

Chapter 4 : - HTML

What is HTML?

HTML is a **markup** language for **describing** web documents (web pages).

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- A markup language is a set of **markup tags**
- HTML documents are described by **HTML tags**
- Each HTML tag **describes** different document content

HTML Example

A small HTML document:

```
<!DOCTYPE html>
<html>
<head>
  <title>Page Title</title>
</head>

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

</html>
```

Example Explained

- The **DOCTYPE** declaration defines the document type to be HTML
- The text between **<html>** and **</html>** describes an HTML document
- The text between **<head>** and **</head>** provides information about the document
- The text between **<title>** and **</title>** provides a title for the document
- The text between **<body>** and **</body>** describes the visible page content
- The text between **<h1>** and **</h1>** describes a heading
- The text between **<p>** and **</p>** describes a paragraph

Using this description, a web browser can display a document with a heading and a paragraph.

HTML Tags

HTML tags are **keywords** (tag names) surrounded by **angle brackets**:

`<tagname>content</tagname>`

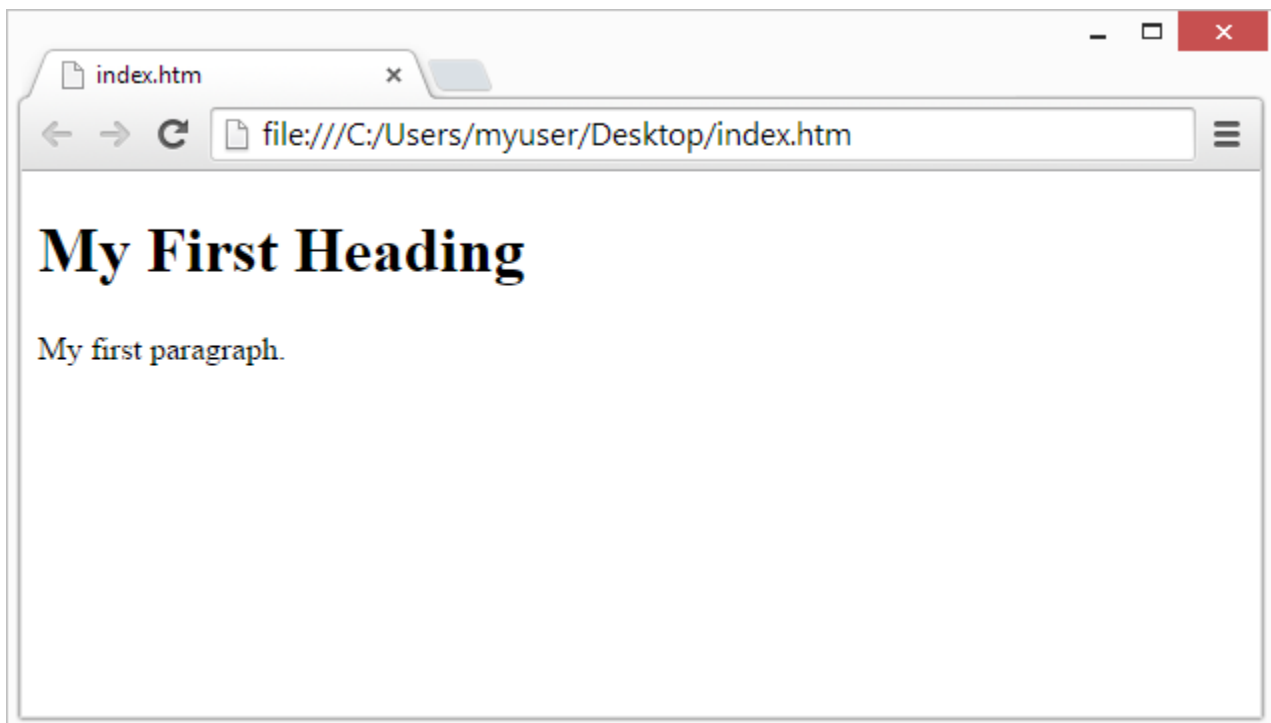
- HTML tags normally come **in pairs** like `<p>` and `</p>`
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- The end tag is written like the start tag, but with a **slash** before the tag name

The start tag is often called the **opening tag**. The end tag is often called the **closing tag**.

