Colours in CSS

We can set the color of an element: affects the colour of the text.

We can set the background-colour of an element too.

RGB Values

RGB specifies colours by giving values for three channels.

* The amount of red, green, and blue light, from 0 to 255, giving nearly 17 million colours
* Computer Scientists prefer RGB values in hexadecimal; non-Computer Scientists prefer to use percentages.

RGBa Values

A fourth channel, the alpha channel, can specify transparency

* It should be a number in [0,1] or a percentage:
* 0 or 0% is fully transparent
* 1 or 100% is fully opaque.

HSL, HSLa

HSL specifies colours in a different way:

* Hue: a number between 0 and 360
* Saturation: a percentage
* Lightness: a percentage
* And again optionally an alpha channel

New Colours

Newer devices have wide-gamut displays, which means they can display a wider range of colours (i.e. brighter colours) than sRGB (standard RGB)

Colour Schemes

You’ll probably pick a colour scheme: a small number of colours that you use throughout your web site.

To change the colour scheme, you may have to make changes to many CSS rules.

This is a case where CSS custom properties can help.

CSS Custom Properties

* CSS has something like variables, called custom properties
* They can give meaningful names to complex properties to improve readability
* They can be set by JavaScript, e.g. for theme switching
* Rules:
* We must have two ‘-‘ before the variable
* We don’t use an ‘=’. Instead we use a ‘:’.
* We must have the variables inside a html {\_\_\_\_}.
* We must have use a var(\_\_\_) to surround the variable when assigning it to colours, backgrounds, etc.
* When using relative sizes, if we want to multiply the em or rem, we need to put the calculation inside a calc(\_\_\_\_)

Font Sizes

* In CSS, we can specify the font-size property
* There are two types of values for font sizes:
  + absolute fonts sizes
  + relative font sizes

Absolute Font Sizes

These values do not depend on any others.

On the web, we might use px occasionally; otherwise, avoid absolute font sizes.

Relative Font Sizes

These values depend on other values, e.g. in some cases, the parent’s values.

* em – relative to parent’s font size
* rem (root em) – relative to root’s font size

You can also use percentages, e.g. 80%, which are relative to the parent’s font size, but this isn’t common with font sizes.

Advice

* For your root font, use pixels
* Then use em or rem for all other rules

Width of CSS Boxes

* Later, we will learn about the CSS box model.
* We may wish to set the width of a box (paragraph).
* We can use absolute values or relative values, percentage being very common (we should use percentages).
* However, relative values for widths behave differently from relative values for fonts.

Table

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