

COMP309

Web-based Technology

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Reading Assignment

- More on Markup languages:

`https:`

`//www.semrush.com/blog/markup-language/`

- HTML markup vs. Markdown:

`https://www.makeuseof.com/tag/`

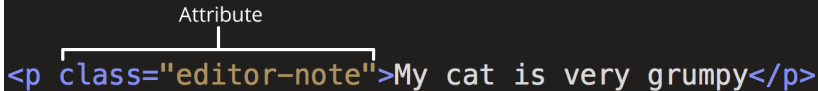
`markdown-4-reasons-learn-now/`

HTML (Pt. II)

HTML attributes

Attributes

- Elements can also have attributes, which look like this:



```
<p class="editor-note">My cat is very grumpy</p>
```

Attributes

- Attributes contain extra information about the element which you don't want to appear in the actual content.
- In this case, the class attribute allows you to give the element an identifying name that can be later used to target the element with style information and other things.

Attributes

An attribute should have:

- A **space** between it and the element name (or the previous attribute, if the element already has one or more attributes.)
- The attribute **name**, followed by an equals sign.
- An attribute **value**, with opening and closing quote marks wrapped around it.

Adding attributes to elements

Another example of an element is `<a>`—this stands for **anchor** and will make the piece of text it wraps around into a hyperlink. This can take a number of attributes, but several are as follows:

- **href**: This attribute specifies as its value the web address that you want the link to point to; where the browser navigates to when the link is clicked. For example, `href="https://www.mozilla.org/"`.

Adding attributes to elements

- **title:** The title attribute specifies extra information about the link, such as what the page is that you are linking to. For example, **title="The Mozilla homepage"**. This will appear as a *tooltip* when hovered over.
- **target:** The target attribute specifies browsing context which will be used to display the link. For example, **target="_blank"** will display the link in a new tab. If you want to display the link in the current tab just omit this attribute.

Exercise: Adding attributes to elements

Edit the line below in the HTML area to turn it into a link to your favourite website.

```
<p>A link to my favourite website.</p>
```

First, add the `<a>` element. Second, add the *href* attribute and the *title* attribute. Lastly, specify target attribute to open the link in the new tab. You'll be able to see your changes when you refresh your browser page.

Exercise: Adding attributes to elements

You should see a link that when hovered over displays the title attribute's content, and when clicked navigates to the web address in the **href** attribute.

Remember that you need to include a space between the element name, and each attribute.

If you make a mistake, you can always edit it.

Boolean attributes & Quotes

Boolean attributes

- Boolean attributes can only have **one** value.
- An example is the *disabled* attribute, which you can assign to form input elements if you want them to be disabled (greyed out) so the user can't enter any data in them.

```
<input type="text" disabled="disabled">
```

Boolean attributes

As shorthand, it is perfectly allowable to write this as follows (the second is a non-disabled form input element for contrast).

```
1 <input type="text" disabled>  
2  
3 <input type="text">
```

Single or double quotes?

- Single or double quotes is purely a matter of style.
- Both the following lines are **equivalent**:

```
1 <a href="http://www.example.com">  
2   An example link.  
3 </a>  
4  
5 <a href='http://www.example.com'>  
6   An example link.  
7 </a>
```

Single or double quotes?

- You should however make sure you don't mix them together.
- The following will go wrong!

```
<a href=" http://www.eg.com' >Fun</a>
```

- If you've used one type of quote in your HTML, you can nest the other type of quote:

```
<a href=" http://www.ex.com" title="Fun" >  
  Fun  
</a>
```


Lists

Unordered List

- Unordered lists are used to mark up lists of items for which the order of the items doesn't matter. E.g. a list of items to buy from a shop.
- Every unordered list starts off with a `` element—this wraps around all the list items:

Unordered List

```
1  <ul>
2  milk
3  eggs
4  bread
5  butter
6  </ul>
```

Unordered List

- The last step is to wrap each list item in a `` (list item) element:

```
1 <ul>
2   <li>milk</li>
3   <li>eggs</li>
4   <li>bread</li>
5   <li>butter</li>
6 </ul>
```

