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# XHTML

W3C Recommendation Summary

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## What is XHTML?

- XHTML stands for **EX**tensible **H**yper**T**ext **M**arkup **L**anguage
- XHTML is aimed to replace HTML
- XHTML is almost identical to HTML 4.01
- XHTML is a stricter and cleaner version of HTML
- XHTML is HTML defined as an XML (Extensible Markup Language) application

## XHTML is a Web Standard

XHTML 1.0 became an official W3C Recommendation January 26, 2000.

A W3C Recommendation means that the specification is stable, that it has been reviewed by the W3C membership, and that the specification is now a Web standard.

## How to get ready for XHTML?

XHTML is the next generation of HTML, but it will take some time before browsers and other software products are ready for it.

In the meantime, there are some important things you can do to prepare yourself for it. As you will see, XHTML is not very different from HTML 4.01, so bringing your code up to 4.01 standards is a good start.

In addition, the following 10 changes will make your current HTML 4.01 documents, XHTML compliant:

## 1. Documents must conform to XML rules.

- a. Elements must be properly nested.

In HTML, some elements can be improperly nested within each other like this:

```
<b><i>This text is bold and italic</b></i>
```

In XHTML, all elements must be properly nested within each other like this:

```
<b><i>This text is bold and italic</i></b>
```

- b. Documents must be well-formed.

All XHTML elements must be nested within the <html> root element. All other elements can have sub elements (children). Sub elements must be in pairs and correctly nested within their parent element. The basic document structure is:

```
<html>  
<head> . . . </head>  
<body> . . . </body>  
</html>
```

## 2. Tag names must be in lowercase.

This is because XHTML documents are XML applications. XML is case-sensitive. Tags like <br> and <BR> are interpreted as different tags.

This is wrong:

```
<BODY>  
<P>This is a paragraph</P>  
</BODY>
```

This is correct:

```
<body>
<p>This is a paragraph.</p>
</body>
```

### **3. All XHTML elements must be closed.**

Non-empty elements must have an end tag.

This is wrong:

```
<p>This is a paragraph.
<li>This is a list item.
```

This is correct:

```
<p>This is a paragraph.</p>
<li>This is a list item.</li>
```

### **4. Empty elements must also be closed.**

Empty elements must either have an end tag, or the start tag must end with />.

This is wrong:

```
This is a line break<br>
Check out this horizontal rule:<hr>
What a cool image! 
```

This is correct:

```
This is a line break<br></br>
Check out this horizontal rule:<hr />
What a cool image! 
```

Important Compatibility Note:

To make your XHTML compatible with today's browsers, you should add an extra space before the "/" symbol like this: <br /> or this <hr />.

## **5. Attribute names must be in lowercase.**

This is wrong:

```
<table WIDTH="100%">
<div ALIGN="center">
```

This is correct:

```
<table width="100%">
<div align="center">
```

## **6. Attribute values must be in quotes.**

This is wrong:

```
<table width=100%>
<img height=200 width=250>
```

This is correct:

```
<table width="100%">
<img height="200" width="250" />
```

## **7. Attribute minimization is forbidden.**

This is wrong:

```
<input checked>
<option selected>
```

This is correct:

```
<input checked="checked" />
<option selected="selected" />
```

## 8. The id attribute replaces the name attribute.

HTML 4.01 defines a “name” attribute for the elements a, applet, frame, iframe, img, and map. In XHTML the “name” attribute is deprecated. Use “id” instead.

This is wrong:

```

<a name="namedanchor"></a>
```

This is correct:

```

<a id="namedanchor"></a>
```

## 9. The XHTML DTD defines mandatory elements.

All XHTML documents must have a DOCTYPE declaration. The html, head and body elements must be present, and the title must be present inside the head element.

This is a minimum XHTML document template:

```
<!DOCTYPE Doctype goes here>
<html>
<head>
  <title>Title goes here</title>
</head>

<body>
Body text goes here
</body>
</html>
```

Note: the DOCTYPE declaration is not a part of the XHTML document itself. It is not an XHTML element, and it should not have a closing tag.

## 10. The `<!DOCTYPE>` is mandatory.

The DOCTYPE declaration should always be the first line in an XHTML document. The DOCTYPE defines the document type:

```
<!DOCTYPE html public "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/strict.dtd">
```

There are currently 3 XHTML document types:

### 1. XHTML 1.0 Strict

Use this when you want really clean markup, free of presentational clutter. Use this together with Cascading Style Sheets.

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

### 2. XHTML 1.0 Transitional

Use this when you need to take advantage of HTML's presentational features and when you want to support browsers that don't understand Cascading Style Sheets.

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

### 3. XHTML 1.0 Frameset

Use this when you want to use HTML frames to partition the browser window into two or more frames.

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

## What is a Document Type Definition (DTD)?

- A DTD specifies the syntax of a web page in SGML (Standard Generalized Markup Language).
- A DTD is used by SGML applications, such as HTML, to specify rules that apply to the markup of documents of a particular type, including a set of element and entity declarations.
- XHTML is specified in an SGML document type definition.
- An XHTML DTD describes in precise, computer-readable language, the allowed syntax and grammar of XHTML markup.

## Validating XHTML

An XHTML document is validated against a DTD. Before an XHTML file can be properly validated, a correct DTD must be added as the first line of the file. See item #10 above for more details.

To run your XHTML files through a validator with the appropriate DTD, use the W3C's HTML validator found at <http://validator.w3.org>.

## Online Resources

- W3C XHTML Homepage - <http://www.w3c.org/MarkUp/>
- W3C Recommendation - <http://www.w3.org/TR/2000/REC-xhtml-basic-20001219/>
- W3Schools XHTML pages - <http://www.w3schools.com/xhtml>
- Web Developers Virtual Library (WDVL) XHTML pages - <http://www.wdvl.com/Authoring/Languages/XML/XHTML/>
- Webmonkey XHTML Overview - <http://hotwired.lycos.com/webmonkey/00/50/index2a.html>
- Web Review XHTML discussions - [http://www.webreview.com/tag/2000/09\\_01\\_00.shtml](http://www.webreview.com/tag/2000/09_01_00.shtml)