

# HTML Introduction

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## Example

```
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```

---

## What is HTML?

HTML is a language for describing web pages.

- HTML stands for **Hyper Text Markup Language**
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses **markup tags** to describe web pages

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## HTML Tags

HTML markup tags are usually called HTML tags

- HTML tags are keywords surrounded by **angle brackets** like <html>
- HTML tags normally **come in pairs** like <b> and </b>
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- Start and end tags are also called **opening tags** and **closing tags**

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## HTML Documents = Web Pages

- HTML documents **describe web pages**
- HTML documents **contain HTML tags** and plain text
- HTML documents are also **called web pages**

The purpose of a web browser (like Internet Explorer or Firefox) is to read HTML documents and display them as web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page:

```
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```

## Example Explained

- The text between `<html>` and `</html>` describes the web page
- The text between `<body>` and `</body>` is the visible page content
- The text between `<h1>` and `</h1>` is displayed as a heading
- The text between `<p>` and `</p>` is displayed as a paragraph

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# HTML - Getting Started

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## What You Need

You don't need any tools to learn HTML at W3Schools.

- You don't need an HTML editor
  - You don't need a web server
  - You don't need a web site
- 

## Editing HTML

HTML can be written and edited using many different editors like Dreamweaver and Visual Studio.

However, in this tutorial we use a plain text editor (like Notepad) to edit HTML. We believe using a plain text editor is the best way to learn HTML.

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## Create Your Own Test Web

**If you just want to learn HTML, skip the rest of this chapter.**

If you want to create a test page on your own computer, just copy the 3 files below to your desktop.

(Right click on each link, and select "save target as" or "save link as")

[mainpage.htm](#)

[page1.htm](#)

[page2.htm](#)

After you have copied the files, you can double-click on the file called "mainpage.htm" and see your first web site in action.

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## Use Your Test Web For Learning

We suggest you experiment with everything you learn at W3Schools by editing your web files with a text editor (like Notepad).

**Note:** If your test web contains HTML markup tags you have not learned, don't panic. You will learn all about it in the next chapters.

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## .HTM or .HTML File Extension?

When you save an HTML file, you can use either the .htm or the .html file extension. There is no difference, it is entirely up to you.

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Don't worry if the examples use tags you have not learned.

You will learn about them in the next chapters.

---

## HTML Headings

HTML headings are defined with the <h1> to <h6> tags.

### Example

```
<h1>This is a heading</h1>
<h2>This is a heading</h2>
<h3>This is a heading</h3>
```

---

## HTML Paragraphs

HTML paragraphs are defined with the <p> tag.

### Example

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

---

## HTML Links

HTML links are defined with the <a> tag.

### Example

```
<a href="http://www.w3schools.com">This is a link</a>
```

**Note:** The link address is specified in the href attribute.

(You will learn about attributes in a later chapter of this tutorial).

---

## HTML Images

HTML images are defined with the <img> tag.

### Example

```

```

**Note:** The name and the size of the image are provided as attributes.

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# HTML Elements

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HTML documents are defined by HTML elements.

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## HTML Elements

An HTML element is everything from the start tag to the end tag:

Start tag *	Element content	End tag *
<code>&lt;p&gt;</code>	This is a paragraph	<code>&lt;/p&gt;</code>
<code>&lt;a href="default.htm" &gt;</code>	This is a link	<code>&lt;/a&gt;</code>
<code>&lt;br /&gt;</code>		

\* The start tag is often called the **opening tag**. The end tag is often called the **closing tag**.

---

## HTML Element Syntax

- An HTML element starts with a **start tag / opening tag**
- An HTML element ends with an **end tag / closing tag**
- The **element content** is everything between the start and the end tag
- Some HTML elements have **empty content**
- Empty elements are **closed in the start tag**
- Most HTML elements can have **attributes**

**Tip:** You will learn about attributes in the next chapter of this tutorial.

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## Nested HTML Elements

Most HTML elements can be nested (can contain other HTML elements).

HTML documents consist of nested HTML elements.

---

## HTML Document Example

```
<html>
```

```
<body>
<p>This is my first paragraph.</p>
</body>

</html>
```

The example above contains 3 HTML elements.

---

## HTML Example Explained

### The **<p>** element:

```
<p>This is my first paragraph.</p>
```

The `<p>` element defines a paragraph in the HTML document. The element has a start tag `<p>` and an end tag `</p>`. The element content is: This is my first paragraph.

### The **<body>** element:

```
<body>
<p>This is my first paragraph.</p>
</body>
```

The `<body>` element defines the body of the HTML document. The element has a start tag `<body>` and an end tag `</body>`. The element content is another HTML element (a `p` element).

### The **<html>** element:

```
<html>

<body>
<p>This is my first paragraph.</p>
</body>

</html>
```

The `<html>` element defines the whole HTML document. The element has a start tag `<html>` and an end tag `</html>`. The element content is another HTML element (the `body` element).

---

## Don't Forget the End Tag

Some HTML elements might display correctly even if you forget the end tag:

```
<p>This is a paragraph
<p>This is a paragraph
```

The example above works in most browsers, because the closing tag is considered optional.

Never rely on this. Many HTML elements will produce unexpected results and/or errors if you forget the end tag .

---

## Empty HTML Elements

HTML elements with no content are called empty elements.

`<br>` is an empty element without a closing tag (the `<br>` tag defines a line break).

**Tip:** In XHTML, all elements must be closed. Adding a slash inside the start tag, like `<br />`, is the proper way of closing empty elements in XHTML (and XML).

---

## HTML Tip: Use Lowercase Tags

HTML tags are not case sensitive: `<P>` means the same as `<p>`. Many web sites use uppercase HTML tags.

W3Schools use lowercase tags because the World Wide Web Consortium (W3C) **recommends** lowercase in HTML 4, and **demands** lowercase tags in XHTML.

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# HTML Attributes

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Attributes provide additional information about HTML elements.

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## HTML Attributes

- HTML elements can have **attributes**
  - Attributes provide **additional information** about an element
  - Attributes are always specified in **the start tag**
  - Attributes come in name/value pairs like: **name="value"**
- 

## Attribute Example

HTML links are defined with the <a> tag. The link address is specified in the href attribute:

### Example


```
<a href="http://www.w3schools.com">This is a link</a>
```

---

## Always Quote Attribute Values

Attribute values should always be enclosed in quotes.

Double style quotes are the most common, but single style quotes are also allowed.

 **Tip:** In some rare situations, when the attribute value itself contains quotes, it is necessary to use single quotes: name='John "ShotGun" Nelson'

---

## HTML Tip: Use Lowercase Attributes

Attribute names and attribute values are case-insensitive.

However, the World Wide Web Consortium (W3C) recommends lowercase attributes/attribute values in their HTML 4 recommendation.

Newer versions of (X)HTML will demand lowercase attributes.

---

## HTML Attributes Reference

A complete list of legal attributes for each HTML element is listed in our:

[Complete HTML Reference](#)

Below is a list of some attributes that are standard for most HTML elements:

Attribute	Value	Description
class	<i>classname</i>	Specifies a classname for an element
id	<i>id</i>	Specifies a unique id for an element
style	<i>style_definition</i>	Specifies an inline style for an element
title	<i>tooltip_text</i>	Specifies extra information about an element (displayed as a tool tip)

For more information about standard attributes:

[HTML Standard Attributes Reference](#)

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# HTML Headings

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Headings are important in HTML documents.

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## HTML Headings

Headings are defined with the `<h1>` to `<h6>` tags.

`<h1>` defines the most important heading. `<h6>` defines the least important heading.

### Example

```
<h1>This is a heading</h1>
<h2>This is a heading</h2>
<h3>This is a heading</h3>
```

**Note:** Browsers automatically add some empty space (a margin) before and after each heading.

---

## Headings Are Important

Use HTML headings for headings only. Don't use headings to make text **BIG** or **bold**.

Search engines use your headings to index the structure and content of your web pages.

Since users may skim your pages by its headings, it is important to use headings to show the document structure.

H1 headings should be used as main headings, followed by H2 headings, then the less important H3 headings, and so on.

---

## HTML Lines

The `<hr />` tag creates a horizontal line in an HTML page.

The `hr` element can be used to separate content:

### Example

```
<p>This is a paragraph</p>
<hr />
<p>This is a paragraph</p>
<hr />
<p>This is a paragraph</p>
```

---

## HTML Comments

Comments can be inserted into the HTML code to make it more readable and understandable. Comments are ignored by the browser and are not displayed.

Comments are written like this:

### Example

```
<!-- This is a comment -->
```

**Note:** There is an exclamation point after the opening bracket, but not before the closing bracket.

---

## HTML Tip - How to View HTML Source

Have you ever seen a Web page and wondered "Hey! How did they do that?"

To find out, right-click in the page and select "View Source" (IE) or "View Page Source" (Firefox), or similar for other browsers. This will open a window containing the HTML code of the page.

---



## Examples From This Page

### [Headings](#)

How to display headings in an HTML document.

### [Hidden comments](#)

How to insert comments in the HTML source code.

### [Horizontal lines](#)

How to insert a horizontal line.

---

## HTML Tag Reference

W3Schools' tag reference contains additional information about these tags and their attributes.

You will learn more about HTML tags and attributes in the next chapters of this tutorial.

Tag	Description
<a href="#"><u>&lt;html&gt;</u></a>	Defines an HTML document
<a href="#"><u>&lt;body&gt;</u></a>	Defines the document's body
<a href="#"><u>&lt;h1&gt; to &lt;h6&gt;</u></a>	Defines HTML headings
<a href="#"><u>&lt;hr /&gt;</u></a>	Defines a horizontal line
<a href="#"><u>&lt;!--&gt;</u></a>	Defines a comment

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# HTML Paragraphs

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HTML documents are divided into paragraphs.

---

## HTML Paragraphs

Paragraphs are defined with the `<p>` tag.

### Example

```
<p>This is a paragraph</p>
<p>This is another paragraph</p>
```

**Note:** Browsers automatically add an empty line before and after a paragraph.

---

## Don't Forget the End Tag

Most browsers will display HTML correctly even if you forget the end tag:

### Example

```
<p>This is a paragraph
<p>This is another paragraph
```

The example above will work in most browsers, but don't rely on it. Forgetting the end tag can produce unexpected results or errors.

**Note:** Future version of HTML will not allow you to skip end tags.

---

## HTML Line Breaks

Use the `<br />` tag if you want a line break (a new line) without starting a new paragraph:

### Example

```
<p>This is<br />a para<br />graph with line breaks</p>
```

The `<br />` element is an empty HTML element. It has no end tag.

---

## `<br>` or `<br />`

In XHTML, XML, elements with no end tag (closing tag) are not allowed.

Even if `<br>` works in all browsers, writing `<br />` instead works better in XHTML and XML applications.

---

## HTML Output - Useful Tips

You cannot be sure how HTML will be displayed. Large or small screens, and resized windows will create different results.

With HTML, you cannot change the output by adding extra spaces or extra lines in your HTML code.

The browser will remove extra spaces and extra lines when the page is displayed. Any number of lines count as one line, and any number of spaces count as one space.

### [Try it yourself](#)

(The example demonstrates some HTML formatting problems)

---



## Examples from this page

### [HTML paragraphs](#)

How HTML paragraphs are displayed in a browser.

### [Line breaks](#)

The use of line breaks in an HTML document.

### [Poem problems](#)

Some problems with HTML formatting.

## More Examples

### [More paragraphs](#)

The default behaviors of paragraphs.

---

## HTML Tag Reference

W3Schools' tag reference contains additional information about HTML elements and their attributes.

Tag	Description
<a href="#"><u>&lt;p&gt;</u></a>	Defines a paragraph
<a href="#"><u>&lt;br /&gt;</u></a>	Inserts a single line break

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# HTML Text Formatting

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## HTML Text Formatting

**This text is bold**

This text is big

*This text is italic*

This is computer output

This is <sub>subscript</sub> and <sup>superscript</sup>

---

## HTML Formatting Tags

HTML uses tags like `<b>` and `<i>` for formatting output, like **bold** or *italic* text.

These HTML tags are called formatting tags (look at the bottom of this page for a complete reference).

**Often `<strong>` renders as `<b>`, and `<em>` renders as `<i>`.**

However, there is a difference in the meaning of these tags:



`<b>` or `<i>` defines bold or italic text only.

`<strong>` or `<em>` means that you want the text to be rendered in a way that the user understands as "important". Today, all major browsers render strong as bold and em as italics. However, if a browser one day wants to make a text highlighted with the strong feature, it might be cursive for example and not bold!



## Try it Yourself - Examples

### [Text formatting](#)

How to format text in an HTML document.

### [Preformatted text](#)

How to control the line breaks and spaces with the pre tag.

### "Computer output" tags

How different "computer output" tags will be displayed.

### Address

How to define contact information for the author/owner of an HTML document.

### Abbreviations and acronyms

How to handle abbreviations and acronyms.

### Text direction

How to change the text direction.

### Quotations

How to handle long and short quotations.

### Deleted and inserted text

How to mark deleted and inserted text.

---

## HTML Text Formatting Tags

Tag	Description
<a href="#"><u>&lt;b&gt;</u></a>	Defines bold text
<a href="#"><u>&lt;big&gt;</u></a>	Defines big text
<a href="#"><u>&lt;em&gt;</u></a>	Defines emphasized text
<a href="#"><u>&lt;i&gt;</u></a>	Defines italic text
<a href="#"><u>&lt;small&gt;</u></a>	Defines small text
<a href="#"><u>&lt;strong&gt;</u></a>	Defines strong text
<a href="#"><u>&lt;sub&gt;</u></a>	Defines subscripted text
<a href="#"><u>&lt;sup&gt;</u></a>	Defines superscripted text
<a href="#"><u>&lt;ins&gt;</u></a>	Defines inserted text
<a href="#"><u>&lt;del&gt;</u></a>	Defines deleted text

## HTML "Computer Output" Tags

Tag	Description
<a href="#"><u>&lt;code&gt;</u></a>	Defines computer code text
<a href="#"><u>&lt;kbd&gt;</u></a>	Defines keyboard text
<a href="#"><u>&lt;samp&gt;</u></a>	Defines sample computer code
<a href="#"><u>&lt;tt&gt;</u></a>	Defines teletype text
<a href="#"><u>&lt;var&gt;</u></a>	Defines a variable
<a href="#"><u>&lt;pre&gt;</u></a>	Defines preformatted text

## HTML Citations, Quotations, and Definition Tags

Tag	Description
-----	-------------

<a href="#"><u>&lt;abbr&gt;</u></a>	Defines an abbreviation
<a href="#"><u>&lt;acronym&gt;</u></a>	Defines an acronym
<a href="#"><u>&lt;address&gt;</u></a>	Defines contact information for the author/owner of a document
<a href="#"><u>&lt;bdo&gt;</u></a>	Defines the text direction
<a href="#"><u>&lt;blockquote&gt;</u></a>	Defines a long quotation
<a href="#"><u>&lt;q&gt;</u></a>	Defines a short quotation
<a href="#"><u>&lt;cite&gt;</u></a>	Defines a citation
<a href="#"><u>&lt;dfn&gt;</u></a>	Defines a definition term

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# HTML Fonts

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## The HTML <font> Tag Should NOT be Used

The <font> tag is deprecated in HTML 4, and removed from HTML5.

The World Wide Web Consortium (W3C) has removed the <font> tag from its recommendations.

In HTML 4, style sheets (CSS) should be used to define the layout and display properties for many HTML elements.

The example below shows how the HTML could look by using the <font> tag:

### Example

```
<p>
<font size="5" face="arial" color="red">
This paragraph is in Arial, size 5, and in red text color.
</font>
</p>
```

```
<p>
<font size="3" face="verdana" color="blue">
This paragraph is in Verdana, size 3, and in blue text color.
</font>
</p>
```

---

## The Right Way to Do It - With Styles

### [Set the font of text](#)

This example demonstrates how to set the font of a text.

### [Set the font size of text](#)

This example demonstrates how to set the font size of a text.

### [Set the font color of text](#)

This example demonstrates how to set the color of a text.

### [Set the font, font size, and font color of text](#)

This example demonstrates how to set the font, font size, and font color of a text.

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# HTML Styles - CSS

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---

CSS is used to style HTML elements.

## Look! Styles and colors

This text is in Verdana and red

This text is in Times and blue

This text is 30 pixels high

[Try it yourself](#)

---

## Styling HTML with CSS

CSS was introduced together with HTML 4, to provide a better way to style HTML elements.

CSS can be added to HTML in the following ways:

- in **Cascading Style Sheet files** (CSS files)
- in the **<style> element** in the HTML head section
- in the **style attribute** in single HTML elements

---

## Using the HTML Style Attribute

It is time consuming and not very practical to style HTML elements using the style attribute.

**The preferred way to add CSS to HTML, is to put CSS syntax in separate CSS files.**

However, in this HTML tutorial we will introduce you to CSS using the style attribute. This is done to simplify the examples. It also makes it easier for you to edit the code and try it yourself.

You can learn everything about CSS in our [CSS Tutorial](#).

## HTML Style Example - Background Color

The background-color property defines the background color for an element:

### Example

```
<html>

<body style="background-color:yellow;">
<h2 style="background-color:red;">This is a heading</h2>
<p style="background-color:green;">This is a paragraph.</p>
</body>

</html>
```

The background-color property makes the "old" bgcolor attribute obsolete.

[Try it yourself: Background color the old way](#)

---

## HTML Style Example - Font, Color and Size

The font-family, color, and font-size properties defines the font, color, and size of the text in an element:

### Example

```
<html>

<body>
<h1 style="font-family:verdana;">A heading</h1>
<p style="font-family:arial;color:red;font-size:20px;">A paragraph.</p>
</body>

</html>
```

The font-family, color, and font-size properties make the old <font> tag obsolete.

---

## HTML Style Example - Text Alignment

The text-align property specifies the horizontal alignment of text in an element:

### Example

```
<html>

<body>
```

```
<h1 style="text-align:center;">Center-aligned heading</h1>
<p>This is a paragraph.</p>
</body>

</html>
```


The text-align property makes the old <center> tag obsolete.

[Try it yourself: Centered heading the old way](#)

---

## Deprecated Tags and Attributes

In HTML 4, several tags and attributes were deprecated. Deprecated means that they will not be supported in future versions of HTML.

 **The message is clear:** Avoid using deprecated tags and attributes!

These tags and attributes should be avoided:

Tags	Description
<center>	<b>Deprecated.</b> Defines centered content
<font> and <basefont>	<b>Deprecated.</b> Defines HTML fonts
<s> and <strike>	<b>Deprecated.</b> Defines strikethrough text
<u>	<b>Deprecated.</b> Defines underlined text
Attributes	Description
align	<b>Deprecated.</b> Defines the alignment of text
bgcolor	<b>Deprecated.</b> Defines the background color
color	<b>Deprecated.</b> Defines the text color

**For all of the above: Use styles instead!**

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# HTML Links

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Links are found in nearly all Web pages. Links allow users to click their way from page to page.



## Try it Yourself - Examples

### [HTML links](#)

How to create links in an HTML document.

(You can find more examples at the bottom of this page)

---

## HTML Hyperlinks (Links)

A hyperlink (or link) is a word, group of words, or image that you can click on to jump to a new document or a new section within the current document.

When you move the cursor over a link in a Web page, the arrow will turn into a little hand.

Links are specified in HTML using the `<a>` tag.

The `<a>` tag can be used in two ways:

1. To create a link to another document, by using the href attribute
2. To create a bookmark inside a document, by using the name attribute

---

## HTML Link Syntax

The HTML code for a link is simple. It looks like this:

```
<a href="url">Link text</a>
```

The href attribute specifies the destination of a link.

## Example

```
<a href="http://www.w3schools.com/">Visit W3Schools</a>
```

which will display like this: [Visit W3Schools](#)

Clicking on this hyperlink will send the user to W3Schools' homepage.

**Tip:** The "*Link text*" doesn't have to be text. It can be an image or any other HTML element.

---

## HTML Links - The target Attribute

The target attribute specifies where to open the linked document.

The example below will open the linked document in a new browser window or a new tab:

### Example

```
<a href="http://www.w3schools.com/" target="_blank">Visit W3Schools!</a>
```

---

## HTML Links - The name Attribute

The name attribute specifies the name of an anchor.

The name attribute is used to create a bookmark inside an HTML document.

**Note:** The upcoming HTML5 standard suggest using the id attribute instead of the name attribute for specifying the name of an anchor. Using the id attribute actually works also for HTML4 in all modern browsers.

Bookmarks are not displayed in any special way. They are invisible to the reader.

### Example

A named anchor inside an HTML document:

```
<a name="tips">Useful Tips Section</a>
```

Create a link to the "Useful Tips Section" inside the same document:

```
<a href="#tips">Visit the Useful Tips Section</a>
```

Or, create a link to the "Useful Tips Section" from another page:

```
<a href="http://www.w3schools.com/html_links.htm#tips">Visit the Useful Tips Section</a>
```

---

## Basic Notes - Useful Tips

**Note:** Always add a trailing slash to subfolder references. If you link like this:  
`href="http://www.w3schools.com/html"`, you will generate two requests to the server, the server will first add a slash to the address, and then create a new request like this:  
`href="http://www.w3schools.com/html/"`.

**Tip:** Named anchors are often used to create "table of contents" at the beginning of a large document. Each chapter within the document is given a named anchor, and links to each of these anchors are put at the top of the document.



## More Examples

### [An image as a link](#)

How to use an image as a link.

### [Link to a location on the same page](#)

How to link to a bookmark.

### [Break out of a frame](#)

How to break out of a frame (if your site is locked in a frame).

### [Create a mailto link](#)

How to link to a mail message (will only work if you have mail installed).

### [Create a mailto link 2](#)

Another mailto link.

---

## HTML Link Tags

Tag	Description
<code>&lt;a&gt;</code>	Defines an anchor

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# HTML Images

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Example

## Norwegian Mountain Trip



## Try it Yourself - Examples

### [Insert images](#)

How to insert images into an HTML document.

### [Insert images from different locations](#)

How to insert an image from another folder or another server.

(You can find more examples at the bottom of this page).

---

## HTML Images - The <img> Tag and the Src Attribute

In HTML, images are defined with the <img> tag.

The <img> tag is empty, which means that it contains attributes only, and has no closing tag.

To display an image on a page, you need to use the src attribute. Src stands for "source". The value of the src attribute is the URL of the image you want to display.

## Syntax for defining an image:

```

```

The URL points to the location where the image is stored. An image named "boat.gif", located in the "images" directory on "www.w3schools.com" has the URL:  
<http://www.w3schools.com/images/boat.gif>.

The browser displays the image where the <img> tag occurs in the document. If you put an image tag between two paragraphs, the browser shows the first paragraph, then the image, and then the second paragraph.

---

## HTML Images - The Alt Attribute

The required alt attribute specifies an alternate text for an image, if the image cannot be displayed.

The value of the alt attribute is an author-defined text:

```

```

The alt attribute provides alternative information for an image if a user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).

---

## HTML Images - Set Height and Width of an Image

The height and width attributes are used to specify the height and width of an image.

The attribute values are specified in pixels by default:

```

```

**Tip:** It is a good practice to specify both the height and width attributes for an image. If these attributes are set, the space required for the image is reserved when the page is loaded. However, without these attributes, the browser does not know the size of the image. The effect will be that the page layout will change during loading (while the images load).

---

## Basic Notes - Useful Tips

**Note:** If an HTML file contains ten images - eleven files are required to display the page right. Loading images take time, so my best advice is: Use images carefully.

**Note:** When a web page is loaded, it is the browser, at that moment, that actually gets the image from a web server and inserts it into the page. Therefore, make sure that the images actually stay in the same spot in relation to the web page, otherwise your visitors will get a broken link icon. The broken link icon is shown if the browser cannot find the image.



## More Examples

### [Aligning images](#)

How to align an image within the text.

### [Let the image float](#)

How to let an image float to the left or right of a paragraph.

### [Make a hyperlink of an image](#)

How to use an image as a link.

### [Create an image map](#)

How to create an image map, with clickable regions. Each of the regions is a hyperlink.

