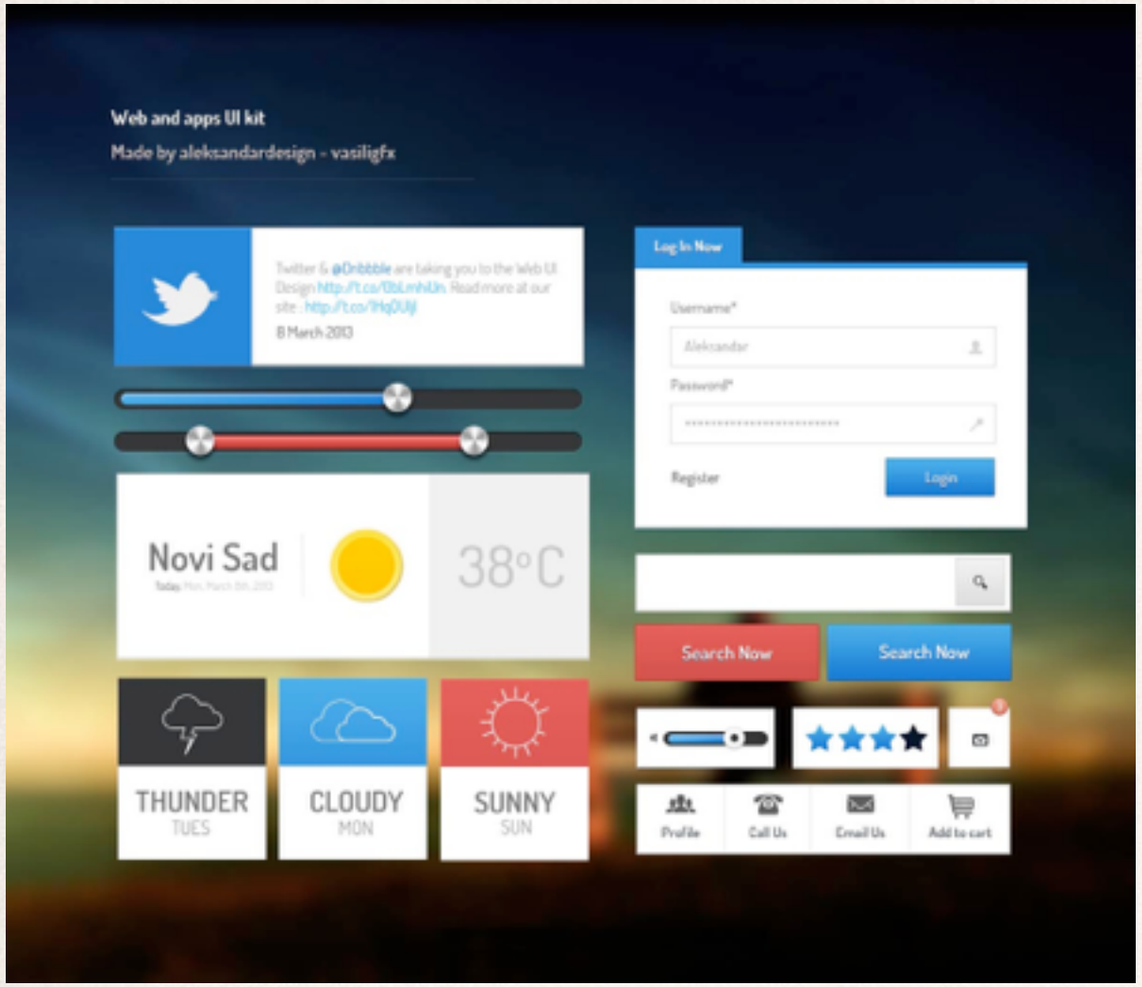
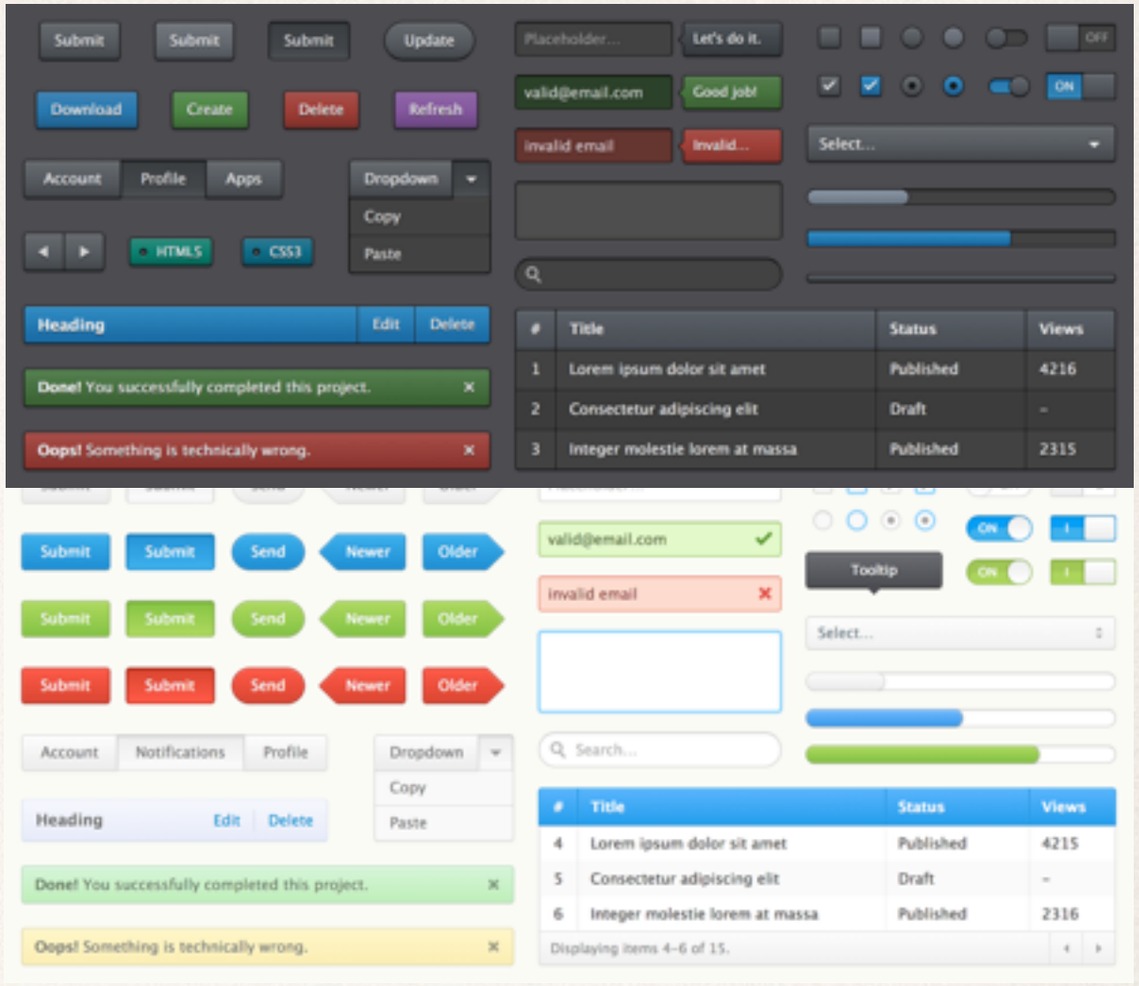




CSS Master Workshop

How to get the best from CSS3 and HTML5

Ynon Perek. ynon@ynonperek.com

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

Agenda

CSS: past, present and future 2

Using CSS for page layouts 36

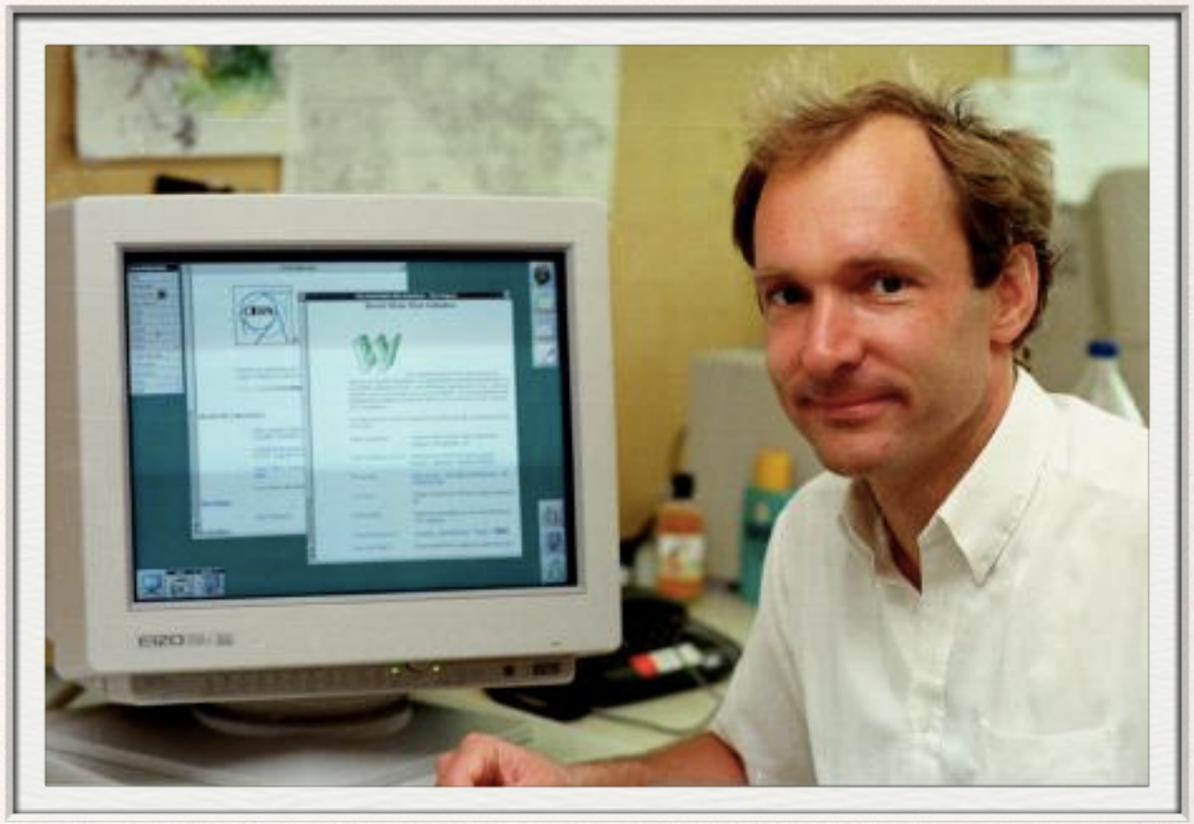
CSS selectors 83

Implementing components with CSS 123

CSS: Past

When The Web Was Young

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



CSS Changed Your Life

```
<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

```
<div class="sidebar">
  <img src="rrose.gif" alt="rose" />
</div>

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

CSS Complexities

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

90s

CNN Interactive
PATHFINDER
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 Unabomb suspect Ted Kaczynski arrested
Poll
Quiz
The top 10 stories according to our users
T I M E: The Best of 1996
T I M E: Man of the Year
Under the Big Top The Year in Review 1996 TIME
ig story BIG?
More 1996 Year in Review
Year in review main page
US News / World News / Health / Sci-Tech / 1996 On the Internet
Sports / Business / People & Showbiz / Time Capsule
Talk of '96 / Prisoner / Obituaries / '97 Preview
CNN.com Home
Pathfinder.com
GAMES

sjkeeves.com - official affiliate of Ask Jeeves, Inc.
rought to you by Host99.com and the EZ Crawler Network
Ask Jeeves
Answering MILLIONS of Your QUESTIONS!
Ask Me : Where can I find special youth rates on airfare?
Don't forget to bookmark this site!! Hit CTRL+D
Type a question and click "Ask!"
What is a healthy diet?
Ask.com
FREE CHATROOMS
FREE SOFTWARE
POKEMON
FREE GAMES
REALTIME STOCK QUOTES
FREE INTERNET ACCESS
YELLOW PAGES
SONG LYRICS
FREE PERSONALS
FIND PEOPLE
JOB SEARCH
MORTGAGES
eed information on a car now? 4autoquotes.com has it! - 4autoquotes.com
ffers access to instant auto insurance rates, new & used car pricing, leases,
loans from top companies. How much can you save?
SK JEEVES, ASK.COM and the JEEVES DESIGN are service marks of Ask Jeeves, Inc.
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Early 2000s

Myspace 2003

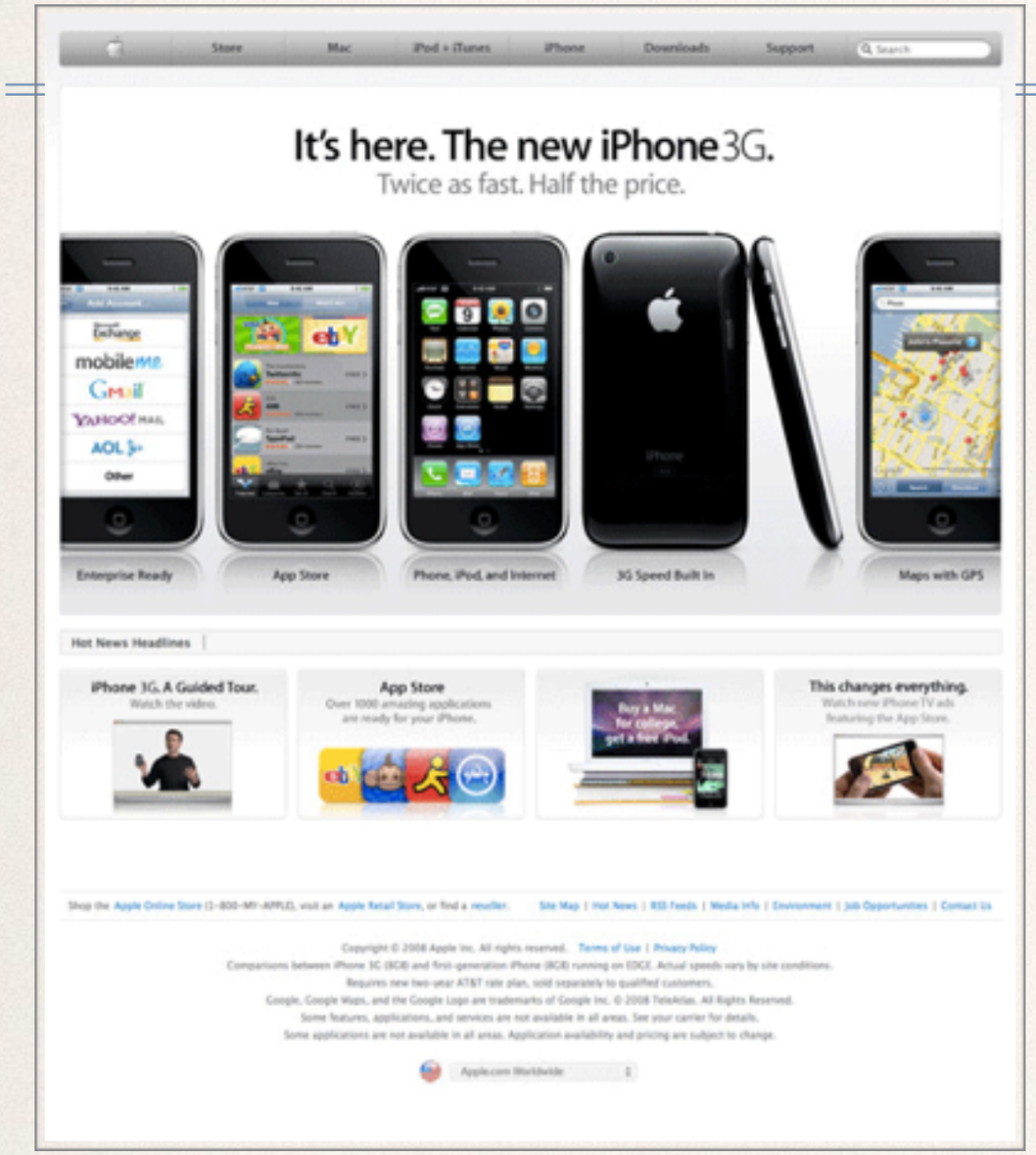
Facebook 2004

Youtube, 2005

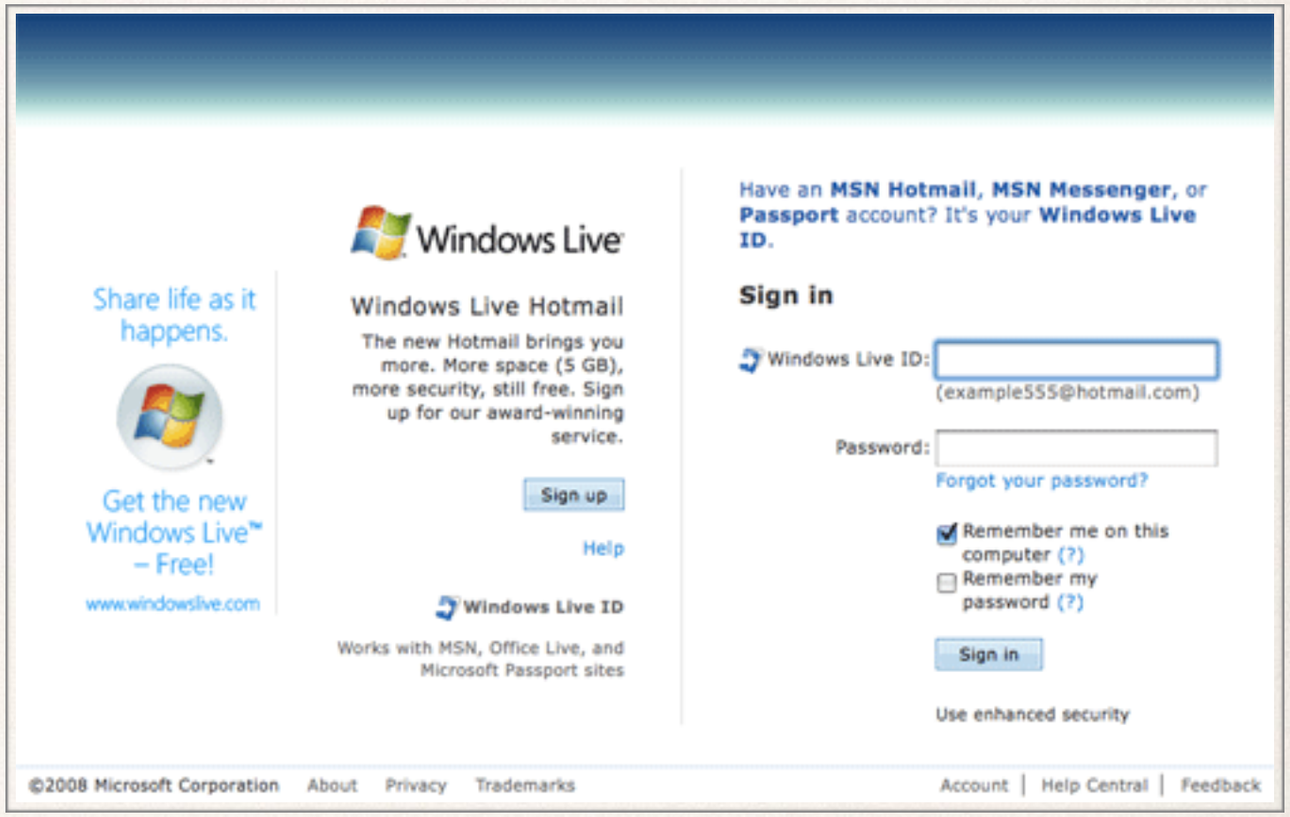
CSS Timeline

- (1996) CSS 1.0
- (1997) CSS 2.0
- Working on CSS 2.1 …
- (2011) CSS 2.1
- (Work In Progress) CSS3

