Lecture 5

HTML

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HTML Colors

HTML supports 140 standard color names. HTML colors are specified with predefined color names, or with RGB, HEX, HSL, RGBA, or HSLA values. In HTML, a color can be specified by using a color name:

Text Color Example:

```
<h1 style="color:red;">TecNsol</h1>
```

Text Color Example:

```
<h2 style="background-color:black;">welcome</h2>
```

HTML RGB

An RGB color value represents RED, GREEN, and BLUE light sources.. In HTML, a color can be specified as an RGB value, using this formula:

rgb(red, green, blue)

Each parameter (red, green, and blue) defines the intensity of the color with a value between 0 and 255.

This means that there are 256 x 256 x 256 = 16777216 possible colors!

For example, rgb(255, 0, 0) is displayed as red, because red is set to its highest value (255), and the other two (green and blue) are set to 0.

To display black, set all color parameters to 0, like this: rgb(0, 0, 0).

To display white, set all color parameters to 255, like this: rgb(255, 255, 255). Experiment by mixing the RGB values below:

rgb(255, 99, 71)

HTML RGBA

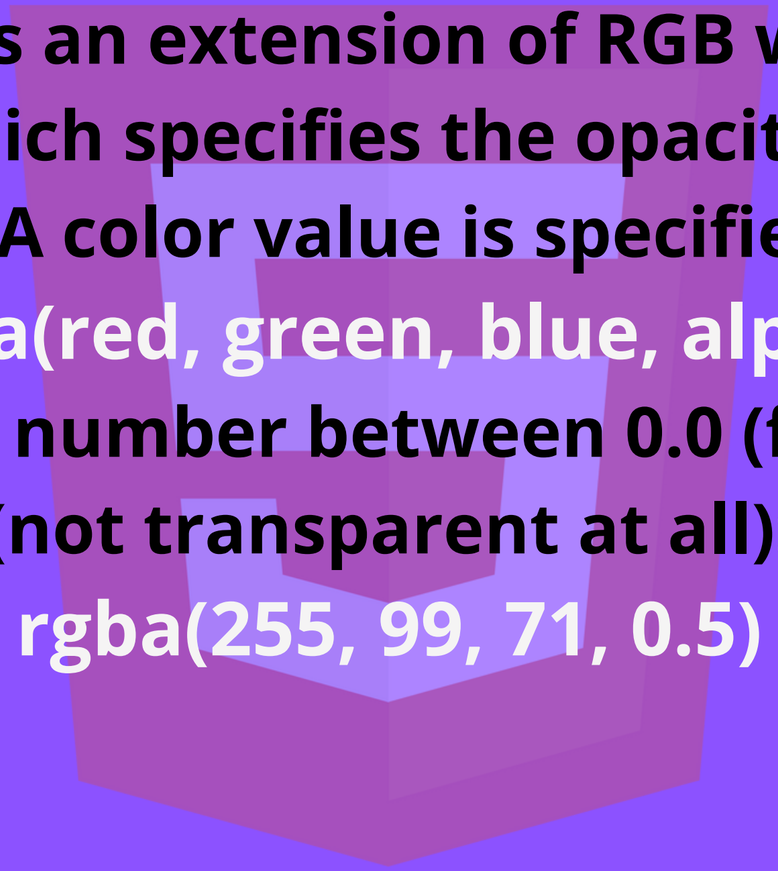
An RGBA color value is an extension of RGB with an Alpha channel (opacity). which specifies the opacity for a color.

An RGBA color value is specified with:

rgba(red, green, blue, alpha)

The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all):

rgba(255, 99, 71, 0.5)



HTML HEX

A hexadecimal color is specified with: #RRGGBB, where the RR (red), GG (green) and BB (blue) hexadecimal integers specify the components of the color. In HTML, a color can be specified using a hexadecimal value in the form given below:

#rrggbb

Where rr (red), gg (green) and bb (blue) are hexadecimal values between 00 and ff (same as decimal 0-255).

For example, #ff0000 is displayed as red, because red is set to its highest value (ff), and the other two (green and blue) are set to 00.

#ff6347

HTML HSL

HSL stands for hue, saturation, and lightness. In HTML, a color can be specified using hue, saturation, and lightness (HSL) in the form:

hsl(hue, saturation, lightness)

Hue is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.

Saturation is a percentage value, 0% means a shade of gray, and 100% is the full color.

Lightness is also a percentage value, 0% is black, and 100% is white.

hsl(0, 100%, 50%)

Saturation can be described as the intensity of a color. The lightness of a color can be described as how much light you want to give the color

HTML CSS

CSS stands for Cascading Style Sheets. Cascading Style Sheets (CSS) is used to format the layout of a webpage.

With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more!

CSS can be added to HTML documents in 3 ways:

- **Inline - by using the style attribute inside HTML elements**
- **Internal - by using a <style> element in the <head> section**
- **External - by using a <link> element to link to an external CSS file**

Inline CSS

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the style attribute of an HTML element.

The following example sets the text color of the <h1> element to blue, and the text color of the <p> element to red:

```
<h1 style="color:blue;">A Blue Heading</h1>

<p style="color:red;">A red paragraph.</p>
```