# Introduction to CSS

Which tag is used to create a link to another page?

- 1.
- 2. <|i>>
- 3. <a>
- 4. <em>

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What are the two tags that nest directly within the <a href="httml">httml</a> tags?

What are the two tags that nest directly within the <a href="httml">httml</a> tags?

<head> and <body> tags

How does this HTML element look like in a browser:

(a)

(b)

(c)

1. 1

• 1

Α.

2. 2

• 2

B. 2

3. 3

• 3

C. 3

How does this HTML element look like in a browser:

# **CSS** = Cascading Style Sheets

CSS is a "style sheet language" that lets you style the elements on your page.

CSS is works in conjunction with HTML, but is not HTML itself.

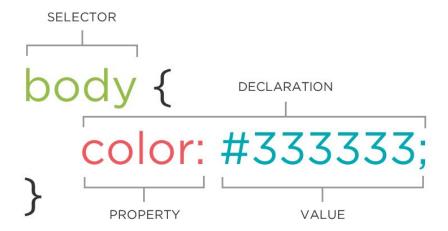
So far we learned how to create a paragraph like this in HTML, but how do we add color to it or align it to the center of the page?

#### The CSS Rule



#### The CSS Rule

- A block of CSS code is a rule.
- The rule starts with a selector.
- It has sets of properties and values.
- A property-value pair is a declaration.



# **Connecting CSS to HTML**

Now we know what does a CSS rule look like. But how do we use it to customize our HTML pages?

- 1. Inline
- 2. Embedded
- 3. External

# **Connecting CSS to HTML: Inline**

Uses the HTML attribute style.

```
Some text.
```

How would you change the color of all the paragraphs in your HTML file to red?

# **Connecting CSS to HTML: Inline**

Uses the HTML attribute style.

```
Some text.
```

How would you change the color of all the paragraphs in your HTML file to red?

Add style attribute to all paragraph elements! Not very efficient.

# **Connecting CSS to HTML: Embedded**

Inside <head> element, use <style> tag.

```
<head>
  <style type="text/css">
    p {
       color: blue;
       font-size: 12px;
    }
  </style>
</head>
```

You can change the style of all paragraphs in one HTML file at once.

What if you have multiple HTML files?

# **Connecting CSS to HTML: Linked**

Put CSS rules in a separate file and use a link to that file in all your HTML files.

```
<!doctype html>
<html>
    <head>
        link rel="stylesheet" type="text/css" href="style.css">
        </head>
        <body>
        ....
        </body>
        </html>
```

# **Connecting CSS to HTML: Linked**

Why do we prefer linked CSS files?

- Shared resource for several pages.
- Reduced file size & bandwidth
- Easy to maintain in larger projects.
- Preferred by nerds everywhere!



# **CSS Syntax**

Selector: HTML element(s) that you want to apply the CSS rule to

Declaration: property-value pairs that define the style you plan to use on HTML element

- Declarations end with a semicolon
- Declaration groups are surrounded by curly brackets.

```
property: value;
property: value;
property: value;
}
```

selector {

```
p {
  color: red;
}
```

# CSS Selectors

#### **CSS Selectors: Element**

The element selector selects <u>all</u> elements with the specified element name.

```
p {
  color: yellow;
}

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

#### **CSS Selectors: Id**

The **#id** selector styles the element with the **specified id** attribute.

```
<h1 id="header">This is my page header</h1>
    <strong id="firstname">This is my first name</strong>
#header {
    color: yellow;
}
#firstname {
    background-color: red;
}
```

#### **CSS Selectors: Class**

The .class selector selects <u>all</u> elements with a <u>specific class</u> attribute.

```
<h1 class="maintitle">Main title goes here.</h1>
  1212 some Rd. Tallahassee, FL
.maintitle {
  font-size: 100px;
}
.address {
  font-style: italic;
}
```

#### **CSS Selectors: Class**

You can also specify that only specific HTML <u>elements</u> should be affected by a <u>class</u>. To do this, start with the element name, then write the period (.) character, followed by the name of the class.

```
<h1 class="maintitle">Main title goes here.</h1>
1212 some Rd. Tallahassee, FL
h1.maintitle {
  font-size: 100px;
}
```

#### **CSS Selectors:** \*

background-color: green;

The \* selector selects all elements.

```
* {
   font-size: 10px;
}
The * selector can also select all elements inside another element
```

#### **CSS Selectors: Element Element**

The element element selector is used to select elements **inside** elements.