Web, 2008 and on



Apple, 2008



Hotmail, 2008

CSS3 Concepts and Features

- 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

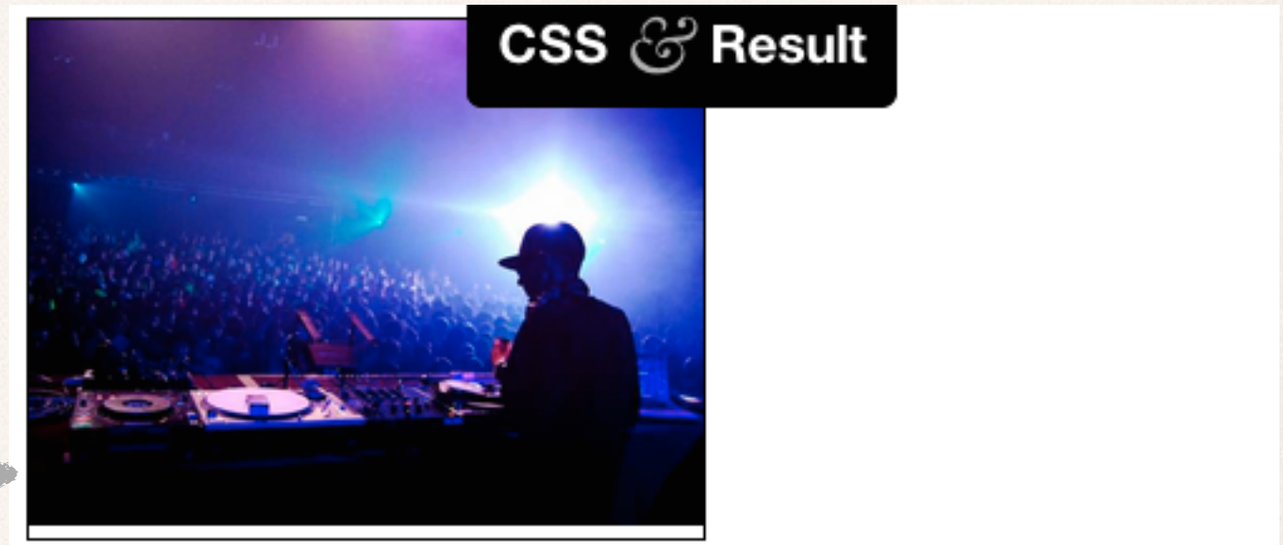
- Better separation of presentation and content using new selector spec
- Adapt to multiple screen sizes:
  - Media Queries
  - Less images, more code
- Design pages, not documents

Core CSS Mischiefs

- 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

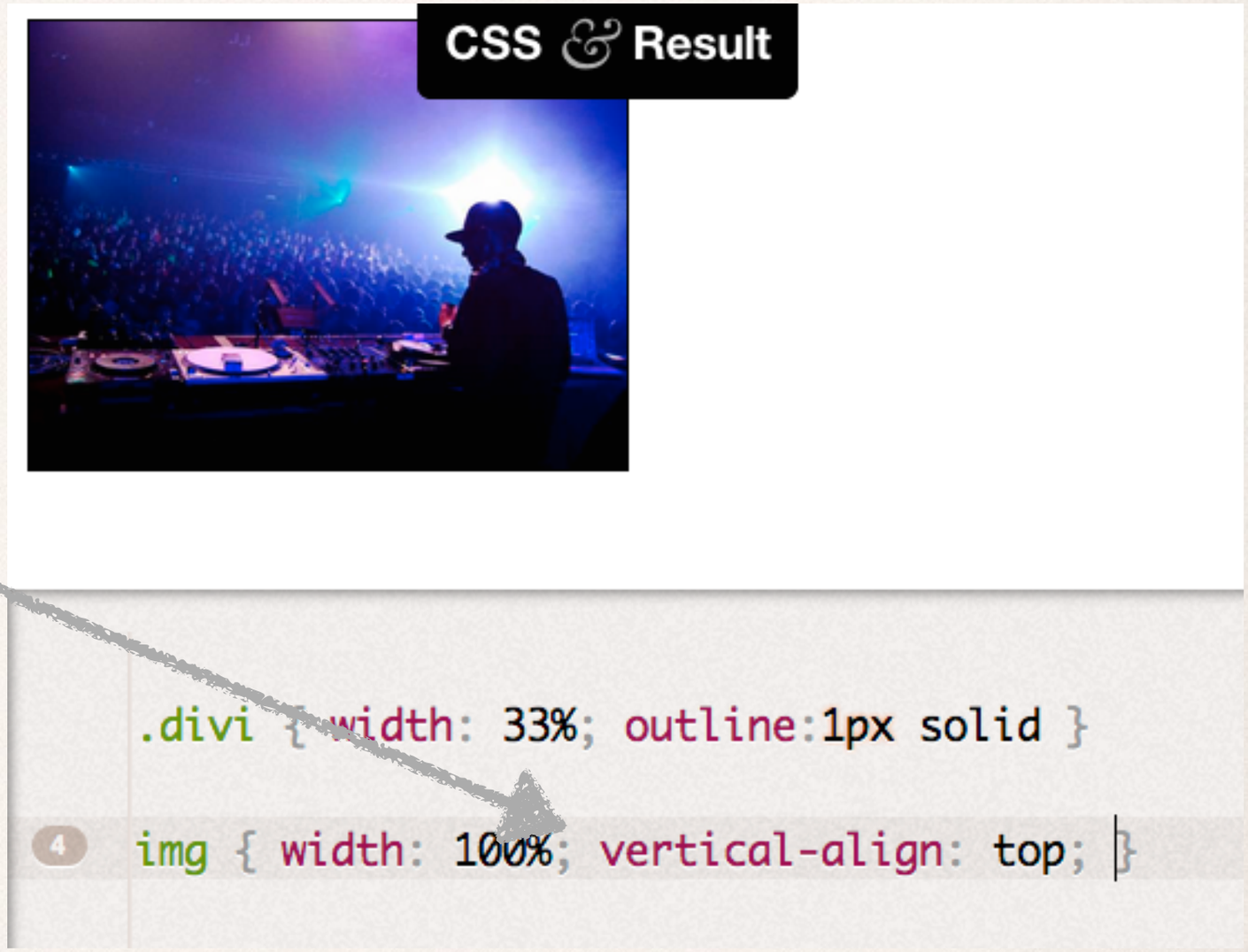
container is just a little too high




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

   img { width: 100%; }
```

Core CSS Mischiefs

until you set the
img vertical-align ???



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 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;
}
```

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 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 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;
  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

Change In Paradigms

http://dowebsitesneedtolookexactlythesameineverybrowser.com/

Developers write (much) more CSS

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

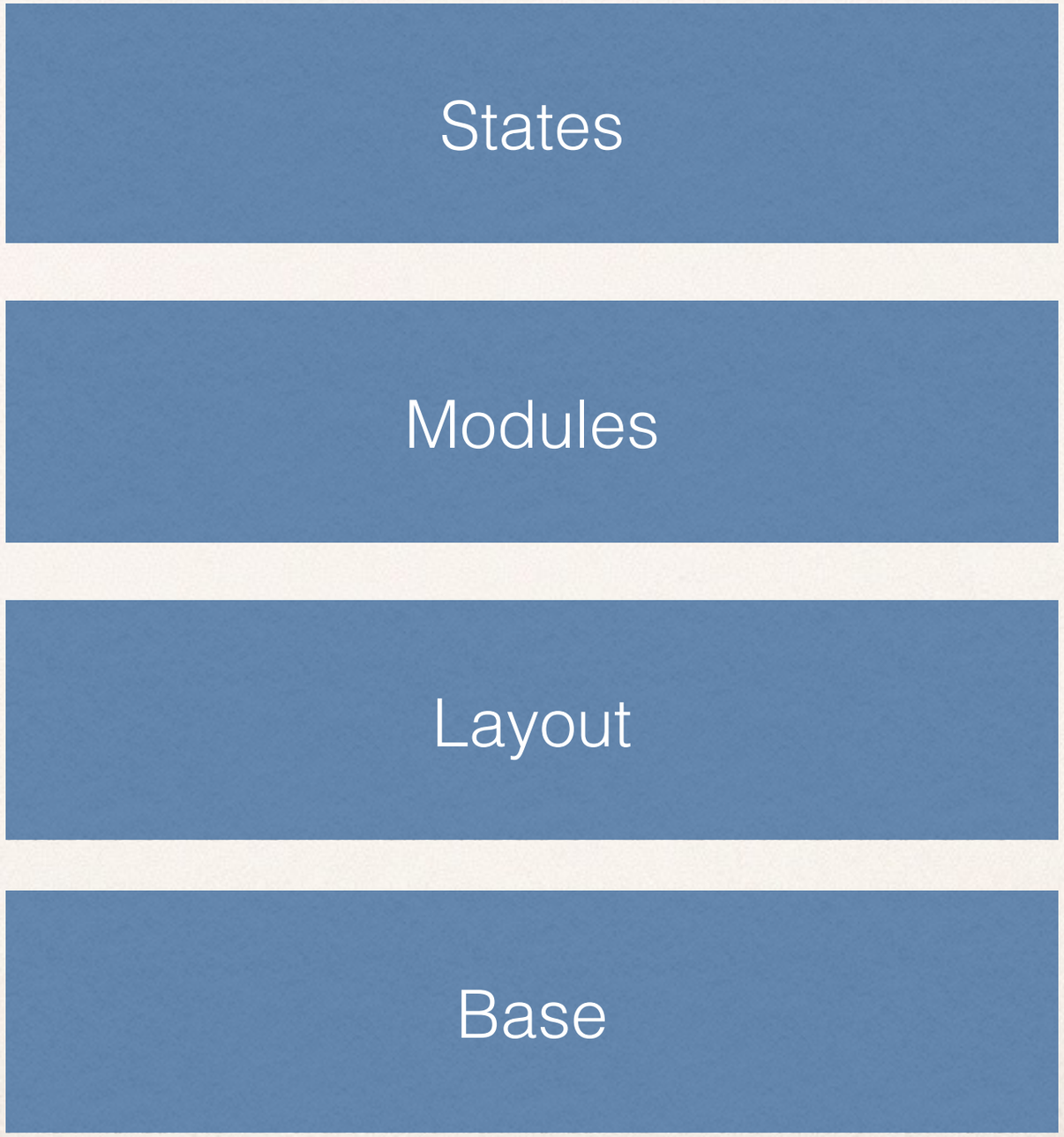
Make better use of device

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

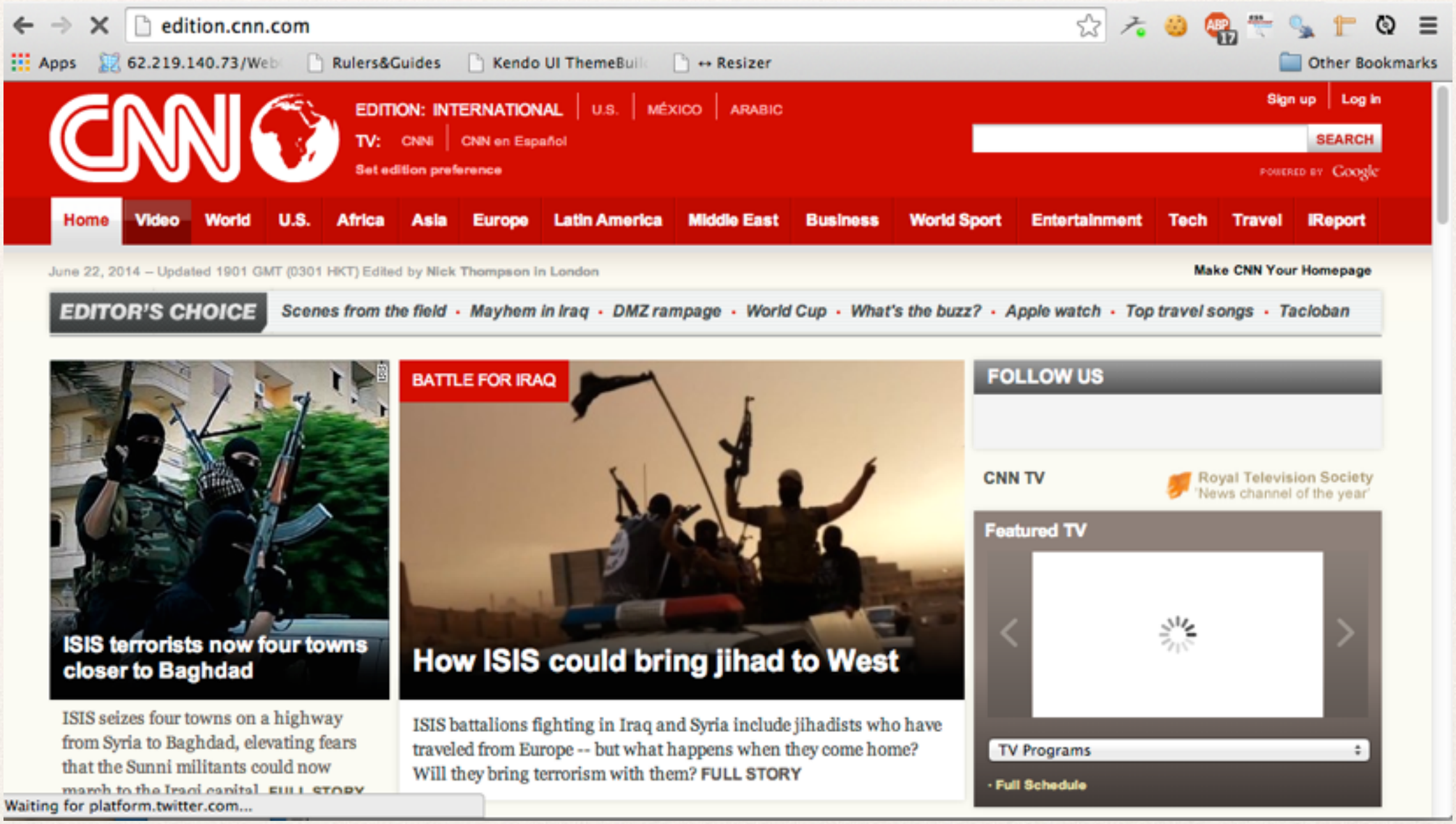
Modern Tooling

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

CSS Layers



CSS Layers

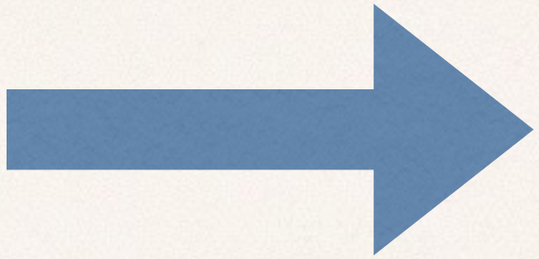

edition.cnn.com
Apps
62.219.140.73/Web
Rulers&Guides
Kendo UI ThemeBuil
Resizer
Other Bookmarks
CNN
EDITION: INTERNATIONAL
U.S.
MÉXICO
ARABIC
TV: CNNi
CNN en Español
Set edition preference
Sign up
Log in
SEARCH
POWERED BY Google
Home
Video
World
U.S.
Africa
Asia
Europe
Latin America
Middle East
Business
World Sport
Entertainment
Tech
Travel
iReport
June 22, 2014 – Updated 1901 GMT (0301 HKT) Edited by Nick Thompson in London
Make CNN Your Homepage
EDITOR'S CHOICE
Scenes from the field · Mayhem in Iraq · DMZ rampage · World Cup · What's the buzz? · Apple watch · Top travel songs · Tacloban
ISIS terrorists now four towns closer to Baghdad
ISIS seizes four towns on a highway from Syria to Baghdad, elevating fears that the Sunni militants could now
BATTLE FOR IRAQ
How ISIS could bring jihad to West
ISIS battalions fighting in Iraq and Syria include jihadists who have traveled from Europe -- but what happens when they come home? Will they bring terrorism with them? FULL STORY
FOLLOW US
CNN TV
Royal Television Society
'News channel of the year'
Featured TV
TV Programs
· Full Schedule
Waiting for platform.twitter.com...