---

## HTML Image Tags

Tag	Description
<a href="#">&lt;img /&gt;</a>	Defines an image
<a href="#">&lt;map&gt;</a>	Defines an image-map
<a href="#">&lt;area /&gt;</a>	Defines a clickable area inside an image-map

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# HTML Tables

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## HTML Tables

Apples	44%
Bananas	23%
Oranges	13%
Other	10%



## Try it Yourself - Examples

### [Tables](#)

How to create tables in an HTML document.

### [Table borders](#)

How to specify different table borders.

(You can find more examples at the bottom of this page).

---

## HTML Tables

Tables are defined with the `<table>` tag.

A table is divided into rows (with the `<tr>` tag), and each row is divided into data cells (with the `<td>` tag). `td` stands for "table data," and holds the content of a data cell. A `<td>` tag can contain text, links, images, lists, forms, other tables, etc.

## Table Example

```
<table border="1">
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr>
<tr>
<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr>
</table>
```

How the HTML code above looks in a browser:

row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

---

## HTML Tables and the Border Attribute

If you do not specify a border attribute, the table will be displayed without borders. Sometimes this can be useful, but most of the time, we want the borders to show.

To display a table with borders, specify the border attribute:

```
<table border="1">
<tr>
<td>Row 1, cell 1</td>
<td>Row 1, cell 2</td>
</tr>
</table>
```

---

## HTML Table Headers

Header information in a table are defined with the `<th>` tag.

All major browsers will display the text in the `<th>` element as bold and centered.

```
<table border="1">
<tr>
<th>Header 1</th>
<th>Header 2</th>
</tr>
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr>
<tr>
<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr>
</table>
```

How the HTML code above looks in your browser:

<b>Header 1</b>	<b>Header 2</b>
row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2



## More Examples

### [Tables without borders](#)

How to create tables without borders.

### [Table headers](#)

How to create table headers.

### [Table with a caption](#)

How to add a caption to a table.

### [Table cells that span more than one row/column](#)

How to define table cells that span more than one row or one column.

### [Tags inside a table](#)

How to display elements inside other elements.

### [Cell padding](#)

How to use cellpadding to create more white space between the cell content and its borders.

### [Cell spacing](#)

How to use cellspacing to increase the distance between the cells.

### [The frame attribute](#)

How to use the "frame" attribute to control the borders around the table.

---

## HTML Table Tags

Tag	Description
<a href="#">&lt;table&gt;</a>	Defines a table
<a href="#">&lt;th&gt;</a>	Defines a table header
<a href="#">&lt;tr&gt;</a>	Defines a table row
<a href="#">&lt;td&gt;</a>	Defines a table cell
<a href="#">&lt;caption&gt;</a>	Defines a table caption
<a href="#">&lt;colgroup&gt;</a>	Defines a group of columns in a table, for formatting
<a href="#">&lt;col /&gt;</a>	Defines attribute values for one or more columns in a table
<a href="#">&lt;thead&gt;</a>	Groups the header content in a table
<a href="#">&lt;tbody&gt;</a>	Groups the body content in a table
<a href="#">&lt;tfoot&gt;</a>	Groups the footer content in a table

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# HTML Lists

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---

The most common HTML lists are ordered and unordered lists:

## HTML Lists

An ordered list:

1. The first list item
2. The second list item
3. The third list item

An unordered list:

- List item
- List item
- List item



## Try-It-Yourself Examples

### Unordered list

How to create an unordered list in an HTML document.

### Ordered list

How to create an ordered list in an HTML document.

(You can find more examples at the bottom of this page).

---

## HTML Unordered Lists

An unordered list starts with the `<ul>` tag. Each list item starts with the `<li>` tag.

The list items are marked with bullets (typically small black circles).

```
<ul>
<li>Coffee</li>
<li>Milk</li>
</ul>
```

How the HTML code above looks in a browser:

- Coffee
  - Milk
- 

## HTML Ordered Lists

An ordered list starts with the `<ol>` tag. Each list item starts with the `<li>` tag.

The list items are marked with numbers.

```
<ol>
<li>Coffee</li>
<li>Milk</li>
</ol>
```

How the HTML code above looks in a browser:

1. Coffee
  2. Milk
- 

## HTML Definition Lists

A definition list is a list of items, with a description of each item.

The `<dl>` tag defines a definition list.

The `<dl>` tag is used in conjunction with `<dt>` (defines the item in the list) and `<dd>` (describes the item in the list):

```
<dl>
<dt>Coffee</dt>
<dd>- black hot drink</dd>
<dt>Milk</dt>
<dd>- white cold drink</dd>
</dl>
```

How the HTML code above looks in a browser:

Coffee

- black hot drink

Milk

- white cold drink

---

## Basic Notes - Useful Tips

**Tip:** Inside a list item you can put text, line breaks, images, links, other lists, etc.

---



### More Examples

[Different types of ordered lists](#)

Demonstrates different types of ordered lists.

[Different types of unordered lists](#)

Demonstrates different types of unordered lists.

[Nested list](#)

Demonstrates how you can nest lists.

[Nested list 2](#)

Demonstrates a more complicated nested list.

[Definition list](#)

Demonstrates a definition list.

---

### HTML List Tags

Tag	Description
<a href="#">&lt;ol&gt;</a>	Defines an ordered list
<a href="#">&lt;ul&gt;</a>	Defines an unordered list
<a href="#">&lt;li&gt;</a>	Defines a list item
<a href="#">&lt;dl&gt;</a>	Defines a definition list
<a href="#">&lt;dt&gt;</a>	Defines an item in a definition list
<a href="#">&lt;dd&gt;</a>	Defines a description of an item in a definition list

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# HTML Forms and Input

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---

HTML Forms are used to select different kinds of user input.



## Try it Yourself - Examples

### [Create text fields](#)

How to create text fields. The user can write text in a text field.

### [Create password field](#)

How to create a password field.

(You can find more examples at the bottom of this page)

---

## HTML Forms

HTML forms are used to pass data to a server.

A form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons and more. A form can also contain select lists, textarea, fieldset, legend, and label elements.

The `<form>` tag is used to create an HTML form:

```
<form>
.
input elements
.
</form>
```

---

## HTML Forms - The Input Element

The most important form element is the input element.

The input element is used to select user information.

An input element can vary in many ways, depending on the type attribute. An input element can be of type text field, checkbox, password, radio button, submit button, and more.

The most used input types are described below.

---

## Text Fields

`<input type="text" />` defines a one-line input field that a user can enter text into:

```
<form>
First name: <input type="text" name="firstname" /><br />
Last name: <input type="text" name="lastname" />
</form>
```

How the HTML code above looks in a browser:

First name:   
Last name:

**Note:** The form itself is not visible. Also note that the default width of a text field is 20 characters.

---

## Password Field

`<input type="password" />` defines a password field:

```
<form>
Password: <input type="password" name="pwd" />
</form>
```

How the HTML code above looks in a browser:

Password:

**Note:** The characters in a password field are masked (shown as asterisks or circles).

---

## Radio Buttons

`<input type="radio" />` defines a radio button. Radio buttons let a user select ONLY ONE of a limited number of choices:

```
<form>
<input type="radio" name="sex" value="male" /> Male<br />
<input type="radio" name="sex" value="female" /> Female
</form>
```

How the HTML code above looks in a browser:

- Male
  - Female
- 

## Checkboxes

`<input type="checkbox" />` defines a checkbox. Checkboxes let a user select ONE or MORE options of a limited number of choices.

```
<form>
<input type="checkbox" name="vehicle" value="Bike" /> I have a bike<br />
<input type="checkbox" name="vehicle" value="Car" /> I have a car
</form>
```

How the HTML code above looks in a browser:

- I have a bike
  - I have a car
- 

## Submit Button

`<input type="submit" />` defines a submit button.

A submit button is used to send form data to a server. The data is sent to the page specified in the form's action attribute. The file defined in the action attribute usually does something with the received input:

```
<form name="input" action="html_form_action.asp" method="get">
Username: <input type="text" name="user" />
<input type="submit" value="Submit" />
</form>
```

How the HTML code above looks in a browser:

Username:

If you type some characters in the text field above, and click the "Submit" button, the browser will send your input to a page called "html\_form\_action.asp". The page will show you the received input.

---



## More Input Examples

### Radio buttons

How to create radio buttons.

### [Checkboxes](#)

How to create checkboxes. A user can select or unselect a checkbox.

### [Simple drop-down list](#)

How to create a simple drop-down list.

### [Drop-down list with a pre-selected value](#)

How to create a drop-down list with a pre-selected value.

### [Textarea](#)

How to create a multi-line text input control. In a text-area the user can write an unlimited number of characters.

### [Create a button](#)

How to create a button.



## Form Examples

### [Fieldset around form-data](#)

How to create a border around elements in a form.

### [Form with text fields and a submit button](#)

How to create a form with two text fields and a submit button.

### [Form with checkboxes](#)

How to create a form with two checkboxes and a submit button.

### [Form with radio buttons](#)

How to create a form with two radio buttons, and a submit button.

### [Send e-mail from a form](#)

How to send e-mail from a form.

## HTML Form Tags

Tag	Description
<a href="#">&lt;form&gt;</a>	Defines an HTML form for user input
<a href="#">&lt;input /&gt;</a>	Defines an input control
<a href="#">&lt;textarea&gt;</a>	Defines a multi-line text input control
<a href="#">&lt;label&gt;</a>	Defines a label for an input element
<a href="#">&lt;fieldset&gt;</a>	Defines a border around elements in a form
<a href="#">&lt;legend&gt;</a>	Defines a caption for a fieldset element
<a href="#">&lt;select&gt;</a>	Defines a select list (drop-down list)
<a href="#">&lt;optgroup&gt;</a>	Defines a group of related options in a select list
<a href="#">&lt;option&gt;</a>	Defines an option in a select list
<a href="#">&lt;button&gt;</a>	Defines a push button

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# HTML Frames

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---

With frames, several Web pages can be displayed in the same browser window.

ATTENTION. Do not expect frames to be supported in future versions of HTML.



## Try-It-Yourself Examples

### [Vertical frameset](#)

How to make a vertical frameset with three different documents.

### [Horizontal frameset](#)

How to make a horizontal frameset with three different documents.

(You can find more examples at the bottom of this page)

---

## HTML Frames

With frames, you can display more than one HTML document in the same browser window. Each HTML document is called a frame, and each frame is independent of the others.

The disadvantages of using frames are:

- Frames are not expected to be supported in future versions of HTML
- Frames are difficult to use. (Printing the entire page is difficult).
- The web developer must keep track of more HTML documents

---

## The HTML frameset Element

The frameset element holds one or more frame elements. Each frame element can hold a separate document.

The frameset element states HOW MANY columns or rows there will be in the frameset, and HOW MUCH percentage/pixels of space will occupy each of them.

---

## The HTML frame Element

The <frame> tag defines one particular window (frame) within a frameset.

In the example below we have a frameset with two columns.

The first column is set to 25% of the width of the browser window. The second column is set to 75% of the width of the browser window. The document "frame\_a.htm" is put into the first column, and the document "frame\_b.htm" is put into the second column:

```
<frameset cols="25%,75%">
  <frame src="frame_a.htm" />
  <frame src="frame_b.htm" />
</frameset>
```

**Note:** The frameset column size can also be set in pixels (cols="200,500"), and one of the columns can be set to use the remaining space, with an asterisk (cols="25%,\*").

---

## Basic Notes - Useful Tips

**Tip:** If a frame has visible borders, the user can resize it by dragging the border. To prevent a user from doing this, you can add noresize="noresize" to the <frame> tag.

**Note:** Add the <noframes> tag for browsers that do not support frames.

**Important:** You cannot use the <body></body> tags together with the <frameset></frameset> tags! However, if you add a <noframes> tag containing some text for browsers that do not support frames, you will have to enclose the text in <body></body> tags! See how it is done in the first example below.



## More Examples

### [How to use the <noframes> tag](#)

How to use the <noframes> tag (for browsers that do not support frames).

### [Nested framesets](#)

How to create a frameset with three documents, and how to mix them in rows and columns.

### [Frameset with noresize="noresize"](#)

How to use the noresize attribute. Move the mouse over the borders between the frames and notice that you cannot move the borders.

### [Navigation frame](#)

How to make a navigation frame. The navigation frame contains a list of links with the second frame as the target. The file called "tryhtml\_contents.htm" contains three links. The source code of the links:

```
<a href="frame_a.htm" target="showframe">Frame a</a><br>
<a href="frame_b.htm" target="showframe">Frame b</a><br>
<a href="frame_c.htm" target="showframe">Frame c</a>
```

The second frame will show the linked document.

### Jump to a specified section within a frame

Two frames. One of the frames has a source to a specified section in a file. The specified section is made with `<a name="C10">` in the "link.htm" file.

### Jump to a specified section with frame navigation

Two frames. The navigation frame (content.htm) to the left contains a list of links with the second frame (link.htm) as a target. The second frame shows the linked document. One of the links in the navigation frame is linked to a specified section in the target file. The HTML code in the file "content.htm" looks like this: `<a href = "link.htm" target = "showframe">Link without Anchor</a><br><a href = "link.htm#C10" target = "showframe">Link with Anchor</a>`.

---

## HTML Frame Tags

Tag	Description
<code>&lt;frameset&gt;</code>	Defines a set of frames
<code>&lt;frame /&gt;</code>	Defines a sub window (a frame)
<code>&lt;noframes&gt;</code>	Defines a noframe section for browsers that do not handle frames

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# HTML Iframes

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---

An iframe is used to display a web page within a web page.

---

## Syntax for adding an iframe:

```
<iframe src="URL"></iframe>
```

The URL points to the location of the separate page.

---

## Iframe - Set Height and Width

The height and width attributes are used to specify the height and width of the iframe.

The attribute values are specified in pixels by default, but they can also be in percent (like "80%").

### Example

```
<iframe src="demo_iframe.htm" width="200" height="200"></iframe>
```

---

## Iframe - Remove the Border

The frameborder attribute specifies whether or not to display a border around the iframe.

Set the attribute value to "0" to remove the border:

### Example

```
<iframe src="demo_iframe.htm" frameborder="0"></iframe>
```

---

## Use iframe as a Target for a Link

An iframe can be used as the target frame for a link.

The target attribute of a link must refer to the name attribute of the iframe:

### Example

```
<iframe src="demo_iframe.htm" name="iframe_a"></iframe>  
<p><a href="http://www.w3schools.com" target="iframe_a">W3Schools.com</a></p>
```

---

## HTML iframe Tag

Tag	Description
<a href="#"><u>&lt;iframe&gt;</u></a>	Defines an inline sub window (frame)

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# HTML Colors

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---

Colors are displayed combining RED, GREEN, and BLUE light.

---










## Color Values

HTML colors are defined using a hexadecimal notation (HEX) for the combination of Red, Green, and Blue color values (RGB).

The lowest value that can be given to one of the light sources is 0 (in HEX: 00). The highest value is 255 (in HEX: FF).

HEX values are specified as 3 pairs of two-digit numbers, starting with a # sign.

### Color Values

Color	Color HEX	Color RGB
	#000000	rgb(0,0,0)
	#FF0000	rgb(255,0,0)
	#00FF00	rgb(0,255,0)
	#0000FF	rgb(0,0,255)
	#FFFF00	rgb(255,255,0)
	#00FFFF	rgb(0,255,255)
	#FF00FF	rgb(255,0,255)
	#C0C0C0	rgb(192,192,192)
	#FFFFFF	rgb(255,255,255)

---

## 16 Million Different Colors

The combination of Red, Green, and Blue values from 0 to 255, gives more than 16 million different colors (256 x 256 x 256).

If you look at the color table below, you will see the result of varying the red light from 0 to 255, while keeping the green and blue light at zero.

To see the full list of color mixes when RED varies from 0 to 255, click on one of the HEX or RGB values below.

Red Light	Color HEX	Color RGB
	<a href="#">#000000</a>	<a href="#">rgb(0,0,0)</a>
	<a href="#">#080000</a>	<a href="#">rgb(8,0,0)</a>
	<a href="#">#100000</a>	<a href="#">rgb(16,0,0)</a>
	<a href="#">#180000</a>	<a href="#">rgb(24,0,0)</a>
	<a href="#">#200000</a>	<a href="#">rgb(32,0,0)</a>
	<a href="#">#280000</a>	<a href="#">rgb(40,0,0)</a>
	<a href="#">#300000</a>	<a href="#">rgb(48,0,0)</a>
	<a href="#">#380000</a>	<a href="#">rgb(56,0,0)</a>
	<a href="#">#400000</a>	<a href="#">rgb(64,0,0)</a>
	<a href="#">#480000</a>	<a href="#">rgb(72,0,0)</a>
	<a href="#">#500000</a>	<a href="#">rgb(80,0,0)</a>
	<a href="#">#580000</a>	<a href="#">rgb(88,0,0)</a>
	<a href="#">#600000</a>	<a href="#">rgb(96,0,0)</a>
	<a href="#">#680000</a>	<a href="#">rgb(104,0,0)</a>
	<a href="#">#700000</a>	<a href="#">rgb(112,0,0)</a>
	<a href="#">#780000</a>	<a href="#">rgb(120,0,0)</a>
	<a href="#">#800000</a>	<a href="#">rgb(128,0,0)</a>
	<a href="#">#880000</a>	<a href="#">rgb(136,0,0)</a>
	<a href="#">#900000</a>	<a href="#">rgb(144,0,0)</a>
	<a href="#">#980000</a>	<a href="#">rgb(152,0,0)</a>
	<a href="#">#A00000</a>	<a href="#">rgb(160,0,0)</a>
	<a href="#">#A80000</a>	<a href="#">rgb(168,0,0)</a>
	<a href="#">#B00000</a>	<a href="#">rgb(176,0,0)</a>
	<a href="#">#B80000</a>	<a href="#">rgb(184,0,0)</a>
	<a href="#">#C00000</a>	<a href="#">rgb(192,0,0)</a>
	<a href="#">#C80000</a>	<a href="#">rgb(200,0,0)</a>
	<a href="#">#D00000</a>	<a href="#">rgb(208,0,0)</a>
	<a href="#">#D80000</a>	<a href="#">rgb(216,0,0)</a>
	<a href="#">#E00000</a>	<a href="#">rgb(224,0,0)</a>
	<a href="#">#E80000</a>	<a href="#">rgb(232,0,0)</a>
	<a href="#">#F00000</a>	<a href="#">rgb(240,0,0)</a>
	<a href="#">#F80000</a>	<a href="#">rgb(248,0,0)</a>
	<a href="#">#FF0000</a>	<a href="#">rgb(255,0,0)</a>

## Shades of Gray

Gray colors are created by using an equal amount of power to all of the light sources.

To make it easier for you to select the correct shade, we have created a table of gray shades for you:

Gray Shades	Color HEX	Color RGB
	#000000	rgb(0,0,0)
	#080808	rgb(8,8,8)
	#101010	rgb(16,16,16)
	#181818	rgb(24,24,24)
	#202020	rgb(32,32,32)
	#282828	rgb(40,40,40)
	#303030	rgb(48,48,48)
	#383838	rgb(56,56,56)
	#404040	rgb(64,64,64)
	#484848	rgb(72,72,72)
	#505050	rgb(80,80,80)
	#585858	rgb(88,88,88)
	#606060	rgb(96,96,96)
	#686868	rgb(104,104,104)
	#707070	rgb(112,112,112)
	#787878	rgb(120,120,120)
	#808080	rgb(128,128,128)
	#888888	rgb(136,136,136)
	#909090	rgb(144,144,144)
	#989898	rgb(152,152,152)
	#A0A0A0	rgb(160,160,160)
	#A8A8A8	rgb(168,168,168)
	#B0B0B0	rgb(176,176,176)
	#B8B8B8	rgb(184,184,184)
	#C0C0C0	rgb(192,192,192)
	#C8C8C8	rgb(200,200,200)
	#D0D0D0	rgb(208,208,208)
	#D8D8D8	rgb(216,216,216)
	#E0E0E0	rgb(224,224,224)
	#E8E8E8	rgb(232,232,232)
	#F0F0F0	rgb(240,240,240)
	#F8F8F8	rgb(248,248,248)
	#FFFFFF	rgb(255,255,255)

Web Safe Colors?

Some years ago, when computers supported max 256 different colors, a list of 216 "Web Safe Colors" was suggested as a Web standard, reserving 40 fixed system colors.

The 216 cross-browser color palette was created to ensure that all computers would display the colors correctly when running a 256 color palette.

This is not important today, since most computers can display millions of different colors. Anyway, here is the list:

000000	000033	000066	000099	0000CC	0000FF
003300	003333	003366	003399	0033CC	0033FF
006600	006633	006666	006699	0066CC	0066FF
009900	009933	009966	009999	0099CC	0099FF
00CC00	00CC33	00CC66	00CC99	00CCCC	00CCFF
00FF00	00FF33	00FF66	00FF99	00FFCC	00FFFF
330000	330033	330066	330099	3300CC	3300FF
333300	333333	333366	333399	3333CC	3333FF
336600	336633	336666	336699	3366CC	3366FF
339900	339933	339966	339999	3399CC	3399FF
33CC00	33CC33	33CC66	33CC99	33CCCC	33CCFF
33FF00	33FF33	33FF66	33FF99	33FFCC	33FFFF
660000	660033	660066	660099	6600CC	6600FF
663300	663333	663366	663399	6633CC	6633FF
666600	666633	666666	666699	6666CC	6666FF
669900	669933	669966	669999	6699CC	6699FF
66CC00	66CC33	66CC66	66CC99	66CCCC	66CCFF
66FF00	66FF33	66FF66	66FF99	66FFCC	66FFFF
990000	990033	990066	990099	9900CC	9900FF
993300	993333	993366	993399	9933CC	9933FF
996600	996633	996666	996699	9966CC	9966FF
999900	999933	999966	999999	9999CC	9999FF
99CC00	99CC33	99CC66	99CC99	99CCCC	99CCFF
99FF00	99FF33	99FF66	99FF99	99FFCC	99FFFF
CC0000	CC0033	CC0066	CC0099	CC00CC	CC00FF
CC3300	CC3333	CC3366	CC3399	CC33CC	CC33FF
CC6600	CC6633	CC6666	CC6699	CC66CC	CC66FF
CC9900	CC9933	CC9966	CC9999	CC99CC	CC99FF
CCCC00	CCCC33	CCCC66	CCCC99	CCCCCC	CCCCFF
CCFF00	CCFF33	CCFF66	CCFF99	CCFFCC	CCFFFF
FF0000	FF0033	FF0066	FF0099	FF00CC	FF00FF
FF3300	FF3333	FF3366	FF3399	FF33CC	FF33FF
FF6600	FF6633	FF6666	FF6699	FF66CC	FF66FF
FF9900	FF9933	FF9966	FF9999	FF99CC	FF99FF
FFCC00	FFCC33	FFCC66	FFCC99	FFCCCC	FFCCFF
FFFF00	FFFF33	FFFF66	FFFF99	FFFFCC	FFFFFF

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# HTML Color Names

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## Color Names Supported by All Browsers












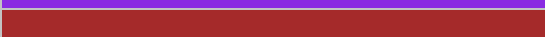






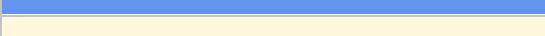
147 color names are defined in the HTML and CSS color specification (17 standard colors plus 130 more). The table below lists them all, along with their hexadecimal values.

 **Tip:** The 17 standard colors are: aqua, black, blue, fuchsia, gray, grey, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.

