



Advanced CSS + Bootstrap

Writing Responsive Web Sites and Apps using CSS and Bootstrap

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Agenda

CSS: past, present and future

2

Using CSS for page layouts

36

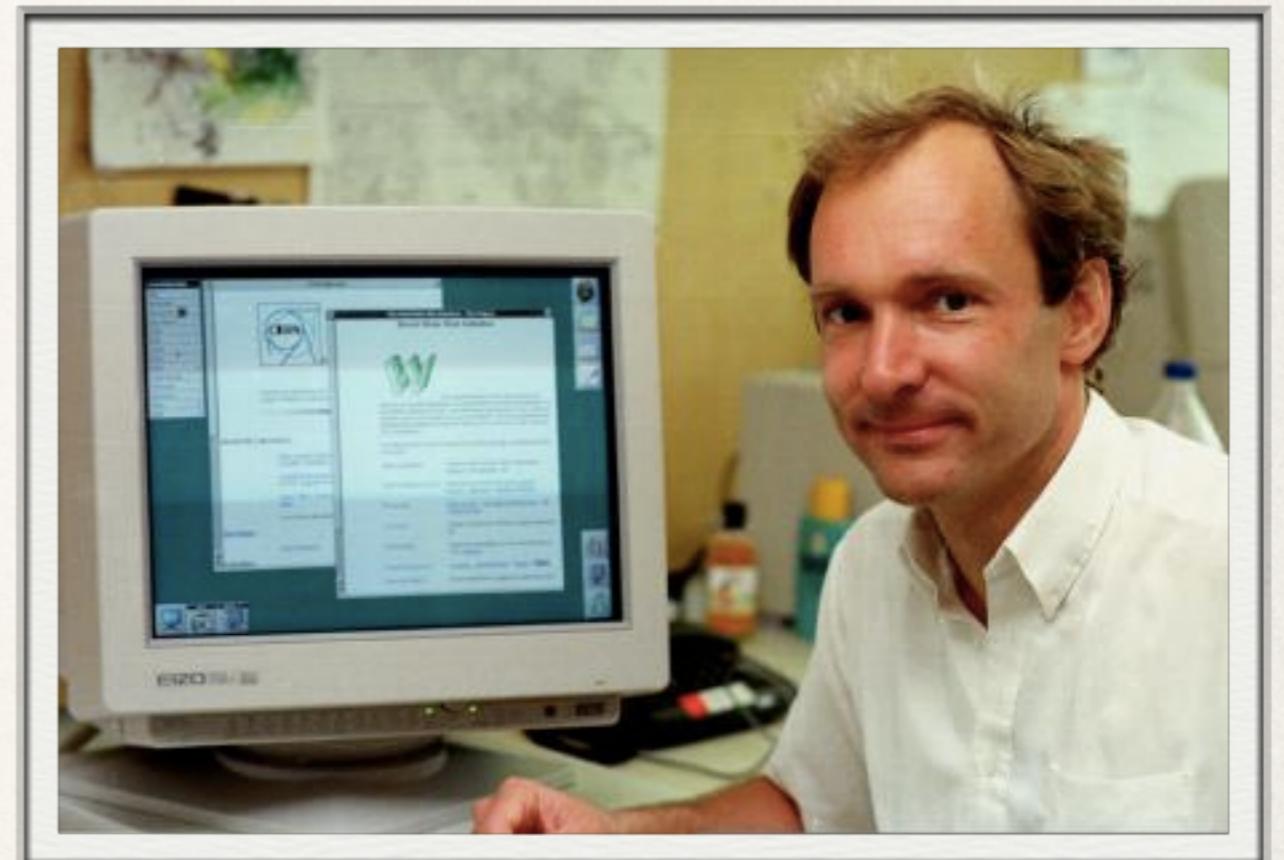
Implementing components with CSS

86

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">
  
</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'S 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 Unabom suspect Ted Kaczynski arrested

Poll [Does your year poll](#) **Quiz** [Test your knowledge](#)

The top 10 stories according to our users

[TIME: The Best of 1996](#)
[TIME: Man of the Year](#)

Under the Big Top [The Year in Review 1996](#) 

Is story BIG?

Year in REVIEW [More 1996 Year in Review](#)

[World News / Health / Sci-Tech / Home on the Internet](#)
[Sports / Business / People & Showbiz / Time Capsule](#)
[Talk of '96 / Friends / Obituaries / '97 Preview](#) [CNN.com Home](#) **GAMES**

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 **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?

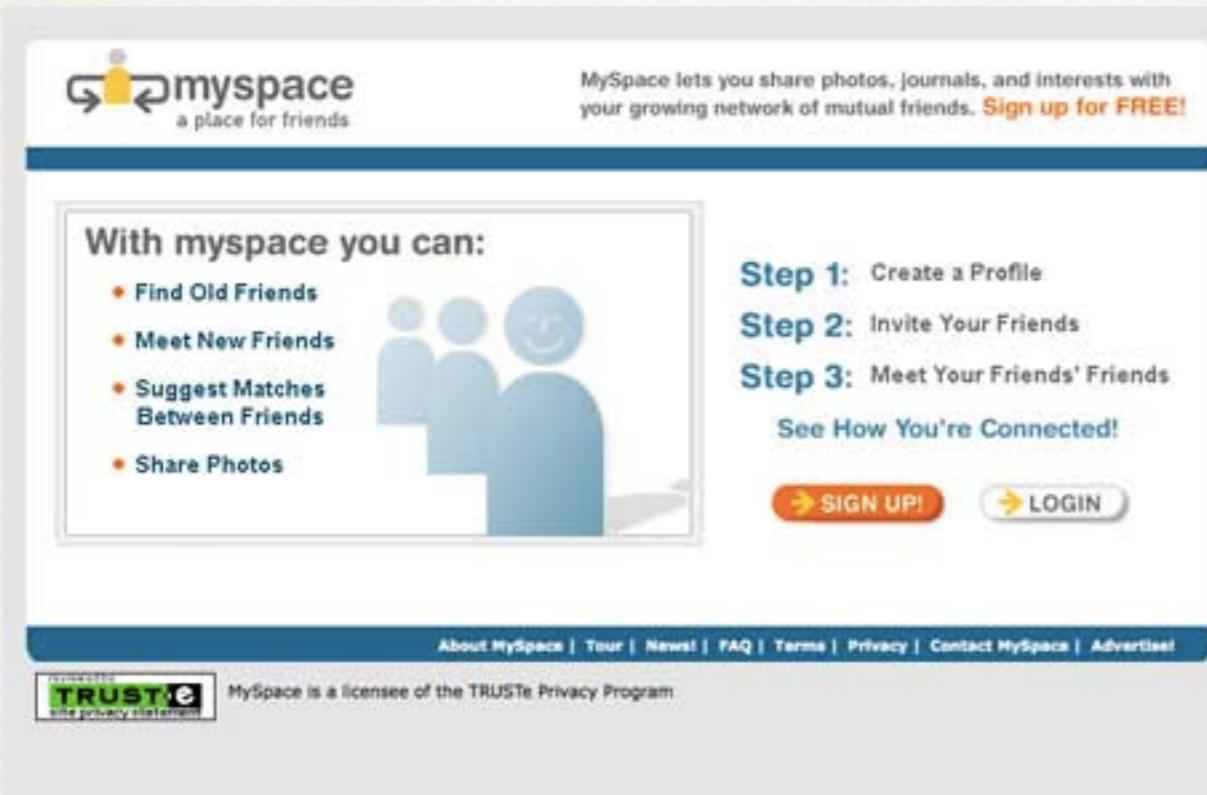
Ask.com

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 offers access to instant auto insurance rates, new & used car pricing, leases, loans from top companies. How much can you save?

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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" logo is also present.

Myspace 2003



The Facebook homepage from 2004 shows a transition in design. The header is blue with the "thefacebook" logo and navigation links for "login", "register", "about", and "faq". The main content area has a blue header with the text "[Welcome to Thefacebook]". Below this, a message states: "Thefacebook is an online directory that connects people through social networks at colleges. We have recently opened up Thefacebook at the following schools:". A long list of college names follows, including Alabama A&M, Alabama Huntsville, Aquinas, Art Chicago, Bellarmine, Belmont Abbey, Bethel KS, Bethune Cookman, Brevard, Brookdale, Caldwell, Catawba, Cedar Crest, Central College, Clarke, COE College, Concord, Concordia MN, Concordia NY, CSU East Bay, CSU Mont. Bay, CUNY Lehman, Delaware State, Delaware Valley, Detroit Mercy, Dowling, Erskine, Evergreen, Fayetteville, FL Southern, Fort Hays, Francis Marion, Franklin, Franklin CH, Franklin Pierce, Full Sail, Georgian Court, Houston Baptist, Incarnate Word, Johnson CC, Juilliard, Juniata, LA Monroe, Lander, Lasell, Lawrence Tech, Lesley, Lincoln MO, Lincoln PA, Marietta, Maryland Art, Maryland Eastern, Marywood, McKendree, Mesa State, Mills College, Monroe, Mount Ida, Muskingum, N.E. Illinois, Nebraska Kearney, New College FL, NJ City, Oakwood, Oglethorpe, Ohio Dominican.