CSS Layers

- 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 Precompilers

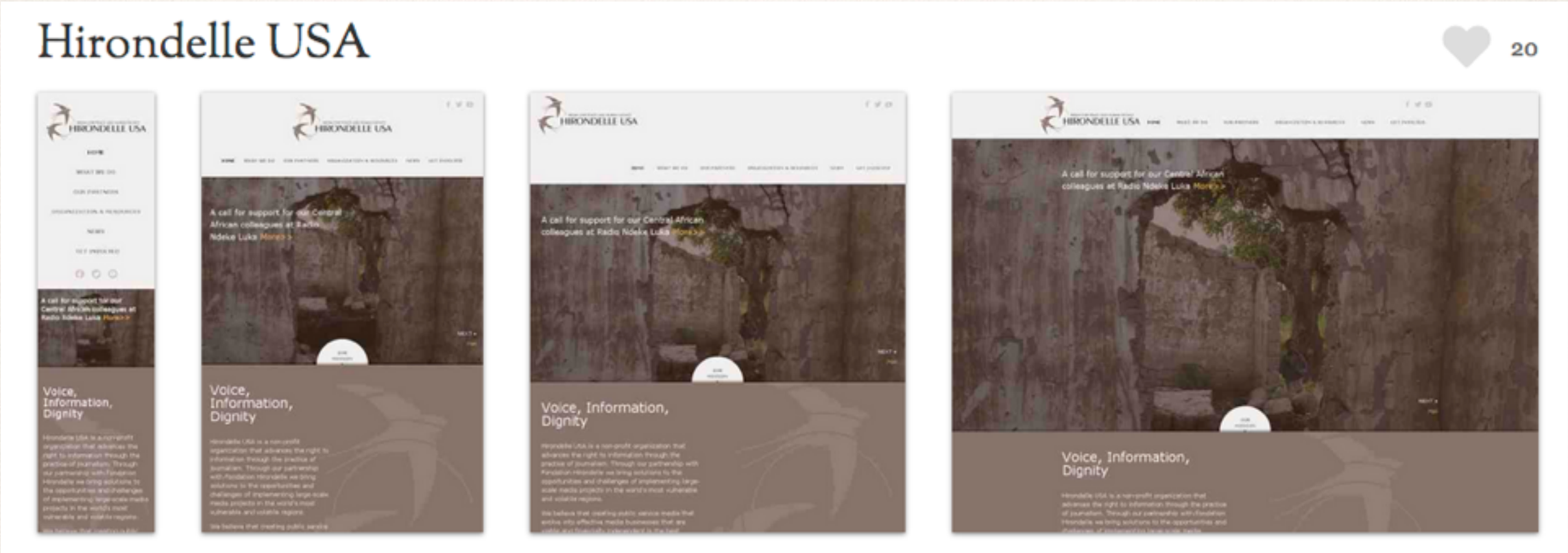
```
$blue: #1111FF;

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



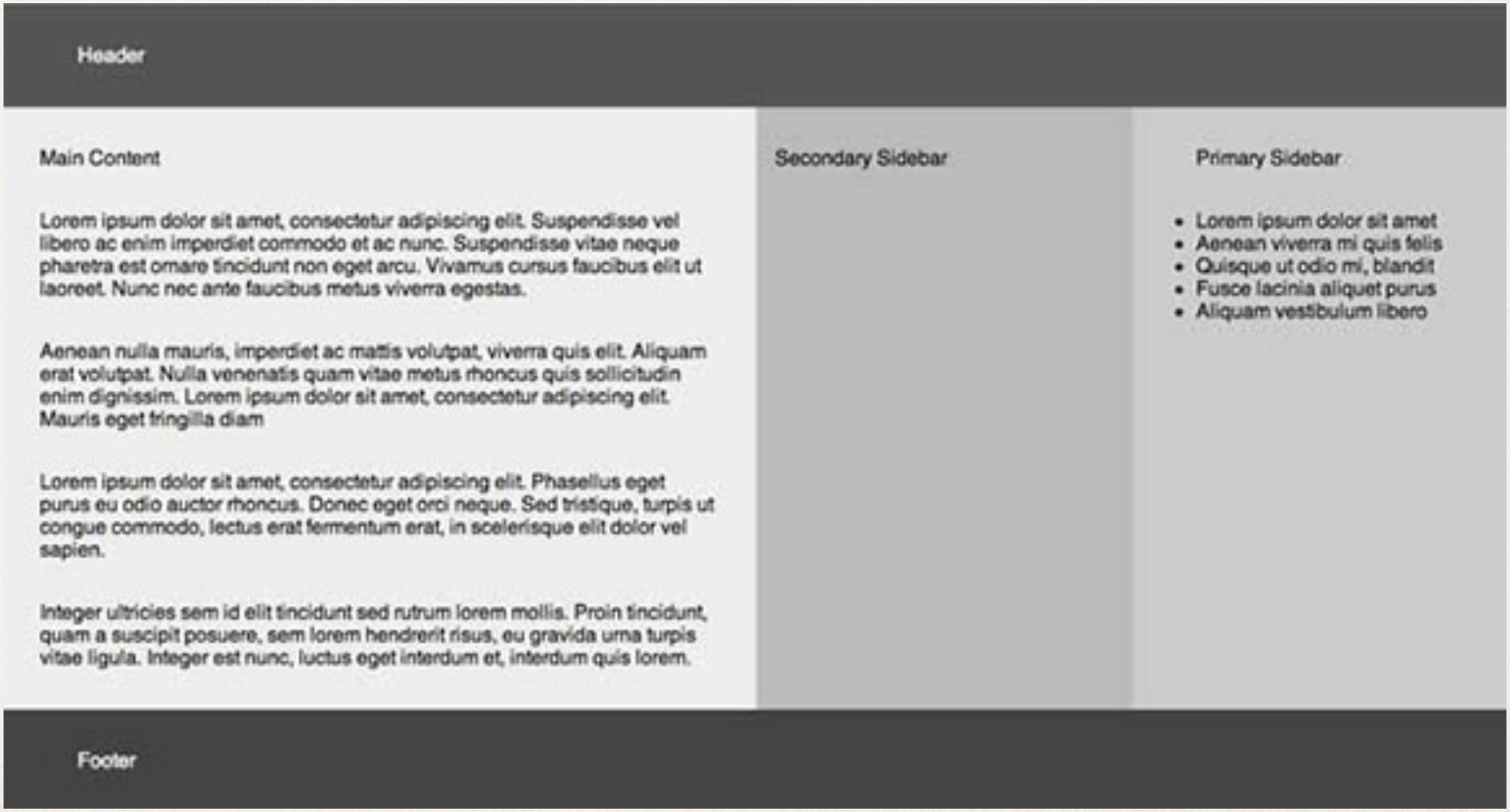
```
ul li {
  padding: 10px;
}
ul a {
  color: #1111ff;
}
ul a:hover {
  background: white;
}
```

CSS: Future

Responsive Web Design



CSS Layouts


Header
Main Content
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse vel libero ac enim imperdiet commodo et ac nunc. Suspendisse vitae neque pharetra est ornare tincidunt non eget arcu. Vivamus cursus faucibus elit ut laoreet. Nunc nec ante faucibus metus viverra egestas.
Aenean nulla mauris, imperdiet ac mattis volutpat, viverra quis elit. Aliquam erat volutpat. Nulla venenatis quam vitae metus rhoncus quis sollicitudin enim dignissim. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris eget fringilla diam
Lorem 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
Lorem ipsum dolor sit amet
Aenean viverra mi quis felis
Quisque ut odio mi, blandit
Fusce lacinia aliquet purus
Aliquam vestibulum libero
Footer

Web Components

```
<div class="content">
  <input type="text"
    value="bla"
    oninput="document.querySelector('qr-
code').data = this.value"
    autofocus
  />
  <br><br>
  <!-- Using Custom Elements -->
  <qr-code data="http://"></qr-code>
</div>
```

http://ynonperek.com

Q & A

Agenda

CSS: past, present and future 2

Using CSS for page layouts 36

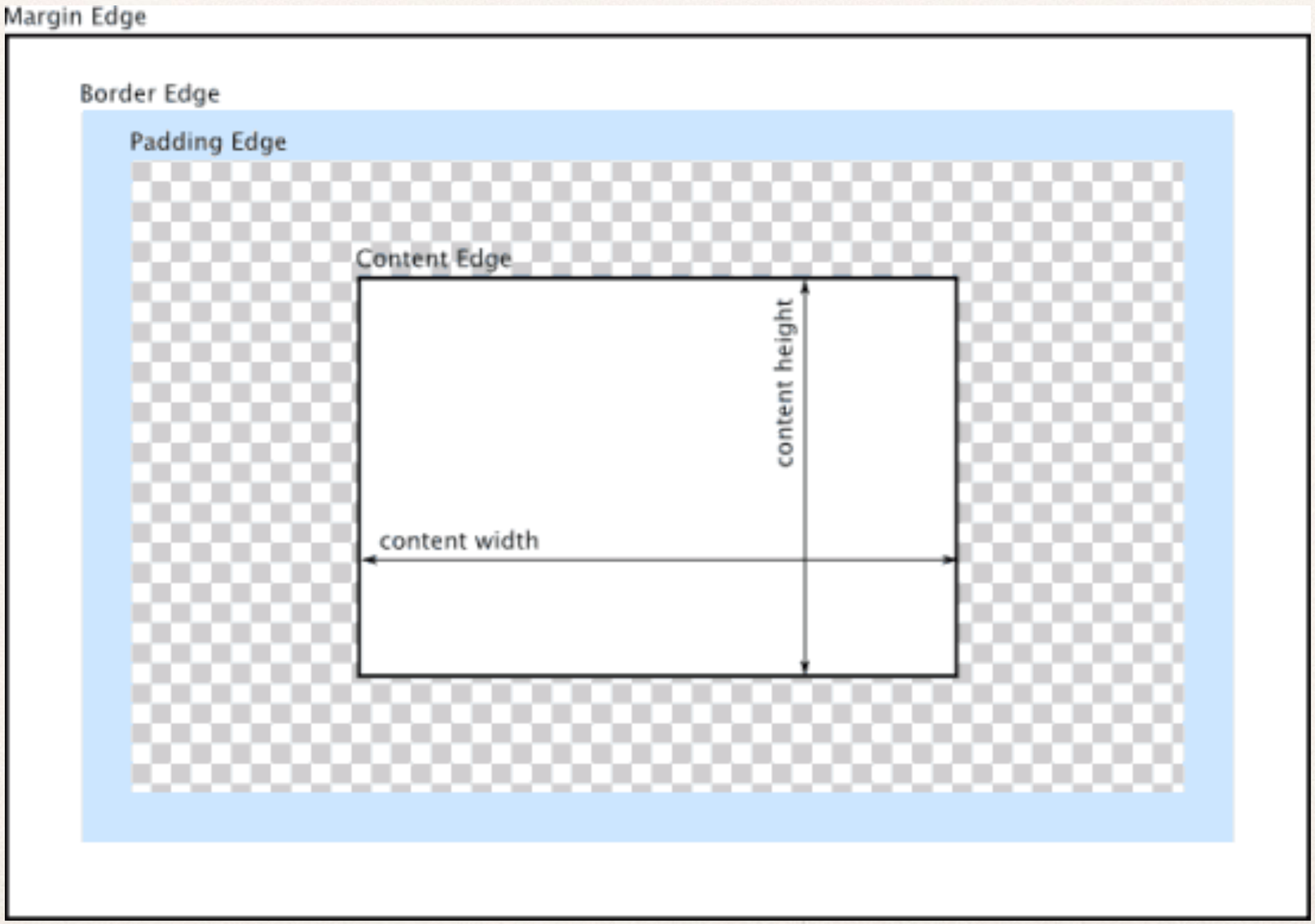
CSS selectors 83

Implementing components with CSS 123

Basic Page Layout

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

CSS Box Model

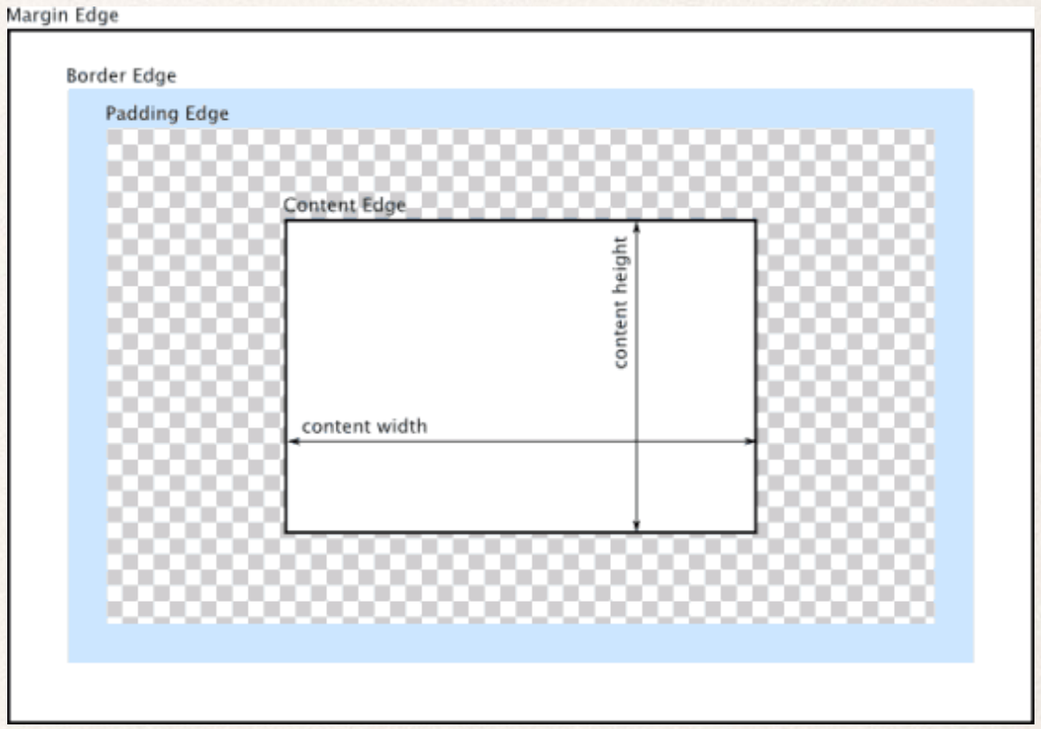


Content Size

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

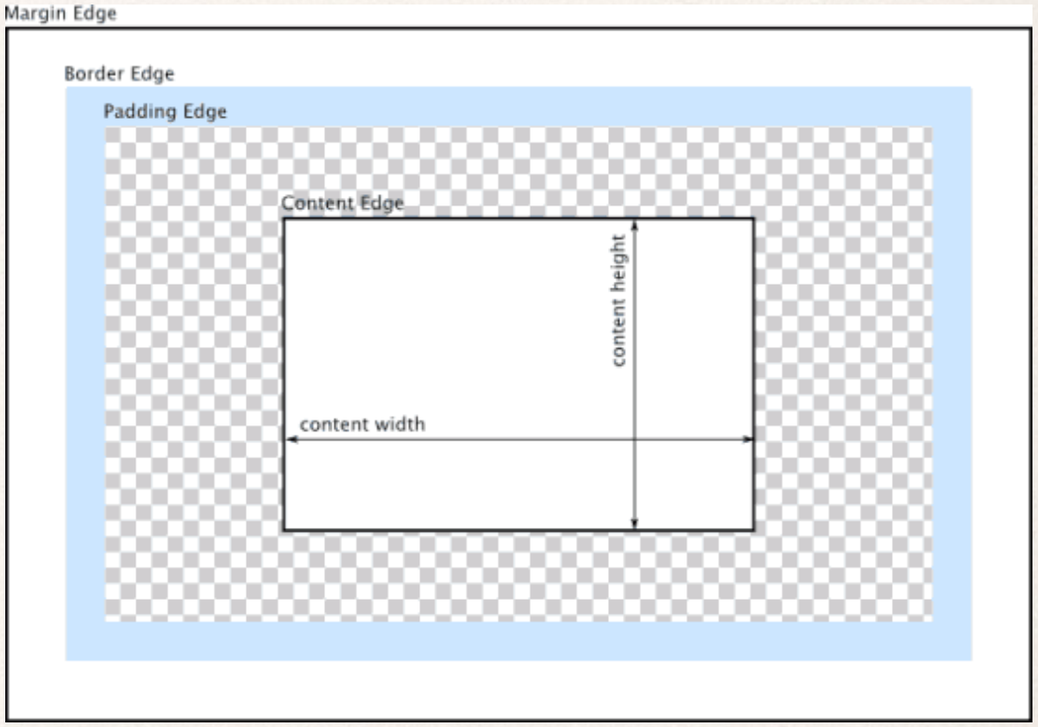
Padding Size

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



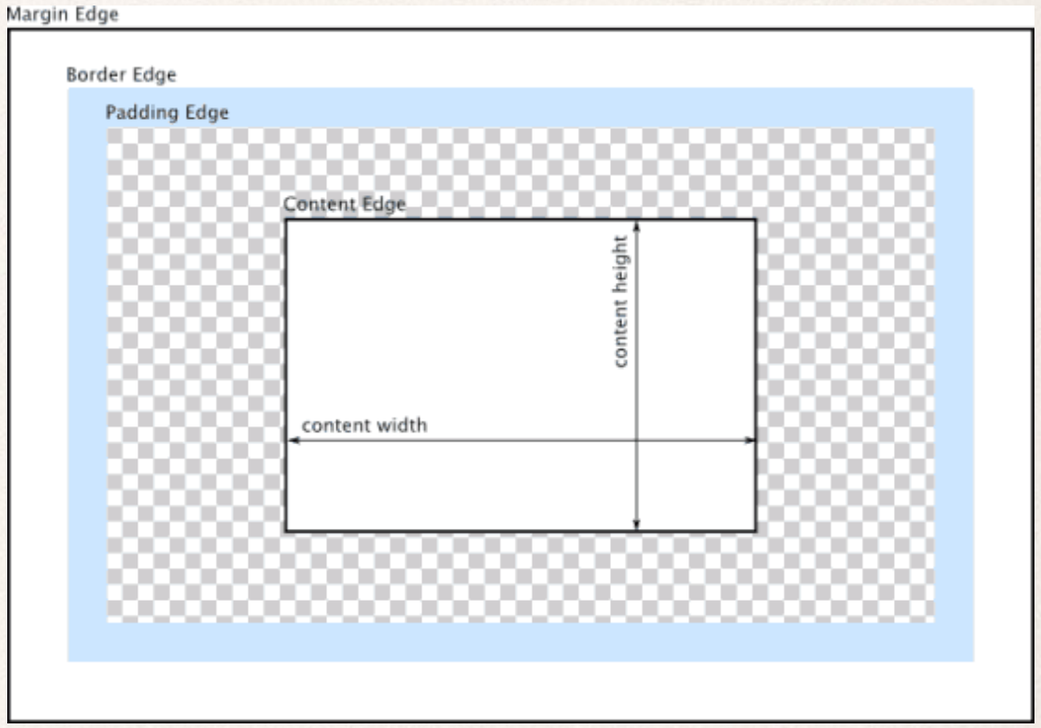
Border Size

- 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

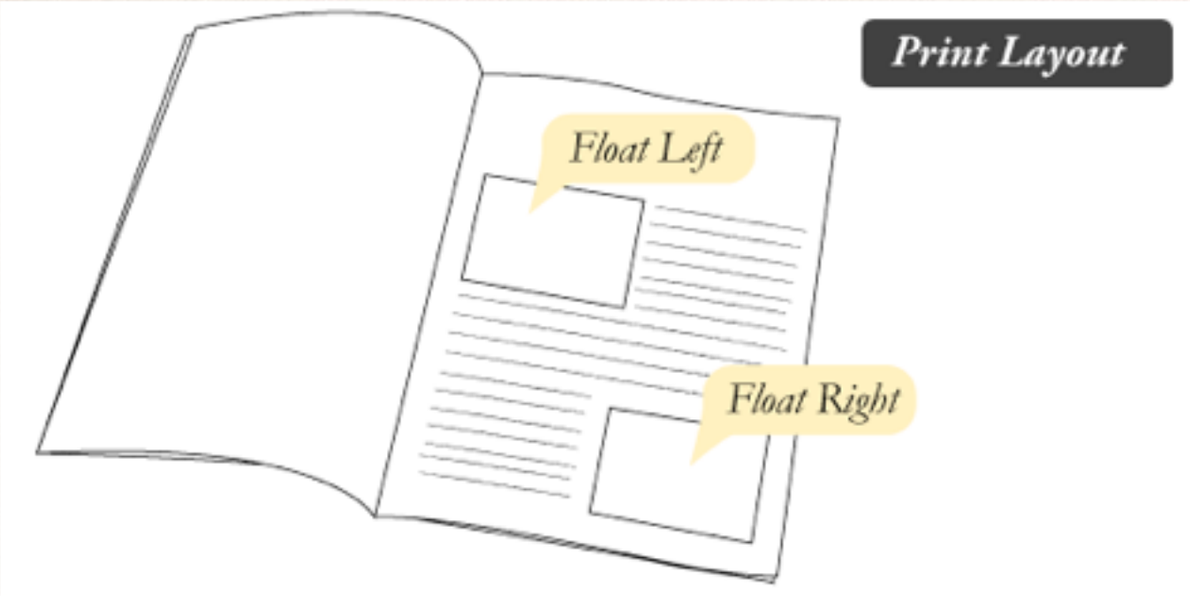
- Margin is the empty space around border
- No style
- Controlled with: `margin-top`, `margin-bottom`, `margin-left`, `margin-right` (or just `margin`)

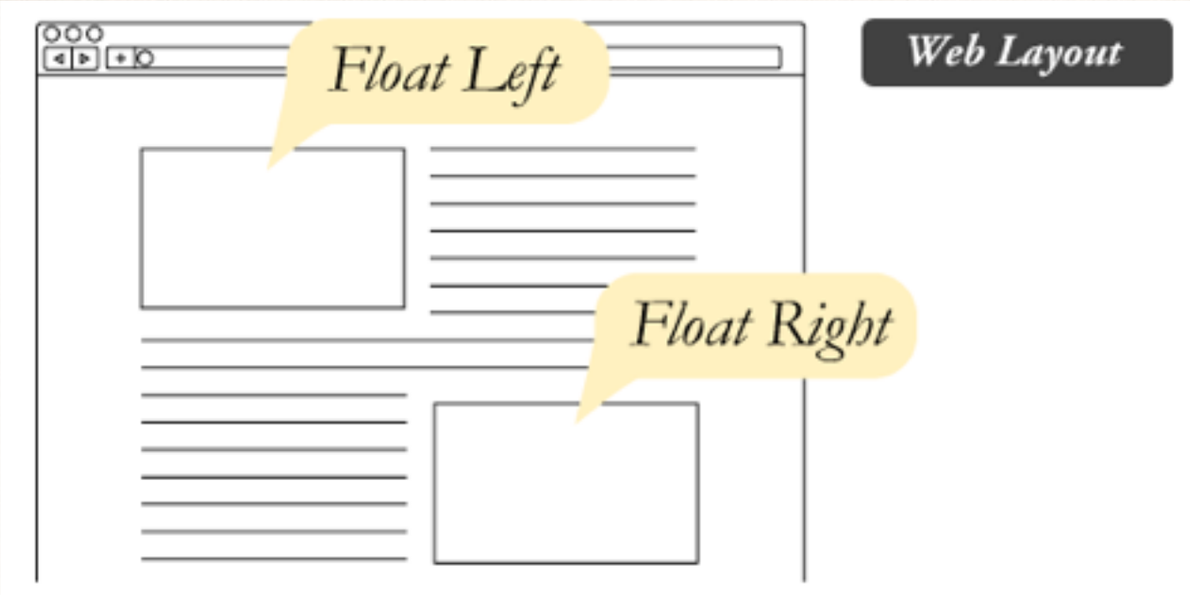


Box Model Caveats: Width

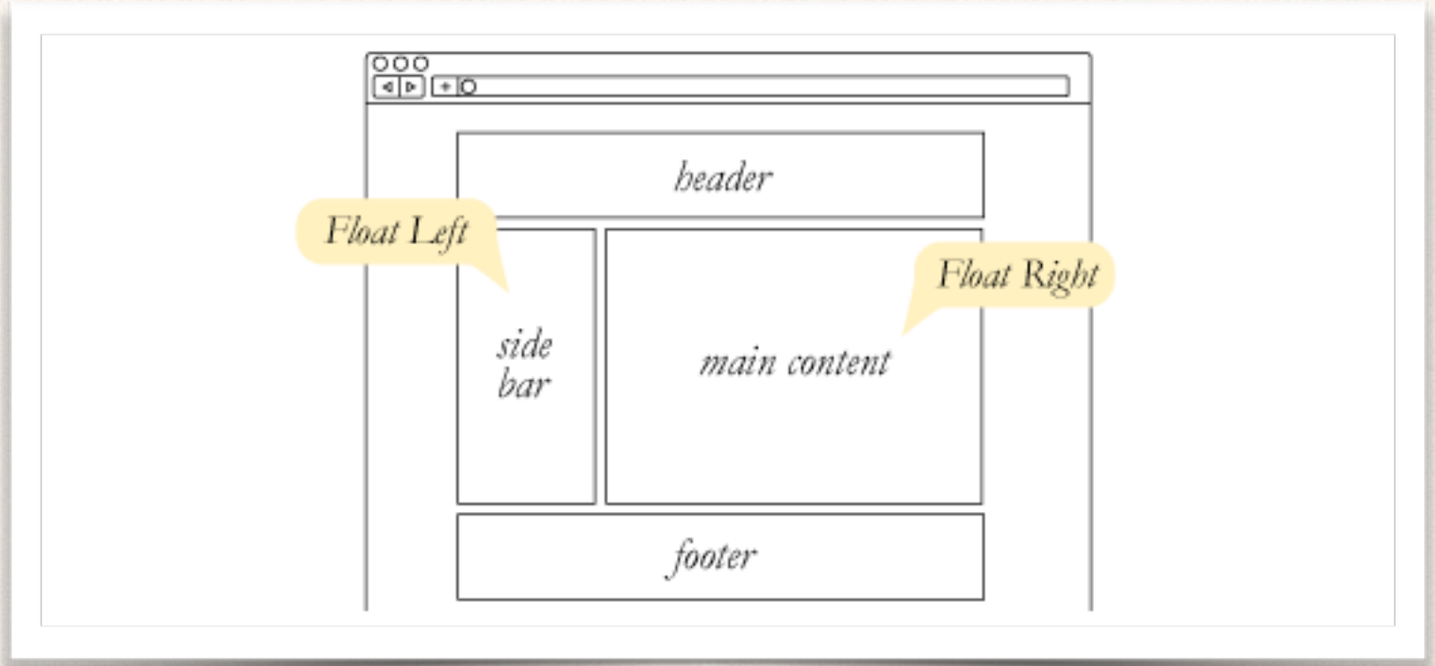
- `{ width: 100% }` means width of the container
- Not setting width means “whatever is left”
- Demo: http://jsbin.com/iyenom/1/edit

Box Model Caveats: Floats





Floats In Layouts



Why people use floats in layout ?

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

What Can Go Wrong

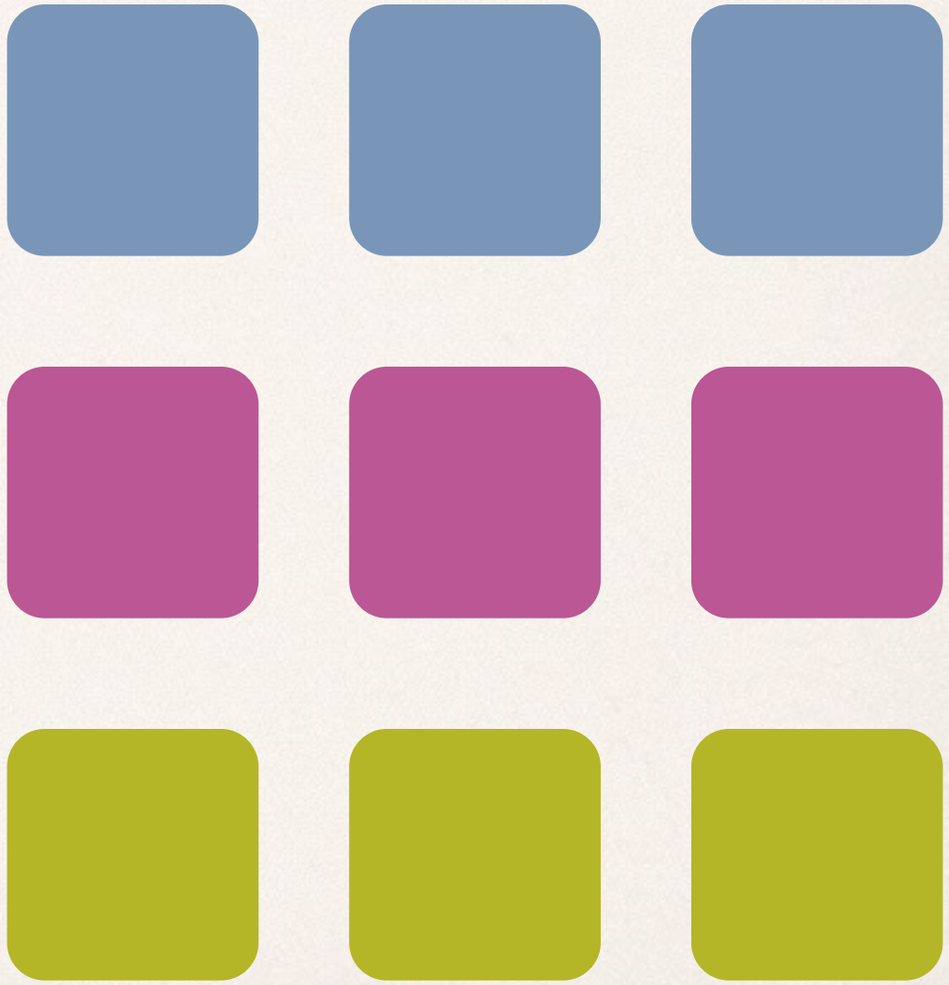
- Floats dimensions are not what you think
- They may need to be cleared
- Demo: **http://jsbin.com/iyenom/3/**

Floated Insights

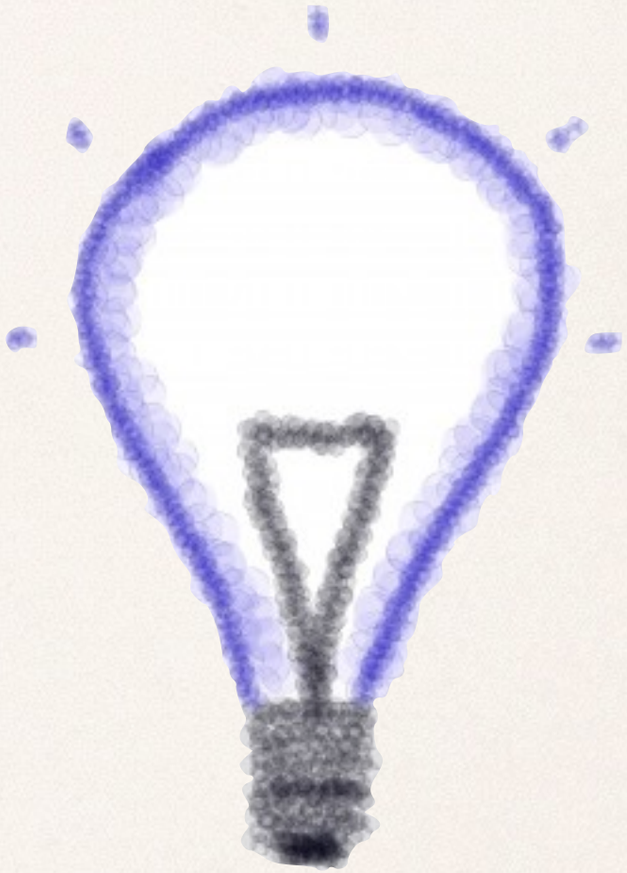
- Floats have no height
- Width is determined by content

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

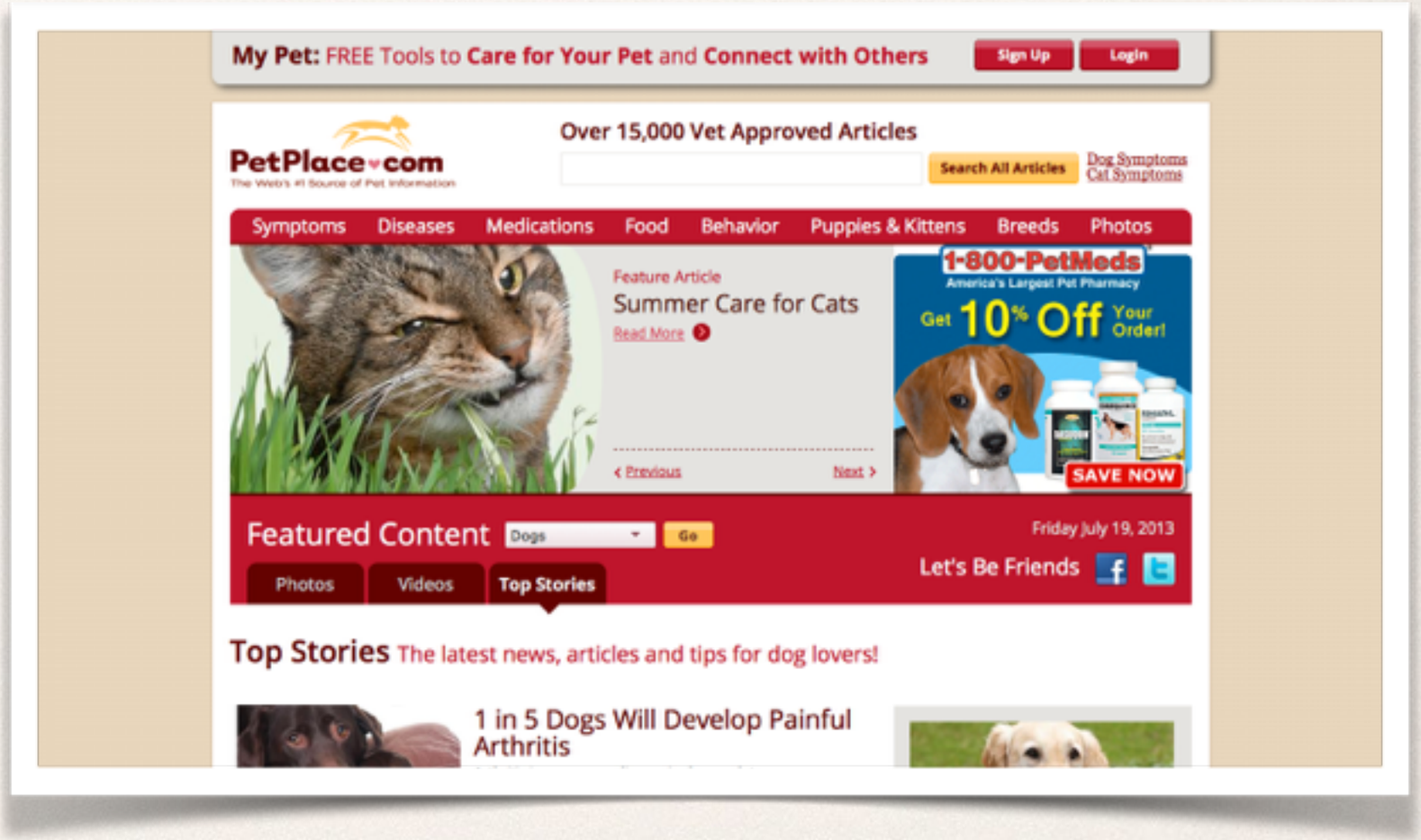


Page Layouts

- 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 HTML CSS JavaScript Console Output 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">

    <img id="dave" src="http://static.jsbin.com/images
/logo.png" alt="Dave, the JS Bin bot">

    <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
target="_blank" href="http://twitter.com
/js_bin">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: -0.03em;
  font-size: 2em;
}

a {
  border-bottom: 1px solid #fff;
  border-bottom: 1px solid rgba(255,255,255,0.7);
  padding-bottom: 0.15em;
```

