said page, the rendering of the page is NOT defined by the DTD!*



For example, a doctype could define how the `<table>`-tag can look like - which attributes it accepts, and which values/valuetypes are accepted for each attribute. Think of it as a lexicon for your current webpage.



[Wikipedia](#) has an informative page on the various Doctypes that are in common use. Mind you - there's nothing stopping you from creating your own doctype. The chances are, however, that the browser probably doesn't know how to render your document.

Which DTD to use depends on what you are going to write. XHTML has a whole different DTD than HTML, for example.

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edited Jan 5, 2009 at 23:37

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answered Jan 5, 2009 at 23:32



Henrik Paul

67.6k ● 31 ● 86 ● 96



2



Doctypes tell the browser in what language the page is written in, be it HTML or XHTML. For example,

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
```



tell the browser to render the page as `HTML4 strict`.



Older browsers used to render pages incorrectly and therefore newer browsers simulate errors of the older browsers when they find an old doctype.

Today you should use at least HTML4 or better XHTML.

A blog entry about doctypes is [Fix Your Site With the Right DOCTYPE!](#) (from [A List Apart](#)).

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Peter Mortensen

31.6k ● 22 ● 109 ● 133

answered Jan 5, 2009 at 23:34



Georg Schölly

126k ● 54 ● 223 ● 276



1

First of all there is no one doctype you should be using, but most designers try to make it work within XHTML 1.0 Strict.



A doctype is nothing more than a declaration of what tags you can use within your html (though the browsers can use more or less than what is defined) You can actually open up the doctype file and start reading ([XHTML 1.0 Strict](#))



If you do not specify a doctype, the browser will try its best to guess but not always hits the correct type.

Quirks mode is just a technique used by browsers to be backwards compatible, a great example of quirks mode is how [IE renders boxes](#)

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answered Jan 5, 2009 at 23:32

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Ólafur Waage

69.9k ● 22 ● 145 ● 199



On the web, a doctype does nothing but tell the browser if you want standards, almost standards, or quirks mode.

1



What changes in quirks mode depends on the browser: Firefox, Opera, Safari, and Chrome implement a limited set of quirks, like removing the space for text descenders



in code like `<table><tr><td><img></td></tr></table>`



(solution: `td img { vertical-align:bottom; }`). IE, on the other hand, reverts to the rendering engine in IE5.5.

That means that you won't be able to use *any* of the new features implemented since 2000.

To trigger standards mode, I suggest using the HTML5 doctype, `<doctype html>`, as it is the easiest to remember.

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answered Jan 6, 2009 at 18:31

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Ms2ger

16k ● 6 ● 40 ● 36



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