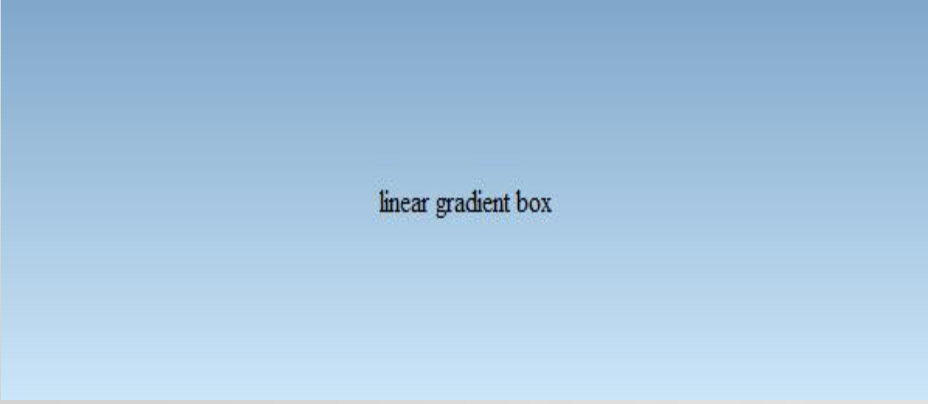# CSS3

ACAD**GILD**

Understanding CSS3

- Successor of CSS2

- It comes with new modules

- With CSS3, you can create rounded borders, add shadow to boxes, and use an image as a border - without using a design program, like Photoshop

- Like HTML5, CSS3 also has varied support across browsers.

FRONT END
DEVELOPMENT

ACAD**GILD**

CSS 3 Gradients

- CSS3 can be used to create gradient backgrounds.

- Gradients can be linear or radial.

  - **Linear gradients** define two colors and percentages of fading

  - **Radial gradients** are more complex defining a center point, primary and secondary colors

linear gradient box

radial gradient box

Transforms

- CSS3 transform property lets you translate, rotate, scale, or skew any element on the page.

```
div {
    height: 100px;
    width: 100px;
    transform:
     translate(80px, 80px)
    scale(1.5, 1.5)
     rotate(45deg);

}
```

translate(80px, 80px)

rotate(45deg);

scale(1.5, 1.5)
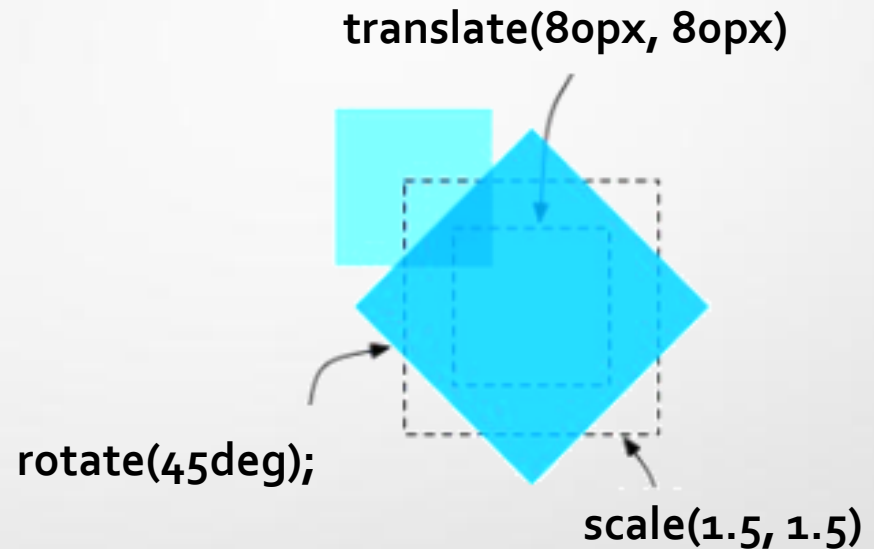
Transitions

Transitions allow the values of CSS properties to changeover time, essentially providing simple animations.

