

Web Development Basics

Internet

The Internet is a international network. It is also called as Web. It is used to share documents called Web pages.

Website:

Collection of web pages.

Web page:

The web page is a document, that contains some information and which can run on browser.

Examples of the browsers:

1. Google Chrome
2. Mozilla firefox
3. Internet explorer
4. Opera
5. Safari etc.

Types of Web pages:

Web pages are classified into three types.

1. Static web pages
2. Dynamic web pages
3. Server pages

1) Static web pages:

- Static web pages contain fixed design of content. Every time when you run this type of pages, it shows you fixed content.
- To create these web pages we use HTML.

2) Dynamic web pages:

- Dynamic web pages allow the user to interact with the page.
- It responds to the user interaction.
- For example, on clicking a button, it shows a message.
- To create these web pages we use DHTML (Dynamic Hyper Text Markup Language).

- Another name of DHTML is JavaScript.

3) Server pages:

- These pages executes on the servers and output will be displayed on the browsers.
- To create these pages we use PHP, JSP, ASP (Active Server Pages).

Types of Languages

Languages are classified into two types.

- Programming languages
- Markup Languages
- Scripting languages

1) Programming languages:

- Most of the programming languages are object-oriented languages.
- We can create classes and objects here.
- Examples: C++, Java, C#.NET etc.,

2) Markup languages:

- Markup languages allows us to mark certain keywords called tags in the middle of text.
- A markup language is set of markup tags
- Examples: HTML, XML, XAML, CAML etc.

3) Scripting languages:

- These languages are object-based languages.
- We can create objects, but we can't create classes here.
- Examples: Javascript, VBscript etc.

HTML

- HTML stands for Hyper Text Markup Language.
- It is developed by Tim Berner's Lee at W3C (World Wide Web Consortium).
- It is used to create Static Web pages.
- It is a global language i.e., it can be understood by all browsers.

- It is a markup language.
- It is not case-sensitive language.
- The latest version of HTML is HTML 5
- HTML documents are also called as web pages.
- HTML pages can run on any browser.

HTML Example

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>My First Heading</h1>
```

```
<p>My first paragraph.</p>
```

```
</body>
```

```
</html>
```

Example Explained

- The DOCTYPE declaration defines the document type
- 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



The <!DOCTYPE html> declaration is the doctype for HTML5.

HTML Tags

HTML markup tags are usually called HTML tags

- HTML tags are keywords (tag names) surrounded by **angle brackets** like <html>
- HTML tags normally **come in pairs** like and
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- The end tag is written like the start tag, with a **forward slash** before the tag name
- Start and end tags are also called **opening tags** and **closing tags**

<tagname>content</tagname>

HTML Elements

"HTML tags" and "HTML elements" are often used to describe the same thing.

But strictly speaking, an HTML element is everything between the start tag and the end tag, including the tags:

HTML Element:

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

Web Browsers

The purpose of a web browser (such as Google Chrome, Internet Explorer, Firefox, Safari) 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 Page Structure

Below is a visualization of an HTML page structure:

```
<html>
<body>
<h1>This a Heading</h1>
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>
</body>
</html>
```

HTML Versions

Since the early days of the web, there have been many versions of HTML:

Version	Year
HTML	1991
HTML+	1993
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML 1.0	2000
HTML5	2012

The <!DOCTYPE> Declaration

The <!DOCTYPE> declaration helps the browser to display a web page correctly.

There are many different documents on the web, and a browser can only display an HTML page 100% correctly if it knows the HTML type and version used.

Common Declarations

HTML5