Click on a color name (or a hex value) to view the color as the background-color along with different text colors:








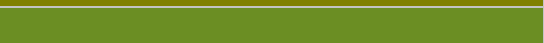




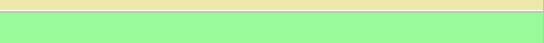
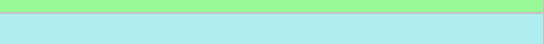






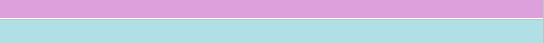
















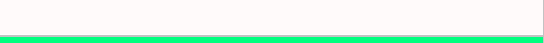

## Sorted by Color Name


[Same list sorted by hex values](#)

Color Name	HEX	Color	Shades	Mix
<a href="#">AliceBlue</a>	<a href="#">#F0F8FF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">AntiqueWhite</a>	<a href="#">#FAEBD7</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Aqua</a>	<a href="#">#00FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Aquamarine</a>	<a href="#">#7FFFD4</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Azure</a>	<a href="#">#F0FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Beige</a>	<a href="#">#F5F5DC</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Bisque</a>	<a href="#">#FFE4C4</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Black</a>	<a href="#">#000000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BlanchedAlmond</a>	<a href="#">#FFEBCD</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Blue</a>	<a href="#">#0000FF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BlueViolet</a>	<a href="#">#8A2BE2</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Brown</a>	<a href="#">#A52A2A</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BurlyWood</a>	<a href="#">#DEB887</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">CadetBlue</a>	<a href="#">#5F9EA0</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Chartreuse</a>	<a href="#">#7FFF00</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Chocolate</a>	<a href="#">#D2691E</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Coral</a>	<a href="#">#FF7F50</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">CornflowerBlue</a>	<a href="#">#6495ED</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Cornsilk</a>	<a href="#">#FFF8DC</a>		<a href="#">Shades</a>	<a href="#">Mix</a>

<u>Crimson</u>	<u>#DC143C</u>		<u>Shades</u>	<u>Mix</u>
<u>Cyan</u>	<u>#00FFFF</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkBlue</u>	<u>#00008B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkCyan</u>	<u>#008B8B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkGoldenRod</u>	<u>#B8860B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkGray</u>	<u>#A9A9A9</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkGrey</u>	<u>#A9A9A9</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkGreen</u>	<u>#006400</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkKhaki</u>	<u>#BDB76B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkMagenta</u>	<u>#8B008B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkOliveGreen</u>	<u>#556B2F</u>		<u>Shades</u>	<u>Mix</u>
<u>Darkorange</u>	<u>#FF8C00</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkOrchid</u>	<u>#9932CC</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkRed</u>	<u>#8B0000</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSalmon</u>	<u>#E9967A</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSeaGreen</u>	<u>#8FBC8F</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSlateBlue</u>	<u>#483D8B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSlateGray</u>	<u>#2F4F4F</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSlateGrey</u>	<u>#2F4F4F</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkTurquoise</u>	<u>#00CED1</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkViolet</u>	<u>#9400D3</u>		<u>Shades</u>	<u>Mix</u>
<u>DeepPink</u>	<u>#FF1493</u>		<u>Shades</u>	<u>Mix</u>
<u>DeepSkyBlue</u>	<u>#00BFFF</u>		<u>Shades</u>	<u>Mix</u>
<u>DimGray</u>	<u>#696969</u>		<u>Shades</u>	<u>Mix</u>
<u>DimGrey</u>	<u>#696969</u>		<u>Shades</u>	<u>Mix</u>
<u>DodgerBlue</u>	<u>#1E90FF</u>		<u>Shades</u>	<u>Mix</u>
<u>FireBrick</u>	<u>#B22222</u>		<u>Shades</u>	<u>Mix</u>
<u>FloralWhite</u>	<u>#FFFAF0</u>		<u>Shades</u>	<u>Mix</u>
<u>ForestGreen</u>	<u>#228B22</u>		<u>Shades</u>	<u>Mix</u>
<u>Fuchsia</u>	<u>#FF00FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Gainsboro</u>	<u>#DCDCDC</u>		<u>Shades</u>	<u>Mix</u>
<u>GhostWhite</u>	<u>#F8F8FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Gold</u>	<u>#FFD700</u>		<u>Shades</u>	<u>Mix</u>
<u>GoldenRod</u>	<u>#DAA520</u>		<u>Shades</u>	<u>Mix</u>
<u>Gray</u>	<u>#808080</u>		<u>Shades</u>	<u>Mix</u>
<u>Grey</u>	<u>#808080</u>		<u>Shades</u>	<u>Mix</u>
<u>Green</u>	<u>#008000</u>		<u>Shades</u>	<u>Mix</u>
<u>GreenYellow</u>	<u>#ADFF2F</u>		<u>Shades</u>	<u>Mix</u>
<u>HoneyDew</u>	<u>#F0FF00</u>		<u>Shades</u>	<u>Mix</u>

HotPink	#FF69B4		Shades	Mix
IndianRed	#CD5C5C		Shades	Mix
Indigo	#4B0082		Shades	Mix
Ivory	#FFFFFF0		Shades	Mix
Khaki	#F0E68C		Shades	Mix
Lavender	#E6E6FA		Shades	Mix
LavenderBlush	#FFF0F5		Shades	Mix
LawnGreen	#7CFC00		Shades	Mix
LemonChiffon	#FFFACD		Shades	Mix
LightBlue	#ADD8E6		Shades	Mix
LightCoral	#F08080		Shades	Mix
LightCyan	#E0FFFF		Shades	Mix
LightGoldenRodYellow	#FAFAD2		Shades	Mix
LightGray	#D3D3D3		Shades	Mix
LightGrey	#D3D3D3		Shades	Mix
LightGreen	#90EE90		Shades	Mix
LightPink	#FFB6C1		Shades	Mix
LightSalmon	#FFA07A		Shades	Mix
LightSeaGreen	#20B2AA		Shades	Mix
LightSkyBlue	#87CEFA		Shades	Mix
LightSlateGray	#778899		Shades	Mix
LightSlateGrey	#778899		Shades	Mix
LightSteelBlue	#B0C4DE		Shades	Mix
LightYellow	#FFFFE0		Shades	Mix
Lime	#00FF00		Shades	Mix
LimeGreen	#32CD32		Shades	Mix
Linen	#FAF0E6		Shades	Mix
Magenta	#FF00FF		Shades	Mix
Maroon	#800000		Shades	Mix
MediumAquaMarine	#66CDAA		Shades	Mix
MediumBlue	#0000CD		Shades	Mix
MediumOrchid	#BA55D3		Shades	Mix
MediumPurple	#9370D8		Shades	Mix
MediumSeaGreen	#3CB371		Shades	Mix
MediumSlateBlue	#7B68EE		Shades	Mix
MediumSpringGreen	#00FA9A		Shades	Mix
MediumTurquoise	#48D1CC		Shades	Mix
MediumVioletRed	#C71585		Shades	Mix
MidnightBlue	#191970		Shades	Mix

<u>MintCream</u>	<u>#F5FFFA</u>		<u>Shades</u>	<u>Mix</u>
<u>MistyRose</u>	<u>#FFE4E1</u>		<u>Shades</u>	<u>Mix</u>
<u>Moccasin</u>	<u>#FFE4B5</u>		<u>Shades</u>	<u>Mix</u>
<u>NavajoWhite</u>	<u>#FFDEAD</u>		<u>Shades</u>	<u>Mix</u>
<u>Navy</u>	<u>#000080</u>		<u>Shades</u>	<u>Mix</u>
<u>OldLace</u>	<u>#FDF5E6</u>		<u>Shades</u>	<u>Mix</u>
<u>Olive</u>	<u>#808000</u>		<u>Shades</u>	<u>Mix</u>
<u>OliveDrab</u>	<u>#6B8E23</u>		<u>Shades</u>	<u>Mix</u>
<u>Orange</u>	<u>#FFA500</u>		<u>Shades</u>	<u>Mix</u>
<u>OrangeRed</u>	<u>#FF4500</u>		<u>Shades</u>	<u>Mix</u>
<u>Orchid</u>	<u>#DA70D6</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleGoldenRod</u>	<u>#EEE8AA</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleGreen</u>	<u>#98FB98</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleTurquoise</u>	<u>#AFEEEE</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleVioletRed</u>	<u>#D87093</u>		<u>Shades</u>	<u>Mix</u>
<u>PapayaWhip</u>	<u>#FFEFD5</u>		<u>Shades</u>	<u>Mix</u>
<u>PeachPuff</u>	<u>#FFDAB9</u>		<u>Shades</u>	<u>Mix</u>
<u>Peru</u>	<u>#CD853F</u>		<u>Shades</u>	<u>Mix</u>
<u>Pink</u>	<u>#FFC0CB</u>		<u>Shades</u>	<u>Mix</u>
<u>Plum</u>	<u>#DDA0DD</u>		<u>Shades</u>	<u>Mix</u>
<u>PowderBlue</u>	<u>#B0E0E6</u>		<u>Shades</u>	<u>Mix</u>
<u>Purple</u>	<u>#800080</u>		<u>Shades</u>	<u>Mix</u>
<u>Red</u>	<u>#FF0000</u>		<u>Shades</u>	<u>Mix</u>
<u>RosyBrown</u>	<u>#BC8F8F</u>		<u>Shades</u>	<u>Mix</u>
<u>RoyalBlue</u>	<u>#4169E1</u>		<u>Shades</u>	<u>Mix</u>
<u>SaddleBrown</u>	<u>#8B4513</u>		<u>Shades</u>	<u>Mix</u>
<u>Salmon</u>	<u>#FA8072</u>		<u>Shades</u>	<u>Mix</u>
<u>SandyBrown</u>	<u>#F4A460</u>		<u>Shades</u>	<u>Mix</u>
<u>SeaGreen</u>	<u>#2E8B57</u>		<u>Shades</u>	<u>Mix</u>
<u>SeaShell</u>	<u>#FFF5EE</u>		<u>Shades</u>	<u>Mix</u>
<u>Sienna</u>	<u>#A0522D</u>		<u>Shades</u>	<u>Mix</u>
<u>Silver</u>	<u>#C0C0C0</u>		<u>Shades</u>	<u>Mix</u>
<u>SkyBlue</u>	<u>#87CEEB</u>		<u>Shades</u>	<u>Mix</u>
<u>SlateBlue</u>	<u>#6A5ACD</u>		<u>Shades</u>	<u>Mix</u>
<u>SlateGray</u>	<u>#708090</u>		<u>Shades</u>	<u>Mix</u>
<u>SlateGrey</u>	<u>#708090</u>		<u>Shades</u>	<u>Mix</u>
<u>Snow</u>	<u>#FFFAFA</u>		<u>Shades</u>	<u>Mix</u>
<u>SpringGreen</u>	<u>#00FF7F</u>		<u>Shades</u>	<u>Mix</u>
<u>SteelBlue</u>	<u>#4682B4</u>		<u>Shades</u>	<u>Mix</u>

<u>Tan</u>	<u>#D2B48C</u>		<u>Shades</u>	<u>Mix</u>
<u>Teal</u>	<u>#008080</u>		<u>Shades</u>	<u>Mix</u>
<u>Thistle</u>	<u>#D8BFD8</u>		<u>Shades</u>	<u>Mix</u>
<u>Tomato</u>	<u>#FF6347</u>		<u>Shades</u>	<u>Mix</u>
<u>Turquoise</u>	<u>#40E0D0</u>		<u>Shades</u>	<u>Mix</u>
<u>Violet</u>	<u>#EE82EE</u>		<u>Shades</u>	<u>Mix</u>
<u>Wheat</u>	<u>#F5DEB3</u>		<u>Shades</u>	<u>Mix</u>
<u>White</u>	<u>#FFFFFF</u>		<u>Shades</u>	<u>Mix</u>
<u>WhiteSmoke</u>	<u>#F5F5F5</u>		<u>Shades</u>	<u>Mix</u>
<u>Yellow</u>	<u>#FFFF00</u>		<u>Shades</u>	<u>Mix</u>
<u>YellowGreen</u>	<u>#9ACD32</u>		<u>Shades</u>	<u>Mix</u>

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# HTML Color Values




























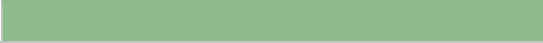











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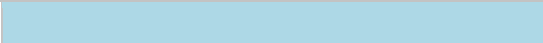

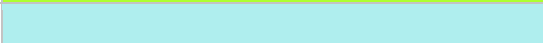














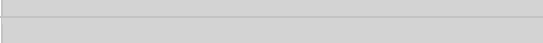






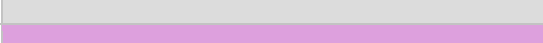

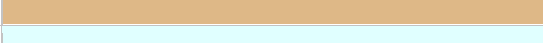

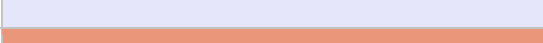

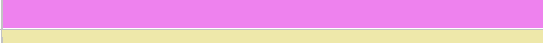
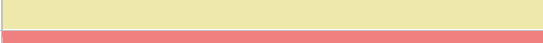

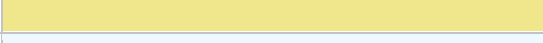




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## Sorted by Hex Value

[Same list sorted by color name](#)

Color Name	HEX	Color	Shades	Mix
<a href="#">Black</a>	<a href="#">#000000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Navy</a>	<a href="#">#000080</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkBlue</a>	<a href="#">#00008B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MediumBlue</a>	<a href="#">#0000CD</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Blue</a>	<a href="#">#0000FF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkGreen</a>	<a href="#">#006400</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Green</a>	<a href="#">#008000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Teal</a>	<a href="#">#008080</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkCyan</a>	<a href="#">#008B8B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DeepSkyBlue</a>	<a href="#">#00BFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkTurquoise</a>	<a href="#">#00CED1</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MediumSpringGreen</a>	<a href="#">#00FA9A</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Lime</a>	<a href="#">#00FF00</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SpringGreen</a>	<a href="#">#00FF7F</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Aqua</a>	<a href="#">#00FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Cyan</a>	<a href="#">#00FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MidnightBlue</a>	<a href="#">#191970</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DodgerBlue</a>	<a href="#">#1E90FF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LightSeaGreen</a>	<a href="#">#20B2AA</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">ForestGreen</a>	<a href="#">#228B22</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SeaGreen</a>	<a href="#">#2E8B57</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkSlateGray</a>	<a href="#">#2F4F4F</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkSlateGrey</a>	<a href="#">#2F4F4F</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LimeGreen</a>	<a href="#">#32CD32</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MediumSeaGreen</a>	<a href="#">#3CB371</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Turquoise</a>	<a href="#">#40E0D0</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">RoyalBlue</a>	<a href="#">#4169E1</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SteelBlue</a>	<a href="#">#4682B4</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkSlateBlue</a>	<a href="#">#483D8B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>

<a href="#">MediumTurquoise</a>	<a href="#">#48D1CC</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Indigo</a>	<a href="#">#4B0082</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkOliveGreen</a>	<a href="#">#556B2F</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">CadetBlue</a>	<a href="#">#5F9EA0</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">CornflowerBlue</a>	<a href="#">#6495ED</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MediumAquaMarine</a>	<a href="#">#66CDAA</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DimGray</a>	<a href="#">#696969</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DimGrey</a>	<a href="#">#696969</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SlateBlue</a>	<a href="#">#6A5ACD</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">OliveDrab</a>	<a href="#">#6B8E23</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SlateGray</a>	<a href="#">#708090</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SlateGrey</a>	<a href="#">#708090</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LightSlateGray</a>	<a href="#">#778899</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LightSlateGrey</a>	<a href="#">#778899</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MediumSlateBlue</a>	<a href="#">#7B68EE</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LawnGreen</a>	<a href="#">#7CFC00</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Chartreuse</a>	<a href="#">#7FFF00</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Aquamarine</a>	<a href="#">#7FFFD4</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Maroon</a>	<a href="#">#800000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Purple</a>	<a href="#">#800080</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Olive</a>	<a href="#">#808000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Gray</a>	<a href="#">#808080</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Grey</a>	<a href="#">#808080</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SkyBlue</a>	<a href="#">#87CEEB</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LightSkyBlue</a>	<a href="#">#87CEFA</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BlueViolet</a>	<a href="#">#8A2BE2</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkRed</a>	<a href="#">#8B0000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkMagenta</a>	<a href="#">#8B008B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">SaddleBrown</a>	<a href="#">#8B4513</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkSeaGreen</a>	<a href="#">#8FBC8F</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">LightGreen</a>	<a href="#">#90EE90</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">MediumPurple</a>	<a href="#">#9370D8</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkViolet</a>	<a href="#">#9400D3</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">PaleGreen</a>	<a href="#">#98FB98</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkOrchid</a>	<a href="#">#9932CC</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">YellowGreen</a>	<a href="#">#9ACD32</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Sienna</a>	<a href="#">#A0522D</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Brown</a>	<a href="#">#A52A2A</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkGray</a>	<a href="#">#A9A9A9</a>		<a href="#">Shades</a>	<a href="#">Mix</a>

DarkGrey	#A9A9A9		Shades	Mix
LightBlue	#ADD8E6		Shades	Mix
GreenYellow	#ADFF2F		Shades	Mix
PaleTurquoise	#AFEEEE		Shades	Mix
LightSteelBlue	#B0C4DE		Shades	Mix
PowderBlue	#B0E0E6		Shades	Mix
FireBrick	#B22222		Shades	Mix
DarkGoldenRod	#B8860B		Shades	Mix
MediumOrchid	#BA55D3		Shades	Mix
RosyBrown	#BC8F8F		Shades	Mix
DarkKhaki	#BDB76B		Shades	Mix
Silver	#C0C0C0		Shades	Mix
MediumVioletRed	#C71585		Shades	Mix
IndianRed	#CD5C5C		Shades	Mix
Peru	#CD853F		Shades	Mix
Chocolate	#D2691E		Shades	Mix
Tan	#D2B48C		Shades	Mix
LightGray	#D3D3D3		Shades	Mix
LightGrey	#D3D3D3		Shades	Mix
PaleVioletRed	#D87093		Shades	Mix
Thistle	#D8BFD8		Shades	Mix
Orchid	#DA70D6		Shades	Mix
GoldenRod	#DAA520		Shades	Mix
Crimson	#DC143C		Shades	Mix
Gainsboro	#DCDCDC		Shades	Mix
Plum	#DDA0DD		Shades	Mix
BurlyWood	#DEB887		Shades	Mix
LightCyan	#E0FFFF		Shades	Mix
Lavender	#E6E6FA		Shades	Mix
DarkSalmon	#E9967A		Shades	Mix
Violet	#EE82EE		Shades	Mix
PaleGoldenRod	#EEE8AA		Shades	Mix
LightCoral	#F08080		Shades	Mix
Khaki	#F0E68C		Shades	Mix
AliceBlue	#F0F8FF		Shades	Mix
HoneyDew	#F0FFF0		Shades	Mix
Azure	#F0FFFF		Shades	Mix
SandyBrown	#F4A460		Shades	Mix
Wheat	#F5DEB3		Shades	Mix

<u>Beige</u>	<u>#F5F5DC</u>		<u>Shades</u>	<u>Mix</u>
<u>WhiteSmoke</u>	<u>#F5F5F5</u>		<u>Shades</u>	<u>Mix</u>
<u>MintCream</u>	<u>#F5FFFA</u>		<u>Shades</u>	<u>Mix</u>
<u>GhostWhite</u>	<u>#F8F8FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Salmon</u>	<u>#FA8072</u>		<u>Shades</u>	<u>Mix</u>
<u>AntiqueWhite</u>	<u>#FAEBD7</u>		<u>Shades</u>	<u>Mix</u>
<u>Linen</u>	<u>#FAF0E6</u>		<u>Shades</u>	<u>Mix</u>
<u>LightGoldenRodYellow</u>	<u>#FAFAD2</u>		<u>Shades</u>	<u>Mix</u>
<u>OldLace</u>	<u>#FDF5E6</u>		<u>Shades</u>	<u>Mix</u>
<u>Red</u>	<u>#FF0000</u>		<u>Shades</u>	<u>Mix</u>
<u>Fuchsia</u>	<u>#FF00FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Magenta</u>	<u>#FF00FF</u>		<u>Shades</u>	<u>Mix</u>
<u>DeepPink</u>	<u>#FF1493</u>		<u>Shades</u>	<u>Mix</u>
<u>OrangeRed</u>	<u>#FF4500</u>		<u>Shades</u>	<u>Mix</u>
<u>Tomato</u>	<u>#FF6347</u>		<u>Shades</u>	<u>Mix</u>
<u>HotPink</u>	<u>#FF69B4</u>		<u>Shades</u>	<u>Mix</u>
<u>Coral</u>	<u>#FF7F50</u>		<u>Shades</u>	<u>Mix</u>
<u>Darkorange</u>	<u>#FF8C00</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSalmon</u>	<u>#FFA07A</u>		<u>Shades</u>	<u>Mix</u>
<u>Orange</u>	<u>#FFA500</u>		<u>Shades</u>	<u>Mix</u>
<u>LightPink</u>	<u>#FFB6C1</u>		<u>Shades</u>	<u>Mix</u>
<u>Pink</u>	<u>#FFC0CB</u>		<u>Shades</u>	<u>Mix</u>
<u>Gold</u>	<u>#FFD700</u>		<u>Shades</u>	<u>Mix</u>
<u>PeachPuff</u>	<u>#FFDAB9</u>		<u>Shades</u>	<u>Mix</u>
<u>NavajoWhite</u>	<u>#FFDEAD</u>		<u>Shades</u>	<u>Mix</u>
<u>Moccasin</u>	<u>#FFE4B5</u>		<u>Shades</u>	<u>Mix</u>
<u>Bisque</u>	<u>#FFE4C4</u>		<u>Shades</u>	<u>Mix</u>
<u>MistyRose</u>	<u>#FFE4E1</u>		<u>Shades</u>	<u>Mix</u>
<u>BlanchedAlmond</u>	<u>#FFEBCD</u>		<u>Shades</u>	<u>Mix</u>
<u>PapayaWhip</u>	<u>#FFEFD5</u>		<u>Shades</u>	<u>Mix</u>
<u>LavenderBlush</u>	<u>FFF0F5</u>		<u>Shades</u>	<u>Mix</u>
<u>SeaShell</u>	<u>FFF5EE</u>		<u>Shades</u>	<u>Mix</u>
<u>Cornsilk</u>	<u>FFF8DC</u>		<u>Shades</u>	<u>Mix</u>
<u>LemonChiffon</u>	<u>FFFACD</u>		<u>Shades</u>	<u>Mix</u>
<u>FloralWhite</u>	<u>FFFAF0</u>		<u>Shades</u>	<u>Mix</u>
<u>Snow</u>	<u>FFFAFA</u>		<u>Shades</u>	<u>Mix</u>
<u>Yellow</u>	<u>FFFF00</u>		<u>Shades</u>	<u>Mix</u>
<u>LightYellow</u>	<u>FFFFE0</u>		<u>Shades</u>	<u>Mix</u>
<u>Ivory</u>	<u>FFFFF0</u>		<u>Shades</u>	<u>Mix</u>

<a href="#">White</a>	<a href="#">#FFFFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
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# HTML 4.01 Quick List

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---

HTML Quick List from W3Schools. Print it, fold it, and put it in your pocket.

---

## HTML Basic Document

```
<html>
<head>
<title>Title of document goes here</title>
</head>

<body>
Visible text goes here...
</body>

</html>
```

## Heading Elements

```
<h1>Largest Heading</h1>

<h2> . . . </h2>
<h3> . . . </h3>
<h4> . . . </h4>
<h5> . . . </h5>

<h6>Smallest Heading</h6>
```

## Text Elements

```
<p>This is a paragraph</p>
<br /> (line break)
<hr /> (horizontal rule)
<pre>This text is preformatted</pre>
```

## Logical Styles

```
<em>This text is emphasized</em>
<strong>This text is strong</strong>
<code>This is some computer code</code>
```

## Physical Styles

`<b>This text is bold</b>`

`<i>This text is italic</i>`

## Links

Ordinary link: `<a href="http://www.example.com/">Link-text goes here</a>`

Image-link: `<a href="http://www.example.com/"></a>`

Mailto link: `<a href="mailto:webmaster@example.com">Send e-mail</a>`

A named anchor:

`<a name="tips">Tips Section</a>`

`<a href="#tips">Jump to the Tips Section</a>`

## Unordered list

`<ul>`

`<li>Item</li>`

`<li>Item</li>`

`</ul>`

## Ordered list

`<ol>`

`<li>First item</li>`

`<li>Second item</li>`

`</ol>`

## Definition list

`<dl>`

`<dt>First term</dt>`

`<dd>Definition</dd>`

`<dt>Next term</dt>`

`<dd>Definition</dd>`

`</dl>`

## Tables

`<table border="1">`

`<tr>`

`<th>Tableheader</th>`

`<th>Tableheader</th>`

`</tr>`

`<tr>`

`<td>sometext</td>`

`<td>sometext</td>`

`</tr>`

`</table>`

## Iframe

```
<iframe src="demo_iframe.htm"></iframe>
```

## Frames

```
<frameset cols="25%,75%">  
  <frame src="page1.htm" />  
  <frame src="page2.htm" />  
</frameset>
```

## Forms

```
<form action="http://www.example.com/test.asp" method="post/get">
```

```
<input type="text" name="email" size="40" maxlength="50" />  
<input type="password" />  
<input type="checkbox" checked="checked" />  
<input type="radio" checked="checked" />  
<input type="submit" value="Send" />  
<input type="reset" />  
<input type="hidden" />
```

```
<select>  
<option>Apples</option>  
<option selected="selected">Bananas</option>  
<option>Cherries</option>  
</select>
```

```
<textarea name="comment" rows="60" cols="20"></textarea>
```

```
</form>
```

## Entities

&lt; is the same as <

&gt; is the same as >

&#169; is the same as ©

## Other Elements

```
<!-- This is a comment -->
```

```
<blockquote>  
Text quoted from a source.  
</blockquote>
```

```
<address>  
Written by W3Schools.com<br />  
<a href="mailto:us@example.org">Email us</a><br />  
Address: Box 564, Disneyland<br />  
Phone: +12 34 56 78  
</address>Source : http://www.w3schools.com/html/html\_quick.asp
```

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# HTML Layouts

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---

Web page layout is very important to make your website look good.

