HTML and CSS Notes for self use

The basic layout of HTML is as given:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>

</body>
</html>
```

Inserting a video in a HTML page:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <video src="A.mp4" controls></video>
</body>
</html>
```

(Here A.mp4 is a video file in the same file as that of the .html file)

Inserting JavaScript and Css files in a HTML file

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="style.css">
</head>
<body>
    This is my first website. I dont really know jackshit about all this,
yet
    <script src="script.js"></script>
</body>
</html>
```

Here,

`<link rel="stylesheet" href="style.css">` Is linking the css file to the HTML and ,

`<script src="script.js"></script>` is linking the script.js file to the HTML page

Headers in HTML:

```
1.   <!DOCTYPE html>
2.   <html lang="en">
3.   <head>
4.       <meta charset="UTF-8">
5.       <meta name="viewport" content="width=device-width, initial-
     scale=1.0">
6.       <title>Document</title>
7.   </head>
8.   <body>
9.       <h1>My bookmarks - Smayan Kulkarni</h1>
10.      <h2>Main Bookmarks - Smayan Kulkarni
11.         can be used like this
12.      </h2>
13.      <h3>Main Bookmarks - Smayan Kulkarni</h3>
14.      <h4>Main Bookmarks - Smayan Kulkarni</h4>
15.      <h5>Main Bookmarks - Smayan Kulkarni
16.         can be used like this too
17.      </h5>
18.      <h6>Main Bookmarks - Smayan Kulkarni</h6>
19.      <p></p>
20.
21. </body>
22. </html>
```

My bookmarks - Smayan Kulkarni

Main Bookmarks - Smayan Kulkarni can be used like this

Main Bookmarks - Smayan Kulkarni

Main Bookmarks - Smayan Kulkarni

Main Bookmarks - Smayan Kulkarni can be used like this too

Main Bookmarks - Smayan Kulkarni

- The fucntion of "\n" is done by
- <sup> for super script: ex: ^{this} will show: ᵗʰⁱˢ
- <sub> for subscript : ex <h1> I like H₂o</h1> will show: I like H_2O

Adding an Image, making a table and making a List in a HTML page:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Images</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <img width= "230" src="train.jpg" alt="Train Image">
    <br>
    <table>
        <thead>
        <tr>
            <th> Name </th>
            <th> Age </th>
            <th> Designation </th>
        </thead>
        <tbody>

        </tr>
        <tr>
            <td> Smayan</td>
            <td > 17</td>
            <td rowspan= "2"> Student</td>
        </tr>
        <tr>
            <td colspan= "2"> Shriayns</td>


        </tr>
    </tbody>
    </table>

    <ul type = "Circle">
        <li> Smayan</li>
        <li> Aryan</li>
        <li> Shriyans</li>
    </ul>
    <ol type = "i">
        <li> Smayan</li>
        <li> Aryan</li>
        <li> Shriyans</li>
    </ol>
</body>
</html>
```

Here the css file is:

```css
td{
    border : 3px solid rgb(128, 61, 61)
}
```

Inline and Block Elements:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Inline and Block Elements</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <p> This is a para which is a block element</p>
    <a href="https://google.com">google</a>
    <div>Div is a block element and is not inline</div>
    <span>This is a span which is an inline element</span>
    <a href="">yes it is inline</a>
</body>
</html>
```

This is a para which is a block element

google
Div is a block element and is not inline
This is a span which is an inline element yes it is inline

The CSS file was :

```css
p{
    background-color: aquamarine;
}
a{
    background-color: bisque;
}

div{
    background-color: yellowgreen;
}
```

ID and classes

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width= , initial-scale=1.0">
    <title>ID and Classes </title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div id="firstdiv" class="red bg-yellow">First</div>
    <div if="seconddiv">Second</div>
</body>
</html>
```
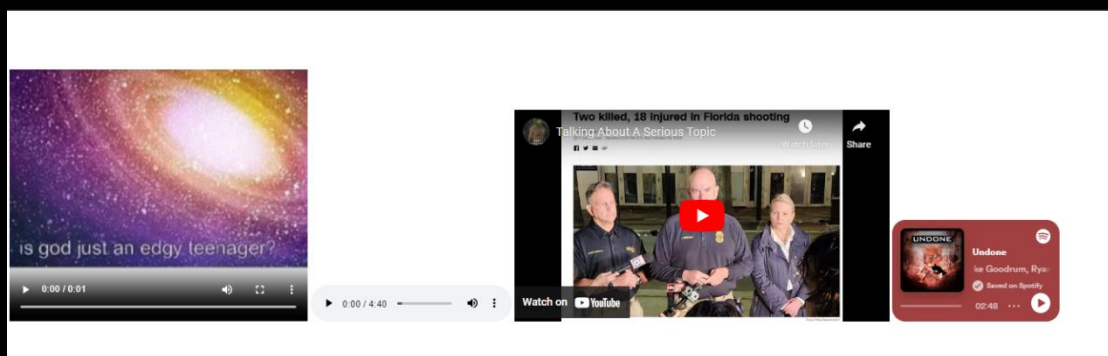
First
Second

