More on HTML

Now that the HTML basics are over, we're now moving on to some advanced HTML topics. You can hear about several new tags and attributes often used in additional topics. All this will broaden the prospects of development at the front end.

<DIV> Tag

The ** tag** creates a **block level division or segment** in an HTML document. is a **block element** It also **serves as a container** for **other HTML elements**. The section **doesn't require any necessary attributes.** When working with CSS, is **frequently used to lay out a web page**.

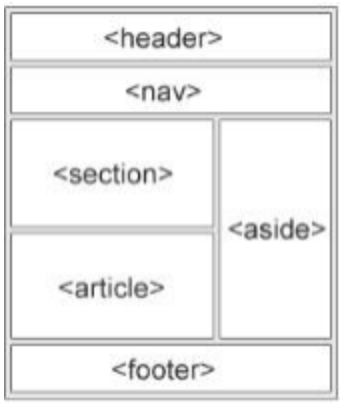
SEMANTIC ELEMENTS

Semantic HTML is an HTML which, rather than a presentation to the website, provides context. For instance, a <p> tag says the text contains a paragraph.

Semantic HTML tags provide the content of tags which go beyond the way they look on a page. For example, text inserted under the **<code> tag** is **recognised as a coding language by the browser immediately.**

Non-semantic examples: and - says nothing about their content.
Semantic element examples: <h1> through <h6>, <p> and <ul> clearly describe their content.

Now, here is an example of how a page is made with some common semantic tags:



EXTRA:

To know more about semantic elements and the benefit of using them, visit:

https://developer.mozilla.org/en-US/docs/Glossary/Semantics#Semantics_in_HTML

INTERNAL LINKS

Instead of scrolling through long pages, you satisfy your readers by offering page hops as an alternative transport mode throughout your website. In principle, page hops is a link only, but the links to a certain section of the same document (i.e. inner links) are the same <a> feature as all links.

You'll know about id attributes later in CSS, so don't put too much emphasis on them now.

For eg., here's how you set up a link:

```
<h2 id="heading">This is the top</h2>
.....
.....
<a href="#heading">Go to top</a>
```

Explanation: the **heading** is the **id** of the top heading of this page, and its used in the **href attribute**. The **id attribute** is a **unique identifier** for an HTML element that **can be used to locate any element.** The symbol '**#**' is used to **refer to an id.**

By clicking the link ***Go to top***, you will go to the line where the heading is created.

BLOCK VS INLINE ELEMENTS

The **block elements** include those which **use the entire webpage width**, effectively ***blocking any other elements from being placed on the left or the right side.***
Inline elements only t**ake up as much width as necessary** to show the element's contents and after that, other elements can be made to match the inline element.

Block elements always start on a new line. But, that's not the case with inline elements.
Block elements examples include: ** , <p>, <h1>, <h6>, <nav>, etc.**
E.g **<b>, , <img> etc.** are examples of **inline elements.**

NOTE*: You can also check which elements are block and which are inline by inspecting them using chrome dev tools.*

Chrome Dev Tools: You can learn a lot about your website using **Chrome Developer Tools**, which are **built into your Chrome browser**. You can **modify** your page and ***see how various items appear on the platform while troubleshooting and debugging problems.*** **HTML**, **CSS**, and **JavaScript can be manipulated** using Chrome Dev Tools.

To **open** Chrome Dev Tools, **press CTRL+SHIFT+C** or **right-click an item on the page, then select Inspect.** We'll go over this topic in greater detail **later** in the course.

TEXT FORMATTING TAGS

HTML allows us to format text just like we do in any other text-editing application like MS Word. The text appearance of your web page will be formatted using various HTML tags.

This is likely to spice up the look of your website but too much variation can be unpleasant in text formatting. HTML also distinguishes specific text elements with a particular significance.

HTML uses elements like **<b>** and **<i>** for f**ormatted output**, such as **bold** or **italic text** respectively.

For eg:;

`<b>Hello!</b>` can be used to bolden the text and

`<i>Hi there!</i>` can be used to italicize the text.

EXTRA:

To know more about them, visit:

https://developer.mozilla.org/en-US/docs/Web/HTML/Element#Inline_text_semantics

and

https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Advanced_text_formatting

SPECIAL CHARACTERS

In HTML, we have **certain characters reserved for the definition of a tag** that are less than **(<)** and are greater than **(>) signs**, called an **angle brackets**. By using them as page symbols, the browser may misinterpret them as markup.

However, several characters are missing from the keyboard.

Special characters, also known as **HTML entities**, are characters that **can't be typed by the keyboard.** The character entities must be replaced in order to display these unique characters.

HTML entity is a text, which starts with an ampersand **(&)** and ends with a semicolon **(;)**.

Eg., these are some html entities with how they will look on browser:

- some useful character entities -   (single space), < (<), ' ('), © (©)
- diacritical marks - à(à), Ô(Ô)
- mathematical symbols - ∀(∀) or ∀ (∀), &#8721(∑); or ∑ (∑)
- some other entities - ←(←), ♥(♥), ™(™)

EXTRA:

To know more about HTML entities, visit:

https://developer.mozilla.org/en-US/docs/Glossary/Entity

You can get all the available entities list here:

https://dev.w3.org/html5/html-author/charref

TABLES

Tables can also be created with simple HTML. **Tables** are **used to display the tabular data.** A lot of tags are used to do this. All table data is included inside the <table> tags.

A table (with the <tr>-tag) divides the table into rows and divides the data cells in each row (with the <td>-tag). .**<tr>** represents the table row, and **<td>** is used for **representing a cell's content.**

The cell can contain text, pictures, lists, types, horizontally defined rules, tables and so on.