Web Browsers

The purpose of a web browser (Chrome, IE, Firefox) is to read HTML documents and display them.

The browser does not display the HTML tags, but uses them to determine how to display the document:



HTML Page Structure

Below is a visualization of an HTML page structure:

```
<html>
<head>
<title>Page title</title>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>
</body>
</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>
<h4>This is a heading</h4>
<h5>This is a heading</h5>
<h6>This is a heading</h6>
```

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>** ie **anchor** tag:

Example

```
<a href="http://www.google.com">This is a link</a>
```

The link address is specified in the **href attribute**.

Attributes are used to provide additional information about HTML elements.

HTML Images

HTML images are defined with the **** tag.

The source file (**src**), alternative text (**alt**), and size (**width** and **height**) are provided as **attributes**:

Example

```

```

HTML Tables

HTML Table Example

	First Name	Last Name	Points
1	Eve	Jackson	94
2	John	Doe	80
3	Adam	Johnson	67
4	Jill	Smith	50

Defining HTML Tables

Example

```
<table style="width:100%">
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```

Example explained:

Tables are defined with the **<table>** tag.

Tables are divided into **table rows** with the **<tr>** tag.

Table rows are divided into **table data** with the **<td>** tag.

A table row can also be divided into **table headings** with the **<th>** tag.

Table data **<td>** are the data containers of the table.

They can contain all sorts of HTML elements like text, images, lists, other tables, etc.

An HTML Table with a Border Attribute

If you do not specify a border for the table, it will be displayed without borders.

A border can be added using the border attribute:

Example

```
<table border="1" style="width:100%">
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```

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

HTML Text Formatting Elements

Text Formatting

This text is bold

This text is italic

This text is italic

This is ^{superscript}

HTML Formatting Elements

In the previous chapter, you learned about HTML **styling**, using the HTML **style attribute**.

HTML also defines special **elements**, for defining text with a special **meaning**.

HTML uses elements like `` and `<i>` for formatting output, like **bold** or *italic* text.

Formatting elements were designed to display special **types of text**:

- Bold text
- Underline text
- Italic text
- Emphasized text
- Marked text
- Small text
- Deleted text

- Inserted text
- Subscripts
- Superscripts

HTML Bold and Strong Formatting

The HTML `` element defines **bold** text, without any extra importance.

Example

```
<p>This text is normal.</p>
```

```
<p><b>This text is bold</b>.</p>
```

The HTML `` element defines **strong** text, with added semantic "strong" importance.

Example

```
<p>This text is normal.</p>
```

```
<p><strong>This text is strong</strong>.</p>
```

HTML *Italic* and *Emphasized* Formatting

The HTML `<i>` element defines *italic* text, without any extra importance.

Example

```
<p>This text is normal.</p>
```

```
<p><i>This text is italic</i>.</p>
```


The HTML `` element defines *emphasized* text, with added semantic importance.

Example

```
<p>This text is normal.</p>
```

```
<p><em>This text is emphasized</em>.</p>
```

Browsers display `` as ``, and `` as `<i>`.

However, there is a difference in the meaning of these tags: `` and `<i>` defines bold and italic text, but `` and `` means that the text is "important".

HTML Small Formatting

The HTML `<small>` element defines **small** text:

Example

```
<h2>HTML <small>Small</small> Formatting</h2>
```

HTML Marked Formatting

The HTML `<mark>` element defines **marked** or highlighted text:

Example

```
<h2>HTML <mark>Marked</mark> Formatting</h2>
```

HTML Deleted Formatting

The HTML `` element defines **deleted** (removed) of text.

Example

`<p>My favorite color is blue red.</p>`

HTML Inserted Formatting

The HTML `<ins>` element defines **inserted** (added) text.

Example

`<p>My favorite <ins>color</ins> is red.</p>`

HTML Subscript Formatting

The HTML `<sub>` element defines **subscripted** text.

Example

`<p>This is _{subscripted} text.</p>`

HTML Superscript Formatting

The HTML `<sup>` element defines **superscripted** text.

Example

`<p>This is ^{superscripted} text.</p>`

Definition and Usage

The tag specifies the font face, font size, and color of text.

```
<font size="3" color="red">This is some text!</font>
```

```
<font face="verdana" color="green">This is some text!</font>
```