

Grids and Mocks

MICHAEL BERNSTEIN
CS 247

THANKS TO SCOTT KLEMMER AND MANEESH AGRAWALA

Sketch 3 workshop

TA-led crash course
Tonight 1/11, 7-9pm, Gates 219
If you're locked out, call (650) 427-0379

Web programming
diagnostic

Five questions

Not graded, but if you get less than 4/5, we recommend that you attend our workshop tomorrow

Which tags show important text in a semantic way? (think for web accessibility)

- 1. <i>,
 - 2. <h1>, <h2>, <h3>, etc
 - 3. ,
-
- a. 1, 2
 - b. 2, 3
 - c. 1, 3
 - d. all of the above

Which tags show important text in a semantic way? (think for web accessibility)

- 1. <i>,
 - 2. <h1>, <h2>, <h3>, etc
 - 3. ,
-
- a. 1, 2
 - b. 2, 3
 - c. 1, 3
 - d. all of the above

What is the maximum number of elements that can be selected by the following selectors?

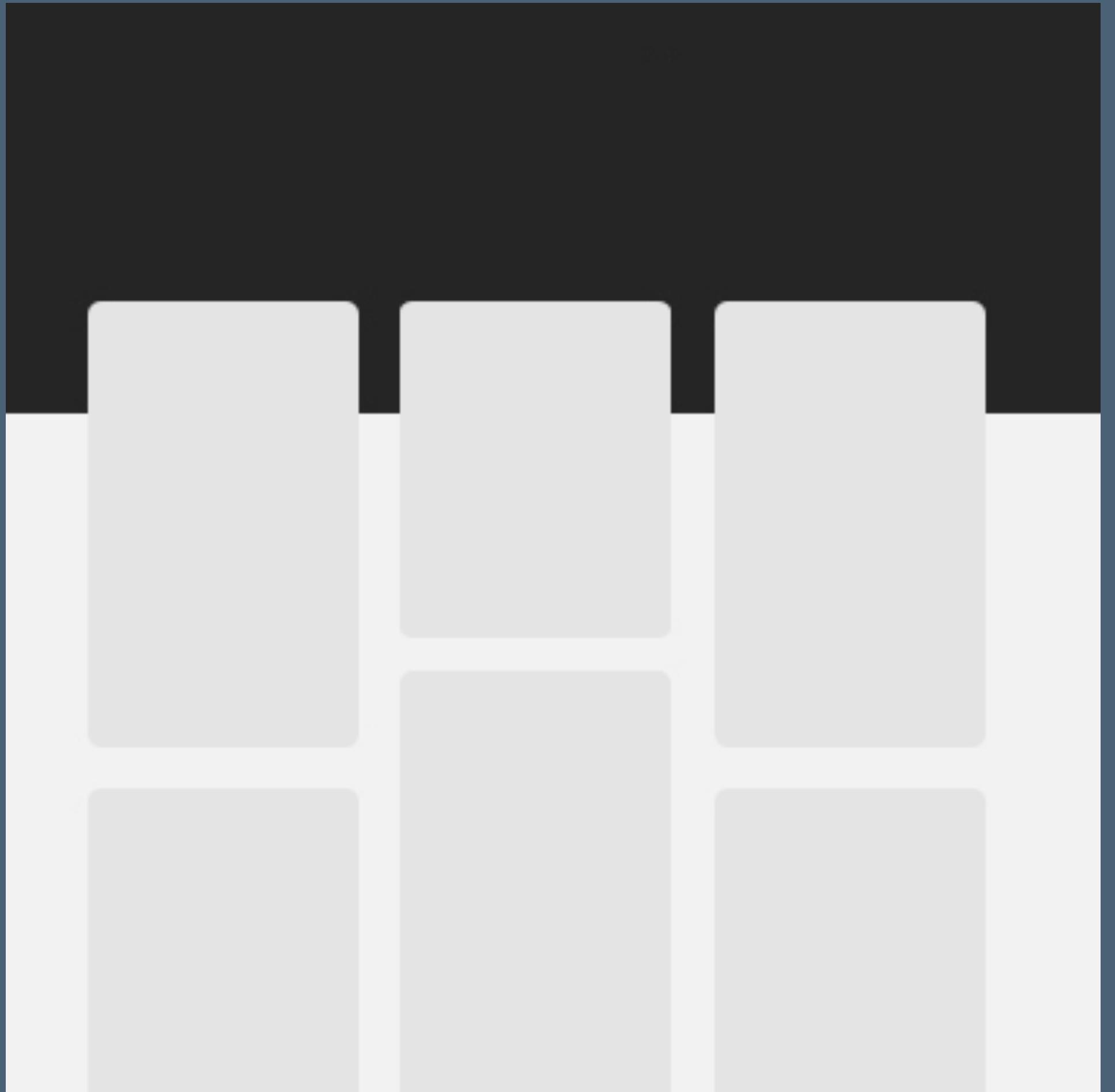
1. `#intro-slide .title`
 2. `.tab #selection`
-
- a. (1) only one, (2) more than one
 - b. (1) more than one, (2) only one
 - c. (1) more than one, (2) more than one

What is the maximum number of elements that can be selected by the following selectors?

1. `#intro-slide .title`
 2. `.tab #selection`
-
- a. (1) only one, (2) more than one
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 - c. (1) more than one, (2) more than one

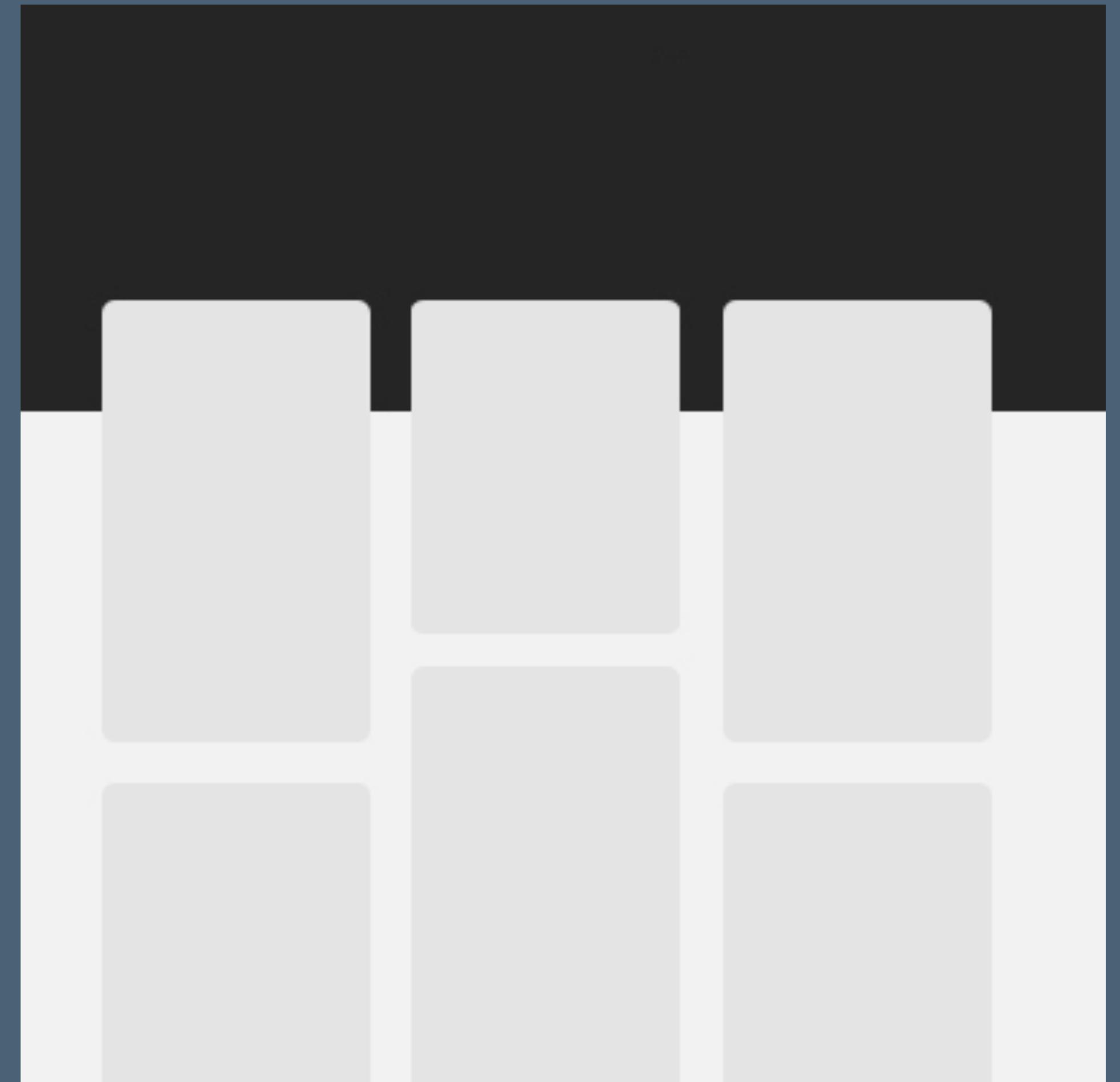
How would you style an element (the rounded grey box) such that it overlaps another element (the black background)?

