

Box Model

Sizing your elements

Height and Width

- The default width of inline elements is the content
- Elements that are not inline can take width and height properties – we saw this in the Display lecture.

Border

- Any element can have a border around it
- **border** property specifies *style*, *width*, and *color*
- The border style **MUST** be specified

```
div{  
    border: solid 1px #CC00AA;  
}
```


Border-style

- none, dotted, dashed, solid, double, groove, ridge, inset, outset, hidden

none

dotted

dashed

solid

double

groove

ridge

inset

outset

hidden

Border width and color

- **Width**
 - Set in pixels or *thin, medium, or large*
- **Color**
 - Name - “blue”
 - RGB – `rgb(0,0,255)`
 - hex - `#0000FF`
 - transparent

Specifying Individual Sides

```
border-width: 3px;
```

Borders!

```
border-width: 3px 10px;
```

Borders!

```
border-width: 3px 10px 20px;
```

Borders!

```
border-width: 3px 10px 20px 1px;
```

Borders!

Margin

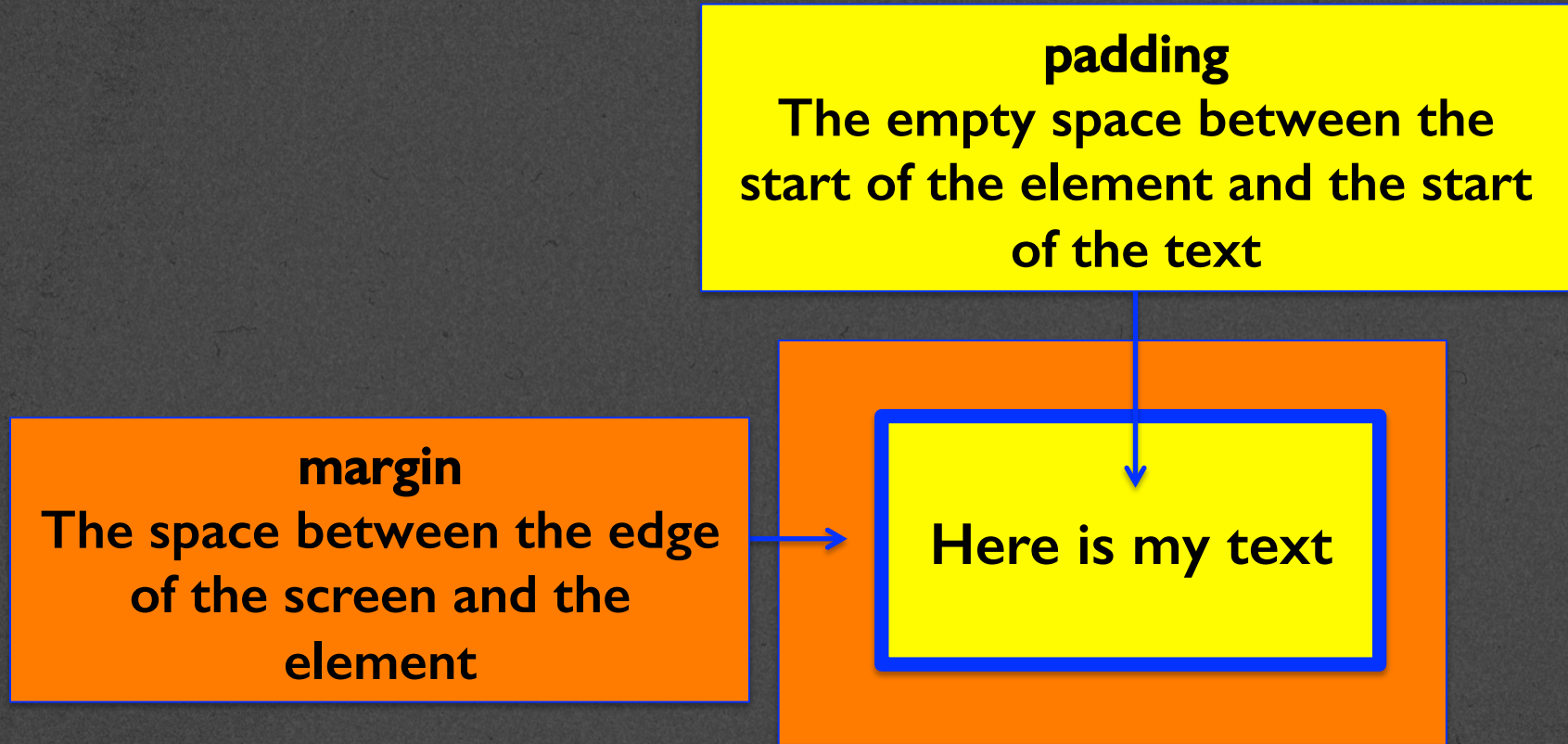
- **Margin is additional space outside your border – between you and neighbor**
- **Positive margin**
 - element moves right/down
- **Negative margin**
 - element moves left/upward

Padding

- **Padding is additional space between the element and its border.**
- **Positive padding**
 - border moves outward from element
- **Negative padding**
 - border moves over the element

Margin and Padding

- **Neither takes a color (transparent)**
- **Can also be defined in 1 - 4 values like border**



Additive Height and Width



$\text{margin} + \text{border} + \text{padding} + \text{width} = \text{actual width}$

What is the width and height?

```
div{  
  width: 100px; width = 132px;  
  height: 50px; height = 82;  
  padding: 10px;  
  margin: 5px;  
  border: 1px solid black;  
}
```

Centering an Element

- To horizontally center an element use:
 - `margin: 0 auto;`
- But...
 - The element must `display: block`
 - The element must not float
 - *The element must not have a fixed or absolute position*
 - The element must have a width that is not auto

box-sizing

- **box-sizing** takes some of the “math” out
- **Options:**
 - **content-box:** default additive
 - **border-box:** width takes content, padding, and border into consideration

Measurements

- **Absolute – set to a specific size**
 - px, mm, cm, pt,
- **Fluid – sets size relative to surrounding elements**
 - %, vw, vh
 - em (for font): 1em is current size, .75 is 75% of the current size
 - rem (for font): 1rem is current size of root element

Example

Review

- **Design sketches should be done with box model (margin, border, padding, content) in mind.**
- **Use box-model to reduce complexity**
- **Margin must always be considered**
- **Use fluid sizes for best viewing**

Acknowledgements/Contributions

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