Design your webpage layout very carefully.

---

## Website Layouts

Most websites have put their content in multiple columns (formatted like a magazine or newspaper).

Multiple columns is created by using `<table>` or `<div>` tags. Some CSS are normally also added to position elements, or to create backgrounds or colorful look for the pages.

---

## HTML Layouts - Using Tables

The simplest way of creating layouts is by using the HTML `<table>` tag.

The following example uses a table with 3 rows and 2 columns - the first and last row spans both columns using the `colspan` attribute:

### Example

```
<html>
<body>

<table width="500" border="0">
<tr>
<td colspan="2" style="background-color:#FFA500;">
<h1>Main Title of Web Page</h1>
</td>
</tr>

<tr valign="top">
<td style="background-color:#FFD700;width:100px;text-align:top;">
<b>Menu</b><br />
HTML<br />
CSS<br />
JavaScript
</td>
<td style="background-color:#EEEEEE;height:200px;width:400px;text-align:top;">
Content goes here</td>
</tr>
```

```


<tr>
<td colspan="2" style="background-color:#FFA500;text-align:center;">
Copyright © 2011 W3Schools.com</td>
</tr>
</table>

</body>
</html>

```

The HTML code above will produce the following result:



 **Note:** Even though it is possible to create nice layouts with HTML tables, tables were designed for presenting tabular data - NOT as a layout tool!

---

## HTML Layouts - Using Div Elements

The div element is a block level element used for grouping HTML elements.

The following example uses five div elements to create a multiple column layout, creating the same result as in the previous example:

### Example

```

<html>
<body>

<div id="container" style="width:500px">

<div id="header" style="background-color:#FFA500;">
<h1 style="margin-bottom:0;">Main Title of Web Page</h1></div>

<div id="menu" style="background-
color:#FFD700;height:200px;width:100px;float:left;">

```

```

<b>Menu</b><br />
HTML<br />
CSS<br />
JavaScript</div>

<div id="content" style="background-
color:#EEEEEE;height:200px;width:400px;float:left;">
Content goes here</div>

<div id="footer" style="background-color:#FFA500;clear:both;text-
align:center;">
Copyright © 2011 W3Schools.com</div>

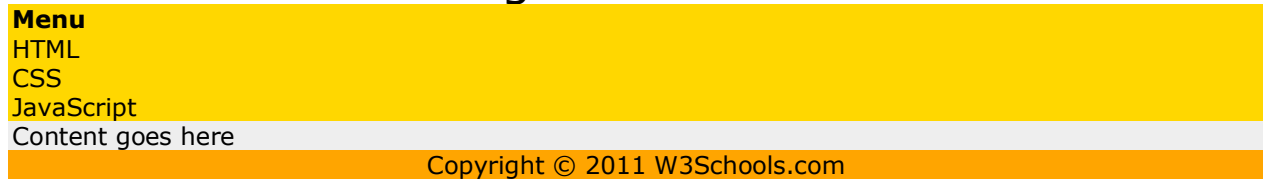
</div>

</body>
</html>

```

The HTML code above will produce the following result:

## Main Title of Web Page



## HTML Layout - Useful Tips

**Tip:** The biggest advantage of using CSS is that, if you place the CSS code in an external style sheet, your site becomes MUCH EASIER to maintain. You can change the layout of all your pages by editing one file. To learn more about CSS, study our [CSS tutorial](#).

**Tip:** Because advanced layouts take time to create, a quicker option is to use a template. Search Google for free website templates (these are pre-built website layouts you can use and customize).

## HTML Layout Tags

Tag	Description
<a href="#">&lt;table&gt;</a>	Defines a table
<a href="#">&lt;div&gt;</a>	Defines a section in a document

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# HTML Doctypes

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---

A doctype declaration refers to the rules for the markup language, so that the browsers render the content correctly.

## Example

An HTML document with a doctype of HTML 4.01 Transitional:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<title>Title of the document</title>
</head>

<body>
The content of the document.....
</body>

</html>
```

---

## HTML Different Doctypes

The doctype declaration is not an HTML tag; it is an instruction to the web browser about what version of the markup language the page is written in.

The doctype declaration refers to a Document Type Definition (DTD). The DTD specifies the rules for the markup language, so that the browsers render the content correctly.

The doctype declaration should be the very first thing in an HTML document, before the <html> tag.



**Tip:** Always add a doctype to your pages. This helps the browsers to render the page correctly!

### HTML 4.01 Strict

This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font and center). Framesets are not allowed:

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

## HTML 4.01 Transitional

This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed:

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

## HTML 4.01 Frameset

This DTD is equal to HTML 4.01 Transitional, but allows the use of frameset content:

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

---

## Tips and Notes

Look at our table of all [HTML/XHTML elements, and which DTD each element appear in](#).

Use [W3C's Validator](#) to check that you have written a valid HTML / XHTML document!

---

## HTML DOCTYPE Element

Tag	Description
<a href="#"><u>&lt;!DOCTYPE&gt;</u></a>	Defines the document type. This declaration goes before the <html> start tag

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# HTML Styles

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---

In HTML 4.0, all formatting can be removed from the HTML document, and stored in a style sheet.



## Try it Yourself - Examples

### [Using styles in HTML](#)

How to add style information into the <head> section.

### [Link that is not underlined](#)

How to make a link that is not underlined, with the style attribute.

### [Link to an external style sheet](#)

How to use the <link> tag to link to an external style sheet.

---

## How to Use Styles

When a browser reads a style sheet, it will format the document according to it.

There are three ways of inserting a style sheet:

- External style sheet
- Internal style sheet
- Inline styles

---

## External Style Sheet

An external style sheet is ideal when the style is applied to many pages. With an external style sheet, you can change the look of an entire Web site by changing one file. Each page must link to the style sheet using the <link> tag. The <link> tag goes inside the <head> section:

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
```

## Internal Style Sheet

An internal style sheet can be used if one single document has a unique style. Internal styles are defined in the <head> section of an HTML page, by using the <style> tag, like this:

```
<head>
<style type="text/css">
body {background-color:yellow;}
p {color:blue;}
</style>
</head>
```

---

## Inline Styles

An inline style can be used if a unique style is to be applied to one single occurrence of an element.

To use inline styles, use the style attribute in the relevant tag. The style attribute can contain any CSS property. The example below shows how to change the text color and the left margin of a paragraph:

```
<p style="color:blue;margin-left:20px;">This is a paragraph.</p>
```

To learn more about style sheets, visit our [CSS tutorial](#).

---

## HTML Style Tags

Tag	Description
<a href="#">&lt;style&gt;</a>	Defines style information for a document
<a href="#">&lt;link /&gt;</a>	Defines the relationship between a document and an external resource

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# HTML **head** Elements

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## Try it Yourself - Examples

### The title of a document

The <title> tag defines the title of the document.

### One target for all links

How to use the base tag to let all the links on a page open in a new window.

---

## The HTML head Element

The head element is a container for all the head elements. Elements inside <head> can include scripts, instruct the browser where to find style sheets, provide meta information, and more.

The following tags can be added to the head section: <title>, <base>, <link>, <meta>, <script>, and <style>.

---

## The HTML title Element

The <title> tag defines the title of the document.

The title element is required in all HTML/XHTML documents.

The title element:

- defines a title in the browser toolbar
- provides a title for the page when it is added to favorites
- displays a title for the page in search-engine results

A simplified HTML document:

```
<html>
<head>
<title>Title of the document</title>
</head>
```

```
<body>
The content of the document.....
```

```
</body>
</html>
```

---

## The HTML base Element

The `<base>` tag specifies a default address or a default target for all links on a page:

```
<head>
<base href="http://www.w3schools.com/images/" />
<base target="_blank" />
</head>
```

---

## The HTML link Element

The `<link>` tag defines the relationship between a document and an external resource.

The `<link>` tag is most used to link to style sheets:

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
```

---

## The HTML style Element

The `<style>` tag is used to define style information for an HTML document.

Inside the style element you specify how HTML elements should render in a browser:

```
<head>
<style type="text/css">
body {background-color:yellow}
p {color:blue}
</style>
</head>
```

---

## The HTML meta Element

The `<meta>` tag provides metadata about the HTML document.

The meta element will be explained in the next chapter.

---

## The HTML script Element

The `<script>` tag is used to define a client-side script, such as a JavaScript.

The script element will be explained in a later chapter.

---

## HTML head Elements

Tag	Description
<a href="#"><code>&lt;head&gt;</code></a>	Defines information about the document
<a href="#"><code>&lt;title&gt;</code></a>	Defines the title of a document
<a href="#"><code>&lt;base /&gt;</code></a>	Defines a default address or a default target for all links on a page
<a href="#"><code>&lt;link /&gt;</code></a>	Defines the relationship between a document and an external resource
<a href="#"><code>&lt;meta /&gt;</code></a>	Defines metadata about an HTML document
<a href="#"><code>&lt;script&gt;</code></a>	Defines a client-side script
<a href="#"><code>&lt;style&gt;</code></a>	Defines style information for a document

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# HTML Meta

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## Try it Yourself - Examples

### Document description

Use the meta element to describe the document.

### Document keywords

Use the meta element to define the keywords of a document.

### Redirect a user

How to redirect a user to a new web address.

---

## The HTML meta Element

Metadata is information about data.

The <meta> tag provides metadata about the HTML document. Metadata will not be displayed on the page, but will be machine parsable.

Meta elements are typically used to specify page description, keywords, author of the document, last modified, and other metadata.

The <meta> tag always goes inside the head element.

The metadata can be used by browsers (how to display content or reload page), search engines (keywords), or other web services.

---

## Keywords for Search Engines

Some search engines will use the name and content attributes of the meta element to index your pages.


The following meta element defines a description of a page:

```
<meta name="description" content="Free Web tutorials on HTML, CSS, XML" />
```

The following meta element defines keywords for a page:

```
<meta name="keywords" content="HTML, CSS, XML" />
```

The intention of the name and content attributes is to describe the content of a page.

 **Note:** A lot of webmasters have used <meta> tags for spamming, like repeating keywords (or using wrong keywords) for higher ranking. Therefore, most search engines have stopped using <meta> tags to index/rank pages.

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# HTML Scripts

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JavaScripts make HTML pages more dynamic and interactive.



## Try it Yourself - Examples

### [Insert a script](#)

How to insert a script into an HTML document.

### [Use of the <noscript> tag](#)

How to handle browsers that do not support scripting, or have scripting disabled.

---

## The HTML script Element

The <script> tag is used to define a client-side script, such as a JavaScript.

The script element either contains scripting statements or it points to an external script file through the src attribute.

The required type attribute specifies the MIME type of the script.

Common uses for JavaScript are image manipulation, form validation, and dynamic changes of content.

The script below writes Hello World! to the HTML output:

### Example

```
<script type="text/javascript">
document.write("Hello World!")
</script>
```



**Tip:** To learn more about JavaScript, visit our [JavaScript tutorial!](#)

---

## The HTML noscript Element

The `<noscript>` tag is used to provide an alternate content for users that have disabled scripts in their browser or have a browser that doesn't support client-side scripting.

The `noscript` element can contain all the elements that you can find inside the `body` element of a normal HTML page.

The content inside the `noscript` element will only be displayed if scripts are not supported, or are disabled in the user's browser:

### Example

```
<script type="text/javascript">
document.write("Hello World!")
</script>
<noscript>Sorry, your browser does not support JavaScript!</noscript>
```

---

## HTML Script Tags

Tag	Description
<code>&lt;script&gt;</code>	Defines a client-side script
<code>&lt;noscript&gt;</code>	Defines an alternate content for users that do not support client-side scripts

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# HTML Entities

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Reserved characters in HTML must be replaced with character entities.

---

## HTML Entities

Some characters are reserved in HTML.

It is not possible to use the less than (<) or greater than (>) signs in your text, because the browser will mix them with tags.

To actually display reserved characters, we must use character entities in the HTML source code.


A character entity looks like this:

```
&entity_name;
```

OR

```
&#entity_number;
```

To display a less than sign we must write: **&lt;** or **&#60;**

 **Tip:** The advantage of using an entity name, instead of a number, is that the name is easier to remember. However, the disadvantage is that browsers may not support all entity names (the support for entity numbers is very good).

---

## Non-breaking Space

A common character entity used in HTML is the non-breaking space (&nbsp;).

Browsers will always truncate spaces in HTML pages. If you write 10 spaces in your text, the browser will remove 9 of them, before displaying the page. To add spaces to your text, you can use the &nbsp; character entity.

---

## HTML Entities Example

Experiment with HTML character entities: [Try it yourself](#)

---

## HTML Useful Character Entities

**Note:** Entity names are case sensitive!

Result	Description	Entity Name	Entity Number
	non-breaking space	&nbsp;	&#160;
<	less than	&lt;	&#60;
>	greater than	&gt;	&#62;
&	ampersand	&amp;	&#38;
¢	cent	&cent;	&#162;
£	pound	&pound;	&#163;
¥	yen	&yen;	&#165;
€	euro	&euro;	&#8364;
§	section	&sect;	&#167;
©	copyright	&copy;	&#169;
®	registered trademark	&reg;	&#174;
™	trademark	&trade;	&#8482;

For a complete reference of all character entities, visit our [HTML Entities Reference](#).

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# HTML Uniform Resource Locators

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A URL is another word for a web address.

A URL can be composed of words, such as "w3schools.com", or an Internet Protocol (IP) address: 192.68.20.50. Most people enter the name of the website when surfing, because names are easier to remember than numbers.

---

## URL - Uniform Resource Locator

When you click on a link in an HTML page, an underlying <a> tag points to an address on the world wide web.

A Uniform Resource Locator (URL) is used to address a document (or other data) on the world wide web.

A web address, like this: <http://www.w3schools.com/html/default.asp> follows these syntax rules:

**scheme://host.domain:port/path/filename**

Explanation:

- **scheme** - defines the **type** of Internet service. The most common type is **http**
- **host** - defines the **domain host** (the default host for http is **www**)
- **domain** - defines the Internet **domain name**, like w3schools.com
- **:port** - defines the **port number** at the host (the default port number for http is **80**)
- **path** - defines a **path** at the server (If omitted, the document must be stored at the root directory of the web site)
- **filename** - defines the name of a document/resource

---

## Common URL Schemes

The table below lists some common schemes:

Scheme	Short for....	Which pages will the scheme be used for...
http	HyperText Transfer Protocol	Common web pages starts with http://. Not encrypted
https	Secure HyperText Transfer Protocol	Secure web pages. All information exchanged are encrypted
ftp	File Transfer Protocol	For downloading or uploading files to a website. Useful for domain maintenance

file	A file on your computer
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# HTML URL Encoding

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URL encoding converts characters into a format that can be transmitted over the Internet.

---

## URL - Uniform Resource Locator

Web browsers request pages from web servers by using a URL.

The URL is the address of a web page, like: **http://www.w3schools.com.**

---

## URL Encoding

URLs can only be sent over the Internet using the [ASCII character-set](#).

Since URLs often contain characters outside the ASCII set, the URL has to be converted into a valid ASCII format.

URL encoding replaces non ASCII characters with a "%" followed by two hexadecimal digits.

URLs cannot contain spaces. URL encoding normally replaces a space with a + sign.

---

## Try It Yourself

If you click the "Submit" button below, the browser will URL encode the input before it is sent to the server. A page at the server will display the received input.

<input type="text" value="Hello Günter"/>	<input type="submit" value="Submit"/>
---	---------------------------------------

Try some other input and click Submit again.

---

## URL Encoding Examples

Character	URL-encoding
€	%80

£	%A3
©	%A9
®	%AE
À	%C0
Á	%C1
Â	%C2
Ã	%C3
Ä	%C4
Å	%C5

For a complete reference of all URL encodings, visit our [URL Encoding Reference](#).

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# HTML Web Server

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To make your web site visible to the world, you'll have to store it on a web server.

---

## Hosting your own Web site

Hosting your web site on your own server is always an option. Here are some points to consider:

### Hardware Expenses

To run a "real" web site, you will have to buy some powerful server hardware. Don't expect that a low cost PC will do the job. You will also need a permanent (24 hours a day ) high-speed connection.

### Software Expenses

Remember that server-licenses often are higher than client-licenses. Also note that server-licenses might have limits on number of users.

### Labor Expenses

Don't expect low labor expenses. You have to install your own hardware and software. You also have to deal with bugs and viruses, and keep your server constantly running in an environment where "everything could happen".

---

## Using an Internet Service Provider

Renting a server from an Internet Service Provider (ISP) is a common option.

Most small companies store their web site on a server provided by an ISP. Here are some advantages:

### Connection Speed

Most ISPs have very fast connections to the Internet.

## Powerful Hardware

ISPs often have powerful web servers that can be shared by several companies. You can also expect them to have an effective load balancing, and necessary backup servers.

## Security and Stability

ISPs are specialists on web hosting. Expect their servers to have more than 99% up time, the latest software patches, and the best virus protection.

---

# Things to Consider with an ISP

## 24-hour support

Make sure your ISP offers 24-hours support. Don't put yourself in a situation where you cannot fix critical problems without having to wait until the next working day. Toll-free phone could be vital if you don't want to pay for long distance calls.

## Daily Backup

Make sure your ISP runs a daily backup routine, otherwise you may lose some valuable data.

## Traffic Volume

Study the ISP's traffic volume restrictions. Make sure that you don't have to pay a fortune for unexpected high traffic if your web site becomes popular.

## Bandwidth or Content Restrictions

Study the ISP's bandwidth and content restrictions. If you plan to publish pictures or broadcast video or sound, make sure that you can.

## E-mail Capabilities

Make sure your ISP supports the e-mail capabilities you need.

## Database Access

If you plan to use data from databases on your web site, make sure your ISP supports the database access you need.

Before you select an ISP, make sure you read W3Schools [Web Hosting Tutorial](#) !!

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# You Have Learned HTML, Now What?

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## HTML Summary

This tutorial has taught you how to use HTML to create your own web site.

HTML is the universal markup language for the Web. HTML lets you format text, add graphics, create links, input forms, frames and tables, etc., and save it all in a text file that any browser can read and display.

The key to HTML is the tags, which indicates what content is coming up.

For more information on HTML, please take a look at our [HTML examples](#) and our [HTML reference](#).

---

## Now You Know HTML, What's Next?

### **XHTML**

XHTML reformulates HTML 4.01 in XML.

If you want to learn more about XHTML, please visit our [XHTML tutorial](#).

### **CSS**

CSS is used to control the style and layout of multiple Web pages all at once.

With CSS, all formatting can be removed from the HTML document and stored in a separate file.

CSS gives you total control of the layout, without messing up the document content.

To learn how to create style sheets, please visit our [CSS tutorial](#).

### **JavaScript**

JavaScript can make your web site more dynamic.

A static web site is nice when you just want to show flat content, but a dynamic web site can react to events and allow user interaction.

JavaScript is the most popular scripting language on the internet and it works with all major browsers.

If you want to learn more about JavaScript, please visit our [JavaScript tutorial](#).



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# HTML Multimedia

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Multimedia on the web is sound, music, videos, and animations.

Modern web browsers have support for many multimedia formats.

---

## What is Multimedia?

Multimedia comes in many different formats. It can be almost anything you can hear or see like text, pictures, music, sound, videos, records, films, animations, and more.

On the Internet you can often find multimedia elements embedded in web pages, and modern web browsers have support for a number of multimedia formats.

In this tutorial you will learn about different multimedia formats and how to use them in your web pages.

---

## Browser Support

The first Internet browsers had support for text only, and even the text support was limited to a single font in a single color. Then came browsers with support for colors, fonts and text styles, and the support for pictures was added.

The support for sounds, animations and videos is handled in different ways by different browsers. Some elements can be handled inline, and some requires an extra helper program (a plug-in).

You will learn more about plug-ins in the next chapters.

---

## Multimedia Formats

Multimedia elements (like sounds or videos) are stored in media files.

The most common way to discover the media type is to look at the file extension. When a browser sees the file extensions .htm or .html, it will assume that the file is an HTML page. The .xml extension indicates an XML file, and the .css extension indicates a style sheet. Picture formats are recognized by extensions like .gif and .jpg.

Multimedia elements also have their own file formats with different extensions like .swf, .wmv, .mp3, and .mp4.

## Video Formats



The MP4 format is the new and upcoming format for internet video. It is supported by YouTube, Flash players and HTML5.

Format	File	Description
AVI	.avi	The AVI (Audio Video Interleave) format was developed by Microsoft. The AVI format is supported by all computers running Windows, and by all the most popular web browsers. It is a very common format on the Internet, but not always possible to play on non-Windows computers.
WMV	.wmv	The Windows Media format is developed by Microsoft. Windows Media is a common format on the Internet, but Windows Media movies cannot be played on non-Windows computer without an extra (free) component installed. Some later Windows Media movies cannot play at all on non-Windows computers because no player is available
MPEG	.mpg .mpeg	The MPEG (Moving Pictures Expert Group) format is the most popular format on the Internet. It is cross-platform, and supported by all the most popular web browsers.
QuickTime	.mov	The QuickTime format is developed by Apple. QuickTime is a common format on the Internet, but QuickTime movies cannot be played on a Windows computer without an extra (free) component installed.
RealVideo	.rm .ram	The RealVideo format was developed for the Internet by Real Media. The format allows streaming of video (on-line video, Internet TV) with low bandwidths. Because of the low bandwidth priority, quality is often reduced.
Flash	.swf .flv	The Flash (Shockwave) format was developed by Macromedia. The Shockwave format requires an extra component to play. But this component comes preinstalled with web browsers like Firefox and Internet Explorer.
Mpeg-4	.mp4	Mpeg-4 (with H.264 video compression) is the new format for the internet. In fact, YouTube recommends using MP4. YouTube accepts multiple formats, and then converts them all to .flv or .mp4 for distribution. More and more online video publishers are moving to MP4 as the internet sharing format for both Flash players and HTML5.

## Sound Formats

Format	File	Description
MIDI	.mid .midi	<p>The MIDI (Musical Instrument Digital Interface) is a format for electronic music devices like synthesizers and PC sound cards. MIDI files do not contain sound, but digital musical instructions (notes) that can be played by electronics (like your PC's sound card).</p> <p><a href="#">Click here to play The Beatles.</a></p> <p>Since MIDI format only contains instructions (notes), MIDI files are extremely small. The example above is only 23K in size but it plays for nearly 5 minutes. MIDI is</p>

		supported by many software systems over a large range of platforms. MIDI is supported by all the most popular Internet browsers.
RealAudio	.rm .ram	The RealAudio format was developed for the Internet by Real Media. The format also supports video. The format allows streaming of audio (on-line music, Internet radio) with low bandwidths. Because of the low bandwidth priority, quality is often reduced.
Wave	.wav	The Wave (waveform) format is developed by IBM and Microsoft. It is supported by all computers running Windows, and by all the most popular web browsers (except Google Chrome).
WMA	.wma	The WMA format (Windows Media Audio), compares in quality to MP3, and is compatible with most players, except the iPod. WMA files can be delivered as a continuous flow of data, which makes it practical for use in Internet radio or on-line music.
MP3	.mp3 .mpga	MP3 files are actually the sound part of MPEG files. The MPEG format was originally developed for video by the Moving Pictures Experts Group. MP3 is one of the most popular sound formats for music. The encoding system combines good compression (small files) with high quality. Expect future software systems to support it.

## What Format To Use?

The WAVE is the most popular **uncompressed** sound format on the Internet, and it is supported by all popular browsers. If you want uncompressed sound (music or speech) to be available to all your visitors, you should use the WAVE format.

The MP3 format is the newest format for **compressed** recorded music. The term MP3 has become synonymous with digital music. If your website is about recorded music, the MP3 format is the choice.

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# HTML Audio Sounds

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Sounds can be played in HTML by many different methods.

---

## Problems and Solutions

Displaying audio in HTML is not easy!

You must add a lot of tricks to make sure you audio files will play in all browsers (Internet Explorer, Chrome, Firefox, Safari, Opera) and on all hardware (PC, Mac , iPad, iPhone).

In this chapter W3Schools summarizes the problems and the solutions.

---

## The Easiest Way to Add Audio to Your Site

The easiest way to add Audio to your web pages?

The Yahoo Media Player (described at the bottom of this page) is definitely a favorite.

It plays mp3 and a variety of other formats. You can add it to your page (or blog) with a single line of code, and easily turn your HTML page into a professional playlist.

### Example

