Week 6: CSS Part 1

ATLS 2200 (Web)
Spring 2022

roadmap

TODAY...

1. Week 05 Debrief
2. Cascading Style Sheets
3. Wrap-up + Next Steps

WHILE YOU'RE GETTING SETTLED

Make sure to check in via Canvas ("Week 4 Lecture Check-in").

daily note, notes

A QUESTION

cascading style sheets

making our webpages look better

CSS

WHAT'S CSS?

Cascading Style Sheets (CSS) is the code that styles web content.

CSS is not a programming language. It's not even a markup language like HTML. **CSS is a stylesheet language.**

We use CSS to describe the presentation of a document written in HTML. CSS describes how elements should be rendered (in our case, on a website).

CSS is a core language of the open web, and we are on the third version of CSS – **CSS3.**

CSS

WHAT'S CSS?

There are three ways to use CSS as part of your website:

1. **External stylesheet** – referenced in the <head> element using a <link> element

2. **Internal stylesheet** – in the <head> element, surrounded by <style></style> tags

3. **Inline styles** – affect a single HTML element; contained within a style attribute

These are ordered in terms of usefulness…

- using an external stylesheet is considered best practice
- using an internal stylesheet can be useful, but is generally less efficient
- using inline styles is considered a bad practice. Don't do it!

CSS

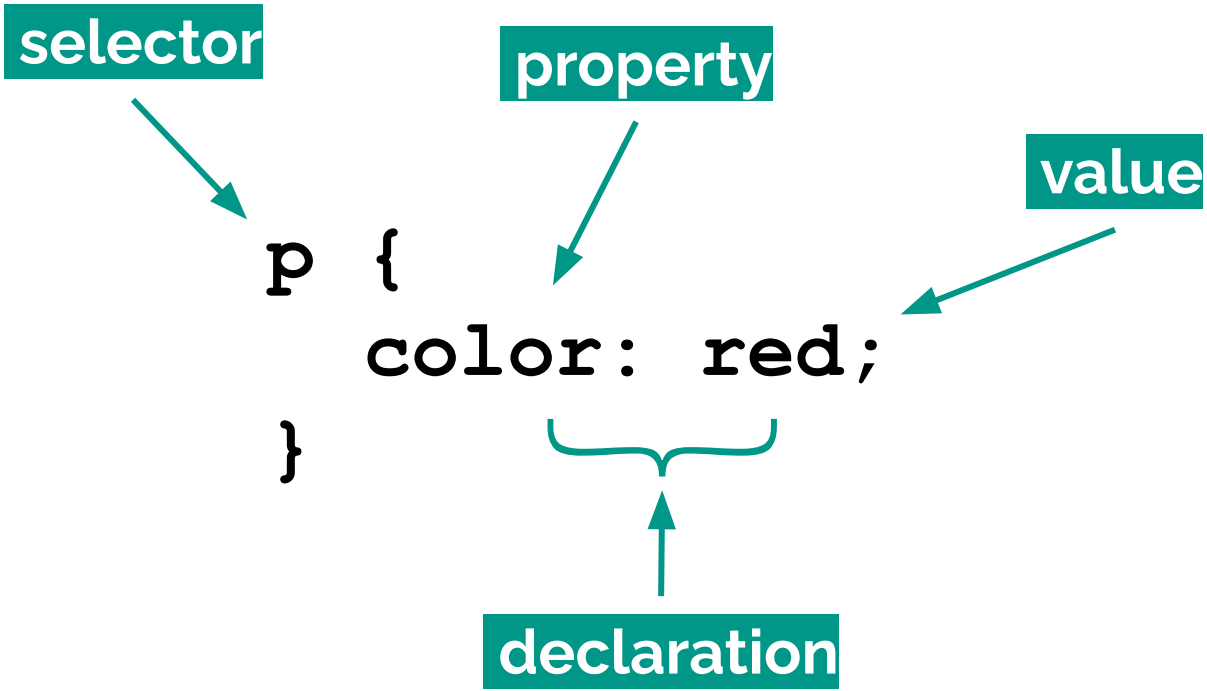
THE ANATOMY OF A CSS DOCUMENT

A CSS document is made up of a series of **rulesets.**

A ruleset (or **rule**) tells our web browser how to style a specific element on our webpage.

```
p {
    color: red;
}

h1 {
    font-size: 50%;
}
```


selector
property
value
p {
color: red;
}
declaration

CSS

THE ANATOMY OF A CSS DOCUMENT

A ruleset has the following parts:

- **Selector** – this is the html element that we want to style
- **Declaration** – this is a single rule that specifies the style
- **Property** (or **properties**) – this is the way we want to style the content
- **Property value** – this is how we want to style the element

Rulesets have a specific structure:

- Each ruleset is wrapped by curly braces after the selector
- Within each declaration, we use a colon to separate the property from its value(s)
- Within a ruleset, we separate declarations using semi-colons (and new line returns, for readability)

CSS

THE ANATOMY OF A CSS DOCUMENT

We can apply multiple property values as part of a single ruleset

```
p {
    color: red;
    font-size: 150%;
}
```

Or select multiple elements and apply a single ruleset to all of them at once

```
p, h1, h2 {
    color: red;
}
```

break for atom

CSS

SELECTORS

Selector name	What does it select	Example
Element selector (aka, tag)	All HTML elements of a specified type	p selects <p>
ID selector	The element on the page with a specified ID (all IDs should be unique)	#my-id selects <p id=”my-id”> or <a id=”my-id”>
Class selector	The element(s) on the page with a given class (we can have many elements of the same class)	.my-class selects <p class=”my-class”> AND <a class=”my-class”>
Attribute selector	The element(s) on the page with a specified attribute	img[src] selects <img src=”...”> but not <img>
Pseudo-class selector	The specified element(s), but only when in a certain state	a:hover selects <a> but only when the mouse is on it

break for atom

CSS

THE CASCADE, SPECIFICITY, INHERITANCE

There are three concepts that are important to understand when working with CSS.

They are the **cascade**, the concept of **specificity**, and the concept of **inheritance**.

At some point you are going to be trying to do something with CSS, and it… just… will… not… work.

The likely culprit will be that you created two rules that are in conflict, and the conflict is being resolved in a way to satisfy some combination these concepts.

CSS

SPECIFICITY

Specificity is how a browser decides which rule applies if multiple rules have different selectors that apply to the same element.

Specificity is measurable; we can do this with 4 values:

- **Thousands** – Score one for this value if the declaration is inside a style attribute of an element in HTML code
- **Hundreds** – Score one for this value for each ID selector
- **Tens** – Score one in this column for each class selector, attribute selector, or pseudo-class
- **Ones** – Score one in this column for each element selector or pseudo-element

CSS

SPECIFICITY

Selector	1000s	100s	10s	1s	Total
h1					
h1 + p::first-letter					
img[alt] + .my-class					
#identifier					
No selector; style attribute used					

CSS

THE CASCADES

CSS

THE CASCADE

The order of our CSS rules matter – they **cascade**.

When two rules conflict, and have the same **specificity**, we apply the one that appears last.

```
p {
    color: red;
}

p {
    color: blue;
}
```

CSS

INHERITANCE

Inheritance refers to the property for child elements to inherit property values from their parent elements.

This is where paying attention to **nesting** is important!

- An element is a **parent element** to any element nested within it
- An element is a **child element** to any element it is nested within

Not all property values are subject to inheritance.

CSS

INHERITANCE

In the following, which elements are parent elements? Which are child elements? **Note, this is heavily simplified HTML.*

```
<html>
  <body>
    <p>This is my page</p>
    <ul>
        <li>List item 1</li>
        <li>List item 2</li>
    </ul>
  </body>
</html>
```

break for atom

roadmap

WHAT'S NEXT?

In recitation this week – practice CSS!

Quiz 3 opens at 10:45 AM; due before recitation.
Assignment 5 opens at 10:45 AM; continue on it in recitation; due Sunday by 11:59 PM.

DAILY NOTE

We'll post the Daily Note in Slack in **#atls-2200-web-spring-2022.**

Make sure to do it now. It has some prior knowledge questions on it that are important.