

# HTML

## HTML: The Language of the Web

A web page is simply a text file written in a language called **Hypertext Markup Language** or **HTML**. A markup language is a language that describes a document's **structure** (paragraphs, text color, etc.) and **content** (information, graphics, etc.). **HTML** tags work with any Web browser. HTML organizes documents and tells Web browsers how Web pages should look on your computer screen. The colors, pictures, and backgrounds on Web pages are determined by HTML tags.

## The History of HTML

HTML was created in the 1980s using SGML, a metalanguage that is used to create other languages. In the early years, no one organization set standards for HTML and web developers were able to modify it. There were some common rules, but competing browsers, seeking to dominate the market, introduced differences in HTML called extensions. Netscape and IE introduced the most extensions, providing options to web page authors but complicating web page development as a whole.

Web developers faced the challenge of determining which browser would support which extension or creating workarounds for which did not.

Ultimately, a group was formed, the World Wide Web Consortium (W3C) and created standards that all browser manufacturers were to follow. They have no enforcement power, but their recommendations are usually followed, though not always right away.

## Versions of HTML

These are the various versions of HTML that the W3C has released:

HTML 1.0	1989-1994	The first public version of HTML, included support for inline images and text controls.
HTML 2.0	1995	Supported by all graphical browsers. Introduced forms. A document written to this specification is compatible with almost all browsers.
HTML 3.0	1996	Proposed replacement for 2.0 but never widely adapted.
HTML 3.2	1997	Support for tables, expanded options for forms, limited script programming.
HTML 4.01	1999	Added support for style sheets, new features for forms and tables, expanded scripting capabilities and more support for multimedia.

## XML

Extensible Markup Language is a metalanguage that allows for creating documents that obey specific rules for their content and structure. Unlike HTML, which has rules but no built-in mechanism for enforcing them.

## XHTML

Extensible HTML is a stricter version of HTML, designed to combine XML and HTML and to eliminate the formatting issues of HTML.

XHTML 1.0	2001	Reformulation of HTML 4.01 in XML, combining the strength of HTML 4.0 with the power of XML. Provided standards for more robust web content on a wide range of browsers.
XHTML 1.1	2002	Minor update to 1.0 simplifying extension writing
XHTML 2.0	2004-	The upcoming version, still is draft which removes the remaining presentational features left in HTML.

XHTML is the future of the web, but HTML isn't going away very soon. They overlap quite a bit and the web is full of HTML documents. Users with old browsers still need supporting.

## DTD - Document Type Declaration

`<!DOCTYPE>` Is Mandatory. The DOCTYPE declaration should always be the first line in an XHTML document.

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

DTD specifies the syntax of a web page in SGML. An XHTML DTD describes in precise, computer-readable language, the allowed syntax and grammar of XHTML markup.

There are currently 3 XHTML document types:  
STRICT, TRANSITIONAL, FRAMESET

## XHTML 1.0 Strict

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

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

## **XHTML 1.0 Transitional**

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

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.

## **XHTML 1.0 Frameset**

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

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

## **HOW TO PREPARE YOUR WEB PAGE**

1. Know the history of HTML
2. Know your market - who is viewing your pages and what is their browser version?
3. Know the different browsers and what they can and cannot do.
4. Test - different browsers and different versions of browsers. Various browsers can even perform differently under different operating systems!
5. Use Validators

## **TOOLS FOR CREATING HTML**

Text Editor - Windows Notepad

HTML Converter - Microsoft Word

HTML Editor - Dreamweaver

**Even though HTML editors allow you to create a web page quickly, you will usually still have to work directly with the HTML code to create a finished document!**

## ELEMENTS AND TAGS

**Element** - distinct object in the document (e.g. heading, title)

**Tags** - marks each element. Either one-sided or two-sided.

Syntax

```
<element>content </element>
```

Example:

```
<p>My Web Page</p>
```

Where paragraph is the *element*, <p> is the *tag*.

Two-sided tags has an opening tag <p> and a closing tag </p> XHTML requires you include both tags. Earlier versions of HTML did not.

## STRUCTURE OF A HTML FILE

**Html - bookends of the document**

```
<html> -- start of document
```

```
</html> -- end of document
```

**Head - information about the document (not displayed in the web browser)**

```
<head>
```

```
</head>
```

e.g. title, keywords

**Body - all the content to be displayed in the web page.**

```
<body>
```

```
</body>
```

## SAMPLE WEB PAGE

```
<html>
```

```
<head>
```

```
  <title> My Web Page </title>
```

```
</head>
```

```
<body>
```

```
This is my content.
```

```
</body>
```

```
</html>
```

## COMMON TAGS

### Heading <h1-h6>

The <h1> to <h6> tags define headers. <h1> defines the largest header. <h6> defines the smallest header.

Attribute	Value	Description	DTD
align	left center right justify	Specifies the alignment of the text in the header. Deprecated. Use styles instead	TF

### Paragraph <p>

The <p> tag defines a paragraph.

Attribute	Value	Description	DTD
align	left right center justify	Specifies the alignment of the text within the paragraph. Deprecated. Use styles instead	TF

### Comment <!-- ... -->

The comment tag is used to insert a comment in the source code. A comment will be ignored by the browser. You can use comments to explain your code, which can help you when you edit the source code at a later date.

No attributes

### Line Break <br/>

The <br> tag inserts a single line break.

No attributes. HTML did not require the end /, XHTML does

### Horizontal Rule <hr/>

The <hr> tag inserts a horizontal rule.

No attributes. HTML did not require the end /, XHTML does

### Bold, Italic <b>, <i>

Font style elements

### Font <font>

Specifies the font face, font size, and font color of text.

### Center <center>

Centers its enclosed text horizontally.

### Link <a>

This element defines the relationship between two linked documents.  
sample:

`<a ref="file:tree.htm">tree page</a>`

href URL - The target URL of the resource

target - Where to open the target URL:

- `_blank` - the target URL will open in a new window
- `_self` - the target URL will open in the same frame as it was clicked
- `_parent` - the target URL will open in the parent frameset
- `_top` - the target URL will open in the full body of the window

## Image `<img/>`

The `img` element defines an image.

``

Attribute	Value	Description	DTD
alt	text	Defines a short description of the image	STF
src	URL	The URL of the image to display	STF

### Optional Attributes

Attribute	Value	Description	DTD
align	top bottom middle left right	Specifies how to align the image according to surrounding text. Deprecated. Use styles instead	TF
border	pixels	Defines a border around an image. Deprecated. Use styles instead	TF
height	pixels %	Defines the height of an image	STF
hspace	pixels	Defines white space on the left and right side of the image. Deprecated. Use styles instead	TF
ismap	URL	Defines the image as a server-side image map	STF
longdesc	URL	A URL to a document that contains a long description of the image	STF
usemap	URL	Defines the image as a client-side image map. Look at the <code>&lt;map&gt;</code> and <code>&lt;area&gt;</code> tags to figure out how it works	STF
vspace	pixels	Defines white space on the top and bottom of the image. Deprecated. Use styles instead	TF
width	pixels %	Sets the width of an image	STF