```
<!DOCTYPE html>
```

HTML 4.01

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

XHTML 1.0

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

HTML Editors

Writing HTML

HTML code can be written in:

- Notepad
- Notepad++
- Microsoft Visual Studio
- Adobe Dreamweaver
- Microsoft Expression Web
- Edit Plus
- Text Pad
- Notepad++

etc.

However, for learning HTML we recommend a text editor like Notepad (PC) or TextEdit (Mac). We believe using a simple text editor is a good way to learn HTML.

Follow the 4 steps below to create your first web page with Notepad.

Step 1: Start Notepad

To start Notepad go to:

Start

All Programs

Accessories

Notepad

Step 2: Edit Your HTML with Notepad

Type your HTML code into your Notepad:



Step 3: Save Your HTML

Select **Save as..** in Notepad's file menu.

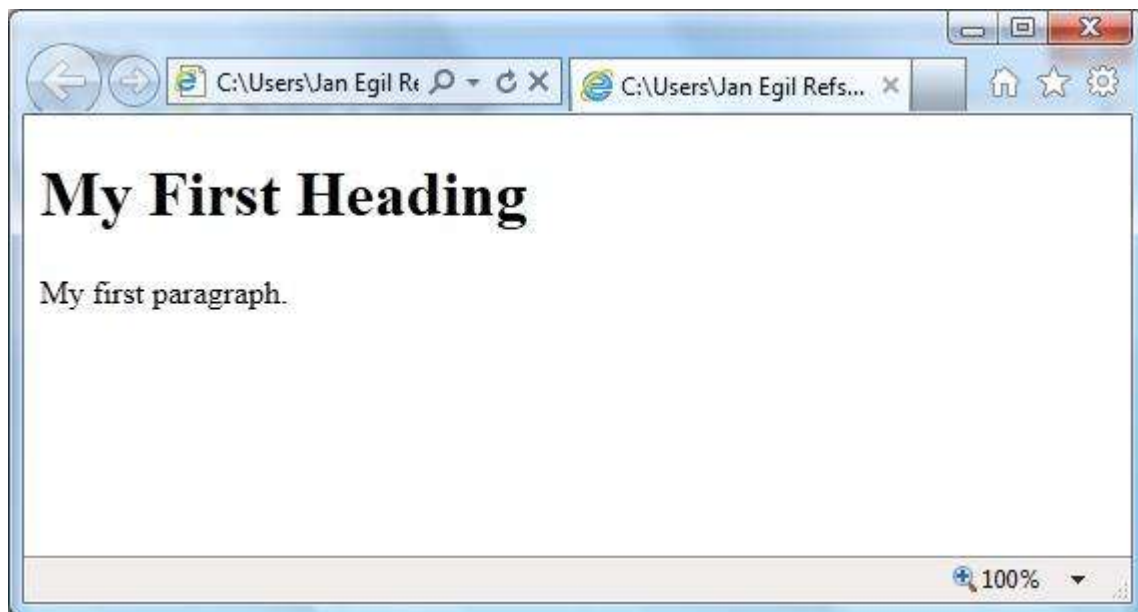
When you save an HTML file, you can use either the .htm or the .html file extension. There is no difference, it is entirely up to you.

Save the file in a folder that is easy to remember, like **w3schools**.

Step 4: Run the HTML in Your Browser

Start your web browser and open your html file from the **File, Open** menu, or just browse the folder and double-click your HTML file.

The result should look much like this:



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 tag.

Example

```

```

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

HTML Elements

HTML documents are defined by HTML elements.

HTML Elements

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

Start tag *	Element content	End tag *
<p>	This is a paragraph	</p>
	This is a link	

* 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.

Nested HTML Elements

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

HTML documents consist of nested HTML elements.

HTML Document Example

```
<!DOCTYPE html>  
<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.

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

Tip: In XHTML, all elements must be closed. Adding a slash inside the start tag, like `
`, 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.

HTML Attributes

Attributes provide additional information about HTML elements.

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: [HTML Tag Reference](#).

Below is a list of some attributes that can be used on any HTML element:

Attribute	Description
class	Specifies one or more classnames for an element (refers to a class in a style sheet)
id	Specifies a unique id for an element
style	Specifies an inline CSS style for an element
title	Specifies extra information about an element (displayed as a tool tip)

HTML Headings

Headings are important in HTML documents.

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.

HTML Paragraphs

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 `
` 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 `
` element is an empty HTML element. It has no end tag.

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.

(The example demonstrates some HTML formatting problems)

HTML Text Formatting

This text is bold

This text is italic

This is computer output

This is _{subscript} and ^{superscript}

HTML Formatting Tags

HTML uses tags like `` 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 `` renders as ``, and `` renders as `<i>`.

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



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

`` or `` 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!

