Lesson 4 : Opening the Box Model
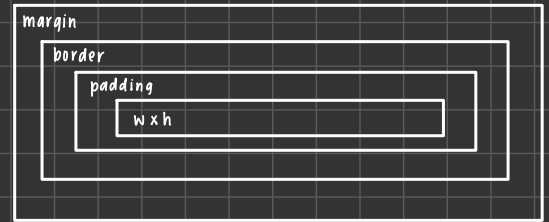
<u>How Are Elements Displayed?</u>

· display property = determines how elements are displayed
allows default display property value to be overwritten

  — most common values : block
inline
inline·block
none

<u>What is the Box Model?</u>

· box model concept = every element on a page is a rectangular box
may have : width
height
padding
borders
margins

```
margin
  border
    padding
      w x h
```

<u>Working with the Box Model</u>

· dimensions of an element defined by : display property
element's contents
specified width & height properties

· padding & border expand the dimensions of the box outward from the element's width & height
· any specified margin will follow the border

· total width = margin-right + border-right + padding-right + width + padding-left + border-left + margin-left
· total height = margin-top + border-top + padding-top + height + padding-bottom + border-bottom + margin-bottom

· every element has a default width & height
· default width is determined by its display value
· default height is determined by its content
· accepts w&h properties : block   doesn't accept w&h properties : inline
inline·block

· margin property = allows us to set the amount of space that surrounds an element
· margins = fall outside of any border
completely transparent, see bg color of parent element
can help position elements and/or provide breathing room around an element

  — inline doesn't accept vertical margins : margin-top
margin-bottom

· padding property = falls inside of element's border (if exists)
provides spacing directly w/in an element
see bg color of element padding is applied to

- works on all 4 sides of inline elements, but vertical padding may bleed into lines above or below element

- longhand = listing multiple properties & values in which each value has its own property
- shorthand = listing multiple properties w/ one property

- margin/padding longhand: use to identify only 1 margin/padding value

  - format: ___ -top : #px;   ⟶   margin-top: 10 px;
            ___ -right : #px;   padding-right: 6 px;
            ___ -bottom : #px;
            ___ -left : #px;

- margin/padding shorthand: use for 3+ margin/padding values

  - format: margin: t/b/l/r #px;

    ⟶ (eg. margin: 20 px;): set same value (20 px) for all four sides

  - format: margin: t/b #px   l/r#px;

    ⟶ (eg. margin: 10px 20px;): set one value for top & bottom (10 px)
                                  set one value for left & right (20 px)

  - format: margin. t#px   r#px   b#px   l#px;   ↻

    ⟶ (eg. margin: 10px   20px   0   15px): set top value (10 px)
                                             set right value (20 px)
                                             set bottom value (0 px)
                                             set left value (15 px)

- borders = falls between padding & margin
            provides outline around element

  - required values: width
                     style
                     color

  - shorthand format: border: w#px   style   color;

    ⟶ (eg. border: 6px   solid   #949599;): 6 pixel·wide, solid, gray border that wraps around all 4 sides of selector

  - common style values: solid
                         double
                         dashed
                         dotted
                         none

- longhand values: border-width
                   border-style
                   border-color

- individual border sides: border-top
                           border-right
                           border-bottom
                           border-left

⟶ (eg: border-bottom: 6px solid #949599;): border only appears on the bottom of selected element

- highly specific longhand format: border-selected side-desired property: appropriate value

⟶ (eg. border-bottom-width: 12px;): changes only the width of the bottom border

· border-radius property = to round the corners of an element
                           accepts length units (eg. pixels & percentages)

- shorthand: 1 value ⟶ round all 4 corners equally
              2 values ⟶ round t-l/b-r & t-r/b-l corners (⌈ ⌋ & ⌊ ⌉)
              4 values ⟶ round t-l & t-r & b-r & b-l corners (⌈ & ⌉ & ⌋ & ⌊)

- longhand: border-top-right-radius
            border-top-left-radius
            border-bottom-right-radius
            border-bottom-left-radius

· box-sizing property = allows us to change exactly how the box model works & how an element's size is calculated

- values: content-box
          padding-box
          border-box

- doesn't include margins, any margin values will need to be added to calculate the full size

· vendor prefixes: mozilla firefox   -moz-
                    microsoft internet explorer   -ms-
                    webkit (google chrome & apple safari)   -webkit-

content-box = default value
· padding-box = alters the box model by including any padding property values w/in the w&h of an element
                as any padding values increase, the content size w/in an element shrinks proportionately
                CSS specification · DON'T USE!!

· border-box = alters box model so any border or padding property values are included w/in the w&h of an element
               generally the best box-sizing value