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**

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;
```
top   side   bottom

Borders!

```
border-width: 3px 10px 20px 1px;
```
top   right   bottom   left
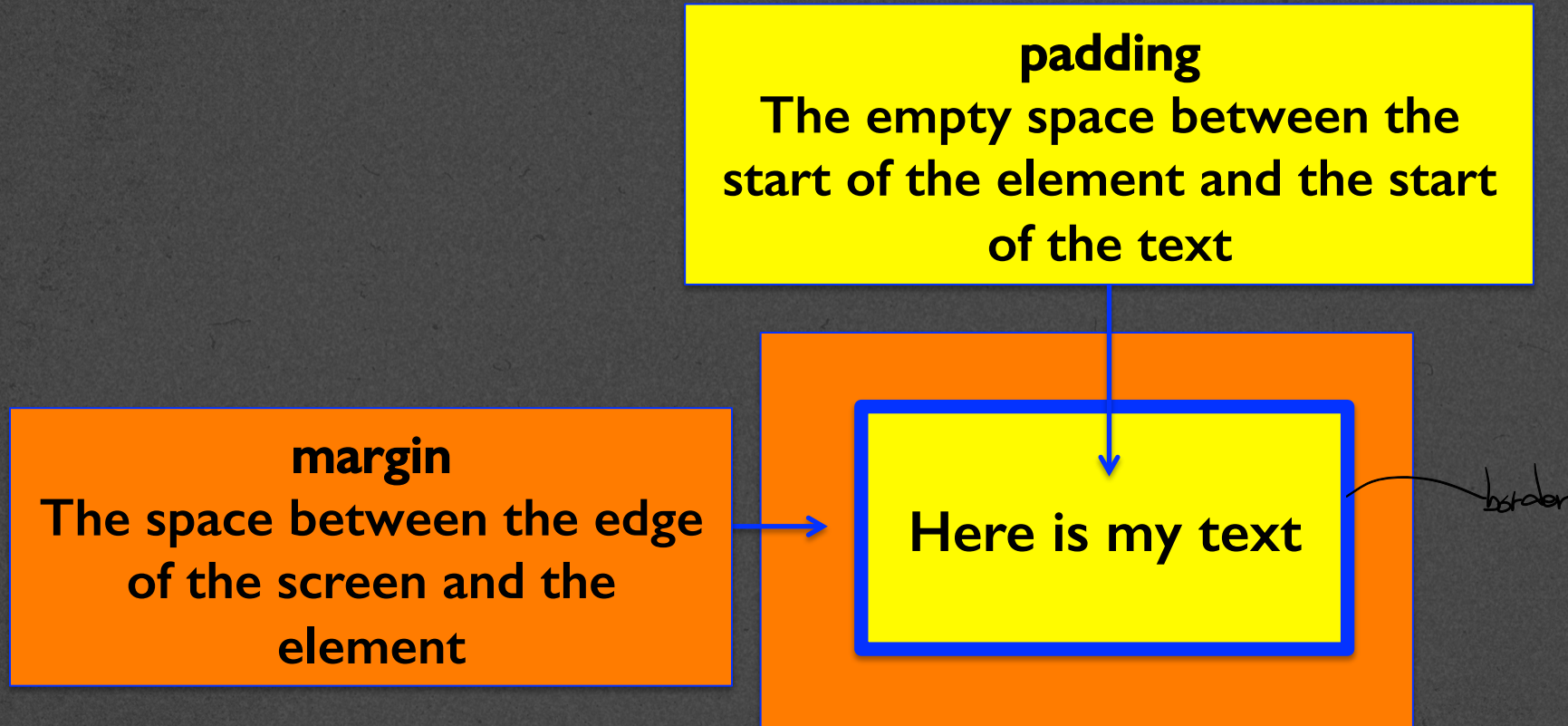
Borders!

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**

padding
The empty space between the start of the element and the start of the text

margin
The space between the edge of the screen and the element

Here is my text

border

Additive Height and Width

Here is my text

margin + border + padding + width = actual width

What is the width and height?

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

width = 132px:

height = 82 px:

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