HTML Text Formatting Tags

Tag	Description
<code></code>	Defines bold text
<code></code>	Defines emphasized text
<code><i></code>	Defines a part of text in an alternate voice or mood
<code><small></code>	Defines smaller text
<code></code>	Defines important text
<code><sub></code>	Defines subscripted text
<code><sup></code>	Defines superscripted text

<u><ins></u>	Defines inserted text
<u></u>	Defines deleted text

HTML Links

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

HTML Hyperlinks (Links)

The HTML `<a>` tag defines a hyperlink.

A hyperlink (or link) is a word, group of words, or image that you can click on to jump to another document.

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

The most important attribute of the `<a>` element is the `href` attribute, which indicates the link's destination.

By default, links will appear as follows in all browsers:

- An unvisited link is underlined and blue
 - A visited link is underlined and purple
 - An active link is underlined and red
-

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](http://www.w3schools.com/)

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 id Attribute

The id attribute can be used to create a bookmark inside an HTML document.

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

Example

An anchor with an id inside an HTML document:

```
<a id="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/".

HTML <head>

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>, <style>, <meta>, <link>, <script>, <noscript>, and <base>.

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:

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

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

</html>
```

The HTML <meta> Element

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

<meta> tags always goes inside the <head> element.

<meta> Tags - Examples of Use

Define keywords for search engines:

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

Define a description of your web page:

```
<meta name="description" content="Free Web tutorials on HTML and CSS">
```

Define the author of a page:

```
<meta name="author" content="Hege Refsnes">
```

Refresh document every 30 seconds:

```
<meta http-equiv="refresh" content="30">
```

HTML head Elements

Tag	Description
<head>	Defines information about the document
<title>	Defines the title of a document
<base>	Defines a default address or a default target for all links on a page
<link>	Defines the relationship between a document and an external resource
<meta>	Defines metadata about an HTML document
<script>	Defines a client-side script
<style>	Defines style information for a document

HTML Images

Example

Norwegian Mountain Trip



HTML Images - The Tag and the Src Attribute

In HTML, images are defined with the tag.

The 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 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 takes 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.

HTML Tables

HTML Tables

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

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 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:

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

HTML Table Tags

Tag	Description
<u><table></u>	Defines a table
<u><th></u>	Defines a header cell in a table
<u><tr></u>	Defines a row in a table
<u><td></u>	Defines a cell in a table
<u><caption></u>	Defines a table caption
<u><colgroup></u>	Specifies a group of one or more columns in a table for formatting
<u><col></u>	Specifies column properties for each column within a <colgroup> element

<code><thead></code>	Groups the header content in a table
<code><tbody></code>	Groups the body content in a table
<code><tfoot></code>	Groups the footer content in a table

HTML Lists

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

HTML Unordered Lists

An unordered list starts with the `` tag. Each list item starts with the `` 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 tag. Each list item starts with the 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.

HTML List Tags

Tag	Description
<code></code>	Defines an ordered list
<code></code>	Defines an unordered list
<code></code>	Defines a list item
<code><dl></code>	Defines a definition list
<code><dt></code>	Defines an item in a definition list
<code><dd></code>	Defines a description of an item in a definition list

HTML `<div>` and ``

HTML elements can be grouped together with `<div>` and ``.

HTML Block Elements

Most HTML elements are defined as **block level** elements or as **inline** elements.

Block level elements normally start (and end) with a new line when displayed in a browser.

Examples: `<h1>`, `<p>`, ``, `<table>`

HTML Inline Elements

Inline elements are normally displayed without starting a new line.

Examples: ``, `<td>`, `<a>`, ``

The HTML <div> Element

The HTML <div> element is a block level element that can be used as a container for grouping other HTML elements.

The <div> element has no special meaning. Except that, because it is a block level element, the browser will display a line break before and after it.

When used together with CSS, the <div> element can be used to set style attributes to large blocks of content.

Another common use of the <div> element, is for document layout. It replaces the "old way" of defining layout using tables. Using tables is not the correct use of the <table> element. The purpose of the <table> element is to display tabular data.

The HTML Element

The HTML element is an inline element that can be used as a container for text.

The element has no special meaning.

When used together with CSS, the element can be used to set style attributes to parts of the text.

HTML Grouping Tags

Tag	Description
<div>	Defines a section in a document (block-level)
	Defines a section in a document (inline)

HTML Forms and Input

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

HTML Forms

HTML forms are used to pass data to a server.

