

# HTML Programming Part 2 - Styles

## Introduction to Styles:

A **style** is a set of **HTML code** that identifies what **style attributes** will be applied to **different HTML elements**. Although there are many different **style attributes** that can be applied to different **HTML elements**, but some of the most commonly used **style attributes** are: “**border**”, “**padding**”, “**background**”, “**color**”, and “**font**”. These **style attributes** can be used by themselves or in combination with other **style attributes**.

Styles can be applied to **elements** in an **HTML document** in three different ways. These include “**inline styles**”, “**embedded styles**”, and “**external style sheets**”. Each of these styles are elaborated in more detail below.

## Inline Styles:

**Inline styles** are applied to a specific **HTML element**, and the **specific style attributes** are applied to each element separately.

## Embedded Styles:

Embedded styles are defined between the an **HTML document's head tags** using the **style tag**. An **embedded style** can stylize multiple **HTML elements** in a design. This saves the programmer time by eliminating redundant program codes from being written. An **HTML document** can have more than one **embedded style**; however each **style** needs to have its own unique name or identifier.

## External Style Sheets:

Large and complicated websites will often use **external style sheets** to apply **styles** across multiple **HTML documents**. The use of **external style sheets** is the most advanced and effective method to apply **styles** to multiple **HTML documents** in a website. This helps to insure that there is consistency between the different **elements** in the design of a website. The effective Use of **external style sheets** also reduces how much work the programmer needs to do to keep a website up-to-date. If an **external style sheet** is updated then every **HTML document** that references that **style sheet** will also be updated instantly.

## Using Styles:

Although the use of **external style sheets** is the most effective method of stylizing a website, it is also the most complicated; therefore it is worth while to learn the basics of **inline** and **embedded styles** first. Once you understand the basic principles behind the commonly used **style attributes** it becomes much easier to understand how to create **external style sheets** for an entire website.

**Note:** The following examples focus on **inline** and **embedded styles** only.

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## Inline Styles:

The use of an **inline style** is the most basic method used to stylize different **elements** in an **HTML document**. By using **inline styles** the programmer can adjust a number of different **style attributes** such as the “**font-size**” and “**color**” of a specific **element**.

**Style attributes** can be applied to different **HTML elements** such as a **paragraph tag** `<p>` by adding a **style attribute** to the **tag** that will be stylized.

**Note 1:** If the same **style** will be used by several different **elements** in an **HTML document** a programmer can create a custom **style** using the **style tag**. By using the **style tag** a programmer can create an **embedded style** that can be used by multiple **HTML elements** in the document. This eliminates the need to retype the specific **styles attributes** multiple times.

**Note 2:** If the same **style** will be used by multiple **HTML documents** a programmer can create an **external style sheet** and then apply the styles to multiple **HTML documents**. If the **external style sheet** is changed every **HTML document** that references that **style sheet** will also be updated automatically. This helps to insure that there is consistency between different **HTML documents** in a website.

## Syntax:

The style attribute can be added to a **paragraph tag** by adding **style=“ \_\_\_\_”**. When the when the **paragraph tag** is modified it will look like the following:

`<p style=“ ____”> Content here... </p>`

## Example:

```
<!doctype html>
<html>
  <head>
    <title>Inline Style Example</title>
    <!--Change the document title to "My Name's Inline Style Example". Make you use proper punctuation. -->
  </head>
  <body>
    <p> This paragraph does not have any "inline styles" applied to it, but the next paragraph does.</p>
    <p style="font-size: 200%; color:red">This paragraph has "inline styles" to change the font size and color.</p>
  </body>
</html>
```

**Note:** Using either **inline** or **embedded styles** is not as powerful as using an **external style sheet**; however it is important to learn how to create simple **inline styles** before attempting more complicated methods of stylizing your **HTML documents**.

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## Style Tag | <style> </style>:

The **style tag** <style> is used for creating a specific **style** that will be used within your **HTML document**. The **style tag** is not visible to the person viewing a website and does not contain the actual content that will be stylized. Instead the **style tag** has a set of program codes that are used for styling the content in an **HTML element** that references the specific **style**.