- 1. negative padding-top on the box
 - 2. negative margin-top on the box
 - 3. absolute position the boxes,
relative position background
-
- a. 1, 3
 - b. 2, 3
 - c. 1, 2, 3
 - d. none



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 - 2. negative margin-top on the box
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 - d. none



Where is the correct place to insert JavaScript?

- 1. in the <head> section
 - 2. in the <body> section
 - 3. in a separate file
-
- a. 1, 3
 - b. 2, 3
 - c. 1, 2, 3
 - d. none

Where is the correct place to insert JavaScript?

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 - 2. in the <body> section
 - 3. in a separate file
-
- a. 1, 3
 - b. 2, 3
 - c. 1, 2, 3
 - d. none

What does this piece of jQuery / js code do?

```
<script>  
  $(".trigger-btn").fadeIn(500);  
  $(".trigger-btn").attr("color", "red");  
  $(".trigger-btn").fadeOut(3);  
</script>
```

- a. It will fade the element in, then change the color to red
- b. No element will appear
- c. A red element will appear, then fade away
- d. Indeterminate; depends on what's in the browser's timer queues

What does this piece of jQuery / js code do?

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Web technologies workshop

TA-led crash course
Tomorrow 1/12, 7-9pm, Gates 219

Last time

- Information scent
- Location and layout
- Negative space

Grids

a.k.a. “shrimp and grids”



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Movies
Music
Obituaries
Real Estate
Sunday Review
T Magazine
Television
Theater
Travel
Weddings / Celebrations

MULTIMEDIA
Interactives
Photography
Podcasts
Video

TOOLS & MORE
Alerts
Beta 620
Corrections
Mobile
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Learning Network
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NYT Store
Public Editor
Theater Tickets
Times Machine
Times Limited
Times Skimmer
Times Topics
Times Wire

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Court Dissolves Parliament in Egypt in Blow to Islamists

By DAVID D. KIRKPATRICK
5 minutes ago

Egypt's high court, which also blessed the presidential bid of Hosni Mubarak's last prime minister Thursday, appeared to be engaged in a frontal legal assault on the Muslim Brotherhood.

• Post a Comment | Read (189)
• The Lede: Reaction in Egypt 5:37 PM ET

With Justices Set to Rule on Health Law, 2 Parties Strategize

By JONATHAN WEISMAN and MICHAEL D. SHEAR

If the measure is not thrown out, House Republicans plan to force a repeal vote, while top officials at the White House are projecting confidence that the justices will rule in their favor.

• Interactive: How the Supreme Court Could Rule

U.N. Monitors Find Vast Devastation in Syrian Village

By RICK GLADSTONE 3:16 PM ET

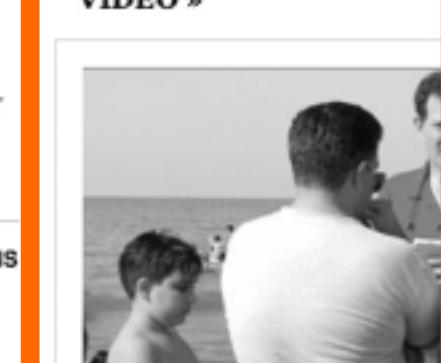
Stores were looted and homes abandoned in Al Heffa, besieged for days by Syrian forces, and the smell of death hung in the air, said United Nations monitors.

• Syrian Liberators, Bearing Toy Guns 5:45 PM ET

MORE NEWS

• Jury Sides With Costner in BP Spill Lawsuit 18 minutes ago
• Mets Sweep the Rays 6:42 PM ET

VIDEO »



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CAMPAGN 2012



Doug Mills/The New York Times; Kirk Irwin for The New York Times

Candidates Go Head to Head on Economy

By HELENE COOPER and MICHAEL BARBARO 57 minutes ago

President Obama acknowledged that the election would turn on the divergence between him and Mitt Romney, who was also in Ohio, on how to achieve economic revival.

• Post a Comment | Read (203)
• Romney Says Obama's Actions Don't Match Words

Tests Put Cave Art in the Age of Neanderthals

By JOHN NOBLE WILFORD

Paintings on cave walls in Spain are far older than previously thought — some of them more than 40,000 years old, scientists said.



Merkel Stresses Limits to Germany's Strength

By NICHOLAS KULISH and PAUL GRETTER 46 minutes ago

Chancellor Angela Merkel told German lawmakers the country cannot prop up the faltering euro zone.

• Switzerland and Britain Gird Against the Storm 8:05 PM ET
• Norris: Conspiracy Theories Fly Full Graphic: The Crisis Now

At U.S. Airports, a Building Boom Takes Hold

By JAD MOUAWAD

The nation's biggest airports are in the midst of major renovations or expansions that, taken together, amount to some of the largest infrastructure projects in America.



Stanford Gets 110 Years in 7 Billion Ponzi Case

By CLIFFORD KRAUSS 7:36 PM ET

A federal jury had convicted Roger W. Stanford of 13 out of 14 counts of fraud in connection with a global scheme.

ON THE BLOGS

• On Par: Live Blog on the U.S. Open
• Bits: Apps I Want to Go Away

More Video | Multimedia »



Sunday Review



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Sunday Review

WILLIAM J. BROAD

News Analysis: Iran's High Card at the Nuclear Negotiation Table

Iran has increased uranium enrichment and is now producing a form close to bomb grade.

MARKETS »

At 9:05 PM ET

JAPAN

Nikkei 8,570.65

+1.76

+0.02%

DATA DELAYED AT LEAST 15 MINUTES

CHINA

HangSeng 18,808.40

-218.12

-1.15%

+0.00%

DATA DELAYED AT LEAST 15 MINUTES

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OPINION »

Kristof: Hugs From Iran | Persian Translation

Editorial: Jamie Dimon

Greenhouse: Proxy War?

Townies: Russian Heart

Op-Ed: How Drones Help Al Qaeda

Taking Note: Gingrich

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dealbook.nytimes.com



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MOVIES »

Heroes, Villains and the Invisible

A look at the offerings in the 2012 Human Rights Watch Film Festival.

A Solitary Retreat

"Your Sister's Sister" is Lynn Shelton's new comedy.

• Interview: Lynn Shelton
• Scriptless in Seattle

WATCH THE TRAILER NOW

A Smell of Wine and Cheap Perfume

Tom Cruise stars in "Rock of Ages."

• Slide Show

YOUR SISTER'S SISTER IN SELECT THEATERS JUNE 15

REAL ESTATE AUTOS JOBS

House Hunting in ... Italy

It's a buyers' market in Italy, where house prices have steadily declined since 2010.

• Slide Show

FIND PROPERTIES

• Go to Real Estate Section

• Search for Properties

• Download the Real Estate App

• Commercial Real Estate

• Video Showcase: Real Estate

• Post an Ad

845 West End Avenue

Expansive Pre-War

Condo Living from

\$1,995 M

LOREM IPSUM

lorem ipsum dolor sit amet,
consectetur adipisicing elit, sed do
eiusmod tempor incididunt ut labore et
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officia deserunt mollit anim id est
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Lorem Ipsum!

dolor sit amet

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Placeholder Text

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Lorem ipsum dolor sit amet

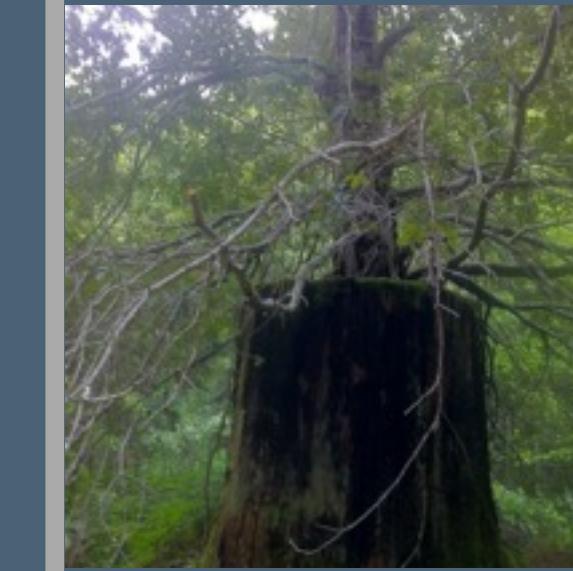
Consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.