```
<a href="song.mp3">Play Song</a>
```

```
<script type="text/javascript" src="http://mediaplayer.yahoo.com/js">  
</script>
```

---

## Using Plugins

A Plugin is a small computer program that extends the standard functionality of a web browser. Plugins can be used for many purposes. They can be used to display music, display maps, verify your bank id, control your input, and much more.

Plugins can be added to HTML pages using `<object>` or `<embed>` tags.

---

## Playing Audio in HTML

### Example

```
<audio controls="controls" height="50px" width="100px">  
  <source src="song.mp3" type="audio/mpeg" />  
  <source src="song.ogg" type="audio/ogg" />  
<embed height="50px" width="100px" src="song.mp3" />  
</audio>
```

---

## Using The <embed> Element

The purpose of the <embed> tag is to embed multimedia elements in HTML pages.

The following code fragment displays an MP3 file embedded in a web page.

### Example

```
<embed height="50px" width="100px" src="song.mp3" />
```

#### Problems:

- The <embed> tag is unknown to HTML 4. Your page will not validate correctly.
  - If your browser does not support the file format, your audio will not play.
  - If you convert your file to another format, it will still not play in all browsers.
- 

## Using The <object> Element

The purpose of the <object> tag is to embed multimedia elements in HTML pages.

The following code fragment displays an MP3 file embedded in a web page.

### Example

```
<object height="50px" width="100px" data="song.mp3" />
```

#### Problems:

- If your browser does not support the file format, your audio will not play.
  - If you convert your file to another format, it will still not play in all browsers.
- 

## Using the <audio> Element

The <audio> element is an HTML 5 element, unknown to HTML 4, but it works in new browsers.

### Example

```
<audio controls="controls">
  <source src="song.mp3" type="audio/mpeg" />
  <source src="song.ogg" type="audio/ogg" />
  Your browser does not support this audio
</audio>
```

The example above uses an Ogg file, to make it work in Firefox, Opera and Chrome. To make the audio work in Internet Explorer and Safari, a file of the type MP3 is added.

Currently, there are 3 main formats for the audio element:

Format	IE 9	Firefox 3.5	Opera 10.5	Chrome 3.0	Safari 3.0
Ogg Vorbis	No	Yes	Yes	Yes	No
MP3	Yes	No	No	Yes	Yes
Wav	No	Yes	Yes	Yes	Yes

### Problems:

- You must convert your videos to many different formats.
- The <audio> element does not work in older browsers.
- The <audio> element does not validate in HTML 4 and XHTML.

---

## The Best HTML Solution

### Example

```
<audio controls="controls" height="50px width="100px">
  <source src="song.mp3" type="audio/mpeg" />
  <source src="song.ogg" type="audio/ogg" />
  <embed height="50px width="100px" src="song.mp3" />
</audio>
```

The example above uses 4 different audio formats. The HTML 5 <audio> element tries to play the video either as ogg or mp3. If this fails, the code "falls back" to try the <embed> element. If this also fails, it displays an error.

### Problems:

- You must convert your videos to many different formats.
- The <audio> element does not validate in HTML 4 and XHTML.
- The <embed> element does not validate in HTML 4 and XHTML.

**NOTE:** Using <!DOCTYPE html> solves the validation problem.

---

## Using the Yahoo Media Player

Using the Yahoo Media Player is a different approach. You simply let Yahoo do the job of playing your songs.

### Example

```
<a href="song.mp3">Play Song</a>

<script type="text/javascript"
src="http://mediaplayer.yahoo.com/js"></script>
```

Using the Yahoo player is free. To use it you insert this piece of JavaScript at the bottom of your web page:

```
<script type="text/javascript" src="http://mediaplayer.yahoo.com/js"></script>
```

Then you simply link to your MP3 files in your HTML, and the JavaScript code automatically creates a play button for each song:

```
<a href="song1.mp3">Play Song 1</a>
<a href="song2.mp3">Play Song 2</a>
...
...
...
```

The Yahoo Media Player presents your readers with a small play button instead of a full player. However, when you click the button, a full player pops up.

Note that the player is always docked and ready at the bottom the window. Just click on it to slide it out.

---

## Using Google

### Example

```
<a href="song.mp3">Play Song</a>

<embed type="application/x-shockwave-flash" wmode="transparent"
src="http://www.google.com/reader/ui/3523697345-audio-
player.swf?audioUrl=song.mp3" height="27" width="320"></embed>
```

---

## Using A Hyperlink

If a web page includes a hyperlink to a media file, most browsers will use a "helper application" to play the file.

The following code fragment displays a link to an MP3 file. If a user clicks on the link, the browser will launch a helper application to play the file:

### Example

```
<a href="song.mp3">Play the song</a>
```

---

## Inline Sound

When sound is included in a web page, or as part of a web page, it is called inline sound.

If you plan to use inline sounds in your web applications, be aware that many people find inline sound annoying. Also note that some users might have turned off the inline sound option in their browser.

Our best advice is to include inline sound only in web pages where the user expects to hear the sound. An example of this is a page which opens after the user has clicked on a link to hear a recording.

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# The **HTML** Object Element

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---

The purpose of the <object> element is to support HTML helpers (Plug-Ins)

---

## HTML Helpers (Plug-Ins)



A helper application is a program that can be launched by the browser to "help". Helper applications are also called Plug-Ins.

Helper applications can be used to play audio and video (and much more). Helper applications are launched using the <object> tag.

One advantage of using a helper application to play video and audio, is that you can let some (or all) of the player settings be controlled by the user.

Most helper applications allow manual (or programmed) control over the volume settings and play functions like rewind, pause, stop and play.

---

## The Best Way to Play Videos in HTML?

For the best general way to include videos in HTML, refer to the next chapter.

---

## Playing Wave Audio Using QuickTime

### Example

```
<object width="420" height="360"
classid="clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B"
codebase="http://www.apple.com/qtactivex/qtplugin.cab">
<param name="src" value="liar.wav" />
<param name="controller" value="true" />
</object>
```

---

## Playing MP4 Video Using QuickTime

### Example

```
<object width="420" height="360"
classid="clsid:02BF25D5-8C17-4B23-BC80-D3488ABDDC6B"
codebase="http://www.apple.com/qtactivex/qtplugin.cab">
<param name="src" value="movie.mp4" />
<param name="controller" value="true" />
</object>
```

---

## Playing SWF Videos Using Flash

### Example

```
<object width="400" height="40"
classid="clsid:d27cdb6e-ae6d-11cf-96b8-444553540000"
codebase="http://fpdownload.macromedia.com/
pub/shockwave/cabs/flash/swflash.cab#version=8,0,0,0">
<param name="SRC" value="bookmark.swf">
<embed src="bookmark.swf" width="400" height="40"></embed>
</object>
```

---

## Playing WMV Movies Using Windows Media Player

The example below shows the suggested code used to display a Windows Media file.

### Example

```
<object width="100%" height="100%"
type="video/x-ms-asf" url="3d.wmv" data="3d.wmv"
classid="CLSID:6BF52A52-394A-11d3-B153-00C04F79FAA6">
<param name="url" value="3d.wmv">
<param name="filename" value="3d.wmv">
<param name="autostart" value="1">
<param name="uiMode" value="full" />
<param name="autosize" value="1">
<param name="playcount" value="1">
<embed type="application/x-mplayer2" src="3d.wmv" width="100%" height="100%"
autostart="true" showcontrols="true"
pluginspage="http://www.microsoft.com/Windows/MediaPlayer/"></embed>
</object>
```

---

## Plug-Ins

Plug-Ins can be used in HTML for many purposes. They can be used to display maps, verify your bank id, control your input, and much more. The restrictions are few.

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# HTML Videos

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---

Videos can be played in HTML by many different methods.

---

## Playing Videos in HTML

### Example

```
<video width="320" height="240" controls="controls">
  <source src="movie.mp4" type="video/mp4" />
  <source src="movie.ogv" type="video/ogg" />
  <source src="movie.webm" type="video/webm" />
<object data="movie.mp4" width="320" height="240">
  <embed src="movie.swf" width="320" height="240" />
</object>
</video>
```

---

## Problems, Problems, and Solutions

Displaying videos in HTML is not easy!

You must add a lot of tricks to make sure your video will play in all browsers (Internet Explorer, Chrome, Firefox, Safari, Opera) and on all hardware (PC, Mac , iPad, iPhone).

In this chapter W3Schools summarizes the problems and the solutions.

---

## The <embed> Tag

The purpose of the <embed> tag is to embed multimedia elements in HTML pages.

The following HTML fragment displays a Flash video embedded in a web page:

### Example

```
<embed src="intro.swf" height="200" width="200"/>
```

### Problems

- The <embed> tag is unknown to HTML 4. Your page will not validate correctly.
- If the browser does not support Flash, your video will not play.
- iPad and iPhone cannot display Flash videos.
- If you convert the video to another format, it will still not play in all browsers.

---

## Using The <object> Tag

The purpose of the <object> tag is to embed multimedia elements in HTML pages.

The following HTML fragment displays a Flash video embedded in a web page:

### Example

```
<object data="intro.swf" height="200" width="200"/>
```

### Problems:

- If the browser does not support Flash, your video will not play.
- iPad and iPhone cannot display Flash videos.
- If you convert the video to another format, it will still not play in all browsers.

---

## Using the <video> Tag

The <video> element is new in HTML 5.

The purpose of the <video> tag is to embed video elements in HTML pages.

The following HTML fragment displays a video in ogg, mp4, or webm format embedded in a web page:

### Example

```
<video width="320" height="240" controls="controls">  
  <source src="movie.mp4" type="video/mp4" />  
  <source src="movie.ogv" type="video/ogg" />  
  <source src="movie.webm" type="video/webm" />  
Your browser does not support the video tag.  
</video>
```

### Problems:

- You must convert your videos to many different formats.
- The <video> element does not work in older browsers.
- The <video> element does not validate in HTML 4 and XHTML.

## The Best HTML Solution

### HTML 5 + <object> + <embed>

```
<video width="320" height="240" controls="controls">
  <source src="movie.mp4" type="video/mp4" />
  <source src="movie.ogg" type="video/ogg" />
  <source src="movie.webm" type="video/webm" />
<object data="movie.mp4" width="320" height="240">
<embed src="movie.swf" width="320" height="240">
Your browser does not support video
</object>
</video>
```

The example above uses 4 different video formats. The HTML 5 <video> element tries to play the video either in mp4, ogg, or webm formats. If this fails, the code "falls back" to try the <object> element. If this also fails, it "falls back" to the <embed> element.

#### Problems:

- You must convert your videos to many different formats.
- The <video> element does not validate in HTML 4 and XHTML.
- The <embed> element does not validate in HTML 4 and XHTML.

**NOTE:** Using <!DOCTYPE html> solves the validation problem.

---

## The YouTube Solution

The easiest way to display videos in HTML is to use YouTube (see next chapter).

---

## Using A Hyperlink

If a web page includes a hyperlink to a media file, most browsers will use a "helper application" to play the file.

The following code fragment displays a link to a Flash video. If a user clicks on the link, the browser will launch a helper application, like Windows Media Player to play the AVI file:

#### Example

```
<a href="intro.swf">Play a video file</a>
```

---

## A Note About Inline Videos

When a video is included in a web page it is called inline video.

If you plan to use inline videos in your web applications, be aware that many people find inline videos annoying. Also note that some users might have turned off the inline video option in their browser.

Our best advice is to include inline videos only in web pages where the user expects to see a video. An example of this is a page which opens after the user has clicked on a link to see the video.

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# HTML - YouTube Videos

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---

The easiest way to display videos (others or your own) in HTML is to use YouTube.

---

## Playing a YouTube Video in HTML

If you want to display a video in a web page, you can upload the video to YouTube and insert HTML code to display the video in your web page.

### Example - YouTube iFrame

```
<iframe width="420" height="345"
src="http://www.youtube.com/embed/XGSy3_Czz8k">
</iframe>
```

### Example - YouTube Embedded

```
<embed
width="420" height="345"
src="http://www.youtube.com/v/XGSy3_Czz8k?
type="application/x-shockwave-flash">
</embed>
```

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# HTML Media Tags Reference

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## HTML 4.01 Multimedia Tags

Tag	Description
<a href="#">&lt;applet&gt;</a>	<b>Deprecated.</b> Defines an embedded applet
<embed>	<b>Deprecated in HTML4 but not in HTML5.</b> Defines an embedded object
<a href="#">&lt;object&gt;</a>	Defines an embedded object
<a href="#">&lt;param&gt;</a>	Defines a parameter for an object

[Complete HTML 4.01 Reference.](#)

## Standard Attributes

Attribute	Value	Description	DTD
class	<i>classname</i>	Specifies a classname for an element	STF
dir	rtl ltr	Specifies the text direction for the content in an element	STF
id	<i>id</i>	Specifies a unique id for an element	STF
lang	<i>language_code</i>	Specifies a language code for the content in an element	STF
style	<i>style_definition</i>	Specifies an inline style for an element	STF
tabindex	<i>number</i>	Specifies the tab order of an element	STF
title	<i>text</i>	Specifies extra information about an element	STF
xml:lang	<i>language_code</i>	Specifies a language code for the content in an element, in XHTML documents	STF

More information about [Standard Attributes](#).

## Event Attributes

Attribute	Value	Description	DTD
onclick	<i>script</i>	Script to be run on a mouse click	STF
ondblclick	<i>script</i>	Script to be run on a mouse double-click	STF
onmousedown	<i>script</i>	Script to be run when mouse button is pressed	STF
onmousemove	<i>script</i>	Script to be run when mouse pointer moves	STF
onmouseout	<i>script</i>	Script to be run when mouse pointer moves out of an	STF

		element	
onmouseover	<i>script</i>	Script to be run when mouse pointer moves over an element	STF
onmouseup	<i>script</i>	Script to be run when mouse button is released	STF
onkeydown	<i>script</i>	Script to be run when a key is pressed	STF
onkeypress	<i>script</i>	Script to be run when a key is pressed and released	STF
onkeyup	<i>script</i>	Script to be run when a key is released	STF

More information about [Event Attributes](#).

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# HTML vs XHTML

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XHTML is a stricter and cleaner version of HTML.

---

## What Is XHTML?

- XHTML stands for EXtensible HyperText Markup Language
  - XHTML is almost identical to HTML 4.01
  - XHTML is a stricter and cleaner version of HTML
  - XHTML is HTML defined as an XML application
  - XHTML is a W3C Recommendation of [January 2000](#).
  - XHTML is supported by all major browsers.
- 

## Why XHTML?

Many pages on the internet contain "bad" HTML.

The following HTML code will work just fine if you view it in a browser (even if it does NOT follow the HTML rules):

```
<html>
<head>
<title>This is bad HTML</title>
<body>
<h1>Bad HTML
<p>This is a paragraph
</body>
```

XHTML is HTML 4.01 redesigned as XML.

XML is a markup language where documents must be marked up correctly and "well-formed".

If you want to study XML, [Read our XML tutorial](#).

Today's market consists of different browser technologies. Some browsers run on computers, and some browsers run on mobile phones or other small devices. Smaller devices often lack the resources or power to interpret a "bad" markup language.

Therefore - by combining the strengths of HTML and XML, XHTML was developed.

---

## The Most Important Differences from HTML:

- XHTML elements must be **properly nested**
- XHTML elements must always be **closed**
- XHTML elements must be in **lowercase**
- XHTML documents must have **one root element**

---

### XHTML 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>
```

**Note:** A common mistake with nested lists, is to forget that the inside list must be within `<li>` and `</li>` tags.

This is wrong:

```
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
      <li>Black tea</li>
      <li>Green tea</li>
    </ul>
  <li>Milk</li>
</ul>
```

This is correct:

```
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
      <li>Black tea</li>
      <li>Green tea</li>
    </ul>
  </li>
  <li>Milk</li>
</ul>
```

Notice that we have inserted a `</li>` tag after the `</ul>` tag in the "correct" code example.

---

### XHTML Elements Must Always Be Closed

Non-empty elements must have a closing tag.

This is wrong:

```
<p>This is a paragraph  
<p>This is another paragraph
```

This is correct:

```
<p>This is a paragraph</p>  
<p>This is another paragraph</p>
```

---

## Empty Elements Must Also Be Closed

Empty elements must also be closed.

This is wrong:

```
A break: <br>  
A horizontal rule: <hr>  
An image: 
```

This is correct:

```
A break: <br />  
A horizontal rule: <hr />  
An image: 
```

---

## XHTML Elements Must Be In Lower Case

Tag names and attributes must be in lower case.

This is wrong:

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

This is correct:

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

---

## XHTML Documents Must Have One Root Element

All XHTML elements must be nested within the <html> root element. Child elements must be in pairs and correctly nested within their parent element.

The basic document structure is:

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

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# XHTML Syntax

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## More XHTML Syntax Rules

- Attribute names must be in **lower case**
- Attribute values must be **quoted**
- Attribute minimization is **forbidden**
- The XHTML DTD defines **mandatory** elements

---

### Attribute Names Must Be In Lower Case

This is wrong:

```
<table WIDTH="100%">
```

This is correct:

```
<table width="100%">
```

---

### Attribute Values Must Be Quoted

This is wrong:

```
<table width=100%>
```

This is correct:

```
<table width="100%">
```

---

### Attribute Minimization Is Forbidden

This is wrong:

```
<input checked>  
<input readonly>  
<input disabled>  
<option selected>  
<frame noresize>
```

This is correct:

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

---

## The Lang Attribute

The lang attribute applies to almost every XHTML element. It specifies the language of the content within an element.

If you use the lang attribute in an element, you must also add the xml:lang attribute, like this:

```
<div lang="it" xml:lang="it">Ciao bella!</div>
```

---

## Mandatory XHTML Elements

An XHTML document must have a DOCTYPE declaration.

The html, head, title, and body elements must also be present.

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# XHTML Doctypes

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## <!DOCTYPE> Is Mandatory

An XHTML document consists of three main parts:

- the DOCTYPE declaration
- the <head> section
- the <body> section

The basic document structure is:

```
<!DOCTYPE ...>

<html>

<head>
<title>... </title>
</head>

<body> ... </body>

</html>
```

**Note:** The <!DOCTYPE> declaration refers to a Document Type Definition (DTD). A DTD specifies the rules for the markup language, so that the browsers render the content correctly.

---

## An XHTML Example

The example below shows an XHTML document with a minimum of required tags:

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

<html xmlns="http://www.w3.org/1999/xhtml">

<head>
<title>Title of document</title>
</head>
```

```
<body>
</body>

</html>
```

**Note:** The xmlns attribute in <html>, specifies the xml namespace for a document, and is required in XHTML documents.

---

## XHTML Different Doctypes

The <!DOCTYPE> declaration is the very first thing in an XHTML document, before the <html> tag.

The <!DOCTYPE> declaration is not an XHTML tag; it is an instruction to the web browser about what version of the markup language the page is written in.

The <!DOCTYPE> declaration refers to a Document Type Definition (DTD). The DTD specifies the rules for the markup language, so that the browsers render the content correctly.

### XHTML 1.0 Strict

This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed. The markup must also be written as well-formed XML.

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

### XHTML 1.0 Transitional

This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed. The markup must also be written as well-formed XML.

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

### XHTML 1.0 Frameset

This DTD is equal to XHTML 1.0 Transitional, but allows the use of frameset content.

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

### XHTML 1.1

This DTD is equal to XHTML 1.0 Strict, but allows you to add modules (for example to provide ruby support for East-Asian languages).

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
```

---

## XHTML HowTo

The following steps shows how a website can be converted from HTML to XHTML in 6 simple steps:

---

### 1. Add a <!DOCTYPE>

Add an XHTML <!DOCTYPE> to the first line of every page:

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

**Tip:** Your pages must have a DOCTYPE declaration if you want them to validate as XHTML.

---

### 2. Add an xmlns Attribute

Add an xmlns attribute to the html element of every page:

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

**Note:** The xmlns attribute specifies the xml namespace for a document, and is required in XHTML documents.

---

### 3. Change Tags And Attribute Names to Lowercase

A general "find-and-replace" function was executed to replace all uppercase tags with lowercase tags. The same was done for attribute names.

---

### 4. Quote All Attribute Values

Check every page to see that attribute values are quoted.

---

### 5. Close all Empty Tags

Empty tags are not allowed in XHTML. The <hr> and <br> tags should be replaced with <hr /> and <br />.

A general "find-and-replace" function was executed to swap the tags.

Close the <img> tags with /> the end of the tag.

---

## 6. Validate XHTML With The W3C Validator

Before an XHTML file can be validated, a correct DTD must be added as the first line of the file.

Input a web address in the box below:

Correct errors found (if any).

---

## XHTML Quiz Test

The test contains 20 questions and there is no time limit.

The test is not official, it's just a nice way to see how much you know, or don't know, about XHTML.

You will get 1 point for each correct answer. At the end of the Quiz, your total score will be displayed. Maximum score is 20 points.

