Web Design I

Document Type Definitions

When authoring an HTML or XHTML document, it is important to add a doctype declaration. The declaration must be exact (both in spelling and in case) to have the desired effect, which makes it sometimes difficult. To ease the work, below is a list of recommended declarations that you can use in your Web documents.

The list is informative and does not try to be exhaustive as there are many other proper declarations you could use. Additional possibilities are being developed as Web technology makes its advances.

HTML types are many: for example, HTML 4.01 Strict, HTML 4.01 Transitional, XHTML 1.0 Strict. All these types are defined in their respective W3C specifications, but they are also defined in a machine-readable language specifying the legal structure, elements and attributes of a type of HTML. Such a definition is called a Document Type Definition (DTD).

Applications that process HTML documents need to know which DTD an HTML or XHTML document is actually using. To accomplish this, each document needs a DTD declaration at the beginning, such as the following:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

Specifying a doctype is important because it defines which version of (X)HTML the document is actually using. This is a critical piece of information that browsers or other tools need for processing the document.

For example, specifying the doctype permits the use of tools such as the Markup Validator to check syntax and to discover errors that may affect the way various browsers render the page. Such tools won't work if the document does not include the doctype.

A doctype declaration will prevent the browsers from guessing how to parse the code, thus triggering a standardized parsing mode. This creates faster processing for a result that is consistent and free of unexpected surprises that documents without the doctype declaration will encounter.

Here is the list:

W3C Standard	Declaration
HTML 2.0 *html.dtd*	`<!DOCTYPE html PUBLIC "-//IETF//DTD HTML 2.0//EN">`
HTML 3.2 *html32.dtd*	`<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">`
HTML 4.01 *strict.dtd*	`<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">`
HTML 4.01 *loose.dtd*	`<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">`
HTML 4.01 *frameset.dtd*	`<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN" "http://www.w3.org/TR/html4/frameset.dtd">`

Copyright © 2010 by Paul Roberts • All rights reserved

W3C Standard	Declaration
XHTML 1.0 *xhtml1-strict.dtd*	`<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">`
XHTML 1.0 *xhtml1-transitional.dtd*	`<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">`
XHTML 1.0 *shtml1-frameset.dtd*	`<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">`
XHTML 1.1 *xhtml11.dtd*	`<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">`
XHTML 1.1 *xhtml11.dtd*	`<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">`

Doctype declarations of many kinds may be available to be applied to relative documents. HTML or XHTML is just one example. Another file type might be XML, which is a sibling coding standard to HTML and XHTML. For an XML document to be valid, it must have an accompanying validation file, which often is a DTD. Such a DTD is written specifically for the purpose of the XML file.

Here is an example of a DTD called MML that is applied to a document written using XML.

```
<!ELEMENT movpix (movie+)>
<!ELEMENT movie (picture, title, director, year, rating, genre, runtime, media,
description, rule)>
<!ATTLIST movie ID CDATA #REQUIRED>
<!ELEMENT picture (#PCDATA)>
<!ELEMENT title (#PCDATA)>
<!ELEMENT director (#PCDATA)>
<!ELEMENT year (#PCDATA)>
<!ELEMENT rating (#PCDATA)>
<!ELEMENT genre (#PCDATA)>
<!ELEMENT runtime (#PCDATA)>
<!ELEMENT media (#PCDATA)>
<!ELEMENT description (#PCDATA)>
<!ELEMENT rule EMPTY>
```

This is a document that uses this DTD.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE movpix SYSTEM "mml.dtd">
<movpix>
<movie ID="Fan0001">
<picture>http://www.absentmind.net/xml/demos/images/lordoftheringsfellowshipofthering.jpg
</picture>
<title>Lord of the Rings: The Fellowship of the Ring</title>
```

```
<director>Peter Jackson</director>
<year>2001</year>
<rating>PG-13</rating>
<genre>Fantasy</genre>
<runtime>178</runtime>
<media>DVD</media>
<description>In ancient times the Rings of Power ... into the Cracks of
Doom.</description>
<rule/>
</movie>
<movie ID="Fan0002">
<picture>http://www.absentmind.net/xml/demos/images/lordoftheringstwotowers.jpg</picture>
<title>Lord of the Rings: The Two Towers</title>
<director>Peter Jackson</director>
<year>2002</year>
<rating>PG-13</rating>
<genre>Fantasy</genre>
<runtime>222</runtime>
<media>DVD</media>
<description>The Fellowship has been broken. Boromir (Sean Bean) is dead, Frodo Baggins
(Elijah Wood) and Samwise Gamgee (Sean Astin) have gone to Mordor.... The War of the Ring
has now begun.</description>
<rule/>
</movie>
<movie ID="Fan0003">
<picture>http://www.absentmind.net/xml/demos/images/lordoftheringreturnofthekingjpg</pict
ure>
<title>Lord of the Rings: Return of the King</title>
<director>Peter Jackson</director>
<year>2001</year>
<rating>PG-13</rating>
<genre>Fantasy</genre>
<runtime>178</runtime>
<media>In Theaters</media>
<description>While Frodo and Sam continue to approach Mount Doom ... as Sauron wages his
last war against Middle-Earth.</description>
<rule/>
</movie>
</movpix>
```

If you want to see the entire HTML 4.01 DTD, download the HTML 4.01 Document Type Definition handout from the class Web site.