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

The website features a banner at the top with the text "It's here. The new iPhone 3G." and "Twice as fast. Half the price." Below the banner, there are five images of the iPhone 3G from different angles: front facing, back, and three side profiles. A horizontal bar below these images lists features: "Enterprise Ready", "App Store", "Phone, iPod, and Internet", "3G Speed Built In", and "Maps with GPS". Below this, a section titled "Hot News Headlines" contains four cards: "iPhone 3G, A Guided Tour.", "App Store", "Buy a Mac, get a free iPod.", and "This changes everything.". At the bottom of the page, there is a copyright notice and a footer with links to "Apple Online Store", "Site Map", "Hot News", "RSS Feeds", "Media Info", "Environment", "Job Opportunities", and "Contact Us".

The page has a blue header with the Windows Live logo. Below it, a large text area says "Share life as it happens." with a Windows Live logo icon. To the right, a sidebar says "Have an MSN Hotmail, MSN Messenger, or Passport account? It's your Windows Live ID." Below this are fields for "Windows Live ID" (with placeholder text "(example555@hotmail.com)"), "Password", and "Forgot your password?". There are also checkboxes for "Remember me on this computer (?)", "Remember my password (?)", and a "Sign in" button. At the bottom, there are links for "Help", "Windows Live ID", "Works with MSN, Office Live, and Microsoft Passport sites", and "Use enhanced security". The footer includes links for "About", "Privacy", "Trademarks", "Account", "Help Central", and "Feedback".

Hotmail, 2008

Apple, 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



CSS & Result

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

`img { width: 100%; }`

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 Mischief

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 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;  
    3 overflow: auto;  
}
```

So we add an overflow: auto ???

Core CSS 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://
dowebsiteseneedtolookexactlythesameineverybrowser.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

States

Modules

Layout

Base

CSS Layers

The screenshot shows the CNN International homepage from June 22, 2014. The top navigation bar includes links for Home, Video, World, U.S., Africa, Asia, Europe, Latin America, Middle East, Business, World Sport, Entertainment, Tech, Travel, and iReport. A search bar and user login options are also present. The main content features two large stories: 'ISIS terrorists now four towns closer to Baghdad' with a photo of two masked fighters, and 'How ISIS could bring jihad to West' with a photo of fighters on a rooftop. A sidebar on the right contains a 'FOLLOW US' section, a 'CNN TV' section with the Royal Television Society award, and a 'Featured TV' section with a loading icon.

edition.cnn.com

Apps 62.219.140.73/Web Rulers&Guides Kendo UI ThemeBuilder ++ Resizer Other Bookmarks

EDITION: INTERNATIONAL | U.S. | MÉXICO | ARABIC

TV: CNN | 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

BATTLE FOR IRAQ

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 march to the Iraqi capital. [FULL STORY](#)

Waiting for platform.twitter.com...

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

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;  
        }  
    }  
}
```



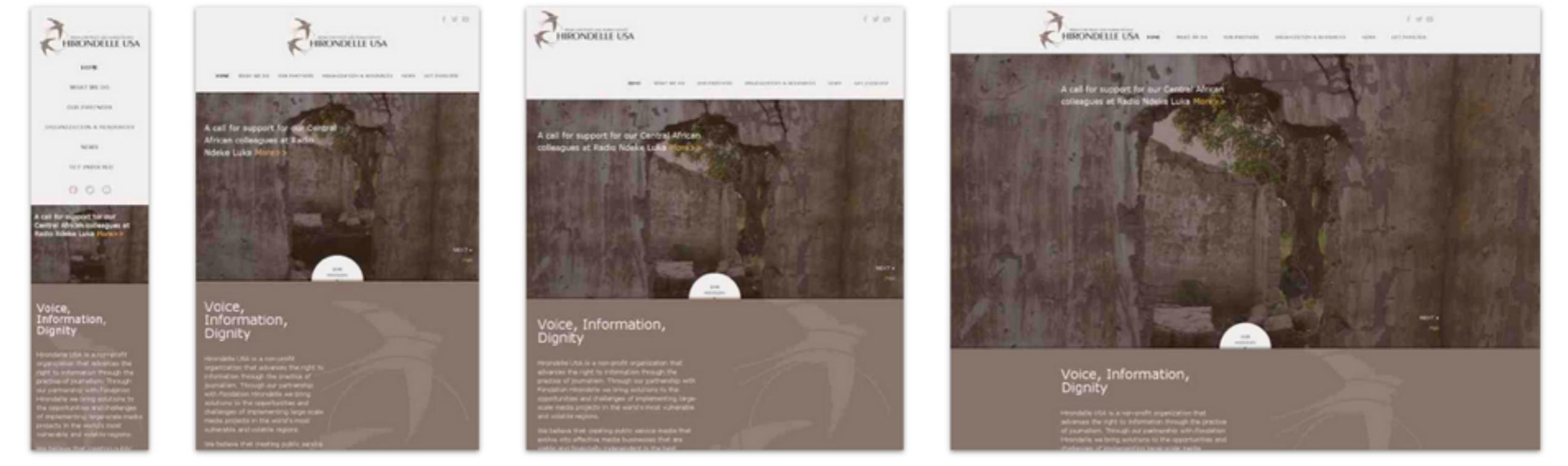
```
ul li {  
    padding: 10px;  
}  
ul a {  
    color: #1111ff;  
}  
ul a:hover {  
    background: white;  
}
```

CSS: Future

Responsive Web Design

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CSS Layouts

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

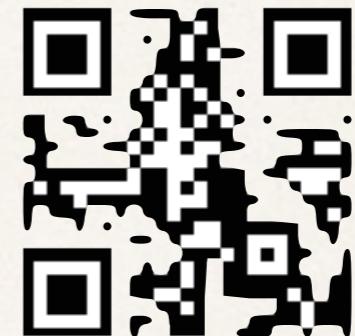
- Donec ipsum dolor sit amet
- Aenean viverra mi quis felis
- Quisque ut odio mi, blandit
- Fusce lacinia aliquet purus
- Aliquam vestibulum libero

