Module 3-2

CSS Selectors

HTML Elements: The Box Model

- HTML content that have been annotated with tags are known as HTML elements.
- All elements come with a margin, border, and padding, this is referred to as the box model.

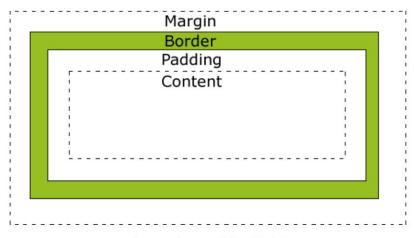


Image - Image of Box Model

HTML Elements: Inline vs Block

- HTML elements are also classified as being inline vs block.
 - o **Inline:** Does not start on a new line
 - o **Block:** Starts on a new line

- Common inline elements: a, img, span
- Common block elements: p, div, table

HTML Elements: inline-block

There is a third type of display known as an inline-block to which elements can be set to, which has characteristics of both inline and block elements:

- Unlike block elements, they don't create line breaks.
- Unlike inline elements, you can adjust its width and height.

Let's Test This

HTML Elements: Positioning

 All elements have a default flow, a position they will fall into in the absence of additional instructions. This is known as "static" flow. There are additional defined positions:

- o **relative:** "relative" to what it would be positioned per the normal flow. (Hard to explain, we'll do an example)
- o absolute: positioned relative to its ancestor.
- fixed: positioned relative to your screen, will follow you as you scroll.

Let's Test This

What is CSS?

- CSS (Cascading Style Sheets) are used to change the default style of HTML elements.
 - Some of the things we've seen so far are considered style changes borders, margins, making text bold, positioning, etc.

- CSS code can be included within the <head>...</head> section of a HTML document or it can be included in its own separate file.
 - The latter is much preferred.
 - Files names should end with a *.css extension.

CSS Selectors

 CSS uses selector to determine which HTML elements will be "targeted" or selected to have a specific format.

• Generally speaking, there will be a CSS block that looks like

so:

```
SELECTOR {
    attribute : attribute value
}
```

 We will start discussion three most important types of selectors in the next section.

CSS Selectors: By Element

Example

```
div {
     color : red;
}
```

A valid HTML element type is used, in the example to the left, the DIV type.

What this code does: Finds all HTML elements that are <div>'s and applies the formatting, which is to make all the enclosed text red.

CSS Selectors: By Class

Example

```
.warning {
    color : red;
}
```

The dot is required for selection by class.

Anytime you see a dot, it is selection by class!

A valid class name is used, in the example to the left, any element of class "warning."

What this code does: Finds all HTML elements that have the class specified. In other words find all HTML elements that are enclosed by any tag with an attribute class="warning".

CSS Selectors: By ID

Example

```
#demo {
color:red;
}
```

The # sign is required anytime you do selection by ID.

Anytime you see a #, it is selection by id!

A valid HTML element type is used, in the example to the left, the DIV type.

What this code does: Finds all
HTML elements that have an
attribute id="demo" and apply
the format.

CSS Selectors: ID takes precedence over Class

Example

```
#demo {
     color : red;
}
.someId {
     color: blue;
}
```

If there is a HTML element has both an id of someId and a class of demo it will appear blue.

```
...
```

The Id attribute takes precedence over the class attribute.

CSS Descendant Selector

Consider the following CSS & HTML code:

```
div p {
      color: blue;
}
```

```
<div id="container">
  1
  <span>
        1.1
        </span>
        2
        3
        4</div>
```

```
1
1.1
2
3
```

CSS Child Selector

Consider the following CSS & HTML code:

```
div > p {
      color: blue;
}
```

```
<div id="container">
    1
    <span>
        1.1
        </span>
        2
        3
        </div>
```

```
1.1
```

CSS Selector by attribute

Consider the following CSS & HTML code:

```
a[target] {
   font-size: 30px;
}
```



Note that there are many anchor tags, but only the one with a target attributed was affected.

Let's write some code!

CSS Variables

```
:root {
    --main-bg-color: blue;
}
div p {
    color: var(--main-bg-color);
}
```

```
1
1.1
2
3
```