

IT WORKSHOP I



Cascading Style Sheets



Topics

- Why CSS?
- CSS Syntax
- CSS Selectors - Element, ID, Class
- Grouping Selectors
- How to Insert CSS
- Types of CSS - Inline/Internal/External
- Cascading Order
- Different CSS properties and values
- Applying styles to portions of a document



CSS

- describes the **appearance, layout, and presentation** of information on a web page
- **HTML** describes the content of the page
- describes **how information is to be displayed**, not what is being displayed
- it provides powerful control over the presentation (e.g., fonts, spacing, sizes, colors, positioning) of an HTML document
- CSS is created and maintained through a group of people within the W3C called the **CSS Working Group**
- **CSS3** is the latest standard for CSS.



CSS

- Can be embedded in HTML document or placed into separate .css file
- CSS enables us to make all pages of our website look similar and consistent
- This separation of structure from presentation simplifies maintaining and modifying web pages, especially on large-scale websites.



CSS

- Ever wonder why they are called “cascading” style sheets?
- CSS allows you to apply several style sheets to the same document
- which means there are bound to be conflicts
- The cascade refers to what happens when several sources of style information vie for control of the elements on a page



Why CSS?

- Separate **Style** from **Content**
 - Content is the text and images within the document
 - Style is the presentation/formatting of the content

```
<font size="14px">
```

My First Header

```
</font>
```

```
<font size="12px" color="red" face="Verdana">
```

My information 1 goes here.

```
</font>
```

```
<font size="14px">
```

My Second Header

```
</font>
```

```
<font size="12px" color="red" face="Verdana">
```

Different information goes here.

```
</font>
```



Why CSS?

■ Separate **Style** from **Content**

■ Content

```
<p class="header">My First Header</p>  
<p class="info">My Information 1 goes here</p>  
<p class="header">My Second Header</p>  
<p class="info">Different Information goes here</p>
```

(Specific markup properties like Class will be discussed later).

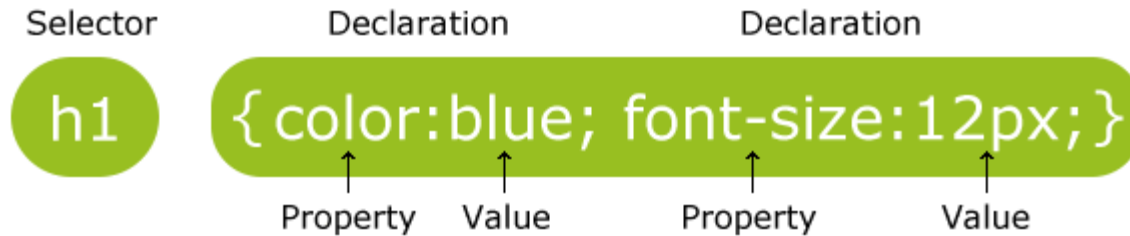
■ Style

```
.header { font-size:14px;}  
.info {   font-family: verdana;  
         font-color: red;  
         font-size: 12px; }
```



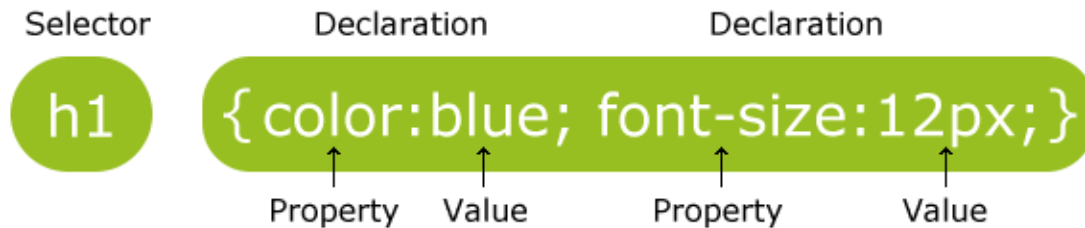
CSS Syntax

- A style rule is made of two blocks and three parts:



- The selector refers to the HTML element to apply style.
- Declaration block is surrounded by curly braces

CSS Syntax (Cont.)



- The declaration block contains one or more properties separated by semicolons.
- Each declaration part consists of a property name and a value, separated by a colon.
- Do not add a space between the property value and the unit (such as font-size: **12 px**;). The correct way is: font-size: **12px**;



CSS Selectors

- CSS selectors allow you to select and manipulate HTML elements.
- CSS selectors are used to "find" (or select) HTML elements based on their **id, class, type, attribute, and more**.