An HTML 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 common 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 ZERO 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.

HTML Form Tags

New : New tags in HTML5.

Tag	Description
<u><form></u>	Defines an HTML form for user input
<u><input></u>	Defines an input control
<u><textarea></u>	Defines a multiline input control (text area)
<u><label></u>	Defines a label for an <input> element
<u><fieldset></u>	Groups related elements in a form
<u><legend></u>	Defines a caption for a <fieldset> element
<u><select></u>	Defines a drop-down list
<u><optgroup></u>	Defines a group of related options in a drop-down list
<u><option></u>	Defines an option in a drop-down list
<u><button></u>	Defines a clickable button
<u><datalist></u> New	Specifies a list of pre-defined options for input controls
<u><keygen></u> New	Defines a key-pair generator field (for forms)
<u><output></u> New	Defines the result of a calculation

HTML Iframes

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" tar-  
get="iframe_a">W3Schools.com</a></p>
```

HTML Colors

Colors are displayed combining RED, GREEN, and BLUE.









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)
	#CoCoCo	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
	#000000	rgb(0,0,0)
	#080000	rgb(8,0,0)
	#100000	rgb(16,0,0)
	#180000	rgb(24,0,0)
	#200000	rgb(32,0,0)
	#280000	rgb(40,0,0)
	#300000	rgb(48,0,0)
	#380000	rgb(56,0,0)
	#400000	rgb(64,0,0)

	#480000	rgb(72,0,0)
	#500000	rgb(80,0,0)
	#580000	rgb(88,0,0)
	#600000	rgb(96,0,0)
	#680000	rgb(104,0,0)
	#700000	rgb(112,0,0)
	#780000	rgb(120,0,0)
	#800000	rgb(128,0,0)
	#880000	rgb(136,0,0)
	#900000	rgb(144,0,0)
	#980000	rgb(152,0,0)
	#A00000	rgb(160,0,0)
	#A80000	rgb(168,0,0)
	#B00000	rgb(176,0,0)
	#B80000	rgb(184,0,0)
	#C00000	rgb(192,0,0)
	#C80000	rgb(200,0,0)
	#D00000	rgb(208,0,0)
	#D80000	rgb(216,0,0)
	#E00000	rgb(224,0,0)
	#E80000	rgb(232,0,0)
	#F00000	rgb(240,0,0)
	#F80000	rgb(248,0,0)
	#FF0000	rgb(255,0,0)

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

HTML Color Names

Color Names Supported by All Browsers





147 color names are defined in the HTML and CSS color specification (16 basic color names plus 130 more). The table below lists them all, along with their hexadecimal values.







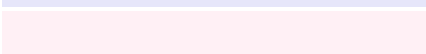
 **Tip:** The 16 basic color names are: aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.



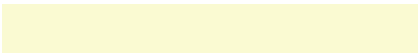














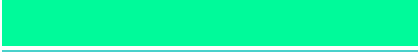







Click on a color name (or a hex value) to view the color as the background-color along with different text colors:

Sorted by Color Name












Color Name	HEX	Color
------------	-----	-------

<u>AliceBlue</u>	<u>#FoF8FF</u>	
<u>AntiqueWhite</u>	<u>#FAEBD7</u>	
<u>Aqua</u>	<u>#00FFFF</u>	
<u>Aquamarine</u>	<u>#7FFFD4</u>	
<u>Azure</u>	<u>#FoFFFF</u>	
<u>Beige</u>	<u>#F5F5DC</u>	
<u>Bisque</u>	<u>#FFE4C4</u>	
<u>Black</u>	<u>#000000</u>	
<u>BlanchedAlmond</u>	<u>#FFEBCD</u>	
<u>Blue</u>	<u>#0000FF</u>	
<u>BlueViolet</u>	<u>#8A2BE2</u>	
<u>Brown</u>	<u>#A52A2A</u>	
<u>BurlyWood</u>	<u>#DEB887</u>	
<u>CadetBlue</u>	<u>#5F9EA0</u>	
<u>Chartreuse</u>	<u>#7FFF00</u>	
<u>Chocolate</u>	<u>#D2691E</u>	
<u>Coral</u>	<u>#FF7F50</u>	