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!

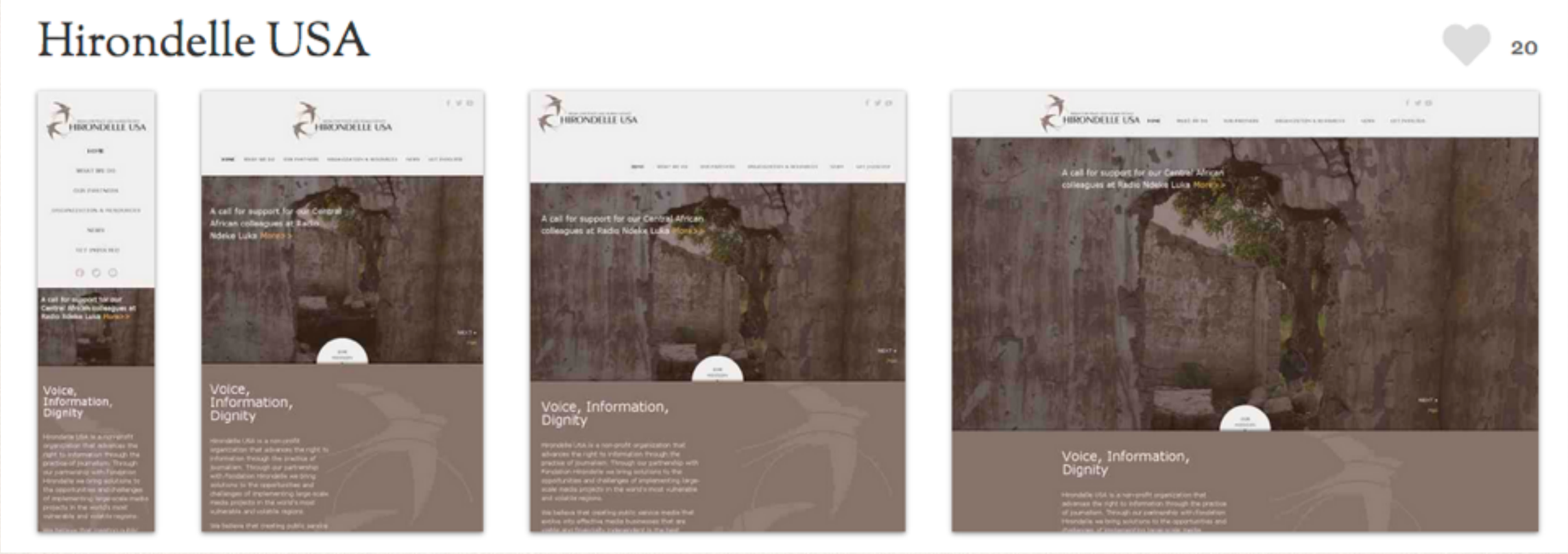
Oh, and please don't click on, I get rather dizzy...