Ordered List

- The markup structure for ordered lists is the same as for unordered lists, except that you have to wrap the list items in an `` element, rather than ``:

```
1 <ol>
2   <li>Drive to the end of the road.</li>
3   <li>Turn right.</li>
4   <li>Go straight across.</li>
5   <li>Turn at the third roundabout.</li>
6   <li>The school is on your right.</li>
7 </ol>
```

Exercise: Nesting Lists

1. It is perfectly all right to nest list as we see in this example.
2. Make a copy of *nest_list.html*
3. Open in browser to see the output.
4. This is a recipe for some food. And so note that after the fourth step we only have general comments about the recipe and not actual steps.
5. Use an unordered list tag to correct this.
6. Save your HTML (name it *nest-list-fixed.html*), load it in a browser, and you should see that the headers now look like headers.

HTML Tables

What is a table?

- A table is a structured set of data made up of of **rows** and **columns** (tabular data).
- It allows you to quickly and easily look up values that indicate some kind of connection between different types of data, for example a person and their age.

What is a table?

Person	Age
Adwoa	38
Kwesi	45
Awo	29
Sadi	47
Jonas	30

Exercise: Creating your first HTML table

1. Make a local copy of *blank-template.html* and *minimal-table.css* in a new directory on your local machine.
2. The content of every table is enclosed by these two tags : **<table>** and **</table>**. Add these inside the body of your HTML.
3. The smallest container inside a table is a table cell, which is created by a **<td>** element ('td' stands for 'table data').

Exercise: Creating your first HTML table

4. Add the following inside your table tag:

```
<td>Hi, I'm your first cell.</td>
```

Important question: What could be the meaning of line 6 in *blank-template.html* ?

Exercise: Creating your first HTML table

5. If we want a row of four cells, we need to copy these tags three times. Update the contents of your table to look like so:

```
<td>Hi, I'm your first cell.</td>  
<td>Hi, I'm your second cell.</td>  
<td>Hi, I'm your third cell.</td>  
<td>Hi, I'm your fourth cell.</td>
```

Exercise: Creating your first HTML table

6. Each `<td>` element creates a single cell and together they make up the first row. Every cell we add makes the row grow longer.
7. To stop this row from growing and start placing subsequent cells on a second row, we need to use the `<tr>` element ('tr' stands for 'table row').

Excercise: Creating your first HTML table

8. Place the four cells you've already created inside `<tr>` tags, like so:

```
<tr>  
  <td>Hi, I'm your first cell.</td>  
  <td>Hi, I'm your second cell.</td>  
  <td>Hi, I'm your third cell.</td>  
  <td>Hi, I'm your fourth cell.</td>  
</tr>
```

Excercise: Creating your first HTML table

9. Now you've made one row, have a go at making one or two more—each row needs to be wrapped in an additional `<tr>` element, with each cell contained in a `<td>`.

Exercise: Adding headers to tables

- Table headers are special cells that go at the start of a row or column and define the type of data that row or column contains.
- Let's take a look at *dog-table.html*
- **Question:** Can you spot any problem with this rendering?

Exercise: Adding headers to tables

1. Make a copy of the *dogs-table.html*
2. To recognize the table headers as headers, both *visually* and *semantically*, you can use the `<th>` element ('th' stands for 'table header').
3. This works in exactly the same way as a `<td>`, except that it denotes a header, not a normal cell.
4. Go into your HTML, and change all the `<td>` elements surrounding the table headers into `<th>` elements.
5. Save your HTML (name it *dogs-table-fixed.html*), load it in a browser, and you should see that the headers now look like headers.

Exercise: Adding headers to tables

Question: Why are headers useful?

Cells spanning multiple rows and columns

- Sometimes we want cells to span multiple rows or columns.
- Take a look at *animals-table.html* in your browser.
- What is wrong with the table?
- What possible improvements can you suggest?

Exercise: Cells spanning multiple rows and columns

1. First, make a local copy of our *animals-table.html* file.
2. Next, use **colspan** to make "Animals", "Hippopotamus", and "Crocodile" span across two columns.
3. Finally, use **rowspan** to make "Horse" and "Chicken" span across two rows.
4. Save (as *animals-table-fixed.html*) and open your code in a browser to see the improvement.

Assignment

Find **Project 1** on vcampus.

See you next week, God willing 🙏