

# 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

- 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 `<img>` 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 `<ul>` (unordered/bullet list) or the `<ol>` (ordered/numbered list) tag, followed by `<li>` 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 **<br>** element (which indicates a line break)

<b>Start tag</b>	<b>Element content</b>	<b>End tag</b>
<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.
- `<br>` is an empty element without a closing tag (the `<br>` 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 `<img>` 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

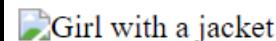
- The **alt** attribute specifies an alternative text to be used, when an image cannot be displayed.
- The **alt** attribute is also useful if the image does not exist:

```
<!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>
```



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](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!