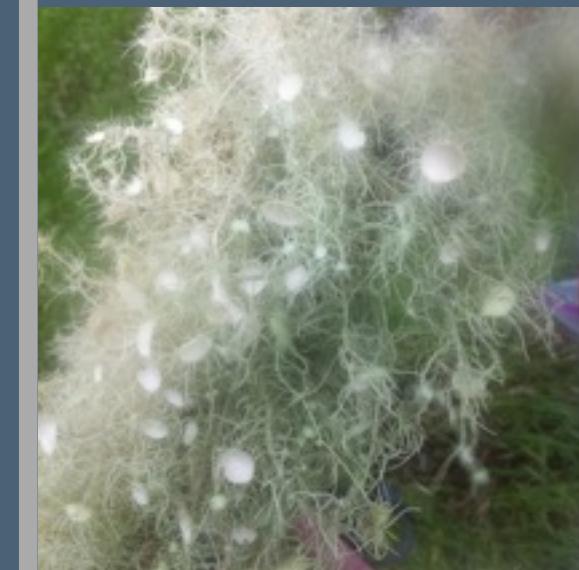
LOREM



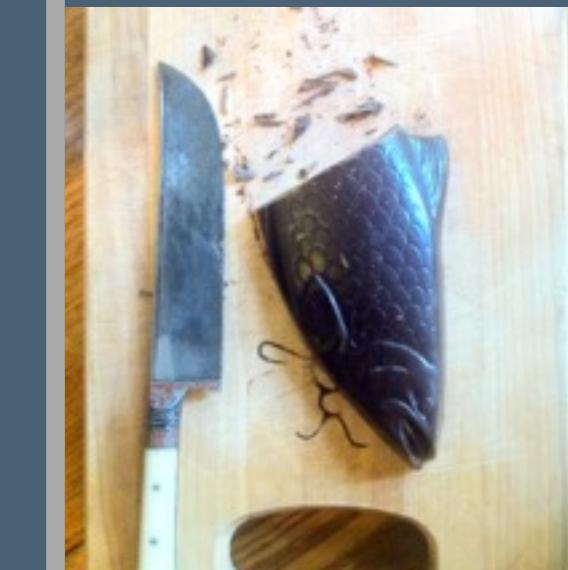
IPSUM



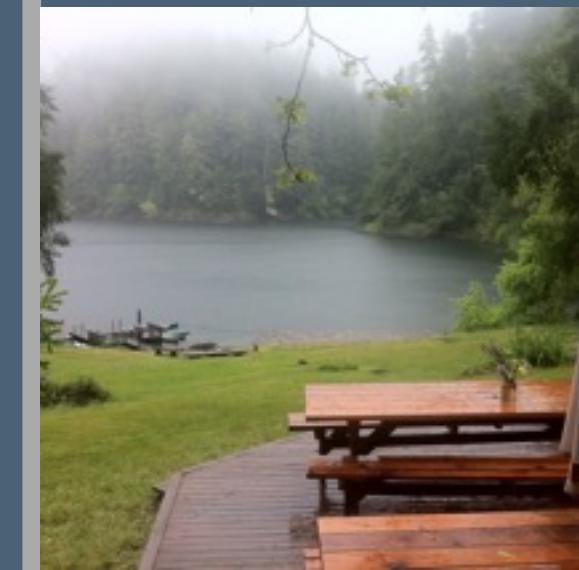
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Michael

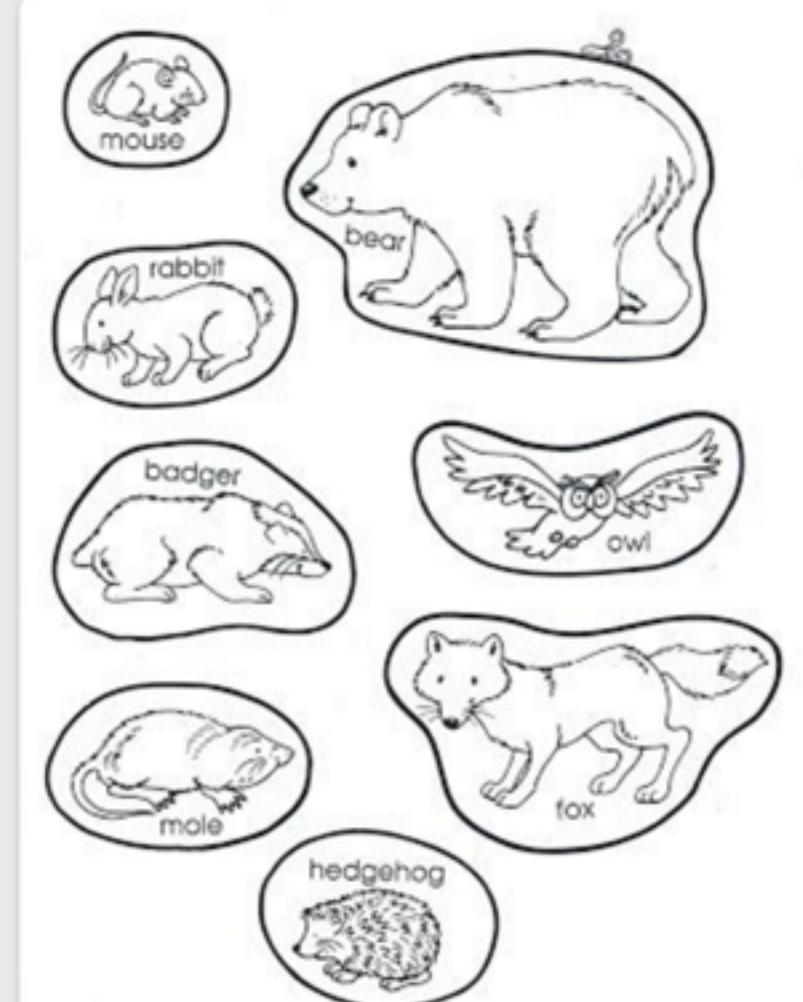


Don't like the Pins you see?

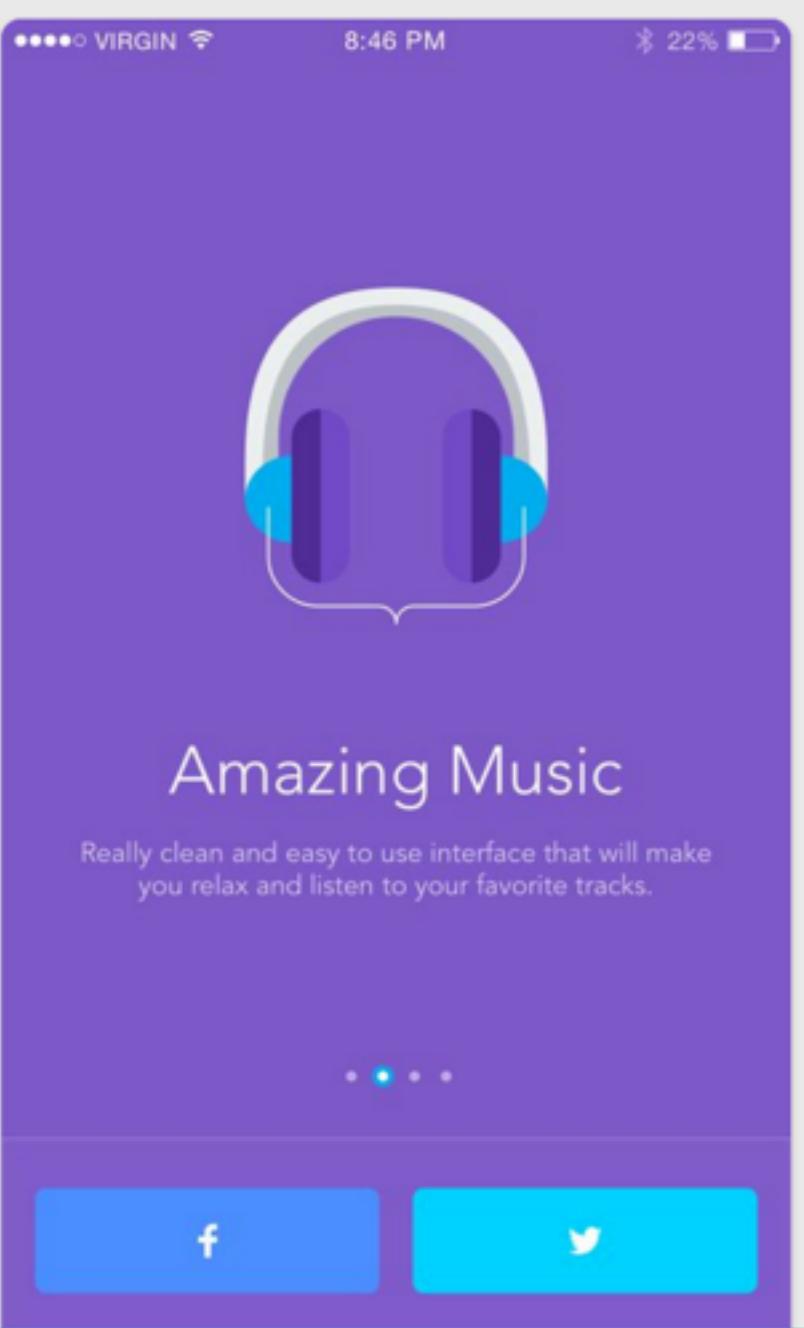
[Follow new interests](#)**d** from Dwell

L.A. Renovation Respects Midcentury Bones (While Adding Some Flair)

Crestwood Renovation livingroom with redwood panelling.