The Element Selector

- The element selector selects elements based on the element name.
- You can set all `<p>` elements on a page to be center-aligned, with a red text color:

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

</style>
```

```
<body>

<p>Hello World!</p>
<p>This paragraph is styled with CSS.</p>
<h1>This element doesn't have style.</h1>

</body>
```



The Element Selector

Hello World!

This paragraph is styled with CSS.

This element doesn't have style.



The Id Selector

- The ID attribute of the HTML element is used as **id selector** to decorate the specific element.
- Note **id** of an element should be unique within a page, so the **id selector** is used if you want to select a single, unique element.
- To specify an HTML element with a specific **id**, a hash character followed by the **id** value of the particular element.



The Id Selector (Cont.)

- The style rule below will be applied to the HTML element with id="para1"

```
<style>
#para1 {
  text-align: center;
  color: blue;
}
</style>
```

```
<body>

<p id="para1">Paragraph with
Style!</p>
<p>This paragraph is not affected by
the style.</p>

</body>
```



The Id Selector (Cont.)

Paragraph with Style!

This paragraph is not affected by the style.



The Class Selector

- The class attribute of the element can be used as **class selector**.
- To select elements with a specific class, write a period character then the value of the class attribute.



The Class Selector (Cont.)

```
<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 Class Selector (Cont.)

Red and center-aligned heading

Red and center-aligned paragraph.



The Class Selector (Cont.)

- It is also possible to specify only a particular HTML elements should be affected by a class.
- Last sample can be modified so that all `<p>` elements with **`class="center"`** will be center-aligned



The Class Selector (Cont.)

```
<html>
<head>
<style>
    h1.center
    {
    text-align: center; font-style:italic
    color: red;
    }
</style>
</head>
<body>
<h1 class="center">The heading will be centered</h1>
<p class="center">The paragraph tag will not be affected.</p>
</body>
</html>
```



The Class Selector (Cont.)

The heading will be centered

The paragraph tag will not be affected.

■ Universal Selector:

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



Grouping Selectors

- In case more than one selector element have same style declaration, then those elements are grouped.

```
h1 {  
    font-size: 36px;  
    font-weight: normal;  
}  
h2 {  
    font-size: 28px;  
    font-weight: normal;  
}  
h3 {  
    font-size: 22px;  
    font-weight: normal;  
}
```

```
h1, h2, h3 {  
    font-weight: normal;  
}  
h1 {  
    font-size: 36px;  
}  
h2 {  
    font-size: 28px;  
}  
h3 {  
    font-size: 22px;  
}
```



CSS Comments

- A CSS comment starts with `/*` and ends with `*/`.
Comments can also span multiple lines

```
p {  
    color: red;  
    /* This is a single-line comment */  
    text-align: center;  
}
```

```
/* This is  
a multi-line  
comment */
```



How to Insert CSS

- There are three ways of CSS can be included in the HTML page:
 - Inline style
 - CSS is placed directly into the HTML element.
 - Internal/embedded style sheet
 - CSS is placed into a separate area within the <head> section of a web page.
 - External style sheet
 - CSS is placed into a separate file (.css extension) and "connected" to a web page.



Inline Styles

- An inline style loses many of the advantages of a style sheet (by mixing content with presentation). Use this method sparingly!
- To use inline styles, add the **style** attribute to the relevant tag.
- The **style** attribute can contain any **CSS property**.



Inline Styles

```
<html>
```

```
<head>
```

```
<title>Embedded Styles</title>
```

```
</head>
```

```
<body>
```

```
<p style="font-size: 10pt; color: red; font-weight: bold; font-  
family: Arial, Helvetica, sans-serif">
```

```
This is a Inline stylesheet declaration. </p>
```

```
<h1 style="background-color:Blue;">Hello CSS</h1>
```

```
</body>
```

```
</html>
```



Inline Styles

This is a Inline stylesheet declaration.

Hello CSS



Internal/embedded Style Sheet

- An internal/embedded style sheet should be used when a **single document** has a **unique style**.
- You define internal styles in the head section of an HTML page, inside the `<style>` tag.



Internal/embedded Style Sheet

```
<head>
<style>
body
{
background-color:yellow;
}
.first
{
color:red;
margin-left:50px;
font-size:20pt;
}
.second
{
color:blue;
margin-left:20px;
font-size:30pt;
}
</style>
</head>
```

```
<body>
<p>This text does not have any style applied to
it.</p>
<p class="first">This text has the <em>font-
size</em> style applied to it, making it 20pt.
</p>
<p class="second"> This text has the <em>font-
size</em> and <em>color</em> styles applied
to it, making it 30pt and deep sky blue.</p>
</body>
</html>
```



Internal/embedded Style Sheet

This text does not have any style applied to it.