Footer

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

Implementing components with CSS

86

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

Margin Edge

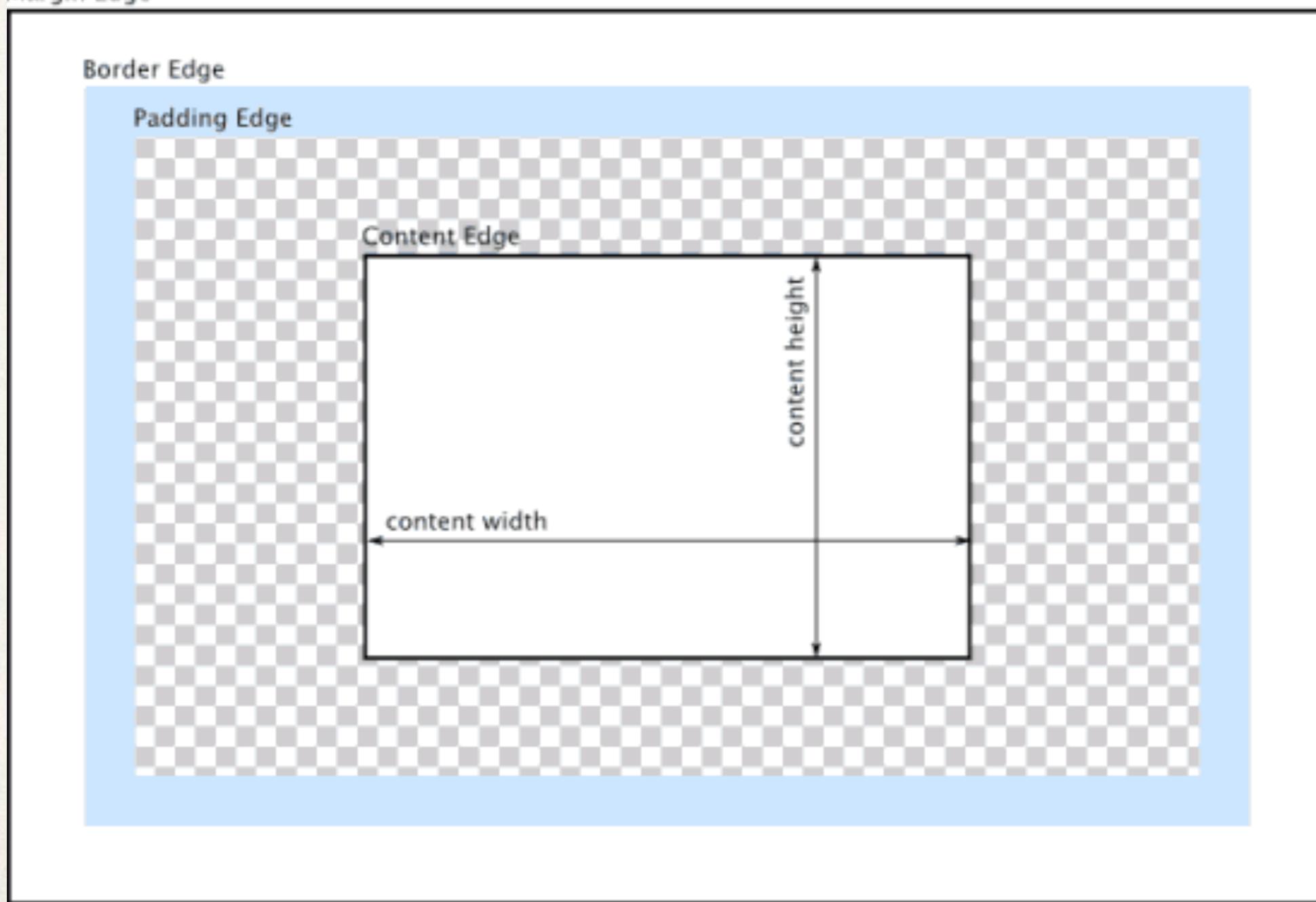
Border Edge

Padding Edge

Content Edge

content width

content height

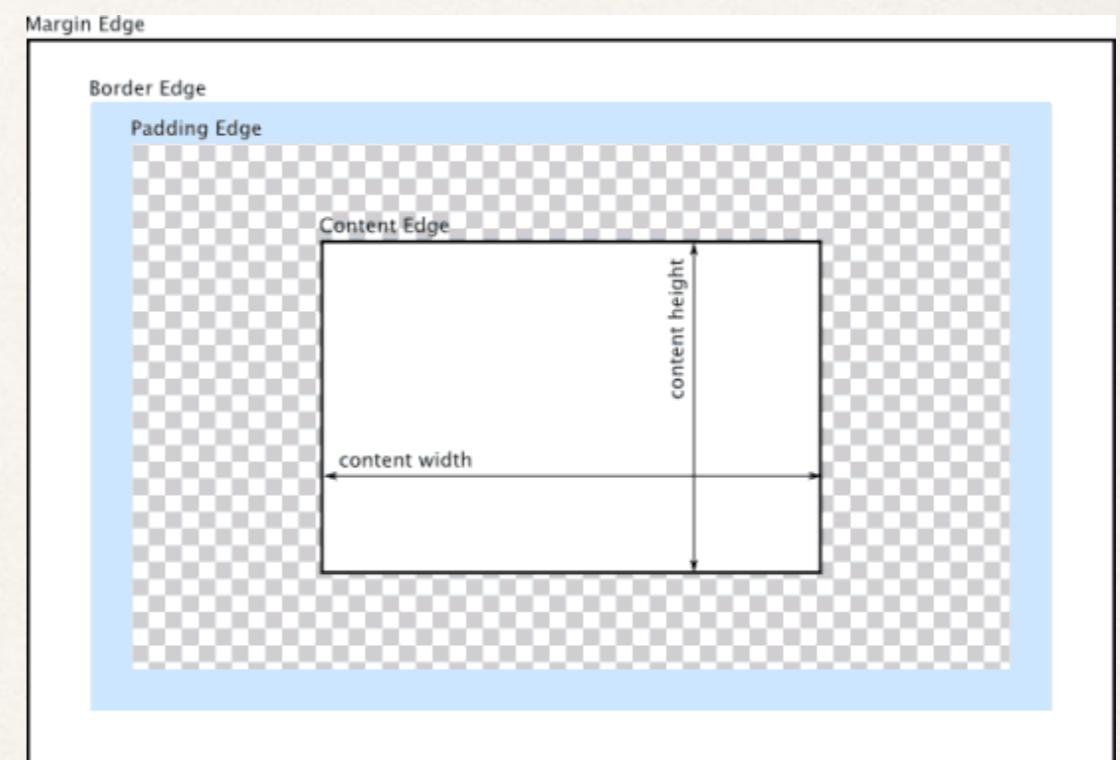


Content Size

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