Found in Design**The Mitten: The Animals****Found in Science**

rosa muerta by robert stone comes to life in california

Found in Architecture**M from Mashable**

10 Gadgets for Your High-Tech Home

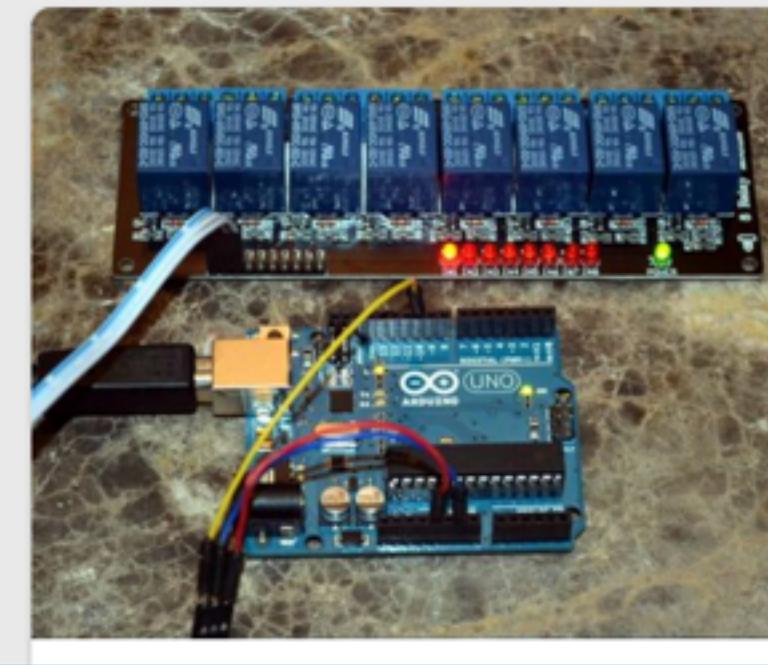
We already carry around a ton of digital capability in our smartphones, so we now demand the same intelligence from our houses.

134 38 2

Found in Technology**B from Brit + Co**

10 High-Tech Gadgets You Need in Your Bedroom

10 High-Tech Gadgets You Need in Your Bedroom via Brit + Co.

Found in Electronicscoffeeandcastiel:austriea:

man you know what I want? a superhero series where they have powers that 100% contradict their personalities. a fishermans daughter who lives by the sea, swims every day, learns that she can control fire. a boy who's mortified of heights but realizes he can use antigravity and hates it. someone who was bitten by a dog as a child, suffers extreme fear around animals, can now communicate with them. they're all disgusted by their powers.

write a book

227,741 notes

**Found in Books**

Wow! David Christian tells the history of our world in 18 minutes. "Backed by stunning illustrations, Christian narrates a complete history of the universe, from the Big Bang to the Internet,

 myspace

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SEATGEEK

Top 5 Tour Announcements of the Week

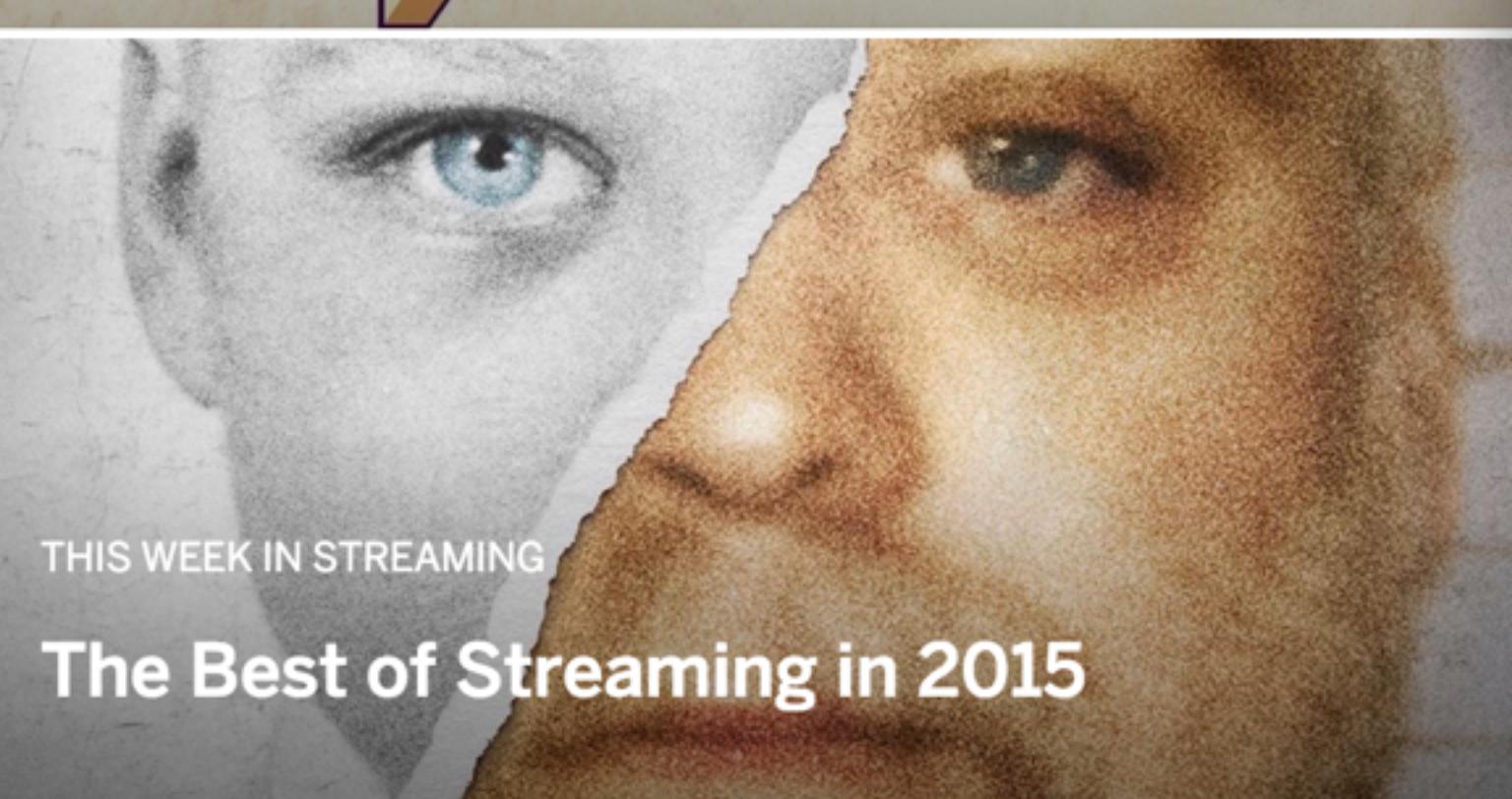
•••



SHOWTIME

Watch the 'Shameless' Season 6 Premiere Before It Airs!

SHAMELESS



THIS WEEK IN STREAMING

The Best of Streaming in 2015



Listen to Shakira's New Song "Try Everything"



Liskka: 100 Percent Electrofeels



Ever Googled Someone? Do A "Deep Search"

[COVER STORIES](#)[FOLLOWING](#)[EXPLORE](#)

COVER STORIES

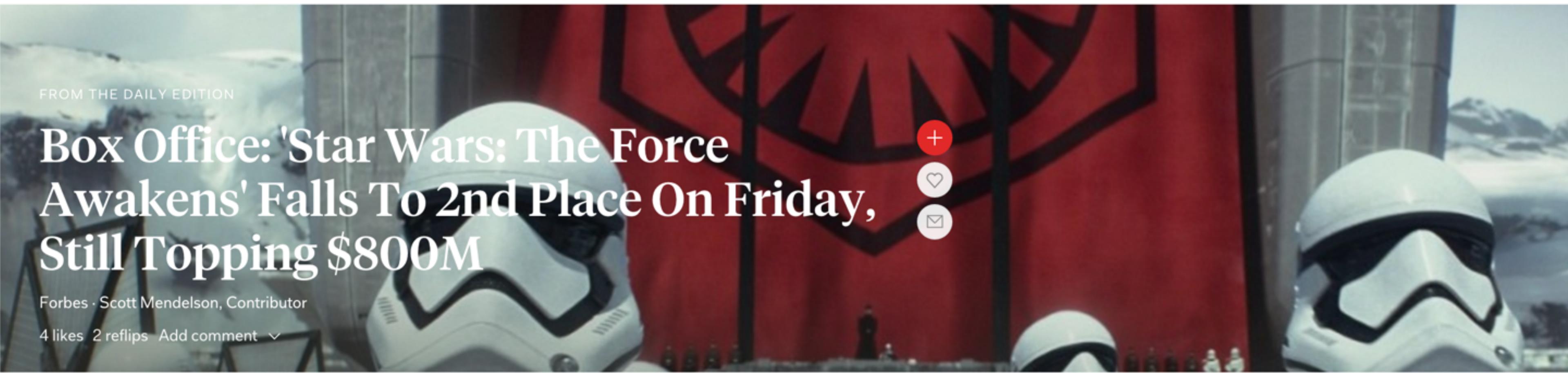
Highlights from everything you follow

FROM THE DAILY EDITION

Box Office: 'Star Wars: The Force Awakens' Falls To 2nd Place On Friday, Still Topping \$800M

Forbes · Scott Mendelson, Contributor

4 likes 2 reflips Add comment ▾



A large image showing two Stormtroopers from Star Wars: The Force Awakens. They are standing in front of a red wall with a large black stylized tree or logo on it. The background shows a snowy landscape.

