

 Week 1

# Introduction to HTML, CSS, & Web Patterns



**What is HTML?**

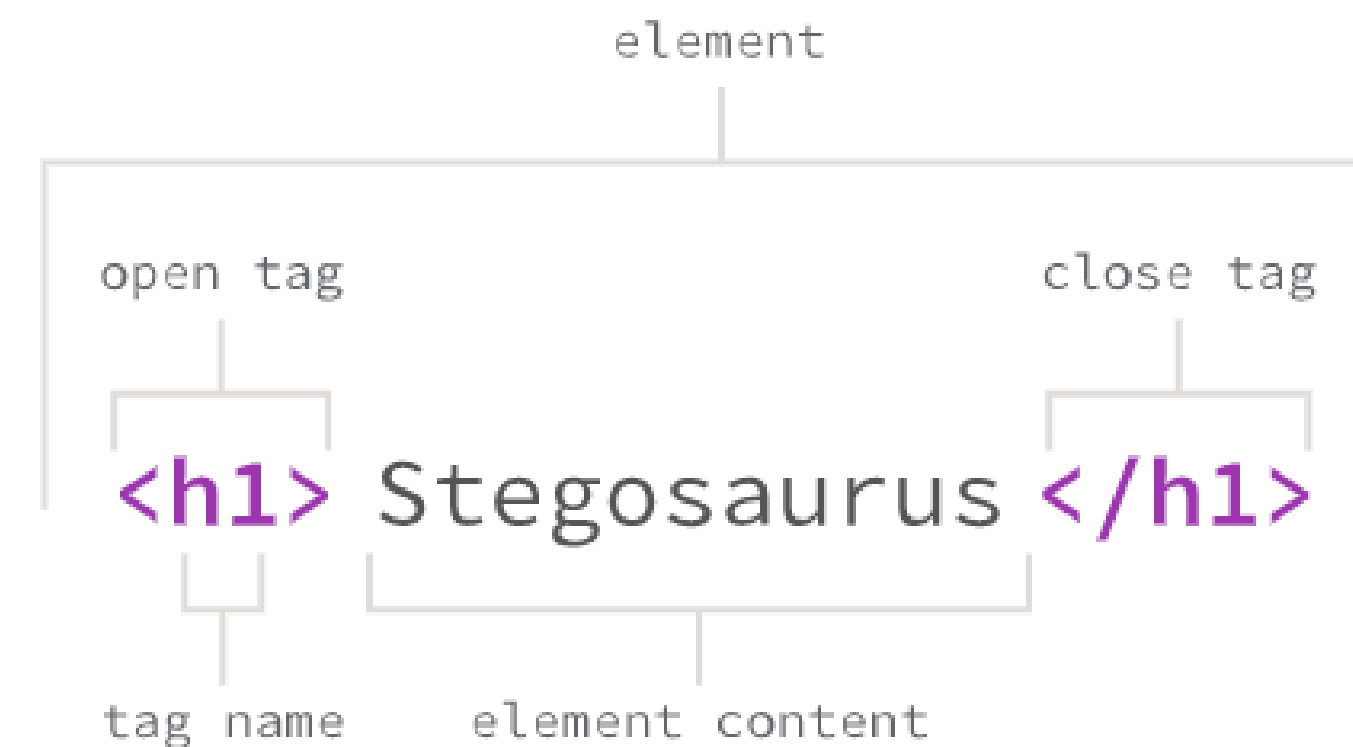
# Hypertext Markup Language (HTML)

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- The foundation of all web pages
- It provides the content for the web page and provides context for the content
- It can link to external pages and load in resources such as stylesheets and scripts
- It can function by itself without need of other languages, but is improved by them

# Tags

- Used to display and organize content
- Allows us to provide context to the browser for content  
*Ex: Stegosaurus is the main heading*
- Most tags consist of an open and close tag with content (and more tags) in between



# Semantics AKA What Tags to Use

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- It is important to use the correct tag to provide the proper context for the browser
  - Accessibility, SEO, readability, organization
- Do **not** use tags for styling (ex: `<i>` is not the italics tag)
- Helpful references for proper semantics
  - [MDN: HTML Elements Reference](#)
  - [Learn the Web: HTML Semantics Cheat Sheet](#)

# Attributes

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- Most tags have attributes



- The attributes generally define extra properties that aren't specifically visible
- Some attributes are mandatory for specific tags and others are optional or provide extra functionality

*Ex: the `<a>` tag must have an attribute named `href` that points to the URL the link will navigate to.*

# Self Closing Tags

- Some tags don't have a close tag—only an open tag. These are called self-closing tags.
- A `<img>` tag is an example: it's only an open tag with a few attributes that define the image to display at that location.