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

How To Build Fluid Layout

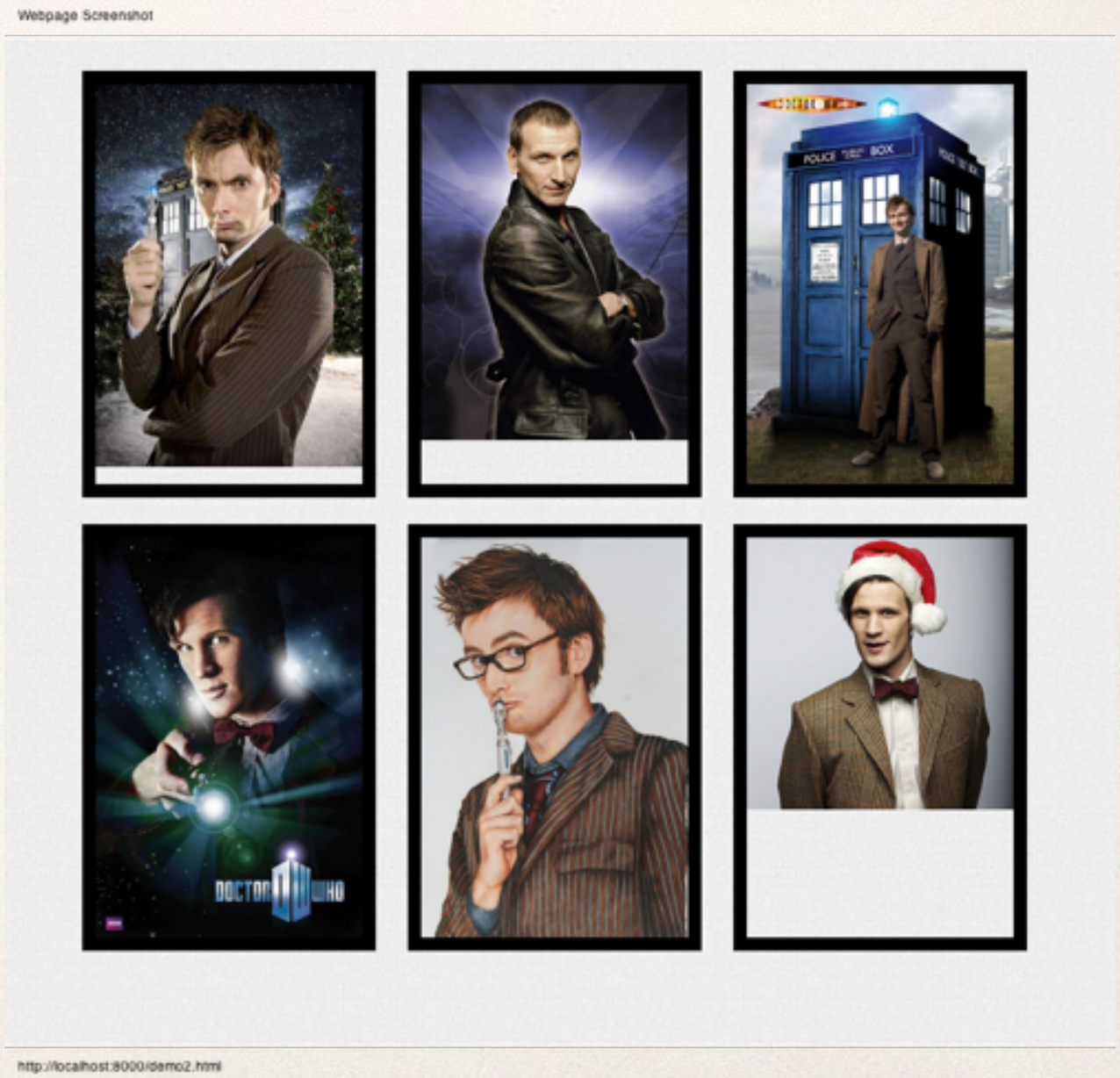
- Use relative units (percents)
- Test often (they break easily)
- Don’t use when size varies drastically
- Easy way: Use a framework

Responsive Layout

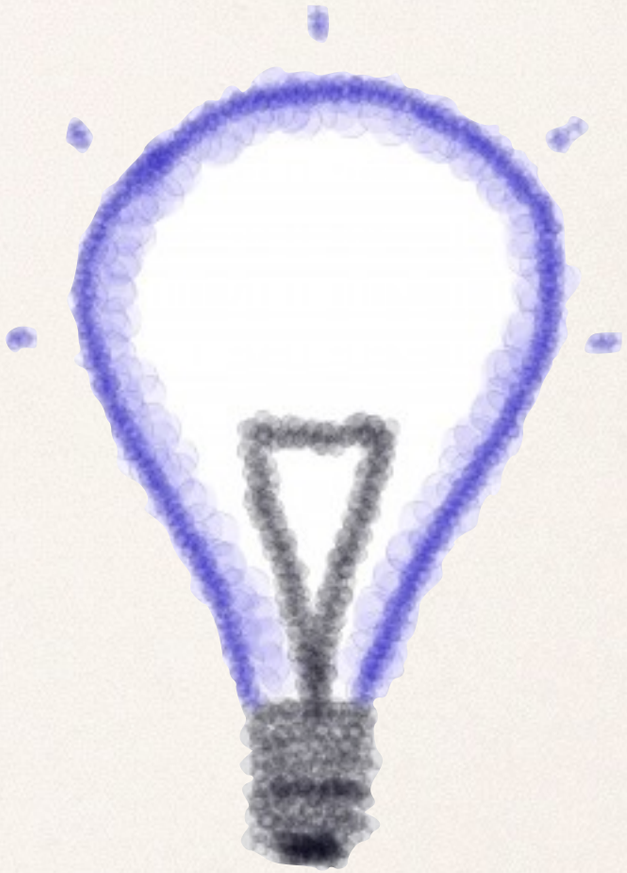


Layout Lab

- Fill in the CSS to create the grid on the right
- HTML at: https://gist.github.com/4286294



Q & A



CSS Units

Percents, ems, pixels, rems, pts, ...

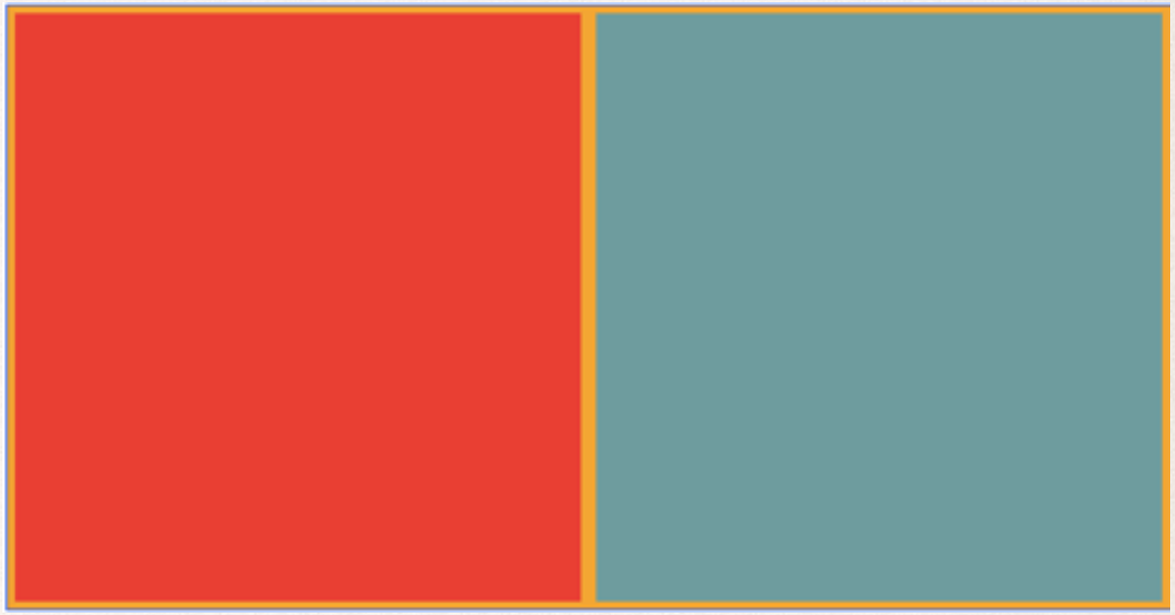
First there were pixels

- 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



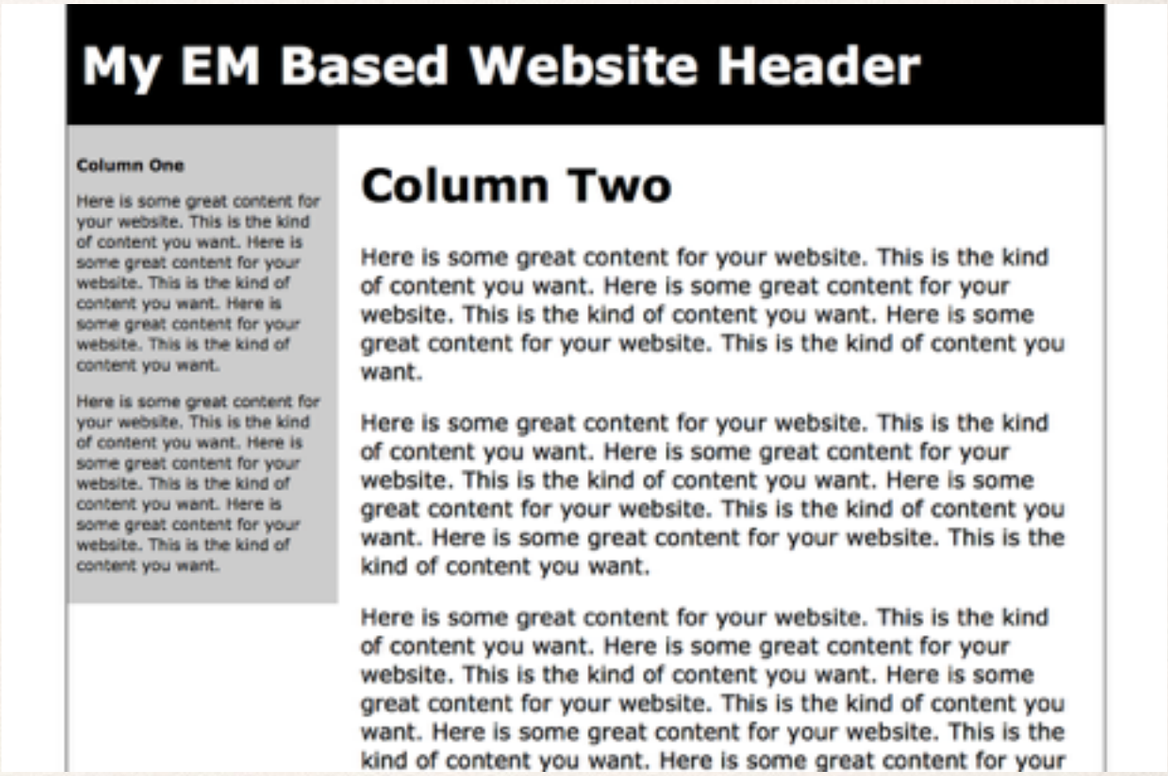
And then everything changed

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



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

*Usage stats:	Global
Support:	84.33%

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

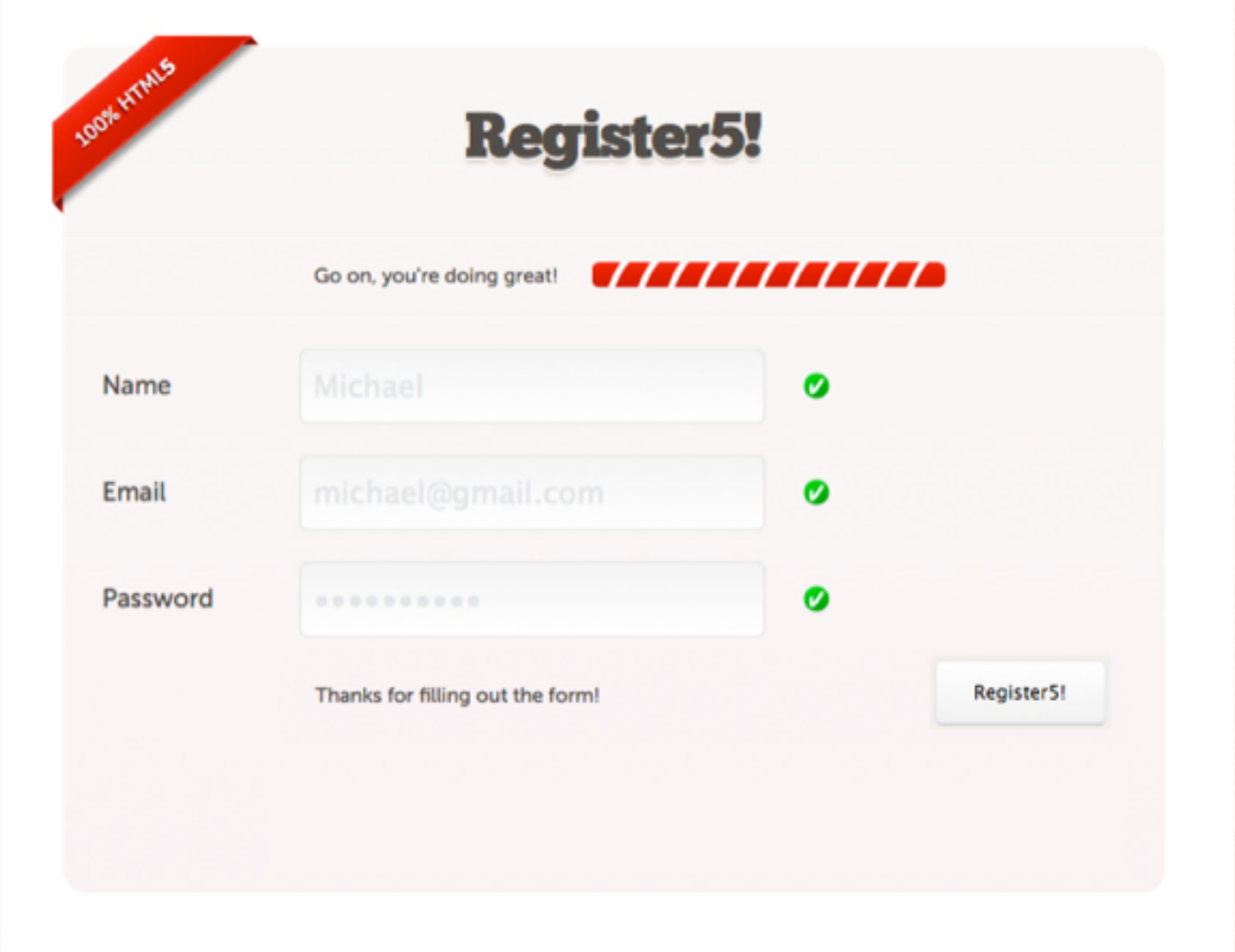
No notes

Rems to the rescue

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

Lab

- Write the HTML and CSS for the following form
- Don’t bother with design - just the layout



But what about fluids ?

- Using % for page layouts is cumbersome
- They don’t play well with borders
- Flexbox to the rescue

Flexbox browser support

Flexible Box Layout Module - Candidate Recommendation

Method of positioning elements in horizontal or vertical stacks.

*Usage stats:	Global
Support:	35.02%
Partial support:	43.78%
Total:	78.8%

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

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

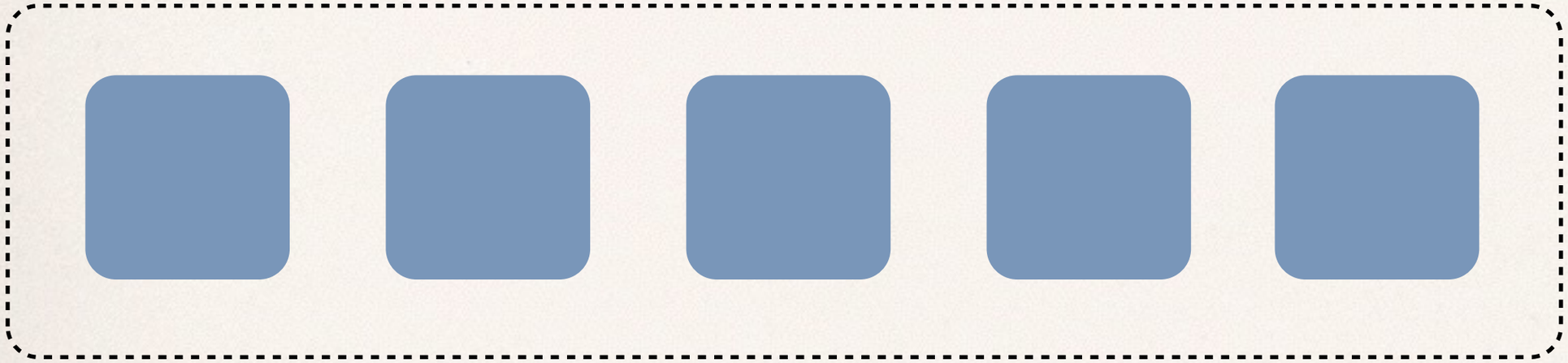
Edit on GitHub

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.

