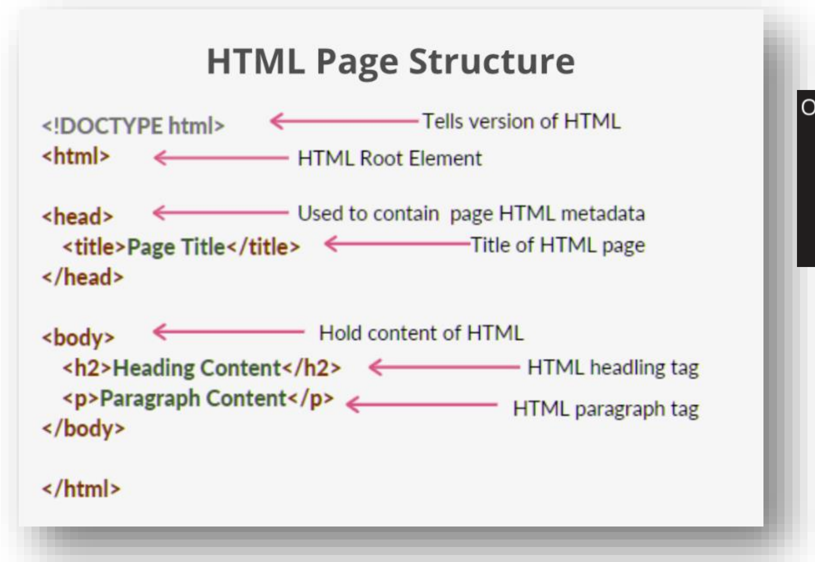
HTML

HTML means **Hyper Text Markup Language** it was created by **Tim Berners-Lee** in 1993

HTML is a language used to create web pages. It uses tags to structure content, such as headings, paragraphs, images, and links. These tags are enclosed in angle brackets < > and usually come in pairs, with an opening tag and a closing tag. For example, <p> for a paragraph and </p> to close it. HTML documents are text files saved with a .html or .htm extension. When viewed in a web browser, HTML documents are rendered as web pages.



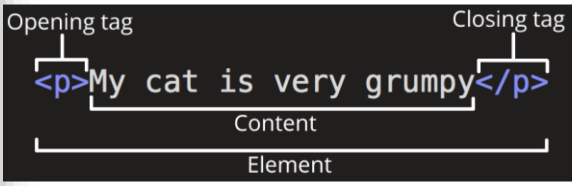
HTML Page Structure

```
<!DOCTYPE html>
<html>

<head>
  <title>Page Title</title>
</head>

<body>
  <h2>Heading Content</h2>
  <p>Paragraph Content</p>
</body>

</html>
```



```
<p>My cat is very grumpy</p>
```

HTML <html> Tag :

- The **<html>** tag represents the root of an HTML document.
- The **<html>** tag is the container for all other HTML elements (except for the <!DOCTYPE> tag).

HTML <body> Tag:

- The **<body>** tag defines the document's body.
- It has a start tag <body> and an end tag </body>.
- The **<body>** element contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

HTML <h1> to <h6> Tags:

- The **<h1>** to **<h6>** tags are used to define HTML headings.
- It has a start tag <h1> and an end tag </h1>:
- **<h1>** defines the most important heading. **<h6>** defines the least important heading.

HTML <p> Tag:

- The <p> element defines a paragraph.
- It has a start tag <p> and an end tag </p>:

Note: for dumpy data we use **lorem** name inside the <p> tag.

(<br>)-Empty HTML Elements:

- HTML elements with no content are called empty elements.
- The **<br>** tag defines a line break, and is an empty element without a closing tag:

HTML Attributes:

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

The href Attribute:

- The **<a>** tag defines a hyperlink. The **href** attribute specifies the URL of the page the link goes to:

Example: **<a href=" https://www.google.com">Click This link</a>**

The src Attribute:

- The **<img>** tag is used to embed an image in an HTML page. The **src** attribute specifies the path to the image to be displayed:
- **Absolute URL-** Links to an external image that is hosted on another website. https://media1.tenor.com/m/aPWMAcg-UqIAAAAC/hi-prands-laughing-star.gif
- **RelativeURL-** Links to an image that is hosted within the website. Example src="images/skb.jpg".

Example: **<img src="skbimage.jpg"> or <img src="images/skb.jpg">**

HTML img Tag:

The <img> tag should also contain the width and height attributes, which specify the width and height of the image (in pixels): example: **<img src="skb.jpg width="500" height="600">**

The alt Attribute:

The required alt attribute for the <img> tag specifies an alternate text for an image, if the image for some reason cannot be displayed. This can be due to a slow connection, or an error in the src attribute, or if the user uses a screen reader. Example: **<img src="skb.jpg" alt="This is admin image">**

<pre> Element:

he **<pre>** HTML element represents preformatted text which is to be presented exactly as written in the HTML file. The text is typically rendered using a non-proportional, or monospaced, font. Whitespace inside this element is displayed as written.

By default, <pre> …..</pre> is block-level element, i.e. its default display value is block.

<hr>: The Thematic Break (Horizontal Rule) element

The `<hr>` HTML element represents a thematic break between paragraph-level elements: for example, a change of scene in a story, or a shift of topic within a section.

The STYLE Attribute:

- The style attribute specifies an inline style for an element.
- The style attribute is used to add styles to an element, such as color, font, size, and more.
  Syntax: <*tagname* style="*property*:*value;*">

  Example: **<p style="color:red;">This is red paragraph.</p>**

Background Color: The CSS background-color property defines the background color for an HTML element.

Example:

```
<body>

<h1 style="background-color:yellow;">This text background color is changed </h1>
<p style="background-color:gray;">This line also change background color</p>

</body>
```

Text Color: The CSS color property defines the text color for an HTML element:

Example:

```
<h1 style="color:blue;">in this text change to blue color</h1>
<p style="color:red;">this text change red color</p>
```

Fonts: The CSS font-family property defines the font to be used for an HTML element:

Example:

```
<h1 style="font-family:verdana;">This text change to verdana font </h1>
<p style="font-family:courier;">This text change to courier font</p>
```

Text Size: The CSS font-size property defines the text size for an HTML element:

Example:

```
<h1 style="font-size:300%;">This is a heading size increase upto 300%</h1>
<p style="font-size:160%;">This is a paragraph also increase 160%.</p>
```

Text Alignment: The CSS text-align property defines the horizontal text alignment for an HTML element:

Example:

```
<h1 style="text-align:center;">Centered Heading</h1>
<p style="text-align:center;">Centered paragraph.</p>
```

HTML TEXT FORMATTING:

Html contains several elements for defining text with a special meaning.

HTML Formatting Elements

Formatting elements were designed to display special types of text:

- **<b>** - Bold text
- **<strong>** - Important text
- **<i>** - *Italic text*
- **<em>** - *Emphasized text*
- **<mark>** - Marked text
- **<small>** - Smaller text
- **<del>** - Deleted ~~text~~
- **<ins>** - Inserted text
- **<sub>** - Subscript $_{\text{text}}$
- **<sup>** - Superscript $^{\text{text}}$

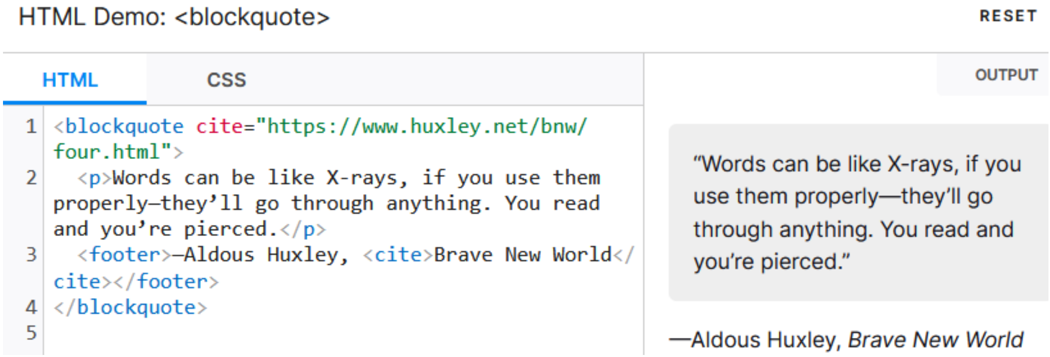
HTML Comments: HTML comments are not displayed in the browser, but they can help document your HTML source code.

HTML Comment Tag: <!-- Write your comments here -->

HTML Quotation and Citation Elements:

<blockquote> :

The **<blockquote>** HTML element indicates that the enclosed text is an extended quotation. Usually, this is rendered visually by indentation



```
<blockquote cite="https://www.huxley.net/bnw/four.html">
  <p>Words can be like X-rays, if you use them properly—they’ll go through anything. You read and you’re pierced.</p>
  <footer>—Aldous Huxley, <cite>Brave New World</cite></footer>
</blockquote>
```

“Words can be like X-rays, if you use them properly—they’ll go through anything. You read and you’re pierced.”