```
 This is my <strong>address</strong> in green background.
p strong {
  background-color: green;
}
```

### **CSS Selectors: Element, Element**

To style several elements with the <u>same style</u>, separate each element name with a <u>comma</u>.

#### **CSS Selectors**

There are a number of other CSS selectors that can be used. For a complete list you can check out this webpage:

https://www.w3schools.com/cssref/css\_selectors.asp

# **Cascading**

Styles "cascade" down until changed

```
p {
 color:blue;
 font-family: 'Helvetica';
.red {
 color: red;
#special {
 font-family: Arial;
Paragraph
Paragraph
Paragraph
```

# **Cascading Priority**

Your browser assigns different priorities to CSS rules depending on the type of selector.

- 1. Important! Most Important
- 2. Inline CSS
- 3. ID
- 4. Class
- 5. Element Least Important

# **Cascading Priority**

Your browser also assigns priority based on the specificity of the selection. More specific selectors have higher priority.

```
.main .sale .clearance p{ //Most specific
  color: red;
}
.header .title p{
  color: green;
}
.footer p{ //Least specific
  color: blue;
}
```

# **Cascading Priority**

The tie-breaker is <u>position</u>. Rules <u>lower</u> in the file overwrite rules higher in the file

```
a{
  background-color: red;
}
a{
  background-color: yellow;
}
a{ //this rule wins
  background-color: black;
}
```

# **CSS Values**

#### **CSS Values: Color**

Your browser can accept colors in many different ways:

- Color name (ex. red)
- Hexadecimal value (ex. #FF0000)
- RGB value (ex. rgb(255, 0, 0))
- HSL value (ex. hsl(0, 100%, 100%))

The 17 standard named colors are: <a href="aqua">aqua</a>, black, blue, fuchsia, gray, grey, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow.

With the possible exception of black and white, color names have limited use in a modern, well-designed web sites because they are so specific and limiting.

# **CSS Values: Lengths and Percentages**

There are many property-specific units for values used in CSS, but there are some general units that are used by a number of properties and it is worth familiarizing yourself with these before continuing.

- px (such as font-size: 12px) is the unit for pixels.
- em (such as font-size: 2em) is the unit for the calculated size of a font. So "2em", for example, is two times the current font size.
- pt (such as font-size: 12pt) is the unit for points, for measurements typically in printed media.
- % (such as width: 80%) is the unit for... wait for it... percentages.
- Other units include pc (picas), cm (centimeters), mm (millimeters) and in (inches).
- When a value is zero, you do not need to state a unit. For example, if you wanted to specify no border, it would be border: 0.

# **CSS Properties**

# **CSS Properties: Color**

To define the text color we use the color property:

```
p {
   color: yellow;
}

To define the background color we use the background-color property:
body {
   background-color: red;
}
```

You can alter the size and shape of the text on a web page with a range of properties.

font-family: This is the font itself, such as Times New Roman, Arial, or Verdana.

The user's browser has to be able to find the font you specify, which, in most cases, means it needs to be on their computer so there is little point in using obscure fonts that are only sitting on your computer

There are a select few "safe" fonts (the most commonly used are Arial, Verdana and Times New Roman), but you can specify more than one font, separated by commas. The purpose of this is that if the user does not have the first font you specify, the browser will go through the list until it finds one it does have.

```
p
  font-family: Arial, Helvetica, Serif;
will look for the Arial font first and, if the browser can't find it, it will search for
Helvetica, and then a common serif font.
if the name of a font is more than one word, it should be put in quotation marks
  font-family: "Times New Roman";
```

font-size: sets the size of the font (remember units such as px, em, pt)

font-weight: states whether the text is bold or not (bold, light, normal,...)

font-style: states whether the text is italic or not (italic, normal)

text-decoration: states whether the text has got a line running under, over, or through it. (underline, overline, line-through, none)

text-transform: will change the case of the text (capitalize, uppercase, lowercase, none)

```
body {
    font-family: arial, helvetica, sans-serif;
    font-size: 14px;
                                           a {
h1 {
                                               text-decoration: none;
    font-size: 2em;
                                           strong {
h2 {
                                               font-style: italic;
    font-size: 1.5em;
                                               text-transform: uppercase;
```

# **CSS Properties: Text Spacing**

letter-spacing: sets spacing between letters. The value can be a length or normal.

word-spacing: sets spacing between words. The value can be a length or normal.

line-height: sets the height of the lines in an element, such as a paragraph, without adjusting the size of the font. It can be a number (which specifies a multiple of the font size, so "2" will be two times the font size, for example), a length, a percentage, or normal.

text-indent: will indent the first line of a paragraph, to a given length or percentage.

text-align: will align the text inside an element to left, right, center, or justify

# **CSS Properties**

Many CSS properties have self-explanatory names:

- background-color
- font-family
- font-size
- color
- width
- height

We can't possibly cover all CSS properties in this course, but we'll cover more later.

Comprehensive list of all CSS properties