HTML5/CSS3

Introduction to HTML

Day 1

Questions?

Agenda
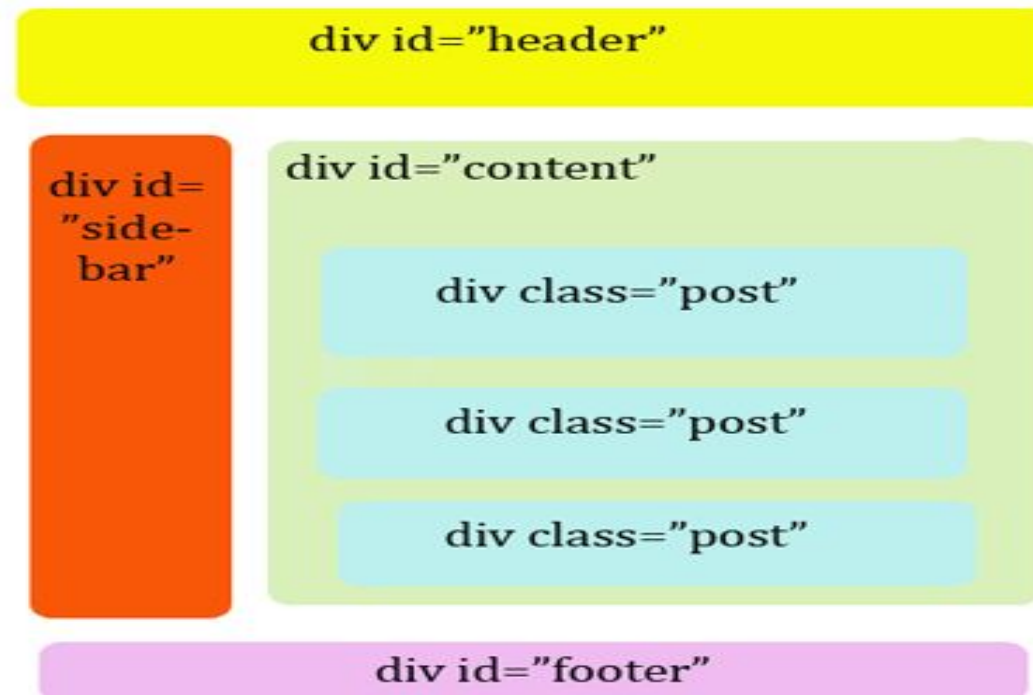
❑ What is HTML
❑ Elements
❑ Opening and Closing Tags
❑ <!DOCTYPE html>
❑ Comments

What is HTML?

❑ HTML is a markup language used to tell your browser how to structure the web pages you visit. It can be as complicated or as simple as the web developer wishes it to be. HTML consists of a series of elements, which you use to enclose, wrap, or mark up different parts of the content to make it appear or act a certain way.

div id="header"

div id= "side-bar"

div id="content"

div class="post"

div class="post"

div class="post"

div id="footer"

HTML Tags

❑ An HTML tag helps the browser determine what default structure and style content display on the screen should have.

   ➢ Examples of HTML tags:
      ► <p></p>
      ► <head></head>
      ► <body></body>
      ►
      ► <img />
      ► <div></div>
      ► For more tags: https://html.com/tags/

❑ An HTML element consist of an opened and closed HTML tag.

   ➢ Opening tag: <nav>

   ➢ Closing tag: </nav>

❑ Some HTML tags are self-closed tags

   ➢ Self-closed tag: <img />

```
1   <!DOCTYPE html>
2 ▼ <html>
3 ▼ <head>
4       <title></title>
5   </head>
6 ▼ <body>|
7
8   </body>
9   </html>
```

❑ This is the base template code of any HTML page
❑ <!DOCTYPE html>
   ➢ When performing HTML validation testing on a web page it tells the HTML validator which version of HTML standard the web page coding is supposed to comply with. When you validate your web page the HTML validator checks the coding against the applicable standard then reports which portions of the coding do not pass HTML validation
   ➢ It tells the browser how to render the page in standards compliant mode.
❑ <html>
   ➢ The <html> tag tells the browser that this is an HTMLdocument. The <html> tag represents the root of an HTML document. The <html> tag is the container for all other HTML elements (except for the <!DOCTYPE>tag).

```
1  <!DOCTYPE html>
2 ▼ <html>
3 ▼ <head>
4        <title></title>
5  </head>
6 ▼ <body>|
7
8  </body>
9  </html>
```

- ❑ This is the base template code of any HTML page
- ❑ <head>
  - ➢ The <head> element is a container for metadata (data about data) and is placed between the <html> tag and the <body> tag. HTML metadata is data about the HTML document. Metadata is not displayed. Metadata typically define the document title, character set, styles, links, scripts, and other meta information
- ❑ <title>
  - ➢ The <title> element set a title to the browser page
- ❑ <body>
  - ➢ The <body> element is where all content being displayed in the web page is.