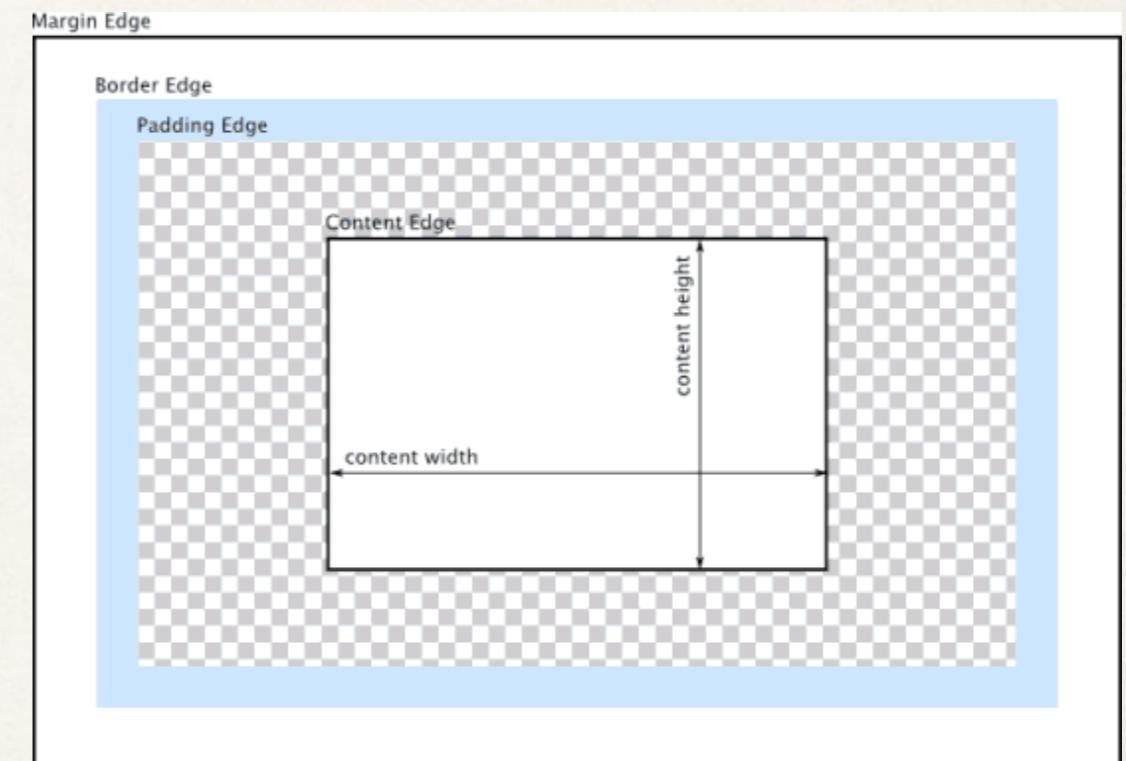
Padding Size

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



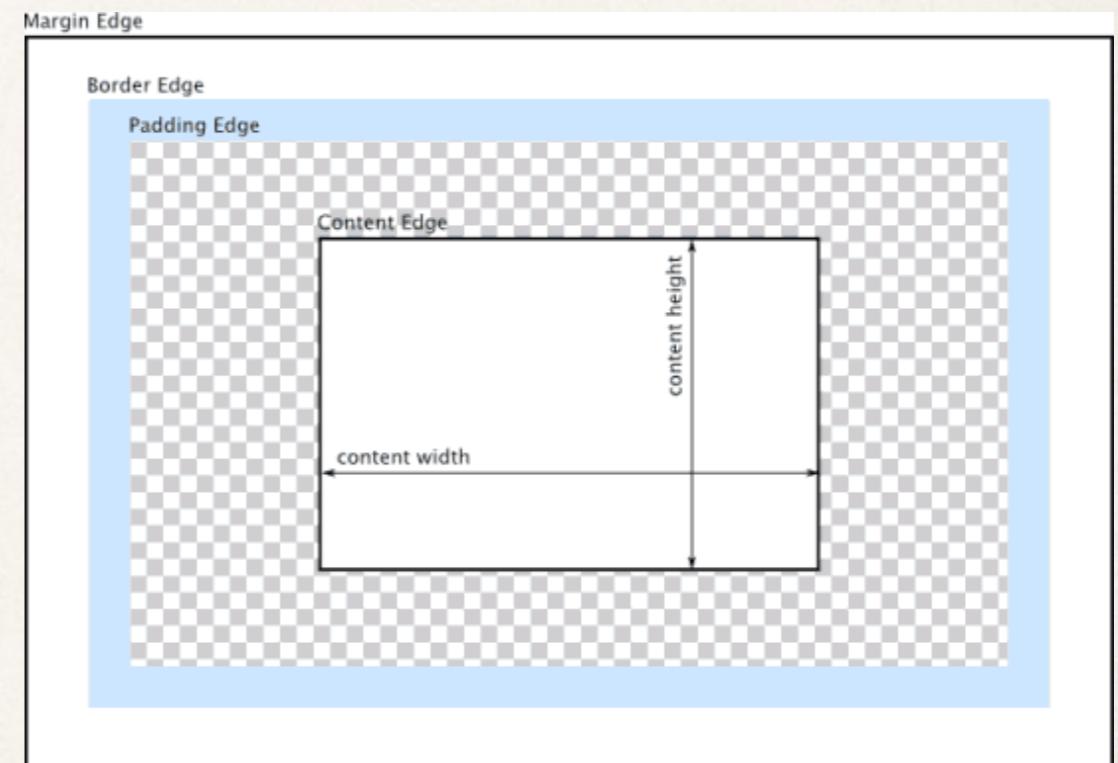
Border Size

- ❖ 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

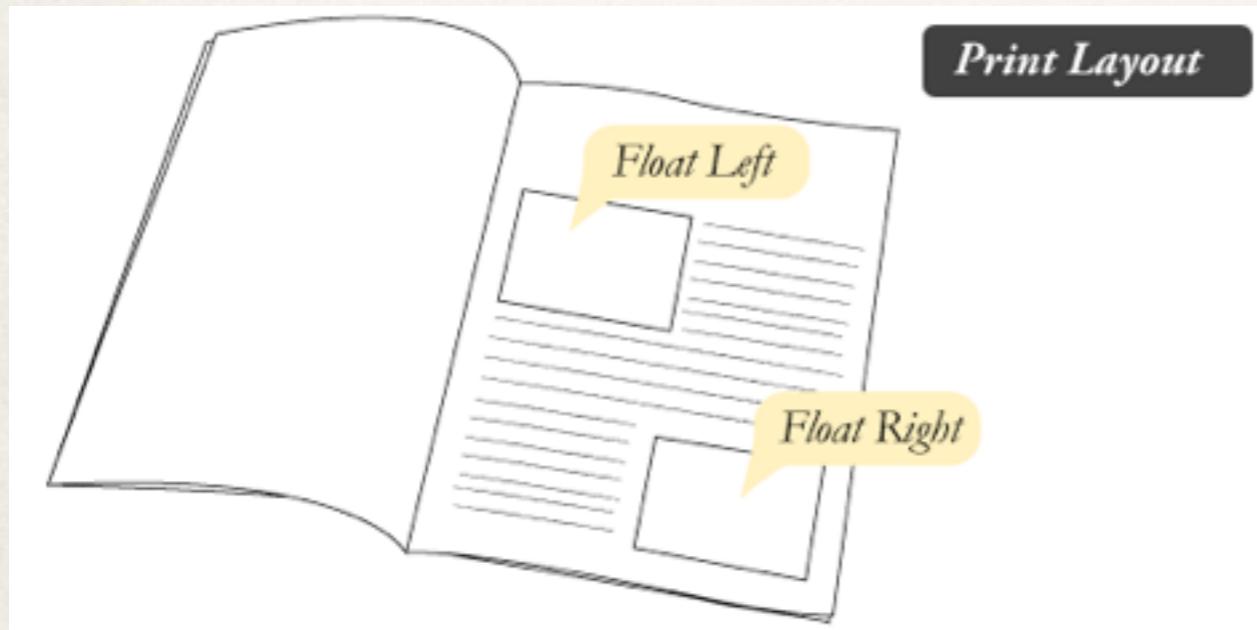
- ❖ Margin is the empty space around border
- ❖ No style
- ❖ Controlled with: margin-top, margin-bottom, margin-left, margin-right (or just margin)