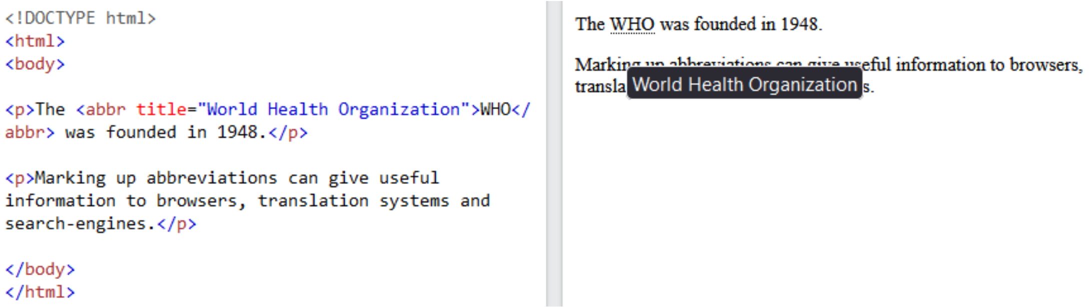
—Aldous Huxley, *Brave New World*

<q> : The **<q>** HTML element indicates that the enclosed text is a short inline quotation. ex: “…….”

<abbr>: The HTML <abbr> tag defines an abbreviation or an acronym, like "HTML", "CSS", "Mr.", "Dr.", "ASAP", "ATM".

Marking abbreviations can give useful information to browsers, translation systems and search-engines.

Example: in given below when you put your cursor on WHO then it show’s its Full abbreviation.



```
<!DOCTYPE html>
<html>
<body>

<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>

<p>Marking up abbreviations can give useful information to browsers, translation systems and search-engines.</p>

</body>
</html>
```

The WHO was founded in 1948.

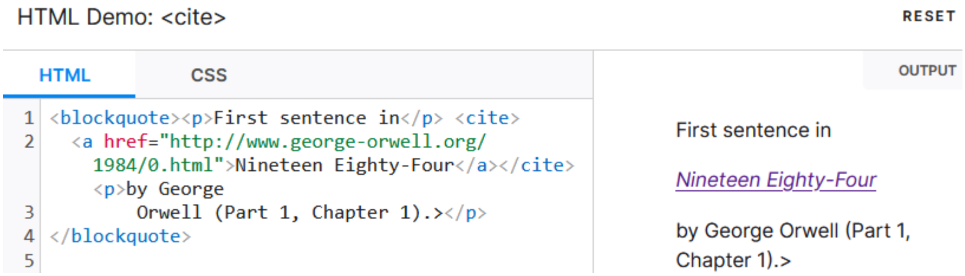
Marking up abbreviations can give useful information to browsers, transla World Health Organization s.

<address>:

The HTML **<address>….</address>** tag defines the contact information for the author/owner of a document or an article.
The contact information can be an email address, URL, physical address, phone number, social media handle, etc.
The text in the <address> element usually renders in *italic*, and browsers will always add a line break before and after the <address> element.

<cite>: The Citation element

The **<cite>** HTML element is used to mark up the title of a cited creative work. The reference may be in an abbreviated form according to context-appropriate conventions related to citation metadata.



```
<blockquote><p>First sentence in</p> <cite>
  <a href="http://www.george-orwell.org/
    1984/0.html">Nineteen Eighty-Four</a></cite>
    <p>by George
        Orwell (Part 1, Chapter 1).></p>
</blockquote>
```

First sentence in

Nineteen Eighty-Four

by George Orwell (Part 1, Chapter 1).>

<bdo> for Bi-Directional Override:

The HTML <bdo>….</bdo> tag is used to override the current text direction

Example: <bdo dir="rtl">This text will be written from right to left</bdo>

So,it's look like this: **tfel ot thgir morf nettirw eb lliw txet sihT**

HTML Links - Hyperlinks

The HTML **<a>** tag defines a hyperlink. It has the following **syntax**: <a href="*url*">*link text*</a>
The most important attribute of the <a> element is the href attribute, which indicates the link's destination.

The *link text* is the part that will be visible to the reader.
Clicking on the link text, will send the reader to the specified URL address.

HTML Links- The target Attribute

By default, the linked page will be displayed in the current browser window. To change this, you must specify another target for the link.
The **target** attribute specifies where to open the linked document.

The **target** attribute can have one of the following values:

- **_self** - Default. Opens the document in the same window/tab as it was clicked
- **_blank** - Opens the document in a new window or tab
- **_parent** - Opens the document in the parent frame
- **_top** - Opens the document in the full body of the window

Example: <a href="https://www.google.com/" target="_blank">Click on This link</a>

Absolute URLs vs. Relative URLs

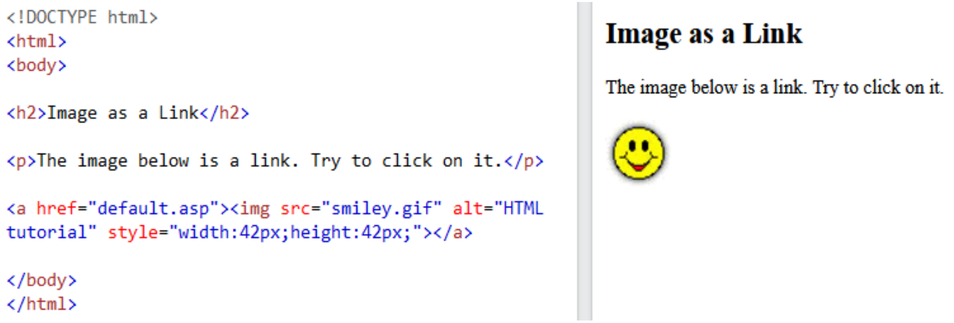
Both examples above are using an **absolute URL** (a full web address) in the href attribute.
A local link (a link to a page within the same website) is specified with a **relative URL** (without the "https://www" part): Example in given below.

```
<h2>Absolute URLs</h2>
<p><a href="https://www.w3.org/">W3C</a></p>
<p><a href="https://www.google.com/">Google</a></p>

<h2>Relative URLs</h2>
<p><a href="html_images.asp">HTML Images</a></p>
<p><a href="/css/default.asp">CSS Tutorial</a></p>
```

HTML Links- Use an Image as a Link:

To use an image as a link,just put the <img> tag inside the <a> tag;



```
<!DOCTYPE html>
<html>
<body>

<h2>Image as a Link</h2>

<p>The image below is a link. Try to click on it.</p>

<a href="default.asp"><img src="smiley.gif" alt="HTML
tutorial" style="width:42px;height:42px;"></a>

</body>
</html>
```

Image as a Link

The image below is a link. Try to click on it.

Link to an Email Address:

Use mailto: inside the href attribute to create a link that opens the user's email program (to let them send a new email): Example: `<a href="mailto:--khajad9@com">Send email</a>`

Button as a Link:

To use an HTML button as a link, you have to add some JavaScript code.

JavaScript allows you to specify what happens at certain events, such as a click of a button:

Example: `<button onclick="document.location='default.asp'"> SKB </button>`

Link Titles:

The **title** attribute specifies extra information about an element. The information is most often shown as a tooltip text when the mouse moves over the element. Example in given below.

`<a href=" https://www.google.com/ " title="Go to google search">Click this SKB link and visit</a>`

HTML Images:

HTML Images Syntax:
The HTML **<img> tag** is used to embed an image in a web page.
Images are not technically inserted into a web page; images are linked to web pages. The <img> tag creates a holding space for the referenced image.

The **<img>** tag is empty, it contains attributes only, and does not have a closing tag.
The **<img>** tag has two required attributes:

- **src** - Specifies the path(URL) to the image
- **alt** - The broken link icon and the alt text are shown if the browser cannot find the image.

Syntax: `<img src="url" alt="alternatetext">`

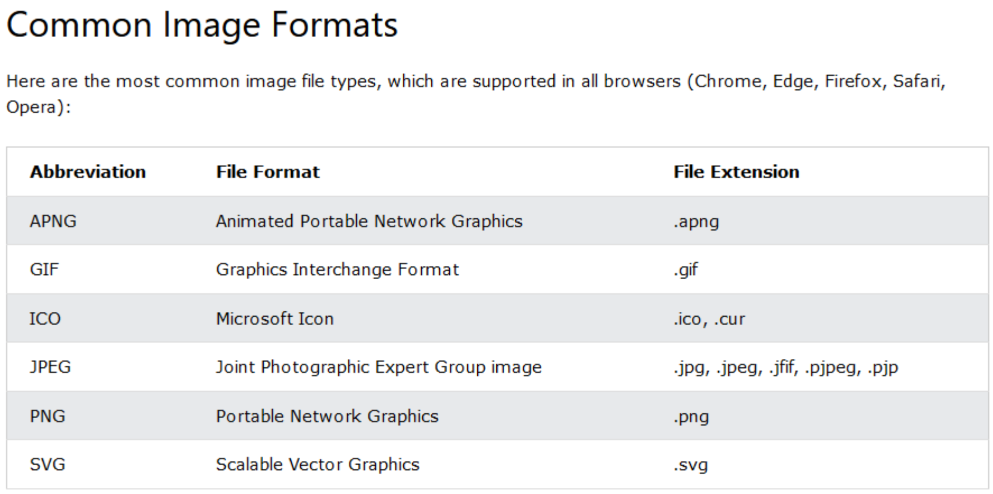
Image Size – Width and Height:

