Topic : More on HTML

1. <DIV> TAG

The tag defines a **block-level section** or a division in an HTML document.
The tag is a block element. It is often used as a **container** for other HTML elements.
The element has *no required attributes*.

The element is very often used together with CSS, to layout a web page. By default, browsers always place a line break before and after the element.

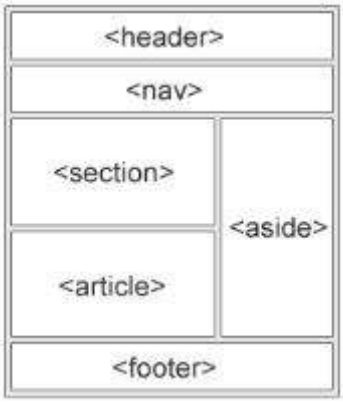
2. SEMANTIC ELEMENTS

Semantic HTML or semantic markup is HTML that **introduces meaning** to the web page rather than just presentation. For eg., a **<p>** tag indicates that the enclosed text is a paragraph.

Semantic HTML tags *provide information about the contents of those tags* that goes beyond just how they look on a page. For eg., text that is enclosed in the **<code>** tag is immediately recognized by the browser as some type of coding language.

Examples of **non-semantic** elements: * * and ** - tells nothing about its content.
Examples of **semantic** elements: *<h1>* to *<h6>, <p>,* and *<ul>* - clearly defines its content.

Now, here is an example of how some of the common semantic tags are used to construct a page:



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

3. INTERNAL LINKS

Instead of having to resort to the task of scrolling down long pages, you can make your readers very happy by offering them page jumps as an alternative mode of transport around

your site. Basically, page jumps are just **links** (they use the same <a> element as all links), but links that point to a certain part of the same document, i.e. internal links.

You simply add a unique id value to an existing element. Now, you will know about id attribute afterwards in CSS, so don't stress too much on it for 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: In the **href** attribute, *heading* is the id of the heading of this page. *id* of an html element is an attribute and it can have any value. While referring to an id, '#' is used in the beginning of its name. Clicking on the link shown below will scroll you to the heading such that it is the first line of the display.

4. BLOCK VS INLINE ELEMENTS

Block elements are those that take up the **full width** available on a web page, effectively blocking out any other elements from sitting next to it on the left or right.
Inline elements are those who only take up as much **width as much needed** to display the contents of the element, thereby allowing other elements to be in line with the inline element.

Block elements always start on a new line.
Inline elements does not start from a new line.

Examples of **block elements** are , <p>, <h1> to <h6>, <nav>, etc.
Examples of **inline elements** are <b>, <i>, , <img>, etc.

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

5. TEXT FORMATTING TAGS

HTML provides us with the ability for formatting text just like we do it in MS Word or any text editing software.
The following HTML tags are used to format the appearance of the text on your web page. This can jazz up the look of the web page, *however,* too much variety in the text formatting can also look displeasing.HTML also defines special **elements** for defining text with a special **meaning**.
HTML uses elements like <b> and <i> for formatting output, like **bold** or *italic* text.
Formatting elements were designed to display special types of text:

- **<b>** - defines bold text

- **** - defines emphasized text
- **<i>** - defines italic text
- **<small>** - defines smaller text
- **** - defines important text
- **<sub>** - defines subscripted text
- **<sup>** - defines superscripted text
- **<u>** - defines underlined text
- **<ins>** - defines inserted text by underlying the text
- **<del>** - defines deleted text by striking through the text
- **<s>** - defines text that is no longer correct, accurate or relevant by striking through it
- **<mark>** - defines marked/highlighted text
- **<pre>** - defines preformatted text which is presented exactly as written in HTML
- **<tt>** - defines text appears as typed by a typewriter
- **<code>** - defines piece of computer code
- **<q>** - defines short quoted text
- **<cite>** - defines reference to a cited work
- **<abbr>** - defines an abbreviation or acronym
- **<var>** - defines a variable name
- **<kbd>** - defines keyboard input
- **<samp>** - defines sample output from a computer program

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

6. SPECIAL CHARACTERS

In HTML, we have **some characters that are reserved**, e.g. less than (<) and greater than (>) signs, known as angle brackets , that are used to define a tag. Using them as symbols for the page, the browser could mistake them for markup.
While there are some characters that are not present on the keyboard.

These characters are called **special characters** or **HTML entity**, that either cannot be used or not available on the keyboard. So, to display these special characters, they must be replaced with the character entities.

An **HTML entity** is a piece of text that **begins with an ampersand (&)** and **ends with a semicolon(;)** and **between is the hex code or entity name**. These entities are used to display the reserved characters.

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 *∀* for(∀), *∑* or *∑* for(∑)

- 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

7. TABLES

Tables are used to show the tabular data. To achieve this many tags are used. All the table-data is enclosed within the **<table>** tags.

A table is divided into rows (with the **<tr>** tag), and each row is divided into data cells (with the **<td>** tag). **tr** stands for table row, which represents the row of a table and **td** stands for table-data, which is the content of a data cell.

A data cell can contain text, images, lists, paragraphs, forms, horizontal rules, tables, etc.

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

7.1. border Attribute

The **border** attribute is used for mentioning the thickness of the borders. If you do not specify a border attribute the table will be displayed without any borders. Sometimes this can be useful, but most of the time, you want the borders to show.

7.2. Headings in a Table

If you want to add column names, then HTML provides a separate tag for that. Headings in a table are defined with the **<th>** tag.

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

7.3. <thead>, <tbody>, <tfoot>

The **<thead>** tag is used to group header content in an HTML table.
The **<tbody>** tag is used to group the body content in an HTML table.
The **<tfoot>** tag is used to group footer content in an HTML table.

These are the semantic tags that not only provide meaning to the elements but also have some other useful functionality as well.
Browsers can use these elements to enable scrolling of the table body independently of the header and footer. Also, when printing a large table that spans

multiple pages, these elements can enable 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:

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

7.4. caption Tag

The <caption> tag defines a table caption.
The <caption> tag must be inserted immediately after the <table> tag.

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.*

7.5. colspan and rowspan Attribute

To manage the layout of the the tables, two attributes are used, **rowspan** and **colspan**.

Attribute **rowspan** is used to mention the number of rows that a particular cell will be occupying. Attribute **colspan** is used to mention the number of columns that a particular cell will be occupying.
They both are used with the **td** tag and can also be used with the **th** 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:

Column 1	Column 2 and 3	
Row 1, cell 1	(Row 1, cell 2) and (Row 1, cell 3)	
(Row 2, cell 1) and (Row 3, cell 2)	Row 2, cell 2	Row 2, cell 3
	Row 3, cell 2	Row 3, cell 3