HTML Base Template Code

❑ This is the base template code of any HTML page

❑ \<head\>

➢ The \<head\> element is a container for metadata (data about data) and is placed between the \<html\> tag and the \<body\> tag. HTML metadata is data about the HTML document. Metadata is not displayed. Metadata typically define the document title, character set, styles, links, scripts, and other meta information

❑ \<title\>

➢ The \<title\> element set a title to the browser page

❑ \<body\>

➢ The \<body\> element is where all content being displayed in the web page is.

```
1   <!DOCTYPE html>
2 ▼ <html>
3 ▼ <head>
4       <title>My First Page</title>
5   </head>
6 ▼ <body>
7       <h1>About ME ONLY</h1>
8 ▼     <p>Lorem ipsum dolor sit amet,
9           <strong>consectetur</strong> adipisicing elit,
10          sed do eiusmod</p>
11 ▼    <div>
12          <span>Next to</span>
13          <span>span</span>
14      </div>
15 ▼    <div>
16          <span>Why the</span>
17          <span>New Line?</span>
18      </div>
19  </body>
20  </html>
```

❑ Open it on Chrome Browser

```
1   <!DOCTYPE html>
2 ▼ <html>
3 ▼ <head>
4       <title>My First Page</title>
5   </head>
6 ▼ <body>
7   <!--     This is a Comments-->
8       <h1>About ME ONLY</h1>
9 ▼     <p>Lorem ipsum dolor sit amet,
10         <strong>consectetur</strong> adipisicing elit,
11         sed do eiusmod</p>
12 ▼    <div>
13         <span>Next to</span>
14         <span>span</span>
15     </div>
16 ▼    <div>
17         <span>Why the</span>
18         <span>New Line?</span>
19     </div>
20   </body>
21   </html>
```

- ❏ On line 7, that is considered a comments. All comments in HTML open with <!-- and close with →
- ❏ All Comments are ignored by the browser, therefore, they will not be displayed on the browser.

- ❑ Block-level elements form a visible block on a page — they will appear on a new line from whatever content went before it, and any content that goes after it will also appear on a new line. Block-level elements tend to be structural elements on the page that represent, for example, paragraphs, lists, navigation menus, footers, etc. A block-level element wouldn't be nested inside an inline element, but it might be nested inside another block-level element.

- ❑ Inline elements are those that are contained within block-level elements and surround only small parts of the document's content, not entire paragraphs and groupings of content. An inline element will not cause a new line to appear in the document; they would normally appear inside a paragraph of text, for example an **<a>** element (hyperlink) or emphasis elements such as **<em>** or **<strong>**

About ME ONLY

Lorem ipsum dolor sit amet, **consectetur** adipisicing elit, sed do eiusmod

Next to span
Why the New Line?

❏ Notice also that the span tag is displayed as inline-block, however, the last two span tags are displayed in a new line because they are inside a div tag.

❏ The div tag is a general tag that is displayed block

❏ The text inside the the h1 tag is displayed block, bold, font size of 32 pixel and some space around it. The h1 tag is used to make text seen important. Similar tags are: h2, h3, h4, h5 and h6

❏ The paragraph display block and with other default style. Notice that the <strong> tag is displayed inline-block

Self-closed Tags

- ❏ Self-closed tags or Empty Elements: Are elements that do not have or required a closing tag.
  - ❏ Ex:
- ❏ Some tags require an attribute to function properly:
  - ❏

```
1   <!DOCTYPE html>
2 ▼ <html>
3 ▼ <head>
4       <title>My Photos</title>
5   </head>
6 ▼ <body>
7       <h1>Me in my Years</h1>
8       <img src="http://digitalspyuk.cdnds.net/17/02/980x490/landscape-
        1484222978-deadpool.jpg" />
9   </body>
10  </html>
```

