

# CSS Master Workshop

How to get the best from CSS3 and HTML5

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Slides at: <http://1drv.ms/1q5grsi>

# Agenda

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CSS: past, present and future

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Using CSS for page layouts

83

Implementing components with CSS

108

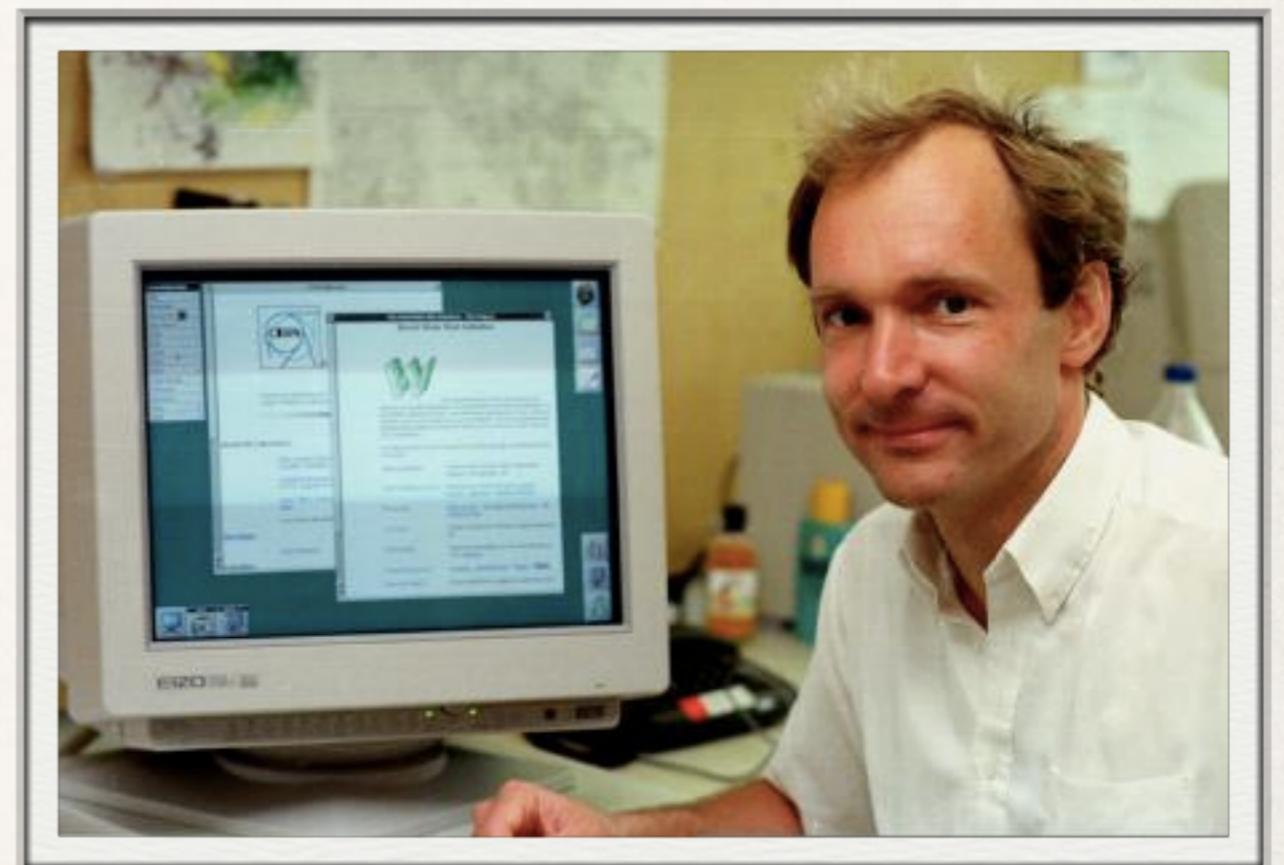
# CSS: Past

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# When The Web Was Young

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- Web was used to host documents
- CSS started out as a design layer for these documents
- Think “text editor” style buttons



# CSS Story

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- ❖ Invented by Håkon Wium Lie and Bert Bos in 1994
- ❖ Goal: Style pages combining:
  - ❖ author preference
  - ❖ user preference
  - ❖ device capabilities



# CSS Changed Your Life

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```
<TABLE BORDER="7" CELLPADDING="7" CELLSPACING="10">
<TR BGCOLOR="#00FF00">
<TD><IMG SRC="rrose.gif" ALT="rose"></TD>
<TD><FONT SIZE="18" COLOR="blue">Image is a
transparent .gif.</FONT></TD>
</TR>
</TABLE>
```

# CSS Changed Your Life

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```
<div class="sidebar">
  
</div>
```

```
<div class="main-content">
  <p>Image is a transparent gif
</div>
```

# CSS Timeline

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- ✿ (1996) CSS 1.0
- ✿ (1997) CSS 2.0
- ✿ “CSS level 2 became a Recommendation in May 1998, and level 3 will probably follow towards the end of 1999.(2011) CSS 2.1”
- ✿ (2011) CSS 2.1
- ✿ (2011-) CSS 3 modules

# CSS Complexities

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- ❖ As sites grew more complex
- ❖ As browser grew further apart
- ❖ As more machines got online
- ❖ CSS got more complex

# 90s

**CNN Interactive  
PATHFINDERS**

**1996 Year in Review**

What were the biggest stories of the year?

It's a question journalists like to ask themselves at the end of every year. Now you can join in the process. Here are our selections for the top ten news stories of 1996.

Disagree with our choices? Then tell us what stories you think were most compelling in the poll below.

**TOP 10 STORIES OF 1996**

- 1 Israel elects Netanyahu
- 2 Crash of TWA Flight 800
- 3 Russia elects Yeltsin
- 4 U.S. elects Clinton
- 5 Hutu-Tutsi conflict in central Africa
- 6 Peace, elections in Bosnia
- 7 U.S. base bombed in Saudi Arabia
- 8 Centennial Olympic Games
- 9 Advances against AIDS

**10 Unabomber suspect Ted Kaczynski arrested**

The top 10 stories according to our users

**TIME: The Best of 1996**

**TIME: Man of the Year**

**BIG TOP** The Year in Review 1996

**TIME.com**

Big story BIG?

**Year in Review**

More 1996 Year in Review

Business | Health | Sports | Books | Home & Interiors | Travel | Entertainment | Business | People & Celebrities | Time Capsule | Talk of '96 | Politics | Obituaries | 1996 Revision | Classifieds | Puzzles

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# Early 2000s



The MySpace homepage from 2003 features the classic blue and white design. At the top, the "myspace" logo is displayed with the tagline "a place for friends". A banner above the main content area reads: "MySpace lets you share photos, journals, and interests with your growing network of mutual friends. [Sign up for FREE!](#)". Below this, a section titled "With myspace you can:" lists five features with corresponding icons: "Find Old Friends", "Meet New Friends", "Suggest Matches Between Friends", and "Share Photos". To the right of this list, three steps are outlined: "Step 1: Create a Profile", "Step 2: Invite Your Friends", and "Step 3: Meet Your Friends' Friends". Below these steps are two buttons: "SIGN UP!" and "LOGIN". At the bottom of the page, there's a footer with links to "About MySpace", "Tour", "News!", "FAQ", "Terms", "Privacy", "Contact MySpace", and "Advertiser". A "TRUSTe" privacy seal is also present.

Myspace 2003



The Facebook homepage from 2004 shows a transition in design. The header is blue with the "thefacebook" logo. Below the header, a login form asks for "Email:" and "Password:", with "login" and "register" buttons. The main content area has a large heading "[ Welcome to Thefacebook ]". Below the heading, it says: "Thefacebook is an online directory that connects people through social networks at colleges." It then lists numerous college names. The footer contains links for "login", "register", "about", and "faq".

Facebook 2004

# Youtube, 2005

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# Web, 2008 and on

The screenshot shows the official Apple iPhone 3G website. At the top, there's a navigation bar with links for Store, News, iPod + iTunes, iPhone, Downloads, and Support. A search bar is also present. The main headline reads "It's here. The new iPhone 3G." followed by the subtext "Twice as fast. Half the price." Below this, there are five images of the iPhone 3G from different angles, showing its screen, back, and sides. A section titled "Enterprise Ready" displays a screenshot of the iPhone running Microsoft Exchange. Another section shows the App Store interface with various apps like eBay and Google Maps. A "Hot News Headlines" section is also visible. At the bottom, there's a "Buy Now" button and some legal fine print.

The screenshot shows the Windows Live Hotmail sign-in page. The Microsoft logo is at the top left, followed by the text "Windows Live". Below it, a slogan says "Share life as it happens." There's a "Get the new Windows Live™ – Free!" button and a link to "www.windowslive.com". To the right, there's a sidebar with text about MSN accounts being Windows Live IDs, a "Sign in" form with fields for Windows Live ID and Password, and checkboxes for "Remember me on this computer" and "Remember my password". At the bottom, there are links for "Help", "Windows Live ID", and "Use enhanced security". The footer includes copyright information for Microsoft Corporation and links for Account, Help Central, and Feedback.

## Hotmail, 2008

Apple, 2008

# CSS3 Concepts and Features

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- ❖ Divided to modules
- ❖ Earliest drafts published in June 1999
- ❖ Implementations in browsers started around 2008
- ❖ Find all specs details here:  
<http://www.w3.org/Style/CSS/specs>

# CSS3 Concepts and Features

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- ❖ Better separation of presentation and content using new selector spec
- ❖ Adapt to multiple screen sizes:
  - ❖ Media Queries
  - ❖ Less images, more code
- ❖ Design pages, not documents

# Core CSS Mischiefs

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- ⌘ CSS was originally designed to style documents
- ⌘ CSS has kept backward compatibility
- ⌘ CSS has taken a long time to evolve
- ⌘ => developer frustration

# Core CSS Mischiefs

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container is just a  
little too high



CSS & Result



```
2 .divi { width: 33%; outline: 1px solid }
```

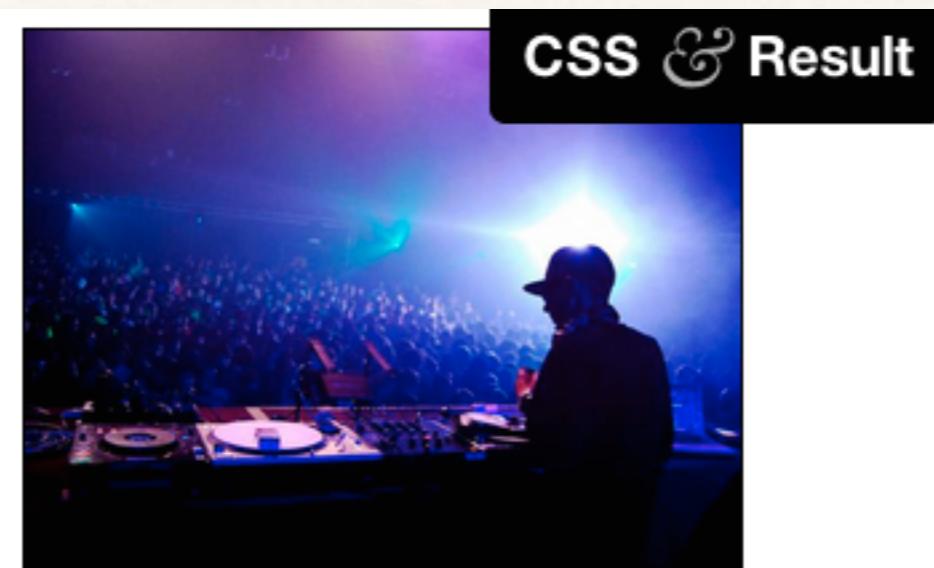
```
img { width: 100%; }
```

<http://codepen.io/ynonp/pen/ENKbm>

# Core CSS Mischiefs

---

until you set the  
img vertical-align ???



CSS & Result

```
.divi { width: 33%; outline: 1px solid }
```

```
4   img { width: 100%; vertical-align: top; }
```

# Core CSS Mischiefs

---

text on the left side text on the left  
side text on the left side text on the  
left side text on the left side text on  
the left side text on the left side

text on the right side text on the right side text on  
the right side text on the right side text on the right side text on  
the right side text on the right side text on the right side text on  
the right side text on the right side

```
#container {  
    border: 1px solid blue;  
}
```

We want this border to  
surround entire container

# Core CSS Mischiefs

text on the left side text on the left  
side text on the left side text on the  
left side text on the left side text on  
the left side text on the left side

text on the right side text on the right side text on  
the right side text on the right side text on the right side te  
the right side text on the  
right side text on the right side text on the right side text on  
the right side

All

```
#container {  
    border: 1px solid blue;  
    overflow: auto;  
}
```

So we add an overflow: auto ???

# CSS Core Mischiefs

---

- ❖ Problems developer face with CSS are divided to 2 groups:
- ❖ Implementing a component matching the spec
- ❖ Managing complexities in large code bases

# Q & A

---



# CSS: Present

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# Change In Paradigms

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<http://dowebsitesneedtolookexactlythesameineverybrowser.com/>



# Developers write (much) more CSS

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- ❖ every website needs to look differently on different devices
- ❖ That lead to theories explaining how to write complex (large) CSS files:
  - ❖ OOCSS
  - ❖ SMACSS

# Make better use of device

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- ❖ Animations
- ❖ Less images
- ❖ Complex layouts
- ❖ <http://www.cssdesignawards.com/>
- ❖ <http://themeforest.net/>

# Modern Tooling

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- ❖ CSS Frameworks make it really easy to start writing modern CSS
- ❖ Examples:
  - ❖ Twitter Bootstrap
  - ❖ Zurb Foundation
- ❖ Both implement concepts from OOCSS / SMACSS

# CSS Layers

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States

Modules

Layout

Base

# CSS Layers

The screenshot displays the CNN International homepage with several distinct CSS layers:

- Header Layer:** A red header bar at the top contains the CNN logo, navigation links for EDITION (INTERNATIONAL, U.S., MEXICO, ARABIC), and sections like TV, Home, Video, World, U.S., Africa, Asia, Europe, Latin America, Middle East, Business, World Sport, Entertainment, Tech, Travel, iReport, and a search bar.
- Middle Content Layer:** The main content area features two large video thumbnails. The left thumbnail shows two men with guns and is titled "ISIS terrorists now four towns closer to Baghdad". The right thumbnail shows a group of people on a rooftop and is titled "How ISIS could bring jihad to West". Both thumbnails include a "BATTLE FOR IRAQ" tag.
- Right Sidebar Layer:** A sidebar on the right includes a "FOLLOW US" section with social media icons, a "CNN TV" section with a Royal Television Society award badge, and a "Featured TV" section with a loading icon.
- Bottom Navigation Layer:** A footer bar at the bottom provides links for "TV Programs" and "Full Schedule".
- Browser UI Layer:** The browser's address bar shows "edition.cnn.com", and the toolbar above the address bar includes various extension icons.

# CSS Layers

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- ❖ Base layer - all elements on page:
  - ❖ Only tag selectors
- ❖ Regions (layout) layer:
  - ❖ Usually special layout classes
- ❖ Modules:
  - ❖ Featured box, menu, article
- ❖ States:
  - ❖ is-active for menu item

# CSS Layer Lab

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- ✿ Arrange the CSS for code&talk page in layers.
- ✿ Project page:  
<https://codeandtalk.com/>
- ✿ CSS file:  
<https://codeandtalk.com/style.css>

# CSS: Future

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# CSS Precompilers

---

```
$blue: #1111FF;
```

```
ul {  
    li {  
        padding: 10px;  
    }  
    a {  
        color: $blue;  
        &:hover {  
            background: white;  
        }  
    }  
}
```



```
ul li {  
    padding: 10px;  
}  
ul a {  
    color: #1111ff;  
}  
ul a:hover {  
    background: white;  
}
```

# Responsive Web Design

## Hironnelle USA



The image displays four responsive web design screenshots for the Hironnelle USA website, arranged in a horizontal row. Each screenshot shows a different view of the same page content, demonstrating how the layout adapts to various devices:

- Mobile View:** Shows a dark-themed mobile version of the site with a sidebar menu on the left containing links like "ABOUT US", "OUR PARTNERS", "MEDIA & RESOURCES", "NEWS", and "RECENTLY". The main content area features a large image of a person's face and a call-to-action button.
- Tablet View:** Shows a landscape-oriented tablet view where the sidebar is integrated into the header. The main content area includes a prominent "A call for support for our Central African colleagues at Radio Noeck Luka" section with a yellow button.
- Laptop View:** Shows a standard desktop view with a wider layout. The sidebar is on the left, and the main content area features a large image of a person's face and a call-to-action button.
- Desktop View:** Shows a wide desktop view with a very similar layout to the laptop version, emphasizing the large image and call-to-action button.