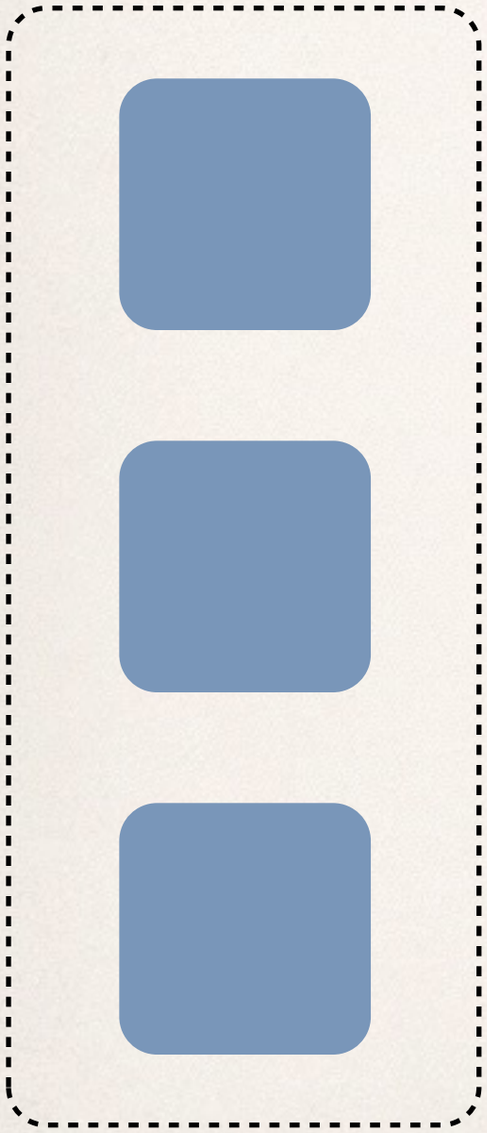
Flexbox to the rescue

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

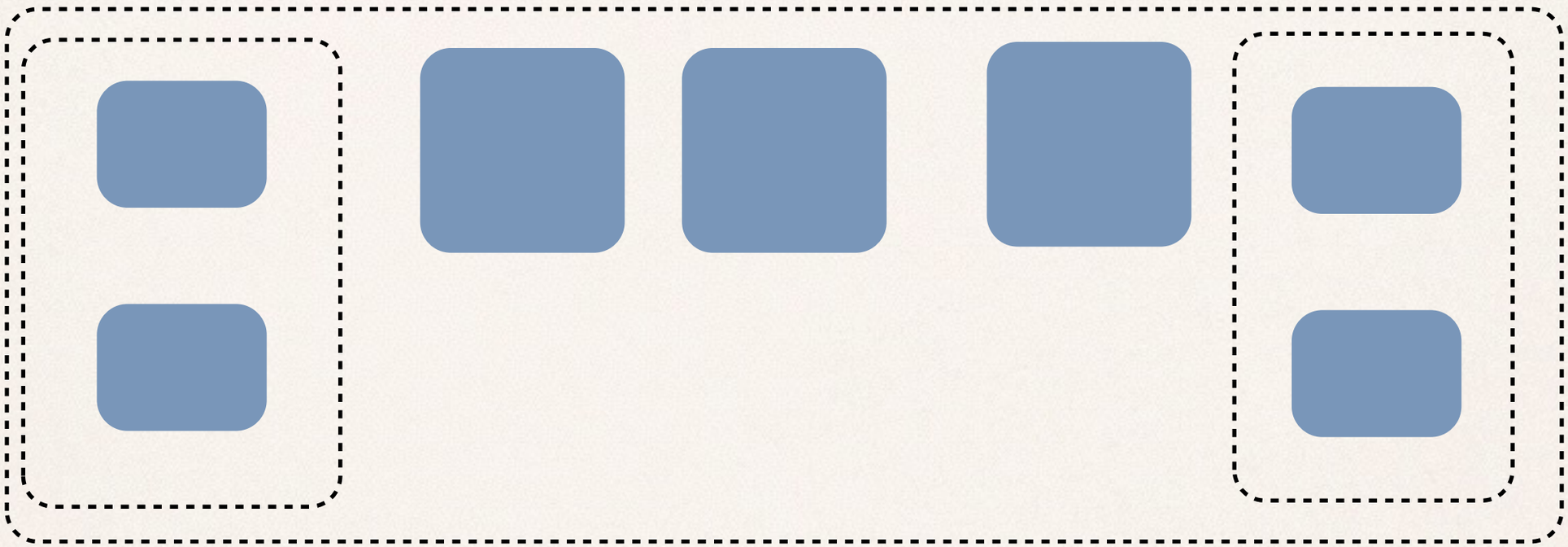
Horizontal flexbox



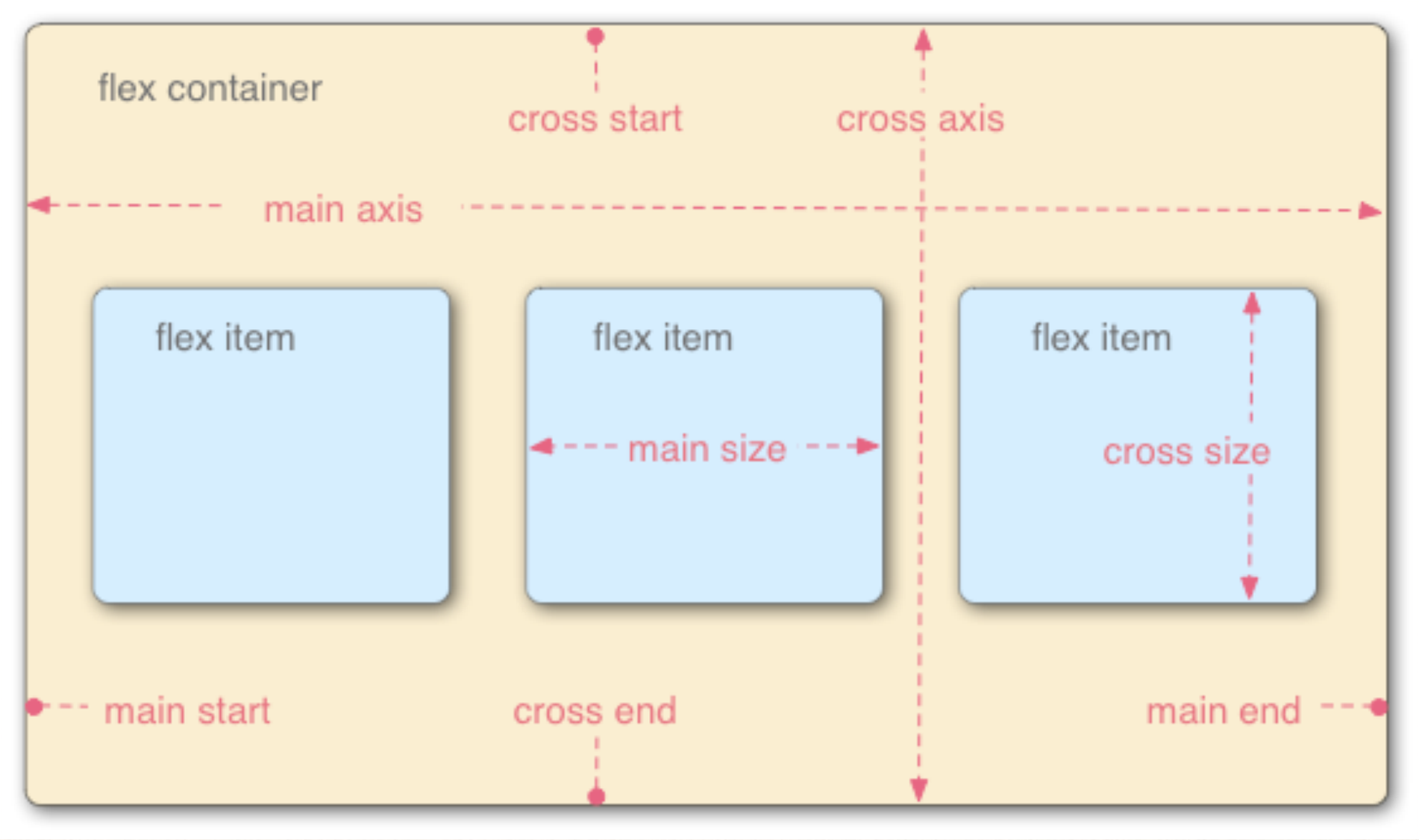
Vertical flexbox



Combined Flexbox



Flexbox concepts



Hello Flexbox

- Demo: Using flexbox to create columns

a left column text is just some text that is displayed on the left column. You can read it by looking left

a left column text is just some text that is displayed on the left column. You can read it by looking left

a left column text is just some text that is displayed on the left column. You can read it by looking left a left column text is just some text that is displayed on the left column. You can read it by looking left a left column text is just some text that is displayed on the left column. You can read it by looking left a left column text is just some text that is displayed on the left column. You can read it by looking left

Flex Props

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

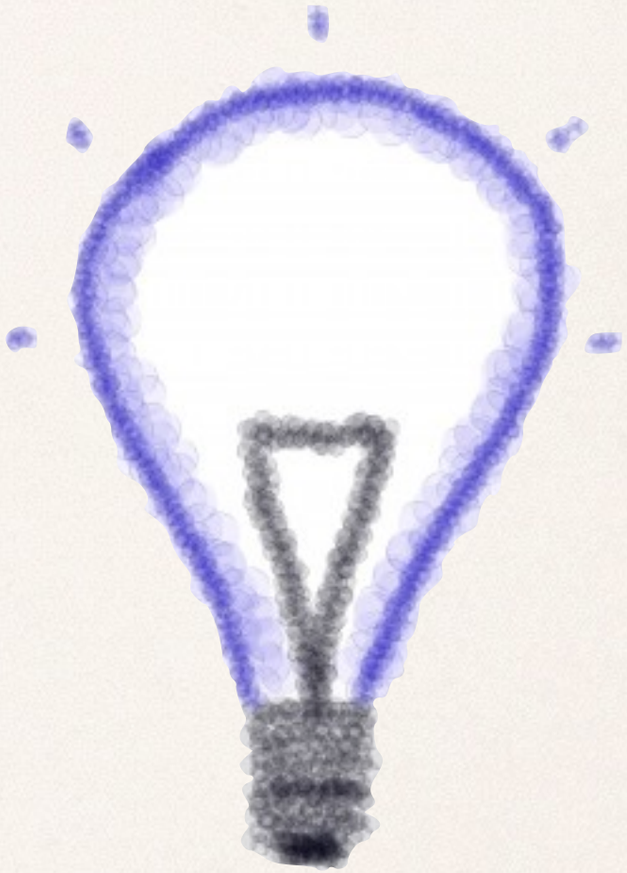
Vertical Flexboxes

- Not as useful since it’s the same as no-flex
- Used to quickly change from horizontal to vertical (think mobile)
- Demo

Other Flex Advantages

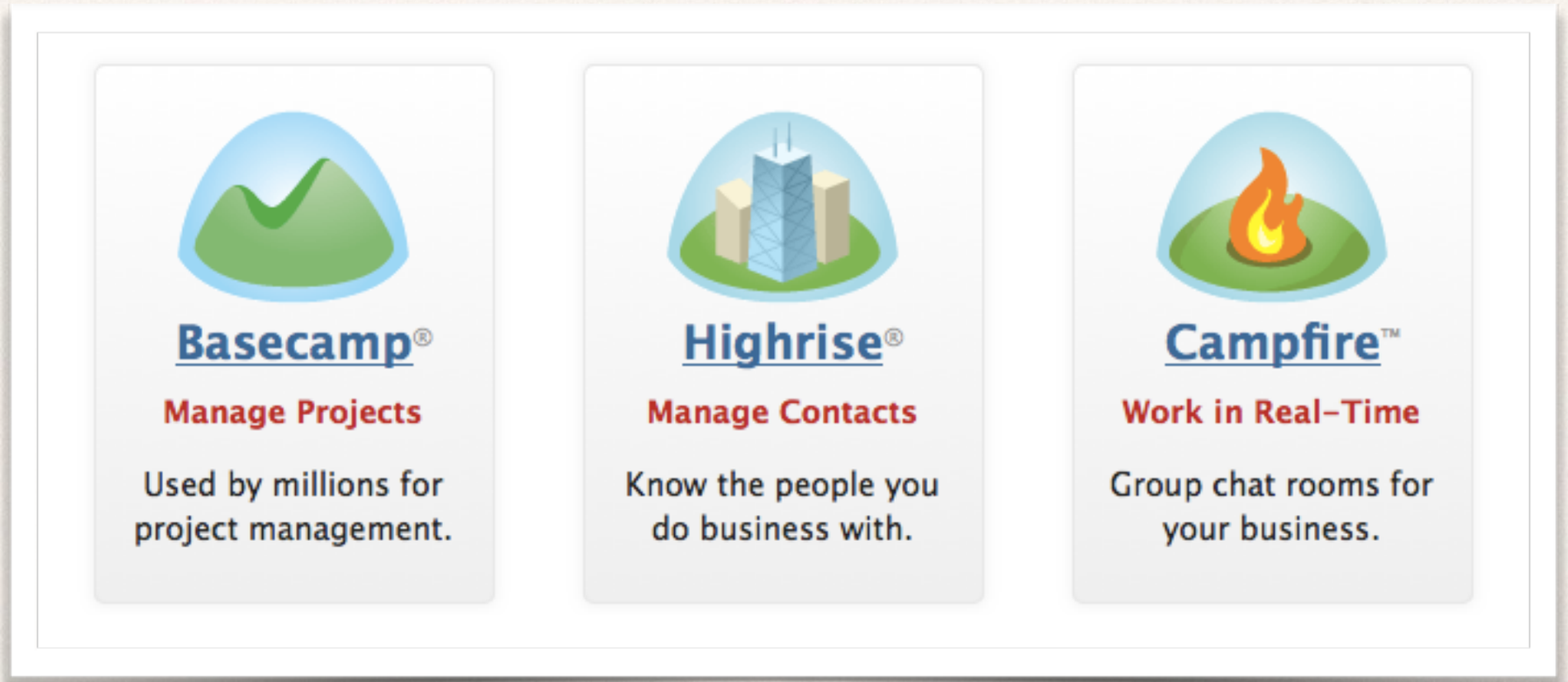
- `justify-content` determines the placing order of elements (so centering is a breeze)
- Can combine fixed-width item with flex.
- Equal height columns works out-of-the-box

Q & A



Lab 1

- Implement HTML and CSS for the following using flexbox
- div image: http://ynonperek.com/static/basecamp.png



Lab 2

- Implement HTML and CSS for the following using twitter bootstrap grid

Agenda

CSS: past, present and future 2

Using CSS for page layouts 36

CSS selectors 83

Implementing components with CSS 123

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><img class="thumb" src="img1.png" /></li>
        <li><img class="thumb" src="img2.png" /></li>
        <li><img class="thumb" src="img3.png" /></li>
    </ul>
</div>
```

Review: Descendants Selector

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

```
<div class="gallery">
    <ul>
        <li><img src="img1.png" /></li>
        <li><img src="img2.png" /></li>
        <li><img src="img3.png" /></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);
}
```

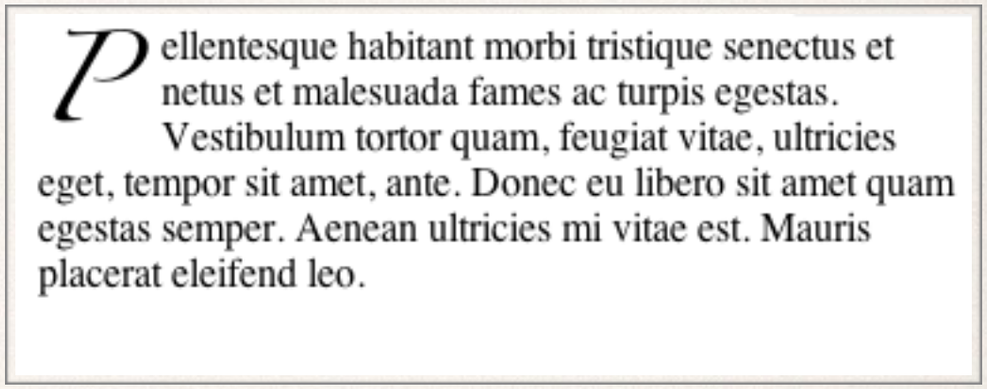
```
<a href="report.pdf">Report</a>
```

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;
}
```



:nth-child

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

```html
<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 #1

- Write a CSS selector for each marked element in the following HTML.
- Test your work by changing background color for the selected element
- http://jsfiddle.net/9GYsp/

1

2

3

```
<body>
    <nav>
        <ul>
            <li><a href="#">Home</a></li>
            <li><a href="#">About</a></li>
            <li><a href="#">Schedule</a></li>
        </ul>
    </nav>

    <div id="page-main">
        <article>
            <p>Pellentesque habitant mor.</p>
            <ul>
                <li>Lorem ipsum .</li>
                <li>Aliquam tin.</li>
                <li>Vestibulum .</li>
            </ul>
            <p>Pellentesque habitant mor.</p>