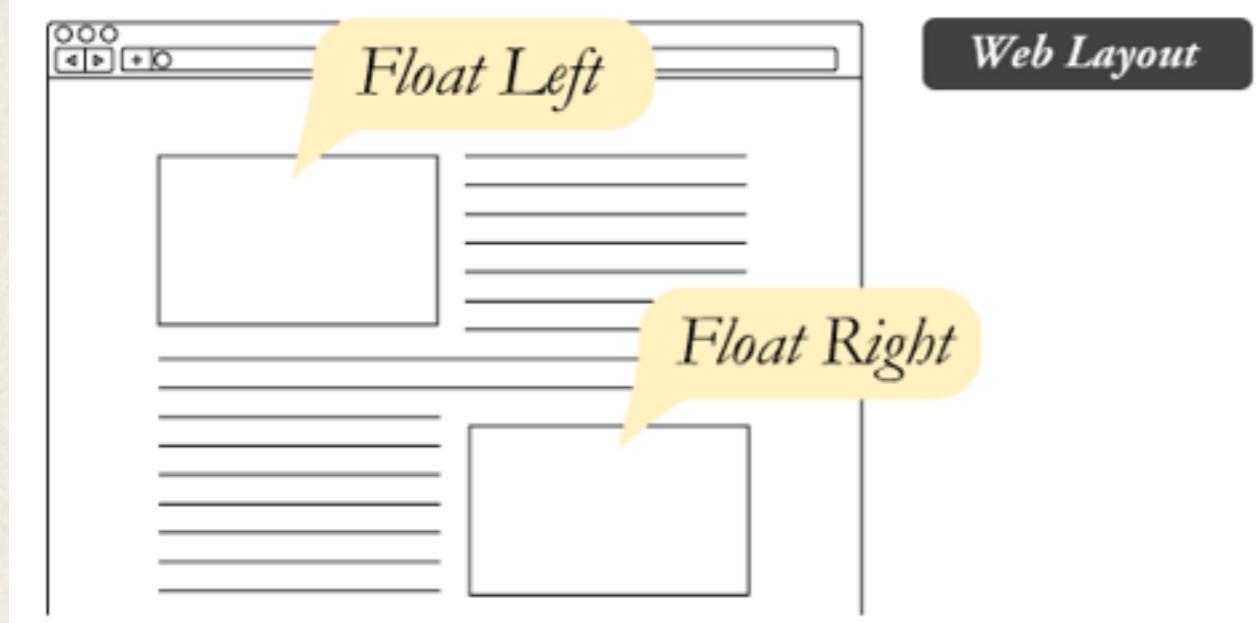
Box Model Caveats: Width

- ❖ { 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

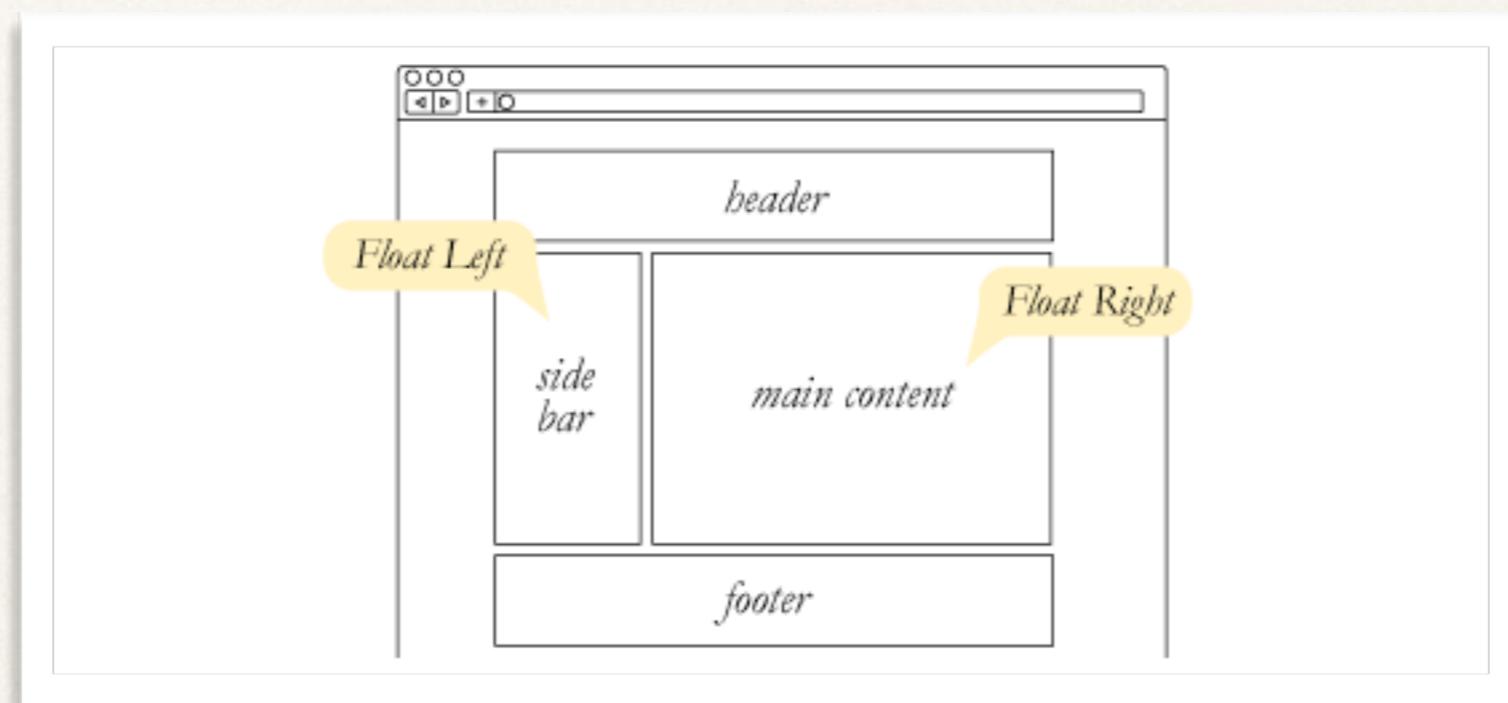


Print Layout



Web Layout

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/>

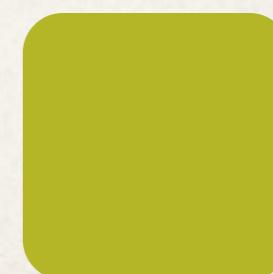
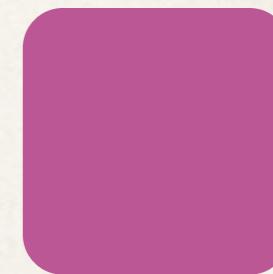
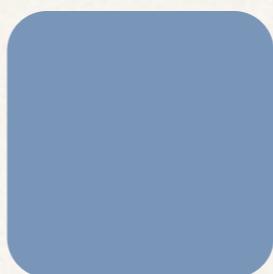
Floated Insights

- * 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

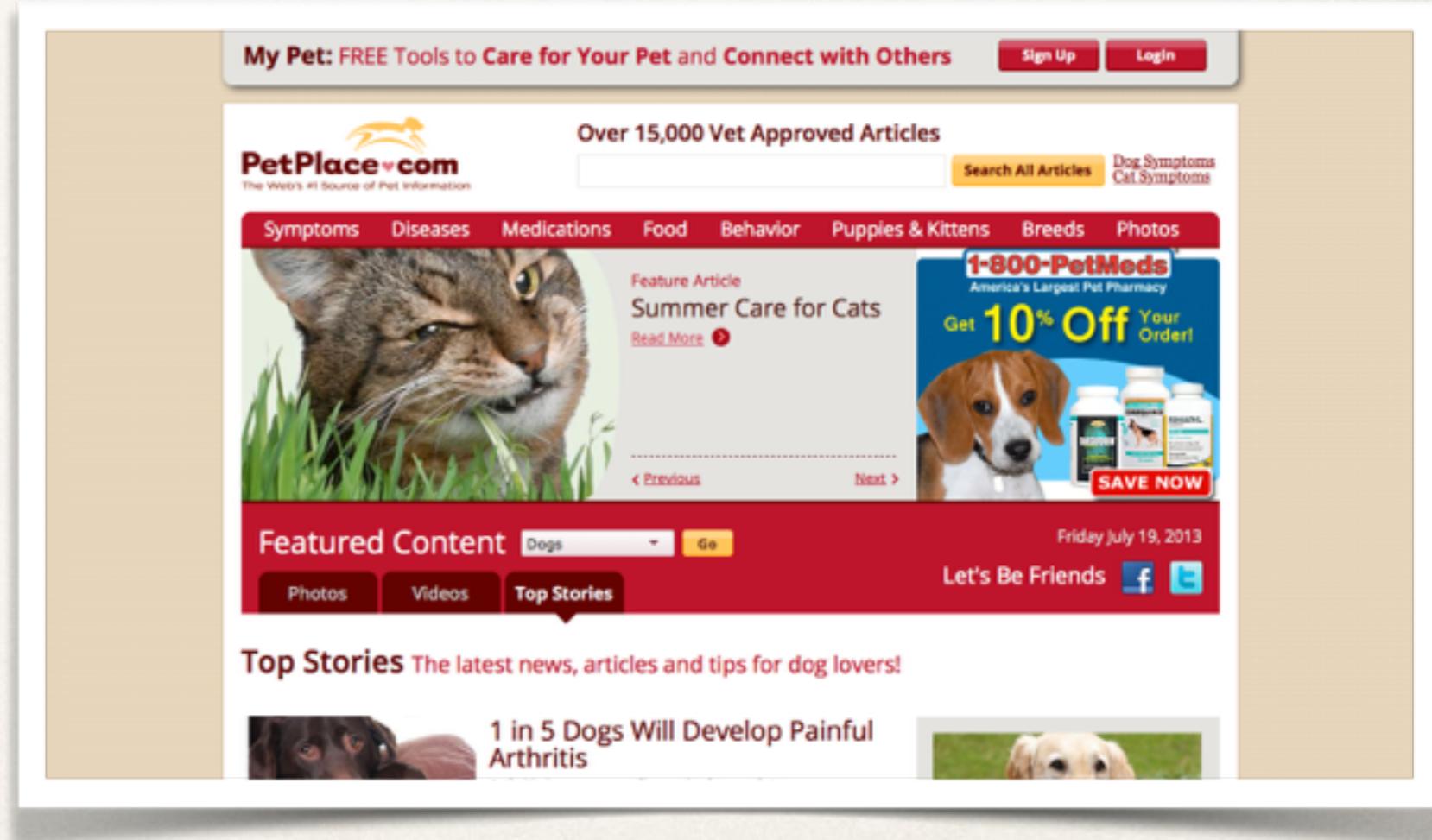


Page Layouts

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

Fixed Layout

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



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">



<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:

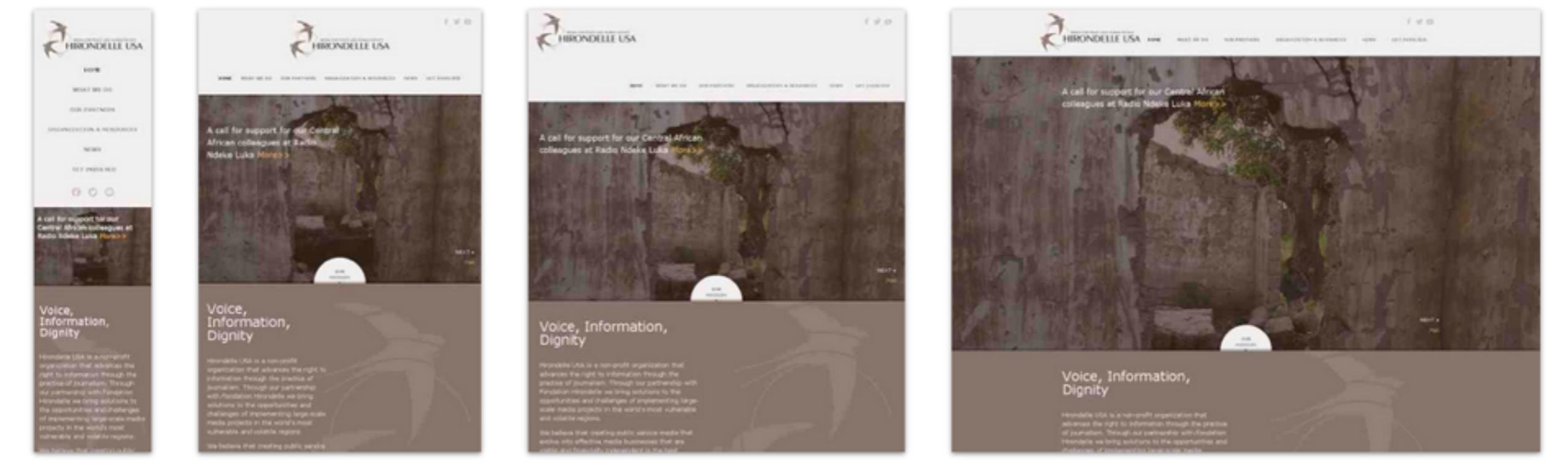
How To Build Fluid Layout

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

Responsive Layout

Hirondelle USA

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Building Responsive Layouts

- ❖ Define break points
- ❖ Write media queries
- ❖ Mobile first

Building Responsive Layouts

```
/* Extra small devices (phones, less than 768px) */
/* No media query since this is the default in Bootstrap */

/* Small devices (tablets, 768px and up) */
@media (min-width: @screen-sm-min) { ... }

/* Medium devices (desktops, 992px and up) */
@media (min-width: @screen-md-min) { ... }

/* Large devices (large desktops, 1200px and up) */
@media (min-width: @screen-lg-min) { ... }
```