The website features a dark header with the Hironnelle USA logo and navigation links. The main content area includes sections for "Voice, Information, Dignity" and "A call for support for our Central African colleagues at Radio Noeck Luka". The footer contains copyright information and links to "MEDIA & RESOURCES", "OUR PARTNERS", "CONTACT", and "GET INVOLVED".

# CSS Layouts

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Header

Main Content

Donec ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse vel libero ac enim imperdier commodo et ac nunc. Suspendisse vitae neque pharetra est omare tincidunt non eget arcu. Vivamus cursus faucibus elit ut laoreet. Nunc nec ante faucibus metus viverra egestas.

Aenean nulla mauris, imperdier ac mattis volutpat, viverra quis elit. Aliquam erat volutpat. Nulla venenatis quam vitae metus rhoncus quis sollicitudin enim dignissim. Donec ipsum dolor sit amet, consectetur adipiscing elit. Mauris eget fringilla diam.

Donec ipsum dolor sit amet, consectetur adipiscing elit. Phasellus eget purus eu odio auctor rhoncus. Donec eget orci neque. Sed tristique, turpis ut congue commodo, lectus erat fermentum erat, in scelerisque elit dolor vel sapien.

Integer ultricies sem id elit tincidunt sed rutrum lorem mollis. Proin tincidunt, quam a suscipit posuere, sem lorem hendrerit risus, eu gravida urna turpis vitae ligula. Integer est nunc, luctus eget interdum et, interdum quis lorem.

Secondary Sidebar

Primary Sidebar

- Donec ipsum dolor sit amet
- Aenean viverra mi quis felis
- Quisque ut odio mi, blandit
- Fusce lacinia aliquet purus
- Aliquam vestibulum libero

Footer

# Q & A

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# Agenda

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CSS: past, present and future

2

Using CSS for page layouts

36

Implementing components with CSS

108

# Basic Page Layout

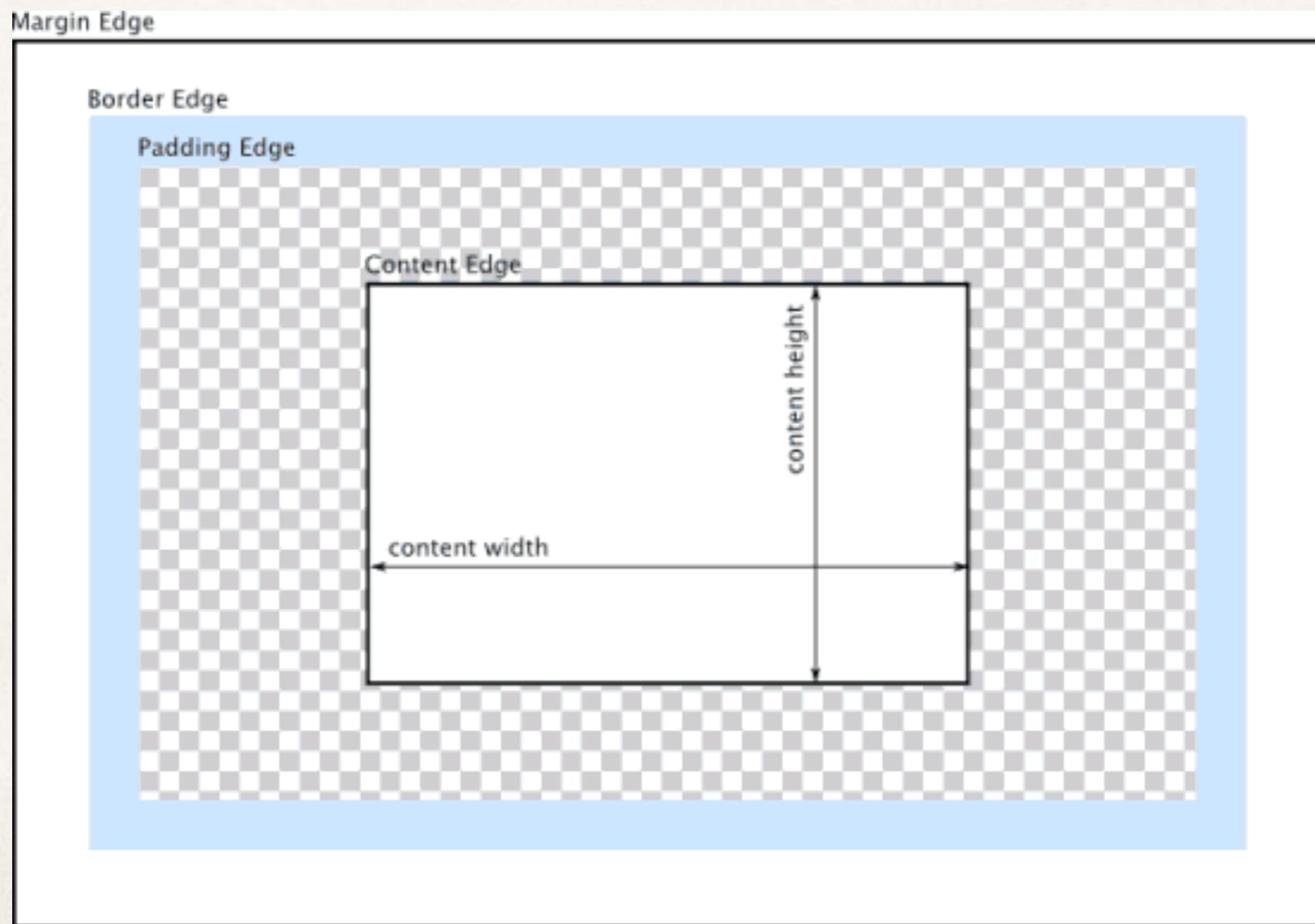
---

- ❖ Browsers place elements in a flow
- ❖ Treating each one as a box

Elements [Bob was here](#) are  
placed in  
boxes

# CSS Box Model

---



# Content Size

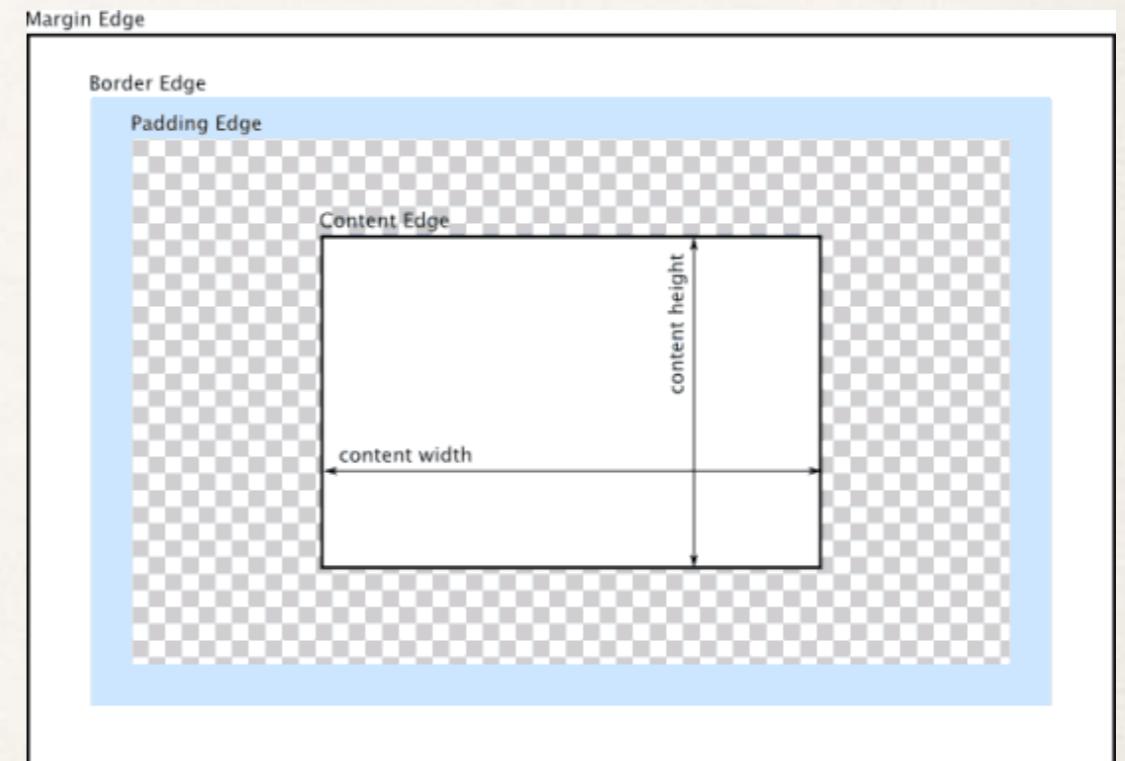
---

- ❖ Innermost box
- ❖ By default controlled by:
  - ❖ `width`, `min-width`, `max-width`
  - ❖ `height`, `min-height`, `max-height`

# Padding Size

---

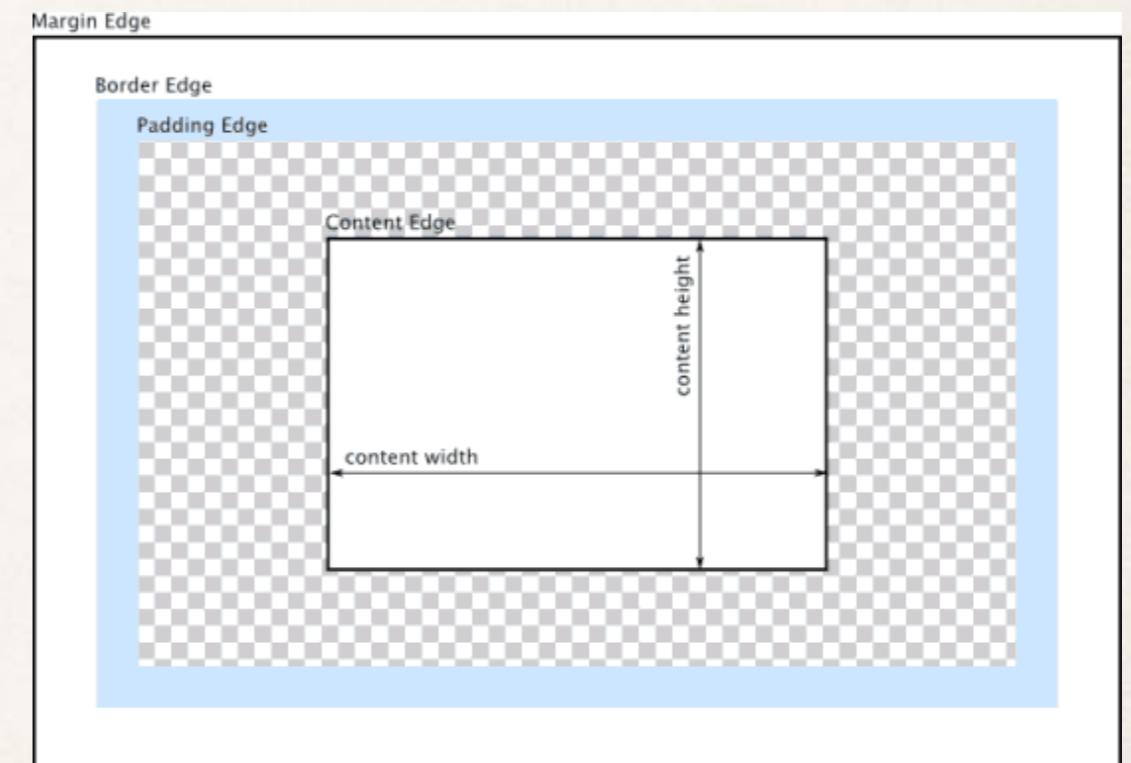
- ❖ Content is surrounded by padding
- ❖ Padding maintains background, but no content
- ❖ Controlled by:
  - ❖ padding
  - ❖ padding-top, padding-bottom, padding-left, padding-right



# Border Size

---

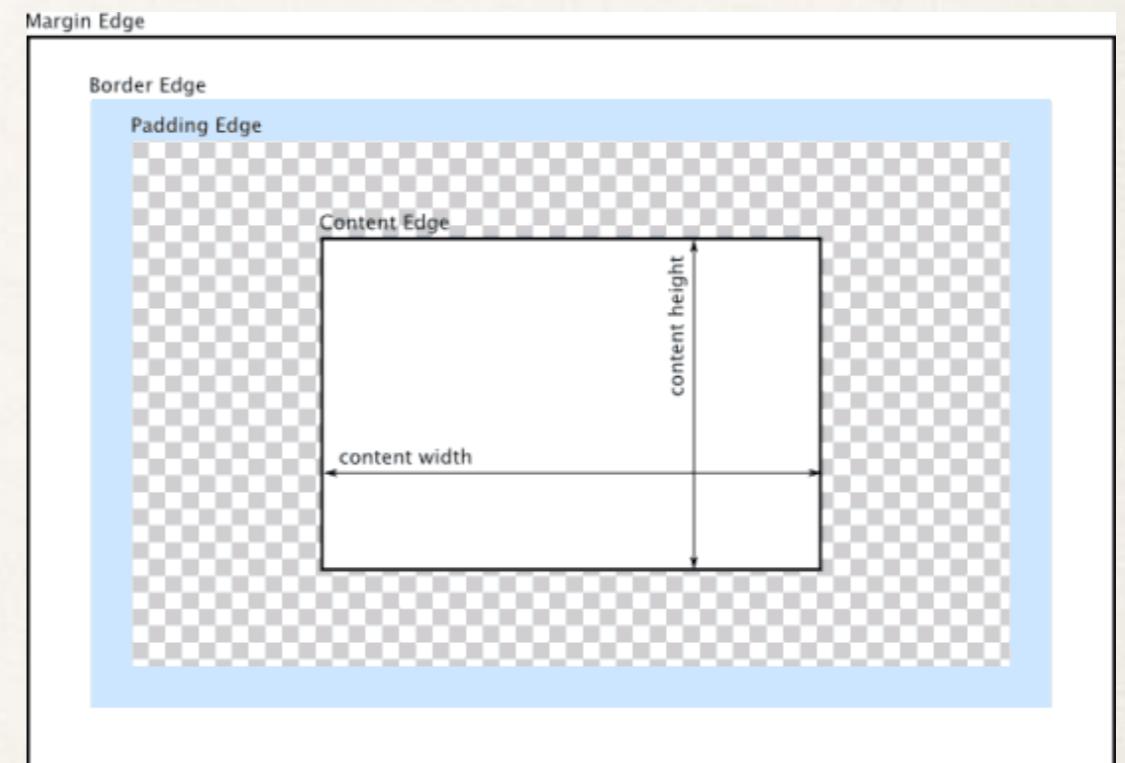
- ❖ Border is the area around padding
- ❖ Does not maintain background or content
- ❖ Can have its own properties
- ❖ Controlled with: border-width or border



# Margin Size

---

- ❖ Margin is the empty space around border
- ❖ No style
- ❖ Controlled with: margin-top, margin-bottom, margin-left, margin-right (or just margin)



