CSS Colours

'color' and 'background-color'

Colours can be applied by using **color** and **background-color** (note that this must be the American English 'color' and not 'colour').

A blue background and yellow text for a H1 tag could look like this:

```
h1 {
        color: yellow;
        background-color: blue;
}
```

Pre-named colours in CSS can tend to be a little harsh. We will look at hexadecimal colours later.

There are 147 valid predefined colour names. The basic first 17 are are **aqua**, **black**, **blue**, **fuchsia**, **gray**, **green**, **lime**, **maroon**,**navy**, **olive**, **orange**, **purple**, **red**, **silver**, **teal**, **white**, and **yellow**. **transparent** is also a valid value.

```
body {
        font-size: 0.8em;
        color: navy;
}

h1 {
        color: #ffc; //these are hex colours
        background-color: #009;
}
```

Save the CSS file and refresh your browser. You will see the colours of the first heading (the h1 element) have changed to yellow and blue. You can apply the color and background-color properties to most HTML elements, including body, which will change the colours of the page and everything in it.

Here is a link for a colour picker - https://htmlcolorcodes.com/color-picker/

CSS brings **16,777,216** colours to your disposal. The value of the css property color, can take the form of a **name**, an **rgb** (red/green/blue) value or a **hex** code.

RGB Colours

red Is the same as **rgb(255,0,0)** **w**hich is the same as **rgb(100%,0%,0%)** **w**hich is the same as **#ff0000** **(hex)** **w**hich is the same as **#f00**

The three values in the rbg value are from 0 to 255, 0 being the lowest level (for example no red), 255 being the highest level (for example full red). These values can also be a percentage.

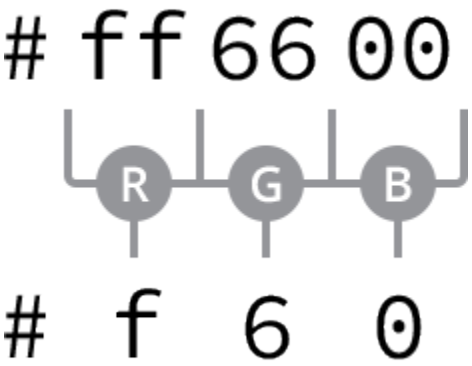
Hexadecimal Colours

Hexadecimal colour values consist of a pound, or hash, #, followed by a three- or six- character figure. The figures use the numbers 0 through 9 and the letters a through f, upper or lower case. These values map to the red, green, and blue colour channels.

Hexadecimal is a **base-16** number system. We are generally used to the **decimal** number system (**base-10**, from 0 to 9), but hexadecimal has 16 digits, from 0 to f.

In six-character notation, the first two characters represent the red channel, the third and fourth characters represent the green channel, and the last two characters represent the blue channel. In three-character notation, the first character represents the red channel, the second character represents the green channel, and the last character represents the blue channel.

If in six-character notation the first two characters are a matching pair, the third and fourth characters are a matching pair, and the last two characters are a matching pair, the six-character figure may be shortened to a three-character figure. To do this the repeated character from each pair should be used once. For example, a shade of orange represented by the hexadecimal color #ff6600 could also be written as #f60.

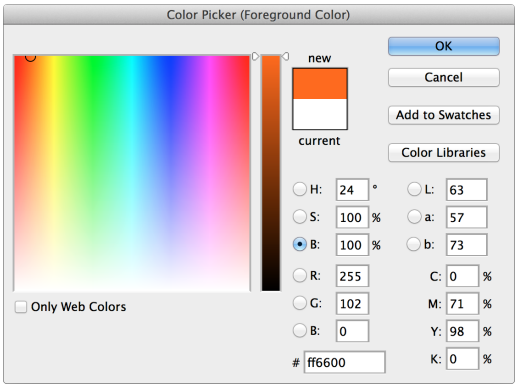


Six-character hexadecimal values may be written as three-character hexadecimal values when the red, green, and blue colour channels each contain a repeating character.

The Millions of Hexadecimal colours

There are millions of hexadecimal colours, over 16.7 million to be exact. Here's how…

There are 16 options for every character in a hexadecimal colour, 0 through 9and a through f. With the characters grouped in pairs, there are 256 colour options per pair (16 multiplied by 16, or 16 squared).



They are, however, a little difficult to work with, especially if you're not too familiar with them. Fortunately Adobe has created Adobe Kuler, https://color.adobe.com/create/color-wheel/ a free application that provides a color wheel to help us find any color we want and its corresponding hexadecimal value.

Most image editing applications, such as Adobe Photoshop, provide the capability to locate hexadecimal color values.