Bootstrap Grid

.col-md-1											
.col-md-8						.col-md-4					
.col-md-4				.col-md-4				.col-md-4			
.col-md-6						.col-md-6					

Mixed Grid

```
<div class="row">
  <div class="col-xs-12 col-md-8">.col-xs-12 .col-md-8</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
</div>

<div class="row">
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
  <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
</div>

<div class="row">
  <div class="col-xs-6">.col-xs-6</div>
  <div class="col-xs-6">.col-xs-6</div>
</div>
```

Nested Grid

```
<div class="row">
  <div class="col-sm-9">
    Level 1: .col-sm-9
    <div class="row">
      <div class="col-xs-8 col-sm-6">
        Level 2: .col-xs-8 .col-sm-6
      </div>
      <div class="col-xs-4 col-sm-6">
        Level 2: .col-xs-4 .col-sm-6
      </div>
    </div>
  </div>
</div>
```

Grid Lab #1

- ❖ Implement a main content and sidebar layout
- ❖ For smaller screens place sidebar below content
- ❖ Starter:
[http://codepen.io/ynonp/pen/
NRPpwd?editors=110](http://codepen.io/ynonp/pen/NRPpwd?editors=110)

Box Of Rain

Look out of any window any morning, any evening, any day Maybe the sun is shining birds are winging or rain is falling from a heavy sky - What do you want me to do, to do for you to see you through? this is all a dream we dreamed one afternoon long ago Walk out of any doorway feel your way, feel your way like the day before Maybe you'll find direction around some corner where it's been waiting to meet you - What do you want me to do, to watch for you while you're sleeping? Well please don't be surprised when you find me dreaming too

Look into any eyes you find by you, you can see clear through to another day I know it's been seen before through other eyes on other days while going home - What do you want me to do, to do for you to see you through? It's all a dream we dreamed one afternoon long ago

Walk into splintered sunlight Inch your way through dead dreams to another land Maybe you're tired and broken Your tongue is twisted with words half spoken and thoughts unclear What do you want me to do to do

Did you Know ?

"Box of Rain" is a song by the Grateful Dead, from their 1970 album American Beauty. The song was composed by bassist Phil Lesh and lyricist Robert Hunter, and sung by Lesh. In later years, the song was a favorite and the crowd would shout "Let Phil sing!" to hear the song.[1]

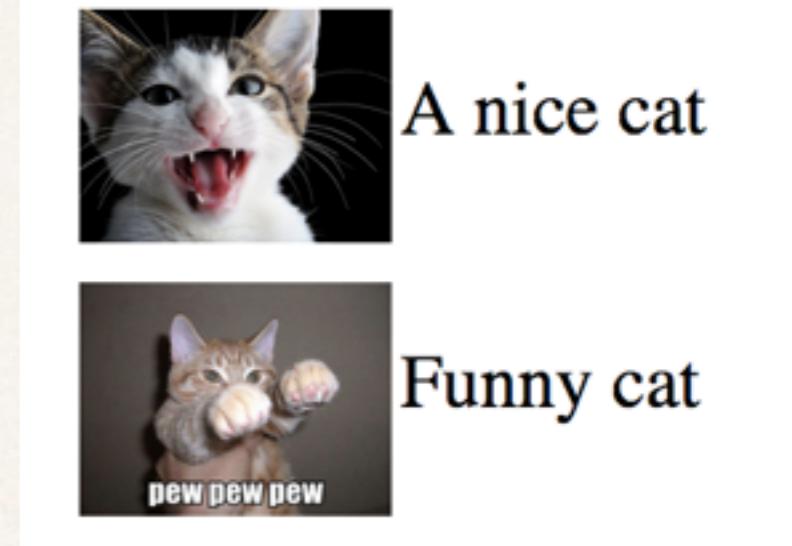
Grid Lab #2

- Implement a list of images and titles.
- When more screen is available title should be placed next to the image
- Starter:
<http://codepen.io/ynonp/pen/zKxkPL>

small screen



medium screen



Grid Lab #3

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

The image shows a registration form titled "Register5!" with a red ribbon banner that says "100% HTML5". The form has three input fields: "Name" (Michael), "Email" (michael@gmail.com), and "Password" (represented by a series of dots). Each field has a green checkmark to its right, indicating validation. A message at the top says "Go on, you're doing great!" with a progress bar. A message at the bottom says "Thanks for filling out the form!" and a "Register5!" button.

Name	Michael	✓
Email	michael@gmail.com	✓
Password	*****	✓

Go on, you're doing great!

Register5!

Thanks for filling out the form!

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

THIS IS THE WEB.



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. 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. 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

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										*Usage stats:	Global
Method of positioning elements in horizontal or vertical stacks.										Support:	35.02%
Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	Total:	43.78%
										2.1 -webkit-	78.8%
										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 -webkit-	4.2 -webkit-	10.0 -webkit-		
Near future	11.0	23.0	29.0	7.0 -webkit-		7.0 -webkit-					
Farther future		24.0									

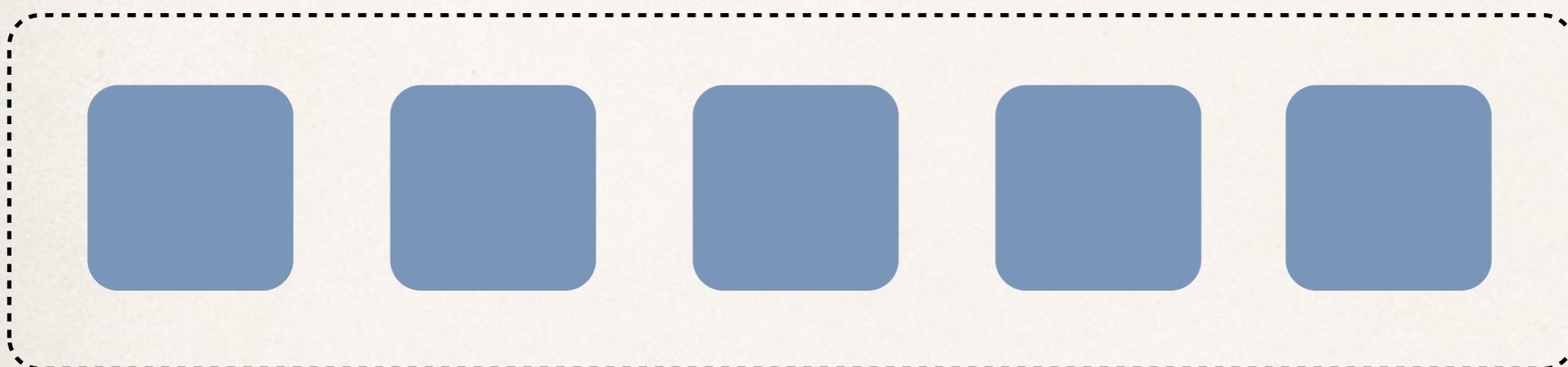
[Notes](#) [Known issues \(1\)](#) [Resources \(4\)](#) [Feedback](#) [Edit on GitHub](#)

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.