`<img src="img_girl.jpg" alt="Girl in a jacket" width="500" height="600">`

(Or) use **style** attribute.. `<img src="img_girl.jpg" alt="Girl in a jacket" style="width:500px;height:600px;">`

- If you have your images in a sub-folder,you must include the folder name in the src attribute:
- HTML allows animated GIFs

- Some web sites point to an image on another server. To point to an image on another server, you must specify an absolute (full) URL in the src attribute:



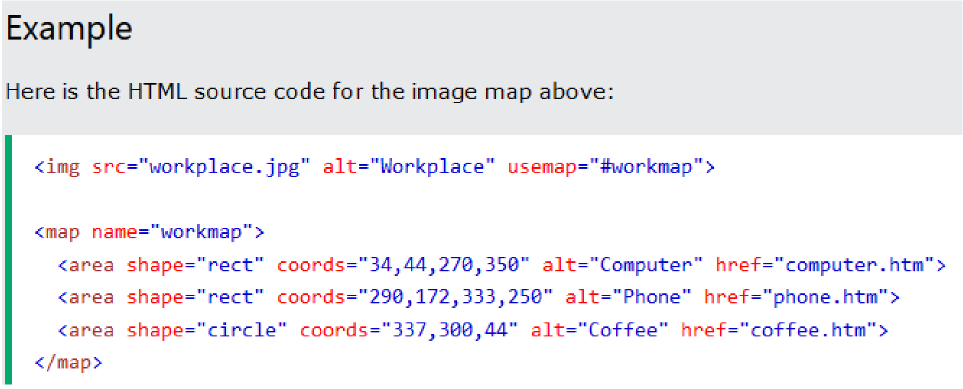
Common Image Formats

Here are the most common image file types, which are supported in all browsers (Chrome, Edge, Firefox, Safari, Opera):

Abbreviation	File Format	File Extension
APNG	Animated Portable Network Graphics	.apng
GIF	Graphics Interchange Format	.gif
ICO	Microsoft Icon	.ico, .cur
JPEG	Joint Photographic Expert Group image	.jpg, .jpeg, .jfif, .pjpeg, .pjp
PNG	Portable Network Graphics	.png
SVG	Scalable Vector Graphics	.svg

HTML Image Maps:

The HTML **<map>** tag defines an image map. An image map is an image with clickable areas. The areas are defined with one or more **<area>** tags.

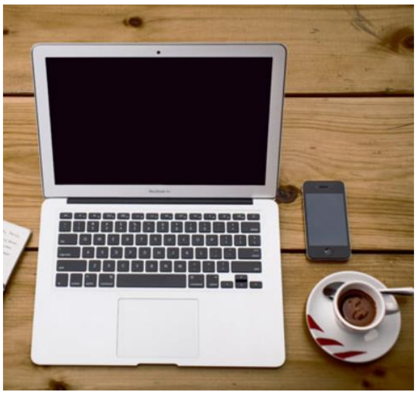


Example

Here is the HTML source code for the image map above:

```
<img src="workplace.jpg" alt="Workplace" usemap="#workmap">

<map name="workmap">
  <area shape="rect" coords="34,44,270,350" alt="Computer" href="computer.htm">
  <area shape="rect" coords="290,172,333,250" alt="Phone" href="phone.htm">
  <area shape="circle" coords="337,300,44" alt="Coffee" href="coffee.htm">
</map>
```



The image is inserted using the **<img>** tag. The only difference from other images is that you must add a **usemap** attribute

The **usemap** value starts with a **hash tag** # followed by the name of the image map, and is used to create a relationship between the image and the image map.

You must define the shape of the clickable area, and you can choose one of these values:

- **rect** - The coordinates for shape="rect" come in pairs, one for the x-axis and one for the y-axis.
- **circle** - To add a circle area, first locate the coordinates of the center of the circle:
- **poly** - The shape="poly" contains several coordinate points, which creates a shape formed with straight lines (a polygon)
- **default** - defines the entire region

You must also define some coordinates to be able to place the clickable area onto the image.

HTML <picture> Element:

- The HTML <**picture**> element gives web developers more flexibility in specifying image resources.
- The <**picture**> element contains one or more <**source**> elements, each referring to different images through the **srcset** attribute. This way the browser can choose the image that best fits the current view and/or device.
- Each <**source**> element has a media attribute that defines when the image is the most suitable.

Example:

```
<picture>
  <source media="(min-width: 650px)" srcset="img_food.jpg">
  <source media="(min-width: 465px)" srcset="img_car.jpg">
  <img src="img_girl.jpg">
</picture>
```

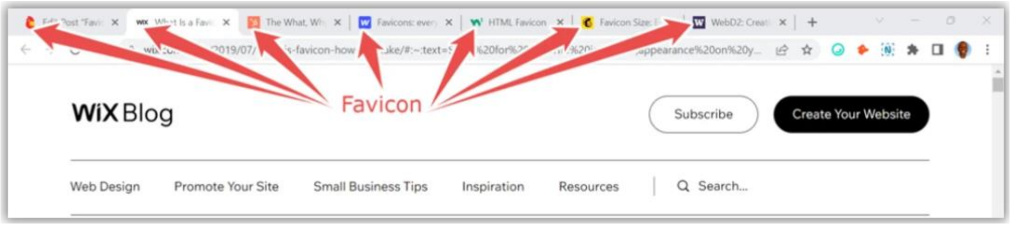
HTML Favicon:

A favicon is a small image displayed next to the page title in the browser tab.

To add a favicon to your website, either save your favicon image to the root directory of your webserver, or create a folder in the root directory called images, and save your favicon image in this folder. A common name for a favicon image is "favicon.ico".

Next, add a `<link>` element to your "index.html" file, after the `<title>` element, like this:

```
<link rel="icon" type="image/jpg" href="/images/skbpic.jpg">
```



HTML Page Title:

Every web page should have a page title to describe the meaning of the page.
The **<title>….</title>** element adds a title to your page

The page title is very important for search engine optimization (SEO). The text is used by search engine algorithms to decide the order when listing pages in search results.

```
<!DOCTYPE html>
<html>
<head>
  <title>HTML SKB</title>
</head>
<body>

The content of the document......

</body>
</html>
```

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

HTML Tables:

<table>……</table> Defines a table

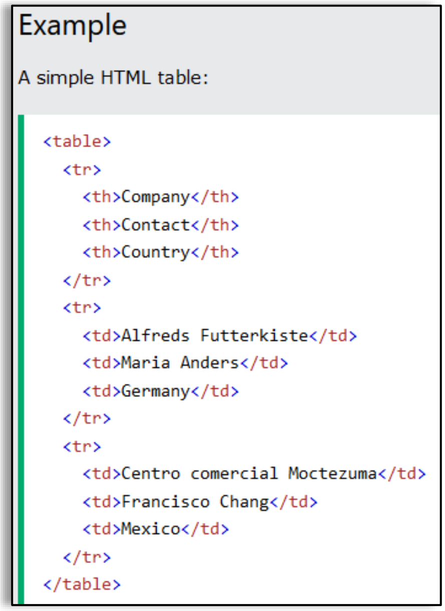
Table Cells: **td** stands for table data. Each table cell is defined by a **<td>** and a **</td>** tag.

Table Rows: **tr** stands for table row. Each table row starts with a **<tr>** and ends with a **</tr>** tag.

Table Headers: **th** stands for table header. Sometimes you want your cells to be table header cells. In those cases use the **<th>** tag instead of the **<td>** tag:

HTML Table Borders

HTML tables can have borders of different styles and shapes

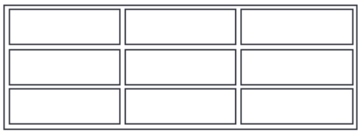

Example

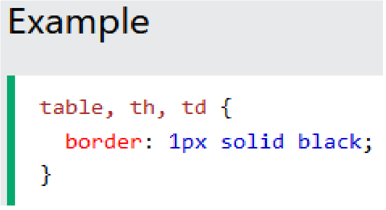
A simple HTML table:

```
<table>
  <tr>
    <th>Company</th>
    <th>Contact</th>
    <th>Country</th>
  </tr>
  <tr>
    <td>Alfreds Futterkiste</td>
    <td>Maria Anders</td>
    <td>Germany</td>
  </tr>
  <tr>
    <td>Centro comercial Moctezuma</td>
    <td>Francisco Chang</td>
    <td>Mexico</td>
  </tr>
</table>
```

How To Add a Border

To add a border, use the CSS `border` property on `table`, `th`, and `td` elements:



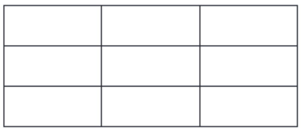

Example

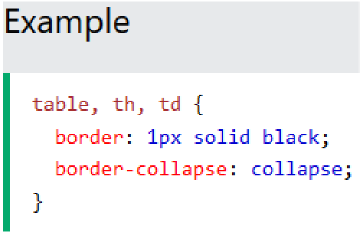
```
table, th, td {
  border: 1px solid black;
}
```

Collapsed Table Borders

To avoid having double borders like in the example above, set the CSS `border-collapse` property to `collapse`.

