

CSS: Cascading Style Sheet

- CSS stands for Cascading Style Sheets.
- CSS is the language we use to style a Web page

CSS describes how HTML elements are to be displayed on screen, paper, or in other media.

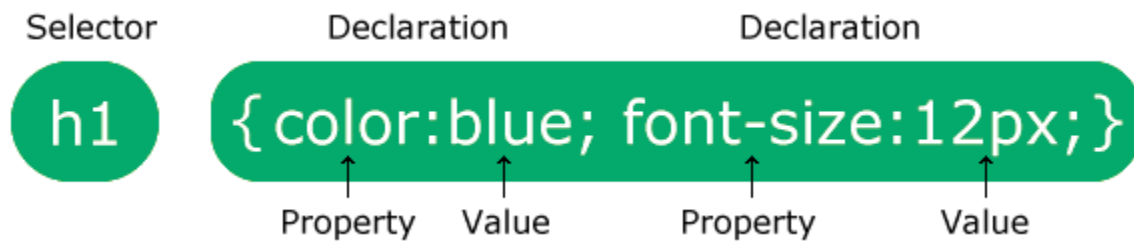
- CSS saves a lot of work. It can control the layout of multiple web pages all at once.
- External stylesheets are stored in CSS files.
- Like HTML, CSS is not a programming language. It's not a markup language either. **CSS is a style sheet language.** CSS is what you use to selectively style HTML elements. For example, this CSS selects paragraph text, setting the color to red:
- CSS saves a lot of work. It can control the layout of multiple web pages all at once.

Why Use CSS?

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

A CSS rule consists of a selector and a declaration block.

CSS Syntax



The selector points to the HTML element you want to style.

The declaration block contains one or more declarations separated by semicolons.

Each declaration includes a CSS property name and a value, separated by a colon.

Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

Example

In this example all <p> elements will be center-aligned, with a red text color:

```
p {  
  color: red;  
  text-align: center;  
}
```

Example Explained

- **p** is a selector in CSS (it points to the HTML element you want to style: <p>).
- **color** is a property, and **red** is the property value
- **text-align** is a property, and **center** is the property value

Levels of Stylesheet(CSS)

- **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

Inline CSS

An inline style may be used to apply a unique style for a single element.

To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property

```
<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

```
<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>
```

Result Size: 668 x 502

This is a heading

This is a paragraph.

External CSS

With an external style sheet, you can change the look of an entire website by changing just one file!

Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

Example

External styles are defined within the <link> element, inside the <head> section of an HTML page:

```
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>

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

</body>
</html>
```

An external style sheet can be written in any text editor, and must be saved with a .css extension.

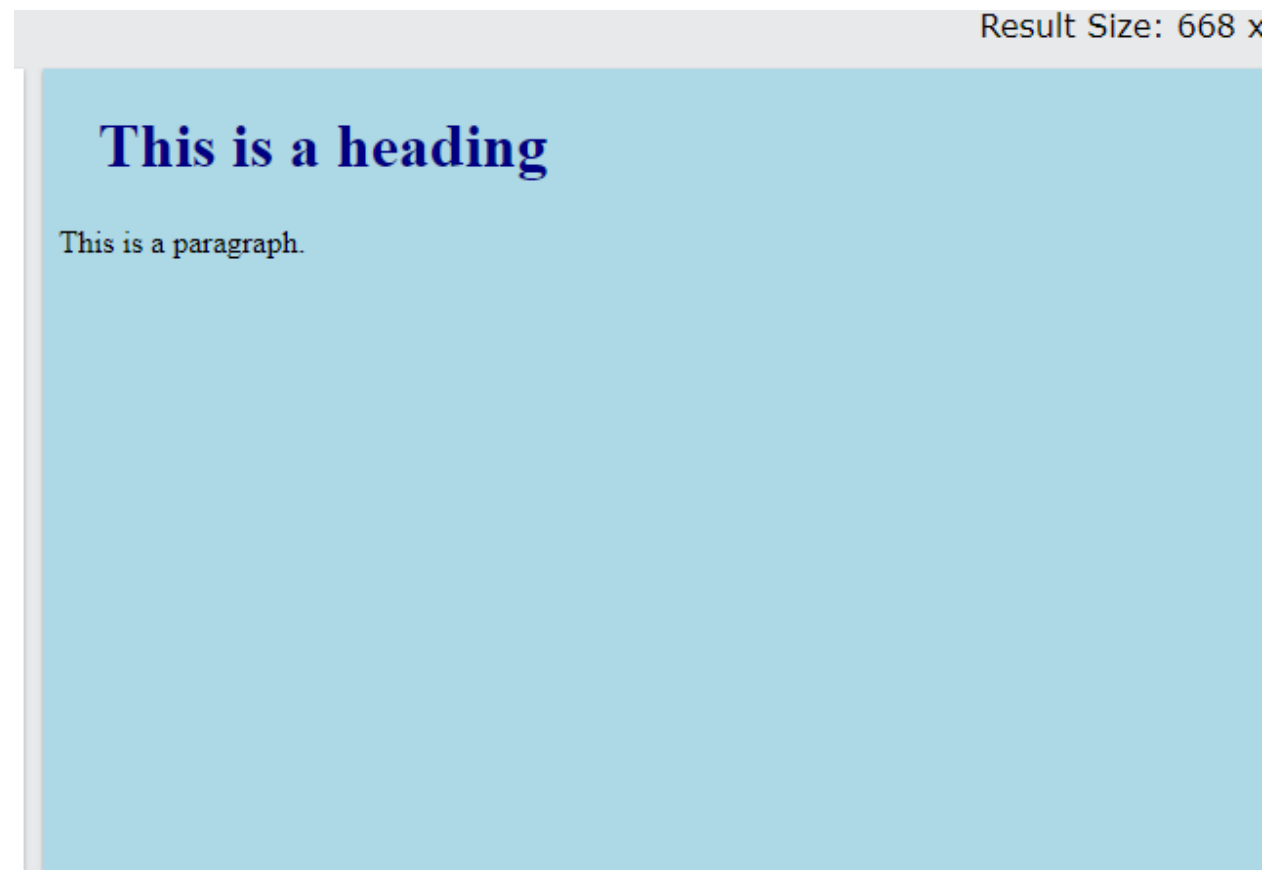
The external .css file should not contain any HTML tags. Here is how the "mystyle.css" file looks:

"mystyle.css"

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

h1 {
  color: navy;
  margin-left: 20px;
}
```