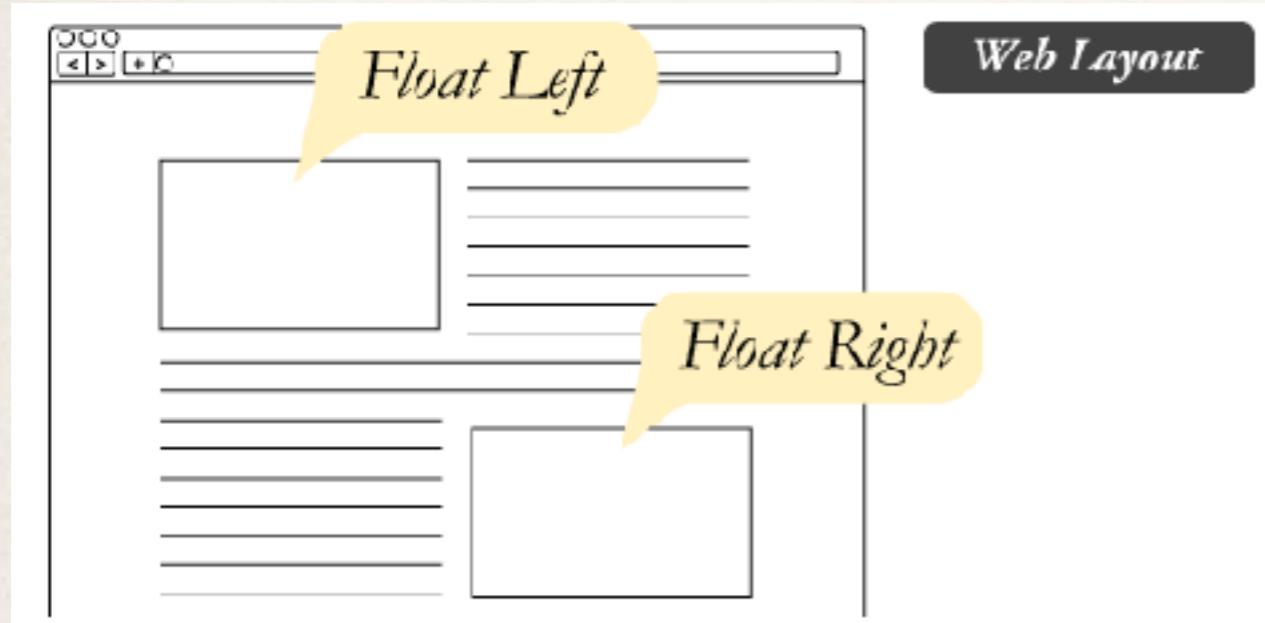
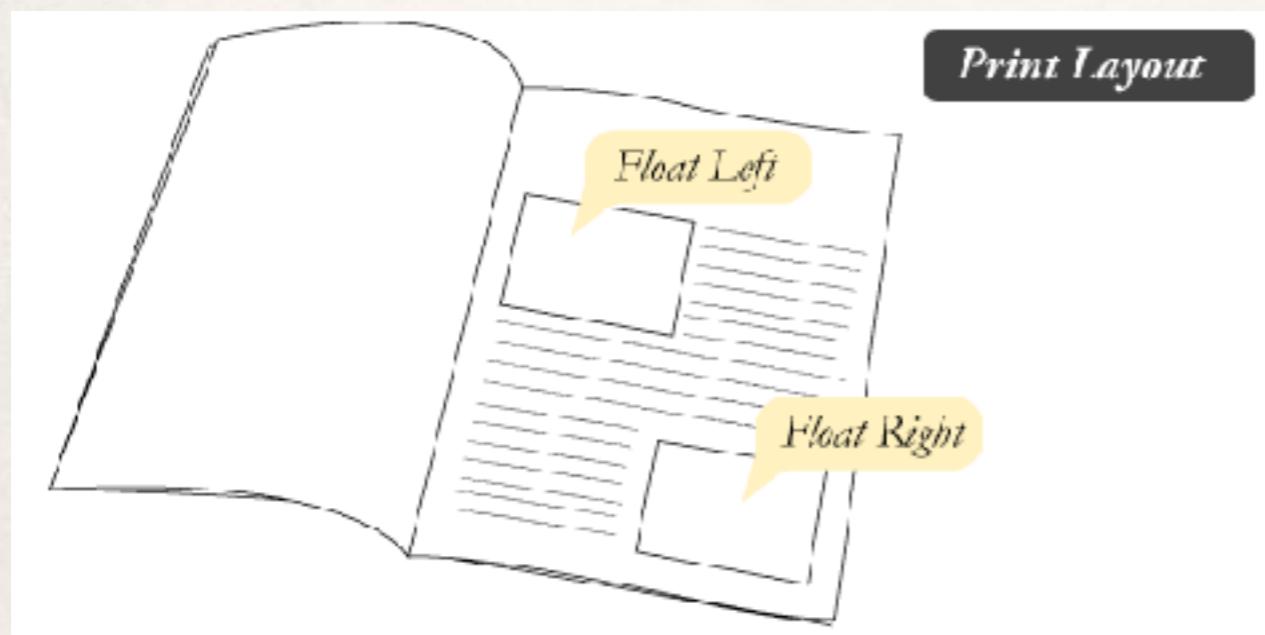
# Box Model Caveats: Width

---

- ❖ { width: 100% } means width of the container
- ❖ Not setting width means “whatever is left”
- ❖ Demo:  
<http://jsbin.com/iyenom/1/edit>

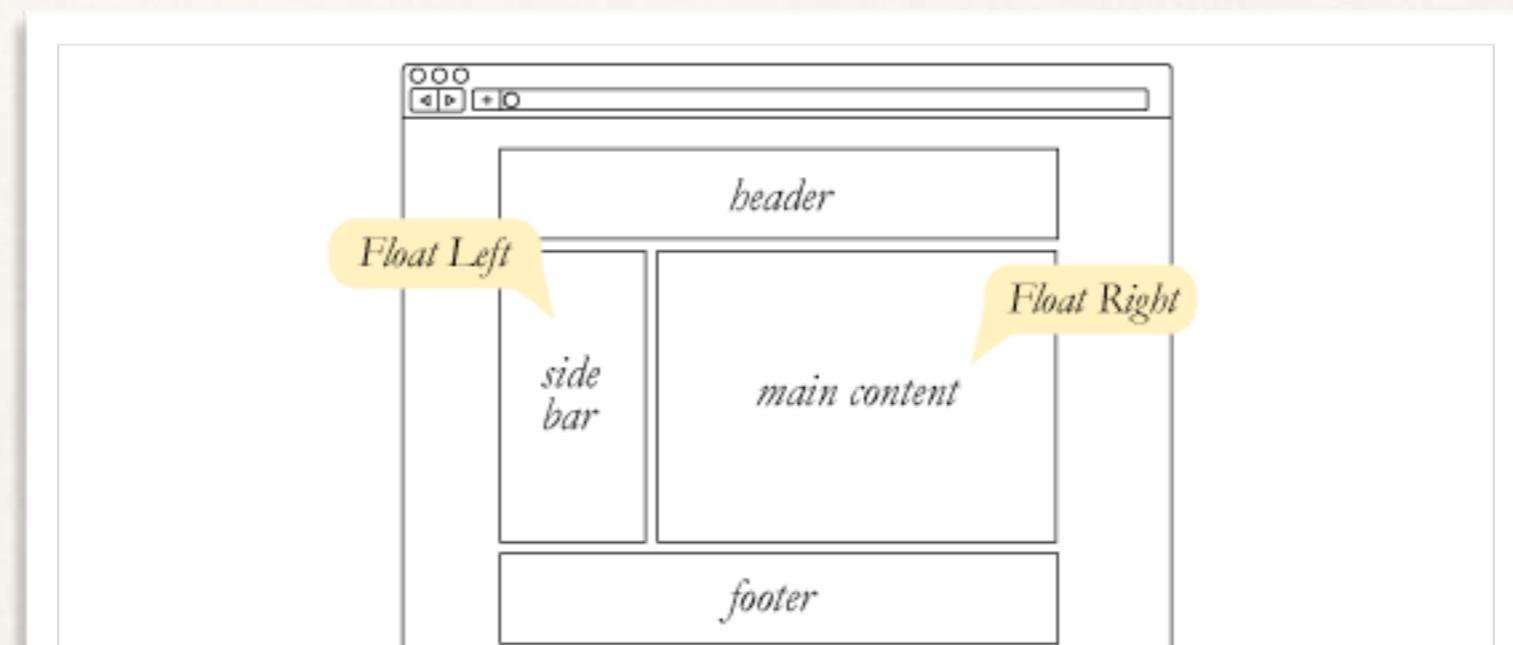
# Box Model Caveats: Floats

---



# FLOATS IN LAYOUTS

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# Why people use floats in layout ?

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- ❖ They work everywhere (Hi IE6)
- ❖ It's easy
- ❖ Demo

# What Can Go Wrong

---

- Floats dimensions are not what you think
- They may need to be cleared
- Demo: <http://jsbin.com/iyenom/3/>

# Floated Insights

---

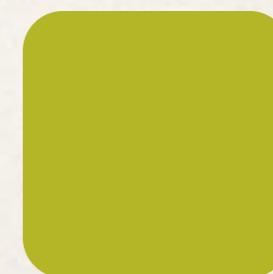
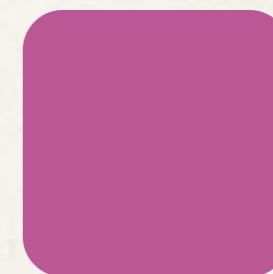
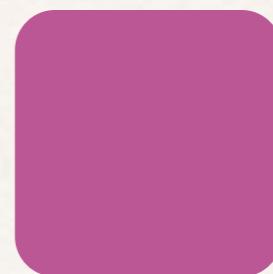
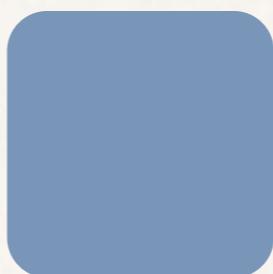
- Floats have no height
- Width is determined by content



# Alternative Layouts

---

- ❖ Use `display: inline-block` to place elements side-by-side
- ❖ Elements will have normal dimensions, so no surprises
- ❖ Except for one...  
<http://jsbin.com/udetov/1/edit>



# Q & A

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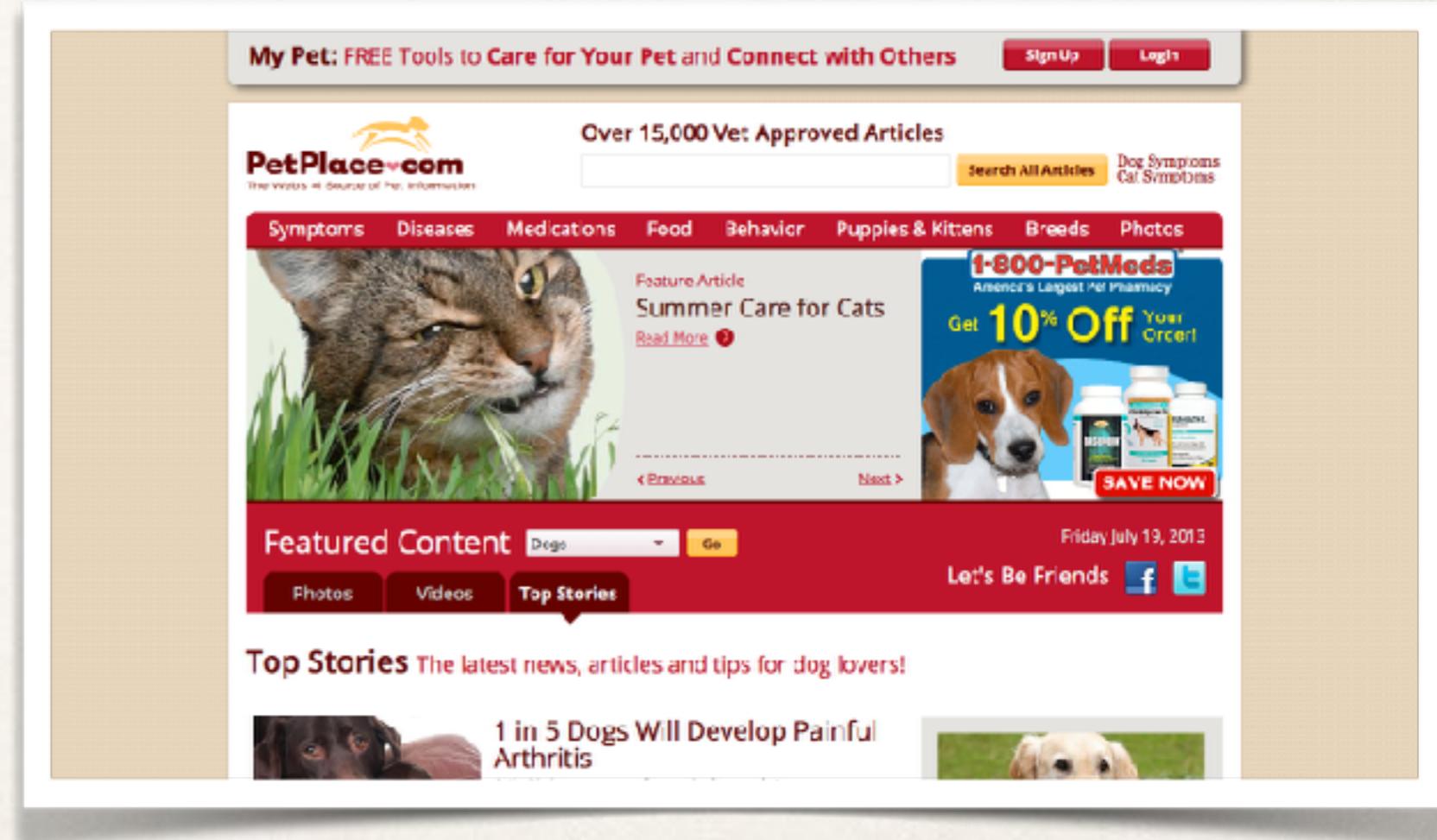
# Page Layouts

---

- ❖ Fixed layout
- ❖ Fluid (liquid) layout
- ❖ Responsive layout

# Fixed Layout

- ❖ Layout with “margins”
- ❖ Easiest to build
- ❖ Not fun to users



# How To Build a Fixed Layout

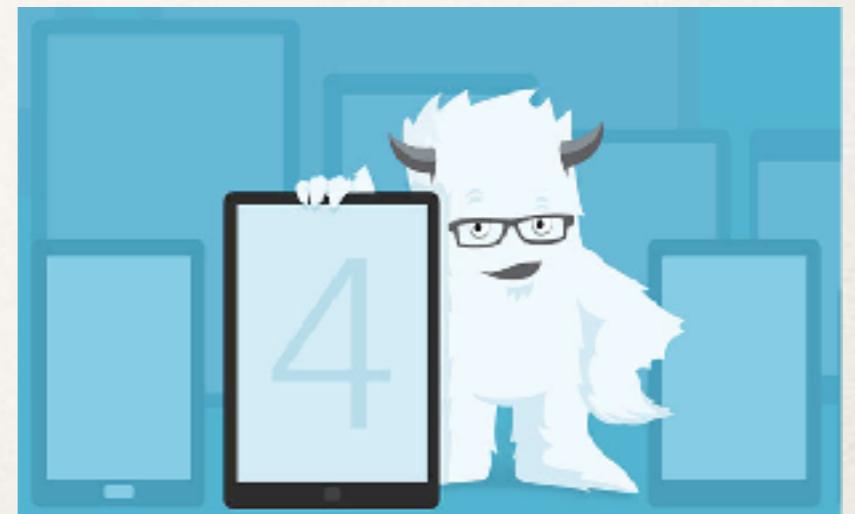
---

- ❖ Use floated divs with widths
- ❖ Make sure to clear after each “row”
- ❖ Alternatively, use inline-block

# How to Quickly build a fixed layout ?

---

- ❖ Use an existing grid:
  - ❖ Twitter Bootstrap
  - ❖ Zurb Foundation
  - ❖ Grid960
  - ❖ Skeleton
- ❖ Demo



# Fluid Layout

Bins Add library Share Log in Register Help

HTML

```
<!DOCTYPE html>
<html>
<head>
<script src="http://jashkenas.github.com/coffee-script/extras/coffee-script.js"></script>
<meta charset=utf-8 />
<title>Welcome to JS Bin</title>
<meta name="viewport" content="width=device-width">
<link href='http://fonts.googleapis.com/css?family=Doppio+One' rel='stylesheet' type='text/css'>
<script class="jsbin" src="http://ajax.googleapis.com/ajax/libs/jquery/1/jquery.min.js"></script>
</head>

<body>

<div class="wrapper">

  <div id="welcome">
    <h1>Welcome to JS Bin!</h1>
    <p class="bubble"><strong>Hello</strong>, I'm <em><strong>Dave</strong> the <strong>JS Bin</strong> bot</em>. <br/>JS Bin is a JavaScript, HTML and CSS playground. If you want to experiment, learn or help your friends with a problem, then JS Bin is for you.<br/>Have a play and build something <strong>cool</strong> &mdash; and don't forget to <a href="http://twitter.com/js_bin" target="_blank">follow me on Twitter</a>!<small id="message">Oh, and please don't click on, I get rather dizzy...</small></p>
    <h2>Here's just a few of the things I can do:</h2>
  </div>

<div id="features">
```

CSS

```
body {
  padding: 0;
  margin: 0;

  background: #3fa8c6;
  background-image: -moz-linear-gradient(top, #3fa8c6 0%, #3fa8c6 0%, #399ab2 100%);
  background-image: -webkit-gradient(linear, left top, left bottom, color-stop(0%,#3fa8c6), color-stop(0%,#3fa8c6), color-stop(100%,#399ab2));
  background-image: -webkit-linear-gradient(top, #3fa8c6 0%,#3fa8c6 0%,#399ab2 100%);
  background-image: -o-linear-gradient(top, #3fa8c6 0%,#3fa8c6 0%,#399ab2 100%);
  background-image: -ms-linear-gradient(top, #3fa8c6 0%,#3fa8c6 0%,#399ab2 100%);
  background-image: linear-gradient(to bottom, #3fa8c6 0%,#3fa8c6 0%,#399ab2 100%);

  color: #fff;

  font-family: 'Doppio One', sans-serif;
  text-shadow: 0 1px 0 rgba(0,0,0,.3);
  line-height: 1.5;
  -webkit-font-smoothing: antialiased;
}

.wrapper {
  width: 50%;
  margin: 0 auto;
}

h1, h2, h3, h4, h5, h6 {
  letter-spacing: -.03em;
  font-size: 2em;
}

a {
  border-bottom: 1px solid #fff;
  border-bottom: 1px solid rgba(255,255,255,.7);
  padding-bottom: .15em;
```

Output

Run with JS Auto-run JS

Welcome to JS Bin!