This will make the borders collapse into a single border:

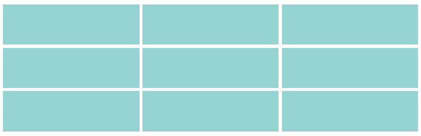


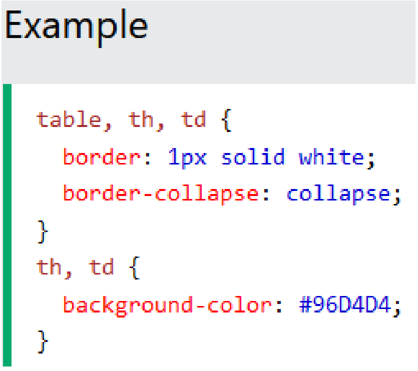

Example

```
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
```

Style Table Borders

If you set a background color of each cell, and give the border a white color (the same as the document background), you get the impression of an invisible border:

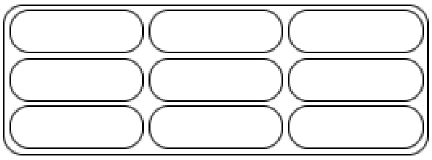


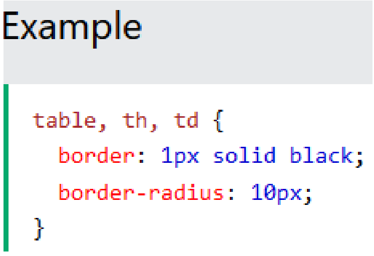

Example

```
table, th, td {
  border: 1px solid white;
  border-collapse: collapse;
}
th, td {
  background-color: #96D4D4;
}
```

Round Table Borders

With the `border-radius` property, the borders get rounded corners:

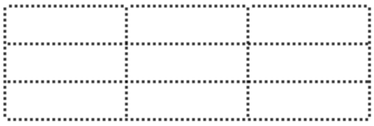



Example

```
table, th, td {
  border: 1px solid black;
  border-radius: 10px;
}
```

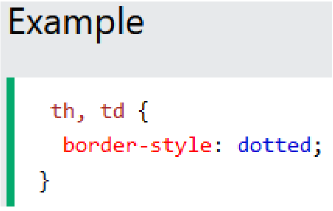
Dotted Table Borders

With the `border-style` property, you can set the appearance of the border.



The following values are allowed:

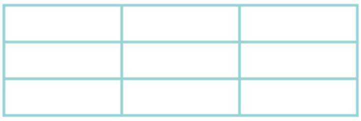
- `dotted`
- `dashed`
- `solid`
- `double`
- `groove`
- `ridge`
- `inset`
- `outset`
- `none`
- `hidden`

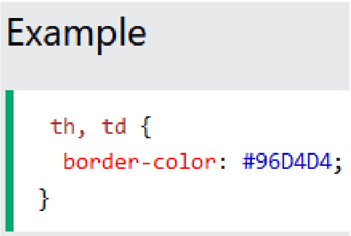

Example

```
th, td {
  border-style: dotted;
}
```

Border Color

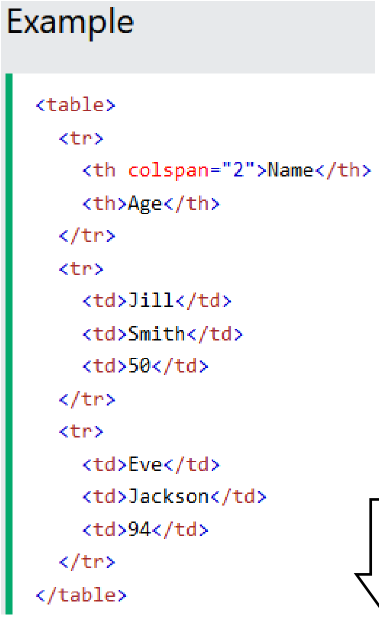
With the `border-color` property, you can set the color of the border.




Example

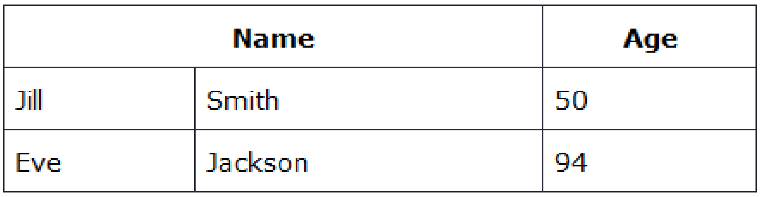
```
th, td {
  border-color: #96D4D4;
}
```

Header for Multiple Columns

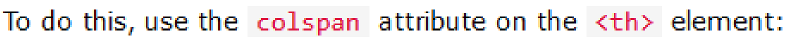


Example

```
<table>
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```



Name		Age
Jill	Smith	50
Eve	Jackson	94



To do this, use the colspan attribute on the <th> element:

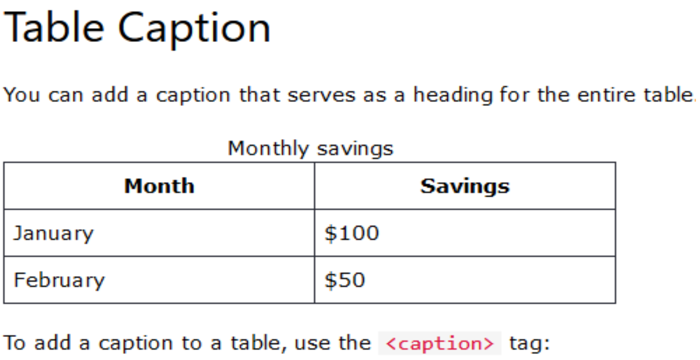


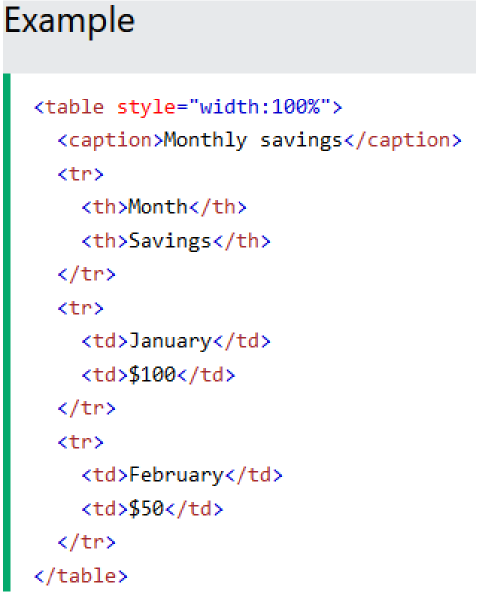
Table Caption

You can add a caption that serves as a heading for the entire table.

Monthly savings

Month	Savings
January	$100
February	$50

To add a caption to a table, use the <caption> tag:

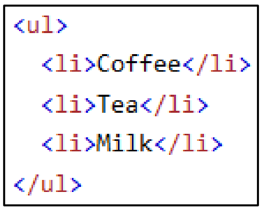


Example

```
<table style="width:100%">
  <caption>Monthly savings</caption>
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
  <tr>
    <td>February</td>
    <td>$50</td>
  </tr>
</table>
```

❖ HTML Lists:

Unordered list : An unordered list starts with the **<ul>** tag. Each list item starts with the <li> tag. The list items will be marked with bullets (small black circles) by default



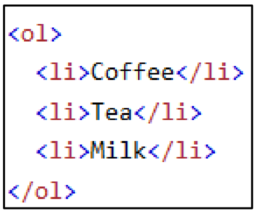
```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Unordered HTML list- Choose List Item Marker

The CSS **list-style-type** property is used to define the style of the list item marker. It can have one of the following values: **disc, circle, square, none.**

Ex: <ul style="list-style-type:disc;">

Ordered list: An ordered list starts with the <ol> tag. Each list item starts with the <li> tag. The list items will be marked with numbers by default.