For example, if a link changes color on hover, you can have it gradually fade from one color to the other, instead of a sudden change

ACAD**GILD**

Here are the steps to create a simple transition using only CSS:

- Declare the original state of the element in the default style declaration.

- Declare the final state of your transitioned element ; for example, in a hover state.

- Include the transition functions in your default style declaration, using a few different properties:

transition-property,

transition-duration,

transition-timing-function,

and transition-delay.

```
div {
    transition-property: color, left;
    transition-duration: 1s;
    transition-timing: ease-in;
}
```

Animation

- Transitions animate elements over time

- CSS animations, unlike transitions, allow you to control each step of an animation via **keyframes**.

- CSS animations allow us to add any number of keyframes in between, to guide our animation in more complex ways.

- Animation properties:

animation-name
animation-duration
animation-timing-function
animation-iteration-count
animation-direction
animation-delay
animation-fill-mode

CSS3 Filters

Allows to create all these effects on images.

- Greyscale

- Blur

- Saturate

- Sepia

- Hue Rotate

- Invert

- Brightness

- Contrast

- Opacity

```
img {
        filter: type(value);

        -webkit-filter: type(value);
        -moz-filter: type(value);
        -ms-filter: type(value);
        -o-filter: type(value);
    }
```

ACAD**GILD**

Multi Column Layout

column-width: 15em;
column-gap: 2em; /* shown in yellow */
column-rule: 4px solid green;
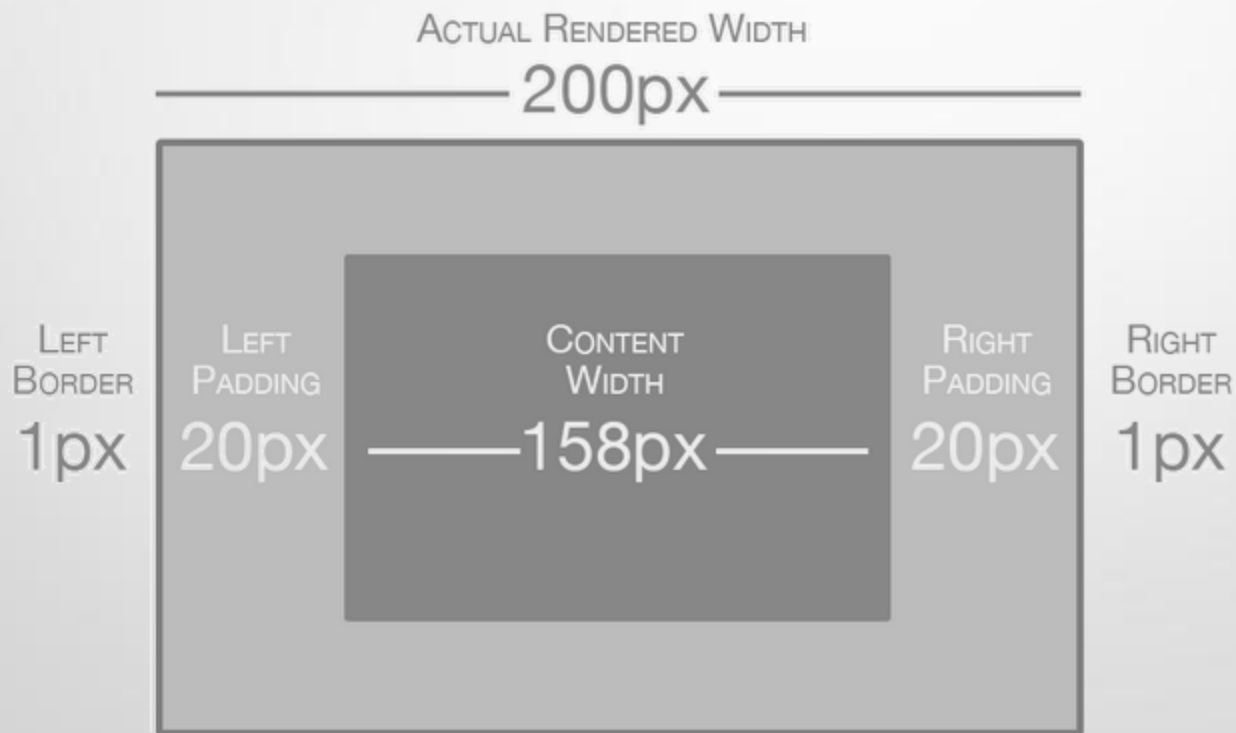padding: 5px; /* shown in blue */