Hello, I'm **Dave** the JS Bin bot. JS Bin Is a JavaScript, HTML and CSS playground. If you want to experiment, learn or help your friends with a problem, then JS Bin is for you. Have a play and build something cool — and don't forget to follow me on Twitter! Oh, and please don't click on, I get rather dizzy...

Here's Just a few of the things I can do:

# How To Build Fluid Layout

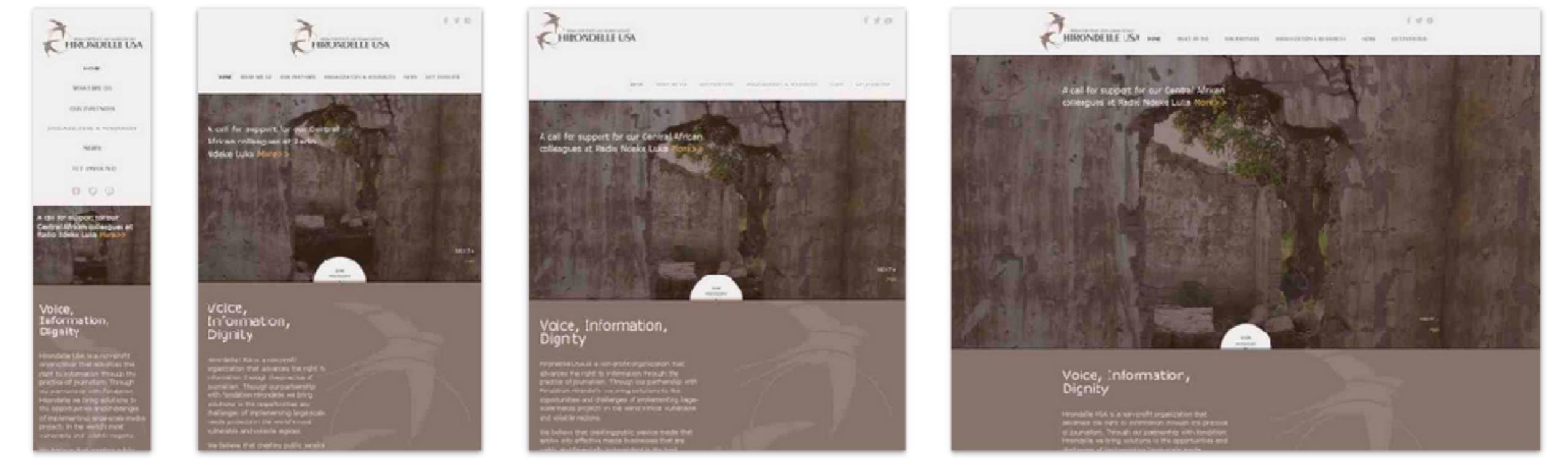
---

- ❖ Use relative units (percents)
- ❖ Test often (they break easily)
- ❖ Don't use when size varies drastically
- ❖ Easy way: Use a framework

# Responsive Layout

## Hironnelle USA

20 



The image displays four responsive web browser windows side-by-side, illustrating how a single website design adapts to different devices. Each window shows the Hironnelle USA homepage with a dark background featuring a large, faint image of a person's face. The top navigation bar is visible in all versions, and the main content area includes a prominent call-to-action button labeled 'DONATE'.

- Mobile View:** Shows a vertical layout with a sidebar on the left containing links like 'HOME', 'ABOUT US', 'OUR PARTNERS', 'EDUCATION & RESOURCES', 'NEWS', and 'RECRUITMENT'. The main content area features a large image of a person's face and a call-to-action button.
- Tablet View:** Shows a horizontal layout where the sidebar is integrated into the main content area. The main content area is larger than the mobile view, providing more space for the image and text.
- Laptop View:** Shows a full desktop-style layout with a clear separation between the sidebar and the main content area. The main content area is very spacious, allowing for detailed text and images.
- Desktop View:** Shows the most complex layout with multiple columns. It includes a sidebar, a main content area with a large image, and a footer section with various links and social media icons.

**Call-to-Action Buttons:**  
A call for support for our Central African colleagues at Radio Ndeke Luka [\[Read More\]](#)  
A call for support for our Central African colleagues at Radio Ndeke Luka [\[Read More\]](#)  
A call for support for our Central African colleagues at Radio Ndeke Luka [\[Read More\]](#)  
A call for support for our Central African colleagues at Radio Ndeke Luka [\[Read More\]](#)

**Text Labels:**  
Voice, Information, Dignity  
Hironnelle USA is a non-profit organization that advances the right to information through the practice of journalism. Through our partnership with Fondation Hirondelle, we bring solutions to the challenges of implementing large-scale media projects in the most vulnerable and volatile regions.

# Layout Lab

---

- Given the HTML at:  
<http://pastebin.com/VZ752ugU>
- Add CSS so the text appears next to the image when screen is large enough, or above the image for smaller screens



# Q & A

---



# CSS Units

---

Percents, ems, pixels, rem, pts, ...



# First there were pixels

---

- ❖ Size is relative to the monitor
- ❖ “normal” is 1/96 inch
- ❖ Used for fixed layouts

```
div {  
  width: 150px;  
  height: 70px;  
  font-size: 16px;  
  padding: 20px;  
}
```

# And percents

---

- ❖ % is relative to the container
- ❖ Root element is relative to browser size
- ❖ Allows fluid layout
- ❖ Consider box sizing property



# And then everything changed

---



# A case for Ems

---

- ❖ We need media queries to cope with the variation in screen size
- ❖ Each breakpoint needs different fonts and spacings
- ❖ Don't want to change sizes in 50 places

# Em Demo

---

- ❖ Em based produce fixed layouts
- ❖ Layout is fixed to font size
- ❖ Also known as elastic layout
- ❖ Code:  
[http://mirificampress.com/  
code\\_examples/  
2008\\_05\\_07\\_em\\_based\\_layout.  
html](http://mirificampress.com/code_examples/2008_05_07_em_based_layout.html)

**My EM Based Website Header**

**Column One**

Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want.

Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want.

**Column Two**

Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want.

Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want.

Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want. Here is some great content for your website. This is the kind of content you want.

# The Problem with Ems

---

- ❖ It's hard to track who's your parent and what their real font size is
- ❖ Long inheritance makes programmers unhappy

# Rems to the rescue

# rem (root em) units - Candidate Recommendation

Type of unit similar to "em", but relative only to the root element, not any parent element. Thus compounding does not occur as it does with "em" units.

Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser
								2.1	
								2.2	
						3.2		2.3	
						4.0-4.1		3.0	
	8.0		26.0			4.2-4.3		4.0	
	9.0	21.0	27.0	5.1		5.0-5.1		4.1	7.0
Current	10.0	22.0	28.0	6.0	15.0	6.0-6.1	5.0-7.0	4.2	10.0
Near future	11.0	23.0	29.0	7.0		7.0			
Farther future		24.0							

**Notes** Known issues (1) Resources (2) Feedback Edit on GitHub

No notes

# Rems to the rescue

---

- ❖ Stand for root ems
- ❖ A rem is an rem, relative to the root element
- ❖ Root element is <html>
- ❖ Demo

# Mixing Units

---

# Centered Image ?

---

```
img {  
    position: absolute;  
    left: ???  
    top: 20px;  
}
```

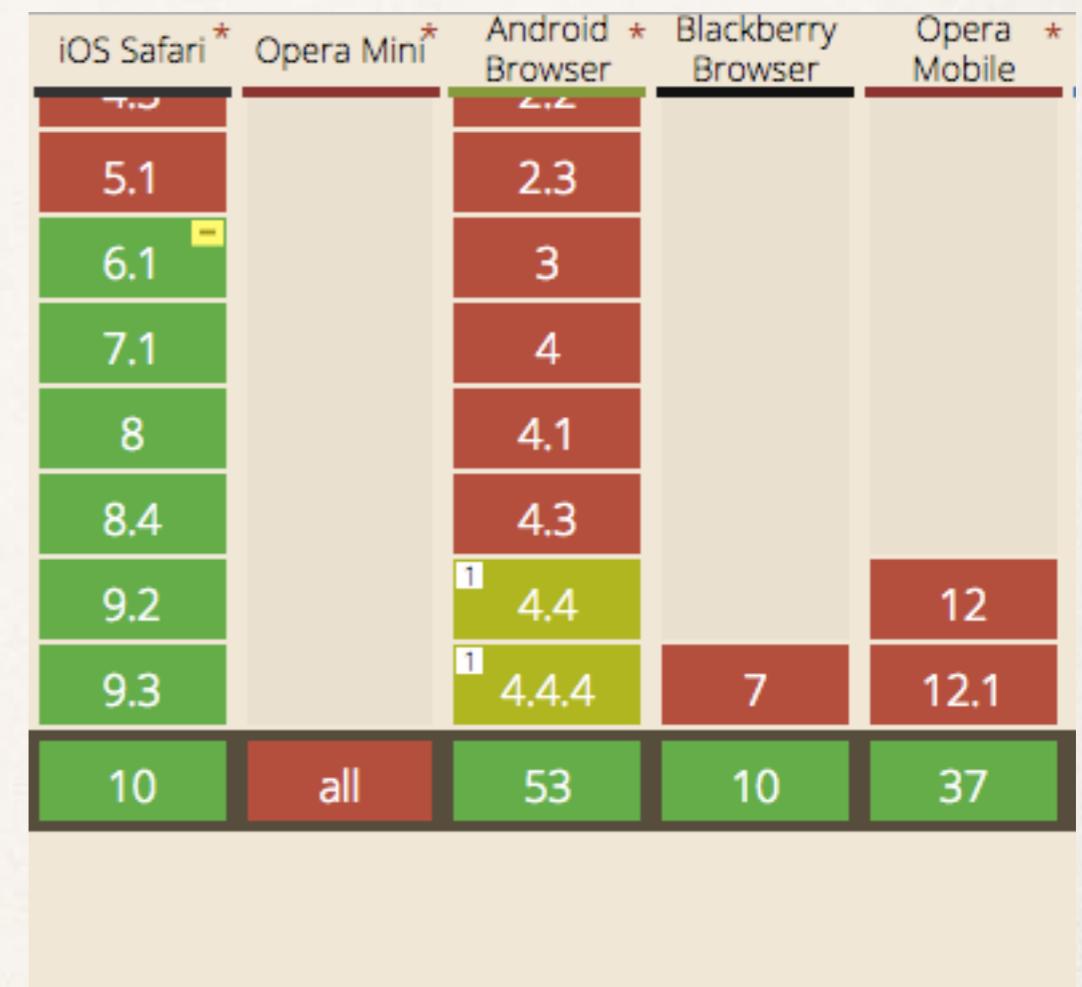
# Centered Image ?

---

```
img {  
    position: absolute;  
    left: calc(50% - 150px);  
    top: 20px;  
}
```

# Awesome. Can I Use It?

IE	Edge *	Firefox	Chrome	Safari	Opera
		7.2	7.0	5.1	5.5
6		43	47	6	34
7		44	48	6.1	35
8		45	49	7	36
9	12	48	52	9	39
10	13	49	53	9.1	40
11	14	50	54	10	41
		51	55	TP	42
		52	56		43
		53	57		



# Flexbox

---

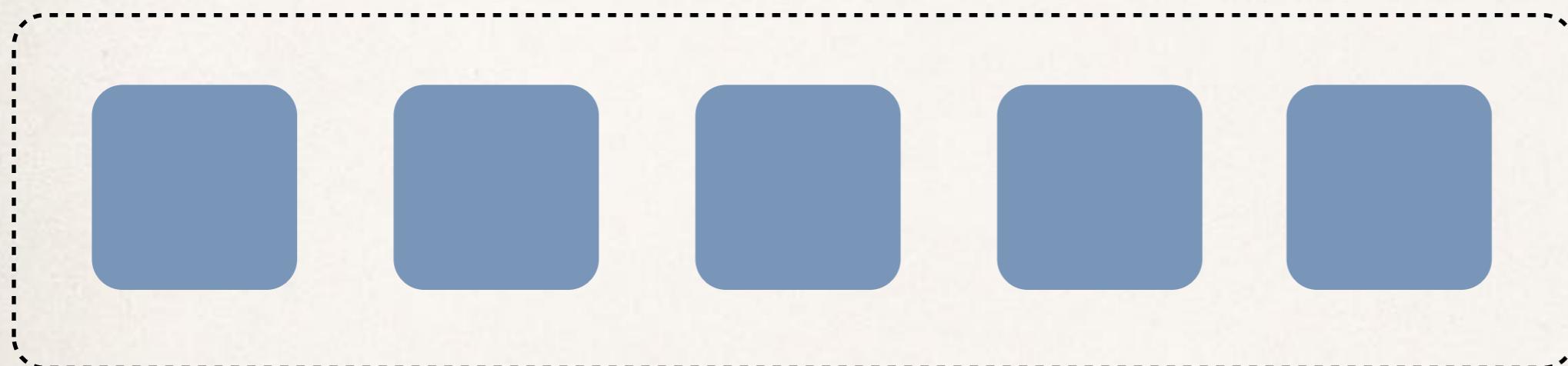
# Flexbox to the rescue

---

- ❖ Flexbox is a layout manager
- ❖ Known as HBoxLayout or VBoxLayout in other frameworks
- ❖ Arrange items in boxes: vertical or horizontal