Note: Do not add a space between the property value and the unit (such as `margin-left: 20 px;`). The correct way is: `margin-left: 20px;`



Selectors in CSS

CSS selectors are used to "find" (or select) the HTML elements you want to style.

- The CSS element or tag Selector
- The CSS id Selector
- The CSS class Selector
- The CSS Universal Selector
- The CSS Grouping Selector

The CSS element or tag Selector

The element selector selects HTML elements based on the element name.

Ex:

```
p {  
  text-align: center;  
  color: red;  
}
```

program

```
<html>  
<head>  
<style>  
p {  
  text-align: center;  
  color: red;  
}  
</style>  
</head>  
<body>  
<p>Every paragraph will be affected by the style.</p>  
</body>  
</html>
```

The CSS id Selector

The id selector uses the id attribute of an HTML element to select a specific element.

- The id of an element is unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a hash (#) character, followed by the id of the element

Example

The CSS rule below will be applied to the HTML element with id="para1":

```
#para1 {  
    text-align: center;  
    color: red;  
}
```

Program

```
<html>  
<head>  
<style>  
#para1 {  
    text-align: center;  
    color: red;  
}  
</style>  
</head>  
<body>  
<p id="para1">Hello World!</p>  
</body>  
</html>
```

The CSS class Selector

The class selector selects HTML elements with a specific class attribute.

To select elements with a specific class, write a period (.) character, followed by the class name.

Example

In this example all HTML elements with class="center" will be red and center-aligned:

```
.center {  
    text-align: center;  
    color: red;  
}
```

Example

```
<html>  
<head>  
<style>  
.center {  
    text-align: center;  
    color: red;  
}  
</style>  
</head>  
<body>  
<h1 class="center">Red and center-aligned heading</h1>  
<p class="center">Red and center-aligned paragraph.</p>  
</body>  
</html>
```

The CSS Universal Selector

The universal selector (*) selects all HTML elements on the page.

Example

The CSS rule below will affect every HTML element on the page:

```
* {  
  text-align: center;  
  color: blue;  
}
```

Example

```
<html>  
<head>  
<style>  
* {  
  text-align: center;  
  color: blue;  
}  
</style>  
</head>  
<body>  
  
<h1>Hello world!</h1>  
  
<p>Every element on the page will be affected by the style.</p>  
<p id="para1">Me too!</p>  
<p>And me!</p>  
  
</body>  
</html>
```

The CSS Grouping Selector

The grouping selector group all the HTML elements with the same style definitions.

```
h1, h2, p {  
    text-align: center;  
    color: red;  
}
```

program

```
<html>  
<head>  
<style>  
h1, h2, p {  
    text-align: center;  
    color: red;  
}  
</style>  
</head>  
<body>  
  
<h1>Hello World!</h1>  
<h2>Smaller heading!</h2>  
<p>This is a paragraph.</p>  
  
</body>  
</html>
```

All CSS Simple Selectors

Selector	Example	Example description
<u>#id</u>	#firstname	Selects the element with id="firstname"
<u>.class</u>	.intro	Selects all elements with class="intro"
<u>element.class</u>	p.intro	Selects only <p> elements with class="intro"
<u>*</u>	*	Selects all elements
<u>element</u>	p	Selects all <p> elements
<u>element,element,..</u>	div, p	Selects all <div> elements and all <p> elements

FONT PROPERTIES IN CSS

There are four font properties

- Font -style
- Font-weight
- Font-size
- Font-family

Font Style

The `font-style` property is mostly used to specify italic text.