Video, Audio and Media

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Audio, video and media</title>
</head>
<body>
    <video src="video.mp4"controls width="445px" height="455" loop autoplay
poster="download.png"></video>
    <audio src="Michishirube English.mp3" controls autoplay></audio>
    <iframe width="560" height="315"
src="https://www.youtube.com/embed/GMGj8Izredg?si=K176SNEwzOWFvwEN" title="YouTube video
player" frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media;
gyroscope; picture-in-picture; web-share" allowfullscreen></iframe>
    <iframe style="border-radius:20px"
src="https://open.spotify.com/embed/track/57o7RdOWikFpIlhYP3G4tj?utm_source=generator"
width="250" height="152" frameBorder="0" allowfullscreen="" allow="autoplay; clipboard-write;
encrypted-media; fullscreen; picture-in-picture" loading="lazy"></iframe>
</html>
```
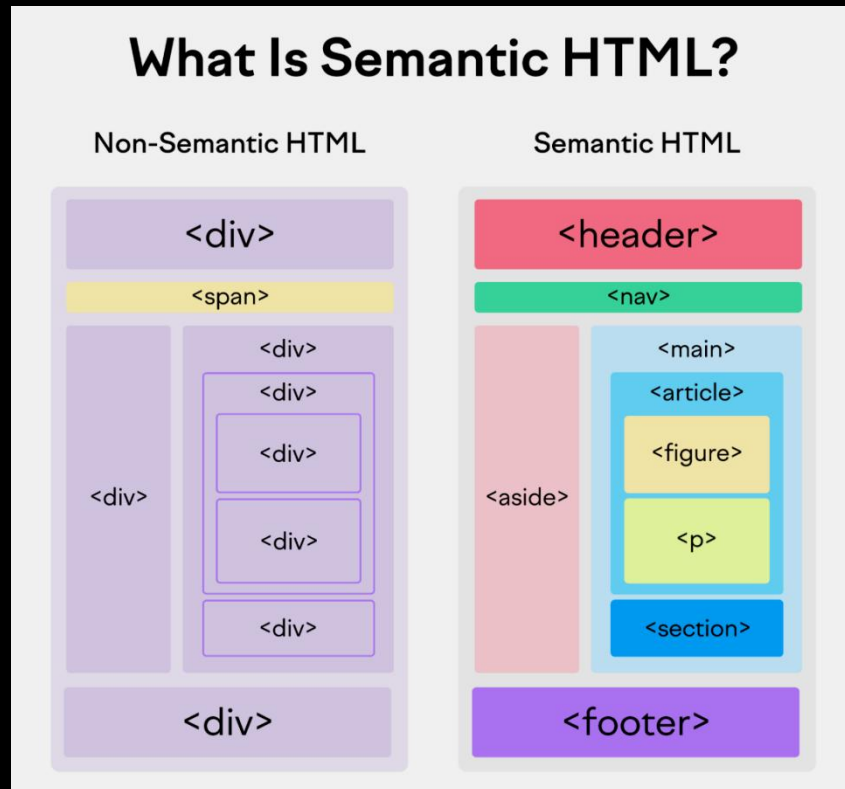

HTML Semantic Tags

Semantic tags add meaning to your HTML. They tell both the browser and the developer what kind of content is being presented.
Here are some of the key semantic tags you must know about:

1. <header>: Used to represent the top section of a web page, often containing headings, logos, and navigation.
2. <nav>: Signifies a navigation menu on a web page.
3. <article>: Indicates a self-contained piece of content, such as a blog post or news article.
4. <section>: Represents a thematic grouping of content on a web page.
5. <aside>: Typically used for sidebars or content that is tangentially related to the main content.
6. <footer>: Represents the footer of a web page, usually containing copyright information and contact details.

7. <figure> and <figcaption>: Used for embedding images, diagrams, or charts, along with a caption.
8. <main>: Signifies the main content area of a web page.
9. <time>: Used to represent time-related information, like dates and times.

What Is Semantic HTML?

Non-Semantic HTML | Semantic HTML

CSS

Types of CSS:
1. **Inline CSS**
2. **Internal CSS**
3. **External CSS**

```html
15 > <> index.html > html
1    <!DOCTYPE html>
2    <html lang="en">
3    <head>
4        <meta charset="UTF-8">
5        <meta name="viewport" content="width=device-width, initial-scale=1.0">
6        <title>Document</title>
7        <link rel="stylesheet" href="d.css">
8    </head>
9    <body>
10       <!-- <h1 style="color: aquamarine;background-color: blueviolet;">About me:</h1> -->
11       <h1>Three ways to add CSS to HTML</h1>
12       <div>
13           <ol>
14               <li>Inline CSS</li>
15               <li>Internal CSS</li>
16               <li>External CSS</li>
17           </ol>
18       </div>
19   </body>
20   </html>
```

CSS Selectors:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>CSS Selectors</title>
    <style>
        /* Descendant Selector */
        div p{
            background-color: brown !important;}
        /* Class Selector */
        .red{
            background-color: aqua;}
        /* ID selector  */
        #green{
            background-color: green;}
        /* Universal Selector */
        *{
            margin: 0;
            padding: 0;}
        /* Psuedo Selectors*/
        a:visited{
            color: yellow;}
        a:link{
            color: aliceblue;}
        a:active{
            color: blueviolet;}
        a:hover{
            background-color: indianred;}
        p:first-child{
            background-color: darkgoldenrod;}
    </style>
</head>
<body>
    <main>
        <p>
            I am first child
        </p>
    </main>
    <div class="selector">
        I am Selector
    </div>
    <div class="red">
        I am a div
        <p>I am a para inside of Div</p>
    </div>
    <div id="green">
        I am another div
        <div>
            <a href="https://google.com">Go to google</a>
            <a href="https://facebook2.com"></a>
        </div>
    </div>

</body>
</html>
```