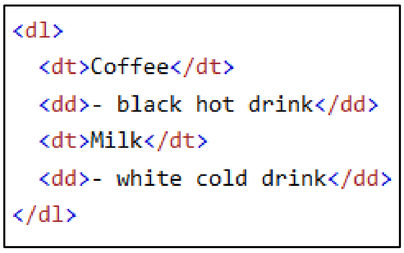
```
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

Ordered HTML list- The Type Attribute

The type attribute of the <ol> tag, defines the type of the list item marker. type=”1”, type=”A”, type=”a” etc..,

HTML Description Lists: HTML also supports description lists.

The **<dl> tag** defines the description list, the **<dt> tag** defines the term (name), and the **<dd> tag** describes each term:

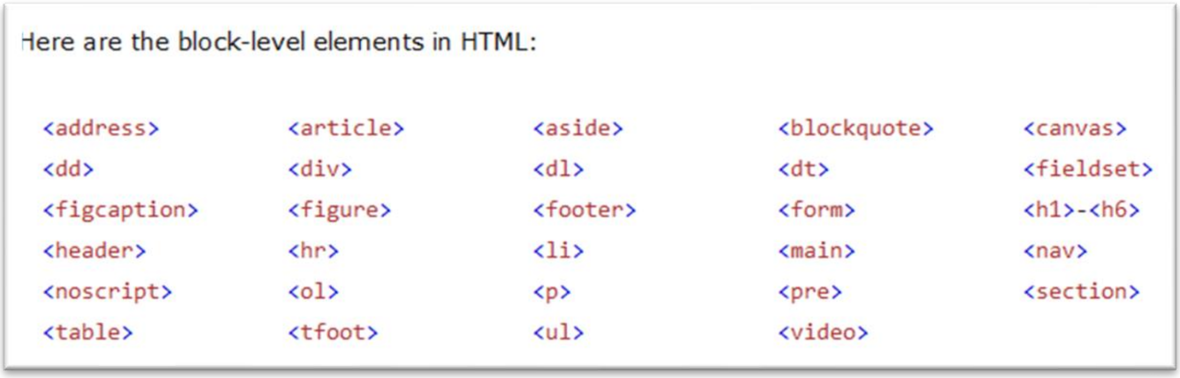


```
<dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
  <dd>- white cold drink</dd>
</dl>
```

HTML Block and Inline Elements

❖ Block- level Elements:

A block-level element always starts on a new line, and the browsers automatically add some space (a margin) before and after the element.
A block-level element always takes up the full width available (stretches out to the left and right as far as it can).
Two commonly used block elements are: <p> and <div>.
The **<p>** element defines a paragraph in an HTML document.
The **<div>** element defines a division or a section in an HTML document.

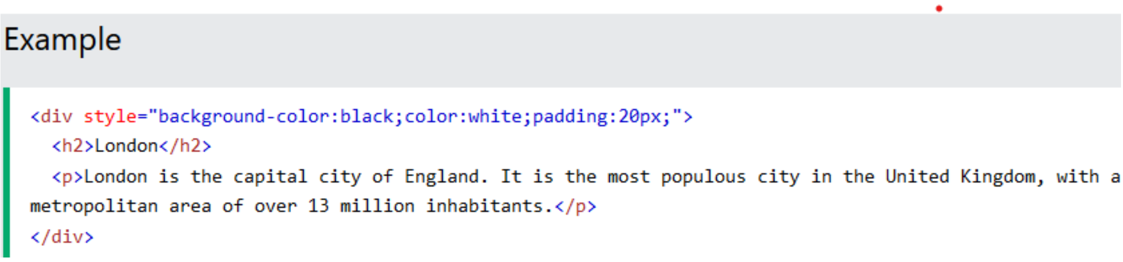


Here are the block-level elements in HTML:

<address>	<article>	<aside>	<blockquote>	<canvas>
<dd>	<div>	<dl>	<dt>	<fieldset>
<figcaption>	<figure>	<footer>	<form>	<h1>-<h6>
<header>	<hr>	<li>	<main>	<nav>
<noscript>	<ol>	<p>	<pre>	<section>
<table>	<tfoot>	<ul>	<video>	

❖ The <div> Element

The **<div>** element is often used as a container for other HTML elements.
The **<div>** element has no required attributes, but style, class and id are common.
When used together with CSS, the **<div>** element can be used to style blocks of content:



Example

```
<div style="background-color:black;color:white;padding:20px;">
  <h2>London</h2>
  <p>London is the capital city of England. It is the most populous city in the United Kingdom, with a
metropolitan area of over 13 million inhabitants.</p>
</div>
```

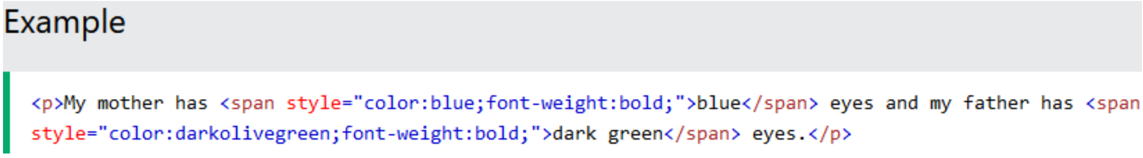
❖ Inline Elements

An inline element does not start on a new line.
An inline element only takes up as much width as necessary.

This is a <span> element inside a paragraph.

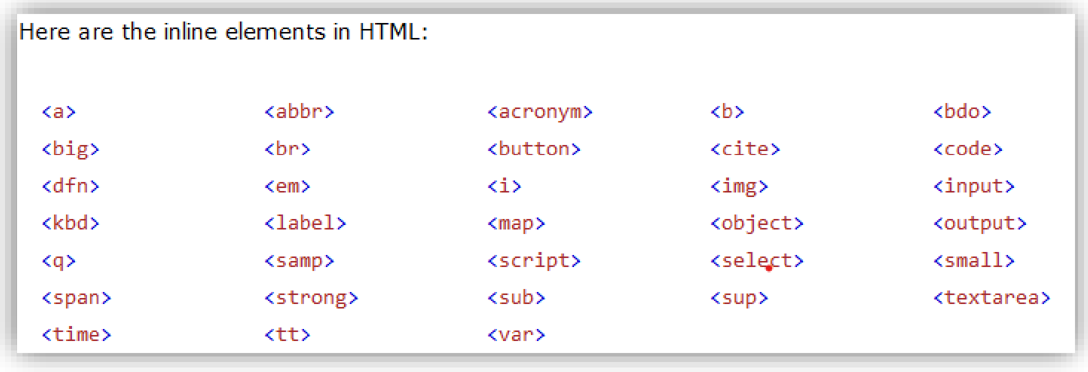
❖ The <span> Element

The **<span>** element is an inline container used to mark up a part of a text, or a part of a document.
The **<span>** element has no required attributes, but style, class and id are common.
When used together with CSS, the **<span>** element can be used to style parts of the text:



Example

```
<p>My mother has <span style="color:blue;font-weight:bold;">blue</span> eyes and my father has <span
style="color:darkolivegreen;font-weight:bold;">dark green</span> eyes.</p>
```



Here are the inline elements in HTML:

<a>	<abbr>	<acronym>	<b>	<bdo>
<big>	<br>	<button>	<cite>	<code>
<dfn>	<em>	<i>	<img>	<input>
<kbd>	<label>	<map>	<object>	<output>
<q>	<samp>	<script>	<select>	<small>
<span>	<strong>	<sub>	<sup>	<textarea>
<time>	<tt>	<var>		

HTML class Attribute:

The HTML **class** attribute is used to specify a class for an HTML element.

The class name is case sensitive!

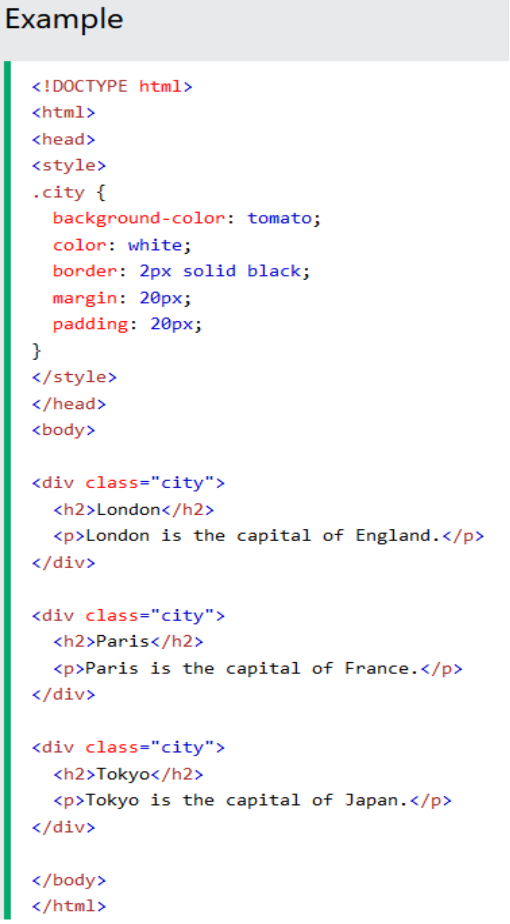
Syntax For Class To create a class; write a period (.) character, followed by a class name. Then, define the CSS properties within curly braces {}:

Using The class Attribute:

The class attribute is often used to point to a class name in a style sheet. It can also be used by a JavaScript to access and manipulate elements with the specific class name.

In the following example we have three <div> elements with a class attribute with the value of "city". All of the three **<div>** elements will be styled equally according to the .city style definition in the head section.

JavaScript can access elements with a specific class name with the getElementsByClassName() method



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
.city {
  background-color: tomato;
  color: white;
  border: 2px solid black;
  margin: 20px;
  padding: 20px;
}
</style>
</head>
<body>

<div class="city">
  <h2>London</h2>
  <p>London is the capital of England.</p>
</div>

<div class="city">
  <h2>Paris</h2>
  <p>Paris is the capital of France.</p>
</div>

<div class="city">
  <h2>Tokyo</h2>
  <p>Tokyo is the capital of Japan.</p>
</div>

</body>
</html>
```

❖ HTML id Attribute:

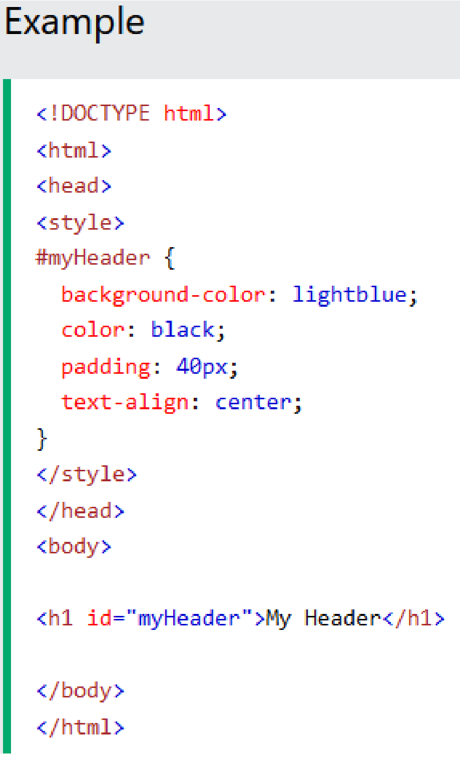
The HTML **id** attribute is used to specify a unique id for an HTML element.
You cannot have more than one element with the same id in an HTML document.