ACAD**GILD**

CSS Background

- Background properties includes

  - **background size,** using more than one background for an element, and

  - **background origin** (which effects the position of a background).

- Multiple Backgrounds

  - The new ability to use multiple backgrounds is a great time saver, allowing you to achieve effects which previously required more than one div.

- Example

  url(example.jpg) top left no-repeat,
  url(example2.jpg) bottom left no-repeat,
  url(example3.jpg) center center repeat-y;

  Note : The first image will be the one "closest" to the user

ACAD**GILD**

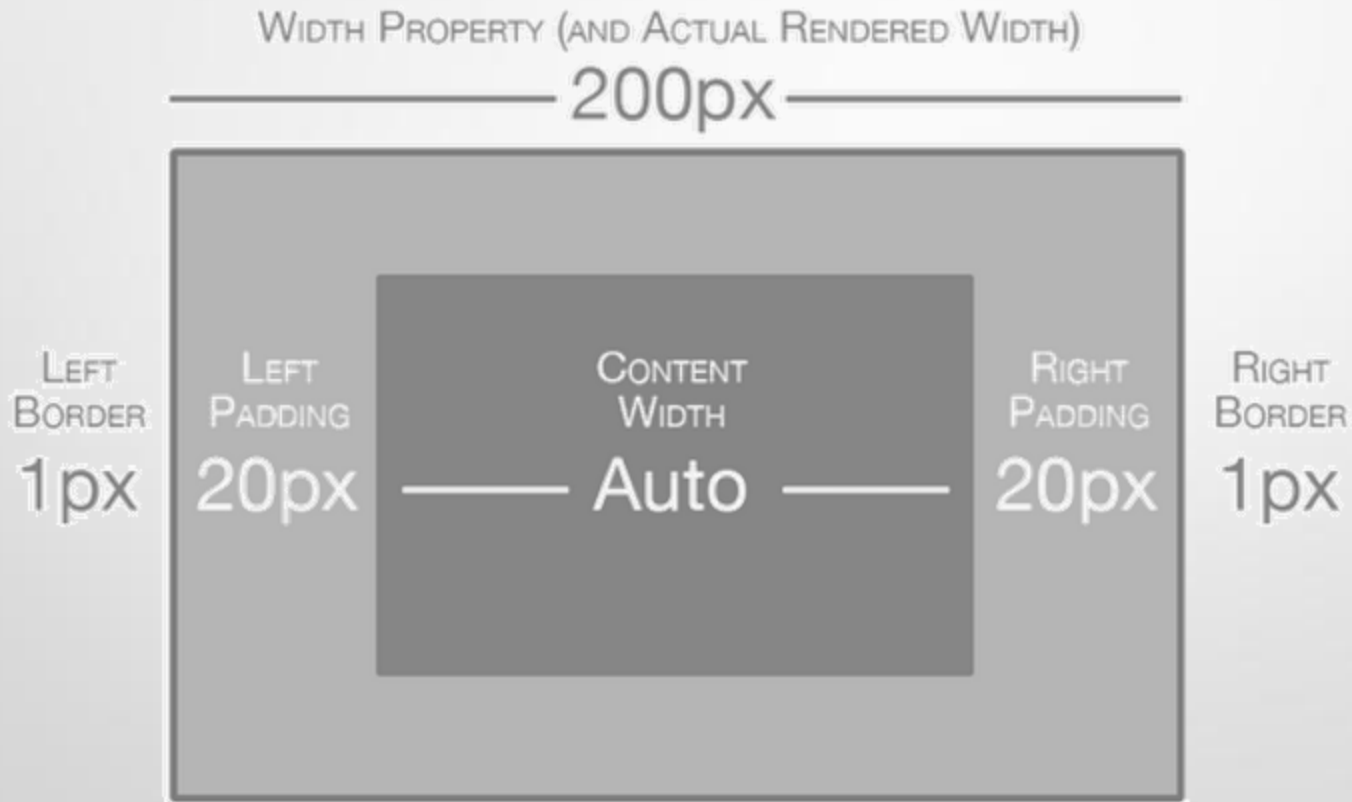# Box Model

- The width and height of any element on a webpage is governed by the CSS box model.

- Without box-sizing,

ACAD**GILD**

CSS Box Model with box-sizing

- *** { box-sizing: border-box; }**

WIDTH PROPERTY (AND ACTUAL RENDERED WIDTH)
200px

LEFT BORDER	LEFT PADDING	CONTENT WIDTH	RIGHT PADDING	RIGHT BORDER
1px	20px	Auto	20px	1px

CSS3 flex Property

- The flex property specifies the length of the item, relative to the rest of the flexible items inside the same container.

- The flex property is a shorthand for the flex-grow, flex-shrink, and the flex-basis properties.

- **Syntax**

  flex: flex-grow flex-shrink flex-basis|auto|initial|inherit;

CSS3 Flex Property Example

```css
#main {
width: 200px;          height: 100px;          border: 1px          solid #c3c3c3;

display: -webkit-flex; /* Safari */
 display: flex;

 -webkit-flex-direction: row-reverse; /* Safari 6.1+ */
 flex-direction: row-reverse;                              }

/* Safari 6.1+ */
#main div:nth-of-type(1) {-webkit-flex-grow: 5;}
#main div:nth-of-type(2) {-webkit-flex-grow:10;}
#main div:nth-of-type(3) {-webkit-flex-grow: 15;}
#main div:nth-of-type(4) {-webkit-flex-grow: 20;}
/* Standard syntax */
 #main div:nth-of-type(1) {flex-grow: 5;}
#main div:nth-of-type(2) {flex-grow: 10;}
#main div:nth-of-type(3) {flex-grow: 15;}
 #main div:nth-of-type(4) {flex-grow: 20;}
