

# HTML

- `<html>`  
`<body>`

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

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

`</body>`

`</html>`

- **What is HTML?**
- HTML is a language for describing web pages.
- HTML stands for **Hyper Text Markup Language**
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses **markup tags** to describe web pages
  
- **HTML Tags**
- HTML markup tags are usually called HTML tags
- HTML tags are keywords surrounded by **angle brackets** like <html>
- HTML tags normally **come in pairs** like <b> and </b>
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- Start and end tags are also called **opening tags** and **closing tags**

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

- `<html>`  
`<body>`

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

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

`</body>`

`</html>`

- **Example Explained**

- The text between `<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

- **HTM or HTML Extension?**
- When you save an HTML file, you can use either the .htm or the .html extension.
- With new software it is perfectly safe to use .html

- **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 provided as an attribute.

You will learn about attributes

- **HTML Images**
- HTML images are defined with the <img> tag.
- **Example**
- ``
- **Note:** The name and the size of the image are provided as attributes.

- **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>
<a href="default.htm" >	This is a link	</a>

\* 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**
- end tag is often called the **closing tag**.

- **Nested HTML Elements**
- Most HTML elements can be nested (can contain other HTML elements).
- HTML documents consist of nested HTML elements.
- **HTML Document Example**
- `<html>`
- `<body>`  
`<p>This is my first paragraph</p>`  
`</body>`
- `</html>`
- The example above contains 3 HTML elements.

- **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 paragraph)

- **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)

- **Don't Forget the End Tag**
- Most browsers will display HTML correctly even if you forget the end tag:
- `<p>`This is a paragraph  
`<p>`This is a 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.

- **Empty HTML Elements**
- HTML elements without content are called empty elements. Empty elements can be closed in the start tag.
- `<br>` is an empty element without a closing tag (it defines a line break).
- In future versions of HTML, all elements must be closed.
- Adding a slash to the start tag, like `<br />`, is the proper way of closing empty elements, accepted by HTML

- **HTML Attributes**
- Attributes provide additional information about HTML elements.
- **HTML Attributes**
- HTML elements can have **attributes**
- Attributes provide **additional information** about the 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 provided as an 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.
- In some rare situations, like 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.
- Newer versions of (X)HTML will demand lowercase attributes

- **HTML Headings**
- Headings are important in HTML documents.
- **HTML Headings**
- Headings are defined with the <h1> to <h6> tags.
- <h1> defines the largest heading. <h6> defines the smallest heading.
- **Example**
- <h1>This is a heading</h1>  
<h2>This is a heading</h2>  
<h3>This is a heading</h3>
- **Note:** Browsers automatically adds an empty line before and after headings
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_headers](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_headers)

- **HTML Rules (Lines)**

- The `<hr />` tag is used to create an horizontal rule (line).

- **Example**

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

`<hr />`

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

`<hr />`

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

- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_hr](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_hr)

- **HTML Text Formatting**
- **HTML Formatting Tags**
- HTML uses tags like `<b>` and `<i>` for formatting output, like **bold** or *italic* text.
- These HTML tags are called formatting tags.
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_formattingch](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_formattingch)

- **HTML Comments**

- Comments can be inserted in 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 -->`

- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_comment](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_comment)

- **How to View HTML Source**
- Have you ever seen a Web page and wondered "Hey! How did they do that?"
- To find out, click the VIEW option in your browser's toolbar and select SOURCE or PAGE SOURCE. This will open a window that shows you 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 adds an empty line before and after paragraphs.
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_paragraphs1](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_paragraphs1)

- **HTML Line Breaks**

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

- **Example**

- `<p>This is<br />a para<br />graph with line breaks</p>`
- The `<br />` element is an empty HTML element. It has no end tag
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_paragraphs](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_paragraphs)

- **HTML Styles**
- **The HTML Style Attribute**
- The purpose of the style attribute is:
- **To provide a common way to style all HTML elements.**
- Styles was introduced with HTML 4, as the new and preferred way to style HTML elements. With HTML styles, styles can be added to HTML elements directly by using the style attribute, or indirectly by in separate style sheets (CSS files).

- **HTML Style Examples**
- `style="background-color:yellow"`
- `style="font-size:10px"`
- `style="font-family:Times"`
- `style="text-align:center"`

- **Style Examples:**
- **Background Color**
- **<body style="background-color:yellow">**
- The style attribute defines a style for the <body> element.
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_bodybgstyle](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_bodybgstyle)

- **Font Family, Color and Size**
- **<p style="font-family:courier new; color:red; font-size:20px">**
- The style attribute defines a style for the <p> element
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_newfont](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_newfont)

- **Text Alignment**
- **<h1 style="text-align:center">**
- The style attribute defines a style for the <h1> element.
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_headeralign](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_headeralign)

# HTML Links

- A link is the "address" to a document (or a resource) on the web
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_links](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_links)

- **The target Attribute**
- The **target attribute** defines **where** the linked document will be opened.
- The code below will open the document in a new browser window:
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml link target](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_link_target)

# HTML Images

- **The Image Tag and the Src Attribute**
- In HTML, images are defined with the `<img>` tag.
- The `<img>` tag is empty, which means that it contains attributes only and it 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 on your page.

- The syntax of defining an image:
- ``
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_images](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_images)
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_images2](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_images2)

- **The Alt Attribute**

- The alt attribute is used to define an "alternate text" for an image. The value of the alt attribute is an author-defined text:
- ``

- The "alt" attribute tells the reader what he or she is missing on a page if the browser can't load images. The browser will then display the alternate text instead of the image. It is a good practice to include the "alt" attribute for each image on a page, to improve the display and usefulness of your document for people who have text-only browsers.

- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_bodybgimg](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_bodybgimg)
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_image\\_float](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_image_float)
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_images\\_adj](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_images_adj)
- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_imglink](http://www.w3schools.com/html/tryit.asp?filename=tryhtml_imglink)