Using The id Attribute:

The **id** attribute specifies a unique id for an HTML element. The value of the id attribute must be unique within the HTML document.

The **id** attribute is used to point to a specific style declaration in a style sheet. It is also used by JavaScript to access and manipulate the element with the specific **id.**
The syntax for **id** is: write a **hash** character **(#)**, followed by an **id** name. Then, define the CSS properties within **curly braces {}.**

In the following example we have an **<h1>** element that points to the **id** name **"myHeader"**. This <h1> element will be styled according to the **#myHeader** style definition in the head section:



Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#myHeader {
  background-color: lightblue;
  color: black;
  padding: 40px;
  text-align: center;
}
</style>
</head>
<body>

<h1 id="myHeader">My Header</h1>

</body>
</html>
```

Difference Between Class and ID ?

A class name can be used by multiple HTML elements, while an id name must only be used by one HTML element within the page.

JavaScript can access an element with a specific id with the getElementById() method

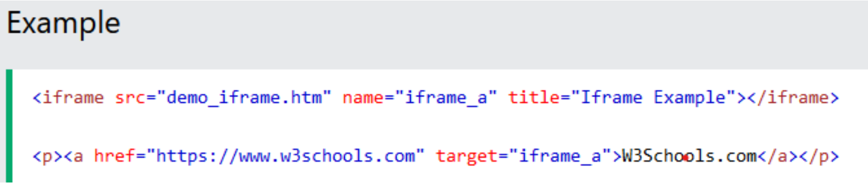
❖ HTML Iframes:

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

The HTML <**iframe**> tag specifies an inline frame.
An inline frame is used to embed another document within the current HTML document.

Syntax: <iframe src="*url*" title="*description*"></iframe>

The **target** attribute of the link must refer to the **name** attribute of the iframe.



Example

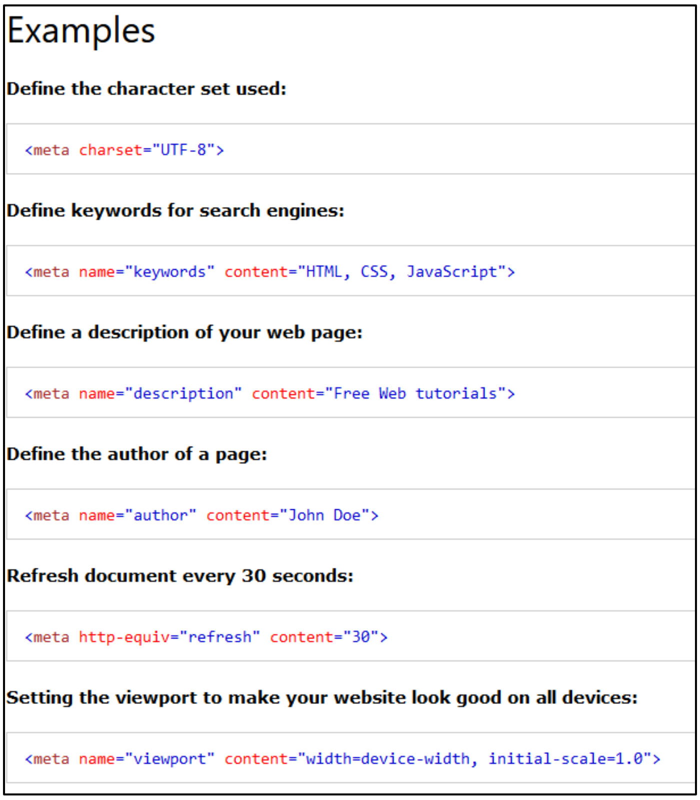
```
<iframe src="demo_iframe.htm" name="iframe_a" title="Iframe Example"></iframe>

<p><a href="https://www.w3schools.com" target="iframe_a">W3Schools.com</a></p>
```

The HTML<meta> Element:

The **<meta>** element is typically used to specify the character set, page description, keywords, author of the document, and viewport settings.

The metadata will not be displayed on the page, but is used by browsers (how to display content or reload page), by search engines (keywords), and other web services.



Examples

Define the character set used:

```
<meta charset="UTF-8">
```

Define keywords for search engines:

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

Define a description of your web page:

```
<meta name="description" content="Free Web tutorials">
```

Define the author of a page:

```
<meta name="author" content="John Doe">
```

Refresh document every 30 seconds:

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

Setting the viewport to make your website look good on all devices:

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

❖ The HTML <base> Element:

- The **<base>** element specifies the base URL and/or target for all relative URLs in a page.
- The **<base>** tag must have either an **href** or a **target** attribute present, or both. There can only be one single <base> element in a document!

<head>

<base href="https://www.example.com/"

target=”_blank”>

</head>

What is Responsive Web Design?

Responsive Web Design is about using HTML and CSS to automatically resize, hide, shrink, or enlarge, a website, to make it look good on all devices (desktops, tablets, and phones).

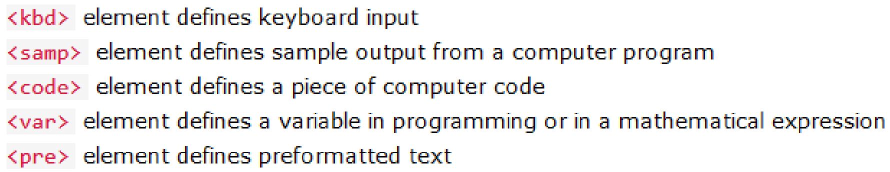
Responsive Text Size:

The text size can be set with a **"vw"** unit, which means the **"viewport width"**.
That way the text size will follow the size of the browser window:

Example: <h1 style="**font-size:10vw**">Hello World</h1>

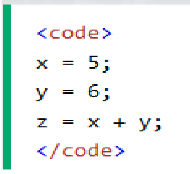
HTML Computer Code Elements:

HTML contains several elements for defining user input and computer code.

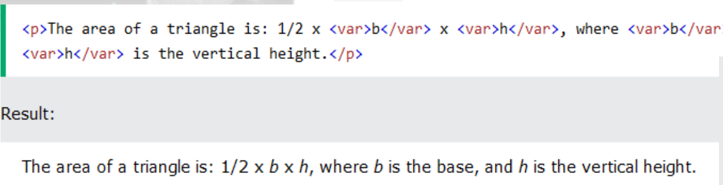


```
<kbd>  element defines keyboard input
<samp>  element defines sample output from a computer program
<code>  element defines a piece of computer code
<var>  element defines a variable in programming or in a mathematical expression
<pre>  element defines preformatted text
```

Example



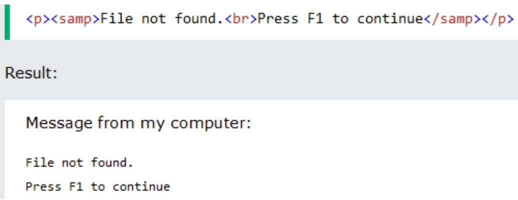
```
<code>
x = 5;
y = 6;
z = x + y;
</code>
```



```
<p>The area of a triangle is: 1/2 x <var>b</var> x <var>h</var>, where <var>b</var> is the base, and
<var>h</var> is the vertical height.</p>
```

Result:

The area of a triangle is: 1/2 x *b* x *h*, where *b* is the base, and *h* is the vertical height.

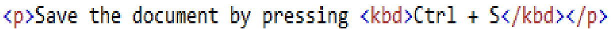