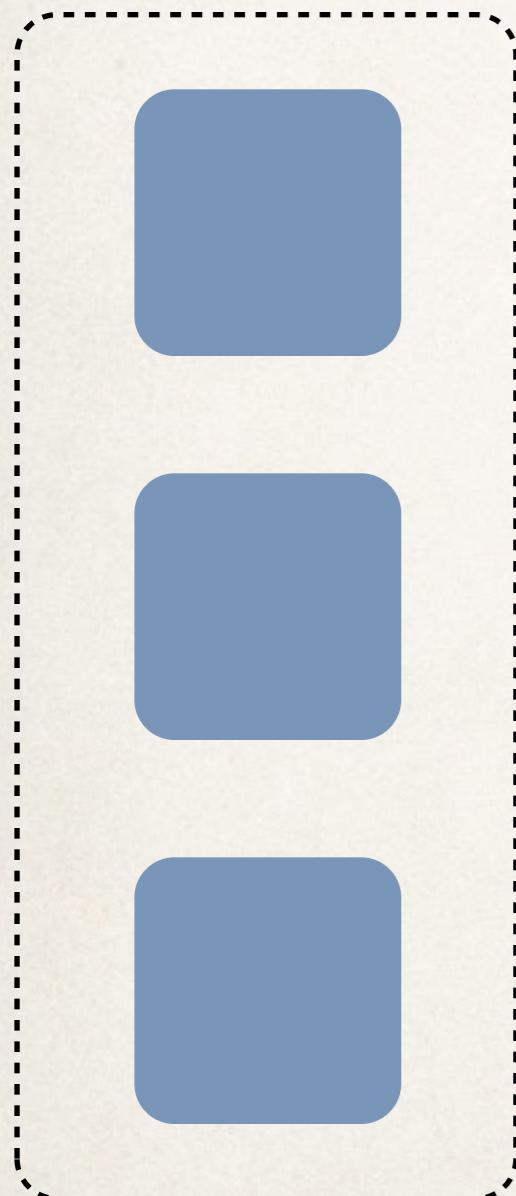
Flexbox to the rescue

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

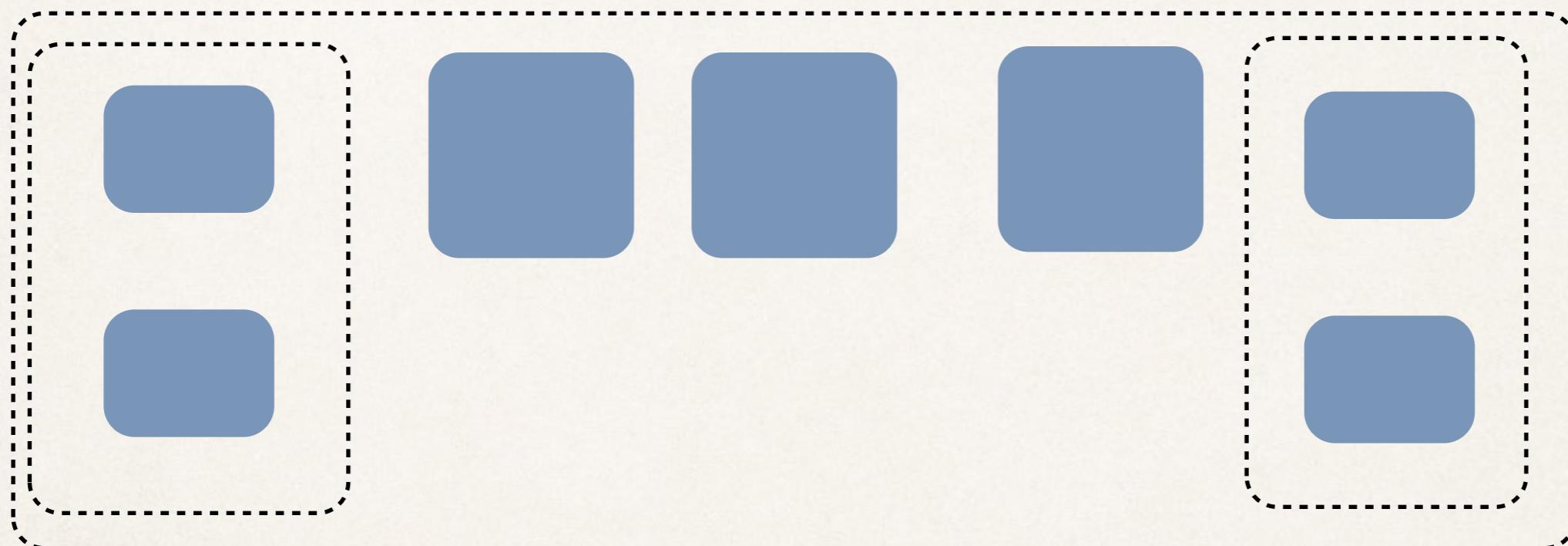
Horizontal flexbox



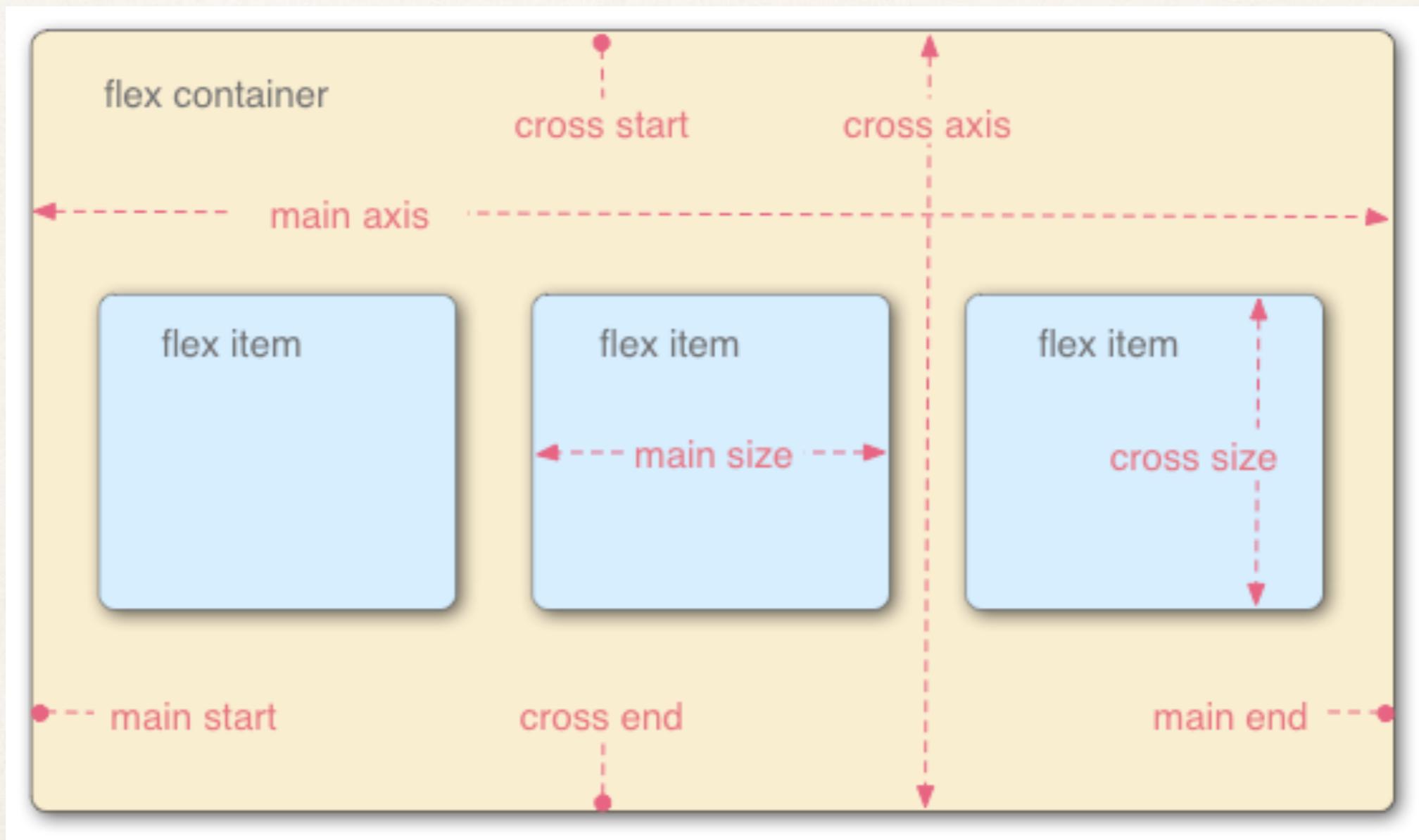
Vertical flexbox



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 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



Agenda

CSS: past, present and future

2

Page layouts & Grid

36

Responsive components

86

Responsive Components

- ❖ Forms
- ❖ Images
- ❖ Navigation
- ❖ Video
- ❖ Content
- ❖ Buttons
- ❖ Prompts

Responsive Forms

- ❖ We need forms to work for everyone

Responsive Forms

- ❖ We need forms to work for everyone
 - ❖ Show on all devices
 - ❖ Native form controls
 - ❖ Client-side validation
 - ❖ Easy to use

Responsive Forms: Foundation

- ❖ Style is determined by `input["type"]` so usually no classes are required
- ❖ Use normal grid for layout

Responsive Forms: Vertical

Vertical Labels

Label

Longer Label

Even Longer Label

One More Label
 Value 1
 Value 2

Primary Action

Advantage:
Adjacent Label and corresponding Input field

Advantage:
Rapid Processing

Label

Longer Label

Even Longer Label

One More Label
 Value 1
 Value 2

Primary Action

Disadvantage:
Increased vertical space

Responsive Forms: Horizontal

Left-Justified Horizontal Labels

Label:

Longer Label: Select Value ▾

Even Longer Label:

One More Label: Value 1
 Value 2

Primary Action

Disadvantage:
Adjacency of Label and corresponding Input field

Advantage:
Easy to scan labels

Label:

Longer Label: Select Value ▾

Even Longer Label:

One More Label: Value 1
 Value 2

Primary Action

Advantage:
Reduced vertical space

Using Native Form Controls

Search (search)

Telephone (tel)