Good luck! [Start the XHTML Quiz](#)

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# HTML 4.01 / XHTML 1.0 Reference

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## Ordered Alphabetically

**DTD:** indicates in which [HTML 4.01 / XHTML 1.0 DTD](#) the tag is allowed. S=Strict, T=Transitional, and F=Frameset

Tag	Description	DTD
<a href="#">&lt;!--...--&gt;</a>	Defines a comment	STF
<a href="#">&lt;!DOCTYPE&gt;</a>	Defines the document type	STF
<a href="#">&lt;a&gt;</a>	Defines an anchor	STF
<a href="#">&lt;abbr&gt;</a>	Defines an abbreviation	STF
<a href="#">&lt;acronym&gt;</a>	Defines an acronym	STF
<a href="#">&lt;address&gt;</a>	Defines contact information for the author/owner of a document	STF
<a href="#">&lt;applet&gt;</a>	<b>Deprecated.</b> Defines an embedded applet	TF
<a href="#">&lt;area /&gt;</a>	Defines an area inside an image-map	STF
<a href="#">&lt;b&gt;</a>	Defines bold text	STF
<a href="#">&lt;base /&gt;</a>	Defines a default address or a default target for all links on a page	STF
<a href="#">&lt;basefont /&gt;</a>	<b>Deprecated.</b> Defines a default font, color, or size for the text in a page	TF
<a href="#">&lt;bdo&gt;</a>	Defines the text direction	STF
<a href="#">&lt;big&gt;</a>	Defines big text	STF
<a href="#">&lt;blockquote&gt;</a>	Defines a long quotation	STF
<a href="#">&lt;body&gt;</a>	Defines the document's body	STF
<a href="#">&lt;br /&gt;</a>	Defines a single line break	STF
<a href="#">&lt;button&gt;</a>	Defines a push button	STF
<a href="#">&lt;caption&gt;</a>	Defines a table caption	STF
<a href="#">&lt;center&gt;</a>	<b>Deprecated.</b> Defines centered text	TF
<a href="#">&lt;cite&gt;</a>	Defines a citation	STF
<a href="#">&lt;code&gt;</a>	Defines computer code text	STF
<a href="#">&lt;col /&gt;</a>	Defines attribute values for one or more columns in a table	STF
<a href="#">&lt;colgroup&gt;</a>	Defines a group of columns in a table for formatting	STF
<a href="#">&lt;dd&gt;</a>	Defines a description of a term in a definition list	STF
<a href="#">&lt;del&gt;</a>	Defines deleted text	STF
<a href="#">&lt;dfn&gt;</a>	Defines a definition term	STF
<a href="#">&lt;dir&gt;</a>	<b>Deprecated.</b> Defines a directory list	TF
<a href="#">&lt;div&gt;</a>	Defines a section in a document	STF

<a href="#"><u>&lt;dl&gt;</u></a>	Defines a definition list	STF
<a href="#"><u>&lt;dt&gt;</u></a>	Defines a term (an item) in a definition list	STF
<a href="#"><u>&lt;em&gt;</u></a>	Defines emphasized text	STF
<a href="#"><u>&lt;fieldset&gt;</u></a>	Defines a border around elements in a form	STF
<a href="#"><u>&lt;font&gt;</u></a>	<b>Deprecated.</b> Defines font, color, and size for text	TF
<a href="#"><u>&lt;form&gt;</u></a>	Defines an HTML form for user input	STF
<a href="#"><u>&lt;frame /&gt;</u></a>	Defines a window (a frame) in a frameset	F
<a href="#"><u>&lt;frameset&gt;</u></a>	Defines a set of frames	F
<a href="#"><u>&lt;h1&gt; to &lt;h6&gt;</u></a>	Defines HTML headings	STF
<a href="#"><u>&lt;head&gt;</u></a>	Defines information about the document	STF
<a href="#"><u>&lt;hr /&gt;</u></a>	Defines a horizontal line	STF
<a href="#"><u>&lt;html&gt;</u></a>	Defines an HTML document	STF
<a href="#"><u>&lt;i&gt;</u></a>	Defines italic text	STF
<a href="#"><u>&lt;iframe&gt;</u></a>	Defines an inline frame	TF
<a href="#"><u>&lt;img /&gt;</u></a>	Defines an image	STF
<a href="#"><u>&lt;input /&gt;</u></a>	Defines an input control	STF
<a href="#"><u>&lt;ins&gt;</u></a>	Defines inserted text	STF
<a href="#"><u>&lt;isindex&gt;</u></a>	<b>Deprecated.</b> Defines a searchable index related to a document	TF
<a href="#"><u>&lt;kbd&gt;</u></a>	Defines keyboard text	STF
<a href="#"><u>&lt;label&gt;</u></a>	Defines a label for an input element	STF
<a href="#"><u>&lt;legend&gt;</u></a>	Defines a caption for a fieldset element	STF
<a href="#"><u>&lt;li&gt;</u></a>	Defines a list item	STF
<a href="#"><u>&lt;link /&gt;</u></a>	Defines the relationship between a document and an external resource	STF
<a href="#"><u>&lt;map&gt;</u></a>	Defines an image-map	STF
<a href="#"><u>&lt;menu&gt;</u></a>	<b>Deprecated.</b> Defines a menu list	TF
<a href="#"><u>&lt;meta /&gt;</u></a>	Defines metadata about an HTML document	STF
<a href="#"><u>&lt;noframes&gt;</u></a>	Defines an alternate content for users that do not support frames	TF
<a href="#"><u>&lt;noscript&gt;</u></a>	Defines an alternate content for users that do not support client-side scripts	STF
<a href="#"><u>&lt;object&gt;</u></a>	Defines an embedded object	STF
<a href="#"><u>&lt;ol&gt;</u></a>	Defines an ordered list	STF
<a href="#"><u>&lt;optgroup&gt;</u></a>	Defines a group of related options in a select list	STF
<a href="#"><u>&lt;option&gt;</u></a>	Defines an option in a select list	STF
<a href="#"><u>&lt;p&gt;</u></a>	Defines a paragraph	STF
<a href="#"><u>&lt;param /&gt;</u></a>	Defines a parameter for an object	STF
<a href="#"><u>&lt;pre&gt;</u></a>	Defines preformatted text	STF
<a href="#"><u>&lt;q&gt;</u></a>	Defines a short quotation	STF
<a href="#"><u>&lt;s&gt;</u></a>	<b>Deprecated.</b> Defines strikethrough text	TF
<a href="#"><u>&lt;samp&gt;</u></a>	Defines sample computer code	STF
<a href="#"><u>&lt;script&gt;</u></a>	Defines a client-side script	STF

<u>&lt;select&gt;</u>	Defines a select list (drop-down list)	STF
<u>&lt;small&gt;</u>	Defines small text	STF
<u>&lt;span&gt;</u>	Defines a section in a document	STF
<u>&lt;strike&gt;</u>	<b>Deprecated.</b> Defines strikethrough text	TF
<u>&lt;strong&gt;</u>	Defines strong text	STF
<u>&lt;style&gt;</u>	Defines style information for a document	STF
<u>&lt;sub&gt;</u>	Defines subscripted text	STF
<u>&lt;sup&gt;</u>	Defines superscripted text	STF
<u>&lt;table&gt;</u>	Defines a table	STF
<u>&lt;tbody&gt;</u>	Groups the body content in a table	STF
<u>&lt;td&gt;</u>	Defines a cell in a table	STF
<u>&lt;textarea&gt;</u>	Defines a multi-line text input control	STF
<u>&lt;tfoot&gt;</u>	Groups the footer content in a table	STF
<u>&lt;th&gt;</u>	Defines a header cell in a table	STF
<u>&lt;thead&gt;</u>	Groups the header content in a table	STF
<u>&lt;title&gt;</u>	Defines the title of a document	STF
<u>&lt;tr&gt;</u>	Defines a row in a table	STF
<u>&lt;tt&gt;</u>	Defines teletype text	STF
<u>&lt;u&gt;</u>	<b>Deprecated.</b> Defines underlined text	TF
<u>&lt;ul&gt;</u>	Defines an unordered list	STF
<u>&lt;var&gt;</u>	Defines a variable part of a text	STF
<xmp>	<b>Deprecated.</b> Defines preformatted text	

# HTML 4.01 / XHTML 1.0 Reference

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## Ordered by Function

**DTD:** indicates in which [HTML 4.01 / XHTML 1.0 DTD](#) the tag is allowed. S=Strict, T=Transitional, and F=Frameset

Tag	Description	DTD
<b>Basic</b>		
<a href="#">&lt;!DOCTYPE&gt;</a>	Defines the document type	STF
<a href="#">&lt;html&gt;</a>	Defines an HTML document	STF
<a href="#">&lt;body&gt;</a>	Defines the document's body	STF
<a href="#">&lt;h1&gt; to &lt;h6&gt;</a>	Defines HTML headings	STF
<a href="#">&lt;p&gt;</a>	Defines a paragraph	STF
<a href="#">&lt;br /&gt;</a>	Inserts a single line break	STF
<a href="#">&lt;hr /&gt;</a>	Defines a horizontal line	STF
<a href="#">&lt;!--...--&gt;</a>	Defines a comment	STF
<b>Formatting</b>		
<a href="#">&lt;acronym&gt;</a>	Defines an acronym	STF
<a href="#">&lt;abbr&gt;</a>	Defines an abbreviation	STF
<a href="#">&lt;address&gt;</a>	Defines contact information for the author/owner of a document	STF
<a href="#">&lt;b&gt;</a>	Defines bold text	STF
<a href="#">&lt;bdo&gt;</a>	Defines the text direction	STF
<a href="#">&lt;big&gt;</a>	Defines big text	STF
<a href="#">&lt;blockquote&gt;</a>	Defines a long quotation	STF
<a href="#">&lt;center&gt;</a>	<b>Deprecated.</b> Defines centered text	TF
<a href="#">&lt;cite&gt;</a>	Defines a citation	STF
<a href="#">&lt;code&gt;</a>	Defines computer code text	STF
<a href="#">&lt;del&gt;</a>	Defines deleted text	STF
<a href="#">&lt;dfn&gt;</a>	Defines a definition term	STF
<a href="#">&lt;em&gt;</a>	Defines emphasized text	STF
<a href="#">&lt;font&gt;</a>	<b>Deprecated.</b> Defines font, color, and size for text	TF
<a href="#">&lt;i&gt;</a>	Defines italic text	STF
<a href="#">&lt;ins&gt;</a>	Defines inserted text	STF
<a href="#">&lt;kbd&gt;</a>	Defines keyboard text	STF
<a href="#">&lt;pre&gt;</a>	Defines preformatted text	STF

<a href="#"><u>&lt;q&gt;</u></a>	Defines a short quotation	STF
<a href="#"><u>&lt;s&gt;</u></a>	<b>Deprecated.</b> Defines strikethrough text	TF
<a href="#"><u>&lt;samp&gt;</u></a>	Defines sample computer code	STF
<a href="#"><u>&lt;small&gt;</u></a>	Defines small text	STF
<a href="#"><u>&lt;strike&gt;</u></a>	<b>Deprecated.</b> Defines strikethrough text	TF
<a href="#"><u>&lt;strong&gt;</u></a>	Defines strong text	STF
<a href="#"><u>&lt;sub&gt;</u></a>	Defines subscripted text	STF
<a href="#"><u>&lt;sup&gt;</u></a>	Defines superscripted text	STF
<a href="#"><u>&lt;tt&gt;</u></a>	Defines teletype text	STF
<a href="#"><u>&lt;u&gt;</u></a>	<b>Deprecated.</b> Defines underlined text	TF
<a href="#"><u>&lt;var&gt;</u></a>	Defines a variable part of a text	STF
<a href="#"><u>&lt;xmp&gt;</u></a>	<b>Deprecated.</b> Defines preformatted text	
<b>Forms</b>		
<a href="#"><u>&lt;form&gt;</u></a>	Defines an HTML form for user input	STF
<a href="#"><u>&lt;input /&gt;</u></a>	Defines an input control	STF
<a href="#"><u>&lt;textarea&gt;</u></a>	Defines a multi-line text input control	STF
<a href="#"><u>&lt;button&gt;</u></a>	Defines a push button	STF
<a href="#"><u>&lt;select&gt;</u></a>	Defines a select list (drop-down list)	STF
<a href="#"><u>&lt;optgroup&gt;</u></a>	Defines a group of related options in a select list	STF
<a href="#"><u>&lt;option&gt;</u></a>	Defines an option in a select list	STF
<a href="#"><u>&lt;label&gt;</u></a>	Defines a label for an input element	STF
<a href="#"><u>&lt;fieldset&gt;</u></a>	Defines a border around elements in a form	STF
<a href="#"><u>&lt;legend&gt;</u></a>	Defines a caption for a fieldset element	STF
<a href="#"><u>&lt;isindex&gt;</u></a>	<b>Deprecated.</b> Defines a searchable index related to a document	TF
<b>Frames</b>		
<a href="#"><u>&lt;frame /&gt;</u></a>	Defines a window (a frame) in a frameset	F
<a href="#"><u>&lt;frameset&gt;</u></a>	Defines a set of frames	F
<a href="#"><u>&lt;noframes&gt;</u></a>	Defines an alternate content for users that do not support frames	TF
<a href="#"><u>&lt;iframe&gt;</u></a>	Defines an inline frame	TF
<b>Images</b>		
<a href="#"><u>&lt;img /&gt;</u></a>	Defines an image	STF
<a href="#"><u>&lt;map&gt;</u></a>	Defines an image-map	STF
<a href="#"><u>&lt;area /&gt;</u></a>	Defines an area inside an image-map	STF
<b>Links</b>		
<a href="#"><u>&lt;a&gt;</u></a>	Defines an anchor	STF
<a href="#"><u>&lt;link /&gt;</u></a>	Defines the relationship between a document and an external resource	STF
<b>Lists</b>		
<a href="#"><u>&lt;ul&gt;</u></a>	Defines an unordered list	STF
<a href="#"><u>&lt;ol&gt;</u></a>	Defines an ordered list	STF

<a href="#"><u>&lt;li&gt;</u></a>	Defines a list item	STF
<a href="#"><u>&lt;dir&gt;</u></a>	<b>Deprecated.</b> Defines a directory list	TF
<a href="#"><u>&lt;dl&gt;</u></a>	Defines a definition list	STF
<a href="#"><u>&lt;dt&gt;</u></a>	Defines a term (an item) in a definition list	STF
<a href="#"><u>&lt;dd&gt;</u></a>	Defines a description of a term in a definition list	STF
<a href="#"><u>&lt;menu&gt;</u></a>	<b>Deprecated.</b> Defines a menu list	TF
<b>Tables</b>		
<a href="#"><u>&lt;table&gt;</u></a>	Defines a table	STF
<a href="#"><u>&lt;caption&gt;</u></a>	Defines a table caption	STF
<a href="#"><u>&lt;th&gt;</u></a>	Defines a header cell in a table	STF
<a href="#"><u>&lt;tr&gt;</u></a>	Defines a row in a table	STF
<a href="#"><u>&lt;td&gt;</u></a>	Defines a cell in a table	STF
<a href="#"><u>&lt;thead&gt;</u></a>	Groups the header content in a table	STF
<a href="#"><u>&lt;tbody&gt;</u></a>	Groups the body content in a table	STF
<a href="#"><u>&lt;tfoot&gt;</u></a>	Groups the footer content in a table	STF
<a href="#"><u>&lt;col /&gt;</u></a>	Defines attribute values for one or more columns in a table	STF
<a href="#"><u>&lt;colgroup&gt;</u></a>	Defines a group of columns in a table for formatting	STF
<b>Styles</b>		
<a href="#"><u>&lt;style&gt;</u></a>	Defines style information for a document	STF
<a href="#"><u>&lt;div&gt;</u></a>	Defines a section in a document	STF
<a href="#"><u>&lt;span&gt;</u></a>	Defines a section in a document	STF
<b>Meta Info</b>		
<a href="#"><u>&lt;head&gt;</u></a>	Defines information about the document	STF
<a href="#"><u>&lt;title&gt;</u></a>	Defines the document title	STF
<a href="#"><u>&lt;meta&gt;</u></a>	Defines metadata about an HTML document	STF
<a href="#"><u>&lt;base /&gt;</u></a>	Defines a default address or a default target for all links on a page	STF
<a href="#"><u>&lt;basefont /&gt;</u></a>	<b>Deprecated.</b> Defines a default font, color, or size for the text in a page	TF
<b>Programming</b>		
<a href="#"><u>&lt;script&gt;</u></a>	Defines a client-side script	STF
<a href="#"><u>&lt;noscript&gt;</u></a>	Defines an alternate content for users that do not support client-side scripts	STF
<a href="#"><u>&lt;applet&gt;</u></a>	<b>Deprecated.</b> Defines an embedded applet	TF
<a href="#"><u>&lt;object&gt;</u></a>	Defines an embedded object	STF
<a href="#"><u>&lt;param /&gt;</u></a>	Defines a parameter for an object	STF

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# HTML / XHTML Standard Attributes

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The attributes listed below are standard, and are supported by all HTML and XHTML tags, with a few exceptions.

## Core Attributes

Not valid in base, head, html, meta, param, script, style, and title elements.

Attribute	Value	Description
<a href="#">class</a>	<i>classname</i>	Specifies a classname for an element
<a href="#">id</a>	<i>id</i>	Specifies a unique id for an element
<a href="#">style</a>	<i>style_definition</i>	Specifies an inline style for an element
<a href="#">title</a>	<i>text</i>	Specifies extra information about an element

## Language Attributes

Not valid in base, br, frame, frameset, hr, iframe, param, and script elements.

Attribute	Value	Description
dir	ltr rtl	Specifies the text direction for the content in an element
lang	<i>language_code</i>	Specifies a language code for the content in an element. <a href="#">Language code reference</a>
xml:lang	<i>language_code</i>	Specifies a language code for the content in an element, in XHTML documents. <a href="#">Language code reference</a>

## Keyboard Attributes

Attribute	Value	Description
accesskey	<i>character</i>	Specifies a keyboard shortcut to access an element
tabindex	<i>number</i>	Specifies the tab order of an element

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# HTML / XHTML Standard Event Attributes

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## Standard Event Attributes

HTML 4 added the ability to let events trigger actions in a browser, like starting a JavaScript when a user clicks on an element.

To learn more about programming events, please visit our [JavaScript tutorial](#) and our [DHTML tutorial](#).

Below is the standard event attributes that can be inserted into HTML / XHTML elements to define event actions.

---

## <body> and <frameset> Events

The two attributes below can only be used in <body> or <frameset>:

Attribute	Value	Description
onload	<i>script</i>	Script to be run when a document load
onunload	<i>script</i>	Script to be run when a document unload

---

## Form Events

The attributes below can be used in form elements:

Attribute	Value	Description
onblur	<i>script</i>	Script to be run when an element loses focus
onchange	<i>script</i>	Script to be run when an element changes
onfocus	<i>script</i>	Script to be run when an element gets focus
onreset	<i>script</i>	Script to be run when a form is reset
onselect	<i>script</i>	Script to be run when an element is selected
onsubmit	<i>script</i>	Script to be run when a form is submitted

---

## Image Events

The attribute below can be used with the img element:

Attribute	Value	Description
onabort	<i>script</i>	Script to be run when loading of an image is interrupted

---

## Keyboard Events

Valid in all elements except base, bdo, br, frame, frameset, head, html, iframe, meta, param, script, style, and title.

Attribute	Value	Description
onkeydown	<i>script</i>	Script to be run when a key is pressed
onkeypress	<i>script</i>	Script to be run when a key is pressed and released
onkeyup	<i>script</i>	Script to be run when a key is released

---

## Mouse Events

Valid in all elements except base, bdo, br, frame, frameset, head, html, iframe, meta, param, script, style, and title.

Attribute	Value	Description
onclick	<i>script</i>	Script to be run on a mouse click
ondblclick	<i>script</i>	Script to be run on a mouse double-click
onmousedown	<i>script</i>	Script to be run when mouse button is pressed
onmousemove	<i>script</i>	Script to be run when mouse pointer moves
onmouseout	<i>script</i>	Script to be run when mouse pointer moves out of an element
onmouseover	<i>script</i>	Script to be run when mouse pointer moves over an element
onmouseup	<i>script</i>	Script to be run when mouse button is released

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# HTML Elements and Valid Doctypes

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## HTML/XHTML Elements and Valid DTDs

The following table lists all HTML/XHTML elements, and defines which [doctype declarations](#) (DTDs) each element appear in.

Tag	HTML 4.01 / XHTML 1.0			XHTML 1.1
	Transitional	Strict	Frameset	
<a href="#">&lt;a&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;abbr&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;acronym&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;address&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;applet&gt;</a>	Yes	No	Yes	No
<a href="#">&lt;area /&gt;</a>	Yes	Yes	Yes	No
<a href="#">&lt;b&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;base /&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;basefont /&gt;</a>	Yes	No	Yes	No
<a href="#">&lt;bdo&gt;</a>	Yes	Yes	Yes	No
<a href="#">&lt;big&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;blockquote&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;body&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;br /&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;button&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;caption&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;center&gt;</a>	Yes	No	Yes	No
<a href="#">&lt;cite&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;code&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;col /&gt;</a>	Yes	Yes	Yes	No
<a href="#">&lt;colgroup&gt;</a>	Yes	Yes	Yes	No
<a href="#">&lt;dd&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;del&gt;</a>	Yes	Yes	Yes	No
<a href="#">&lt;dfn&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;dir&gt;</a>	Yes	No	Yes	No
<a href="#">&lt;div&gt;</a>	Yes	Yes	Yes	Yes
<a href="#">&lt;dl&gt;</a>	Yes	Yes	Yes	Yes

<u>&lt;dt&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;em&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;fieldset&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;font&gt;</u>	Yes	No	Yes	No
<u>&lt;form&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;frame /&gt;</u>	No	No	Yes	No
<u>&lt;frameset&gt;</u>	No	No	Yes	No
<u>&lt;h1&gt; to &lt;h6&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;head&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;hr /&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;html&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;i&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;iframe&gt;</u>	Yes	No	Yes	No
<u>&lt;img /&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;input /&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;ins&gt;</u>	Yes	Yes	Yes	No
<u>&lt;isindex&gt;</u>	Yes	No	Yes	No
<u>&lt;kbd&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;label&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;legend&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;li&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;link /&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;map&gt;</u>	Yes	Yes	Yes	No
<u>&lt;menu&gt;</u>	Yes	No	Yes	No
<u>&lt;meta /&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;noframes&gt;</u>	Yes	No	Yes	No
<u>&lt;noscript&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;object&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;ol&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;optgroup&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;option&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;p&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;param /&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;pre&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;q&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;s&gt;</u>	Yes	No	Yes	No
<u>&lt;samp&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;script&gt;</u>	Yes	Yes	Yes	Yes
<u>&lt;select&gt;</u>	Yes	Yes	Yes	Yes

<a href="#"><u>&lt;small&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;span&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;strike&gt;</u></a>	Yes	No	Yes	No
<a href="#"><u>&lt;strong&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;style&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;sub&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;sup&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;table&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;tbody&gt;</u></a>	Yes	Yes	Yes	No
<a href="#"><u>&lt;td&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;textarea&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;tfoot&gt;</u></a>	Yes	Yes	Yes	No
<a href="#"><u>&lt;th&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;thead&gt;</u></a>	Yes	Yes	Yes	No
<a href="#"><u>&lt;title&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;tr&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;tt&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;u&gt;</u></a>	Yes	No	Yes	No
<a href="#"><u>&lt;ul&gt;</u></a>	Yes	Yes	Yes	Yes
<a href="#"><u>&lt;var&gt;</u></a>	Yes	Yes	Yes	Yes

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# HTML Color Names

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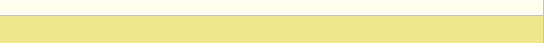
## Color Names Supported by All Browsers






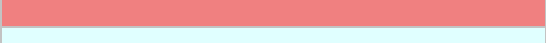
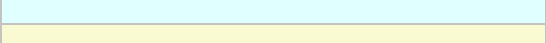


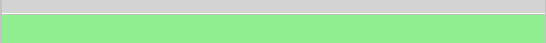



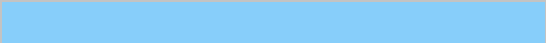





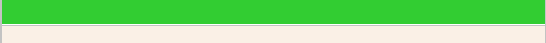






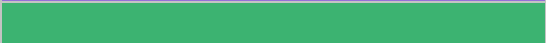





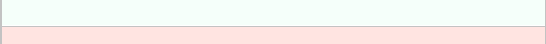
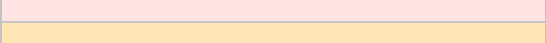





147 color names are defined in the HTML and CSS color specification (17 standard colors plus 130 more). The table below lists them all, along with their hexadecimal values.






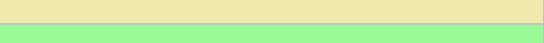
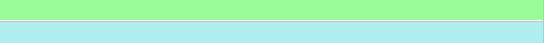

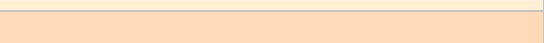



















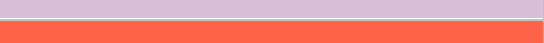

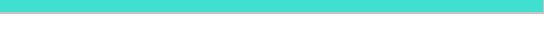


 **Tip:** The 17 standard colors are: aqua, black, blue, fuchsia, gray, grey, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.