```
<p><samp>File not found.<br>Press F1 to continue</samp></p>
```

Result:

Message from my computer:

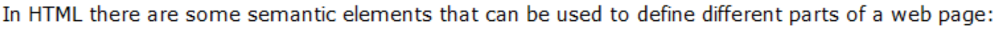
```
File not found.
Press F1 to continue
```



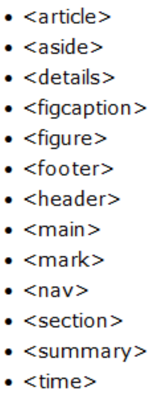
```
<p>Save the document by pressing <kbd>Ctrl + S</kbd></p>
```

Semantic Elements:

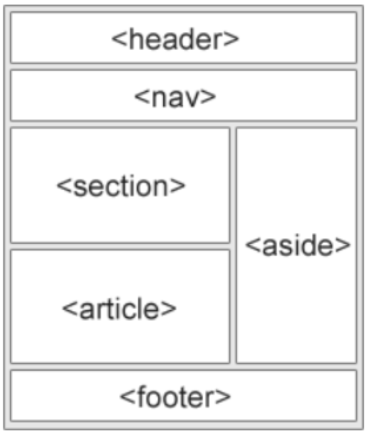
- A semantic element clearly describes its meaning to both the browser and the developer.
- Examples of **non-semantic** elements: <div> and <span> - Tells nothing about its content.
- Examples of **semantic** elements: <form>, <table>, and <article> - Clearly defines its content.



In HTML there are some semantic elements that can be used to define different parts of a web page:



- <article>
- <aside>
- <details>
- <figcaption>
- <figure>
- <footer>
- <header>
- <main>
- <mark>
- <nav>
- <section>
- <summary>
- <time>



❖ <section> Element :

The **<section>….</section>** element defines a section in a document

“A section is a thematic grouping of content, typically with a heading”.

❖ <article> Element

The **<article>……</article>** element specifies independent, self-contained content.

An article should make sense on its own, and it should be possible to distribute it independently from the rest of the web site.

Examples of where the **<article>** element can be used:

- Forum posts
- Blog posts
- User comments
- Product cards
- Newspaper articles

❖ <header> Element:

The **<header>…..</header>** element represents a container for introductory content or a set of navigational links.
A **<header>** element typically contains:

- one or more heading elements (<h1> - <h6>)
- logo or icon
- authorship information

❖ <footer> Element:

The **<footer>….</footer>** element defines a footer for a document or section.

A **<footer>** element typically contains:

- authorship information
- copyright information
- contact information
- sitemap
- back to top links
- related documents

❖ <nav> Element:

The **<nav>….</nav>** HTML element represents a section of a page whose purpose is to provide navigation links, either within the current document or to other documents. Common examples of navigation sections are menus, tables of contents, and indexes.

❖ <aside> Element:

The **<aside>…..</aside>** HTML element represents a portion of a document whose content is only indirectly related to the document's main content. Asides are frequently presented as sidebars or call-out boxes.

❖ <figure> and <figcaption> Elements:

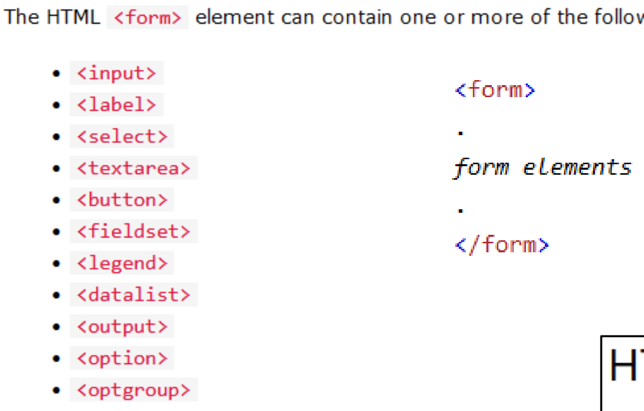
The **<figure>** tag specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.

The **<figcaption>** tag defines a caption for a <figure> element. The <figcaption> element can be placed as the first or as the last child of a <figure> element.

HTML Forms:

An HTML **form** is used to collect user input. The user input is most often sent to a server for processing.

The **<form>** element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc



The HTML <form> element can contain one or more of the following form elements:

- <input>
- <label>
- <select>
- <textarea>
- <button>
- <fieldset>
- <legend>
- <datalist>
- <output>
- <option>
- <optgroup>

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

The <input> Element:

The HTML **<input>** element is the most used form element. An **<input>** element can be displayed in many ways, depending on the type attribute.

Name Attribute for <input>:

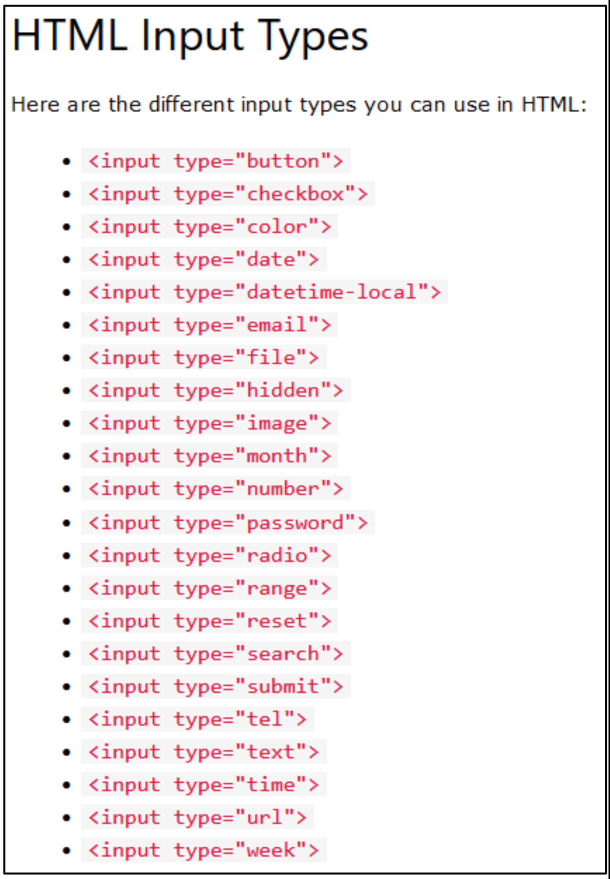
Notice that each input field must have a **name** attribute to be submitted.
If the **name** attribute is omitted, the value of the input field will not be sent at all.

The <label> Element:

The **<label>** tag defines a label for many form elements.

The **<label>** element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focuses on the input element.

The **<label>** element also helps users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the **<label>** element, it toggles the radio button/checkbox.

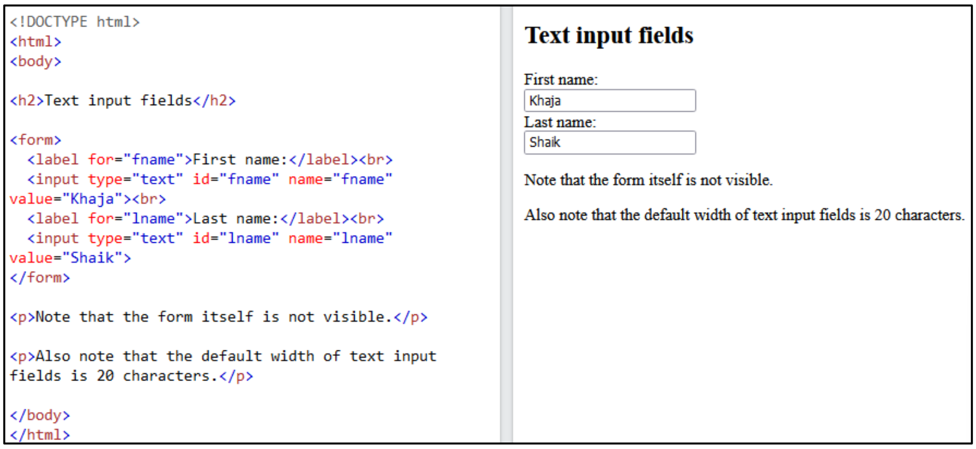


HTML Input Types

Here are the different input types you can use in HTML:

- <input type="button">
- <input type="checkbox">
- <input type="color">
- <input type="date">
- <input type="datetime-local">
- <input type="email">
- <input type="file">
- <input type="hidden">
- <input type="image">
- <input type="month">
- <input type="number">
- <input type="password">
- <input type="radio">
- <input type="range">
- <input type="reset">
- <input type="search">
- <input type="submit">
- <input type="tel">
- <input type="text">
- <input type="time">
- <input type="url">
- <input type="week">

The **for** attribute of the **<label>** tag should be equal to the **id** attribute of the **<input>** element to bind them together.



```
<!DOCTYPE html>
<html>
<body>

<h2>Text input fields</h2>

<form>
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"
value="Khaja"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname"
value="Shaik">
</form>

<p>Note that the form itself is not visible.</p>

<p>Also note that the default width of text input
fields is 20 characters.</p>

</body>
</html>
```

Text input fields

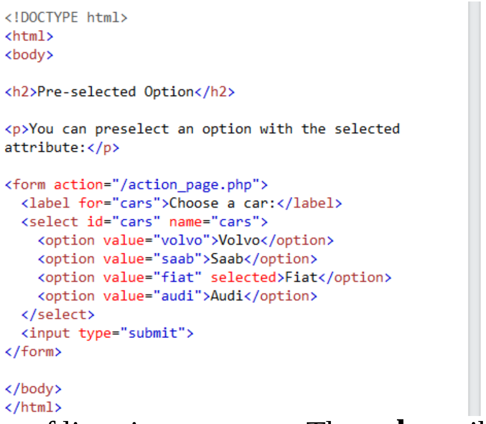
First name:
Khaja
Last name:
Shaik

Note that the form itself is not visible.

Also note that the default width of text input fields is 20 characters.

The <select> Element: The **<select>** element defines a drop-down list:

The <option> Element: it defines an option that can be selected. To define a pre-selected option, add the **selected** attribute to the option.