**Note:** A programmer can create more than one **style**; however each **style** will need to have its own unique name. To apply a style to an **element** the programmer needs to create a specific **HTML element** with open and close tags that have the same name as the **style**.

### Syntax:

The **style tag** is written as <style> </style> with the different styles inserted between the open and close tags.

### Example:

```
<!doctype html>
<html>
  <head>
    <title> The website title goes here </title>
    <!--Change the title of the document to your first and last name for this activity-->
    <style>
      stylized { color:red; border:2px solid blue; padding:10px; font-size:200%; }
    <!--The style above includes several different styles markers. -->
    <!--These include: a blue border, red text, and a 200% increase in font size. -->
    <!--The word "stylized" is a specific identifier that has been assigned by the programmer to identify this style. -->
    <!--The word "stylized" can be changed to any other word or phrase . -->
    <!--Now change the word "stylized" to "mystyle". -->
    </style>
  </head>
  <body>
    <p>This paragraph has regular text formatting because it has no styles applied to it.</p>
    <p>However, the following paragraph of text has several different styles applied to it.</p>
    <p><stylized>This paragraph has several different styles applied to it.</stylized></p>
    <!--The content that a style is applied to needs to use a specific tag that references the desired style. -->
    <!--Since you have changed the style name from "stylized" you will need to change the tags for this style as well. -->
    <p> The paragraph above has the following styles; a blue border, red text, and a font size of 200%.</p>
  </body>
</html>
```

**Note:** This example shows how several different **styles** can be combined and applied to an **HTML element** in a document. Styles can be applied to multiple elements and large documents may have more than one style. The examples on the following pages will elaborate on the different style attributes shown in this example.

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## Style Attributes | Border:

The different **styles** that are used in an **HTML document** are defined between the open and close **style tags**. An **HTML document** can have more than one **style** but every **style** needs to have its own unique name. The specific name of each style is followed by the style's specific attributes which are written between open and closed curly brackets like this example: **style-name{specific style attributes}**.

The **border attribute** is used to surround an HTML element. **Borders** can be customized in several different ways which include: width, location, offset, color, etc.

### Syntax:

The **border attribute** is written inside brackets as **style-name{border:attributes}**. The **border attribute** can be modified in several different ways as indicated below:

The width of every border needs to be specified using a measurement:

**border: \_\_px, border-left: \_\_px, etc.**

The different sides of a border can be defined using the following statements:

**border-left: \_\_px, border-right: \_\_px, border-top: \_\_px, border-bottom: \_\_px.**

The border can be defined as either a solid or dashed line by using the statement:

**border: \_\_ px solid, or border: \_\_ px dashed.**

The color of a border can be defined by adding a color code to the statement:

**border: \_\_ px solid blue, border: \_\_ px dashed red, etc.**

### Example:

```
<!doctype html>
<html>
  <head>
    <title> The website title goes here </title>
    <!--Change the title of the document to your first and last name for this activity-->
    <style>
      border1 { border:5px solid;padding:5px; }
      border2 { border:10px solid;padding:5px; }
      border3 { border-left:10px solid blue;padding:5px; }
      border4 { border:5px dashed blue;padding:5px; }
    <!--This example shows 4 different ways that the border attribute can be customized. -->
  </style>
</head>
<body>
  <p>The follow paragraphs show how the different border style attribute can be customize :</p>
  <p><border1>This paragraph has a black border with a width of 5 pixels on all four sides.</border1></p>
  <br>
  <p><border2>This paragraph has a black border with a width of 10 pixels on all four sides.</border2></p>
  <br>
  <p><border3>This paragraph has a 10 pixel blue border on the left side only.</border3></p>
  <br>
  <p><border4>This paragraph has a dashed 5 pixel blue border on all four sides.</border4></p>
</body>
</html>
```

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## Style Attributes | Padding:

**Padding** is the amount of space that is added between the perimeter of an **HTML element** and its **flow content**. In other words **padding** defines the space between the element's border and its **flow content**. The amount of padding that is used is defined by a measurement in **pixels**.