        </article>
    </div>
</body>
```

Selectors: Lab #2

- Prepare dinner: http://flukeout.github.io/

CSS Conflicts

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

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

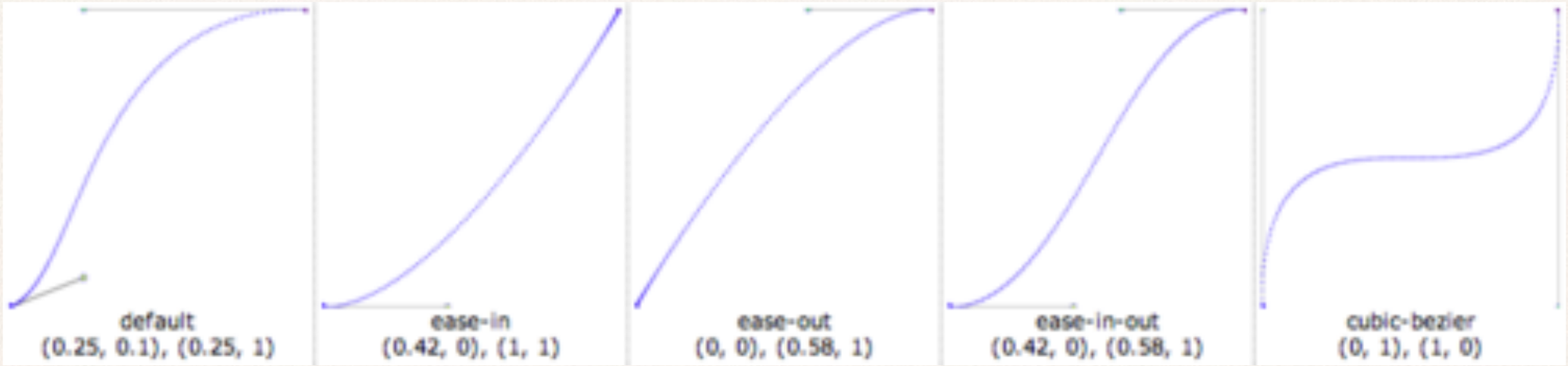
- Almost any property can be animated
- Use all to catch everything
- Full list at: https://developer.mozilla.org/en/css/css_transitions

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



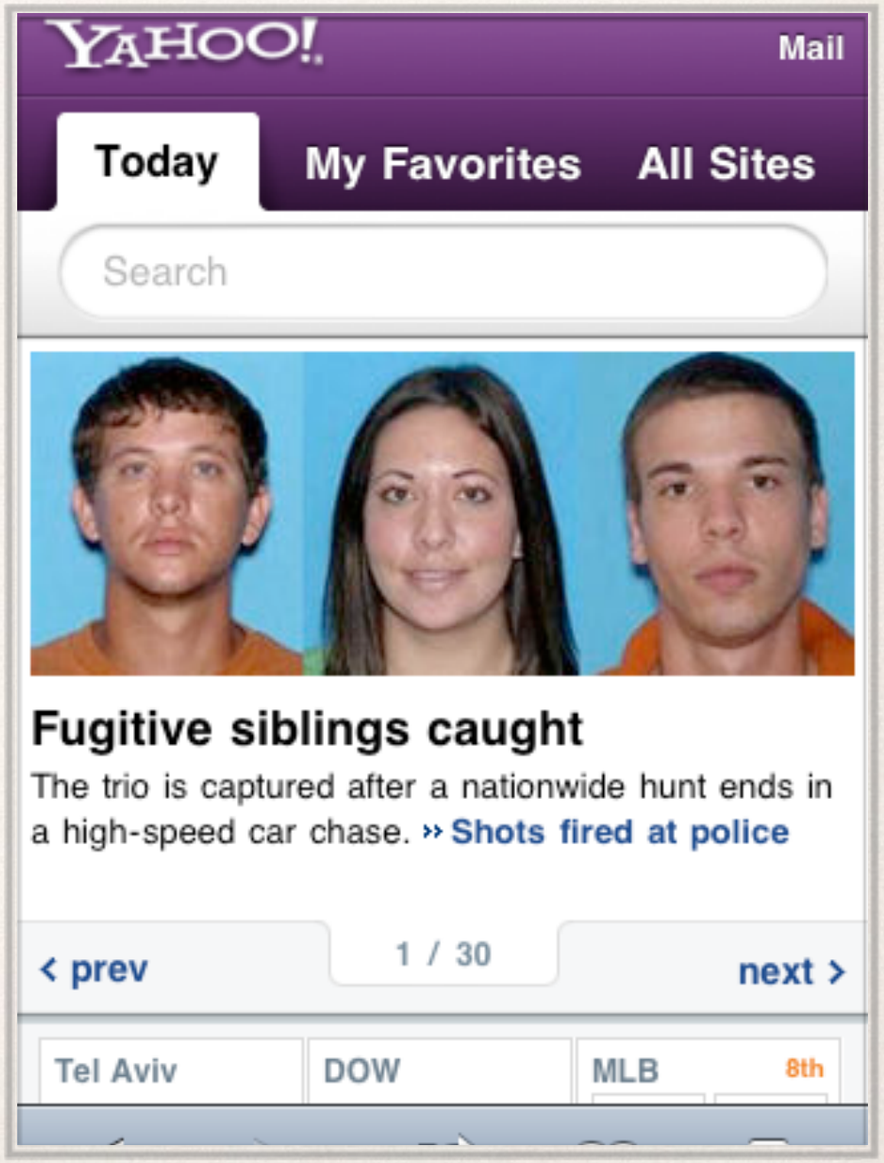
Live demo at: http://www.the-art-of-web.com/css/timing-function/

transition delay

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

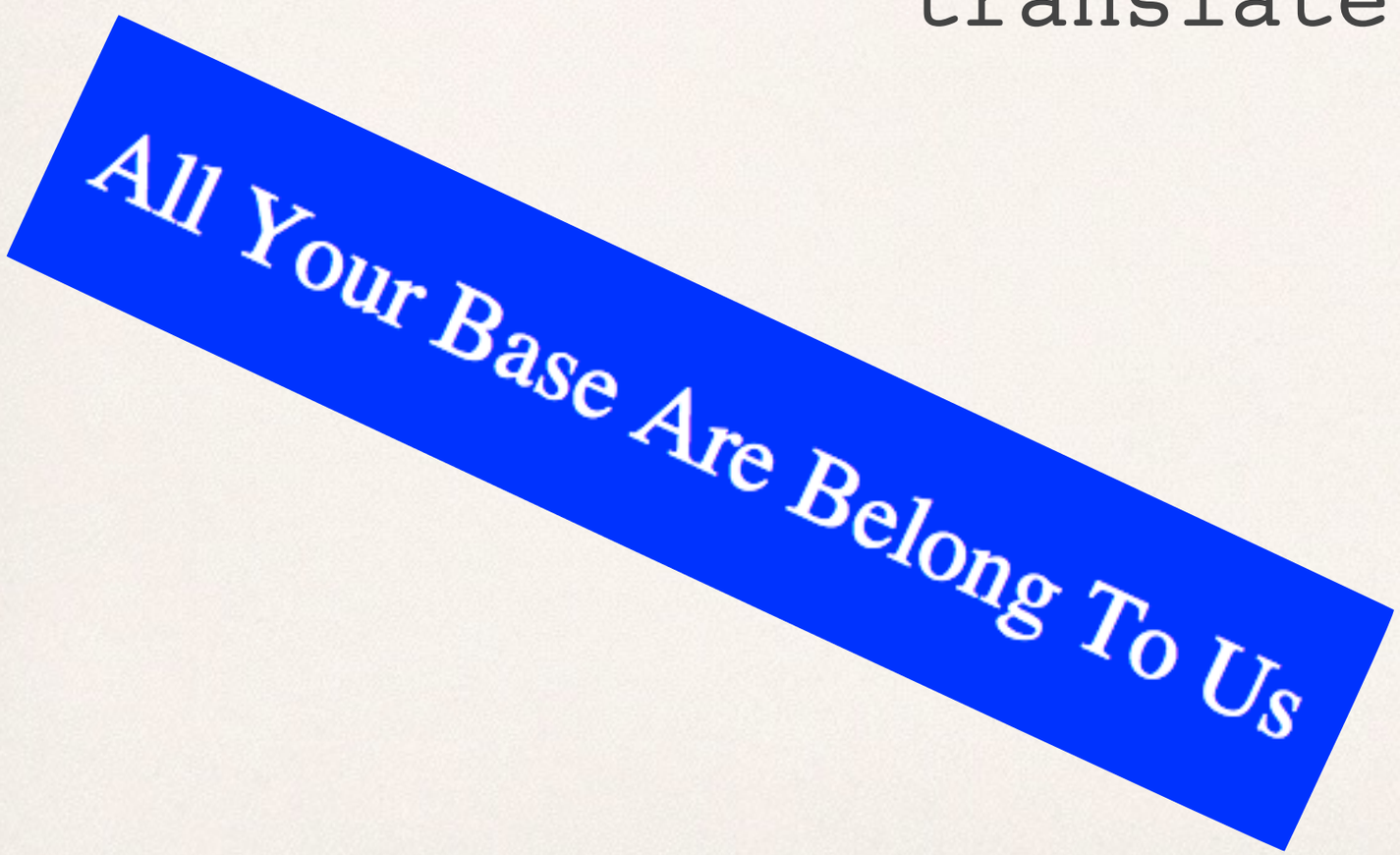
Lab

- 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

Agenda

CSS: past, present and future 2

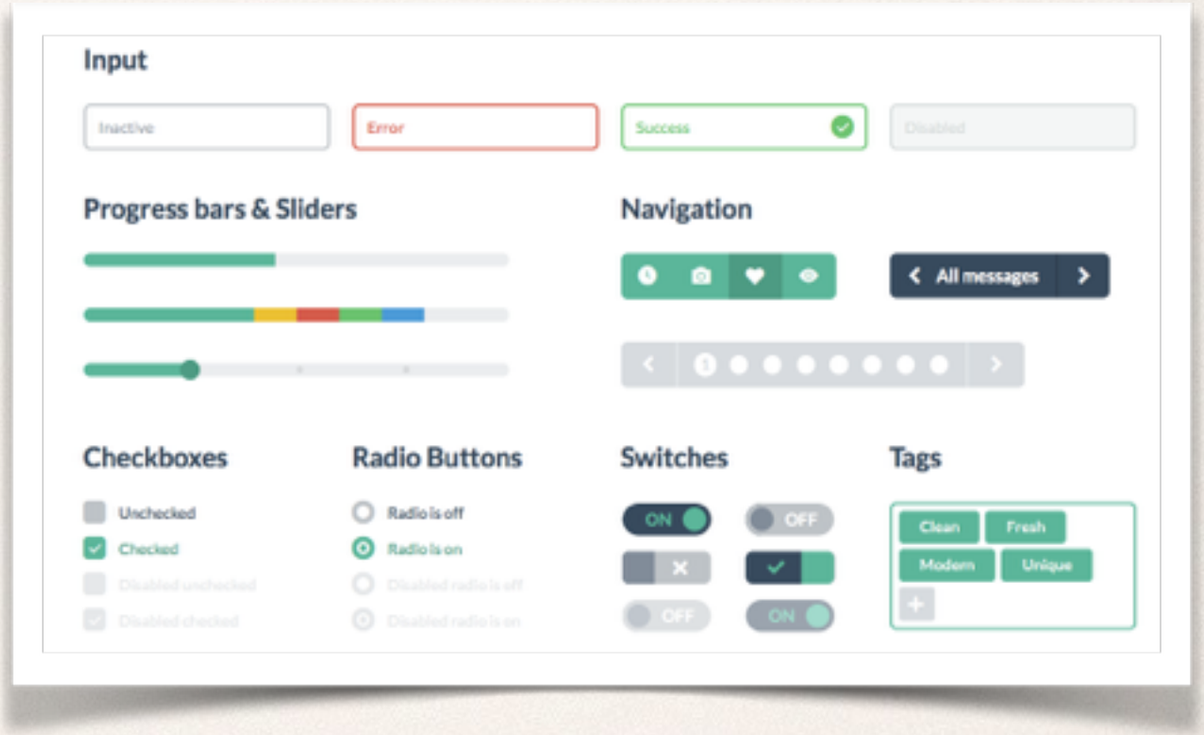
Using CSS for page layouts 36

CSS selectors 83

Implementing components with CSS 123

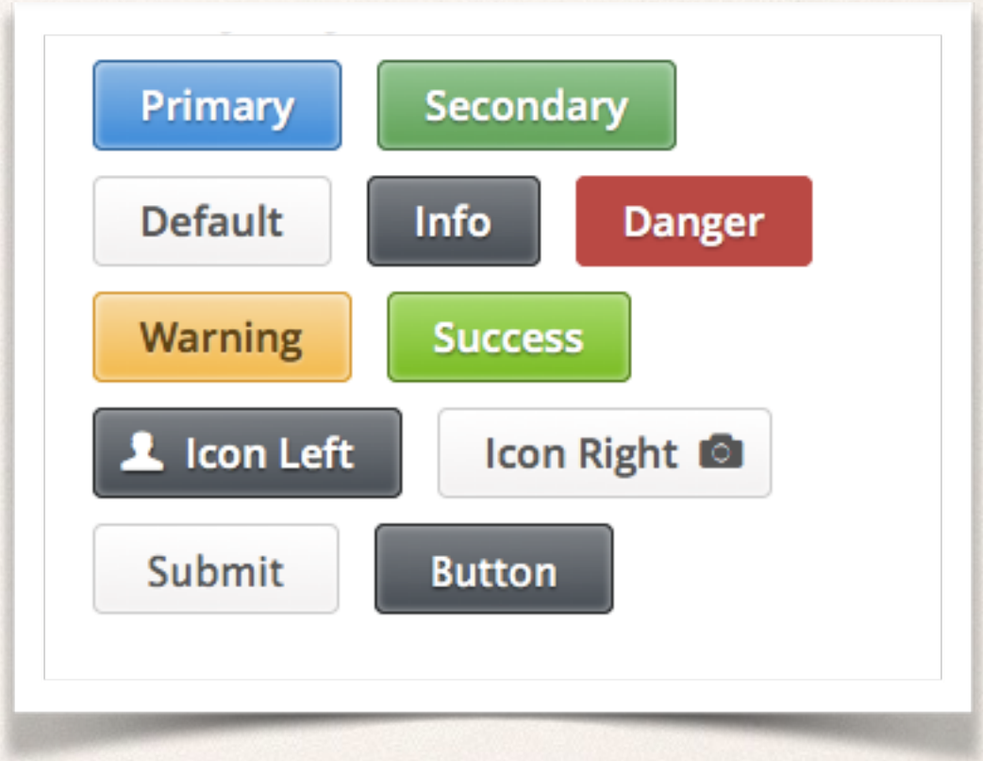
Styling UI Controls

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



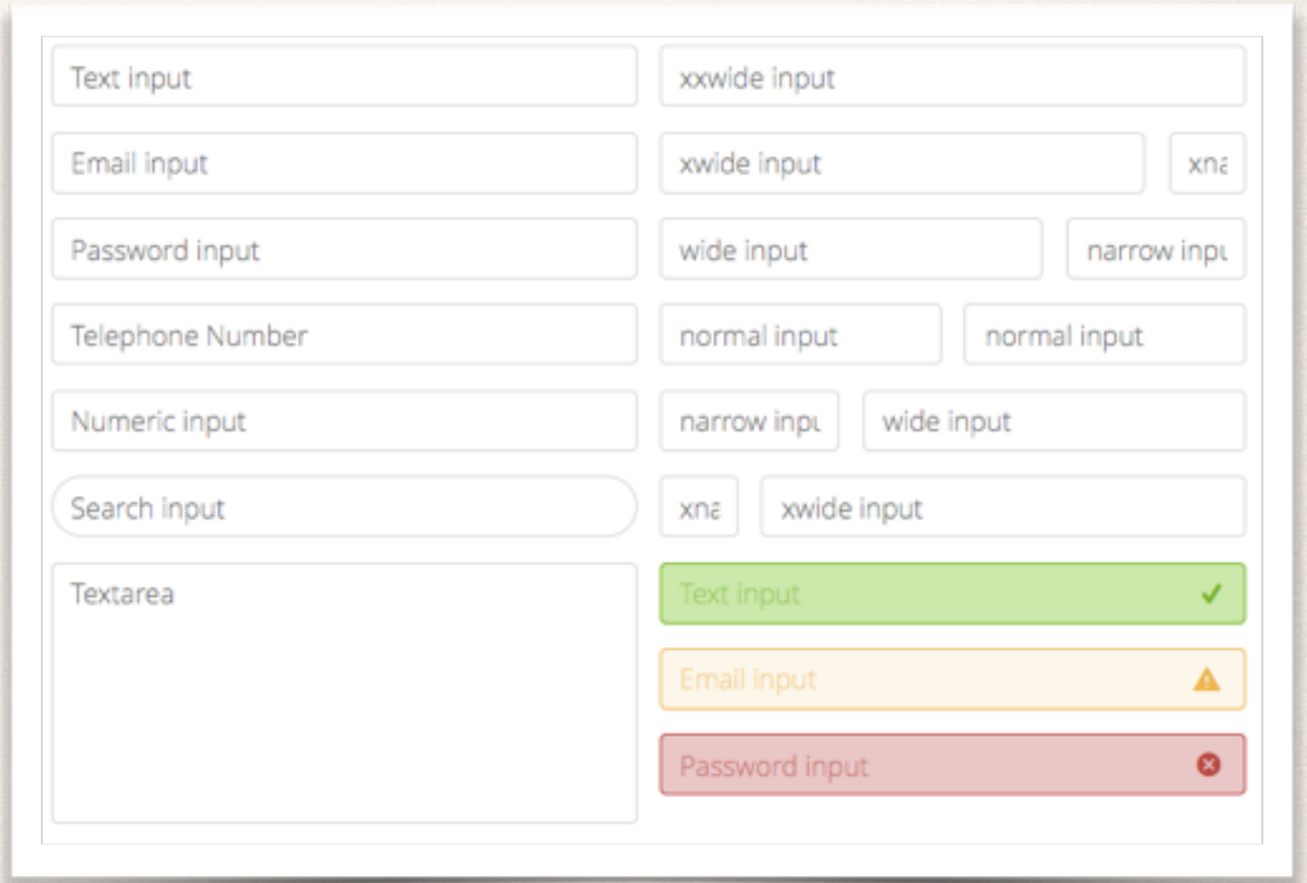
Hello Buttons

- A button is rectangular
- May have round corners
- May have drop-shadow (or inset)
- May have an icon
- Demo



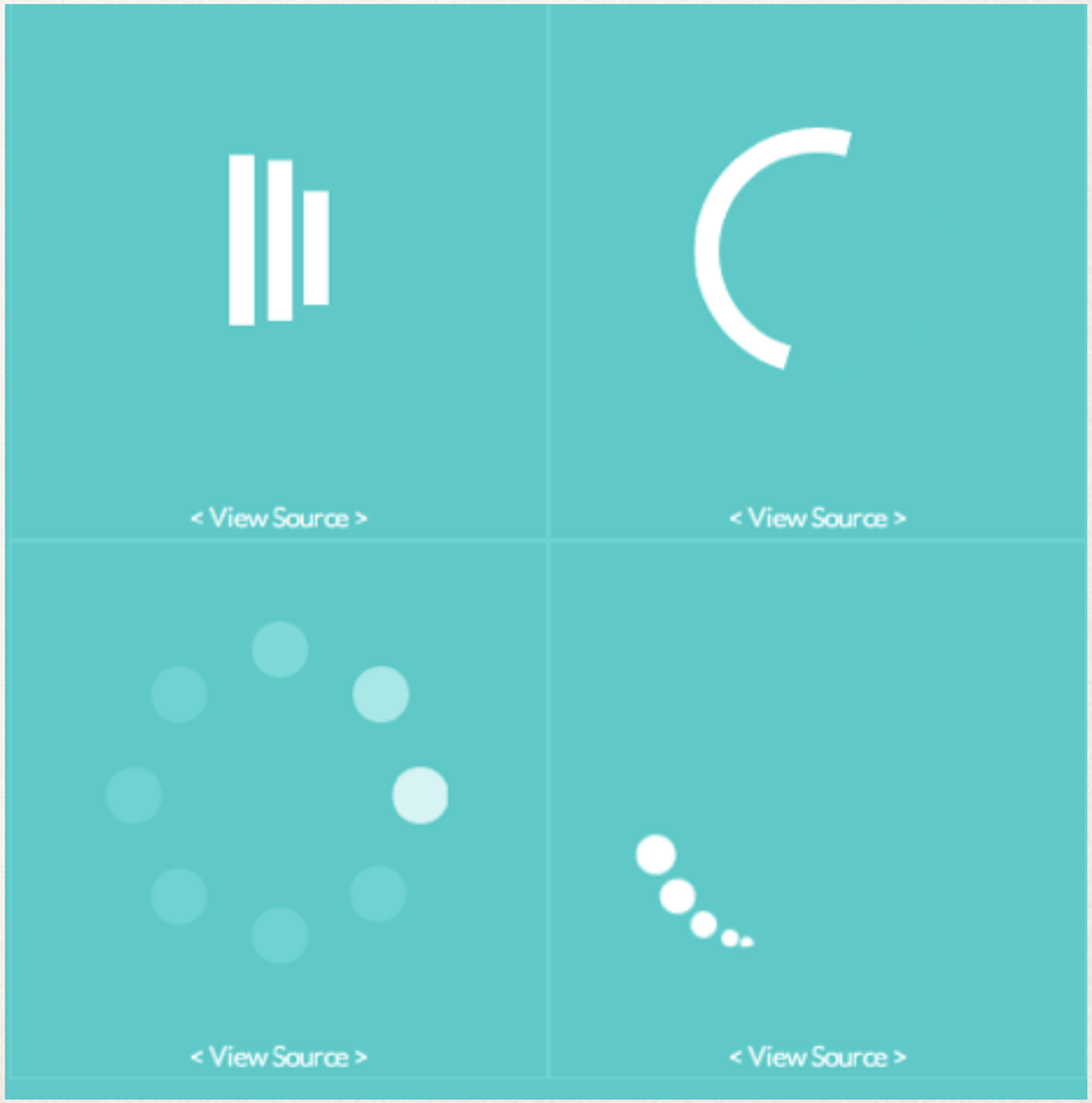
Hello Form Controls

- 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)



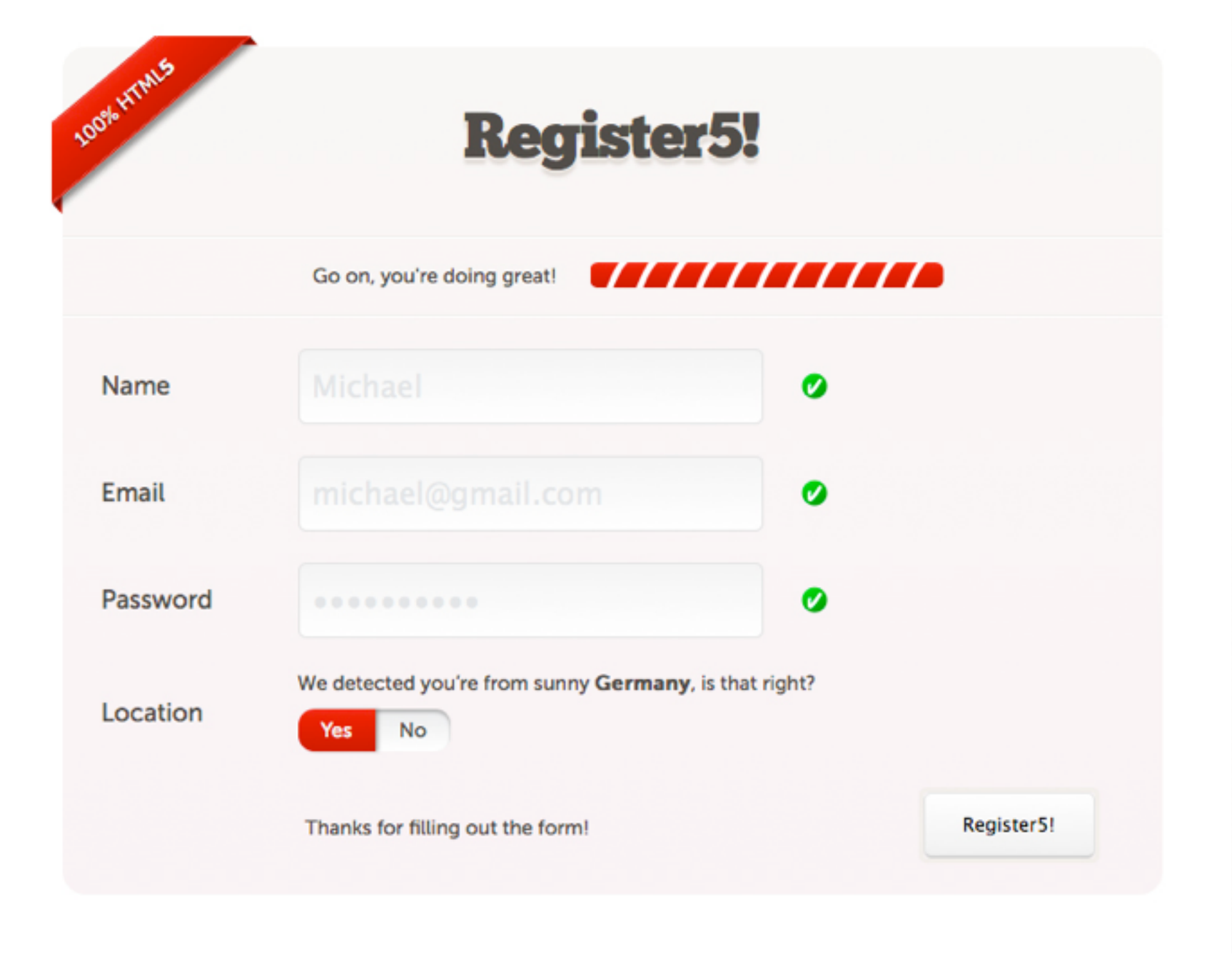
Hello Spinners

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



Lab

- Now style the form you created earlier
- Bonus: use a single div for the toggle button



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

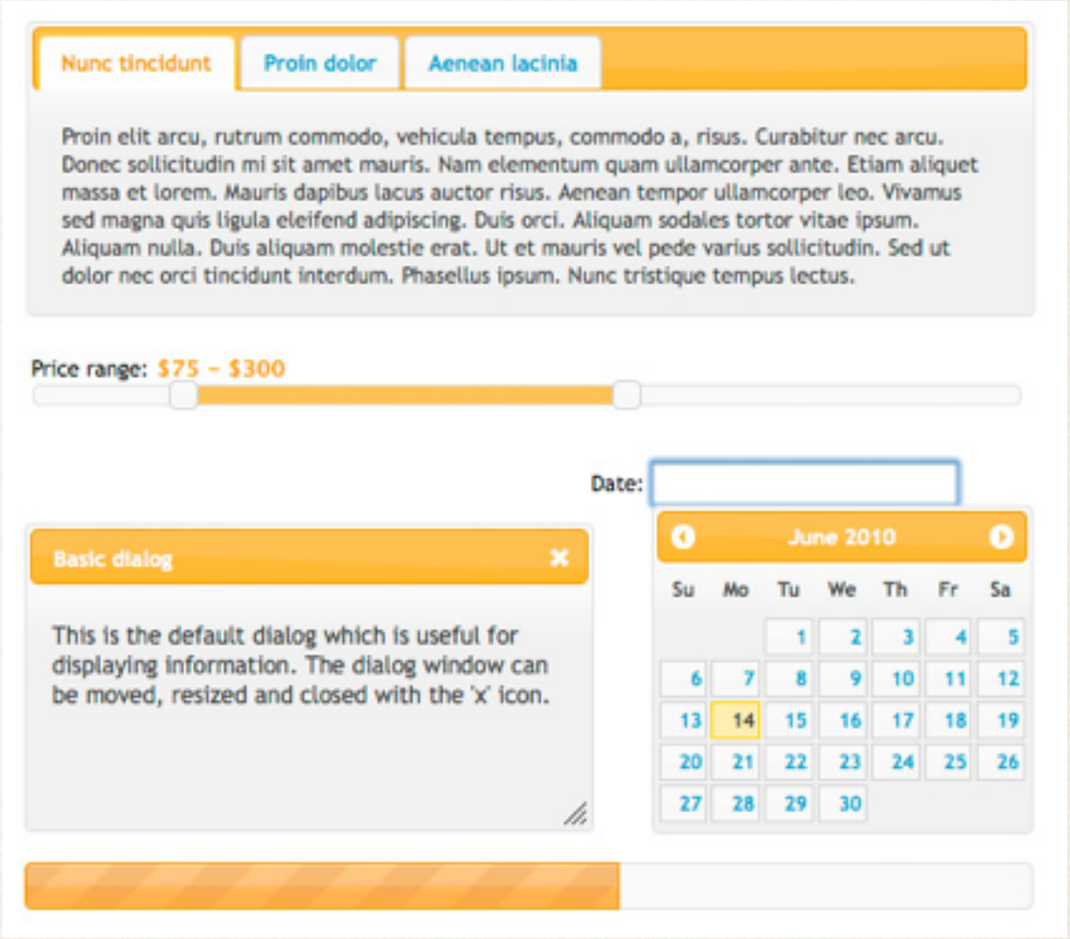
- Make sure license fits
- Change default colors
- Be consistent

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

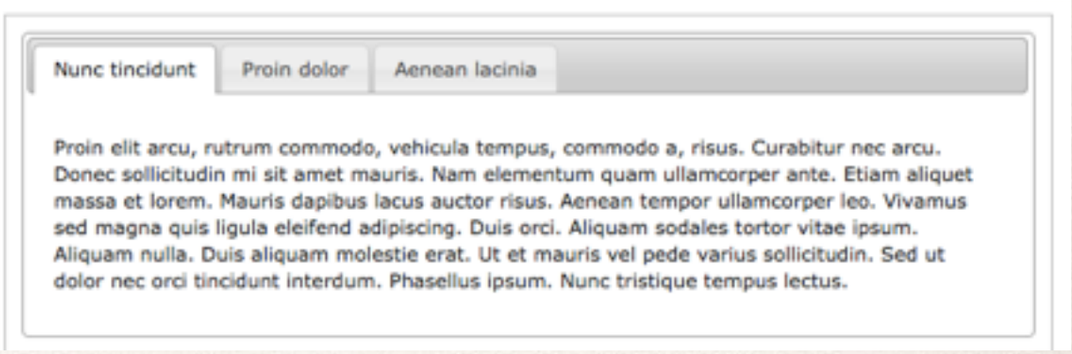
Famous jQuery Plugins: jQuery UI

- 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>
```