This text has the *font-size* style applied to it, making it 20pt.

This text has the *font-size* and *color* styles applied to it, making it 30pt and deep sky blue.



External Style Sheet

- An external style sheet is ideal when the style is applied to **many pages**.
- Change the look of an entire Web site by changing just one file.
- Each page must include a link to the style sheet with the `<link>` tag. The `<link>` tag goes inside the head section:

```
<head>  
<link rel="stylesheet" type="text/css" href="mystyle.css">  
</head>
```



External Style Sheet

```
<html>
```

```
<head>
```

```
<meta charset = "utf-8">
```

```
<title>External Styles</title>
```

```
<link rel="stylesheet" type="text/css" href="myStyle.css">
```

```
</head>
```

```
<body>
```

```
<p>This text does have any style applied to it.</p>
```

```
<p>This text has the <em>font-size</em> style applied to it, making it 20pt.
```

```
</p>
```

```
<p class="test"> This text has the <em>font-size</em> and <em>color</em>  
styles applied to it, making it 40pt and Green.</p>
```

```
</body>
```

```
</html>
```




External Style Sheet

myStyle.css

```
body
{
background-color:pink;
}
p
{
color:blue;
margin-left:20px;
}
p.test
{
color:green;
margin-left:40px;
}
```

This text does have any style applied to it.

This text has the *font-size* style applied to it, making it 20pt.

This text has the *font-size* and *color* styles applied to it, making it 40pt and Green.



Cascading Order

- What style will be used when there is more than one style specified for an HTML element?
- All the styles will "cascade" into a new "virtual" style sheet by the following rules, where number four has the highest priority:
 1. Browser default
 2. External style sheet (Linked) (in an external .css file)
 3. Internal style sheet (in the head section)
 4. Inline style (inside an HTML element)
- An inline style (inside an HTML element) has the highest priority, which means that it will override every style declared inside the <head> tag, in an external style sheet, and in the browser (default value).



CSS Text

Property	Description	Example
color	Sets the color of text	color: blue;
text-align	Specifies the horizontal alignment of text (center, left, right, justify)	text-align: center;
text-decoration	Specifies the decoration added to text (underline, line-through, underline)	text-decoration: underline;
text-transform	Controls the capitalization of text (uppercase, lowercase, capitalize)	text-transform: uppercase;
text-indent	Specifies the indentation of the first line in a text-block	text-indent: 50px;

text-shadow



CSS Background

Property	Description	Example
background	Sets all the background properties in one declaration	background: #00ff00 url("smiley.gif") no-repeat fixed center;
background-color	Sets the background color of an element	background-color: #b0c4de;
background-image	Sets the background image for an element	background-image: url("paper.gif");
background-position	Sets the starting position of a background image	background-image: url("img_tree.png"); background-position: right top;
background-repeat	Sets how a background image will be repeated	background-image: url("gradient_bg.png"); background-repeat: repeat-x;

length measurement | percentage | left | center | right | top

repeat | repeat-x | repeat-y | no-repeat



CSS Background

```
body { background: white url(arlo.png) no-repeat right top  
fixed; }
```

- replaces this rule with five separate declarations:

- ```
body {
 background-color: white;
 background-image: url(arlo.png);
 background-repeat: no-repeat;
 background-position: right top;
 background-attachment: fixed;
}
```



# CSS Font

| Property    | Description                                                 | Example                                                                                |
|-------------|-------------------------------------------------------------|----------------------------------------------------------------------------------------|
| font        | Sets all the font properties in one declaration             | font: 15px arial, sans-serif;                                                          |
| font-family | Specifies the font family for text                          | font-family: "Times New Roman", Times, serif;                                          |
| font-size   | Specifies the font size of text                             | font-size: 40px;                                                                       |
| font-style  | Specifies the font style for text (normal, italic, oblique) | font-style: normal;                                                                    |
| font-weight | Specifies the font bold of text                             | normal   bold   bolder   lighter   100   200   300   400   500   600   700   800   900 |

| xx-small | x-small | small | medium | large | x-large | xx-large | smaller | larger |

font: font-style font-weight font-variant font-size/line-height font-family



# CSS Links

---

- Links can be styled with any CSS property (e.g. color, font-family, background, etc.).
- Links can be styled differently depending on what **state** they are in.
  - a:link - a normal, unvisited link
  - a:visited - a link the user has visited
  - a:hover - a link when the user mouse over it
  - a:active - a link the moment it is clicked