Emmet Shortcuts:

Emmet Cheatsheet

Forms in HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Forms</title>
</head>
<body>
    <h1>Form Demo:</h1>
    <form action="">
        <input type="text" placeholder="Enter your name" id="Namebar">
        <input type="password" placeholder="Enter your password" id="passbar">
        <input type="color">
        <input type="checkbox">
        <input type="email">
    </form>


</body>
</html>
```

All types of forms

Labels for Inputs:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Labels and Names</title>
</head>
<body>
    <form action="/this-project">
        <p>
            <label for="username">Enter a username</label>
            <input type="text" name="username" id="username" placeholder="Enter your
                username">
        </p>
        <p>
            <label for="password">Enter your password</label>
            <input type="password" id="password" name="password" placeholder="password">
        </p>
        <p>
            <label for="color">Enter a color</label>
            <input type="color" id="color" name="color">
        </p>
    </form>
</body>
</html>
```

Radio Buttons, List, Range Inputs and Text Area:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Other inputs</title>
</head>
<body>
    <h2>More inputs!</h2>
    <form action="/forms.html" >
        <input type="checkbox" name="agree_tos" id="agree">
        <label for="agree">I agree to everything </label>
        <p>
            <input type="radio" name="opt" id="S"v  value="small size shirt">
            <label for="S">Small</label>
            <input type="radio" name="opt" id="M" value="medium size shirt">
            <label for="M">Medium</label>
            <input type="radio" name="opt" id="L" value="large size shirt">
            <label for="L">Large</label>
        </p>
        <p>
            <label for="">Please select an Entree</label>
            <select name="mean" id="mean">
                <option value="Fish">Fish</option>
                <option value="Veg" selected> Vegetarian</option>
                <option value="Chicken">Chicken</option>
            </select>
        </p>
        <p>
            <label for="cheese">Amount of Cheese:</label>
            <input type="range" id="cheese" min="1" max ="100" name="cheese_level">
        </p>
        <p>
            <label for="req">Any special requests?</label>
            <textarea name="spl_req" id="req" cols="40" rows="15" placeholder="enter whatever
special requests you have in here!"></textarea>
        </p>
        <button>Submit!</button>
    </form>
</body>
</html>
```

More inputs!

☐ I agree to everything

○ Small   ○ Medium   ○ Large

Please select an Entree [Vegetarian ▾]

Amount of Cheese: [●━━━━━━━━━━]

Any special requests? [enter whatever special requests you have in here!

]

[Submit!]

Fonts in CSS:

```css
h1{
    font-family: monospace;
    text-transform: uppercase;
    text-align: center;
    font-weight: 100;
  font-size: 40px;
    text-decoration: underline plum wavy;
    letter-spacing: 20px;
}
```


Font Managing in CSS:
Ex 9:
HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <h1>Todos</h1>
<ul>
  <li class="done">Walk Chickens</li>
  <li>Clean Out Coop</li>
  <li class="done">Collect Chicken Eggs</li>
  <li>Incubate Chicken Eggs</li>
  <li>Hatch New Chickens!</li>
</ul>
<button id="clear">Clear List</button>
<button>Add Todo</button>
</body>
</html>
```


CSS

```css
li{
    color: blue;
}
.done{
    color: grey;
}
#clear{
    background-color: red;
    color: white;
}
```

EX 10:
HTML:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link rel="stylesheet" href="style.css">
```

```
</head>
<body>
<header>
    <a href="/home">Home</a>
    <a href="/contact">Contact</a>
    <a href="/about">About</a>
</header>

<p>
  I like to eat <a href="/popcorn">popcorn</a> and <a href="/donuts">donuts</a>
</p>

<p id="dislikes">
  I hate eating <a href="/pickles">pickles</a> and <a href="/beets">beets</a>
</p>
</body>
</html>
```

CSS:

```css
header a {
    font-size: 30px;
    color: teal;
}
#dislikes a{
    color: red;
    font-weight: bold;
}
a:hover, #dislikes :hover{
    background-color: aqua;
    color: black;
}
a:active{
    background-color: orange !important;
}
a:nth-of-type(2){
    background-color: rgba(86, 176, 150, 0.793);
}
```


On Hover:

On Click:

CSS Specificity:

Specificity is how the browser decides which rules to apply when multiple rules could apply when multiple rules could apply to the same element.

Usually higher order element selecters have higher selectivity.

Specificity Calculator: https://specificity.keegan.st