FROM THE DAILY EDITION



Lakers have explored trades, but no 'blockbuster' on horizon, GM says

CBS Sports · By Matt Moore | NBA writer

FROM THE DAILY EDITION



Facebook.car joins Apple.car, but neither means a car is coming

Mashable · Adario Strange

Nearly everyone seems to want an Apple

FROM THE DAILY EDITION



Cologne New Year assault reports more than double in number

DW English

Cologne police have said the number of

FROM THE DAILY EDITION



Boeing Meets Its 2015 Order Target at the 11th Hour

Fox Business · By Adam Levine-Weinberg

Boeing spent much of the past year trying



Predicting future climates

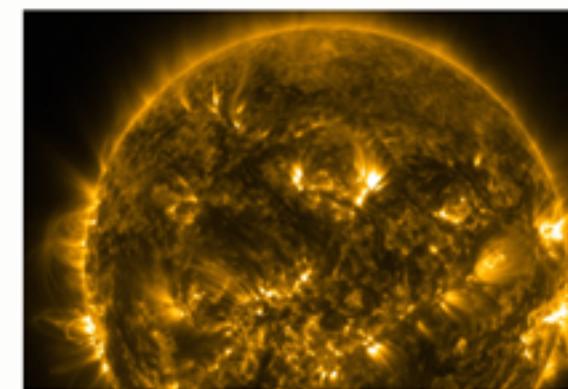
Understanding the effects of climate change



Top Stories



Marine extinctions
Industrial revolution of the oceans will imperil wildlife, says Stanford scientist.



Solar flares
Artificial intelligence helps Stanford physicists predict communication-disrupting explosions.



Taking flight
Stanford scientist invents device that measures forces generated by a bird's wings.

MORE HEADLINES

- > Stanford to host White House Summit on Cybersecurity and Consumer Protection
- > Screening for diseases doesn't necessarily save lives
- > Researchers isolate stem cell that gives rise to bones, cartilage

 [MORE NEWS](#)



2 DAYS
AGO

How well your immune system works depends more on your environment than on your genes, a [@StanfordMed](#) study suggests: stanford.io/lud2GHA

 [@Stanford](#)

At Stanford



D.SCHOOL The Hasso Plattner Institute of Design is Stanford's hub for innovation and design thinking.

 [MORE SITES](#)

Events

- JAN 19 Concert: Live Electronics 7:30 p.m.
- JAN 20 An Evening With David Talbot 7:30 p.m.
- JAN 21 Reading: Louise Glück 8:00 p.m.

 [EVENT CALENDAR](#)

Athletics



Men's tennis
What to watch for as the Cardinal opens its dual match season this week.

 [GOSTANFORD.COM](#)

SCHOOLS

Business
Earth Sciences

DEPARTMENTS

Departments A - Z
Interdisciplinary

HEALTH CARE

Stanford Health Care
Stanford Children's

ABOUT STANFORD

Facts
History

RESOURCES

A - Z Index
Campus Map

 Apply

 Help

Architecture of a grid

- Grid columns

The Stanford University website homepage is displayed, illustrating a grid-based layout structure. Red vertical lines are overlaid on the page to show the columns. The header features a navigation bar with links: About Stanford, Admission, Academics, Research, Campus Life, STUDENTS, FACULTY / STAFF, PARENTS, and ALUMNI. Below the header is a large banner image of Earth. To the right of the banner, a headline reads "Predicting future climates" with a subtext "Understanding the effects of climate change". A "Top Stories" section follows, containing three articles with images: "Marine extinctions" (image of a seal), "Solar flares" (image of the sun), and "Taking flight" (image of a bird). Below these stories is a social sharing section with icons for Facebook, Twitter, LinkedIn, YouTube, Instagram, and a yellow link icon. The main content area includes sections for "At Stanford" (with a photo of people and a D.SCHOOL blurb), "Events" (listing three events: Concert: Live Electronics, An Evening With David Talbot, and Reading: Louise Glück), and "Athletics" (with a tennis ball icon and a blurb about men's tennis). The footer contains links for Schools, Departments, Health Care, About Stanford, and Resources, along with a "GO STANFORD.COM" button.

Architecture of a grid

- Grid columns
- Rows indicate where items get vertically aligned

The Stanford University website homepage is displayed with an overlaid orange grid. The grid highlights the structure of the layout, showing how content is organized into columns and rows.

Header: Stanford University (row 1, col 1), Web (row 1, col 2), People (row 1, col 3), Search web or people (row 1, col 4).

Top Navigation: About Stanford, Admission, Academics, Research, Campus Life, STUDENTS, FACULTY / STAFF, PARENTS, ALUMNI (row 2, columns 1-8).

Hero Section: A large image of Earth (row 3, columns 1-6). To its right is a dark box containing the text "Predicting future climates" and "Understanding the effects of climate change" (row 3, columns 7-8).

Top Stories (Row 4):

- Marine extinctions (with image of a seal) (row 4, column 1)
- Solar flares (with image of the sun) (row 4, column 2)
- Taking flight (with image of a bird) (row 4, column 3)

More Headlines (Row 5):

- Stanford to host White House Summit on Cybersecurity and Consumer Protection
- Screening for diseases doesn't necessarily save lives
- Researchers isolate stem cell that gives rise to bones, cartilage

More News (Row 6): MORE NEWS (with social media icons: Facebook, Twitter, Apple, YouTube, Instagram, LinkedIn) (row 6, columns 7-8).

At Stanford (Row 7): 2 DAYS AGO (with image of people) (row 7, column 1), How well your immune system works depends more on your environment than on your genes, a @StanfordMed study suggests: stanford.io/1ud2GHA (row 7, columns 2-8).

Events (Row 8): JAN 19 Concert: Live Electronics 7:30 p.m., JAN 20 An Evening With David Talbot 7:30 p.m., JAN 21 Reading: Louise Glück 8:00 p.m. (row 8, columns 2-8). Includes a link to the EVENT CALENDAR.

Athletics (Row 9): Men's tennis (with image of a tennis ball) (row 9, column 1), What to watch for as the Cardinal opens its dual match season this week (row 9, columns 2-8). Includes a link to GO STANFORD.COM.

Footer (Row 10): SCHOOLS (Business, Earth Sciences), DEPARTMENTS (Departments A - Z, Interdisciplinary), HEALTH CARE (Stanford Health Care, Stanford Children's), ABOUT STANFOR (Facts, History), RESOURCES (A - Z Index, Campus Map, Apply) (row 10, columns 1-8).

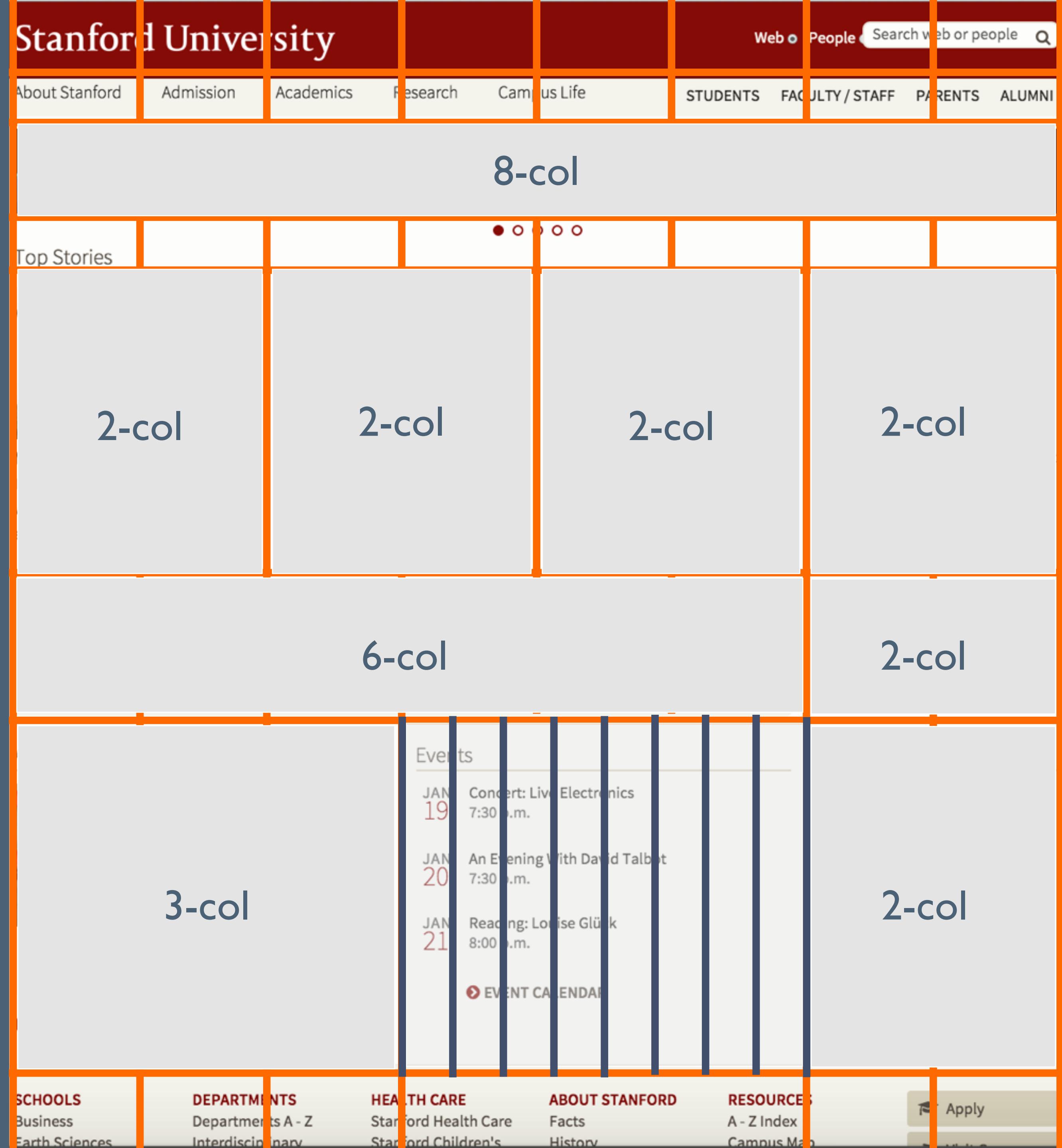
Architecture of a grid

- Grid columns
- Rows indicate where items get vertically aligned
- Inside rows, the divs span multiple columns