```

Selectors

- Selectors are at the heart of CSS.

- Relational selectors

  Descendant (E F)

  Child (E > F)

  Adjacent Sibling (E + F)

  General Sibling (E ~ F)

- Attribute selectors

  E[attr$=val]

  E[attr*=val]

pseudo-class

- A pseudo-class is used to define a special state of an element.

- For example, it can be used to:

    Style an element when a user mouses over it

    Style visited and unvisited links differently

- Syntax

    selector:pseudo-class {
    property:value;
    }

Pseudo classes

:enabled

A user interface element that's enabled.

:disabled

Conversely, a user interface element that's disabled.

:checked

Radio buttons or checkboxes that are selected or ticked.

:valid

Applies to elements that are valid, based on the type or pattern attributes

:invalid

Applies to empty required elements, and elements failing to match the requirements defined by the type or pattern attributes.

:in-range

Applies to elements with range limitations, where the value is within those limitations. This applies, for example, to number and range input types with min and max attributes

:out-of-range

The opposite of :in-range: elements whose value is outside the limitations of their range.

:required

Applies to form controls that have the required attribute set.

:optional

Applies to all form controls that do not have the required attribute.

:read-only

Applies to elements whose contents are unable to be altered by the user. This is usually most elements other than form fields.

:read-write

Applies to elements whose contents are user-alterable, such as text input fields

ACAD**GILD**

Text Shadow

- **Syntax**

text-shadow : (x-offset) (y-offset) (blur-radius) (color)

x-offset	to position the shadow along the x-axis
y-offset	to position the shadow along the y-axis
blur-radius	to set the amount of blur
color	to set the color of the shadow

```
#style{
    text-shadow : 0px  -15px 0 #fe2192
}
```

CSS Text Effects
CSS Text Effects