Eg:

```
<table border=1>
    <tr>
        <td>Row 1, cell 1</td>
        <td>Row 1, cell 2</td>
        <td>Row 1, cell 3</td>
    </tr>
    <tr>
        <td>Row 2, cell 1</td>
        <td>Row 2, cell 2</td>
        <td>Row 2, cell 3</td>
```

```
    </tr>
    <tr>
        <td>Row 3, cell 1</td>
        <td>Row 3, cell 2</td>
        <td>Row 3, cell 3</td>
    </tr>
    <tr>
        <td>Row 4, cell 1</td>
        <td>Row 4, cell 2</td>
        <td>Row 4, cell 3</td>
    </tr>
</table>
```

The table will be seen something like this:

Row 1, cell 1	Row 1, cell 2	Row 1, cell 3
Row 2, cell 1	Row 2, cell 2	Row 2, cell 3
Row 3, cell 1	Row 3, cell 2	Row 3, cell 3
Row 4, cell 1	Row 4, cell 2	Row 4, cell 3

border Attribute

For the **thickness of borders**, the **border attribute** is used. The table will be shown without any borders if you do not assign a border attribute. It can be useful at times, but the majority of the time, you want to show your boundaries.

Headings in a Table

HTML has a separate tag to add column names. The <th> tag is used to describe headings in a table.

Eg:

```
<table border=1>
    <tr>
        <th>Column 1</th>
        <th>Column 2</th>
        <th>Column 3</th>
    </tr>
    <tr>
        <td>Row 1, cell 1</td>
        <td>Row 1, cell 2</td>
```

```
        <td>Row 1, cell 3</td>
    </tr>
    <tr>
        <td>Row 2, cell 1</td>
        <td>Row 2, cell 2</td>
        <td>Row 2, cell 3</td>
    </tr>
</table>
```

The table will be seen like this:

Column 1	Column 2	Column 3
Row 1, cell 1	Row 1, cell 2	Row 1, cell 3
Row 2, cell 1	Row 2, cell 2	Row 2, cell 3

<thead>, <tbody>, <tfoot>

The **<thead>** tag is used in an HTML table to group the content of the header.

For grouping of body content in an HTML table, the **<tbody>** tag is used.

The **<tfoot>** tag is used for grouping the content of footers.

These are **semantic tags** which give **meaning to the elements** as well as other useful features.

Additionally, when printing a large table that spans multiple pages, these elements will allow the table header and footer to be printed at the top and bottom of each page.

Eg:

```
<table border="1">
    <thead>
        <tr>
            <th>Column 1</th>
            <th>Column 2</th>
            <th>Column 3 </th>
        </tr>
    </thead>
    <tbody>
        <tr>
            <td>Row 1, cell 1</td>
            <td>Row 1, cell 2</td>
            <td>Row 1, cell 3</td>
        </tr>
        <tr>
```

```
            <td>Row 2, cell 1</td>
            <td>Row 2, cell 2</td>
            <td>Row 2, cell 3</td>
        </tr>
    </tbody>
    <tfoot>
        <tr>
            <th>Column 1</th>
            <th>Column 2</th>
            <th>Column 3 </th>
        </tr>
    </tfoot>
</table>
```

The table now looks like this:

Column 1	Column 2	Column 3
Row 1, cell 1	Row 1, cell 2	Row 1, cell 3
Row 2, cell 1	Row 2, cell 2	Row 2, cell 3
Column 1	Column 2	Column 3

caption Tag

The **<caption>** tag defines a table caption.

Following the **<table>** tag, the **<caption>** tag must be inserted.

Eg: If you add ***<caption>Table Example</caption>*** just after the <table> tag, the table will now look like this:

Table Example

Column 1	Column 2	Column 3
Row 1, cell 1	Row 1, cell 2	Row 1, cell 3
Row 2, cell 1	Row 2, cell 2	Row 2, cell 3
Column 1	Column 2	Column 3

NOTE: *You can specify only one caption per table.*

colspan and rowspan Attribute

These two attributes, **rowspan** and **colspan**, are used to **handle the layout of the tables.**

The **rowspan attribute** is **used to indicate the number of rows occupied by a specific cell.** The **colspan attribute** is **used to specify the number of columns occupied by a specific cell.**

Both are used with the <td> tag and also with the <tr> tag.

Eg: adding attributes colspan and rowspan to the table

```
<table border="1">
    <thead>
        <tr>
            <th>Column 1</th>
            <th colspan="2">Column 2 and 3 heading</th>
        </tr>
    </thead>
    <tbody>
        <tr>
            <td>Row 1, cell 1</td>
            <td colspan="2">(Row 1, cell 2) and (Row 1, cell 3)</td>
        </tr>
        <tr>
            <td rowspan="2">(Row 2, cell 1) and (Row 3, cell 2)</td>
            <td>Row 2, cell 2</td>
            <td>Row 2, cell 3</td>
        </tr>
        <tr>
            <td>Row 3, cell 2</td>
            <td>Row 3, cell 3</td>
        </tr>
    </tbody>
</table>
```

The table now looks like:

<table>
<tr><th>Column 1</th><th colspan="2">Column 2 and 3</th></tr>
<tr><td>Row 1, cell 1</td><td colspan="2">(Row 1, cell 2) and (Row 1, cell 3)</td></tr>
<tr><td rowspan="2">(Row 2, cell 1) and (Row 3, cell 2)</td><td>Row 2, cell 2</td><td>Row 2, cell 3</td></tr>
<tr><td>Row 3, cell 2</td><td>Row 3, cell 3</td></tr>
</table>

You can take a look at this cheat sheet for HTML, which will keep you from memorizing everything:

https://html.com/wp-content/uploads/html-cheat-sheet.pdf