This property has three values:

- normal - The text is shown normally
- italic - The text is shown in italics
- oblique - The text is "leaning" (oblique is very similar to italic, but less supported)

Example

```
.normal {  
  font-style: normal;  
}  
  
.italic {  
  font-style: italic;  
}  
  
.oblique {  
  font-style: oblique;  
}
```

```
<html>
<head>
<style>
.normal {
  font-style: normal;
}

.italic {
  font-style: italic;
}

.oblique {
  font-style: oblique;
}
</style>
</head>
<body>
<p class="normal">This is a paragraph in normal style.</p>
<p class="italic">This is a paragraph in italic style.</p>
<p class="oblique">This is a paragraph in oblique style.</p>

</body>
</html>
```

output

This is a paragraph in normal style.

This is a paragraph in italic style.

This is a paragraph in oblique style.

Font Weight

The `font-weight` property specifies the weight of a font:

Example

```
.normal {  
  font-weight: normal;  
}  
  
.thick {  
  font-weight: bold;  
}  
  
<html>  
<head>  
<style>  
  .normal {  
    font-weight: normal;  
  }  
  
  .thick {  
    font-weight: bold;  
  }  
  
</style>  
</head>  
<body>  
  
<p class="normal">This is a paragraph.</p>  
<p class="thick">This is a paragraph.</p>  
  
</body>  
</html>
```

output

This is a paragraph

This is a paragraph.

Font Size

The `font-size` property sets the size of the text.

Set Font Size With Pixels

Setting the text size with pixels gives you full control over the text size:

Example

```
h1 {  
  font-size: 40px;  
}
```

```
h2 {  
  font-size: 30px;  
}
```

```
p {  
  font-size: 14px;  
}
```

```
<html>  
<head>  
<style>  
h1 {  
  font-size: 40px;  
}  
  
h2 {  
  font-size: 30px;  
}  
  
p {  
  font-size: 14px;  
}  
</style>  
</head>  
<body>
```

```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>

</body>
</html>
```

output

This is heading 1

This is heading 2

This is a paragraph.

This is another paragraph.

The CSS font-family Property

In CSS, we use the `font-family` property to specify the font of a text.

In CSS there are five generic font families:

1. **Serif** fonts have a small stroke at the edges of each letter. They create a sense of formality and elegance.
2. **Sans-serif** fonts have clean lines (no small strokes attached). They create a modern and minimalistic look.
3. **Monospace** fonts - here all the letters have the same fixed width. They create a mechanical look.
4. **Cursive** fonts imitate human handwriting.
5. **Fantasy** fonts are decorative/playful fonts

Note: If the font name is more than one word, it must be in quotation marks, like: "Times New Roman".

Example

Specify some different fonts for three paragraphs:

```
.p1 {  
  font-family: "Times New Roman", Times, serif;  
}  
  
.p2 {  
  font-family: Arial, Helvetica, sans-serif;  
}  
  
.p3 {  
  font-family: "Lucida Console", "Courier New", monospace;
```

```
<html>
<head>
<style>
.p1 {
  font-family: "Times New Roman", Times, serif;
}

.p2 {
  font-family: Arial, Helvetica, sans-serif;
}

.p3 {
  font-family: "Lucida Console", "Courier New", monospace;
}
</style>
</head>
<body>

<h1>CSS font-family</h1>
<p class="p1">This is a paragraph, shown in the Times New Roman font.</p>
<p class="p2">This is a paragraph, shown in the Arial font.</p>
<p class="p3">This is a paragraph, shown in the Lucida Console font.</p>

</body>
</html>
```

OUTPUT

CSS font-family

This is a paragraph, shown in the Times New Roman font.

This is a paragraph, shown in the Arial font.

This is a paragraph, shown in the Lucida Console font.

```
File Edit Format View Help
<html>
<head>
<style>
p { font-family : arial,serif,sans-serif,"Times New Roman";
    font-style:oblique;
    font-weight:bold;
    font-size:40px}
</style>
</head>
<body>
<p>EXAMPLE FOR CSS FONTS</p>
</body>
```

EXAMPLE FOR CSS FONTS

To shorten the code, it is also possible to specify all the individual font properties in one property.

The **font** property is a shorthand property for:

- **font-style**
- **font-weight**
- **font-size/line-height**
- **font-family**

Note: The **font-size** and **font-family** values are required. If one of the other values is missing, their default value are used.

Example

Use **font** to set several font properties in one declaration:

```
.a {  
  font: italic bold 30px "Times New Roman"  
}
```

```
.b {  
  font: 20px Arial, sans-serif;  
}
```

program

```
<html>  
<head>  
<style>  
.a {  
  font: italic bold 30px "Times New Roman"  
}  
  
.b {  
  font: 20px Arial, sans-serif;  
}  
  
</style>  
</head>  
<body>  
<p class="a">This is a paragraph.</p>  
  
<p class="b">iam from bellary </p>  
  
</body>  
</html>
```

This is a paragraph.

iam from bellary

All CSS Font Properties

Property	Description
font	Sets all the font properties in one declaration
font-family	Specifies the font family for text
font-size	Specifies the font size of text
font-style	Specifies the font style for text
font-weight	Specifies the weight of a font