❏ Attributes are extra information you can give to an element. In the case of the <img />, the src attribute provides a way for the <img /> to source an image from your local computer or from the internet. Let's give the image a width and height. For more attributes: https://developer.mozilla.org/en-US/docs/Web/HTML/Attributes

```
1   <!DOCTYPE html>
2 ▼ <html>
3 ▼ <head>
4       <title>My Photos</title>
5   </head>
6 ▼ <body>
7       <h1>Me in my Years</h1>
8       <img src="http://digitalspyuk.cdnds.net/17/02/980x490/landscape-
            1484222978-deadpool.jpg" width="400px" height="300px" />
9   </body>
10  </html>
```

Attributes

- ❏ An attribute should have:
  - ❏ A space between attribute name and the element name
  - ❏ The attribute name, followed by an equals sign.
  - ❏ An attribute value, with opening and closing quote marks wrapped around it.

```html
<header>
    <a href="#" id="logo"></a>
    <nav>
        <a href="#" id="menu-icon"></a>
        <ul>
            <li><a href="#" class="current">Home</a></li>
            <li><a href="#">About</a></li>
            <li><a href="#" title="PF">Work</a></li>
            <li><a href="#" target="_blank">Blog</a></li>
            <li><a href="#">Contact</a></li>
        </ul>
    </nav>
</header>
```

- ❏ The <header> typically contains a group of introductory or navigational aids
- ❏ The <a> 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.
  - ❏ **title**: The title attribute specifies extra information about the link, such as what the page is that you are linking to. This will appear as a tooltip when hovered over.
  - ❏ **target**: The target attribute specifies the 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.
- ❏ The <nav> defines a set of navigation links
- ❏ The <ul> represents an unordered list of items, typically rendered as a bulleted list
- ❏ The <li> is used to represent an item in a list. It must be contained in a parent element: an unordered list (<ul>).

❏ class attribute:
  - ❏ The class attribute specifies one or more classnames for an element.
  - ❏ The class attribute is mostly used to point to a class in a style sheet. However, it can also be used by a JavaScript to make changes to HTML elements with a specified class although not recommended.

❏ id attribute:
  - ❏ The id attribute specifies a unique id for an HTML element (the value must be unique within the HTML document).
  - ❏ The id attribute is most used to point to a style in a style sheet, and by JavaScript (via the HTML DOM) to manipulate the element with the specific id.

HTML Table

```
<table>
    <tr>
        <th>Table Header</th>
        <th>Table Header</th>
        <th>Table Header</th>
    </tr>
    <tr>
        <td>Table cell</td>
        <td>Table cell</td>
        <td>Table cell</td>
    </tr>
    <tr>
        <td>Table cell</td>
        <td>Table cell</td>
        <td>Table cell</td>
    </tr>
</table>
```

❏ In HTML, you create tables using the <table> element, in conjunction with the **<tr>** and **<td>** elements.

❏ Each set of **<tr>** tags (opening and closing tags) represents a row within the table that they're nested in. And each set of **<td>** tags represents a table data cell within the row that they're nested in.

❏ You can also add table headers using the **<th>** element.

```
<table>
    <thead>
        <tr>
            <th>Header 1</th>
            <th>Header 2</th>
            <th>Header 3</th>
        </tr>
    </thead>
    <tbody>
        <tr>
            <td>Col 1 Cell 1</td>
            <td>Col 2 Cell 1</td>
            <td>Col 3 Cell 1</td>
        </tr>
        <tr>
            <td>Col 1 Cell 2</td>
            <td>Col 2 Cell 2</td>
            <td>Col 3 Cell 2</td>
        </tr>
    </tbody>
    <tfoot>
        <tr>
            <td>Footer 1</td>
            <td>Footer 2</td>
            <td>Footer 3</td>
        </tr>
    </tfoot>
</tfoot>
</table>
```

❏ The <thead>, <tbody>, and <tfoot> represent the different sections of a table

```
<section>
    <h1>Level 1</h1>
    <p>Text text text</p>

    <section>
        <h1>Level 1.1</h1>
        <p>Text text text</p>

        <section>
            <h1>Level 1.1.1</h1>
            <p>Text text text</p>
        </section>
    </section>
</section>
<section>
    <h1>Level 2</h1>
    <p>Text text text</p>
    <section>
        <h1>Level 2.1</h1>
        <p>Text text text</p>
    </section>
</section>
```

❏ The HTML <section> element represents a standalone section, which doesn't have a more specific semantic element to represent it, contained within an HTML document. Typically, but not always, sections have a heading.