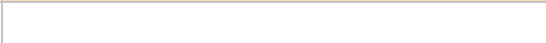



Click on a color name (or a hex value) to view the color as the background-color along with different text colors:

Color Name	HEX	Color	Shades	Mix
<a href="#">AliceBlue</a>	<a href="#">#F0F8FF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">AntiqueWhite</a>	<a href="#">#FAEBD7</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Aqua</a>	<a href="#">#00FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Aquamarine</a>	<a href="#">#7FFFD4</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Azure</a>	<a href="#">#F0FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Beige</a>	<a href="#">#F5F5DC</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Bisque</a>	<a href="#">#FFE4C4</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Black</a>	<a href="#">#000000</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BlanchedAlmond</a>	<a href="#">#FFEBCD</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Blue</a>	<a href="#">#0000FF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BlueViolet</a>	<a href="#">#8A2BE2</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Brown</a>	<a href="#">#A52A2A</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">BurlyWood</a>	<a href="#">#DEB887</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">CadetBlue</a>	<a href="#">#5F9EA0</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Chartreuse</a>	<a href="#">#7FFF00</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Chocolate</a>	<a href="#">#D2691E</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Coral</a>	<a href="#">#FF7F50</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">CornflowerBlue</a>	<a href="#">#6495ED</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Cornsilk</a>	<a href="#">#FFF8DC</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Crimson</a>	<a href="#">#DC143C</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Cyan</a>	<a href="#">#00FFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkBlue</a>	<a href="#">#00008B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkCyan</a>	<a href="#">#008B8B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">DarkGoldenRod</a>	<a href="#">#B8860B</a>		<a href="#">Shades</a>	<a href="#">Mix</a>

<u>DarkGray</u>	<u>#A9A9A9</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkGrey</u>	<u>#A9A9A9</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkGreen</u>	<u>#006400</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkKhaki</u>	<u>#BDB76B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkMagenta</u>	<u>#8B008B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkOliveGreen</u>	<u>#556B2F</u>		<u>Shades</u>	<u>Mix</u>
<u>Darkorange</u>	<u>#FF8C00</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkOrchid</u>	<u>#9932CC</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkRed</u>	<u>#8B0000</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSalmon</u>	<u>#E9967A</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSeaGreen</u>	<u>#8FBC8F</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSlateBlue</u>	<u>#483D8B</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSlateGray</u>	<u>#2F4F4F</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkSlateGrey</u>	<u>#2F4F4F</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkTurquoise</u>	<u>#00CED1</u>		<u>Shades</u>	<u>Mix</u>
<u>DarkViolet</u>	<u>#9400D3</u>		<u>Shades</u>	<u>Mix</u>
<u>DeepPink</u>	<u>#FF1493</u>		<u>Shades</u>	<u>Mix</u>
<u>DeepSkyBlue</u>	<u>#00BFFF</u>		<u>Shades</u>	<u>Mix</u>
<u>DimGray</u>	<u>#696969</u>		<u>Shades</u>	<u>Mix</u>
<u>DimGrey</u>	<u>#696969</u>		<u>Shades</u>	<u>Mix</u>
<u>DodgerBlue</u>	<u>#1E90FF</u>		<u>Shades</u>	<u>Mix</u>
<u>FireBrick</u>	<u>#B22222</u>		<u>Shades</u>	<u>Mix</u>
<u>FloralWhite</u>	<u>#FFFAF0</u>		<u>Shades</u>	<u>Mix</u>
<u>ForestGreen</u>	<u>#228B22</u>		<u>Shades</u>	<u>Mix</u>
<u>Fuchsia</u>	<u>#FF00FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Gainsboro</u>	<u>#DCDCDC</u>		<u>Shades</u>	<u>Mix</u>
<u>GhostWhite</u>	<u>#F8F8FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Gold</u>	<u>#FFD700</u>		<u>Shades</u>	<u>Mix</u>
<u>GoldenRod</u>	<u>#DAA520</u>		<u>Shades</u>	<u>Mix</u>
<u>Gray</u>	<u>#808080</u>		<u>Shades</u>	<u>Mix</u>
<u>Grey</u>	<u>#808080</u>		<u>Shades</u>	<u>Mix</u>
<u>Green</u>	<u>#008000</u>		<u>Shades</u>	<u>Mix</u>
<u>GreenYellow</u>	<u>#ADFF2F</u>		<u>Shades</u>	<u>Mix</u>
<u>HoneyDew</u>	<u>#F0FFF0</u>		<u>Shades</u>	<u>Mix</u>
<u>HotPink</u>	<u>#FF69B4</u>		<u>Shades</u>	<u>Mix</u>
<u>IndianRed</u>	<u>#CD5C5C</u>		<u>Shades</u>	<u>Mix</u>
<u>Indigo</u>	<u>#4B0082</u>		<u>Shades</u>	<u>Mix</u>
<u>Ivory</u>	<u>#FFFFFF</u>		<u>Shades</u>	<u>Mix</u>
<u>Khaki</u>	<u>#F0E68C</u>		<u>Shades</u>	<u>Mix</u>

<u>Lavender</u>	<u>#E6E6FA</u>		<u>Shades</u>	<u>Mix</u>
<u>LavenderBlush</u>	<u>#FFF0F5</u>		<u>Shades</u>	<u>Mix</u>
<u>LawnGreen</u>	<u>#7CFC00</u>		<u>Shades</u>	<u>Mix</u>
<u>LemonChiffon</u>	<u>#FFFACD</u>		<u>Shades</u>	<u>Mix</u>
<u>LightBlue</u>	<u>#ADD8E6</u>		<u>Shades</u>	<u>Mix</u>
<u>LightCoral</u>	<u>#F08080</u>		<u>Shades</u>	<u>Mix</u>
<u>LightCyan</u>	<u>#E0FFFF</u>		<u>Shades</u>	<u>Mix</u>
<u>LightGoldenRodYellow</u>	<u>#FAFAD2</u>		<u>Shades</u>	<u>Mix</u>
<u>LightGray</u>	<u>#D3D3D3</u>		<u>Shades</u>	<u>Mix</u>
<u>LightGrey</u>	<u>#D3D3D3</u>		<u>Shades</u>	<u>Mix</u>
<u>LightGreen</u>	<u>#90EE90</u>		<u>Shades</u>	<u>Mix</u>
<u>LightPink</u>	<u>#FFB6C1</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSalmon</u>	<u>#FFA07A</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSeaGreen</u>	<u>#20B2AA</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSkyBlue</u>	<u>#87CEFA</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSlateGray</u>	<u>#778899</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSlateGrey</u>	<u>#778899</u>		<u>Shades</u>	<u>Mix</u>
<u>LightSteelBlue</u>	<u>#B0C4DE</u>		<u>Shades</u>	<u>Mix</u>
<u>LightYellow</u>	<u>#FFFFE0</u>		<u>Shades</u>	<u>Mix</u>
<u>Lime</u>	<u>#00FF00</u>		<u>Shades</u>	<u>Mix</u>
<u>LimeGreen</u>	<u>#32CD32</u>		<u>Shades</u>	<u>Mix</u>
<u>Linen</u>	<u>#FAF0E6</u>		<u>Shades</u>	<u>Mix</u>
<u>Magenta</u>	<u>#FF00FF</u>		<u>Shades</u>	<u>Mix</u>
<u>Maroon</u>	<u>#800000</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumAquaMarine</u>	<u>#66CDAA</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumBlue</u>	<u>#0000CD</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumOrchid</u>	<u>#BA55D3</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumPurple</u>	<u>#9370D8</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumSeaGreen</u>	<u>#3CB371</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumSlateBlue</u>	<u>#7B68EE</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumSpringGreen</u>	<u>#00FA9A</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumTurquoise</u>	<u>#48D1CC</u>		<u>Shades</u>	<u>Mix</u>
<u>MediumVioletRed</u>	<u>#C71585</u>		<u>Shades</u>	<u>Mix</u>
<u>MidnightBlue</u>	<u>#191970</u>		<u>Shades</u>	<u>Mix</u>
<u>MintCream</u>	<u>#F5FFFA</u>		<u>Shades</u>	<u>Mix</u>
<u>MistyRose</u>	<u>#FFE4E1</u>		<u>Shades</u>	<u>Mix</u>
<u>Moccasin</u>	<u>#FFE4B5</u>		<u>Shades</u>	<u>Mix</u>
<u>NavajoWhite</u>	<u>#FFDEAD</u>		<u>Shades</u>	<u>Mix</u>
<u>Navy</u>	<u>#000080</u>		<u>Shades</u>	<u>Mix</u>

<u>OldLace</u>	<u>#FDF5E6</u>		<u>Shades</u>	<u>Mix</u>
<u>Olive</u>	<u>#808000</u>		<u>Shades</u>	<u>Mix</u>
<u>OliveDrab</u>	<u>#6B8E23</u>		<u>Shades</u>	<u>Mix</u>
<u>Orange</u>	<u>#FFA500</u>		<u>Shades</u>	<u>Mix</u>
<u>OrangeRed</u>	<u>#FF4500</u>		<u>Shades</u>	<u>Mix</u>
<u>Orchid</u>	<u>#DA70D6</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleGoldenRod</u>	<u>#EEE8AA</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleGreen</u>	<u>#98FB98</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleTurquoise</u>	<u>#AFEEEE</u>		<u>Shades</u>	<u>Mix</u>
<u>PaleVioletRed</u>	<u>#D87093</u>		<u>Shades</u>	<u>Mix</u>
<u>PapayaWhip</u>	<u>#FFEFD5</u>		<u>Shades</u>	<u>Mix</u>
<u>PeachPuff</u>	<u>#FFDAB9</u>		<u>Shades</u>	<u>Mix</u>
<u>Peru</u>	<u>#CD853F</u>		<u>Shades</u>	<u>Mix</u>
<u>Pink</u>	<u>#FFC0CB</u>		<u>Shades</u>	<u>Mix</u>
<u>Plum</u>	<u>#DDA0DD</u>		<u>Shades</u>	<u>Mix</u>
<u>PowderBlue</u>	<u>#B0E0E6</u>		<u>Shades</u>	<u>Mix</u>
<u>Purple</u>	<u>#800080</u>		<u>Shades</u>	<u>Mix</u>
<u>Red</u>	<u>#FF0000</u>		<u>Shades</u>	<u>Mix</u>
<u>RosyBrown</u>	<u>#BC8F8F</u>		<u>Shades</u>	<u>Mix</u>
<u>RoyalBlue</u>	<u>#4169E1</u>		<u>Shades</u>	<u>Mix</u>
<u>SaddleBrown</u>	<u>#8B4513</u>		<u>Shades</u>	<u>Mix</u>
<u>Salmon</u>	<u>#FA8072</u>		<u>Shades</u>	<u>Mix</u>
<u>SandyBrown</u>	<u>#F4A460</u>		<u>Shades</u>	<u>Mix</u>
<u>SeaGreen</u>	<u>#2E8B57</u>		<u>Shades</u>	<u>Mix</u>
<u>SeaShell</u>	<u>#FFF5EE</u>		<u>Shades</u>	<u>Mix</u>
<u>Sienna</u>	<u>#A0522D</u>		<u>Shades</u>	<u>Mix</u>
<u>Silver</u>	<u>#C0C0C0</u>		<u>Shades</u>	<u>Mix</u>
<u>SkyBlue</u>	<u>#87CEEB</u>		<u>Shades</u>	<u>Mix</u>
<u>SlateBlue</u>	<u>#6A5ACD</u>		<u>Shades</u>	<u>Mix</u>
<u>SlateGray</u>	<u>#708090</u>		<u>Shades</u>	<u>Mix</u>
<u>SlateGrey</u>	<u>#708090</u>		<u>Shades</u>	<u>Mix</u>
<u>Snow</u>	<u>#FFFAFA</u>		<u>Shades</u>	<u>Mix</u>
<u>SpringGreen</u>	<u>#00FF7F</u>		<u>Shades</u>	<u>Mix</u>
<u>SteelBlue</u>	<u>#4682B4</u>		<u>Shades</u>	<u>Mix</u>
<u>Tan</u>	<u>#D2B48C</u>		<u>Shades</u>	<u>Mix</u>
<u>Teal</u>	<u>#008080</u>		<u>Shades</u>	<u>Mix</u>
<u>Thistle</u>	<u>#D8BFD8</u>		<u>Shades</u>	<u>Mix</u>
<u>Tomato</u>	<u>#FF6347</u>		<u>Shades</u>	<u>Mix</u>
<u>Turquoise</u>	<u>#40E0D0</u>		<u>Shades</u>	<u>Mix</u>

<a href="#">Violet</a>	<a href="#">#EE82EE</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Wheat</a>	<a href="#">#F5DEB3</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">White</a>	<a href="#">#FFFFFF</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">WhiteSmoke</a>	<a href="#">#F5F5F5</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">Yellow</a>	<a href="#">#FFFF00</a>		<a href="#">Shades</a>	<a href="#">Mix</a>
<a href="#">YellowGreen</a>	<a href="#">#9ACD32</a>		<a href="#">Shades</a>	<a href="#">Mix</a>

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# HTML Color Picker

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Get darker/lighter shades of any color.

Select color:

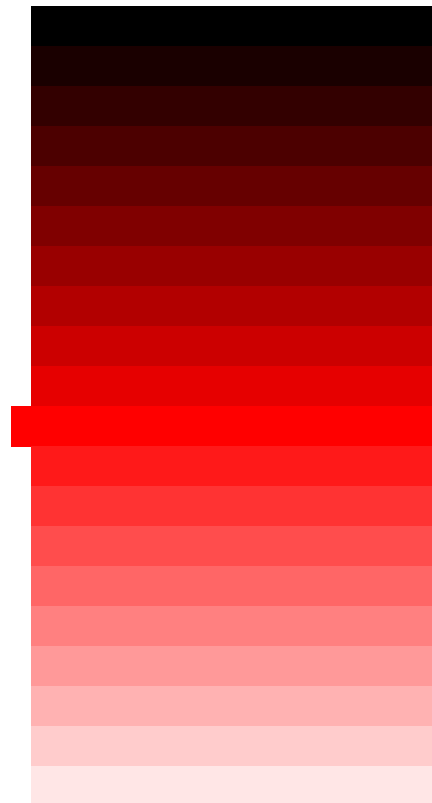


#FF0000

Selected color:

#FF0000

Darker/lighter shades:



Hex values:

#000000  
#1A0000  
#330000  
#4C0000  
#660000  
#800000  
#990000  
#B20000  
#CC0000  
#E60000  
#FF0000  
#FF1919  
#FF3333  
#FF4D4D  
#FF6666  
#FF8080  
#FF9999  
#FFB2B2  
#FFCCCC  
#FFE6E6  
#FFFFFF

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# HTML Character Sets

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## HTML Character Sets

To display an HTML page correctly, the browser must know what character-set to use.

The character-set for the early world wide web was ASCII. ASCII supports the numbers from 0-9, the uppercase and lowercase English alphabet, and some special characters.

[Complete ASCII reference.](#)

Since many countries use characters which are not a part of ASCII, the default character-set for modern browsers is ISO-8859-1.

[Complete ISO-8859-1 reference.](#)

If a web page uses a different character-set than ISO-8859-1, it should be specified in the <meta> tag.

[Try it yourself](#)

---

## ISO Character Sets

It is the International Standards Organization (ISO) that defines the standard character-sets for different alphabets/languages.

The different character-sets being used around the world are listed below:

Character set	Description	Covers
ISO-8859-1	Latin alphabet part 1	North America, Western Europe, Latin America, the Caribbean, Canada, Africa
ISO-8859-2	Latin alphabet part 2	Eastern Europe
ISO-8859-3	Latin alphabet part 3	SE Europe, Esperanto, miscellaneous others
ISO-8859-4	Latin alphabet part 4	Scandinavia/Baltics (and others not in ISO-8859-1)
ISO-8859-5	Latin/Cyrillic part 5	The languages that are using a Cyrillic alphabet such as Bulgarian, Belarusian, Russian and Macedonian
ISO-8859-6	Latin/Arabic part 6	The languages that are using the Arabic alphabet
ISO-8859-7	Latin/Greek part 7	The modern Greek language as well as mathematical symbols derived from the Greek

ISO-8859-8	Latin/Hebrew part 8	The languages that are using the Hebrew alphabet
ISO-8859-9	Latin 5 part 9	The Turkish language. Same as ISO-8859-1 except Turkish characters replace Icelandic ones
ISO-8859-10	Latin 6 Lappish, Nordic, Eskimo	The Nordic languages
ISO-8859-15	Latin 9 (aka Latin 0)	Similar to ISO 8859-1 but replaces some less common symbols with the euro sign and some other missing characters
ISO-2022-JP	Latin/Japanese part 1	The Japanese language
ISO-2022-JP-2	Latin/Japanese part 2	The Japanese language
ISO-2022-KR	Latin/Korean part 1	The Korean language

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## The Unicode Standard

Because the character-sets listed above are limited in size, and are not compatible in multilingual environments, the Unicode Consortium developed the Unicode Standard.

The Unicode Standard covers all the characters, punctuations, and symbols in the world.

Unicode enables processing, storage and interchange of text data no matter what the platform, no matter what the program, no matter what the language.

---

## The Unicode Consortium

The Unicode Consortium develops the Unicode Standard. Their goal is to replace the existing character-sets with its standard Unicode Transformation Format (UTF).

The Unicode Standard has become a success and is implemented in XML, Java, ECMAScript (JavaScript), LDAP, CORBA 3.0, WML, etc. The Unicode standard is also supported in many operating systems and all modern browsers.

The Unicode Consortium cooperates with the leading standards development organizations, like ISO, W3C, and ECMA.

Unicode can be implemented by different character-sets. The most commonly used encodings are UTF-8 and UTF-16:

Character-set	Description
UTF-8	A character in UTF8 can be from 1 to 4 bytes long. UTF-8 can represent any character in the Unicode standard. UTF-8 is backwards compatible with ASCII. UTF-8 is the preferred encoding for e-mail and web pages
UTF-16	16-bit Unicode Transformation Format is a variable-length character encoding for Unicode, capable of encoding the entire Unicode repertoire. UTF-16 is used in major operating systems and environments, like Microsoft Windows 2000/XP/2003/Vista/CE and the Java and .NET byte code environments

**Tip:** The first 256 characters of Unicode character-sets correspond to the 256 characters of ISO-8859-1.

**Tip:** All HTML 4 processors already support UTF-8, and all XHTML and XML processors support UTF-8 and UTF-16!

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# HTML **ASCII** Reference

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The ASCII character-set is used to send information between computers on the Internet.

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## The ASCII Character Set

ASCII stands for the "American Standard Code for Information Interchange". It was designed in the early 60's, as a standard character-set for computers and hardware devices like teleprinters and tapedrives.

ASCII is a 7-bit character set containing 128 characters.

It contains the numbers from 0-9, the uppercase and lowercase English letters from A to Z, and some special characters.

The character-sets used in modern computers, HTML, and Internet are all based on ASCII.

The following table lists the 128 ASCII characters and their equivalent HTML entity codes.

---

## ASCII Printable Characters

ASCII Character	HTML Entity Code	Description
	&#32;	space
!	&#33;	exclamation mark
"	&#34;	quotation mark
#	&#35;	number sign
\$	&#36;	dollar sign
%	&#37;	percent sign
&	&#38;	ampersand
'	&#39;	apostrophe
(	&#40;	left parenthesis
)	&#41;	right parenthesis
*	&#42;	asterisk
+	&#43;	plus sign
,	&#44;	comma
-	&#45;	hyphen

.	&#46;	period
/	&#47;	slash
0	&#48;	digit 0
1	&#49;	digit 1
2	&#50;	digit 2
3	&#51;	digit 3
4	&#52;	digit 4
5	&#53;	digit 5
6	&#54;	digit 6
7	&#55;	digit 7
8	&#56;	digit 8
9	&#57;	digit 9
:	&#58;	colon
;	&#59;	semicolon
<	&#60;	less-than
=	&#61;	equals-to
>	&#62;	greater-than
?	&#63;	question mark
@	&#64;	at sign
A	&#65;	uppercase A
B	&#66;	uppercase B
C	&#67;	uppercase C
D	&#68;	uppercase D
E	&#69;	uppercase E
F	&#70;	uppercase F
G	&#71;	uppercase G
H	&#72;	uppercase H
I	&#73;	uppercase I
J	&#74;	uppercase J
K	&#75;	uppercase K
L	&#76;	uppercase L
M	&#77;	uppercase M
N	&#78;	uppercase N
O	&#79;	uppercase O
P	&#80;	uppercase P
Q	&#81;	uppercase Q
R	&#82;	uppercase R
S	&#83;	uppercase S
T	&#84;	uppercase T

U	&#85;	uppercase U
V	&#86;	uppercase V
W	&#87;	uppercase W
X	&#88;	uppercase X
Y	&#89;	uppercase Y
Z	&#90;	uppercase Z
[	&#91;	left square bracket
\	&#92;	backslash
]	&#93;	right square bracket
^	&#94;	caret
_	&#95;	underscore
`	&#96;	grave accent
a	&#97;	lowercase a
b	&#98;	lowercase b
c	&#99;	lowercase c
d	&#100;	lowercase d
e	&#101;	lowercase e
f	&#102;	lowercase f
g	&#103;	lowercase g
h	&#104;	lowercase h
i	&#105;	lowercase i
j	&#106;	lowercase j
k	&#107;	lowercase k
l	&#108;	lowercase l
m	&#109;	lowercase m
n	&#110;	lowercase n
o	&#111;	lowercase o
p	&#112;	lowercase p
q	&#113;	lowercase q
r	&#114;	lowercase r
s	&#115;	lowercase s
t	&#116;	lowercase t
u	&#117;	lowercase u
v	&#118;	lowercase v
w	&#119;	lowercase w
x	&#120;	lowercase x
y	&#121;	lowercase y
z	&#122;	lowercase z
{	&#123;	left curly brace

	&#124;	vertical bar
}	&#125;	right curly brace
~	&#126;	tilde

## ASCII Device Control Characters

The ASCII device control characters were originally designed to control hardware devices.

Control characters have nothing to do inside an HTML document.

ASCII Character	HTML Entity Code	Description
NUL	&#00;	null character
SOH	&#01;	start of header
STX	&#02;	start of text
ETX	&#03;	end of text
EOT	&#04;	end of transmission
ENQ	&#05;	enquiry
ACK	&#06;	acknowledge
BEL	&#07;	bell (ring)
BS	&#08;	backspace
HT	&#09;	horizontal tab
LF	&#10;	line feed
VT	&#11;	vertical tab
FF	&#12;	form feed
CR	&#13;	carriage return
SO	&#14;	shift out
SI	&#15;	shift in
DLE	&#16;	data link escape
DC1	&#17;	device control 1
DC2	&#18;	device control 2
DC3	&#19;	device control 3
DC4	&#20;	device control 4
NAK	&#21;	negative acknowledge
SYN	&#22;	synchronize
ETB	&#23;	end transmission block
CAN	&#24;	cancel
EM	&#25;	end of medium
SUB	&#26;	substitute
ESC	&#27;	escape

FS	&#28;	file separator
GS	&#29;	group separator
RS	&#30;	record separator
US	&#31;	unit separator
DEL	&#127;	delete (rubout)

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# HTML ISO-8859-1 Reference

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Modern browsers supports several character-sets:

- [ASCII character set](#)
- [Standard ISO character sets](#)
- [Mathematical symbols, Greek letters, and other symbols](#)

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## ISO-8859-1

ISO-8859-1 is the default character set in most browsers.

The first 128 characters of ISO-8859-1 is the original ASCII character-set (the numbers from 0-9, the uppercase and lowercase English alphabet, and some special characters).

The higher part of ISO-8859-1 (codes from 160-255) contains the characters used in Western European countries and some commonly used special characters.

Entities are used to implement reserved characters or to express characters that cannot easily be entered with the keyboard.

---

## Reserved Characters in HTML

Some characters are reserved in HTML and XHTML. For example, you cannot use the greater than or less than signs within your text because the browser could mistake them for markup.