<u>CornflowerBlue</u>	<u>#6495ED</u>	
<u>Cornsilk</u>	<u>#FFF8DC</u>	
<u>Crimson</u>	<u>#DC143C</u>	
<u>Cyan</u>	<u>#00FFFF</u>	
<u>DarkBlue</u>	<u>#00008B</u>	
<u>DarkCyan</u>	<u>#008B8B</u>	
<u>DarkGoldenRod</u>	<u>#B8860B</u>	
<u>DarkGray</u>	<u>#A9A9A9</u>	
<u>DarkGrey</u>	<u>#A9A9A9</u>	
<u>DarkGreen</u>	<u>#006400</u>	
<u>DarkKhaki</u>	<u>#BDB76B</u>	
<u>DarkMagenta</u>	<u>#8B008B</u>	
<u>DarkOliveGreen</u>	<u>#556B2F</u>	
<u>Darkorange</u>	<u>#FF8C00</u>	
<u>DarkOrchid</u>	<u>#9932CC</u>	
<u>DarkRed</u>	<u>#8B0000</u>	
<u>DarkSalmon</u>	<u>#E9967A</u>	

<u>DarkSeaGreen</u>	<u>#8FBC8F</u>	
<u>DarkSlateBlue</u>	<u>#483D8B</u>	
<u>DarkSlateGray</u>	<u>#2F4F4F</u>	
<u>DarkSlateGrey</u>	<u>#2F4F4F</u>	
<u>DarkTurquoise</u>	<u>#00CED1</u>	
<u>DarkViolet</u>	<u>#9400D3</u>	
<u>DeepPink</u>	<u>#FF1493</u>	
<u>DeepSkyBlue</u>	<u>#00BFFF</u>	
<u>DimGray</u>	<u>#696969</u>	
<u>DimGrey</u>	<u>#696969</u>	
<u>DodgerBlue</u>	<u>#1E90FF</u>	
<u>FireBrick</u>	<u>#B22222</u>	
<u>FloralWhite</u>	<u>#FFFAF0</u>	
<u>ForestGreen</u>	<u>#228B22</u>	
<u>Fuchsia</u>	<u>#FF00FF</u>	
<u>Gainsboro</u>	<u>#DCDCDC</u>	
<u>GhostWhite</u>	<u>#F8F8FF</u>	
<u>Gold</u>	<u>#FFD700</u>	
<u>GoldenRod</u>	<u>#DAA520</u>	
<u>Gray</u>	<u>#808080</u>	
<u>Grey</u>	<u>#808080</u>	
<u>Green</u>	<u>#008000</u>	
<u>GreenYellow</u>	<u>#ADFF2F</u>	
<u>HoneyDew</u>	<u>#F0FFF0</u>	
<u>HotPink</u>	<u>#FF69B4</u>	
<u>IndianRed</u>	<u>#CD5C5C</u>	
<u>Indigo</u>	<u>#4B0082</u>	
<u>Ivory</u>	<u>#FFFFFF</u>	
<u>Khaki</u>	<u>#F0E68C</u>	
<u>Lavender</u>	<u>#E6E6FA</u>	
<u>LavenderBlush</u>	<u>#FFF0F5</u>	
<u>LawnGreen</u>	<u>#7CFC00</u>	
<u>LemonChiffon</u>	<u>#FFFACD</u>	
<u>LightBlue</u>	<u>#ADD8E6</u>	

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


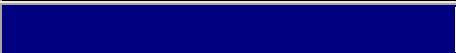







<u>OldLace</u>	<u>#FDF5E6</u>	
<u>Olive</u>	<u>#808000</u>	
<u>OliveDrab</u>	<u>#6B8E23</u>	
<u>Orange</u>	<u>#FFA500</u>	
<u>OrangeRed</u>	<u>#FF4500</u>	
<u>Orchid</u>	<u>#DA70D6</u>	
<u>PaleGoldenRod</u>	<u>#EEE8AA</u>	
<u>PaleGreen</u>	<u>#98FB98</u>	
<u>PaleTurquoise</u>	<u>#AFEEEE</u>	
<u>PaleVioletRed</u>	<u>#DB7093</u>	
<u>PapayaWhip</u>	<u>#FFEFD5</u>	
<u>PeachPuff</u>	<u>#FFDAB9</u>	
<u>Peru</u>	<u>#CD853F</u>	
<u>Pink</u>	<u>#FFC0CB</u>	
<u>Plum</u>	<u>#DDA0DD</u>	
<u>PowderBlue</u>	<u>#B0E0E6</u>	
<u>Purple</u>	<u>#800080</u>	
<u>Red</u>	<u>#FF0000</u>	
<u>RosyBrown</u>	<u>#BC8F8F</u>	
<u>RoyalBlue</u>	<u>#4169E1</u>	
<u>SaddleBrown</u>	<u>#8B4513</u>	
<u>Salmon</u>	<u>#FA8072</u>	
<u>SandyBrown</u>	<u>#F4A460</u>	
<u>SeaGreen</u>	<u>#2E8B57</u>	
<u>SeaShell</u>	<u>#FFF5EE</u>	
<u>Sienna</u>	<u>#A0522D</u>	
<u>Silver</u>	<u>#C0C0C0</u>	
<u>SkyBlue</u>	<u>#87CEEB</u>	
<u>SlateBlue</u>	<u>#6A5ACD</u>	
<u>SlateGray</u>	<u>#708090</u>	
<u>SlateGrey</u>	<u>#708090</u>	
<u>Snow</u>	<u>#FFFAFA</u>	
<u>SpringGreen</u>	<u>#00FF7F</u>	
<u>SteelBlue</u>	<u>#4682B4</u>	


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


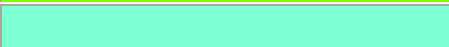




















HTML Color Values


















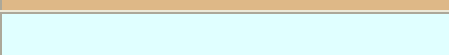

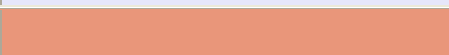

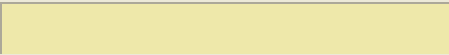

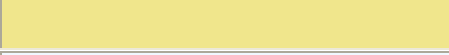

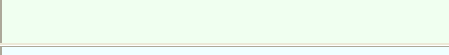



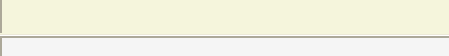