I

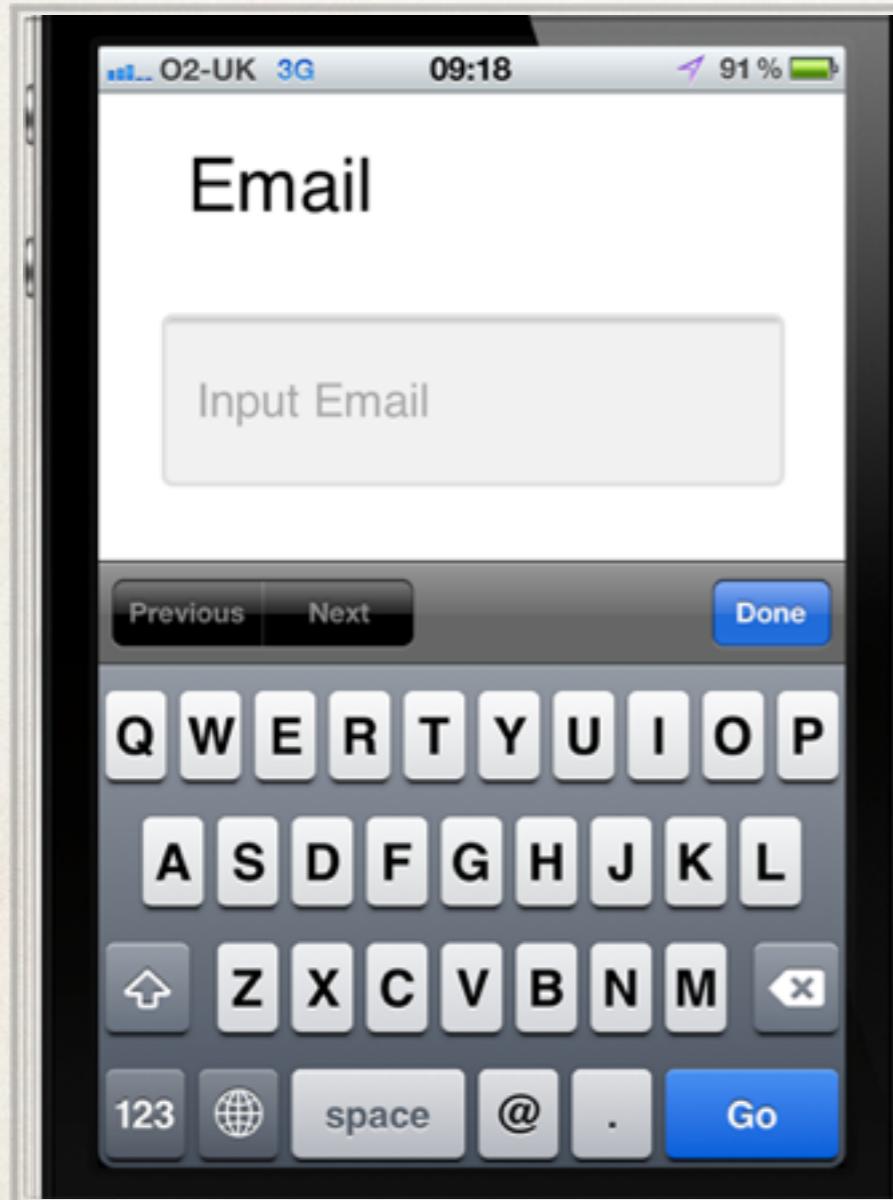
URL (url)

Previous Next AutoFill Done

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
+ * #	0	✖

```
<input type="tel" />
```

Using Native Form Controls



```
<input type="email" />
```

Using Native Form Controls



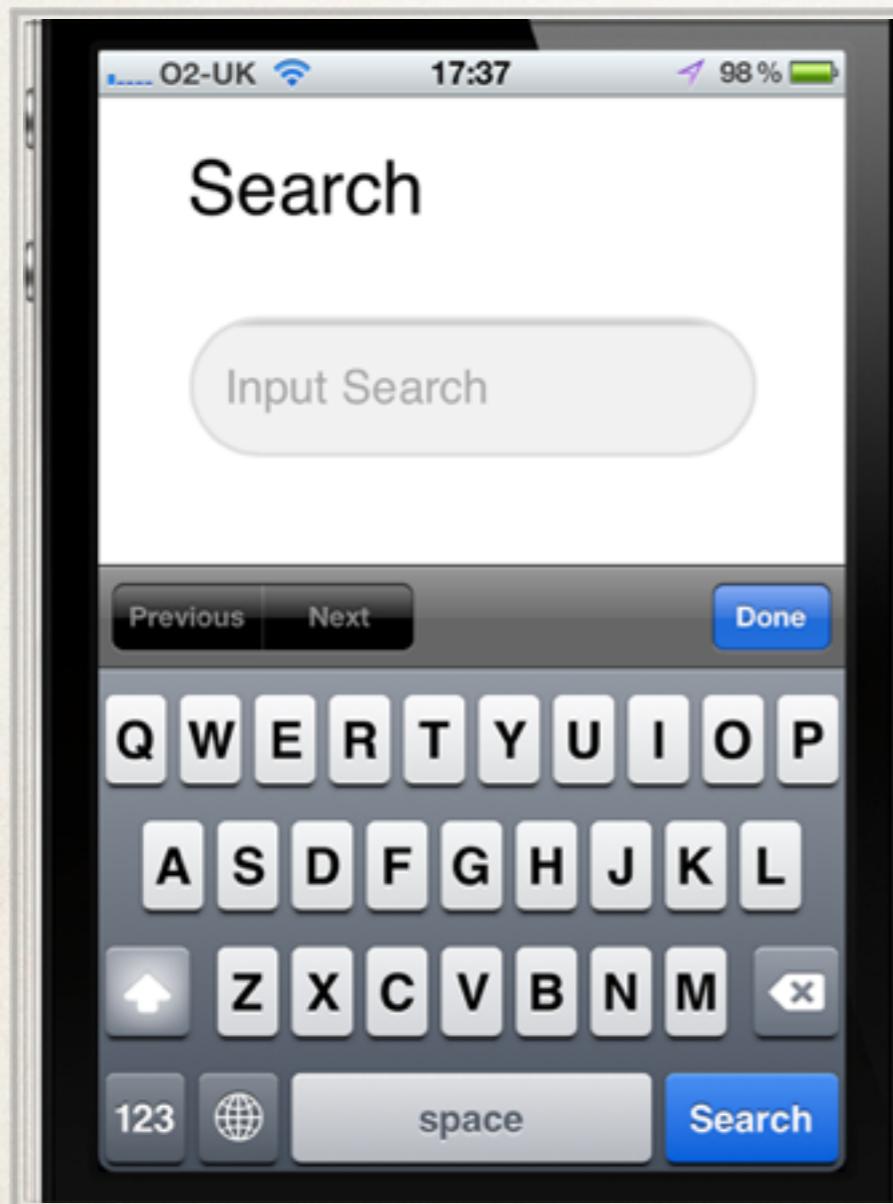
```
<input type="number" />
```

Using Native Form Controls



```
<input type="date" />
```

Using Native Form Controls



```
<input type="search" />
```

Bootstrap Forms

- ✿ Bootstrap already supports many form styles
- ✿ Beware - using bootstrap styles will make your forms look familiar...
- ✿ <http://getbootstrap.com/css/#forms>

Bootstrap Forms: Demo

```
<form>
  <div class="form-group">
    <label for="exampleInputEmail1">Email address</label>
    <input type="email" class="form-control" id="exampleInputEmail1"
placeholder="Email">
  </div>
  <div class="form-group">
    <label for="exampleInputPassword1">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1"
placeholder="Password">
  </div>
  <div class="form-group">
    <label for="exampleInputFile">File input</label>
    <input type="file" id="exampleInputFile">
    <p class="help-block">Example block-level help text here.</p>
  </div>
  <div class="checkbox">
    <label>
      <input type="checkbox"> Check me out
    </label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
</form>
```

Forms Lab #1

- ❖ Create the following vertical form

The image shows a vertical form with the following fields:

- Username**: An input field.
- Email address**: An input field.
- Enter your birthday date**: An input field for dates in mm/dd/yyyy format.
- Even Longer Label**: A label for two radio buttons.
 - Value 1
 - Value 2
- Do It**: A blue rectangular button at the bottom.

Forms Lab #2

- ✿ Create the following horizontal form
- ✿ For smaller screen, form should display as vertical

The form consists of five input fields arranged horizontally. From top to bottom: 1. A text input field labeled "Username". 2. A text input field labeled "Email address". 3. A text input field labeled "Enter your birthday date" with a placeholder "mm/dd/yyyy". 4. A text input field labeled "Even Longer Label". 5. A group of two radio buttons labeled "Value 1" and "Value 2". Below the radio buttons is a blue rectangular button labeled "Do It".

Username	<input type="text"/>
Email address	<input type="text"/>
Enter your birthday date	<input type="text"/> mm/dd/yyyy
Even Longer Label	<input type="radio"/> Value 1 <input type="radio"/> Value 2
<input type="button" value="Do It"/>	

Thanks For Listening

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