HTML and XHTML processors must support the five special characters listed in the table below:

Character	Entity Number	Entity Name	Description
"	&#34;	&quot;	quotation mark
'	&#39;	&apos; (does not work in IE)	apostrophe
&	&#38;	&amp;	ampersand
<	&#60;	&lt;	less-than
>	&#62;	&gt;	greater-than

**Note:** Entity names are case sensitive!

---

## ISO 8859-1 Symbols

Character	Entity Number	Entity Name	Description
	&#160;	&nbsp;	non-breaking space
¡	&#161;	&iexcl;	inverted exclamation mark
¢	&#162;	&cent;	cent
£	&#163;	&pound;	pound
¤	&#164;	&curren;	currency
¥	&#165;	&yen;	yen
	&#166;	&brvbar;	broken vertical bar
§	&#167;	&sect;	section
¨	&#168;	&uml;	spacing diaeresis
©	&#169;	&copy;	copyright
ª	&#170;	&ordf;	feminine ordinal indicator
«	&#171;	&laquo;	angle quotation mark (left)
¬	&#172;	&not;	negation
	&#173;	&shy;	soft hyphen
®	&#174;	&reg;	registered trademark
—	&#175;	&macr;	spacing macron
°	&#176;	&deg;	degree
±	&#177;	&plusmn;	plus-or-minus
²	&#178;	&sup2;	superscript 2
³	&#179;	&sup3;	superscript 3
´	&#180;	&acute;	spacing acute
µ	&#181;	&micro;	micro
¶	&#182;	&para;	paragraph
·	&#183;	&middot;	middle dot
¸	&#184;	&cedil;	spacing cedilla
¹	&#185;	&sup1;	superscript 1
º	&#186;	&ordm;	masculine ordinal indicator
»	&#187;	&raquo;	angle quotation mark (right)
¼	&#188;	&frac14;	fraction 1/4
½	&#189;	&frac12;	fraction 1/2
¾	&#190;	&frac34;	fraction 3/4
¿	&#191;	&iquest;	inverted question mark
×	&#215;	&times;	multiplication
÷	&#247;	&divide;	division

## ISO 8859-1 Characters

Character	Entity Number	Entity Name	Description
À	&#192;	&Agrave;	capital a, grave accent
Á	&#193;	&Aacute;	capital a, acute accent
Â	&#194;	&Acirc;	capital a, circumflex accent
Ã	&#195;	&Atilde;	capital a, tilde
Ä	&#196;	&Auml;	capital a, umlaut mark
Å	&#197;	&Aring;	capital a, ring
Æ	&#198;	&AElig;	capital ae
Ç	&#199;	&Ccedil;	capital c, cedilla
È	&#200;	&Egrave;	capital e, grave accent
É	&#201;	&Eacute;	capital e, acute accent
Ê	&#202;	&Ecirc;	capital e, circumflex accent
Ë	&#203;	&Euml;	capital e, umlaut mark
Ì	&#204;	&Igrave;	capital i, grave accent
Í	&#205;	&Iacute;	capital i, acute accent
Î	&#206;	&Icirc;	capital i, circumflex accent
Ï	&#207;	&Iuml;	capital i, umlaut mark
Ð	&#208;	&ETH;	capital eth, Icelandic
Ñ	&#209;	&Ntilde;	capital n, tilde
Ò	&#210;	&Ograve;	capital o, grave accent
Ó	&#211;	&Oacute;	capital o, acute accent
Ô	&#212;	&Ocirc;	capital o, circumflex accent
Õ	&#213;	&Otilde;	capital o, tilde
Ö	&#214;	&Ouml;	capital o, umlaut mark
Ø	&#216;	&Oslash;	capital o, slash
Ù	&#217;	&Ugrave;	capital u, grave accent
Ú	&#218;	&Uacute;	capital u, acute accent
Û	&#219;	&Ucirc;	capital u, circumflex accent
Ü	&#220;	&Uuml;	capital u, umlaut mark
Ý	&#221;	&Yacute;	capital y, acute accent
Þ	&#222;	&THORN;	capital THORN, Icelandic
ß	&#223;	&szlig;	small sharp s, German
à	&#224;	&agrave;	small a, grave accent
á	&#225;	&aacute;	small a, acute accent
â	&#226;	&acirc;	small a, circumflex accent
ã	&#227;	&atilde;	small a, tilde
ä	&#228;	&auml;	small a, umlaut mark
å	&#229;	&aring;	small a, ring

æ	&#230;	&aelig;	small ae
ç	&#231;	&ccedil;	small c, cedilla
è	&#232;	&egrave;	small e, grave accent
é	&#233;	&eacute;	small e, acute accent
ê	&#234;	&ecirc;	small e, circumflex accent
ë	&#235;	&euml;	small e, umlaut mark
ì	&#236;	&igrave;	small i, grave accent
í	&#237;	&iacute;	small i, acute accent
î	&#238;	&icirc;	small i, circumflex accent
ï	&#239;	&iuml;	small i, umlaut mark
ð	&#240;	&eth;	small eth, Icelandic
ñ	&#241;	&ntilde;	small n, tilde
ò	&#242;	&ograve;	small o, grave accent
ó	&#243;	&oacute;	small o, acute accent
ô	&#244;	&ocirc;	small o, circumflex accent
õ	&#245;	&otilde;	small o, tilde
ö	&#246;	&ouml;	small o, umlaut mark
ø	&#248;	&oslash;	small o, slash
ù	&#249;	&ugrave;	small u, grave accent
ú	&#250;	&uacute;	small u, acute accent
û	&#251;	&ucirc;	small u, circumflex accent
ü	&#252;	&uuml;	small u, umlaut mark
ý	&#253;	&yacute;	small y, acute accent
þ	&#254;	&thorn;	small thorn, Icelandic
ÿ	&#255;	&yuml;	small y, umlaut mark

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# HTML Symbol Entities Reference

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## HTML Symbol Entities

This entity reference includes mathematical symbols, Greek characters, various arrows, technical symbols and shapes.

**Note:** Entity names are case sensitive.

### Math Symbols Supported by HTML

Character	Entity Number	Entity Name	Description
∀	&#8704;	&forall;	for all
∂	&#8706;	&part;	part
∃	&#8707;	&exist;	exists
∅	&#8709;	&empty;	empty
∇	&#8711;	&nabla;	nabla
∈	&#8712;	&isin;	isin
∉	&#8713;	&notin;	notin
∋	&#8715;	&ni;	ni
∏	&#8719;	&prod;	prod
∑	&#8721;	&sum;	sum
−	&#8722;	&minus;	minus
*	&#8727;	&lowast;	lowast
√	&#8730;	&radic;	square root
∝	&#8733;	&prop;	proportional to
∞	&#8734;	&infin;	infinity
∠	&#8736;	&ang;	angle
∧	&#8743;	&and;	and
∨	&#8744;	&or;	or
∩	&#8745;	&cap;	cap
∪	&#8746;	&cup;	cup
∫	&#8747;	&int;	integral
∴	&#8756;	&there4;	therefore
~	&#8764;	&sim;	similar to
≅	&#8773;	&cong;	congruent to

≈	&#8776;	&asmp;	almost equal
≠	&#8800;	&ne;	not equal
≡	&#8801;	&equiv;	equivalent
≤	&#8804;	&le;	less or equal
≥	&#8805;	&ge;	greater or equal
⊂	&#8834;	&sub;	subset of
⊃	&#8835;	&sup;	superset of
⊄	&#8836;	&nsub;	not subset of
⊆	&#8838;	&sube;	subset or equal
⊇	&#8839;	&supe;	superset or equal
⊕	&#8853;	&oplus;	circled plus
⊗	&#8855;	&otimes;	circled times
⊥	&#8869;	&perp;	perpendicular
·	&#8901;	&sdot;	dot operator

## Greek Letters Supported by HTML

Character	Entity Number	Entity Name	Description
Α	&#913;	&Alpha;	Alpha
Β	&#914;	&Beta;	Beta
Γ	&#915;	&Gamma;	Gamma
Δ	&#916;	&Delta;	Delta
Ε	&#917;	&Epsilon;	Epsilon
Ζ	&#918;	&Zeta;	Zeta
Η	&#919;	&Eta;	Eta
Θ	&#920;	&Theta;	Theta
Ι	&#921;	&Iota;	Iota
Κ	&#922;	&Kappa;	Kappa
Λ	&#923;	&Lambda;	Lambda
Μ	&#924;	&Mu;	Mu
Ν	&#925;	&Nu;	Nu
Ξ	&#926;	&Xi;	Xi
Ο	&#927;	&Omicron;	Omicron
Π	&#928;	&Pi;	Pi
Ρ	&#929;	&Rho;	Rho
	undefined		Sigmaf
Σ	&#931;	&Sigma;	Sigma
Τ	&#932;	&Tau;	Tau
Υ	&#933;	&Upsilon;	Upsilon
Φ	&#934;	&Phi;	Phi

Χ	&#935;	&Chi;	Chi
Ψ	&#936;	&Psi;	Psi
Ω	&#937;	&Omega;	Omega
α	&#945;	&alpha;	alpha
β	&#946;	&beta;	beta
γ	&#947;	&gamma;	gamma
δ	&#948;	&delta;	delta
ε	&#949;	&epsilon;	epsilon
ζ	&#950;	&zeta;	zeta
η	&#951;	&eta;	eta
θ	&#952;	&theta;	theta
ι	&#953;	&iota;	iota
κ	&#954;	&kappa;	kappa
λ	&#955;	&lambda;	lambda
μ	&#956;	&mu;	mu
ν	&#957;	&nu;	nu
ξ	&#958;	&xi;	xi
ο	&#959;	&omicron;	omicron
π	&#960;	&pi;	pi
ρ	&#961;	&rho;	rho
ς	&#962;	&sigmaf;	sigmaf
σ	&#963;	&sigma;	sigma
τ	&#964;	&tau;	tau
υ	&#965;	&upsilon;	upsilon
φ	&#966;	&phi;	phi
χ	&#967;	&chi;	chi
ψ	&#968;	&psi;	psi
ω	&#969;	&omega;	omega
ϑ	&#977;	&thetasym;	theta symbol
Υ	&#978;	&upsih;	upsilon symbol
ϖ	&#982;	&piv;	pi symbol

## Other Entities Supported by HTML

Character	Entity Number	Entity Name	Description
Œ	&#338;	&OElig;	capital ligature OE
œ	&#339;	&oelig;	small ligature oe
Š	&#352;	&Scaron;	capital S with caron

š	&#353;	&scaron;	small S with caron
ÿ	&#376;	&Yuml;	capital Y with diaeresis
f	&#402;	&fnof;	f with hook
^	&#710;	&circ;	modifier letter circumflex accent
~	&#732;	&tilde;	small tilde
	&#8194;	&ensp;	en space
	&#8195;	&emsp;	em space
	&#8201;	&thinsp;	thin space
	&#8204;	&zwnj;	zero width non-joiner
	&#8205;	&zwj;	zero width joiner
	&#8206;	&lrm;	left-to-right mark
	&#8207;	&rlm;	right-to-left mark
–	&#8211;	&ndash;	en dash
—	&#8212;	&mdash;	em dash
`	&#8216;	&lquo;	left single quotation mark
'	&#8217;	&rsquo;	right single quotation mark
,	&#8218;	&sbquo;	single low-9 quotation mark
“	&#8220;	&lquo;	left double quotation mark
”	&#8221;	&rdquo;	right double quotation mark
„	&#8222;	&bdquo;	double low-9 quotation mark
†	&#8224;	&dagger;	dagger
‡	&#8225;	&Dagger;	double dagger
•	&#8226;	&bull;	bullet
...	&#8230;	&hellip;	horizontal ellipsis
‰	&#8240;	&permil;	per mille
'	&#8242;	&prime;	minutes
”	&#8243;	&Prime;	seconds
<	&#8249;	&lsaquo;	single left angle quotation
>	&#8250;	&rsaquo;	single right angle quotation
—	&#8254;	&oline;	overline
€	&#8364;	&euro;	euro
™	&#8482;	&trade;	trademark
←	&#8592;	&larr;	left arrow
↑	&#8593;	&uarr;	up arrow
→	&#8594;	&rarr;	right arrow
↓	&#8595;	&darr;	down arrow
↔	&#8596;	&harr;	left right arrow
↵	&#8629;	&crarr;	carriage return arrow
⌈	&#8968;	&lceil;	left ceiling

] ]	&#8969;	&rceil;	right ceiling
[ [	&#8970;	&lfloor;	left floor
] ]	&#8971;	&rfloor;	right floor
◇	&#9674;	&loz;	lozenge
♠	&#9824;	&spades;	spade
♣	&#9827;	&clubs;	club
♥	&#9829;	&hearts;	heart
♦	&#9830;	&diams;	diamond

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# HTML URL Encoding Reference

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URL encoding converts characters into a format that can be transmitted over the Internet.

---

## URL - Uniform Resource Locator

Web browsers request pages from web servers by using a URL.

The URL is the address of a web page, like: **http://www.w3schools.com.**

---

## URL Encoding

URLs can only be sent over the Internet using the [ASCII character-set](#).

Since URLs often contain characters outside the ASCII set, the URL has to be converted into a valid ASCII format.

URL encoding replaces unsafe ASCII characters with a "%" followed by two hexadecimal digits.

URLs cannot contain spaces. URL encoding normally replaces a space with a + sign.

---

## Try It Yourself

If you click the "Submit" button below, the browser will URL encode the input before it is sent to the server. A page at the server will display the received input.

<input type="text" value="Hello Günter"/>	<input type="submit" value="Submit"/>
---	---------------------------------------

Try some other input and click Submit again.

---

## URL Encoding Functions

In JavaScript, PHP, and ASP there are functions that can be used to URL encode a string.

In JavaScript you can use the `encodeURIComponent()` function. PHP has the `rawurlencode()` function and ASP has the `Server.URLEncode()` function.

Click the "URL Encode" button to see how the JavaScript function encodes the text.

Hello Günter

**Note:** The JavaScript function encodes space as `%20`.

---

## URL Encoding Reference

ASCII Character	URL-encoding
space	%20
!	%21
"	%22
#	%23
\$	%24
%	%25
&	%26
'	%27
(	%28
)	%29
*	%2A
+	%2B
,	%2C
-	%2D
.	%2E
/	%2F
0	%30
1	%31
2	%32
3	%33
4	%34
5	%35
6	%36
7	%37
8	%38
9	%39
:	%3A
;	%3B

<	%3C
=	%3D
>	%3E
?	%3F
@	%40
A	%41
B	%42
C	%43
D	%44
E	%45
F	%46
G	%47
H	%48
I	%49
J	%4A
K	%4B
L	%4C
M	%4D
N	%4E
O	%4F
P	%50
Q	%51
R	%52
S	%53
T	%54
U	%55
V	%56
W	%57
X	%58
Y	%59
Z	%5A
[	%5B
\	%5C
]	%5D
^	%5E
_	%5F
`	%60
a	%61
b	%62

c	%63
d	%64
e	%65
f	%66
g	%67
h	%68
i	%69
j	%6A
k	%6B
l	%6C
m	%6D
n	%6E
o	%6F
p	%70
q	%71
r	%72
s	%73
t	%74
u	%75
v	%76
w	%77
x	%78
y	%79
z	%7A
{	%7B
	%7C
}	%7D
~	%7E
	%7F
€	%80
	%81
,	%82
<i>f</i>	%83
”	%84
...	%85
†	%86
‡	%87
^	%88
%o	%89

Š	%8A
<	%8B
Œ	%8C
	%8D
Ž	%8E
	%8F
	%90
`	%91
'	%92
"	%93
"	%94
•	%95
–	%96
—	%97
~	%98
™	%99
š	%9A
>	%9B
œ	%9C
	%9D
ž	%9E
ÿ	%9F
	%A0
ı	%A1
¢	%A2
£	%A3
	%A4
¥	%A5
	%A6
§	%A7
..	%A8
©	%A9
ª	%AA
«	%AB
¬	%AC
–	%AD
®	%AE
—	%AF
º	%B0

±	%B1
²	%B2
³	%B3
´	%B4
µ	%B5
¶	%B6
·	%B7
¸	%B8
¹	%B9
º	%BA
»	%BB
¼	%BC
½	%BD
¾	%BE
¿	%BF
À	%C0
Á	%C1
Â	%C2
Ã	%C3
Ä	%C4
Å	%C5
Æ	%C6
Ç	%C7
È	%C8
É	%C9
Ê	%CA
Ë	%CB
Ì	%CC
Í	%CD
Î	%CE
Ï	%CF
Ð	%D0
Ñ	%D1
Ò	%D2
Ó	%D3
Ô	%D4
Õ	%D5
Ö	%D6
	%D7

Ø	%D8
Ù	%D9
Ú	%DA
Û	%DB
Ü	%DC
Ý	%DD
Þ	%DE
ß	%DF
à	%E0
á	%E1
â	%E2
ã	%E3
ä	%E4
å	%E5
æ	%E6
ç	%E7
è	%E8
é	%E9
ê	%EA
ë	%EB
ì	%EC
í	%ED
î	%EE
ï	%EF
ð	%F0
ñ	%F1
ò	%F2
ó	%F3
ô	%F4
õ	%F5
ö	%F6
÷	%F7
ø	%F8
ù	%F9
ú	%FA
û	%FB
ü	%FC
ý	%FD
þ	%FE

ÿ	%FF
---	-----

## URL Encoding Reference

The ASCII device control characters %00-%1f were originally designed to control hardware devices. Control characters have nothing to do inside a URL.

ASCII Character	Description	URL-encoding
NUL	null character	%00
SOH	start of header	%01
STX	start of text	%02
ETX	end of text	%03
EOT	end of transmission	%04
ENQ	enquiry	%05
ACK	acknowledge	%06
BEL	bell (ring)	%07
BS	backspace	%08
HT	horizontal tab	%09
LF	line feed	%0A
VT	vertical tab	%0B
FF	form feed	%0C
CR	carriage return	%0D
SO	shift out	%0E
SI	shift in	%0F
DLE	data link escape	%10
DC1	device control 1	%11
DC2	device control 2	%12
DC3	device control 3	%13
DC4	device control 4	%14
NAK	negative acknowledge	%15
SYN	synchronize	%16
ETB	end transmission block	%17
CAN	cancel	%18
EM	end of medium	%19
SUB	substitute	%1A
ESC	escape	%1B
FS	file separator	%1C
GS	group separator	%1D
RS	record separator	%1E

US	unit separator	%1F
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# HTML Language Code Reference

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## ISO Language Codes

The HTML lang attribute can be used to declare the language of a Web page or a portion of a Web page. This is meant to assist search engines and browsers.

According to the W3C recommendation you should declare the primary language for each Web page with the lang attribute inside the <html> tag, like this:

```
<html lang="en">
...
</html>
```

In XHTML, the language is declared inside the <html> tag as follows:

```
<html xmlns="http://www.w3.org/1999/xhtml" lang="en" xml:lang="en">
...
</html>
```

## ISO 639-1 Language Codes

ISO 639-1 defines abbreviations for languages. In HTML and XHTML they can be used in the lang and xml:lang attributes.

Language	ISO Code
Abkhazian	ab
Afar	aa
Afrikaans	af
Albanian	sq
Amharic	am
Arabic	ar
Aragonese	an
Armenian	hy
Assamese	as
Aymara	ay
Azerbaijani	az
Bashkir	ba
Basque	eu

Bengali (Bangla)	bn
Bhutani	dz
Bihari	bh
Bislama	bi
Breton	br
Bulgarian	bg
Burmese	my
Byelorussian (Belarusian)	be
Cambodian	km
Catalan	ca
Cherokee	
Chewa	
Chinese (Simplified)	zh
Chinese (Traditional)	zh
Corsican	co
Croatian	hr
Czech	cs
Danish	da
Divehi	
Dutch	nl
Edo	
English	en
Esperanto	eo
Estonian	et
Faeroese	fo
Farsi	fa
Fiji	fj
Finnish	fi
Flemish	
French	fr
Frisian	fy
Fulfulde	
Galician	gl
Gaelic (Scottish)	gd
Gaelic (Manx)	gv
Georgian	ka
German	de
Greek	el
Greenlandic	kl

Guarani	gn
Gujarati	gu
Haitian Creole	ht
Hausa	ha
Hawaiian	
Hebrew	he, iw
Hindi	hi
Hungarian	hu
Ibibio	
Icelandic	is
Ido	io
Igbo	
Indonesian	id, in
Interlingua	ia
Interlingue	ie
Inuktitut	iu
Inupiak	ik
Irish	ga
Italian	it
Japanese	ja
Javanese	jv
Kannada	kn
Kanuri	
Kashmiri	ks
Kazakh	kk
Kinyarwanda (Ruanda)	rw
Kirghiz	ky
Kirundi (Rundi)	rn
Konkani	
Korean	ko
Kurdish	ku
Laothian	lo
Latin	la
Latvian (Lettish)	lv
Limburgish ( Limburger)	li
Lingala	ln
Lithuanian	lt
Macedonian	mk
Malagasy	mg

Malay	ms
Malayalam	ml
Maltese	mt
Maori	mi
Marathi	mr
Moldavian	mo
Mongolian	mn
Nauru	na
Nepali	ne
Norwegian	no
Occitan	oc
Oriya	or
Oromo (Afan, Galla)	om
Papiamentu	
Pashto (Pushto)	ps
Polish	pl
Portuguese	pt
Punjabi	pa
Quechua	qu
Rhaeto-Romance	rm
Romanian	ro
Russian	ru
Sami (Lappish)	
Samoan	sm
Sangro	sg
Sanskrit	sa
Serbian	sr
Serbo-Croatian	sh
Sesotho	st
Setswana	tn
Shona	sn
Sichuan Yi	ii
Sindhi	sd
Sinhalese	si
Siswati	ss
Slovak	sk
Slovenian	sl
Somali	so

Spanish	es
Sundanese	su
Swahili (Kiswahili)	sw
Swedish	sv
Syriac	
Tagalog	tl
Tajik	tg
Tamazight	
Tamil	ta
Tatar	tt
Telugu	te
Thai	th
Tibetan	bo
Tigrinya	ti
Tonga	to
Tsonga	ts
Turkish	tr
Turkmen	tk
Twi	tw
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# HTTP Status Messages

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When a browser requests a service from a web server, an error might occur.

This is a list of HTTP status messages that might be returned:

## 1xx: Information

Message:	Description:
100 Continue	Only a part of the request has been received by the server, but as long as it has not been rejected, the client should continue with the request
101 Switching Protocols	The server switches protocol

## 2xx: Successful

Message:	Description:
200 OK	The request is OK
201 Created	The request is complete, and a new resource is created
202 Accepted	The request is accepted for processing, but the processing is not complete
203 Non-authoritative Information	
204 No Content	
205 Reset Content	
206 Partial Content	

## 3xx: Redirection

Message:	Description:
300 Multiple Choices	A link list. The user can select a link and go to that location. Maximum five addresses
301 Moved Permanently	The requested page has moved to a new url
302 Found	The requested page has moved temporarily to a new url
303 See Other	The requested page can be found under a different url
304 Not Modified	
305 Use Proxy	
306 <i>Unused</i>	This code was used in a previous version. It is no longer used, but the code is reserved

307 Temporary Redirect	The requested page has moved temporarily to a new url
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#### 4xx: Client Error

Message:	Description:
400 Bad Request	The server did not understand the request
401 Unauthorized	The requested page needs a username and a password
402 Payment Required	<i>You can not use this code yet</i>
403 Forbidden	Access is forbidden to the requested page
404 Not Found	The server can not find the requested page
405 Method Not Allowed	The method specified in the request is not allowed
406 Not Acceptable	The server can only generate a response that is not accepted by the client
407 Proxy Authentication Required	You must authenticate with a proxy server before this request can be served
408 Request Timeout	The request took longer than the server was prepared to wait
409 Conflict	The request could not be completed because of a conflict
410 Gone	The requested page is no longer available
411 Length Required	The "Content-Length" is not defined. The server will not accept the request without it
412 Precondition Failed	The precondition given in the request evaluated to false by the server
413 Request Entity Too Large	The server will not accept the request, because the request entity is too large
414 Request-url Too Long	The server will not accept the request, because the url is too long. Occurs when you convert a "post" request to a "get" request with a long query information
415 Unsupported Media Type	The server will not accept the request, because the media type is not supported
416	
417 Expectation Failed	

#### 5xx: Server Error

Message:	Description:
500 Internal Server Error	The request was not completed. The server met an unexpected condition
501 Not Implemented	The request was not completed. The server did not support the functionality required
502 Bad Gateway	The request was not completed. The server received an invalid response from the upstream server
503 Service Unavailable	The request was not completed. The server is temporarily overloading or down
504 Gateway Timeout	The gateway has timed out

505 HTTP Version Not Supported	The server does not support the "http protocol" version
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