Sorted by Hex Value

[Same list sorted by color name](#)

Color Name	HEX	Color
Black	#000000	
Navy	#000080	
DarkBlue	#00008B	
MediumBlue	#0000CD	
Blue	#0000FF	
DarkGreen	#006400	
Green	#008000	
Teal	#008080	
DarkCyan	#008B8B	

DeepSkyBlue	#00BFFF	
DarkTurquoise	#00CED1	
MediumSpringGreen	#00FA9A	
Lime	#00FF00	
SpringGreen	#00FF7F	
Aqua	#00FFFF	
Cyan	#00FFFF	
MidnightBlue	#191970	
DodgerBlue	#1E90FF	
LightSeaGreen	#20B2AA	
ForestGreen	#228B22	
SeaGreen	#2E8B57	
DarkSlateGray	#2F4F4F	
DarkSlateGrey	#2F4F4F	
LimeGreen	#32CD32	
MediumSeaGreen	#3CB371	
Turquoise	#40E0D0	
RoyalBlue	#4169E1	
SteelBlue	#4682B4	
DarkSlateBlue	#483D8B	
MediumTurquoise	#48D1CC	
Indigo	#4B0082	
DarkOliveGreen	#556B2F	
CadetBlue	#5F9EA0	
CornflowerBlue	#6495ED	
MediumAquaMarine	#66CDAA	
DimGray	#696969	
DimGrey	#696969	
SlateBlue	#6A5ACD	
OliveDrab	#6B8E23	
SlateGray	#708090	
SlateGrey	#708090	
LightSlateGray	#778899	
LightSlateGrey	#778899	

MediumSlateBlue	#7B68EE	
LawnGreen	#7CFC00	
Chartreuse	#7FFF00	
Aquamarine	#7FFFD4	
Maroon	#800000	
Purple	#800080	
Olive	#808000	
Gray	#808080	
Grey	#808080	
SkyBlue	#87CEEB	
LightSkyBlue	#87CEFA	
BlueViolet	#8A2BE2	
DarkRed	#8B0000	
DarkMagenta	#8B008B	
SaddleBrown	#8B4513	
DarkSeaGreen	#8FBC8F	
LightGreen	#90EE90	
MediumPurple	#9370DB	
DarkViolet	#9400D3	
PaleGreen	#98FB98	
DarkOrchid	#9932CC	
YellowGreen	#9ACD32	
Sienna	#A0522D	
Brown	#A52A2A	
DarkGray	#A9A9A9	
DarkGrey	#A9A9A9	
LightBlue	#ADD8E6	
GreenYellow	#ADFF2F	
PaleTurquoise	#AFEEEE	
LightSteelBlue	#B0C4DE	
PowderBlue	#B0E0E6	
FireBrick	#B22222	
DarkGoldenRod	#B8860B	
MediumOrchid	#BA55D3	

RosyBrown	#BC8F8F	
DarkKhaki	#BDB76B	
Silver	#CoCoCo	
MediumVioletRed	#C71585	
IndianRed	#CD5C5C	
Peru	#CD853F	
Chocolate	#D2691E	
Tan	#D2B48C	
LightGray	#D3D3D3	
LightGrey	#D3D3D3	
Thistle	#D8BFD8	
Orchid	#DA70D6	
GoldenRod	#DAA520	
PaleVioletRed	#DB7093	
Crimson	#DC143C	
Gainsboro	#DCDCDC	
Plum	#DDA0DD	
BurlyWood	#DEB887	
LightCyan	#E0FFFF	
Lavender	#E6E6FA	
DarkSalmon	#E9967A	
Violet	#EE82EE	
PaleGoldenRod	#EEE8AA	
LightCoral	#F08080	
Khaki	#F0E68C	
AliceBlue	#F0F8FF	
HoneyDew	#F0FFF0	
Azure	#F0FFFF	
SandyBrown	#F4A460	
Wheat	#F5DEB3	
Beige	#F5F5DC	
WhiteSmoke	#F5F5F5	
MintCream	#F5FFFA	
GhostWhite	#F8F8FF	

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

Ivory	#FFFFF0	
White	#FFFFFF	

HTML Entities

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: **<** or **<**

 **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 ().

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 character entity.

HTML Useful Character Entities

Note: Entity names are case sensitive!

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
§	section	§	§
©	copyright	©	©
®	registered trademark	®	®
™	trademark	™	™

HTML Uniform Resource Locators

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

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

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

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

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.

URL Encoding Examples

Character URL-encoding

€	%80
£	%A3
©	%A9
®	%AE
À	%C0
Á	%C1
Â	%C2
Ã	%C3
Ä	%C4
Å	%C5

HTML Quick List

HTML Basic Document

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

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

</html>
```