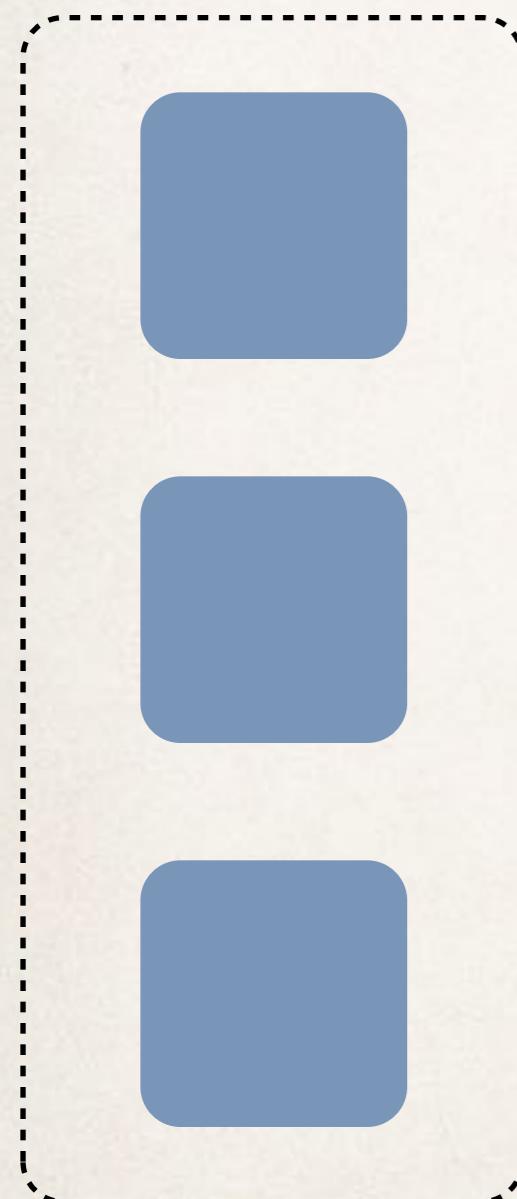
# Horizontal flexbox

---



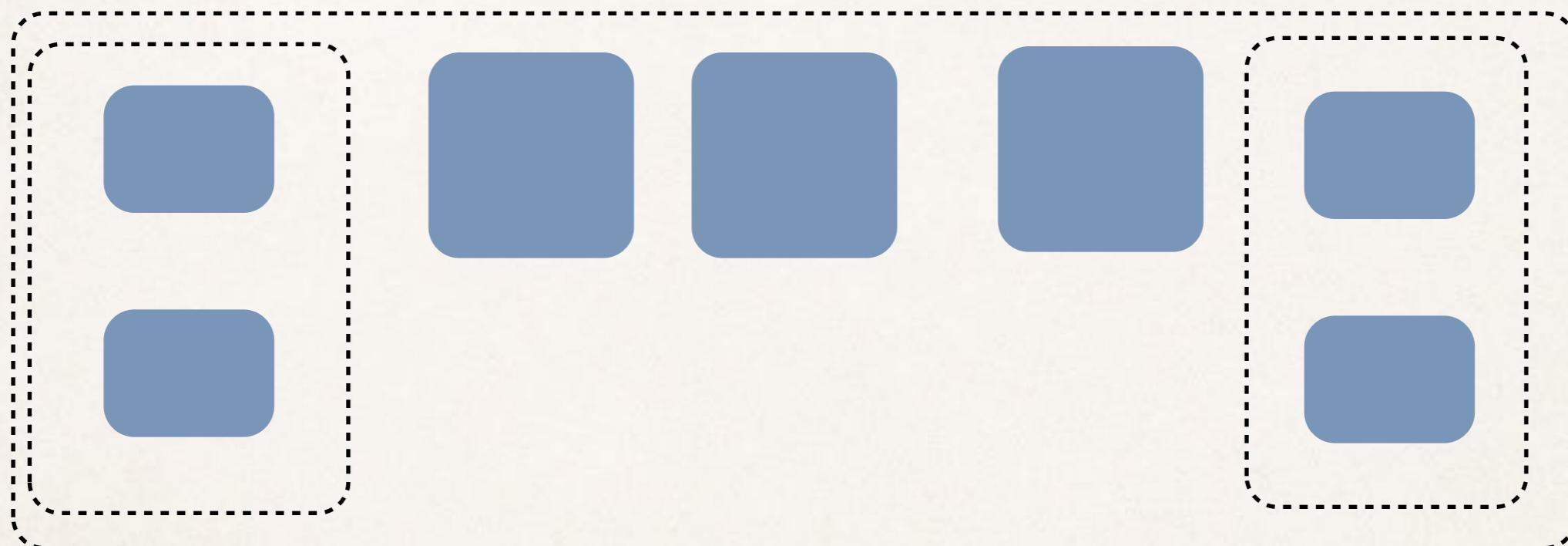
# Vertical flexbox

---



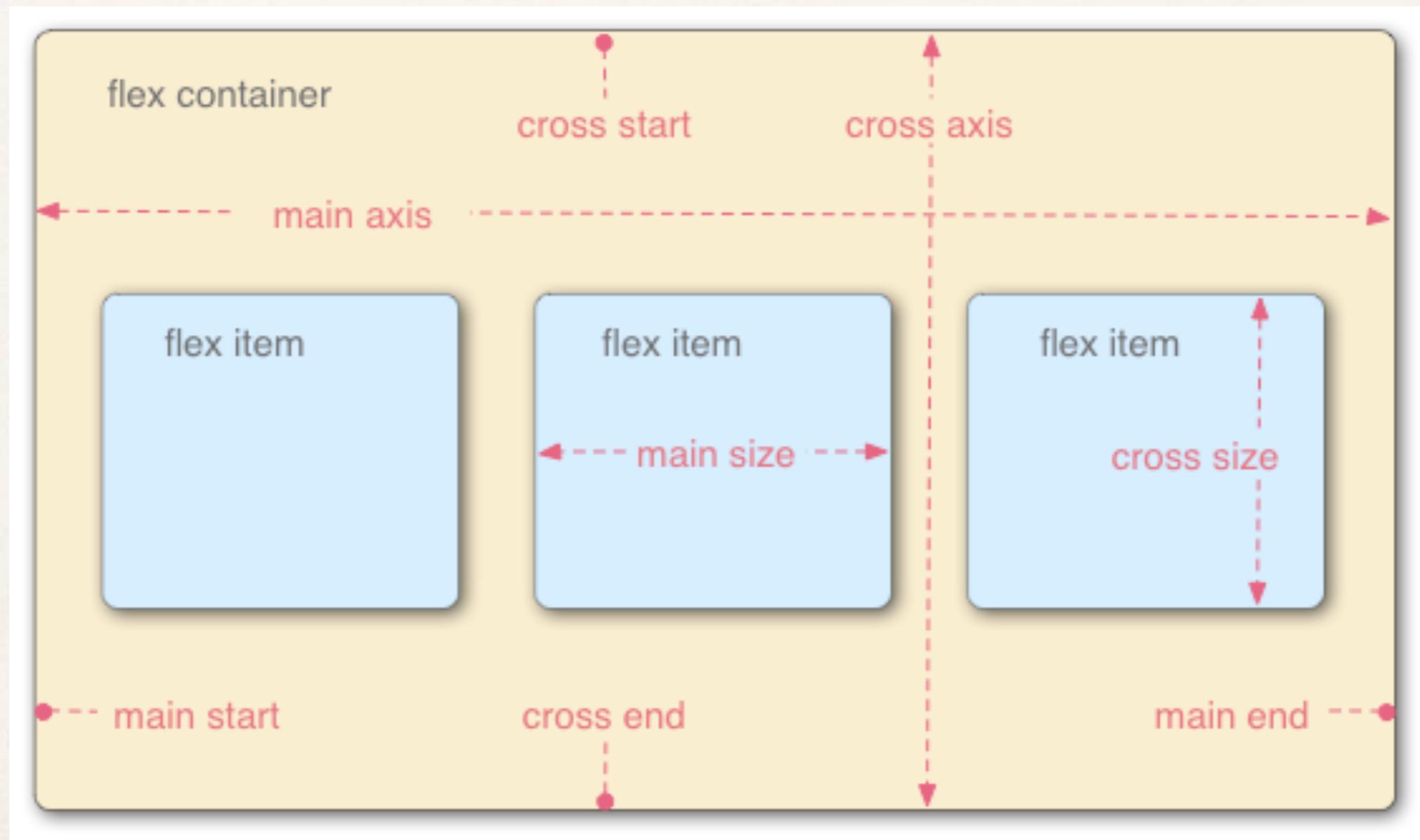
# Combined Flexbox

---



# Flexbox concepts

---



# Flexbox browser support

## Notes Known issues (1) Resources (4) Feedback

[Edit on GitHub](#)

Most partial support refers to supporting an [older version](#) of the specification or an [older syntax](#). For Firefox 21+ it refers to lack of flex-wrap & flex-flow support.

# Hello Flexbox

---

- ❖ Demo: Using flexbox to create
- ❖ <http://codepen.io/ynonp/pen/PbKEmZ>

# Flex Props

---

- ❖ Use `display: flex` on a container to flexify
- ❖ Use `flex: [count]` on an item to choose flex factor

# Equal Height Columns

---

- ❖ You got them. Yay.

# Dynamic Order OMG

---

- ❖ Just set order on the columns...
- ❖ .a { order: 3 }

# Centering items is a breeze

---

```
/* Center according to the main axis */
justify-content: center;

/* Center according to the secondary axis */
align-items: center;
```

<http://codepen.io/ynonp/pen/RoZxYW>

# Q & A

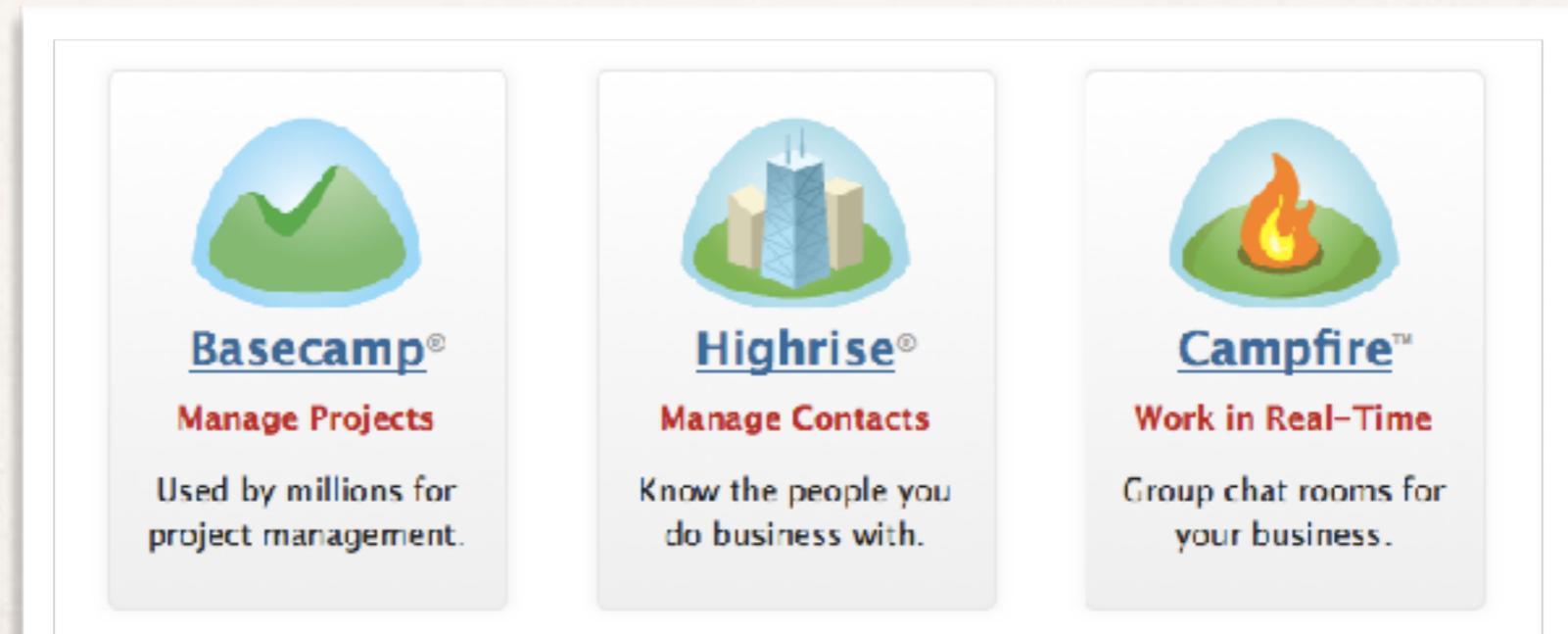
---



# Lab 1

---

- ❖ Implement HTML and CSS for the following using flexbox
- ❖ Don't forget responsiveness
- ❖ div image: <https://help.basecamp.com/images/logo-bc.png>



# CSS Selectors

---

# Why Selectors Level 3

---

- ❖ Selectors help separate content from presentation
- ❖ They let you modify presentation without touching content (no need to add special classes)
- ❖ That said, they can easily be misused

# Review: Tag Selector

---

- Used in the base layer
- Sets style throughout the page

```
a {  
  text-decoration: none;  
  color: black;  
}
```

```
body {  
  background: #d7d7d7;  
}
```

```
h1 {  
  font-size: 3em;  
}
```

# Review: ID Selector

---

```
#content { width: 960px; margin: 0 auto; }
```

```
<div id="content">  
</div>
```

# Review: Class Selector

---

```
.thumb { width: 32px; height: 32px; }
```

```
<div class="gallery">
  <ul>
    <li></li>
    <li></li>
    <li></li>
  </ul>
</div>
```

# Review: Descendants Selector

---

```
.gallery img { border: 2px solid blue; }
```

```
<div class="gallery">
  <ul>
    <li></li>
    <li></li>
    <li></li>
  </ul>
</div>
```

# Direct Child Selector

---

- CSS2.1 Selector.
- IE8 and above

```
.header > h1 {  
    font-size: 1.8em;  
    font-weight: bold;  
}
```

```
<div class="header">  
    <h1>Welcome Home</h1>  
    <div class="menu">  
        <h1>About</h1>  
        <h1>Gallery</h1>  
        <h1>Contact</h1>  
    </div>  
</div>
```

# Attribute Selector

---

- CSS2.1 Selector.
- IE7 and above

```
input[type="text"] {  
    border: 2px solid blue;  
}
```

```
<form>  
    <input type="text"/>  
    <input type="text" />  
    <input type="submit" />  
</form>
```

# CSS 3 Selectors

---



# “Starts With” Attribute Selector

---

```
a[href^="mailto:"] {  
    background: url(/images/icn-email.png);  
}
```

```
<a href="/work">Work</a>  
<a href="/about">About</a>  
<a href="mailto:admin@work.com">Contact</a>
```

# “Ends With” Attribute Selector

---

```
a[href$="pdf"] {  
    background: url(/images/icn-pdf.png);  
}
```

```
<a href="report.pdf">Report</a>
```

# Pseudo Selectors

---

- ❖ :first-child
- ❖ :last-child
- ❖ :nth-child, :nth-of-type
- ❖ :not
- ❖ :enabled, :disabled, :checked

# Pseudo Selectors: Drop Caps

---

```
p { margin-top: 20px; }
p::first-letter {
    font: 2em zapfino;
    float: left;
    margin: -22px 15px 0 0;
}
```

**P**ellentesque habitant morbi tristique senectus et  
netus et malesuada fames ac turpis egestas.  
Vestibulum tortor quam, feugiat vitae, ultricies  
egestas semper. Aenean ultricies mi vitae est. Mauris  
placerat eleifend leo.

