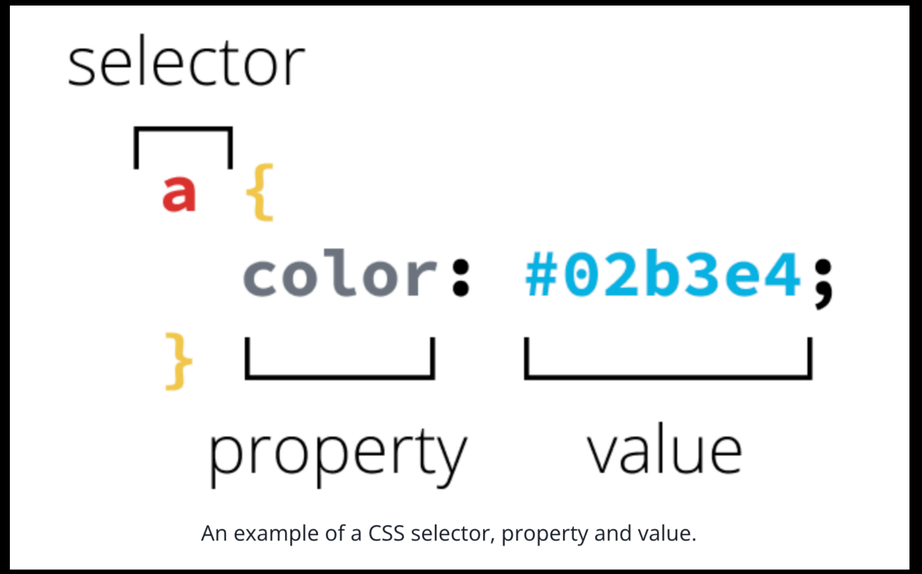
CSS Basics

Why learn CSS ?

Selectors in CSS

1. Simple Selector
    1. Element Selector
    2. Class Selector
    3. ID Selector
2. Pseudo-class Selector
3. Multiple Selector



An example of a CSS selector, property and value.

Element Selector

- CSS can select HTML elements by using an element’s tag name. A tag name is the word (or character) between HTML angle brackets.

Class Selector

- CSS is not limited to selecting elements by tag name. HTML elements can have more than just a tag name; they can also have attributes. One common attribute is the class attribute. It’s also possible to select an element by its class attribute.

- To select an HTML element by its class using CSS, a period (.) must be prepended to the class’s name.

ID Selector

- For situations where you need more specificity in styling, you may also select elements for CSS using an id attribute. You can have different ids associated with a class (although a class is not required).

- The id attribute can be added to an element, along with a class attribute. On the CSS side, the delineation is made by using # to represent an id, the same way . is used for class.

Pseudo-classes Selector

- A CSS pseudo-class is a keyword added to a selector that specifies a special state of the selected element(s). For example, :hover can be used to change a button's color when the user's pointer hovers over it.

Multiple Selector

- What if we want to add some styles to all our headings? We don’t want to have redundant rules, since that would eventually become a nightmare to maintain and is not scalable at all.
- Instead, we can select multiple HTML elements in the same CSS rule by separating them with commas.
- Copying and pasting code is usually a bad idea for web developers, and multiple selectors can help reduce that kind of behavior quite a bit.

Explore time:

- Universal Selector
- Nested Selector
- Attribute Selector

How to add Styling to HTML?

- Inline
- Internal
- External

Inline CSS

- To style an HTML element, you can add the style attribute directly to the opening tag. After you add the attribute, you can set it equal to the CSS style(s) you'd like applied to that element.

- Inline styles should be avoided at all costs because they make it impossible to alter styles from an external stylesheet.

- That said, there will be many times when you need to apply styles to only a specific HTML element. For this, you should always use CSS classes instead of inline styles.

Internal CSS / Style Tag

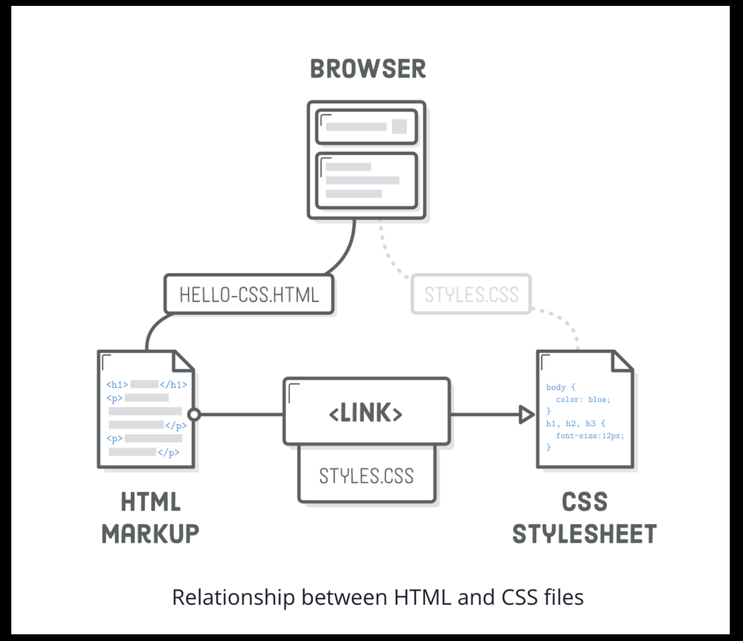
- Inline styles are a fast way of styling HTML, but they also have limitations. If you wanted to style, for example, multiple <h1> elements, you would have to add inline styling to each element manually. In addition, you would also have to maintain the HTML code when additional <h1> elements are added.

