# CSS Basics: Styling your Web

# CSS Defined

☞ CSS stands for Cascading Style Sheets

☞ It is the primary way of styling static HTML pages

☞ The current standard is CSS3, but some more antiquated browsers do not support all of its features

# Why learn CSS?

- ☞ Controls the layout and style of any webpage you create
- ☞ Without it, your websites will look quite plain
  - ☞ Why? The web and HTML were originally created for professors to share research papers, not by designers
- ☞ Eventually, you'll be able to make your websites look good on any device (desktop, tablet, mobile) using it

# How do I add CSS to my web page?

- CSS styling can be added to an HTML page in several different ways
  - Inline, inside of HTML elements
  - Included inside of an HTML file as a list of declarations linked to HTML elements
  - Written in a separate `.css` file as a list of declarations linked to HTML elements and linked to externally from inside of an HTML file

# Inline, inside of HTML elements

```
<!DOCTYPE html>
<html>
  <body>
    <span style="color: black">Some text</span>
  </body>
</html>
```

# Included in HTML file

## Typically in `<head>` section

```
<!DOCTYPE html>
<html>
  <head>
    <style type="text/css">
      span{color: black;}
    </style>
  </head>
  <body>
    <span>Some text</span>
  </body>
</html>
```

# Linked to in an external stylesheet

## from HTML

```
<!-- index.html, abridged -->
<head>
  <link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
  <span>Some text</span>
</body>
```

```
/* style.css */
span{
  color: black;
}
```

# Classes and IDs

- ☞ A **class** is an HTML attribute whose value is used to classify one or more elements on a page

- ☞ An **ID** is an HTML attribute whose value is used to only classify one element on a page

```
<div id="events">
  <div class='event'>
    <h3>Awesome Party</h3>
  </div>
  <div class='event'>
    <h3>Only Alright Party</h3>
  </div>
</div>
```

# Selectors

- Used in order for the browser to know which element you are trying to style

- The basic selectors are

  - HTML element names

  - Class names, always prefixed with a dot (.)

  - ID names, always prefixed with a pound sign (#)

# attribute: value;

**background-color: orange;**

- ☞ A CSS attribute
  - ☞ is a pre-defined style that the browser applies to an HTML element
  - ☞ always followed by a colon
- ☞ A CSS value
  - ☞ always follows an attribute
  - ☞ tells the browser which attribute option to apply to the selected element
  - ☞ is always followed by a semicolon

# CSS Example 1: Element Selection

Select all `div`s on the page, make their text orange, give them a black background, and center all of their text within the `div`s themselves[1]

```css
div{
  color: orange;
  background-color: black;
  text-align: center;
}
```

[1] Keep in mind that this CSS must be included in an HTML page using one of the three methods mentioned in prior slides, the next few pages will assume this

# CSS Example 2: Class Selection

Select all elements with the class `events` on the page, make their text white, give them a red background, and left align all of their text within the elements themselves

```
.events{
  color: white;
  background-color: red;
  text-align: left;
}
```

# CSS Example 3: ID Selection

Select all elements with the ID `event` on the page, make their text white, give them a red background, and left align all of their text within the elements themselves

```
#event{
  padding: 10px;
  margin-bottom: 6px
}
```

**More on padding and margin later.**

# CSS Comments

- ☞ Comments can be a useful way to
    - ☞ denote what you're actually styling if it's unclear
    - ☞ leave notes for other developers
    - ☞ temporarily disable code to see how the page looks without a style

```css
/* An individual event listing */
.events li{
  /* Let's leave this section for now until v1.2 */
  background-color: blue;
  /* color: orange; */
}
```

# CSS Example 4: An actual stylesheet

```css
/* Extracted from the NYCDA 'class' page template */
.right{
  width: 440px;
  font-size: 20px;
}

.right i{
  display: block;
}

.skills{
  margin-top: 10px;
}

i{
  font-style: italic;
  margin-bottom: 6px;
  margin-top: 16px;
  font-size: 18px;
  line-height: 30px;
}

ul{
  margin-left: 21px;
  font-size: 18px;
  line-height: 30px;
}

ul li{
  list-style: disc;
}
```

# Exercise 1: Your First CSS

☞ Create a blank webpage with an `<h1>` and `<p>` element and sample text inside of both

☞ Style these elements' background and text colors using CSS included from an external stylesheet (.css file)