# :nth-child

```
td { padding: 2px; }
tr td:first-child { width: 100px; }
tr:nth-child(2n) { background: #ccc; }
```

```
<table>
  <tr>
    <td>Dollar</td>
    <td>USA</td>
  </tr>
  <tr>
    <td>Pound</td>
    <td>Great Britain</td>
  </tr>
  <tr>
    <td>Yen</td>
    <td>Japan</td>
  </tr>
  <tr>
    <td>Euro</td>
    <td>EMU</td>
  </tr>
</table>
```

Dollar	USA
Pound	Great Britain
Yen	Japan

# Selectors: Lab

---

- ❖ Prepare dinner:  
<http://flukeout.github.io/>

# CSS Conflicts

---



MARTIN

[phillipmartin.info](http://phillipmartin.info)

# What is the text color ?

---

```
.foo { color: blue; }  
p     { color: red; }
```

```
<p class="foo">Hello</p>
```

# Selector Specificity

---

- ✿ Number of IDs = A
- ✿ Number of class, attributes, pseudo-classes = B
- ✿ Number of type, pseudo elements = C
- ✿ Add it all to get the specificity
- ✿ Selector with the larger specificity wins

# CSS Faceoff

---

- ❖ Who Wins ?
- ❖ #slider
- ❖ OR
- ❖ div.twocol .container .primary .content ul

# Q & A

---



# Agenda

---

CSS: past, present and future

2

Using CSS for page layouts

36

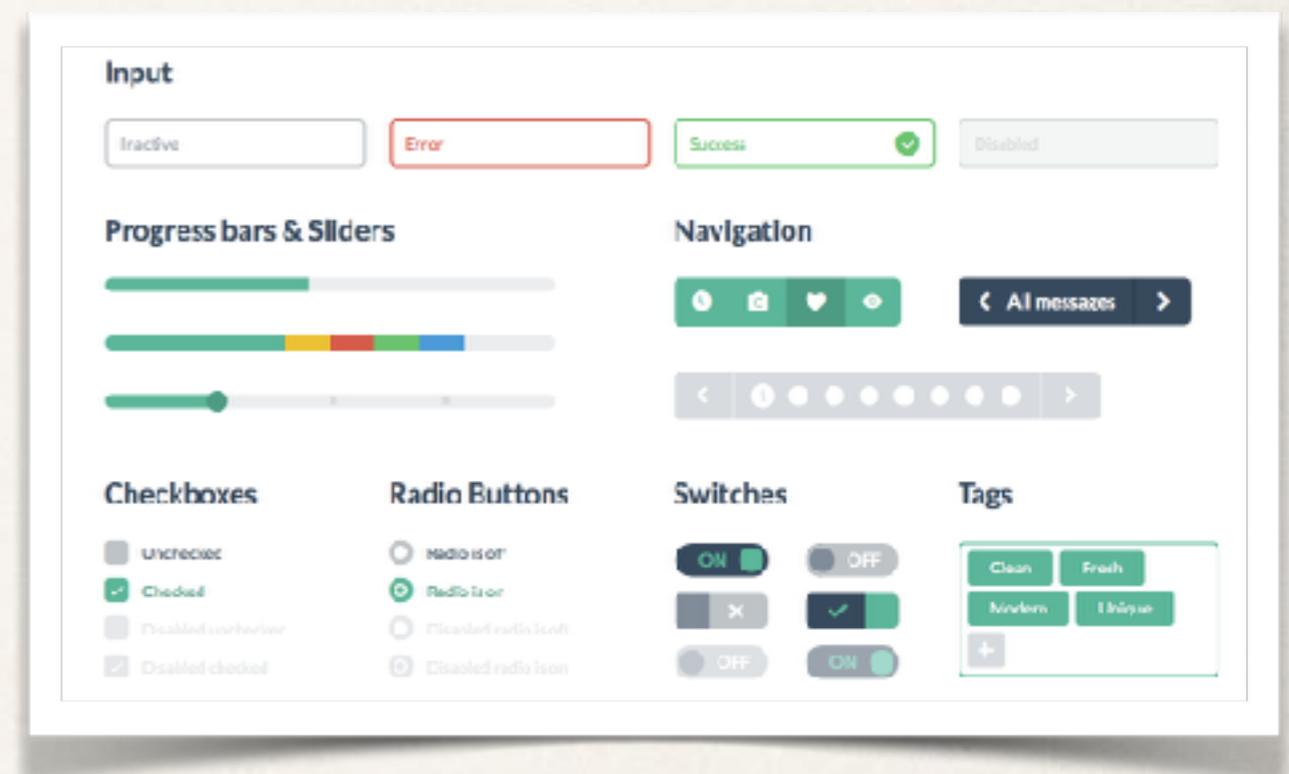
Implementing components with CSS

108

# Styling UI Controls

---

- ❖ Styling a simple button
- ❖ Styling form fields
- ❖ Famous UI kits
- ❖ Famous jQuery Plugins



# Tools of the trade

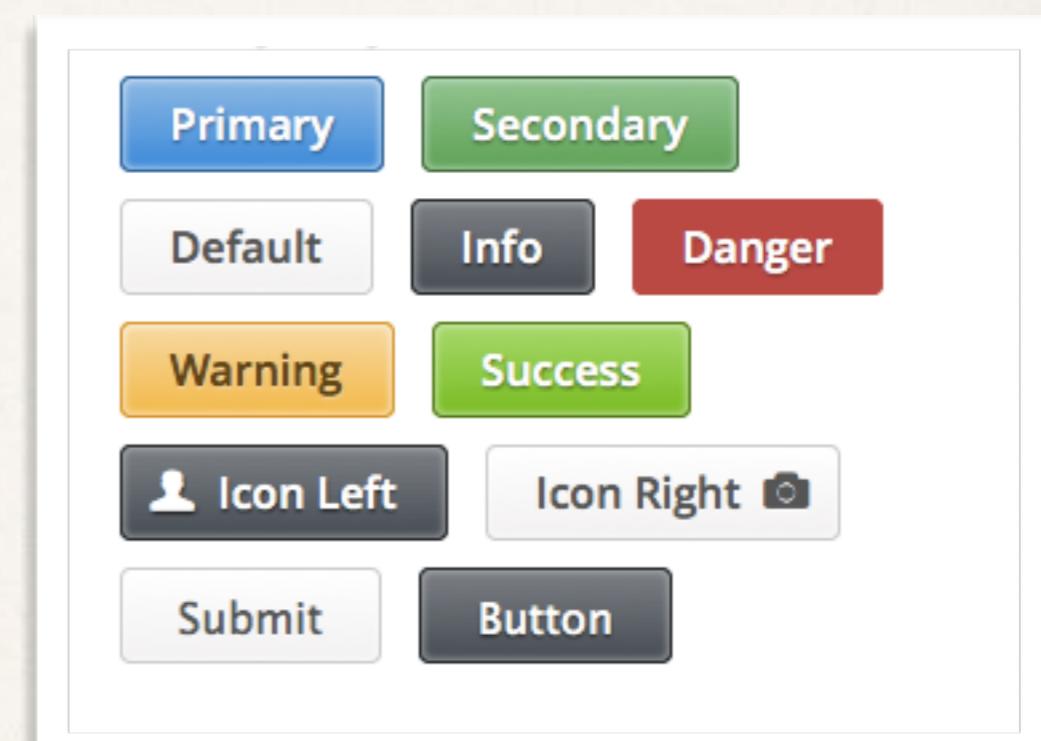
---

- ❖ Position: absolute, relative
- ❖ Transform: (rotate, translate, scale)
- ❖ Flexbox

# Hello Buttons

---

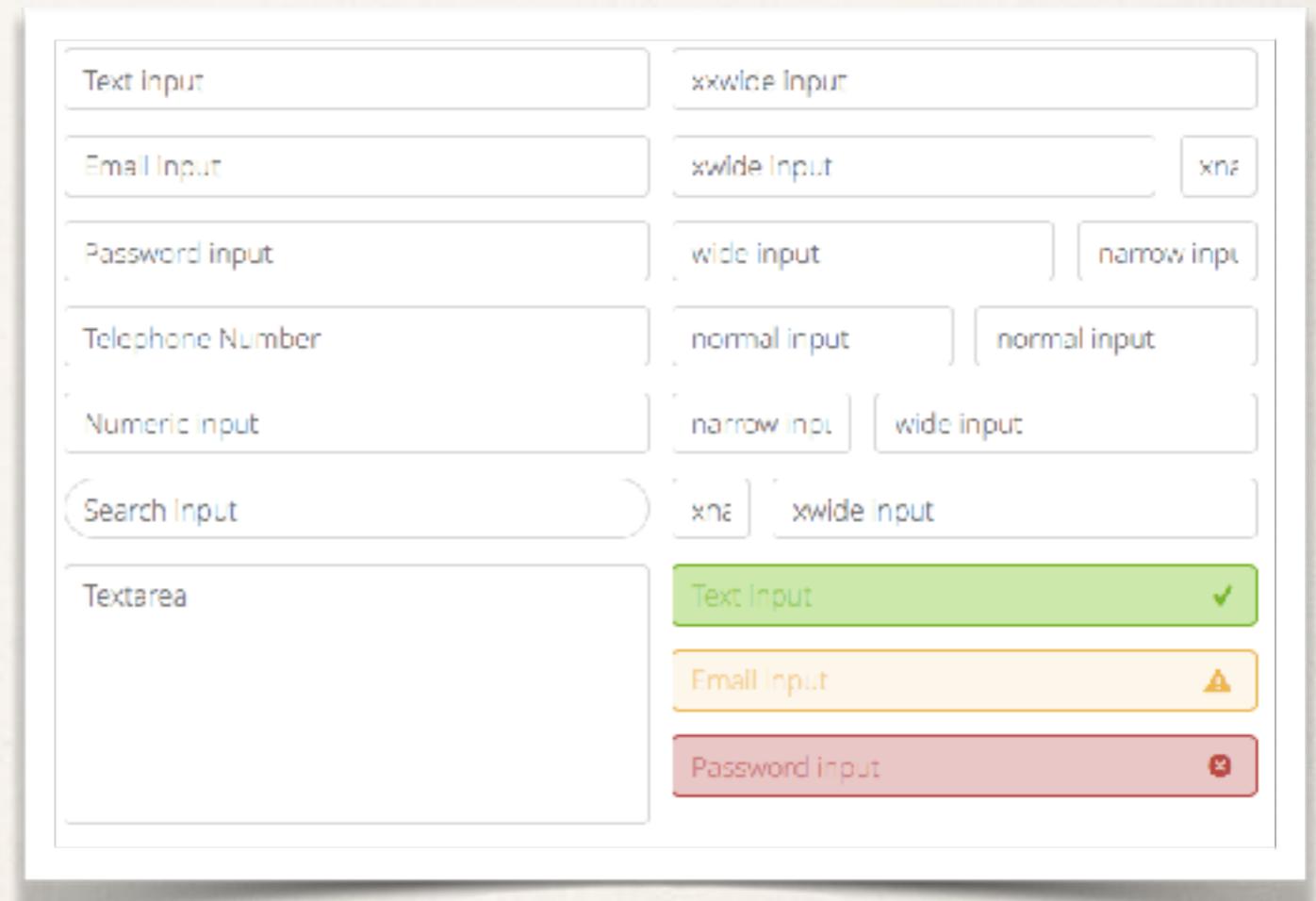
- ❖ A button is rectangular
- ❖ May have round corners
- ❖ May have drop-shadow (or inset)
- ❖ May have an icon
- ❖ Demo:  
<http://css3buttongenerator.com/>



# Hello Form Controls

---

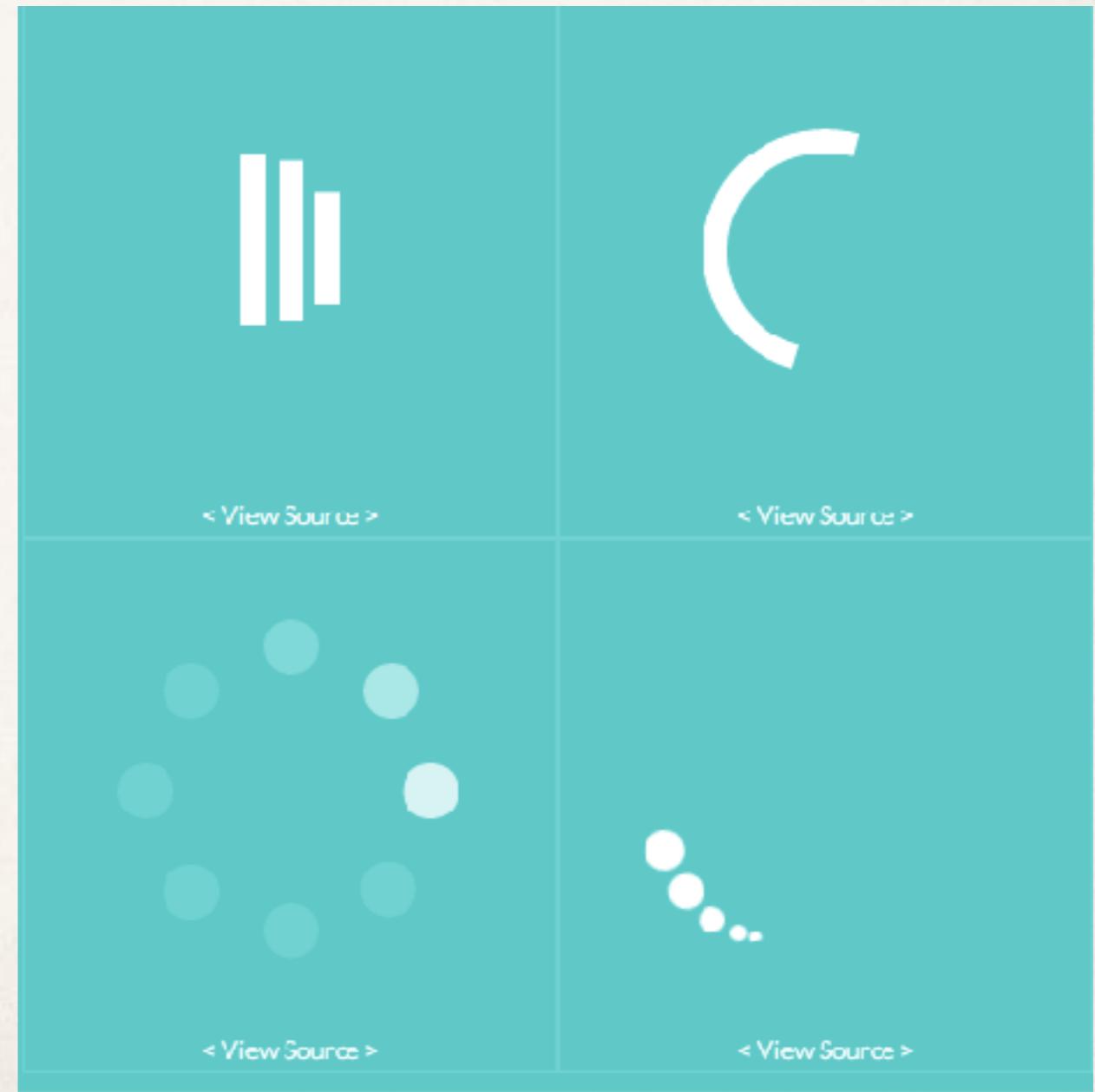
- ❖ Use ::-prefix-placeholder to style placeholder text
- ❖ Use border to change input's border style
- ❖ Use background to add an icon (but prefer a dedicated <i> tag)



# Hello Spinners

---

- ✿ <http://projects.lukehaas.me/css-loaders/>
- ✿ No images involved
- ✿ Single div



# UI Kits

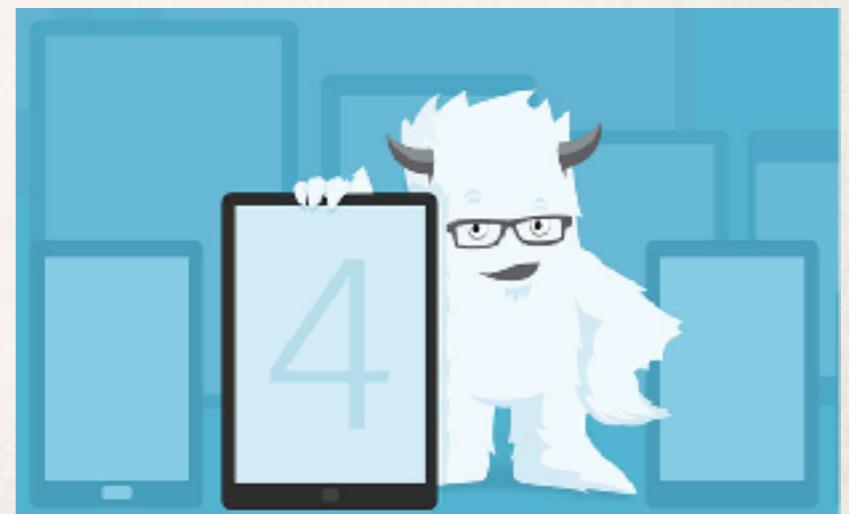
---

- ❖ Instead of writing your own CSS controls, can use existing
- ❖ There are many free kits, and many paid ones
- ❖ Choose something that works for you.
- ❖ Be consistent

