

HTML (Hyper Text Markup Language)

Introduction Part I



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

```
<!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

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 Browser

- The purpose of a web browser (Chrome, IE, Firefox, Safari) 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

<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>



The <!DOCTYPE> Declaration

- The <!DOCTYPE> declaration helps the browser to display a web page correctly.
- There are different document types on the web.
- To display a document correctly, the browser must know both type and version.
- The doctype declaration is not case sensitive. All cases are acceptable:

```
<!DOCTYPE html>
```

```
<!DOCTYPE HTML>
```

```
<!doctype html>
```

```
<!Doctype Html>
```


HTML Documents

- All HTML documents must start with a 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>
```

HTML Headings

- HTML headings are defined with the `<h1>` to `<h6>` tags:

```
<h1>This is a heading</h1>
```

```
<h2>This is a heading</h2>
```

```
<h3>This is a heading</h3>
```

Heading Level 1

Heading Level 2

Heading Level 3

Heading Level 4

Heading Level 5

Heading Level 6



HTML Headings

- Headings are defined with the `<h1>` to `<h6>` tags.
- `<h1>` defines the most important heading. `<h6>` defines the least important heading.
- Search engines use your headings to index the structure and content of your web pages.
- Users skim your pages by its headings. It is important to use headings to show the document structure.
- h1 headings should be main headings, followed by h2 headings, then the less important h3, and so on.



HTML Paragraphs

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

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

- Groups sentences and sections of text together.
- Block Display – Configures empty space above and below

HTML Paragraphs

- The HTML `<p>` element defines a **paragraph**.
- The browser will remove extra spaces and extra lines when the page is displayed.
- Any number of spaces, and any number of new lines, count as **only one space**.

```
<p>
```

```
This paragraph  
contains a lot of lines  
in the source code,  
but the browser  
ignores it.
```

```
</p>
```

```
<p>
```

```
This paragraph  
contains          a lot of spaces  
in the source      code,  
but the            browser  
ignores it.
```

```
</p>
```

HTML Line Breaks

- The HTML `
` element defines a **line break**.
- Use `
` if you want a line break (a new line) without starting a new paragraph:

```
<p>This is<br>a para<br>graph with line breaks</p>
```



The Poem Problem

- This poem will display as one line:

```
<p>  
  My Bonnie lies over the ocean.  
  
  My Bonnie lies over the sea.  
  
  My Bonnie lies over the ocean.  
  
  Oh, bring back my Bonnie to me.  
</p>
```

The HTML `<pre>` Element

- The HTML `<pre>` element defines preformatted text.
- The text inside a `<pre>` element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks:

`<pre>`

My Bonnie lies over the ocean.

My Bonnie lies over the sea.

My Bonnie lies over the ocean.

Oh, bring back my Bonnie to me.

`</pre>`

Line Break Element

- Line Break element

- Stand-alone, or void tag

*...text goes here
*
This starts on a new line....

- Causes the next element or text to display on a new line



HTML Horizontal Rules

- The `<hr>` tag creates a horizontal line in an HTML page.
- The `hr` element can be used to separate content:

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



Blockquote Element

- Blockquote element
 - Indents a block of text for special emphasis

<blockquote>

...text goes here...

</blockquote>

- Block Display – Configures empty space above and below

HTML Elements

- HTML elements are written with a **start** tag, with an **end** tag, with the **content** in between:

```
<tagname>content</tagname>
```

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

```
<p>My first HTML 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 4 HTML elements:

```
<!DOCTYPE html>  
<html>  
  <body>  
  
    <h1>My First Heading</h1>  
  
    <p>My first paragraph.</p>  
  
  </body>  
</html>
```

Phrase Elements

- Indicate the context and meaning of the text

Element	Example	Usage
<code></code>	bold text	Text that has no extra importance but is styled in bold font by usage and convention
<code></code>	emphasized text	Causes text to be emphasized in relation to other text; usually displayed in italics
<code><i></code>	italicized text	Text that has no extra importance but is styled in italics by usage and convention
<code><mark></code>	mark text	Text that is highlighted in order to be easily referenced (HTML5 only)
<code><small></code>	small text	Legal disclaimers and notices (“fine print”) displayed in small font-size
<code></code>	strong text	Strong importance; causes text to stand out from surrounding text; usually displayed in bold
<code><sub></code>	_{sub} text	Displays a subscript as small text below the baseline
<code><sup></code>	^{sup} text	Displays a superscript as small text above the baseline

Proper Nesting

CODE:

```
<p><i>Call for a free quote for your web development needs:  
<strong>888.555.5555 </strong></i></p>
```

BROWSER DISPLAY:

*Call for a free quote for your web development needs: **888.555.5555***



Exercises

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

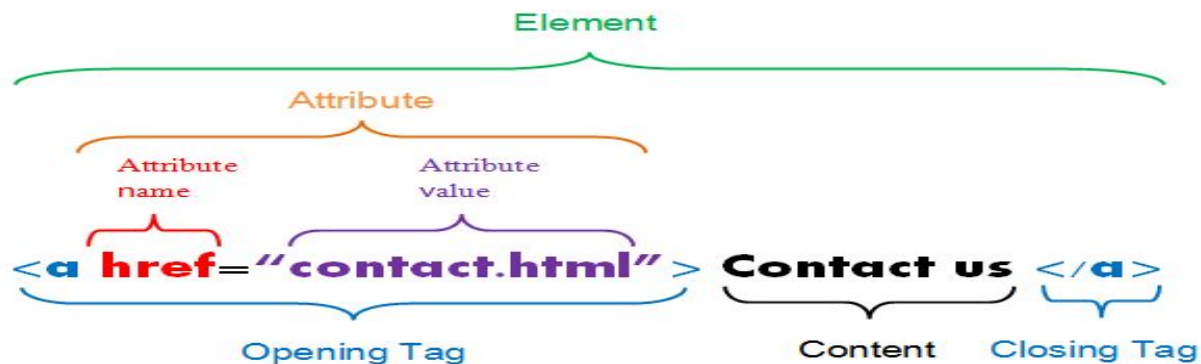
```
<p>London is the capital city of England. It is
the most populous city in the United Kingdom,
with a metropolitan area of over 13 million
inhabitants.</p>
</body>
</html>
```

- 1- Add Heading before the paragraph
- 2- Add horizontal rule between heading and paragraph.
- 3-Add six headings to the document with the text "Hello".
- 4- Mark up the following text with appropriate tags:
"Universal Studios Presents" is the most important content.
"Jurassic Park" is the next most important content.
"About" is of lesser importance than Jurassic Park.
The last sentence is just a paragraph.

HTML Links

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

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



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**:

```

```



Exercise

Lets do this!

We're looking for an HTML and CSS developer




For our client, The Cat Factory, **we need a skilled web developer in HTML and CSS**. We offer a competitive salary, a bag of cat food, and toys.

Don't wait, apply now! Our crazy team is waiting for you right meow!

Validate your code!

<http://validator.w3.org/>

 **Markup Validation Service**
Check the markup (HTML, XHTML, ...) of Web documents

Validate by **URI**

Validate by **File Upload**

Validate by **Direct Input**

Validate by URI

Validate a document online:

Address:

[▶ More Options](#)

Check

This validator checks the [markup validity](#) of Web documents in HTML, XHTML, SMIL, MathML, etc. If you wish to validate [CSS stylesheets](#), [MobileOK content](#), or to [find broken links](#), there are [other validators and tools](#) available. As an [alternate validator](#).

HTML Lists

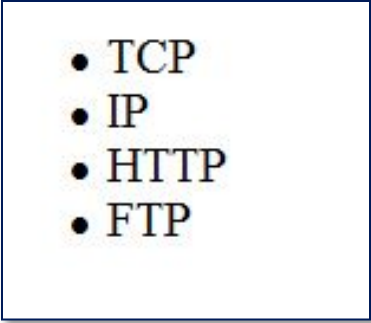
- Unordered List
- Ordered List
- Description List
formerly called a definition list

HTML List Tags

Tag	Description
<u></u>	Defines an unordered list
<u></u>	Defines an ordered list
<u></u>	Defines a list item
<u><dl></u>	Defines a description list
<u><dt></u>	Defines a term in a description list
<u><dd></u>	Describes the term in a description list

Unordered List

- Displays a bullet, or list marker, before each entry in the list.
- ``
Contains the unordered list
- ``
Contains an item in the list

- 
- TCP
 - IP
 - HTTP
 - FTP

Unordered List Example

TCP

IP

HTTP

FTP

- TCP
- IP
- HTTP
- FTP

Ordered List

- Displays a numbering or lettering system to itemize the information contained in the list
- ``
Contains the ordered list
 - type attribute determines numbering scheme of list, default is numerals
- ``
Contains an item in the list

Ordered List Example

``

`Apply to school`

`Register for course`

`Pay tuition`

`Attend course`

``

1. Apply to school
2. Register for course
3. Pay tuition
4. Attend course

Description List

Useful to display a list of terms and descriptions or a list of FAQ and answers

- `<dl>`
Contains the description list
- `<dt>`
Contains a term/phrase/sentence
Configures empty space above and below the text
- `<dd>`
Contains a description of the term/phrase/sentence
 - Indents the text
 - Configures empty space above and below the text

Description List Example

<dl>

<dt>IP</dt>

<dd>Internet Protocol</dd>

<dt>TCP</dt>

<dd>Transmission Control Protocol</dd>

</dl>

IP

Internet Protocol

TCP

Transmission Control Protocol

Ordered HTML List - The Type Attribute

The type attribute of the `` tag, defines the type of the list item marker:

Type	Description
<code>type="1"</code>	The list items will be numbered with numbers (default)
<code>type="A"</code>	The list items will be numbered with uppercase letters
<code>type="a"</code>	The list items will be numbered with lowercase letters
<code>type="I"</code>	The list items will be numbered with uppercase roman numbers
<code>type="i"</code>	The list items will be numbered with lowercase roman numbers

Ordered List - Example

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

<h2>List of our Cafe drinks</h2>

<ol type="A">
  <li>Spanish Latte</li>
  <li>Jasmine Tea</li>
  <li>Americano</li>
  <li>Iced Shaken espresso</li>
</ol>

</body>
</html>
```