# CSS Links

---

- `a { text-decoration: none; }`  
`a:link { color: maroon; }`  
`a:visited { color: gray; }`  
`a:focus { color: maroon; background-color: #ffd9d9; }`  
`a:hover { color: maroon; background-color: #ffd9d9; }`  
`a:active { color: red; background-color: #ffd9d9; }`





## CSS Border (Cont.)

---

- The border-color property is used to set the color of the border. The color can be set by:
  - name - specify a color name, like "red"
  - RGB - specify a RGB value, like "rgb(255,0,0)"
  - Hex - specify a hex value, like "#ff0000"
- Eg: border-style: solid;  
border-color: red;

```
#silly {
border-top-style: solid;
border-right-style: dashed;
border-bottom-style: double;
border-left-style: dotted;
width: 300px;
height: 100px;
}
```



# CSS Border (Cont.)

---

- The border property is a shorthand for the following individual border properties:
  - border-width
  - border-style (required)
  - border-color
- Eg: border: 5px solid red;



# CSS Border (Cont.)

---



solid



dashed



dotted



double



inset



outset



groove



ridge



# CSS

---

- Lists
- Table

<https://www.scaler.com/topics/css/css-tables/>

<https://www.freecodecamp.org/news/how-to-style-lists-with-css/>



# Applying styles to portions of a document

---

## ■ **<div>**

- A division tag: to “package” a block of document into one unit. It defines a block element.
- Causes a line break, like `<br>` and `<p>`.

## ■ **<span>**

- “Wraps” a portion of text into a unit, but doesn't cause a line break. Allows styles to be applied to an 'elemental' region (such as a portion of a paragraph).



# Example

---

```
<p>This text is rendered as foo-style and this is not. </p>
```

```
<p>This is a crimson text within black texts. This is an orange text within other texts. </p>
```

```
<div class="foo">
```

```
 <p>The "foo" style will be applied to this text, and to this text as well.
```

```
 <h2 class="logo">freeCodeCamp</h2>
```

```
 <ul class="nav">
```

```
 Home
```

```
 About
```

```

```

```
</div>
```



# Navigation Bar

```
ul {
 list-style-type: none;
 margin: 0;
 padding: 0;
 overflow: hidden;
 background-color: #333;
}
```

```
li a {
 display: block;
 color: white;
 text-align: center;
 padding: 14px 16px;
 text-decoration: none;
}
```

```
li {
 float: left;
}

li a:hover {
 background-color: #111;
}
</style>
</head>
<body>

 Home
 News
 Contact
 About

```



# Navigation Bar

Home News Contact About

Home

News

Contacts

About us

A paragraph with text was added to show that when you open the menu sub-items, they will hide some of the content instead of shifting it.

Home

News

Contacts

About us

A paragraph with text was added to show that when you open the menu sub-items, they will hide some of the content instead of shifting it.

Address

Phone

Email

open the menu sub-items, they will hide some of the





# Navigation Bar

```
<style>
```

```
#navbar ul{
 display: none;
 background-color: #f90;
 position: absolute; top: 100%;
}
#navbar li:hover ul { display: block; }
#navbar, #navbar ul{
 margin: 0; padding: 0;
 list-style-type: none;
}
#navbar {
 height: 30px;
 background-color: #666;
 padding-left: 25px; min-width:
470px;
}
```

```
#navbar li {
 float: left;
 position: relative;
 height: 100%;
}
#navbar li a {
 display: block;
 padding: 6px;
 width: 100px; color: #fff;
 text-decoration: none;
 text-align: center;
}
#navbar ul li { float: none; }
#navbar li:hover { background-color: #f90; }
#navbar ul li:hover { background-color: #666;
}
</style>
```



# Navigation Bar

```
</head>
```

```
<body>
```

```
 <ul id="navbar">
```

```
 Home
```

```
 News
```

```
 Contacts
```

```

```

```
 Address
```

```
 Phone
```

```
 Email
```

```

```

```

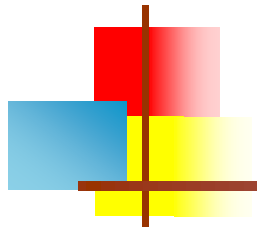
```

```
 About us
```

```

```

```
<p>A paragraph with text was added to show that when you open the menu sub-
items, they will hide some of the content instead of shifting it.</p>
```



The End