# The Big Kits

---

- ❖ Twitter bootstrap from twitter
- ❖ Zurb foundation from Zurb



# Some smaller kits

---

- ✳ Skeleton: <http://www.getskeleton.com/>
- ✳ Metro UI: <http://metroui.org.ua/>
- ✳ Gumby framework: <http://www.gumbyframework.com/>
- ✳ More at: <http://www.cssflow.com/>

# How to use a kit

---

- ❖ Make sure license fits
- ❖ Change default colors
- ❖ Be consistent

# Adding JavaScript

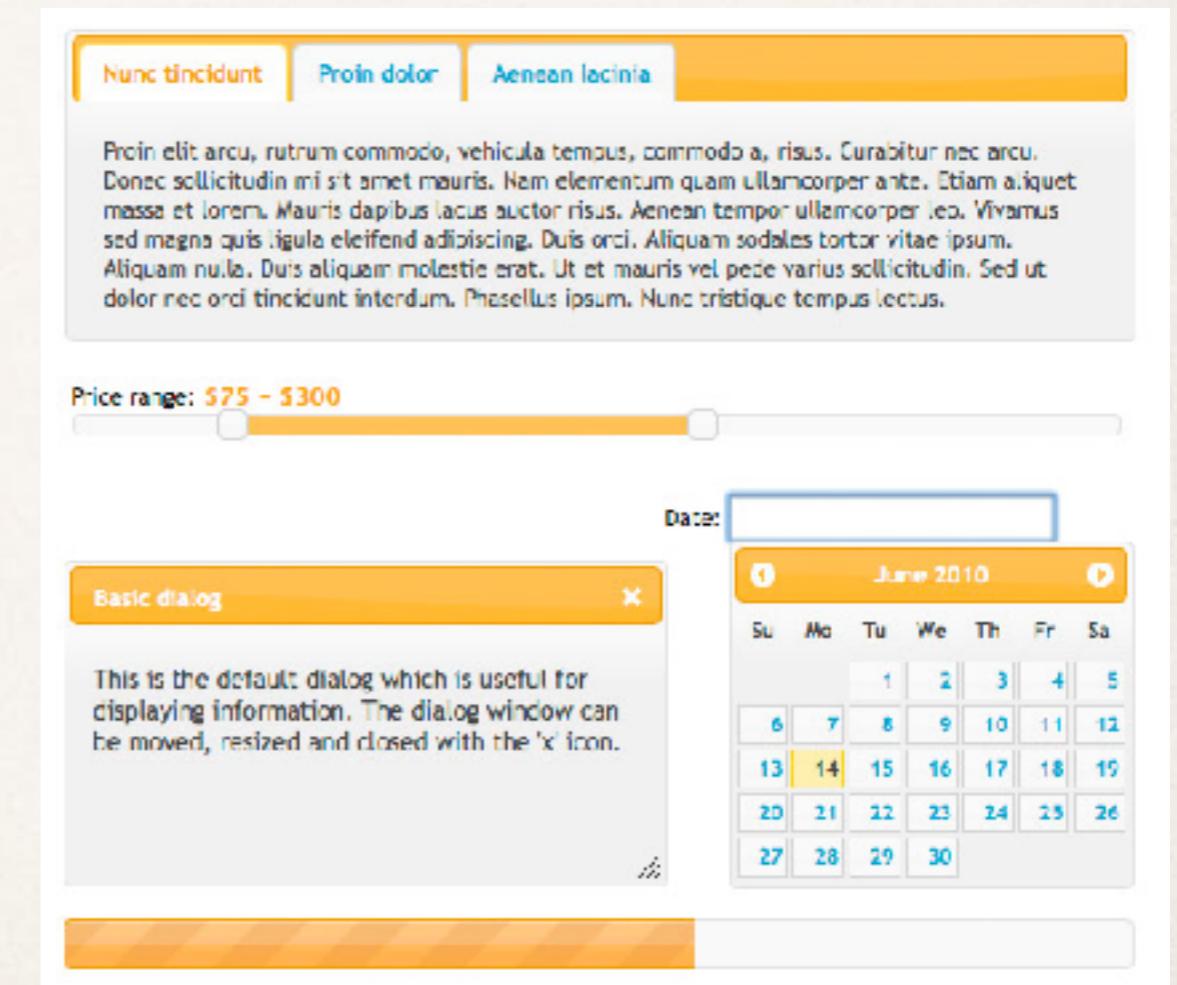
---



- ❖ Some kits will require you to add more HTML elements to get right
- ❖ Usually for technical reasons
- ❖ Can avoid with the help of JavaScript
- ❖ Best known as jQuery Plugins

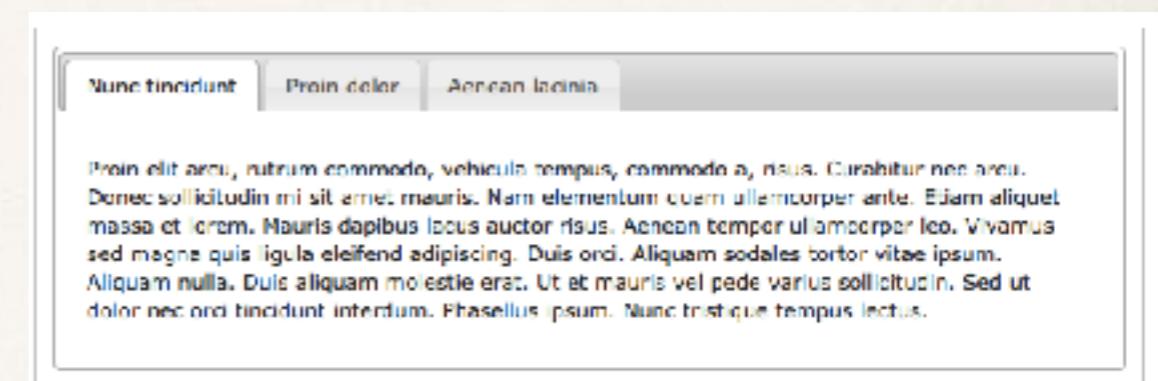
# Famous jQuery Plugins: jQuery UI

- ❖ jQuery UI is them-able UI kit
- ❖ Involves JavaScript to create the DOM
- ❖ Also handles actions



# jQuery UI Demo – Tabs

```
<div id="tabs">
  <ul>
    <li><a href="#tabs-1">Nunc tincidunt</a></li>
    <li><a href="#tabs-2">Proin dolor</a></li>
    <li><a href="#tabs-3">Aenean lacinia</a></li>
  </ul>
  <div id="tabs-1">
    <p>e tempus lectus.</p>
  </div>
  <div id="tabs-2">
    <p>t, tellus pellentesque pretium posuere,  
felis lorem euismod felis, eu ornare leo nisi vel  
felis. Mauris consectetur tortor et purus.</p>
  </div>
  <div id="tabs-3">
    <p>nt eu risus hendrerit ligula tempus  
pretium. Curabitur lorem enim, pretium nec,  
feugiat nec, luctus a, lacus.</p>
    <p>pede. Aenean vehicula velit eu tellus  
interdum rutrum. Maecenas commodo. Pellentesque  
nec elit. Fusce in lacus. Vivamus a libero vitae  
lectus hendrerit hendrerit.</p>
  </div>
</div>
```



# Other jQuery UI Controls

---

- ❖ Accordion
- ❖ Autocomplete
- ❖ Button
- ❖ Datepicker
- ❖ Tooltip
- ❖ Dialog

# Famous jQuery Plugins

---

<http://designwithpc.com/Plugins/ddSlick>

## 1 Basic Drop down using JSON

Select your favorite social network ▾

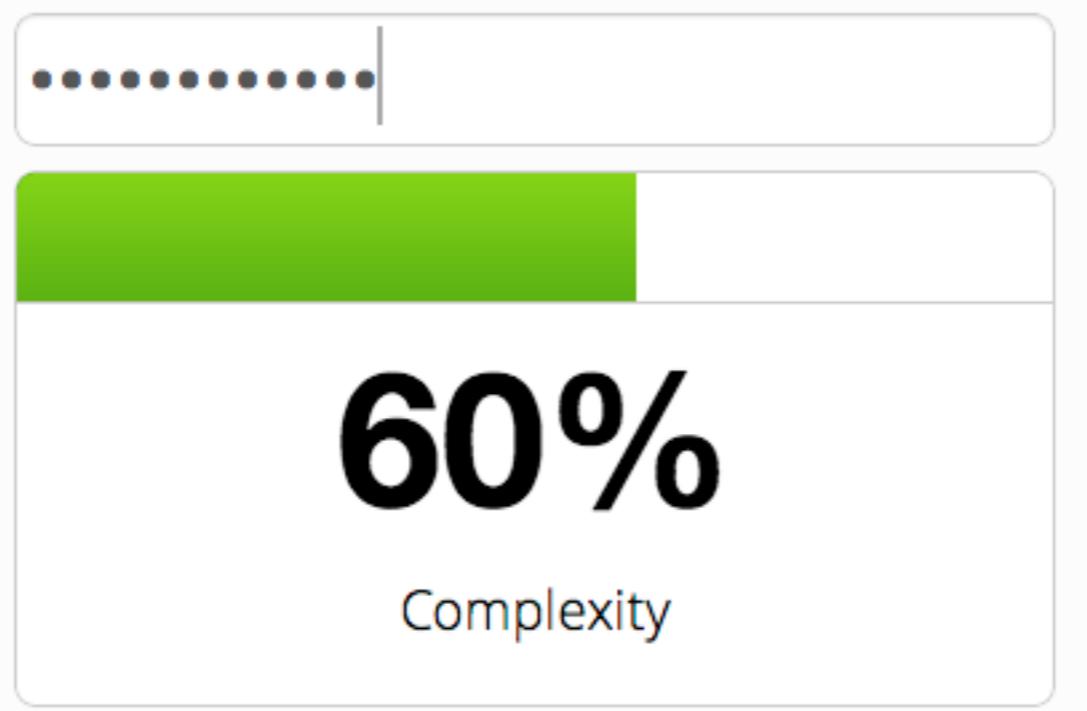
-  Facebook  
Description with Facebook
-  Twitter  
Description with Twitter
-  LinkedIn  
Description with LinkedIn
-  Foursquare  
Description with Foursquare

# Famous jQuery Plugins

---

<http://danpalmer.me/jquery-complexify/>

**Try it out:**



# Famous jQuery Plugins: Filtering

<http://luis-almeida.github.com/filtrify/>

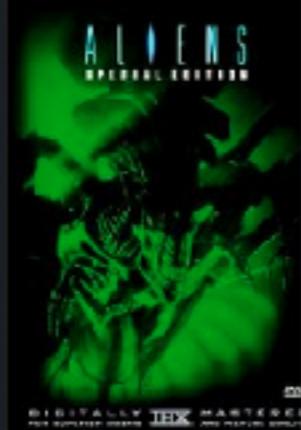
genre ▲ main actors ▼ director ▼

Adventure x

Search

Action	24
Animation	1
Biography	0
Comedy	4
Crime	3
Drama	13
Family	6

Allens



**Aliens**

genre: Action, Adventure, Sci-Fi, Thriller  
actors: Sigourney Weaver, Michael Biehn, Carrie Henn, Paul Reiser  
director: James Cameron

Sherlock Holmes



**Sherlock Holmes**

genre: Action, Adventure, Crime, Mystery, Thriller  
actors: Robert Downey Jr., Jude Law, Rachel McAdams, Mark Strong  
director: Guy Ritchie

The Beach



**The Beach**

LEONARDO DiCAPRIO  
**THE BEACH**  
genre: Adventure, Drama, Romance, Thriller  
actors: Leonardo DiCaprio, Daniel York, Patcharawanan Patarakijanon, Virginie Ledoyen  
director: Danny Boyle

Jurassic Park



**Jurassic Park**

genre: Adventure, Sci-Fi  
actors: Sam Neill, Laura Dern, Jeff Goldblum, Richard Attenborough  
director: Steven Spielberg

O Brother, Where Art Thou?



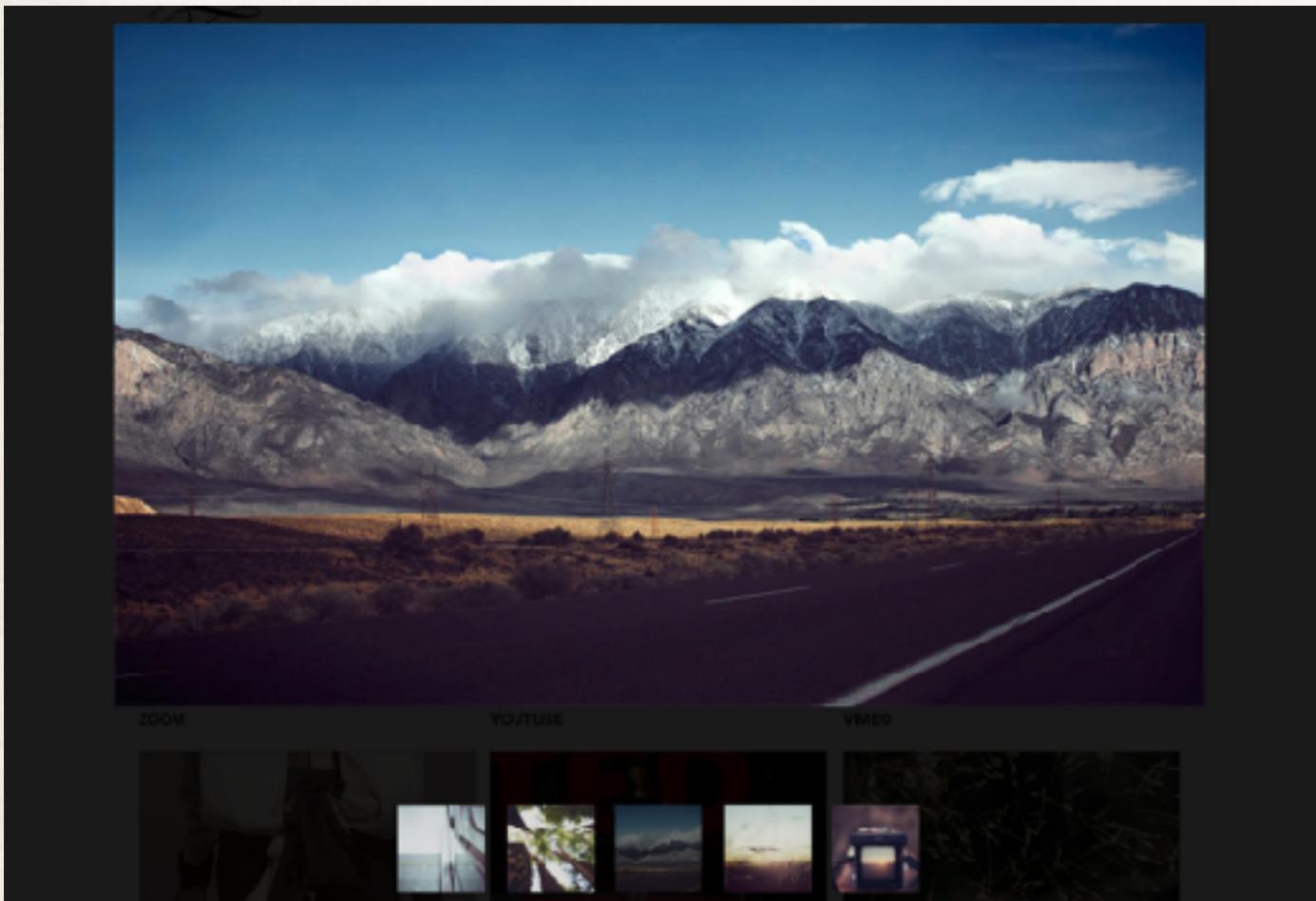
**O Brother, Where Art Thou?**

genre: Comedy, Adventure, Crime, Music  
actors: George Clooney, John Turturro, Tim Blake Nelson, John Goodman  
director: Joel Coen