# Sample Navbar

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```
<header>
  <h1>Titanosaur</h1>
  
  <p>The heaviest creatures ever to walk the earth.</p>
  <nav>
    <ul>
      <li><a href="#desc">Description</a></li>
      <li><a href="#paleo">Paleobiology</a></li>
      <li><a href="#tax">Taxonomy</a></li>
    </ul>
  </nav>
</header>
```





**View Source**

# How to View Page Source Code

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- Right click and select “View Page Source” or use shortcut command `+ option + u`
  - This will open a new tab showing the HTML source code for the webpage.
- Right click and select “Inspect” or use shortcut command `+ option + i`
  - This will open the developer tools. If you use the right click option, it will bring you directly to the element you clicked on in the elements tab



**What is CSS?**

# Cascading Style Sheets (CSS)

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- Provides styling (design) for our webpages
  - Colors, fonts, layout, visibility, size, transforms, animations, and more!
- It doesn't understand our content, it simply presents it
- Cascading means that each line of code is applied in order and will (usually) override previously lines of code that conflict

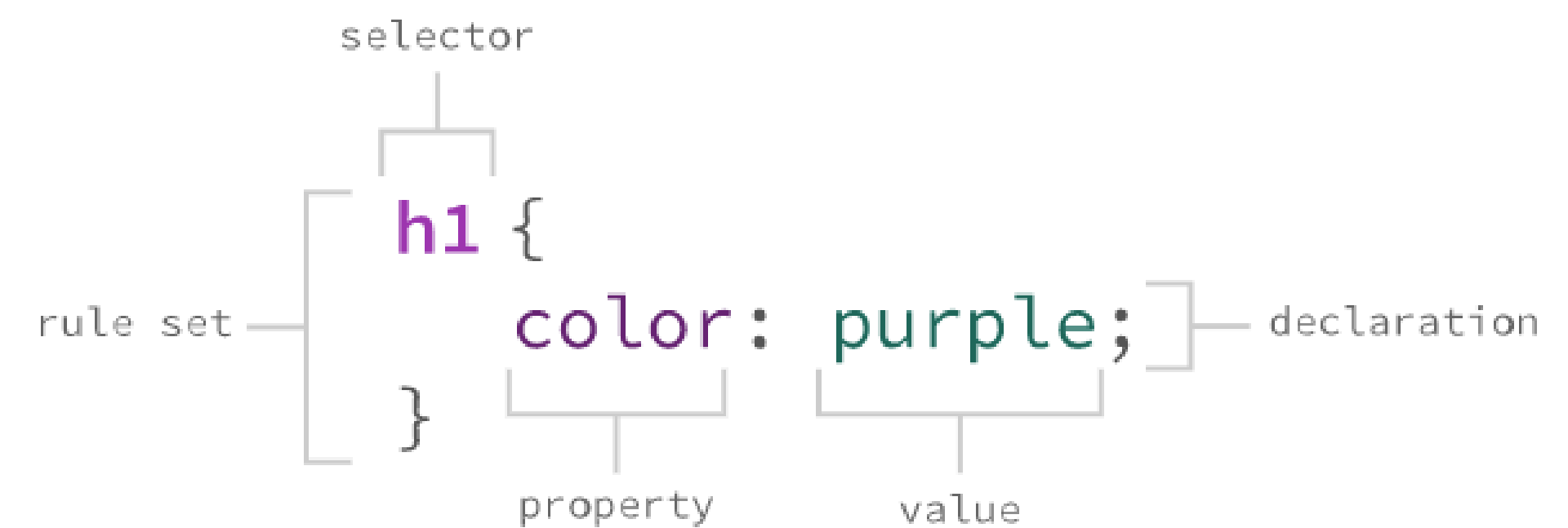
*Ex: If I set the color of all <p> tags on line 34 to orange and then set the <p> color to blue on line 65, the <p> tags will be colored blue as that rule came second.*

# Ruleset

A grouping of CSS properties that change how elements look.

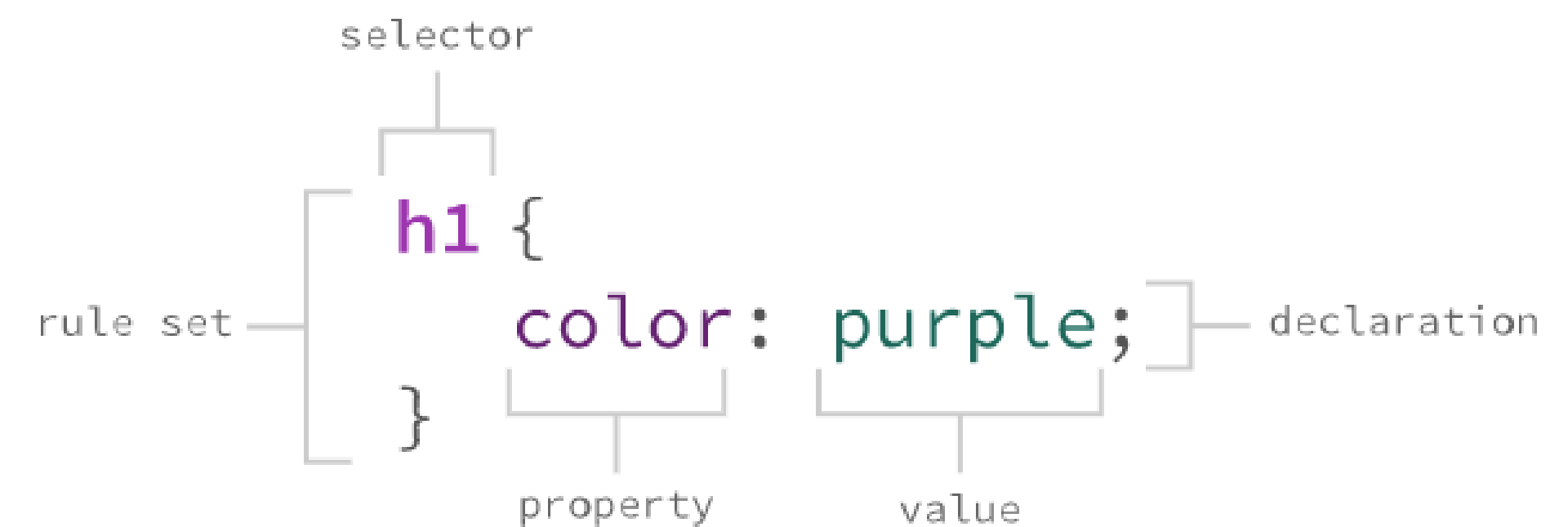
**Selector:** The piece of code that tells the CSS which HTML element should be targeted.

**Declaration:** A line of CSS that changes the look of an element.



**Property:** A defined set of attributes about the look of HTML that can be changed.

**Value:** What that attribute's style will be changed to. A value can be a predefined keyword (purple) or an amount (5rem) depending on the property.



# CSS Selectors

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- How we choose which HTML element to apply the styles to