☞ If you have time, clone your basic webpage and try implementing your CSS using the other 2 methods outlined earlier

    ☞ Inline, inside of the elements themselves

    ☞ At the top of the file in the `head` section

# Basic CSS Attributes

```
color: red;
```

The `color` attribute dictates text of the element color

```
font-family: "Times New Roman", serif;
```

`font-family` denotes the element's display font

```
font-size: 20px;
```

`font-size` determines the selected element's font size

```
background-color: #fff;
```

Sets the background color of the element, #fff is a hex code meaning "white" (more on this later). This is the default background-color value

```
background-image: url('tiger.png');
```

Sets a background image for the element with the url ‘tiger.png'

```
background-repeat: no-repeat;
```

Tells the browser not to repeat the background image horizontally or vertically. Other possible values: repeat (default), repeat-x, repeat-y, inherit

```
width: 100%;
```

Sets the width of this element to take up 100% of the parent element it resides in

```
height: 20px;
```

sets the height of the element to 20 pixels

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# Units for width, height, and font size

☞ %, a percentage of the parent element the selected element is occupying

```
width: 43%;
```

☞ `px`, an exact pixel value for the element to take up

```
height: 420px;
```

☞ `em`, proportionate to the parent value with 1em being the exact parent value and 2em twice that

```
max-height: 3em
```

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# Specifying colors

- ☞ `background-color` and `color` can take several forms of color input
  - ☞ "valid" colors like `red`, `orange`, and `blue`[3]
  - ☞ hex values which correspond to a color, like `#fff` (white), `#000` (black), or `#0E0EFF` (a specific shade of blue)
  - ☞ RGB, or red, green, blue values like `rgb(10, 160, 30)` or `rgba` values, which include an alpha (opacity) value `rgba(100, 43, 210, .4)`

[3] For a full list of valid colors, see this website

# More attributes

`text-align: center;`

How the text should be aligned within the element itself

`text-transform: uppercase;`

Makes all text uppercase regardless of how it was entered into the element. Also try `lowercase` and `capitalize`

`line-height: 20px;`

Gives the selected element a line-height of 20px, a measure of separation between lines of text

# Styles for <li> tags within lists

```
list-style-type: square;
```

Makes the bullet point style into a square bullet point, one of many possible options

```
list-style-image: url('my-bullet.png');
```

Sets a custom image for the bullet point

```
list-style: none;
```

Removes bullet points from the list style

# Alternate selection methods

Sometimes, just using an element name, class name, or ID isn't specific enough or the most efficient way to select an element.

# Combining element and class selectors

You can combine an element and class selector to be more specific. The same can be done with IDs.

```
<ul class="presidents">
  <li>
    George Washington
    <ul>
      <li>Brave</li>
      <li>Tall</li>
    </ul>
  </li>
</ul>
```

```
/* Only George Washington will have a square list-style-type, not brave and tall */
ul.presidents{
  list-style-type: square;
}
```

# Selecting multiple items

To select multiple items, separate their selectors with commas.

```
<ul class="presidents">
  <li>
    George Washington
  </li>
</ul>
<span>Cut down the cherry tree</span>
```

```
ul.presidents, span{
  font-family: "Arial", sans-serif;
}
```

# Selecting descendants

```
<ul class="presidents">
  <li>
    George Washington
    <ul>
      <li>Brave</li>
      <li>Tall</li>
    </ul>
  </li>
</ul>

/* All <li>s will have a square list-style-type */
ul.presidents li{
  list-style-type: square;
}
```

# Selecting direct descendants

```
<ul class="presidents">
  <li>
    George Washington
    <ul>
      <li>Brave</li>
      <li>Tall</li>
    </ul>
  </li>
</ul>
```

```
/* Only George Washington will have a square list-style-type */
ul.presidents > li{
  list-style-type: square;
}
```

# Final Basic CSS Exercise

## Style "The Onion Article"

Download the `onion.html` file and apply the following styles to it:

① Make the main headline dark green

② Use the font family "Georgia" for the main headline and the subheadline

③ Center the text of the main headline and the subheadline

④ Make the paragraphs have a line height of 19 pixels

⑤ Make the "You might also like" label all uppercase

⑥ **Bonus:** Remove the underline from the links

⑦ **Bonus:** Make an underline appear when you hover over a link