- Fortunately, HTML allows you to write CSS code in its own dedicated section with the <style> element. CSS can be written between opening and closing <style> tags. To use the <style> element, it must be placed inside of the <head> element.

External CSS

- When HTML and CSS code are in separate files, the files must be linked. Otherwise, the HTML file won't be able to locate the CSS code, and the styling will not be applied.

- You can use the <link> element to link HTML and CSS files together. The <link> element must be placed within the head of the HTML file.



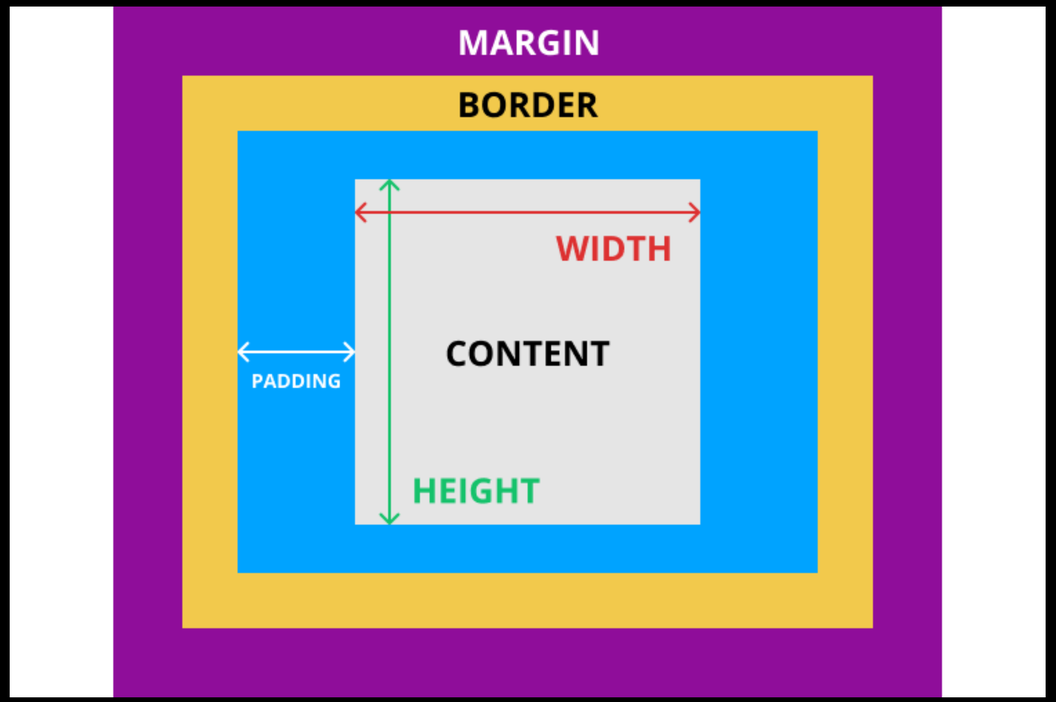
Relationship between HTML and CSS files

Specificity

- Because elements can have multiple CSS selectors, there is a hierarchy for the weight given to each type of selector. Here is the logical order of selectors from least to most weight assigned:
    - Type selectors (e.g., h1) and pseudo-elements (e.g., ::before).
    - Class selectors (e.g., .example), attributes selectors (e.g., [type="radio"]) and pseudo-classes (e.g., :hover).
    - ID selectors (e.g., #example).

Box Model in CSS

- The box model is the basic building block of CSS.
- According to the box model concept, every element on a page is a rectangular box and may have width, height, padding, borders, and margins.



Colors in CSS

- Colors in CSS can be specified by the following methods:
  - Hexadecimal colors
  - RGB colors
  - Predefined/Cross-browser color names
  - RGBA colors
  - HSL colors
  - HSLA colors

Hexadecimal Colors

- A hexadecimal color is specified with: #RRGGBB, where the RR (red), GG (green) and BB (blue) hexadecimal integers specify the components of the color. All values must be between 00 and FF.

- For example, the #0000ff value is rendered as blue, because the blue component is set to its highest value (ff) and the others are set to 00.

RGB Colors

- An RGB color value is specified with the rgb() function, which has the following syntax: rgb(red, green, blue)
- Each parameter (red, green, and blue) defines the intensity of the color and can be an integer between 0 and 255 or a percentage value (from 0% to 100%).
- For example, the rgb(0,0,255) value is rendered as blue, because the blue parameter is set to its highest value (255) and the others are set to 0.

Predefined/Cross-browser Color Names

- 140 color names are predefined in the HTML and CSS color specification.

Explore Time:

- Font:
  - Font-family
  - Font-weight
  - Font-style
  - Emphasis & Importance
  - How to add External Fonts ?

Units in CSS

1. Absolute unit
2. Percentage unit
3. Relative unit
    1. Relative to font size
    2. Related to Document

Absolute Unit

- mm
- cm
- in
- px

Percentage Unit

- div { width:10%; }

Relative Unit to Font size

- em
- rem

Relative Unit to ViewPort

- vw
- vh

Homework

- Style Tribute page using External CSS.
- Can you create a card like this?