### Syntax:

The padding attribute is written inside brackets as **style-name{padding: \_\_px}**.

### Example:

```
<!doctype html>
<html>
  <head>
    <title> The website title goes here </title>
    <!--Change the title of the document to your first and last name for this activity-->
    <style>
      padding1 { border:10px solid blue;padding:0px; }
      padding2 { border:10px solid blue;padding:5px; }
      padding3 { border:10px solid blue;padding:10px; }
      padding4 { border:10px solid blue;padding:15px; }
    <!--This example shows 4 different examples of different padding measurements using a measurement in pixels. -->
    <!--Change the border color in these example to any color other than blue. -->
    </style>
  </head>
  <body>
    <p>The follow paragraphs show how the padding style attribute can be customize.</p>
    <p><padding1>This paragraph has a padding value of 0px (pixels).</padding1></p>
    <!-- Since there is no padding in this example the border is actually touching the edges of the content. -->
    <br>
    <p><padding2>This paragraph has a padding value of 5px (pixels).</padding2></p>
    <br>
    <p><padding3>This paragraph has a padding value of 10px (pixels)</padding3></p>
    <br>
    <p><padding4>This paragraph has a padding value of 15px (pixels).</padding4></p>
  </body>
</html>
```

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## Style Attributes | Background:

The **background attribute** allows the programmer to specify a color or image they want to use for the **background** of an **HTML element**.

### Syntax:

The **background attribute** is written as **style-name{background:attributes}**. The most basic use of the **background attribute** is to apply a background color and is written as: {background:color}.

A **HTML element** can also use an image for a **background**. An image can be used as the entire **background** or can be repeated in a pattern and is written: **{background-image:url('http://\_\_\_\_') background-repeat:repeat;height:\_\_px;"} }**

### Example:

```
<!doctype html>
<html>
  <head>
    <title> The website title goes here </title>
  <!--Change the title of the document to your first and last name for this activity-->
  <style>
    background1 { border:5px solid;padding:10px; background:yellow; }
    background2 { border:5px solid;padding:10px; background:silver; }
    background3 { border-left:10px solid blue;padding:10px; background:yellow; }
    background4 { border:5px dashed blue;padding:10px; background:yellow; }
  <!--This example shows 4 different ways that the border attribute can be customized. -->
  <!--Change the colors used in the styles "background1", "background2", "background3", and "background4". -->
  <!--Remember to change the name of the color in the example paragraphs as well. -->
  </style>
</head>
<body>
  <p>The follow paragraphs show how the border and background style attribute can be used together. </p>
  <p><background1>This paragraph has a solid border and a yellow background.</background1></p>
  <br>
  <p><background2>This paragraph has a solid border and a silver background.</background2></p>
  <br>
  <p><background3>This paragraph has a border on one side and a yellow background.</background3></p>
  <br>
  <p><background4>This paragraph has a dashed border with a yellow background.</background4></p>
</body>
</html>
```

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## Style Attributes | Font:

The **font attribute** can be used to stylize the **flow content** (or text) in an **HTML element**. There are many **font attributes** that are very specific; however there are two very important font attributes that are commonly used. The most commonly used **font attributes** include: “**font-size**” and “**font-family**”.

### Syntax:

The font-family attribute is written as:

```
style-name{font-family:verdana, arial, sans-serif; }  
style-name{font-family:georgia, times, serif; }
```

**Note:** A **font-family** usually has more than one **font** listed, and the order of the **fonts** in the list can be modified. The provided example only includes three **font** types; however a **font-family** can have as many **fonts** as the programmer wants to include, and **fonts** should be listed in their preferred order by the programmer. If a computer does not have the preferred **font** installed then the next **font** in the list will be used instead. If none of the preferred **fonts** are available then a generic **font** will be used.

