

# HTML Colors

- 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:

Tomato

Orange

DodgerBlue

MediumSeaGreen

Gray

SlateBlue

Violet

LightGray

# Background Color

- You can set the background color for HTML elements:

The screenshot shows a simple web page with a blue header containing the text "Hello World". Below the header is a large orange rectangular area containing placeholder text from the "Lorem ipsum" generator. The text reads: "Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat."

## Example

```
<h1 style="background-color:DodgerBlue;">Hello World</h1>
<p style="background-color:Tomato;">Lorem ipsum...</p>
```

# Text Color

- You can set the color of text:

`Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.`

`Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.`

## Example

```
<h1 style="color:Tomato;">Hello World</h1>
<p style="color:DodgerBlue;">Lorem ipsum...</p>
<p style="color:MediumSeaGreen;">Ut wisi enim...</p>
```

# Border Color

- You can set the color of borders:

Hello World

Hello World

Hello World

## Example

```
<h1 style="border:2px solid Tomato;">Hello World</h1>
<h1 style="border:2px solid DodgerBlue;">Hello World</h1>
<h1 style="border:2px solid Violet;">Hello World</h1>
```

# Color Values

```
<h1 style="background-color:rgb(255, 99, 71);">...</h1>
<h1 style="background-color:#ff6347;">...</h1>
<h1 style="background-color:hsl(9, 100%, 64%);">...</h1>
```

- HTML, colors can also be specified using RGB values, HEX values, HSL values, RGBA values, and HSLA values.
- The following three <div> elements have their background color set with RGB, HEX, and HSL values:

rgb(255, 99, 71)

#ff6347

hsl(9, 100%, 64%)

# Color Values

- The following two <div> elements have their background color set with RGBA and HSLA values, which adds an Alpha channel to the color (here we have 50% transparency):

```
rgba(255, 99, 71, 0.5)
```

```
hsla(9, 100%, 64%, 0.5)
```

```
<h1 style="background-color:rgba(255, 99, 71, 0.5);">...</h1>
<h1 style="background-color:hsla(9, 100%, 64%, 0.5);">...</h1>
```

# HTML CSS

- CSS stands for Cascading Style Sheets.
- CSS saves a lot of work. It can control the layout of multiple web pages all at once.



# What is CSS?

- 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!
- **Tip:** The word **cascading** means that a style applied to a parent element will also apply to all children elements within the parent. So, if you set the color of the body text to "blue", all headings, paragraphs, and other text elements within the body will also get the same color (unless you specify something else)!

# Using CSS

- 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
- The most common way to add CSS, is to keep the styles in external CSS files. However, in this tutorial we will use inline and internal styles, because this is easier to demonstrate, and easier for you to try it yourself.

# 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:

## Example

```
<h1 style="color:blue;">A Blue Heading</h1>  
  
<p style="color:red;">A red paragraph.</p>
```

# Internal CSS

- An internal CSS is used to define a style for a single HTML page.
- An internal CSS is defined in the `<head>` section of an HTML page, within a `<style>` element.
- The following example sets the text color of ALL the `<h1>` elements (on that page) to blue, and the text color of ALL the `<p>` elements to red. In addition, the page will be displayed with a "powderblue" background color:

## Example

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1 {color: blue;}
p {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

# External CSS

- An external style sheet is used to define the style for many HTML pages.
- To use an external style sheet, add a link to it in the `<head>` section of each HTML page:

## Example

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

## "styles.css":

```
body {
  background-color: powderblue;
}

h1 {
  color: blue;
}

p {
  color: red;
}
```

- **Tip:** With an external style sheet, you can change the look of an entire web site, by changing one file!

# CSS Colors, Fonts and Sizes

- The CSS **color** property defines the text color to be used.
- The CSS **font-family** property defines the font to be used.
- The CSS **font-size** property defines the text size to be used.

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
    color: blue;
    font-family: verdana;
    font-size: 300%;
}
p {
    color: red;
    font-family: courier;
    font-size: 160%;
}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

# CSS Border

## Example

Use of CSS border property:

```
p {  
    border: 2px solid powderblue;  
}
```

# CSS Padding

- The CSS padding property defines a padding (space) between the text and the border.

## Example

Use of CSS border and padding properties:

```
p {  
    border: 2px solid powderblue;  
    padding: 30px;  
}
```

# CSS Margin

- The CSS margin property defines a margin (space) outside the border.

## Example

Use of CSS border and margin properties:

```
p {  
    border: 2px solid powderblue;  
    margin: 50px;  
}
```

# Link to External CSS

```
<link rel="stylesheet" href="/html/styles.css">
```

```
<link rel="stylesheet" href="styles.css">
```

```
<link rel="stylesheet" href="https://www.w3schools.com/html/styles.css">
```

# Exercise 05

- <https://reurl.cc/bErOqM>

The screenshot shows a web-based exercise interface. At the top, it says "Web Programming Exercise 03". To the right of the title, there is a blue button labeled "總分 3/3" and a question mark icon. Below the title, there are two input fields: "Name" containing "Jenny" and "Student ID" containing "9900990". The main content area contains a question: "1. Choose the correct HTML element for the largest heading:". There are four options: " <head>", " <h6>", " <h1>" (which is highlighted with a green background and has a checkmark to its right), and " <heading>".

Just show that you are all correct!

\*\*\* Upload this image to YZU portal \*\*\*