Architecture of a grid

- Nest grids inside of grids in order to set up layouts within a div



Implementing grids: Bootstrap

- Twitter's front-end web development framework
- Makes sane layout and styles easy to write
- Comes with predefined styles that you apply using their classes

Add Bootstrap to your HTML

I. CSS in <head>, before your own CSS

```
<head>
  <title>HCI Project Portfolio</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <!-- Bootstrap -->
  <link href="css/bootstrap.min.css" rel="stylesheet">
  <link href="css/bootstrap-theme.min.css" rel="stylesheet">
  <link href="css/introHCI.css" rel="stylesheet">
```

2. JS just above </body> at the end of the document

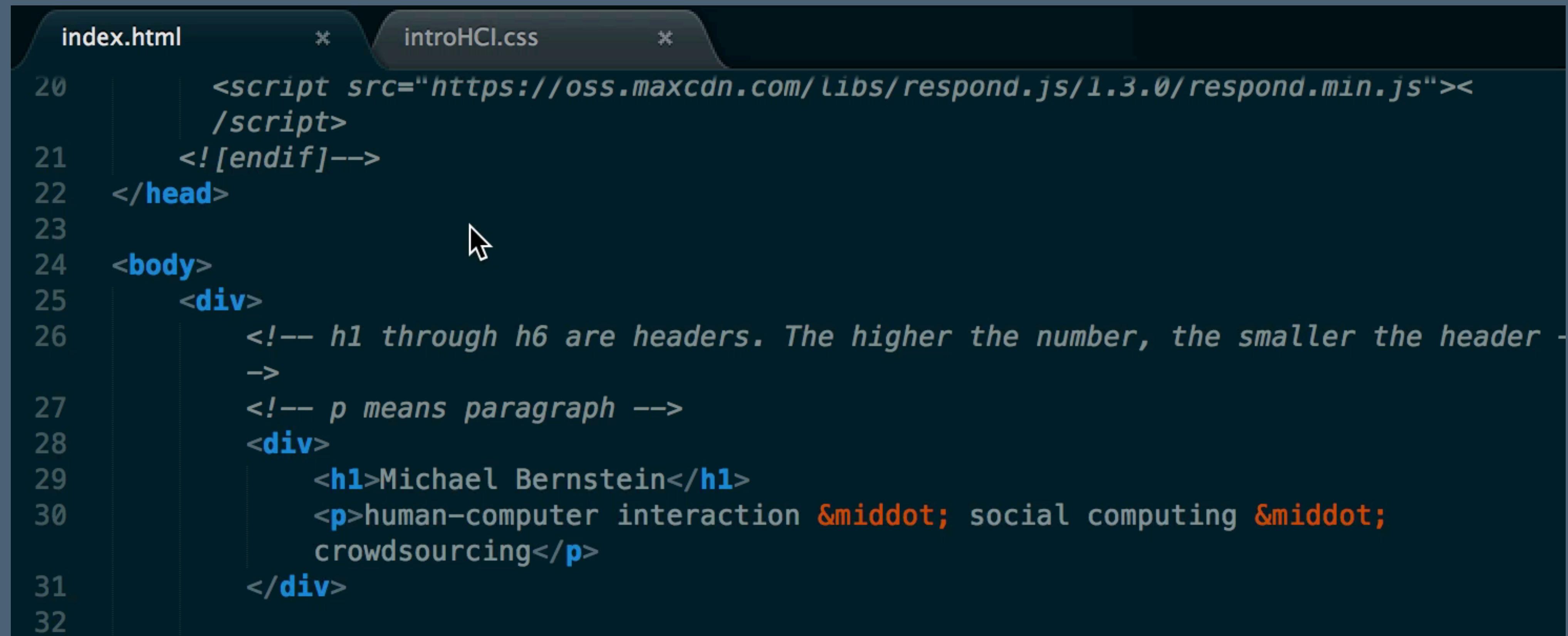
```
  <h5 class="project-title">Design tools<</h5>
</div>

  <!-- jQuery (necessary for Bootstrap's JavaScript plugins) -->
  <script src="https://code.jquery.com/jquery.js"></script>
  <!-- Include all compiled plugins (below), or include individual files as needed -->
  <script src="js/bootstrap.min.js"></script>

</body>
</html>
```

Add Bootstrap styles

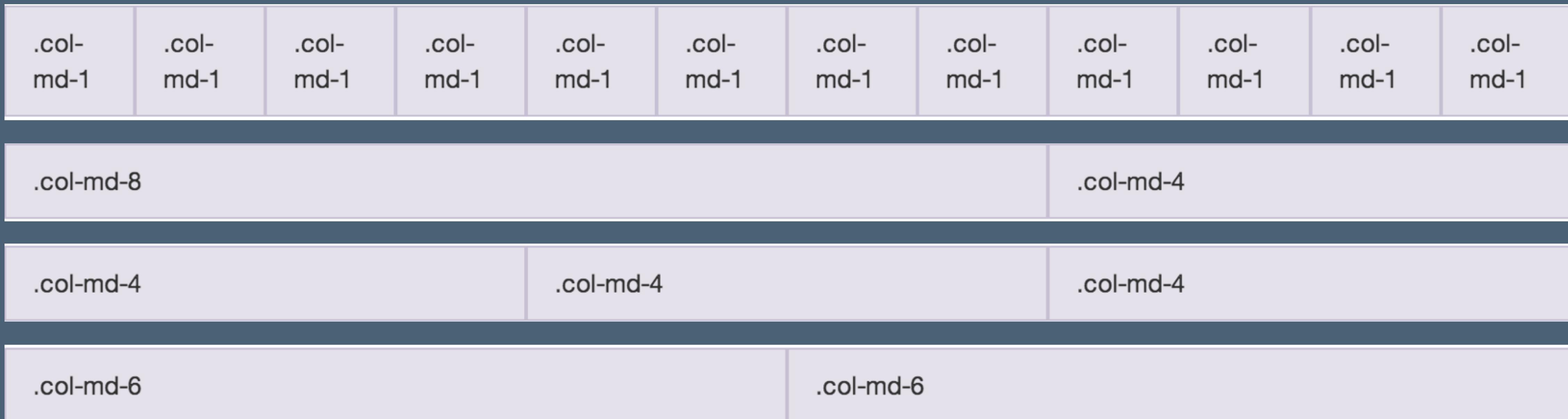
- Put the entire body inside a `<div class="container">`
- Containers add margins



```
index.html      * introHCl.css      *
20   <script src="https://oss.maxcdn.com/libs/respond.js/1.3.0/respond.min.js">
21     /script>
22   <![endif]-->
23 </head>
24
25 <body>
26   <!-- h1 through h6 are headers. The higher the number, the smaller the header -
27   -->
28   <!-- p means paragraph -->
29   <div>
30     <h1>Michael Bernstein</h1>
31     <p>human-computer interaction &middot; social computing &middot;
32       crowdsourcing</p>
33   </div>
34
```

Bootstrap Grid

- Bootstrap gives you 12 columns



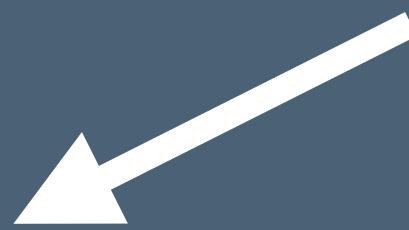
Bootstrap Grid

- Rows go in the `container`, and each div is tagged with `col-md-X` where X is the # columns to span out of 12

Example

```
<div class="container">
  <div class="row">
    <div class="col-md-3">
      
    </div>
    <div class="col-md-3">
      
    </div>
    <div class="col-md-3">
      
    </div>
    <div class="col-md-3">
      
    </div>
  </div>
</div>
```

Four images to a row,
spaced evenly



HCI

col-md-3

HCI

col-md-3

HCI

col-md-3

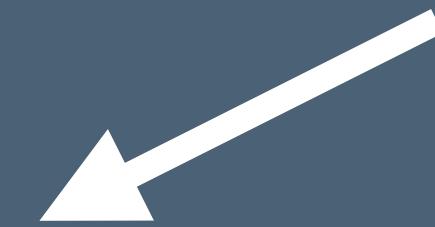
HCI

col-md-3

Example 2

```
<div class="container">
  <div class="row">
    <div class="col-md-2">
      
    </div>
    <div class="col-md-2">
      
    </div>
    <div class="col-md-4">
      
    </div>
    <div class="col-md-4">
      
    </div>
  </div>
</div>
```

