

Colors and Images in CSS

Color

The color property is used to **set the foreground color of an element's text context** and its decoration.

The color property can be specified in 6 different ways. Each one of them provides has some difference from the other. Although color can also be applied to backgrounds and borders.

By name

All modern browsers support 140 different colors named in CSS. Unlike HTML, CSS will completely ignore unknown keywords.

The color keywords all represent plain, solid colors, without transparency like `orangered`, `green`, `blue`, `lightgrey`, etc.

Example : `<h2 style="color:orangered;">orangered </h2>`

Browser : `orangered`

Using rgb

RGB stands for **Red, Green and Blue**. It is a color model where the combination of red, green and blue forms a color. The intensity of each color has values ranging from 0 to 255. This provides a very large number of colors dataset.

❖ RGB value for **black** : `rgb(0, 0, 0)` and for **white** : `rgb(255, 255, 255)`.

Example : `<h2 style="color:rgb(255, 99, 71);">rgb(255, 99, 71) </h2>`

Browser : `rgb(255, 99, 71)`

By hex code

The colors can be represented by **6 digits hexadecimal code**. The codes are made using the 3 colors (Red, Green and Blue). First 2 digits are red, next 2 are green and last 2 are blue. So, the syntax for hex code is: **#RRGGBB**.

Each hexadecimal value between 00 - FF is similar to 0 - 255.

❖ #000000 is black and #FFFFFF is white.

Example : `<h2 style="color:#ff6347;">#ff6347 </h2>`

Browser :

#ff6347

Using hsl

The color can also be specified using the **HSL (Hue, Saturation and Lightness)** components.

- **Hue**, is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.
- **Saturation**, represents the amount of saturation in the color. It is a percentage value, 0% means a shade of gray, and 100% is the full color.
- **Lightness**, represents the amount of light in the color. It is also a percentage, 0% is black, 50% is neither light or dark, 100% is white.

Example : `<h2 style="color:hsl(9, 100%, 64%);">hsl(9, 100%, 64%) </h2>`

Browser :

hsl(9, 100%, 64%)

Using rgba

RGBA (Red, Green, Blue, Alpha) is an extension of RGB, provided with alpha transparency. This alpha value determines the opacity of the RGB defined color. The alpha parameter is a number between 0.0 (transparent) and 1.0 (opaque).

Example : `rgba(255, 0, 0, 0.6)` is a red color, with 0.6 opacity

Browser :



Using hsla

HSLA (Hue, Saturation, Lightness, Alpha) is also an extension of HSL, provided with alpha transparency. The alpha value and property is the same as that in RGBA.


Example : `hsla(0, 100%, 50%, 0.6)` is a red color with 0.6 opacity

Browser :



Sizing Images

If an image is placed inside a box that is smaller or larger than the dimensions of the image, it will either appear smaller than the box, or overflow out of the box. Here comes the role of CSS to adjust the size.

Picture overflow	Picture smaller than the div
	

Solution 1 : In this case we can set the size of the image to **max-width : 100%** and **max-height:100%** of the outer div. By this the overflow image will adjust to the size of div but the smaller image will remain in the same position and problem sustains.

Solution 2 : Using the object-fit property. When using object-fit the replaced element can be sized to fit a box in a variety of ways.

- **object-fit : cover** - Sizes the image down, maintaining the aspect ratio so that it neatly fills the box.
- **object-fit : contain** - image will be scaled down until it is small enough to fit inside the box.

Picture Overflow

HTML :

```
<div>
  
</div>
```

CSS :

```
div{
  height: 100px;
  width: 150px;
  border: 2px solid red;
}
img {
  height: 100%;
  width: 100%;
}
.contain {
  object-fit: contain;
}
```

Before :



After :



Picture Smaller than div

HTML :

```
<div>
  
</div>
```

CSS :

```
div{
  height: 250px;
  width: 650px;
  border: 2px solid red;
}
img {
  height: 100%;
  width: 100%;
}
.cover {
  object-fit: cover;
}
```

Before :



After :