- Selectors can target either one single element, or multiple
- Make sure to be specific when selecting an element to make sure you do not accidentally apply styles to the wrong element!
- Check out this [CSS Selectors](#) reference guide



**VS Code**



# Introduction to VS Code

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- Let's take a quick tour of VS Code!
- Check out Steve's [Get Started with VS Code](#) video
- Don't forget to practice your [keyboard shortcuts!](#)
  - And test your skills [here](#)

# Emmet

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- A default plug-in in VS Code that allows you to quickly add large amounts of code with less keystrokes
- Check out the [documentation](#) for helpful tips and tricks

# Live Server

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- A plug-in that provides a quick and easy to set up server to view your web page
- To start the server, open your HTML file, right click inside of the file and select “Open with Live Server”
- To stop the server, right click inside of the HTML file and select “Stop Live Server” or click the stop button at the bottom of the window



# What Are Web Patterns?

# Web Patterns

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- A web pattern is a term referring to designed elements on a web page
- Common examples of patterns include navigation bars, cards, banners, forms, etc.
- It is common to create a library of patterns that can be reused throughout a website
  - Some examples:  
[US Web Design System](#), [MailChimp](#), [TailwindCSS](#)

The in-class activities and assignments over the course of the semester will create a number of web patterns that can be used together like a mini pattern library.

