Introduction To HTML

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What is HTML?

Hyper Text Markup Language

Hyper Text Markup Language, HTML for short, is a syntax for structuring and organizing the GUI of web pages.

```html
<main>
  <header class="header">
    <h1>HTML OVERLAY SDK TEST</h1>
    <h3 class="display-when-ready" style="display: none;">
      Playlist Name: <b id="overlayPlaylistName"></b> | Current
    </h3>
    <div class="buttons-wrapper">
      Playlist Playback: 
      <button id="overlayPauseBtn">Pause</button>
      <button id="overlayPlayBtn">Play</button>
      <button id="overlayRestartBtn">Restart</button>
    </div>
  </header>

  <section class="right-sidebar display-when-ready" style="displ
```
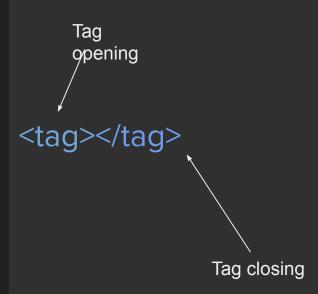
HTML Uses Tags

HTML is structured with tags. Tags are XML surrounded with <>.

Tags have a opening tag of <> and a closing tag of </>.

The name of the tag goes inside the <>.

Tag opening

Tag closing

Content In Tags

Content can be placed inside tags. The content can be anything from other tags to strings.

Tag opening

`<tag>content</tag>`

Tag closing

Almost 100 Tags

There are over almost 100+ html elements that browsers can read. Each tags will cause a different GUI affect for the user.

```
<html></html>
<head></head>
<body></body>
<div></div>
<h1></h1>
<p></p>
<a></a>
<ul></ul>
<li></li>
<img />
```

Webpage Basics

Every web page will begin with the following tags.

- All webpages must have <html> tags, and all other tags, except for the <DOCTYPE> must be inside the opening and closing <html>.
- The <head> holds meta information that only the browser can read. This information will 'configure' the page.
- The <body> contains tags that are visible to the user

```
<!DOCTYPE html>
<html>
  <head>
    // meta data goes here
  </head>
  <body>
    // website body goes here
  </body>
</html>
```

Tags are Stacked

Tags are stacked up and go inside each other.

Tags that have an opening and closing tag, '<tag></tag>' can have content in between the brackets.

Tags that have the opening and closing in the tag like '<tag />' do not have content inside of them.

```html
<!DOCTYPE html>
<html>
  <head>
    // meta data goes here
  </head>
  <body>
    <div>
      <h1>Hello World</h1>
      <img src="pic.jpg" />
    </div>
  </body>
</html>
```

Header Tags

Header tags are the tags that are used to structure sections and subsections of a web page with titles.

```
<h1></h1>
<h2></h3>
<h3></h3>
<h4></h4>
<h5></h5>
```

div Tag

The div tag serves as a container for other elements. This tag will become crucial for box layouts when we later get to css.

`<div></div>`

P Tag

The p tag, also known as the paragraph tag, is used for separating paragraphs of texts.

`<p></p>`

Span Tag

The span tag typically goes inside other tags to highlight certain text. The importance of span will become better understood when we learn about its inline property with CSS.

`<span></span>`

Break Tag

The break tag creates a vertical space between elements on a page.

`<br/>`

Horizontal Rule Tag

The horizontal rule is a line that runs across the screen.

`<hr />`

Strong Tag

The strong tag makes the text in between the tags bold.

Small Tag

The small tag makes the text in between it smaller than the p tag text.

<small></small>

Ordered Lists

Order lists are list that appear in numerical values. For example:

1. Item 1
2. Item 2
3. Item 3

The <li> tags must go inside the <ol> tag, and each is a seperate item.

```
<ol>
    <li></li>
    <li></li>
    <li></li>
</ol>
```

Unordered Lists

Unordered lists are lists that appear as bullet points. For example:

- Item 1
- Item 2
- Item 3

Notice, unlike ordered list which has <ol>, unordered lists use <ul>.

```
<ul>
    <li></li>
    <li></li>
    <li></li>
</ul>
```

Attributes

All html elements can have attributes assigned to them. Attributes are special parameters that can be used to control how elements appear and interact with a page.

The attribute is defined by a key-value pair, with the value of attribute in quotations.

`<element key="value">`

`</element>`

ID Attribute

An id is a unique signature for an attribute. Every element on the page that uses the id tag should have a different value.

There should be no two attributes with the same id. Like there should be no two people with the same cell phone number.

```
<div id="anid">

</div>
```

Class Attribute

A class attribute is used to assign classes to an element on a page. Multiple elements can have the same class name, unlike IDs they are NOT required to be unique.

Also, multiple class names can be defined in an element when separated by a space.

The class attribute will become very important when we learn css.

```
<div class="container">

</div>


<div class="container full-width">

</div>
```

Image Tag

The image tag is used for displaying images on the page. It uses a source attribute which is the path to an image file.

```
<img src="/path/image.jpg" />
```

<a> href Attribute

The a tag is used for linking pages together. The href is a special attribute for a tags which tells the browser what page to link to.

```
<a href="/a/page">
    Click Me
</a>
```

Forms

Forms in html is the way users can enter data into a website. The data is sent to another source, such as a backend server or an api.

Forms have multiple form elements inside of it.

```
<form>
    <!-- Form elements -->
</form>
```

Input

Inputs are boxes where users input information on a single line.

Notice how each input has a different type. This type attribute controls what data a user is able to enter.

```
<form>
    <input type="text" />

    <input type="number" />

    <input type="email" />

    <input type="password" />
</form>
```

Label Tag

The label tag acts as a title for a form input. It is optional and not required.

```html
<form>
    <label>First Name</label>
    <input type="text" name="fname" />
</form>
```

Input Radio/Checkboxes

Radio buttons are a type of input that allows us to have multiple options to select from, but the user will only be able to select one.

Notice, this is the first example where an element has several attributes.

```html
<form>
    <input type="radio" name="set1" />

    <input type="radio" name="set1" />

    <input type="radio" name="set1" />

    <input type="checkbox">

</form>
```

Textarea

Textarea allows for multiple lines of text to be inserted by the user. The width and height can controlled by the cols and rows attributes.

```html
<form>
    <textarea cols="10" rows="5" >
    </textarea>
</form>
```

Select

The select element creates a drop down list on the page, and allows the user to select one or multiple items in the list.

The option tag creates separate items in the dropdown list.

```html
<form>
    <select>
        <option>Apples</option>
        <option>Bananas</option>
        <option>Oranges</option>
    </select>
</form>
```

Button

Button is an html element that is used for submitting a form.

```html
<form>
    <button type="button" >
        Submit Form
    </button>
</form>
```