```
<!DOCTYPE html>
<html>
<body>

<h2>Pre-selected Option</h2>

<p>You can preselect an option with the selected
attribute:</p>

<form action="/action_page.php">
  <label for="cars">Choose a car:</label>
  <select id="cars" name="cars">
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
    <option value="fiat" selected>Fiat</option>
    <option value="audi">Audi</option>
  </select>
  <input type="submit">
</form>

</body>
</html>
```

Pre-selected Option

You can preselect an option with the selected attribute:

Use the **size** attribute to specify the number of visible values.

Use the **multiple** attribute to allow the user to select more than one value.

The <textarea> Element:

The <textarea> element defines a multi-line input field (a text area). The **rows** attribute specifies the visible number of lines in a text area. The **cols** attribute specifies the visible width of a text area

The <button> Element: The **<button>** element defines a clickable button.

Example: <button type="button" onclick="alert('Hello World!')">Click Me!</button>

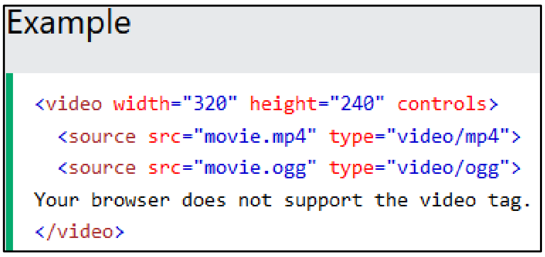
List of all <form> Attributes

Accept-charset, action, autocomplete, enctype, method, name, novalidate, rel, target.

The HTML <video> Element: To show a video in HTML, use the **<video>** element:

The **controls** attribute adds video controls, like play, pause, and volume.
It is a good idea to always include **width** and **height** attributes. If height and width are not set, the page might flicker while the video loads.
The **<source>** element allows you to specify alternative video files which the browser may choose from. The browser will use the first recognized format.

The text between the **<video>** and **</video>** tags will only be displayed in browsers that do not support the **<video>** element. Add muted after autoplay, to let your video start playing automatically(but muted).

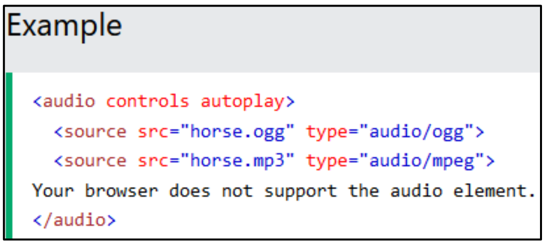


Example

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

HTML <audio>Element: its used to play an **audio** file on a web page.

To start an **audio** file automatically, use the autoplay attribute



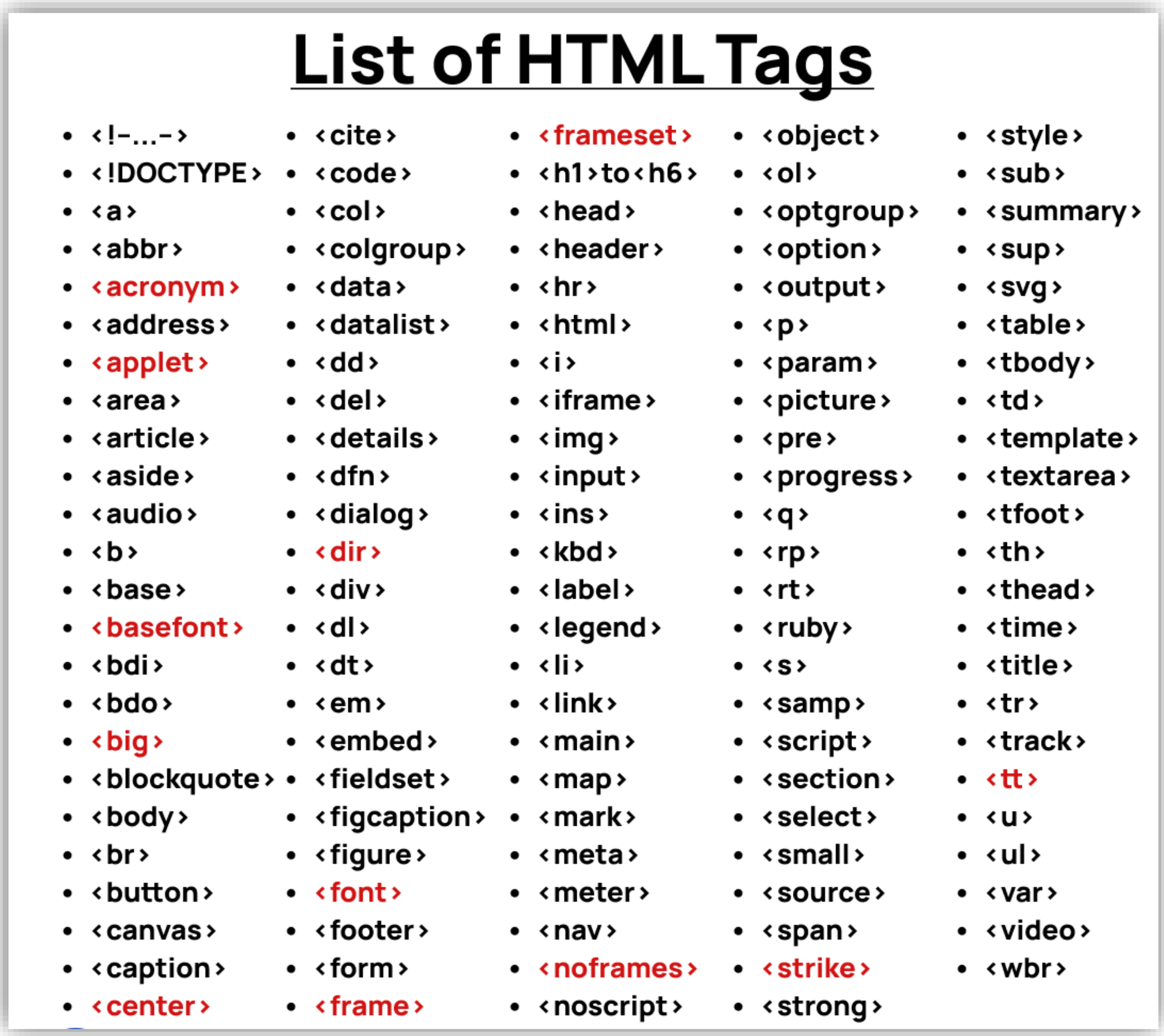
Example

```
<audio controls autoplay>
  <source src="horse.ogg" type="audio/ogg">
  <source src="horse.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</audio>
```

HTML Youtube Videos:

- Define an **<iframe>** element in your web page
- Let the **src** attribute point to the video URL
- Use the **width** and **height** attributes to specify the dimension of the player

Add **mute=1** after **autoplay=1** to let your video start playing automatically. Also use **loop=1**, **controls=0.**
<iframe width="420" height="315"
src="https://www.youtube.com/embed/tgbNymZ7vqY?autoplay=1&mute=1">
</iframe>



List of HTML Tags

- <!-...->
- <!DOCTYPE>
- <a>
- <abbr>
- <acronym>
- <address>
- <applet>
- <area>
- <article>
- <aside>
- <audio>
- <b>
- <base>
- <basefont>
- <bdi>
- <bdo>
- <big>
- <blockquote>
- <body>
-
- <button>
- <canvas>
- <caption>
- <center>
- <cite>
- <code>
- <col>
- <colgroup>
- <data>
- <datalist>
- <dd>
- <del>
- <details>
- <dfn>
- <dialog>
- <dir>
- <div>
- <dl>
- <dt>
- <em>
- <embed>
- <fieldset>
- <figcaption>
- <figure>
- <font>
- <footer>
- <form>
- <frame>
- <frameset>
- <h1>to<h6>
- <head>
- <header>
- <hr>
- <html>
- <i>
- <iframe>
- <img>
- <input>
- <ins>
- <kbd>
- <label>
- <legend>
- <li>
- <link>
- <main>
- <map>
- <mark>
- <meta>
- <meter>
- <nav>
- <noframes>
- <noscript>
- <object>
- <ol>
- <optgroup>
- <option>
- <output>
- <p>
- <param>
- <picture>
- <pre>
- <progress>
- <q>
- <rp>
- <rt>
- <ruby>
- <s>
- <samp>
- <script>
- <section>
- <select>
- <small>
- <source>
- <span>
- <strike>
- <strong>
- <style>
- <sub>
- <summary>
- <sup>
- <svg>
- <table>
- <tbody>
- <td>
- <template>
- <textarea>
- <tfoot>
- <th>
- <thead>
- <time>
- <title>
- <tr>
- <track>
- <tt>
- <u>
- <ul>
- <var>
- <video>
- <wbr>