# Famous jQuery Plugins: Lightbox

---

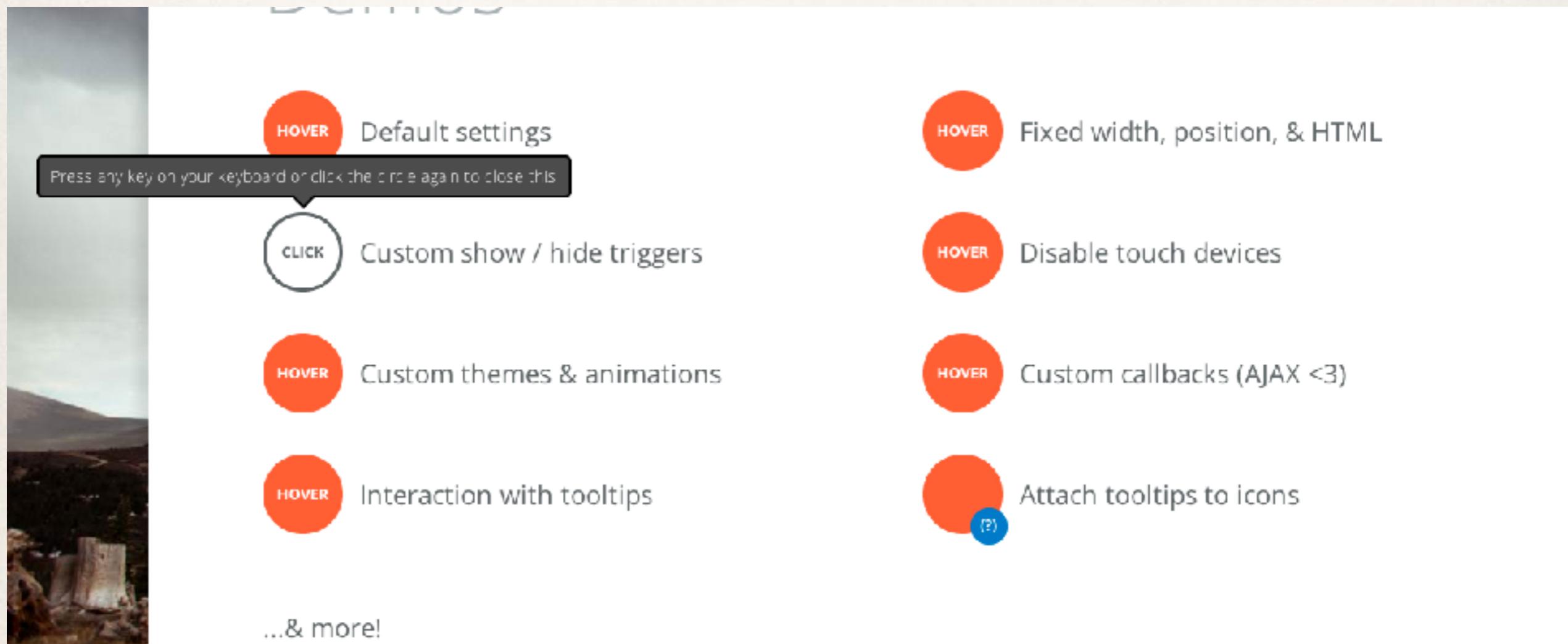
<http://www.frescojs.com/>



# jQuery Plugins: Tooltips

---

<http://calebjacob.com/tooltipster/>



# What Next

---

- ❖ Discover more plugins at: <http://plugins.jquery.com/>
- ❖ Or at: <http://www.unheap.com/>
- ❖ Or build your own

# CSS Animations and Transitions

---

# CSS Transition

---

- ❖ Controls the transition between element states
- ❖ Allows animating transitions
- ❖ Uses 3D acceleration
- ❖ Replaces old JS

# Transitions Browser Support

Simple method of animating certain properties of an element										
Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	IE Mobile
								2.1 -webkit-		
								2.2 -webkit-		
						3.2 -webkit-		2.3 -webkit-		
						4.0-4.1 -webkit-		3.0 -webkit-		
	8.0					4.2-4.3 -webkit-		4.0 -webkit-		
	9.0	28.0	33.0			5.0-5.1 -webkit-		4.1 -webkit-		
	10.0	29.0	34.0			6.0-6.1 -webkit-		4.2- 4.3 -webkit-	7.0 -webkit-	
Current	11.0	30.0	35.0	7.0	22.0	7.0-7.1	5.0-7.0	4.4	10.0 -webkit-	10.0
Near future		31.0	36.0	8.0	23.0	8.0		4.4.3		
Farther future		32.0	37.0		24.0					
3 versions ahead		33.0	38.0							

# Demo – Transitions

---

- ❖ Each state is represented by a CSS class
- ❖ Clicking the button changes element state



# Controlling Transition

---

- ❖ transition-property
- ❖ transition-duration
- ❖ transition-timing-function
- ❖ transition-delay



# transition-property

---

- ❖ Almost any property can be animated
- ❖ Use all to catch everything
- ❖ Full list at: [https://developer.mozilla.org/en/css/css\\_transitions](https://developer.mozilla.org/en/css/css_transitions)

# transition-duration

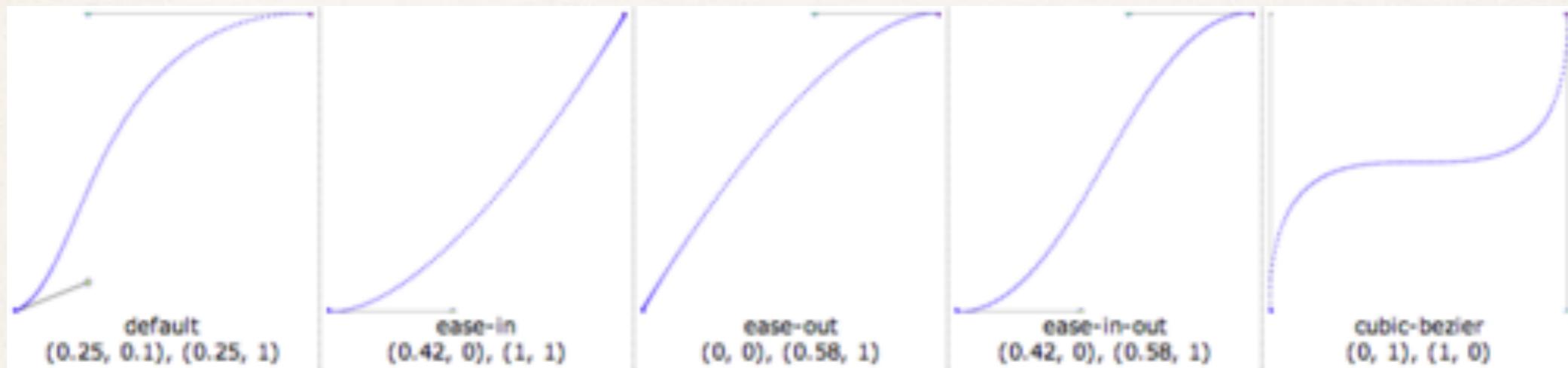
---

- ❖ How long the property animation should take
- ❖ Use time in seconds or ms (can be < 1s)

# transition timing-function

---

- ❖ Determines the timing function for the animation



Live demo at: <http://www.the-art-of-web.com/css/timing-function/>

# transition delay

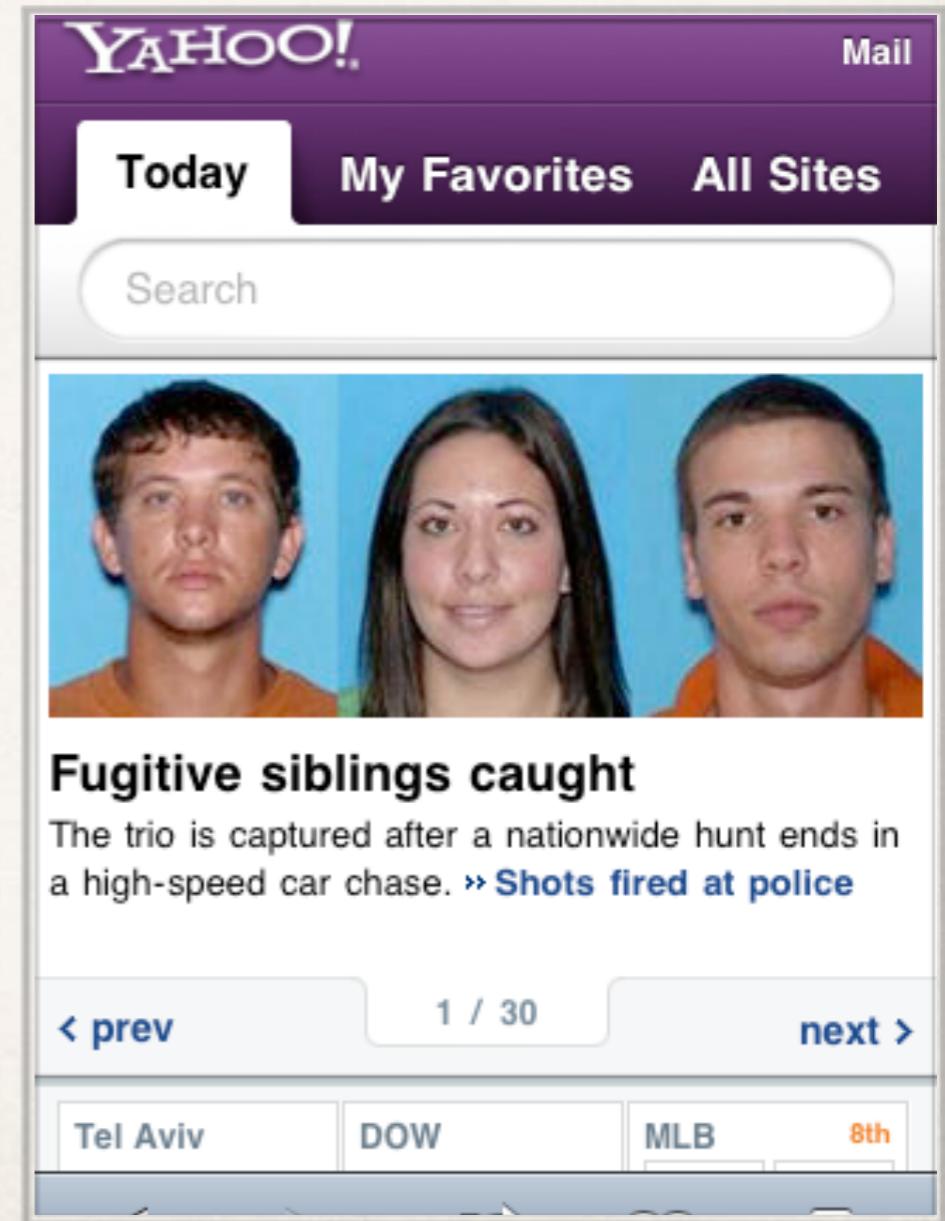
---

- ❖ Delay between value change and animation start
- ❖ Can be used to coordinate multiple animating objects

# Lab

---

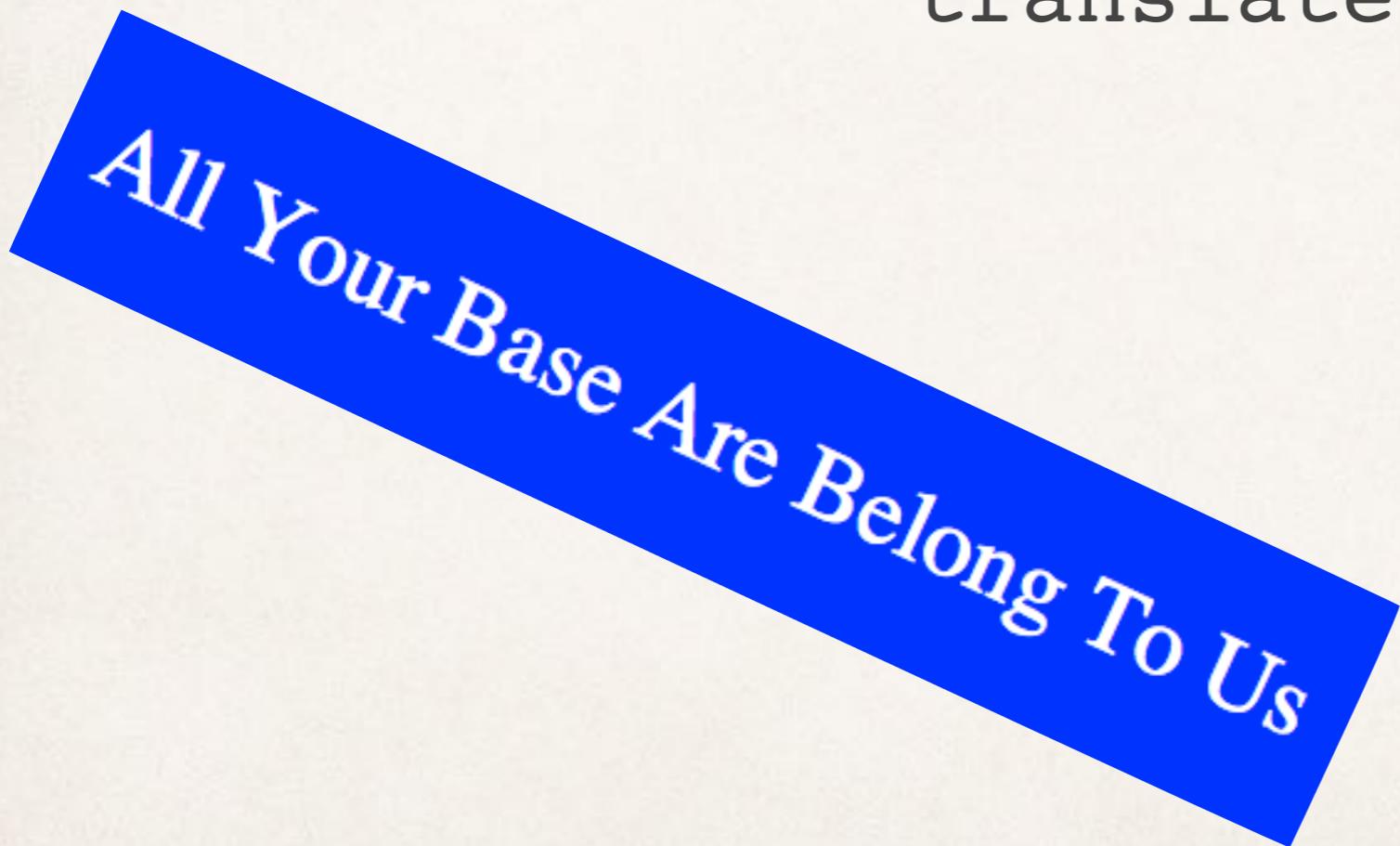
- ❖ Implement a yahoo style “top news” section
- ❖ Click next to animate to the next image
- ❖ Click prev to animate to the previous image
- ❖ Hint: 3 divs inside a container, and animate position



# CSS Transformations

---

```
-webkit-transform:  
    rotate(25deg)  
    translate(80px, 150px);
```



# CSS Transformations

---

- ❖ Available Transformations:
  - ❖ translate
  - ❖ scale
  - ❖ rotate
  - ❖ skew

# Keyframe Animations

---

- ❖ Use keyframe animations when:
  - ❖ Need more control
  - ❖ Repeated Animations

# Keyframe Animations

---

- Define An Animation With:

```
@-webkit-keyframes rounder {  
    0%   { border-radius: 0; }  
    100% { border-radius: 100px; }  
}
```

# Keyframe Animations

---

- Apply it to an element

```
div {  
    width: 200px;  
    height: 200px;  
    background: blue;  
    -webkit-animation: rounder 2s infinite;  
}
```

# Keyframes Lab

---

- ❖ Write a spinner keyframe animation



# Q & A

---



# Thanks For Listening

---

- ✿ Read more: [www.tocode.co.il](http://www.tocode.co.il)
- ✿ Talk to me: [ynon@tocode.co.il](mailto:ynon@tocode.co.il)
- ✿ Photos from: <http://123rf.com>
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