Four images to a row, spaced
at 2col-2col-4col-4col



Example 2

Four images to a row, spaced



col-md-2



col-md-2



col-md-4



col-md-4

```

</div>
</div>
</div>
```

Nesting grids

- Nest by creating a new `<div class="row">` inside of a `div`
- You now have a new set of 12 columns within that `div`

```
<div class="container">
  <div class="row">
    <div class="col-md-6"><p>Hello, world!</p></div>
    <div class="col-md-3">
      <div class="row">
        <div class="col-md-8"><p>Internal grid</p></div>
        <div class="col-md-4"><p>Internal grid 2</p></div>
      </div>
    </div>
    <div class="col-md-3"><p>Goodbye, world!</p></div>
  </div>
</div>
```

Enter the grid

Get the files at <http://hci.st/247grid>

Add this final row to the page

col-md-2	col-md-2	col-md-2	col-md-2	col-md-2	col-md-2
HCI	HCI	HCI	HCI	HCI	HCI
col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1
Hamlet					Tomorrow and tomorrow and tomorrow creeps in this petty pace from day to day. To the last syllable of recorded time.
Hamlet					Tomorrow and tomorrow and tomorrow creeps in this petty pace from day to day. To the last syllable of recorded time.
Hamlet					Tomorrow and tomorrow and tomorrow creeps in this petty pace from day to day. To the last syllable of recorded time.
Hamlet					Tomorrow and tomorrow and tomorrow creeps in this petty pace from day to day. To the last syllable of recorded time.

```
<div class="row">
  <div class="col-md-4">
    
  </div>
  <div class="col-md-4">
    <div class="row">
      <div class="col-md-3">
        <p>Hamlet</p>
      </div>
      <div class="col-md-9">
        <p>Tomorrow and tomorrow...</p>
      </div>
    </div>
    <div class="row">
      <div class="col-md-3">
        <p>Hamlet</p>
      </div>
    </div>
    ...
  </div>
```

Responsive design

Totally responsive to your needs, just like Stanford Dining.

Beautiful Individual
Gold, Silver & Coloured
Gem Bangles

[View My Collection](#)



Faceted quartz and
cinnamon swirl necklace



Silver Nutmeg and a
Golden Pear



Lapis Lazuli and Cinnamon
Gilt Necklace



Citrine and Peppercorn
Statement Necklace



Cinnamon Swirl Gilt
Bracelet

One HTML page, multiple views

- How should my page look on...
 - A laptop with a wide window?
 - A laptop?
 - A tablet?
 - A phone?

Intuition: use the grid

- In responsive design, we reflow the grid at different viewport widths

The image displays three side-by-side screenshots of the Stanford University website, illustrating how the layout adapts to different viewport widths.

- Left Screenshot (Desktop View):** Shows a wide grid layout with a large hero image at the top featuring a man in a black polo shirt talking to a group of men in camouflage uniforms. Below the image is a callout box with the title "A road to peace" and a subtitle: "Project to understand conflict in the world's political hotspots may hold the key to finding stability, Stanford scholar says". The navigation bar includes links for "About Stanford", "Admission", "Academics", "Research", "Campus Life", "STUDENTS", "FACULTY/STAFF", "PARENTS", and "ALUMNI".
- Middle Screenshot (Tablet View):** Shows a grid layout similar to the desktop version but with a smaller hero image. The callout box is present. A "MENU" button is visible in the top left corner.
- Right Screenshot (Mobile View):** Shows a single-column grid layout. The hero image is very small. The callout box is present. A "MENU" button is visible in the top left corner. Below the grid, there is a "Top Stories" section with three items: "Marine extinctions", "Solar flares", and "Stanford to host White House Summit on Cybersecurity and".

CSS media queries

- CSS rules that ask how wide the browser viewport is

```
/* Extra small devices (phones, less than 768px) */  
@media (max-width: 768px) { #logo { color: yellow; } }
```

```
/* Small devices (tablets, 768px and up) */  
@media (min-width: 768px) { #logo { color: red; } }
```

```
/* Medium devices (desktops, 992px and up) */  
@media (min-width: 992px) { #logo { color: blue; } }
```

```
/* Large devices (large desktops, 1200px and up) */  
@media (min-width: 1200px) { #logo { color: green; } }
```

Responsiveness in Bootstrap

- Bootstrap has wrapped all these media queries into CSS classes for grid layouts
- We've been using the default, `md`
- Examples: `col-md-4`, `col-lg-6`, `col-sm-3`, `col-xs-2`
 - `xs` extra small (mobile)
 - `sm` small (tablet)
 - `md` medium (desktops)
 - `lg` large (wide desktops)

Responsiveness in Bootstrap

- Bootstrap automatically applies the appropriate grid class when the viewport size changes.
- By default, all `md` items are 12 columns (full width) at `xs` and `sm` sizes
- To create different behavior, we apply multiple classes to a div element:

```
<div class="col-md-3 col-xs-6">
```

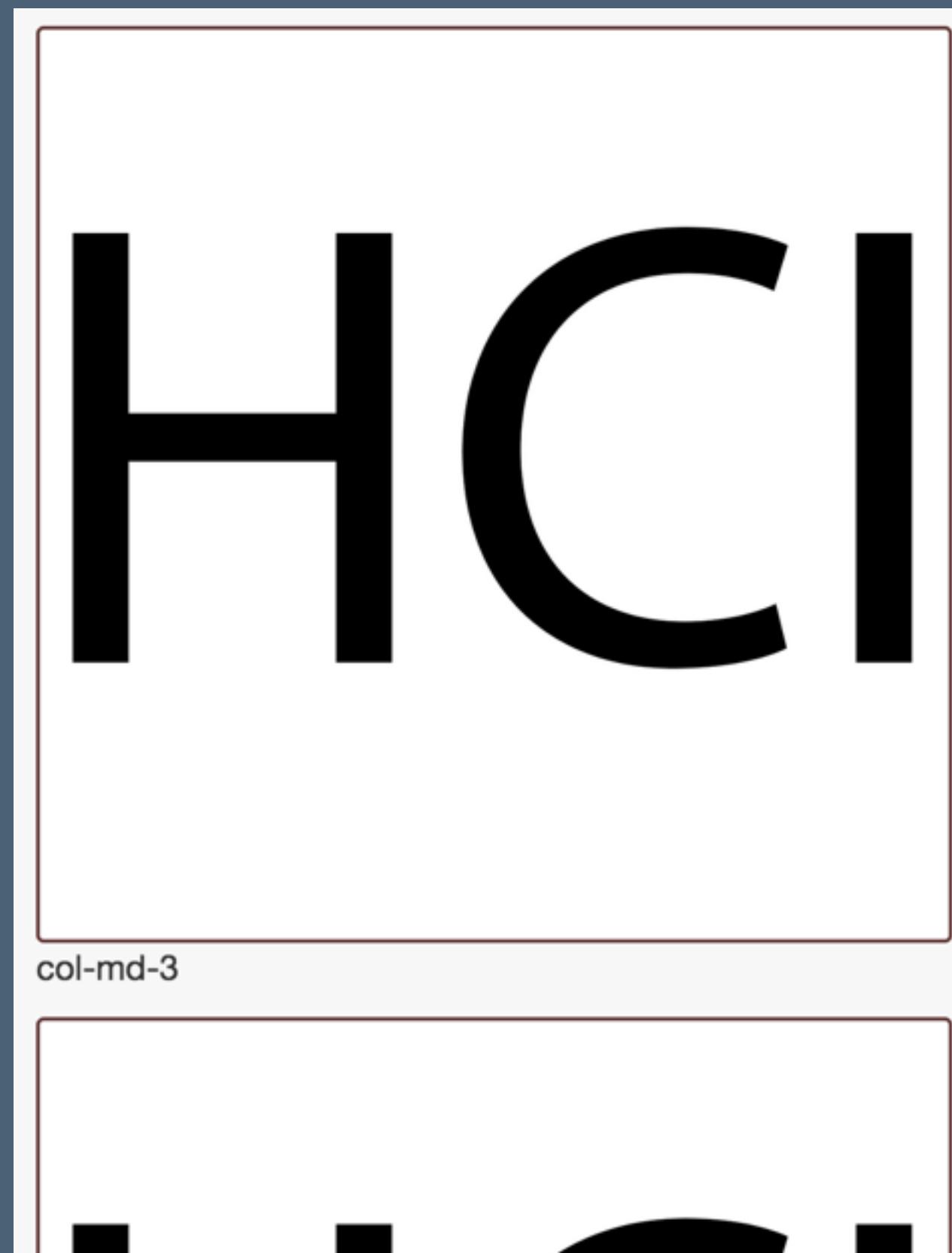
Example

```
<div class="row">
  <div class="col-md-3 col-xs-6">
    
  </div>
  <div class="col-md-3 col-xs-6">
    
  </div>
  <div class="col-md-3 col-xs-6">
    
  </div>
  <div class="col-md-3 col-xs-6">
    
  </div>
</div>
```