List of our Cafe drinks

- A. Spanish Latte
- B. Jasmine Tea
- C. Americano
- D. Iced Shaken espresso

Special Characters

- Display special characters such as quotes, copyright symbol, etc.

Character	Code
©	©
<	<
>	>
&	&
	



Div Element

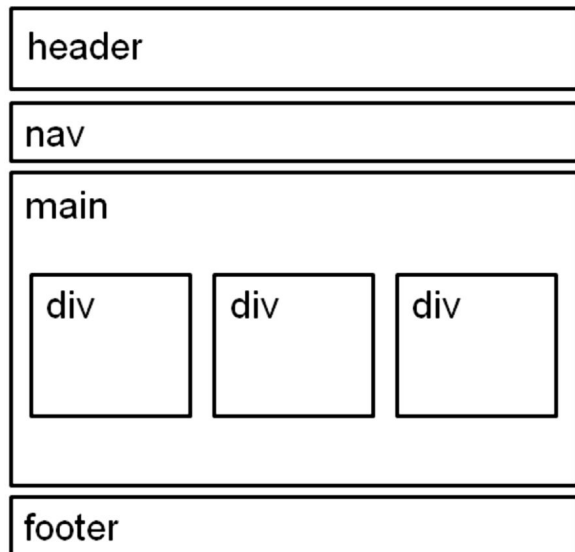
-
-
-
-
- Configures a structural block area or “division” on a web page with empty space above and below.

Can contain other block display elements, including other div elements

```
<div>Home Services Contact</div>
```



HTML5 Structural Elements



HTML5 Structural Elements

`<body>`

`<header>` *document headings go here*

`</header>`

`<nav>` *main navigation goes here* `</nav>`

`<main>` *main content goes here* `</main>`

`<footer>` *document footer information goes here* `</footer>`

`</body>`



Anchor Element

- Specifies a hyperlink reference (href) to a file
- Text between the `<a>` and `` is displayed on the web page.

`Contact Us`

- href Attribute
 - Indicates the file name or URL



Absolute & Relative Hyperlinks

- Absolute link
 - Link to a different website

`Yahoo`

- Relative link
 - Link to pages on your own site

`Home`

E-Mail Hyperlink

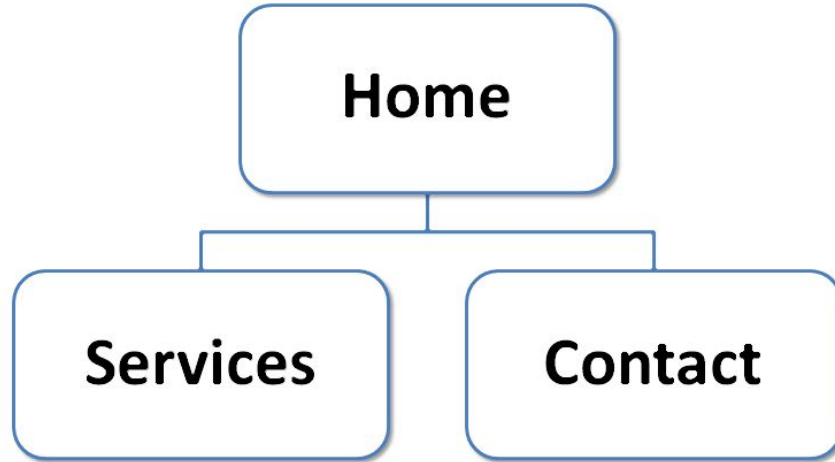
- Automatically launch the default mail program configured for the browser
- If no browser default is configured,
- a message is displayed

`me@gmail.com`



Hyperlinks

- Hands-On Practice





Exercise!

