

HTML Basic

HTML Documents

- All HTML documents must start with a document type declaration: `<!DOCTYPE html>`.
- The HTML document itself begins with `<html>` and ends with `</html>`.
- The visible part of the HTML document is between `<body>` and `</body>`.

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

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

My First Heading

My first paragraph.

HTML Headings

- HTML headings are defined with the `<h1>` to `<h6>` tags.
- `<h1>` defines the most important heading. `<h6>` defines the least important heading:

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

<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<h5>This is heading 5</h5>
<h6>This is heading 6</h6>

</body>
</html>
```

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

HTML Paragraphs

- HTML paragraphs are defined with the `<p>` tag:

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

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

</body>
</html>
```

This is a paragraph.

This is another paragraph.

HTML Links

- HTML links are defined with the `<a>` tag:

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

<h2>HTML Links</h2>
<p>HTML links are defined with the a tag:</p>

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

</body>
</html>
```

HTML Links

HTML links are defined with the a tag:

[This is a link](https://www.w3schools.com)

- The link's destination is specified in the `href` attribute.
- Attributes are used to provide additional information about HTML elements.
- You will learn more about attributes in a later chapter.

HTML Images

- HTML images are defined with the `` tag.
- The source file (`src`), alternative text (`alt`), `width`, and `height` are provided as attributes:

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

<h2>HTML Images</h2>
<p>HTML images are defined with the img tag:</p>



</body>
</html>
```

HTML Images

HTML images are defined with the img tag:



HTML Buttons

- HTML buttons are defined with the <button> tag:

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

<h2>HTML Buttons</h2>
<p>HTML buttons</p>

<button>Click me</button>

</body>
</html>
```

HTML Buttons

HTML buttons

Click me

HTML Lists

- HTML lists are defined with the `` (unordered/bullet list) or the `` (ordered/numbered list) tag, followed by `` tags (list items):

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

<h2>An Unordered HTML List</h2>

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

<h2>An Ordered HTML List</h2>

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

</body>
</html>
```

An Unordered HTML List

- Coffee
- Tea
- Milk

An Ordered HTML List

1. Coffee
2. Tea
3. Milk

HTML Elements

HTML Elements

- An HTML element usually consists of a **start** tag and **end** tag, with the content inserted in between:

```
<tagname>Content goes here...</tagname>
```

- The HTML **element** is everything from the start tag to the end tag:

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

- HTML elements with no content are called empty elements. Empty elements do not have an end tag, such as the **
** element (which indicates a line break)

Start tag	Element content	End tag
<h1>	My First Heading	</h1>
<p>	My first paragraph.	</p>

Nested HTML Elements

- HTML elements can be nested (elements can contain elements).
- All HTML documents consist of nested HTML elements.
- This example contains four HTML elements:

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

    <h1>My First Heading</h1>
    <p>My first paragraph.</p>

  </body>
</html>
```

Explained <html>

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

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

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

Explained <body>

- The <body> element defines the document body.
- It has a start tag <body> and an end tag </body>.
- The element content is two other HTML elements (<h1> and <p>).

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

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

Explained <h1>

- The <h1> element defines a **heading**.
- It has a **start** tag <h1> and an **end** tag </h1>.
- The element **content** is: My First Heading.

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

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

Explained <p>

- The <p> element defines a **paragraph**.
- It has a **start** tag <p> and an **end** tag </p>.
- The element **content** is: My first paragraph.

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

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```


Do Not Forget the End Tag

- Some HTML elements will display correctly, even if you forget the end tag:

```
<html>
<body>

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

</body>
</html>
```

This is a paragraph.

This is a paragraph.

- The example above works in all browsers, because the closing tag is considered optional.
- **Never rely on this. It might 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):

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

<p>This is a <br> paragraph with a line break.</p>

</body>
</html>
```

This is a
paragraph with a line break.

Use Lowercase Tags

- HTML tags are not case sensitive: <P> means the same as <p>.
- The HTML5 standard does not require lowercase tags, but W3C **recommends** lowercase in HTML.
- At W3Schools we always use lowercase tags.