Exercise

Logo HERE

- Home
- About
  - Company
  - Partners
  - Our People
- Personal Projects
- Contact

❏ Using what you have learnt up to this point, re-create the structure of this page. You can use your own content.

Logo HERE

- Home
- About
- Personal Projects
- Contact

My Page

Yup!!

Lorem ipsum **dolor** sit amet, consectetur adipisicing elit, sed do eiusmod tempor

Morning	Evenings	Nights
Wake Up	Wake Up Again	Finally
Eat, exercises, Watch TV at the same time	Still Waking Up	On with my day
Sleep	Never Mind	Sleep

No Copy Rights

❑ Using what you have learnt up to this point, re-create the structure of this page. You can use your own content. The red borders are not requirement, they are only meant as visuals.

❏ HTML Forms are one of the main points of interaction between a user and a web site or application. They allow users to send data to the web site. Most of the time that data is sent to the web server, but the web page can also intercept it to use it on its own.

❏ An HTML Form is made of one or more widgets. Those widgets can be text fields (single line or multiline), select boxes, buttons, checkboxes, or radio buttons. Most of the time those widgets are paired with a label that describes their purpose, properly implemented labels are able to clearly instruct both sighted and blind users on what to enter into a form input.

❏ The main difference between a HTML form and a regular HTML document is that most of the time, the data collected by the form is sent to a web server. In that case, you need to set up a web server to receive and process the data.

```html
<form>
    <br /><label for="FullName">Full Name</label>
    <input id="FullName" type="text" name="name" required />
    <br /><label for="email">Email</label>
    <input id="email" type="email" name="email" />
    <br /><label for="pass">Password</label>
    <input id="pass" type="password" name="p" disabled />
    <br /><label for="qant">Quantity</label>
    <input id="qant" type="number" name="ocena" value="0" min="1" max="6" />
    <br /><label for="dob">DOB</label>
    <input type="date" min="2017-11-30" name="data" />
    <br /><label for="hour">Hour</label>
    <input id="hour" type="time" name="wprowadzany_czas" />
    <br /><label for="c">Favorite Color</label>
    <input id="c" type="color" name="ulubiony_kolor" value="#FF00AA" />
    <input id="sub" type="submit" name="submit" value="Save" />
</form>
```

❏ For more attributes for input fields:
https://developer.mozilla.org/en-US/docs/Web/HTML/Element/input

platform
By Per Scholas

```html
<form>
    <label for="message">Tell Me Everything</label>
    <textarea cols="50" rows="10"></textarea> <br />
    <input list="cars"/>
    <datalist id="cars">
        <option value="BMW"/>
        <option value="Ford"/>
        <option value="Volvo"/>
        <option value="Skoda"/>
        <option value="Toyota"/>
    </datalist> <br />
    <select name="country" id="country">
        <optgroup label="Europe">
            <option value="UK">UK</option>
            <option value="Germany">Germany</option>
            <option value="France">France</option>
        </optgroup>

        <optgroup label="North America">
            <option value="usa">USA</option>
            <option value="canada">Canada</option>
        </optgroup>
    </select> <br />
    <input name="submit" type="submit" value="save" />
</form>
```

❑ Using HTML create the following pages

Login Page

Email | Enter Your Email

Password | Enter Your Password

[Login]

❑ Research for radio and checkbox input fields

Register Page

First Name | Enter Your First Name
Last Name | Enter Your Last Name
Email | Enter Your Email
Password | Enter Your Password
Confirm Password | Confirm Your Password
Gender ○ Female ○ Male
Date of Birth | mm/dd/yyyy
Habits ☐ You like sports ☐ You like to eat ☐ You like to sleep

Register

❑ For this exercise, create the structure of a simple calculator. Make sure to modify your <head> tag to look similar to the code below. The code provided is CSS, we will cover it in later sessions but for now concentrate on the structure of the HTML

0.00

7	8	9	C
4	5	6	/
1	2	3	*
0	00	.	+
=			-

```html
<head>
    <title>Calculator</title>
    <style>
        table{
            width: 200px;
            height: 300px;
            text-align: center;
            border: 5px solid green;
        }
        th, td{
            border: 1px solid red;
        }
        th{
            text-align: right;
        }
        td:hover{
            background-color: lightcoral;
            color: white;
        }
    </style>
</head>
```