The font-size attribute is written using any of the following three methods:

```
style-name{font-size: ____%; }  
style-name{font-size: ____pt; }  
style-name{font-size: ____px; }
```

### Example

```
<!doctype html>  
<html>  
  <head>  
    <title> The website title goes here </title>  
    <!--Change the title of the document to your first and last name for this activity-->  
    <style>  
      sans-serif1 { font-family:verdana, arial, sans-serif; }  
      sans-serif2 { font-size:150%; font-family:verdana, arial, sans-serif; }  
      serif1 { font-family:georgia, times, serif; }  
      serif2 { font-size:150%; font-family:georgia, times, serif; }  
    <!--These styles use both the "font-size" and "font-family" style attributes.-->  
    <!--Although you can not always specify exactly what font you want to use you can specify your preference.-->  
    <!--A "san-serif" font is a very simple font that has strait edges, whereas a "serif" font is more decretive.-->  
    <!--Each font-family has more then one option. The order the fonts appear in a family indicate their importance.-->  
    <!--If a computer cannot display the text using the desired font in a family it will use the next font in the list.-->  
  </style>  
  </head>  
  <body>  
    <p>This paragraph contains text that has not styles applied to it.</p>  
    <!--The look and size of the text that has no style can change depending on what internet browser you use.-->  
    <br>  
    <p><sans-serif1>This paragraph uses a "san-serif" font type. </sans-serif1></p>  
    <p><serif1>This paragraph uses a "serif" font type.</serif1></p>  
    <!--Can you tell the difference between the "san-serif" and "serif" font types?-->  
    <br>  
    <p><sans-serif2>This paragraph has a font-size of 150% and uses a "sans-serif" font type. </san-serif2></p>  
    <p><serif2>This paragraph has a font-size of 150% and uses a "serif" font type.</serif2></p>  
    <!--Is it easier to see the difference between the "san-serif" and "serif" font types when they are enlarged?-->  
  </body>  
</html>
```

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## Style Attributes | Color:

**HTML** program codes allow for a large range of very specific colors to be selected and used in a **web-design**. Usually colors are identified by using either **RGB**, or **HEX** values; however, there are some basic colors that can be used by using generic color names. These basic colors include: red, green, blue, cyan, magenta, yellow, black, and white.

**Note:** When writing **HTML codes** it is important to use the American English spelling for words. For example if you write **“color”** using the British spelling **“colour”** you will have an error and the indicated color will not be applied to the **HTML element**.

### Syntax:

The **color attribute** is written inside brackets as **style-name{color:attribute}**. The default **color attribute** applies to any text inside an **HTML element**; however **color attributes** can be applied to other **style attributes** such as **borders** or **backgrounds**.

An **element's font** color can be changed by using the following color statement: **{color:\_\_\_}, {color:red; }, {color:blue; }, {color:green; }, etc.**

A **color attribute** can be applied to other **style attributes** by adding a **color code** to other **style attribute** as is shown in the examples below:  
**{border:2px solid \_\_\_}, {border:2px solid red}, {border:2px solid green}, etc.**  
**{background: \_\_\_}, {background:red}, {background: green}, etc.**

### Example:

```
<!doctype html>
<html>
  <head>
    <title> The website title goes here </title>
    <!--Change the title of the document to your first and last name for this activity-->
    <style>
      redstyle{ color:red; border:2px solid red; padding:10px; font-size:200%; }
      greenstyle{ color:green; border:2px solid green; padding:10px; font-size:200%; }
      bluestyle{ color:blue; border:2px solid blue; padding:10px; font-size:200%; }
      blackstyle{ color:white; padding:10px; font-size:200%; background:black; }
    </style>
  </head>
  <body>
    <p>The follow examples show how several different color styles can be applied to different elements.</p>
    <br>
    <p><redstyle>This paragraph has the Red style applied to it.</redstyle></p>
    <br>
    <p><greenstyle>This paragraph has the Green style applied to it.</greenstyle></p>
    <br>
    <p><bluestyle>This paragraph has the Blue style applied to it.</bluestyle></p>
    <br>
    <p><blackstyle>This style has white text and a black background.</blackstyle></p>
    <!-- Change the look of the styles. Don't forget to rename the style when you are done. -->
    <!-- Change "Red" to "Cyan". Change "Green" to "Magenta". Change "Blue" to "Yellow". -->
  </body>
</html>
```