Basic Tags

```
<h1>Largest Heading</h1>
<h2> ... </h2>
<h3> ... </h3>
<h4> ... </h4>
<h5> ... </h5>
<h6>Smallest Heading</h6>

<p>This is a paragraph.</p>
<br> (line break)
<hr> (horizontal rule)
<!-- This is a comment -->
```

Formatting

```
<b>Bold text</b>
<code>Computer code</code>
<em>Emphasized text</em>
<i>Italic text</i>
<kbd>Keyboard input</kbd>
```

<pre>Preformatted text</pre>
<small>Smaller text</small>
Important text

<abbr> (abbreviation)
<address> (contact information)
<bdo> (text direction)
<blockquote> (a section quoted from another source)
<cite> (title of a work)
 (deleted text)
<ins> (inserted text)
<sub> (subscripted text)
<sup> (superscripted text)

Links

Ordinary link: Link-text goes here

Image-link:

Mailto link: Send e-mail

Bookmark:

Tips Section

Jump to the Tips Section

Images

Styles/Sections

<style type="text/css">
 h1 {color:red;}
 p {color:blue;}
</style>

<div>A block-level section in a document</div>

An inline section in a document

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>Item 1</dt>
  <dd>Describe item 1</dd>
  <dt>Item 2</dt>
  <dd>Describe item 2</dd>
</dl>
```

Tables

```
<table border="1">
  <tr>
    <th>table header</th>
    <th>table header</th>
  </tr>
  <tr>
    <td>table data</td>
    <td>table data</td>
  </tr>
</table>
```

Iframe

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

Forms

```
<form action="demo_form.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

< is the same as <
> is the same as >
© is the same as ©

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.