HTML Attributes

HTML Attributes

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

The href Attribute

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

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

<h2>The href Attribute</h2>
<p>HTML links are defined with the a
tag. The link address is specified in
the href attribute:</p>

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

</body>
</html>
```

The href Attribute

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

[This is a link](https://www.w3schools.com)

The src Attribute

- HTML images are defined with the `` tag.
- The filename of the image source is specified in the `src` attribute:

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

<h2>The src Attribute</h2>



</body>
</html>
```

The src Attribute



The width and height Attributes

- Images in HTML have a set of size attributes, which specifies the width and height of the image:
- The image size is specified in pixels: width="200" means 200 pixels wide.

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

<h2>Size Attributes</h2>
<p>Images in HTML have a set of size
attributes, which specifies the width and
height of the image:</p>



</body>
</html>
```

Size Attributes

Images in HTML have a set of size attributes, which specifies the width and height of the image:



The alt Attribute


- The **alt** attribute specifies an alternative text to be used, when an image cannot be displayed.
- The **alt** attribute is also useful if the image does not exist:

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



<p>If we try to display an image that does
not exist, the value of the alt attribute
will be displayed instead. </p>

</body>
</html>
```

 Girl with a jacket

If we try to display an image that does not exist, the value of the alt attribute will be displayed instead.

The style Attribute

- The **style** attribute is used to specify the styling of an element, like color, font, size etc.

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

<h2>The style Attribute</h2>
<p>The style attribute is used to specify
the styling of an element, like color:</p>

<p style="color:red">I am a paragraph.</p>

</body>
</html>
```

The style Attribute

The style attribute is used to specify the styling of an element, like color:

I am a paragraph.

The lang Attribute

- The language of the document can be declared in the `<html>` tag.
- The language is declared with the `lang` attribute.
- Declaring a language is important for accessibility applications (screen readers) and search engines:

```
<!DOCTYPE html>  
<html lang="en-US">  
<body>
```

- The first two letters specify the language (en). If there is a dialect, use two more letters (US).
- Use “zh-Hant” for Chinese (Traditional)

The title Attribute

- Here, a **title** attribute is added to the `<p>` element. The value of the title attribute will be displayed as a tooltip when you mouse over the paragraph:

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

<h2 title="I'm a header">The title
Attribute</h2>

<p title="I'm a tooltip">
Mouse over this paragraph, to display the
title attribute as a tooltip.
</p>

</body>
</html>
```

The title Attribute

Mouse over this paragraph, to display the title attribute as a tooltip.

I'm a tooltip

W3Schools Suggest: Use Lowercase Attributes

- The HTML5 standard does not require lowercase attribute names.
- The title attribute can be written with uppercase or lowercase like **title** or **TITLE**.
- W3C **recommends** lowercase in HTML.
- At W3Schools we always use lowercase attribute names.

W3Schools Suggest: Quote Attribute Values

- The HTML5 standard does not require **quotes** around attribute values.
- The **href** attribute, demonstrated above, can be written without quotes:

Bad

```
<a href=https://www.w3schools.com>
```

Good

```
<a href="https://www.w3schools.com">
```

- W3C recommends quotes in HTML.
- Sometimes it is necessary to use quotes. This example will not display the title attribute correctly, because it contains a space:

```
<p title=About W3Schools>
```

Single or Double Quotes?

- Double quotes around attribute values are the most common in HTML, but single quotes can also be used.
- In some situations, when the attribute value itself contains double quotes, it is necessary to use single quotes, or vice versa:

```
<p title='John "ShotGun" Nelson'>John with double quotes</p>  
<p title="John 'ShotGun' Nelson">John with single quotes</p>
```

John with double quotes

John "ShotGun" Nelson

John with single quotes

John 'ShotGun' Nelson

Summary

- All HTML elements can have **attributes**
- The **title** attribute provides additional "tool-tip" information
- The **href** attribute provides address information for links
- The **width** and **height** attributes provide size information for images
- The **alt** attribute provides text for screen readers
- At W3Schools we always use **lowercase** attribute names
- At W3Schools we always **quote** attribute values with double quotes

A complete list of all attributes for each HTML element

- https://www.w3schools.com/tags/ref_attributes.asp

Exercise 03

- <https://reurl.cc/QbqvEZ>

Web Programming Exercise 03

總分 3/3 ?

Name

Jenny

Student ID

9900990

✓ 1. Choose the correct HTML element for the largest heading: 1/1

☐ <head>

☐ <h6>

☒ <h1> ✓

☐ <heading>

Just show that you are all correct!