

CHAPTER ELEVEN II

11.2.0CSS RGB Colors

11.2.1 RGB Value

In CSS, a color can be specified as an RGB value, using this formula:

rgb(red, green, blue)

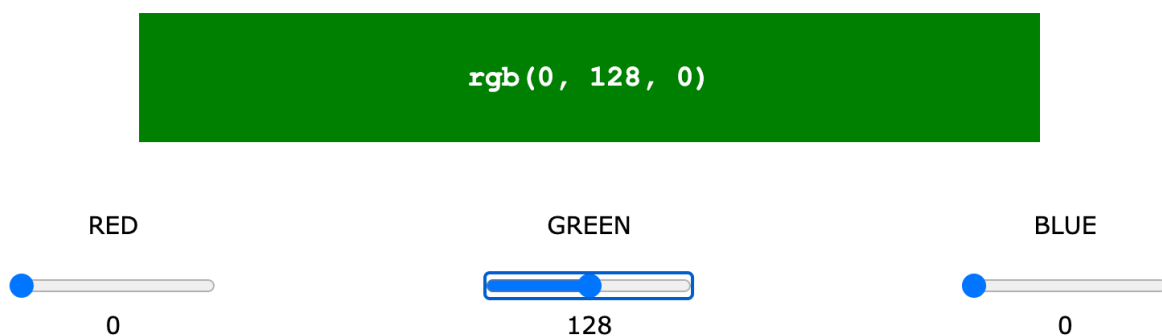
Each parameter (red, green, and blue) defines the intensity of the color between 0 and 255.

For example, *rgb(255, 0, 0)* is displayed as red, because red is set to its highest value (255) and the others 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)*.

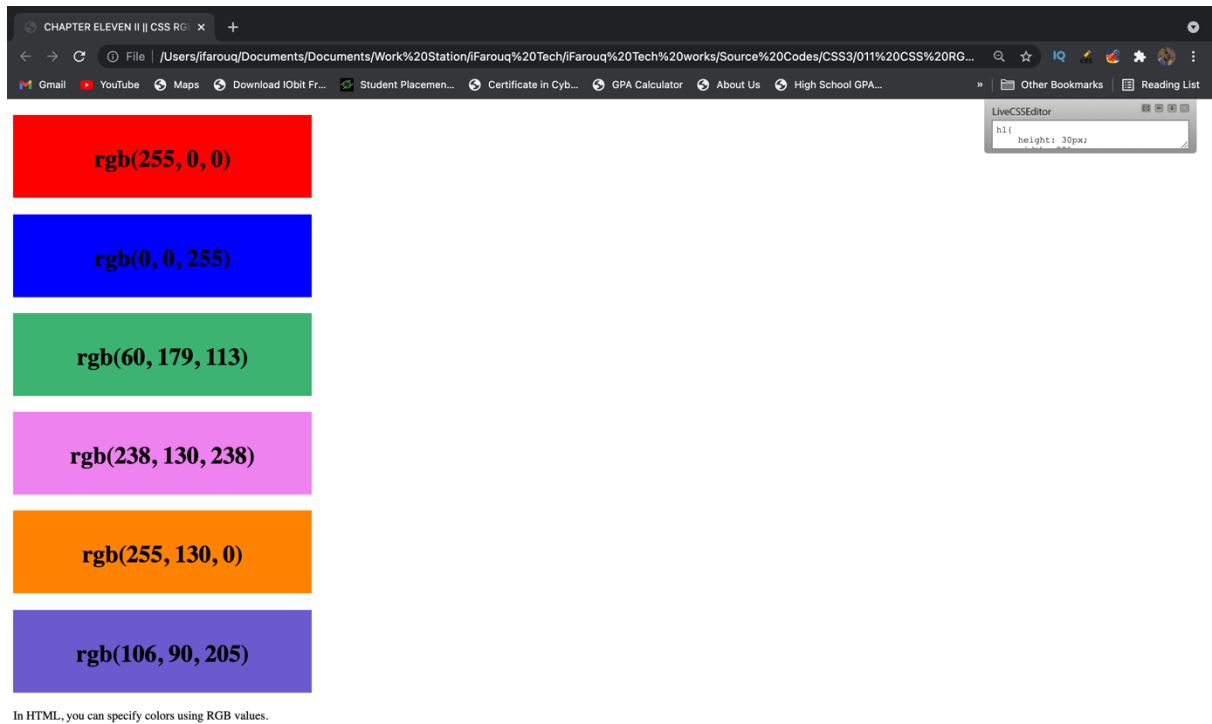
Experiment by mixing the RGB values below:



Example:

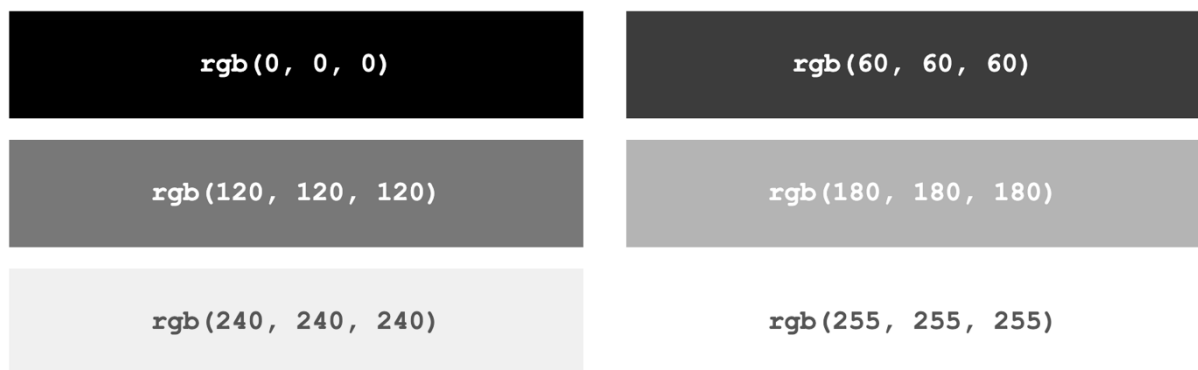
| | |
|--------------------------------|---------------------------------|
| <code>rgb(255, 0, 0)</code> | <code>rgb(0, 0, 255)</code> |
| <code>rgb(60, 179, 113)</code> | <code>rgb(238, 130, 238)</code> |
| <code>rgb(255, 165, 0)</code> | <code>rgb(106, 90, 205)</code> |

```
<!DOCTYPE html>
<html>
  <body>
    <h1 style="background-color:rgb(255, 0, 0);">
      rgb(255, 0, 0)
    </h1>
    <h1 style="background-color:rgb(0, 0, 255);">
      rgb(0, 0, 255)
    </h1>
    <h1 style="background-color:rgb(60, 179, 113);">
      rgb(60, 179, 113)
    </h1>
    <h1 style="background-color:rgb(238, 130, 238);">
      rgb(238, 130, 238)
    </h1>
    <h1 style="background-color:rgb(255, 165, 0);">
      rgb(255, 165, 0)
    </h1>
    <h1 style="background-color:rgb(106, 90, 205);">
      rgb(106, 90, 205)
    </h1>
    <p>
      In HTML, you can specify colors using RGB values.
    </p>
  </body>
</html>
```



Shades of gray are often defined using equal values for all the 3 light sources:

Example:

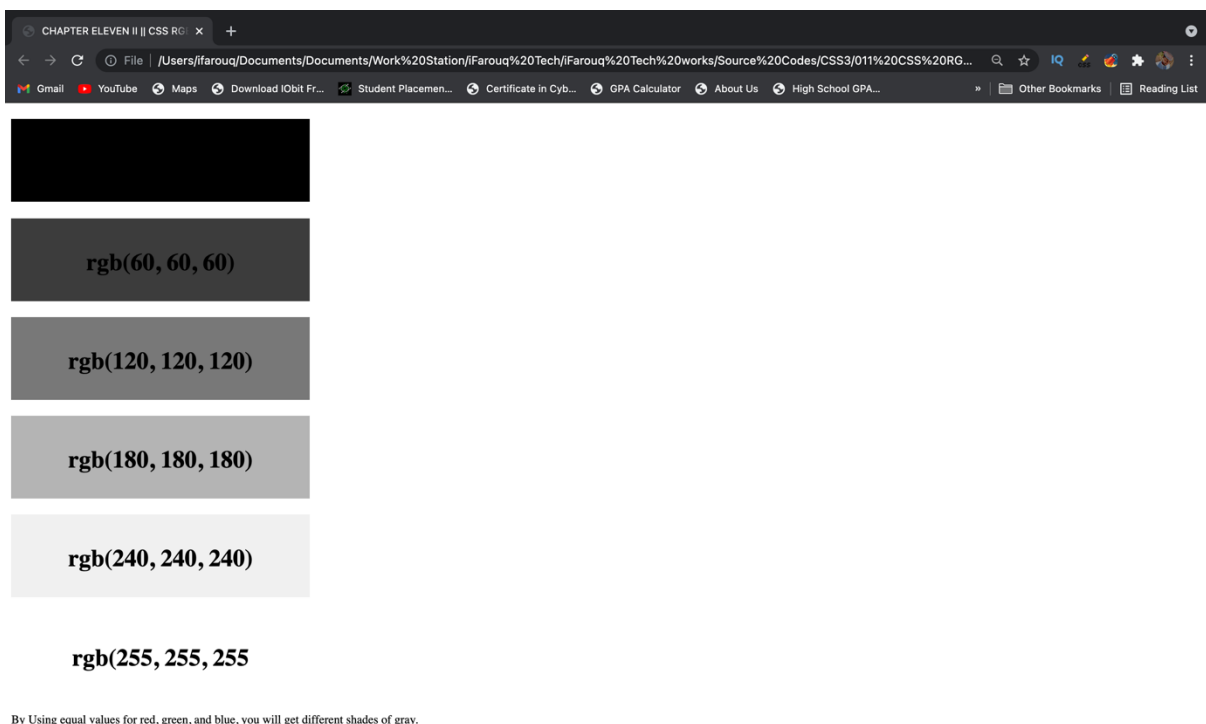


```
<!DOCTYPE html>
<html>
  <body>
    <h1 style="background-color:rgb(0, 0, 0);">
      rgb(0, 0, 0)
    </h1>
    <h1 style="background-color:rgb(60, 60, 60);">
      rgb(60, 60, 60)
    </h1>
    <h1 style="background-color:rgb(120, 120, 120);">
      rgb(120, 120, 120)
    </h1>
```

```

<h1 style="background-color:rgb(180, 180, 180);">
    rgb(180, 180, 180)
</h1>
<h1 style="background-color:rgb(240, 240, 240);">
    rgb(240, 240, 240)
</h1>
<h1 style="background-color:rgb(255, 255, 255);">
    rgb(255, 255, 255)
</h1>
<p>
    By using equal values for red, green, and blue, you will get
    different shades of gray.
</p>
</body>
</html>

```



11.2.2 RGBA Value

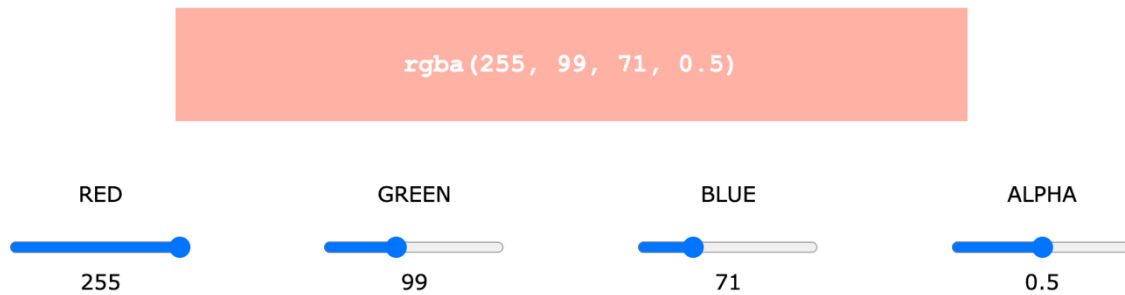
RGBA color values are an extension of RGB color values with an alpha channel - which specifies the opacity for a color.

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):

Experiment by mixing the RGBA values below:



Example:



```
<!DOCTYPE html>
<html>
  <body>
    <h1 style="background-color:rgba(255, 99, 71, 0);">
      rgba(255, 99, 71, 0)
    </h1>
    <h1 style="background-color:rgba(255, 99, 71, 0.2);">
      rgba(255, 99, 71, 0.2)
    </h1>
    <h1 style="background-color:rgba(255, 99, 71, 0.4);">
      rgba(255, 99, 71, 0.4)
    </h1>
    <h1 style="background-color:rgba(255, 99, 71, 0.6);">
      rgba(255, 99, 71, 0.6)
    </h1>
    <h1 style="background-color:rgba(255, 99, 71, 0.8);">
      rgba(255, 99, 71, 0.8)
    </h1>
```

```

</h1>
<h1 style="background-color:rgba(255, 99, 71, 1);">
    rgba(255, 99, 71, 1)
</h1>
<p>
    You can make transparent colors by using the RGBA color value.
</p>
</body>
</html>

```