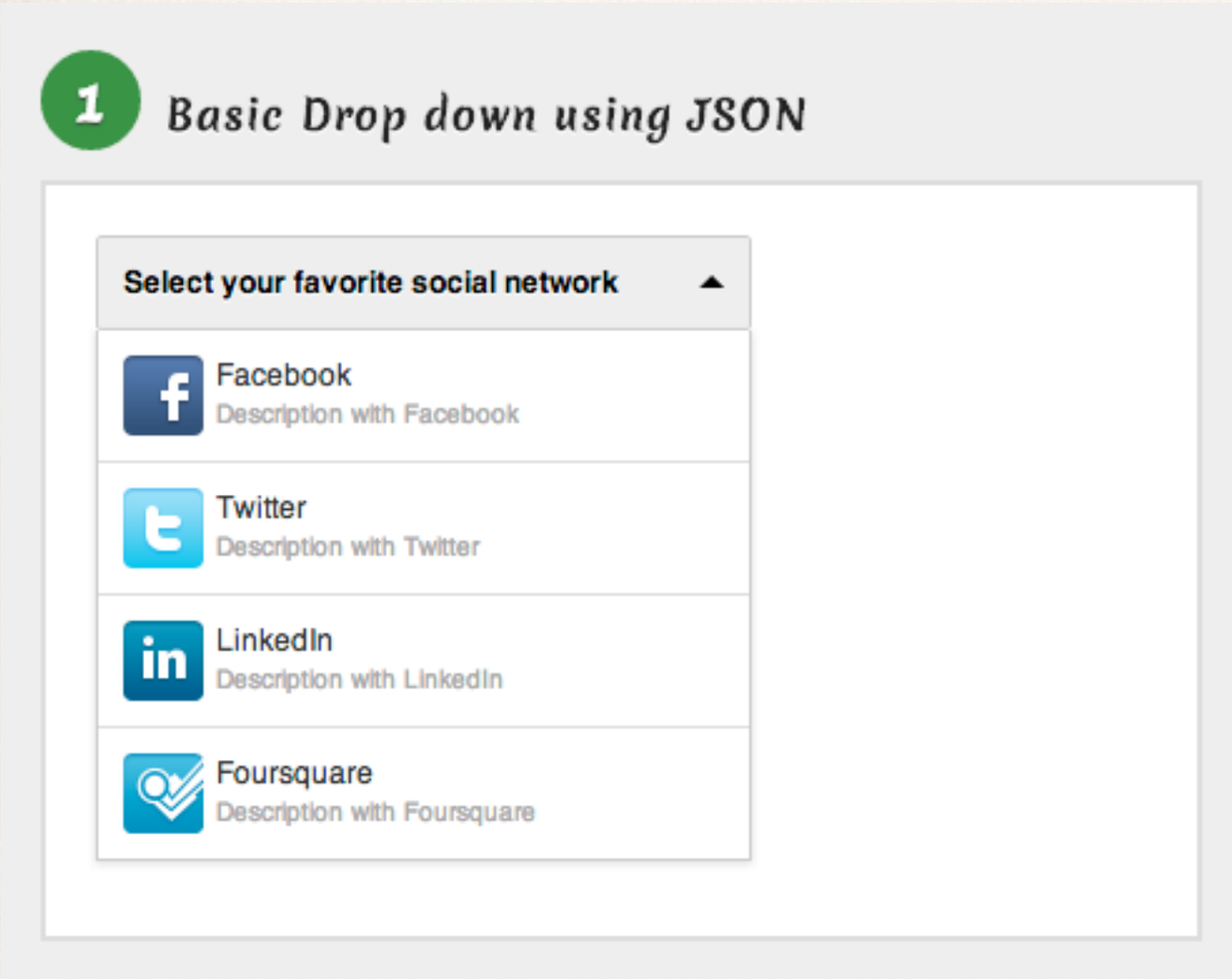


Other jQuery UI Controls

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

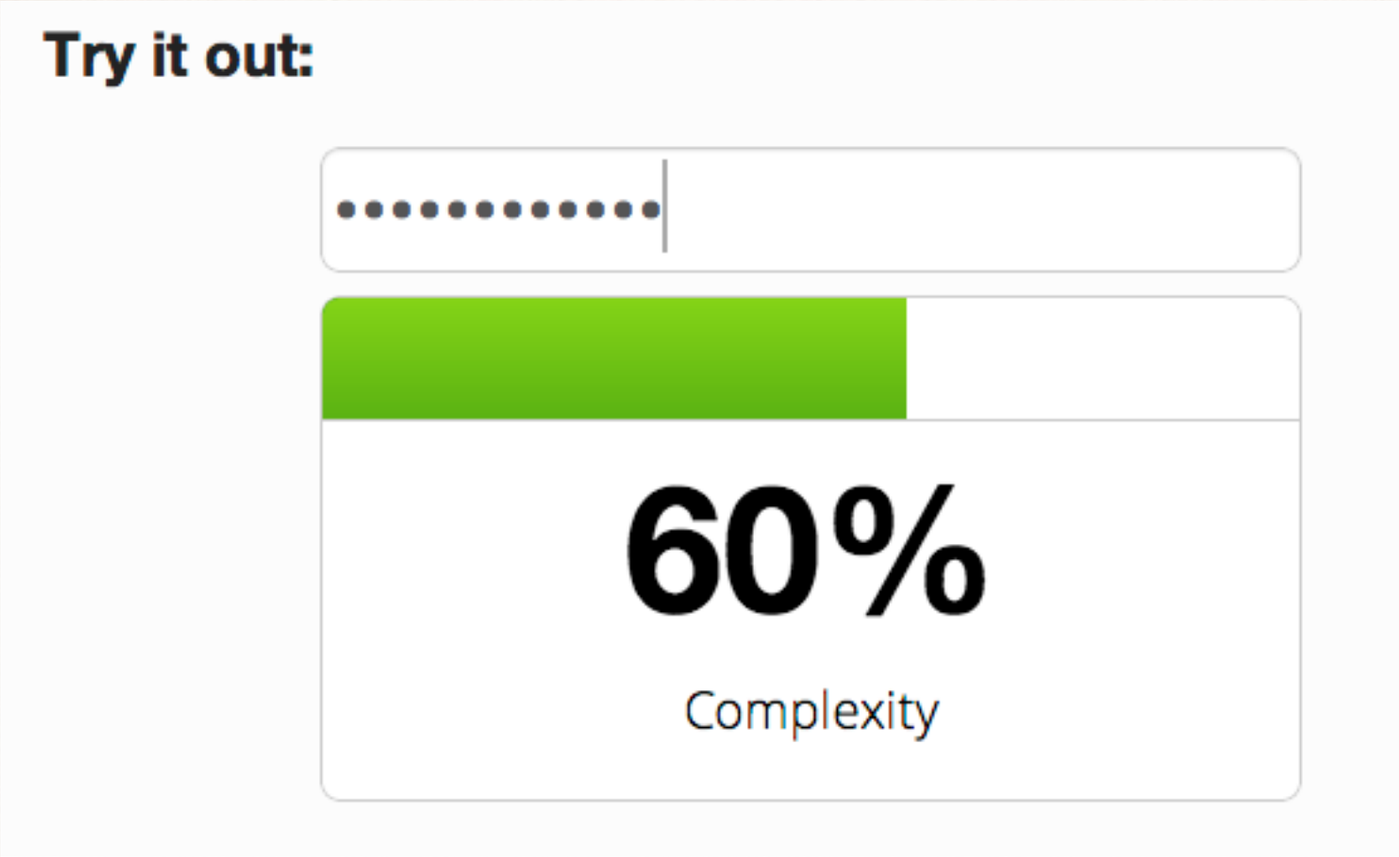
Famous jQuery Plugins

http://designwithpc.com/Plugins/ddSlick



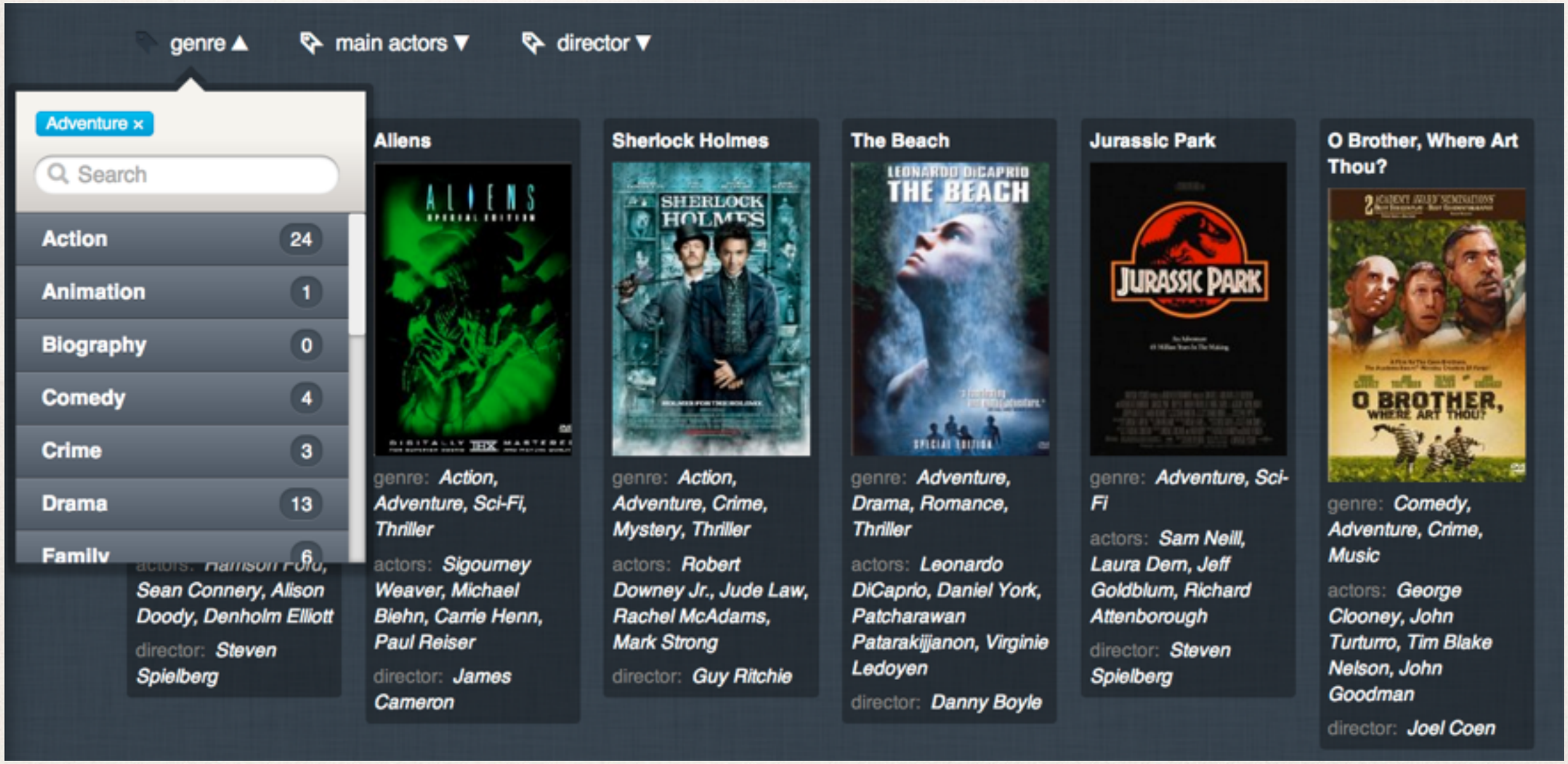
Famous jQuery Plugins

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



Famous jQuery Plugins: Filtering

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

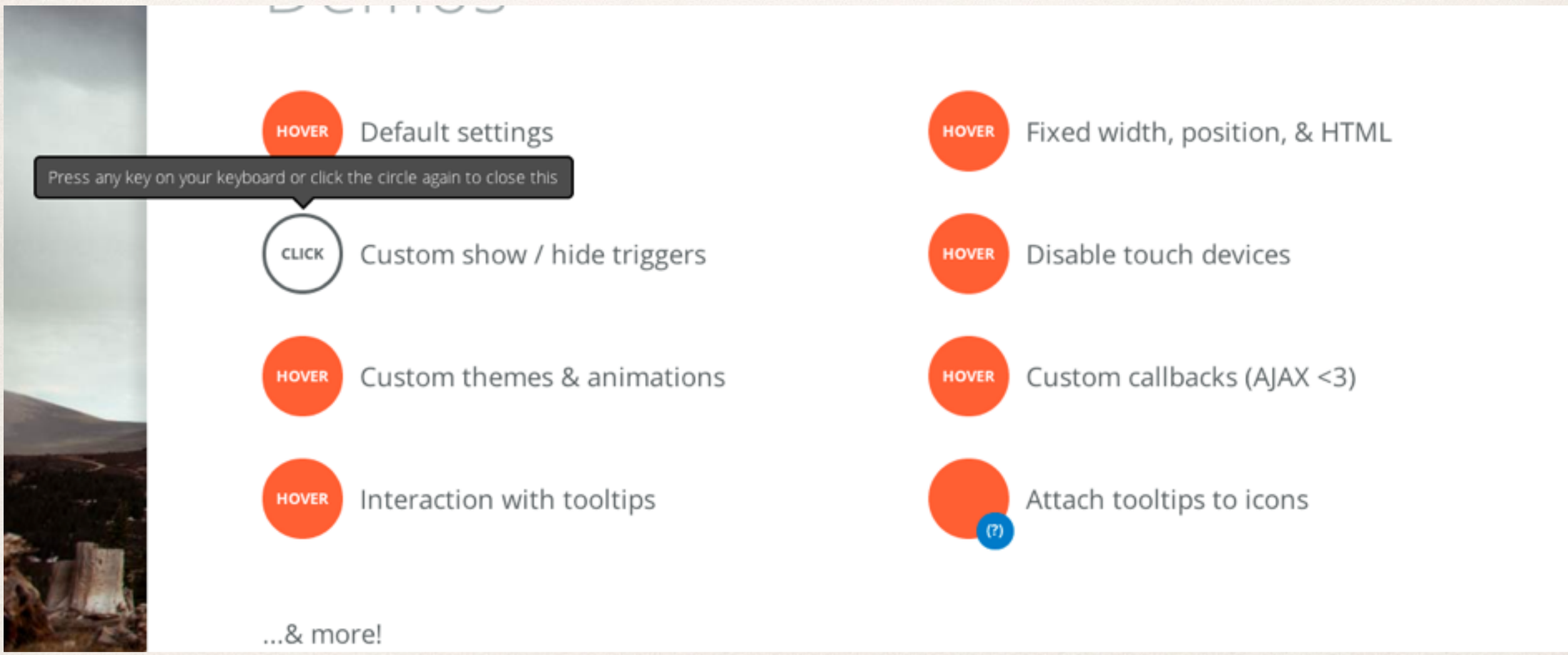


Famous jQuery Plugins: Lightbox

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

Thanks For Listening

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