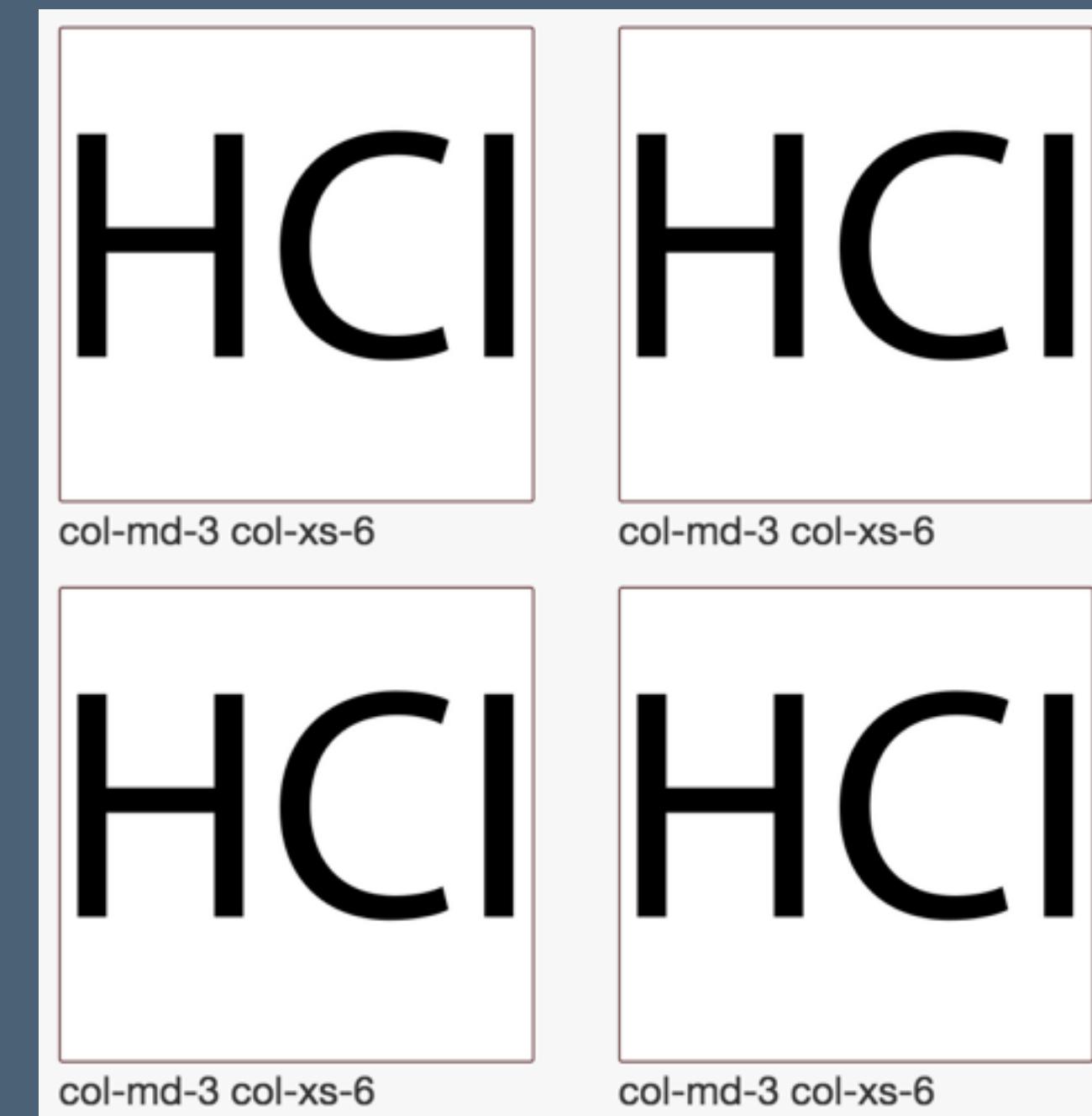
Four to a row at desktop
(md) width, and two to a
row at mobile (xs) width

Example at xs screen width

class="col-md-3"



class="col-md-3 col-xs-6"

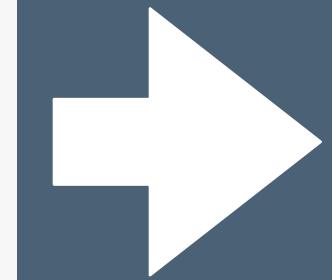


Try it

```
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4
```

```
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
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md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4
```

```
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
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md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4
```



```
col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4
```

```
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
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md-4 col-md-4 col-md-4 col-md-4 col-md-4  
col-md-4 col-md-4 col-md-4 col-md-4 col-  
md-4 col-md-4 col-md-4 col-md-4 col-md-4
```

Edit your previous page so that the three columns of text near the top lay out with one two-column row and one full-width row when you're on a mobile phone.

To test, drag your browser window and make it thin.

All that said...

- Responsive design is part of the material in this class

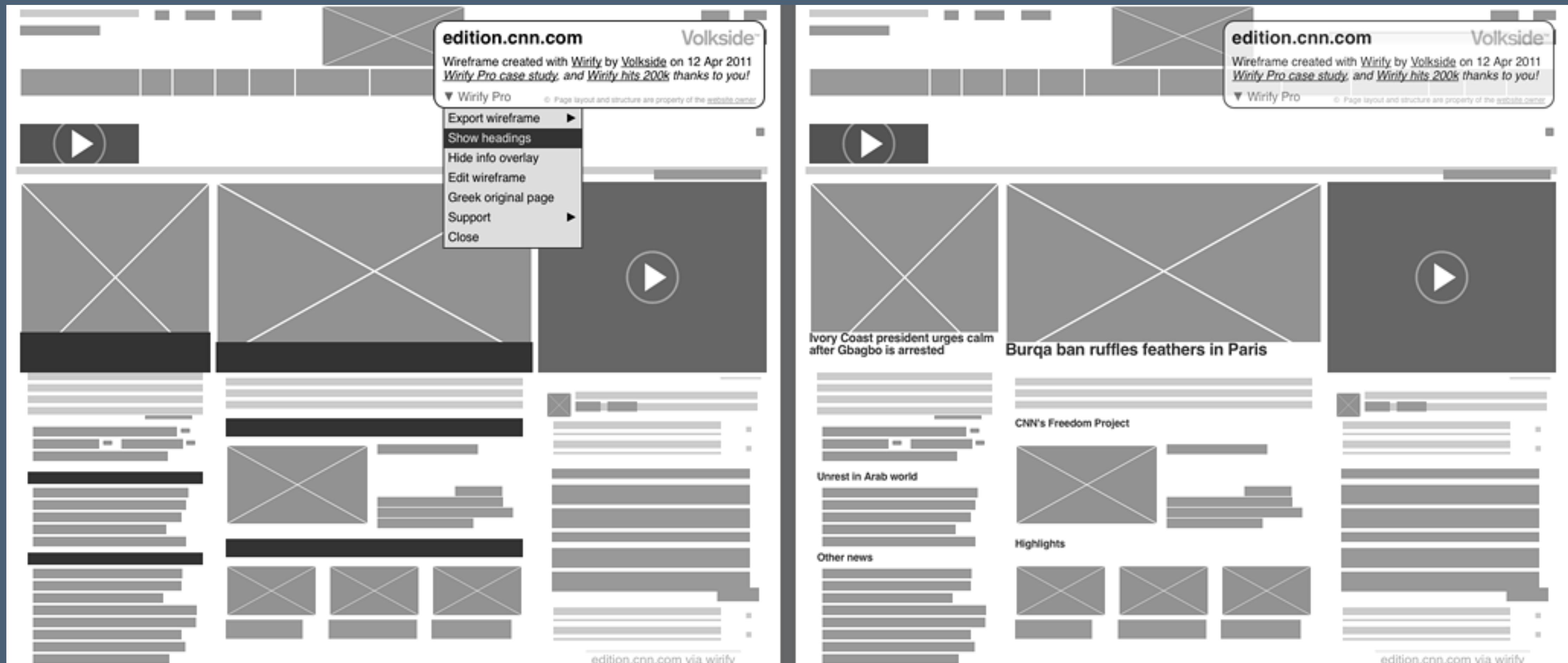
...but it is not required for P2.

Making mocks

From wireframes to pixel-perfect

Wireframes: shifting ground

- This is what a wireframe used to look like:



Wireframes: shifting ground

- This is where things are going:

The image displays four wireframe screens for account creation, showing a progression from basic information to payment details.

CREATE YOUR ACCOUNT

1 Create Account: Basic Info

Basic Info
Shipping
Billing
Payment

Full Name
John Smith

Email Address
yourname@email.com

Password

Confirm Password

GO TO NEXT STEP

SHIPPING INFORMATION

2 Create Account: Shipping Info

✓ Basic Info
2 Shipping
Billing
Payment

Address
Street Address
Street Address 2 (if necessary)

City
Your City

Zip Code Country

Billing address is same as shipping

GO TO NEXT STEP

BILLING INFORMATION

3 Create Account: Billing Info

✓ Basic Info
✓ Shipping
3 Billing
Payment

Billing Address
Street Address
Street Address 2 (if necessary)

City
Your City

Zip Code Country

GO TO NEXT STEP

PAYMENT INFORMATION

4 Create Account: Payment Info

✓ Basic Info
✓ Shipping
✓ Billing
4 Payment

Card Number
Street Address lock icon

Expires on
8 - August ▼ 2017 ▼

Security Code
The security code appears as 3 numbers on the back of card.

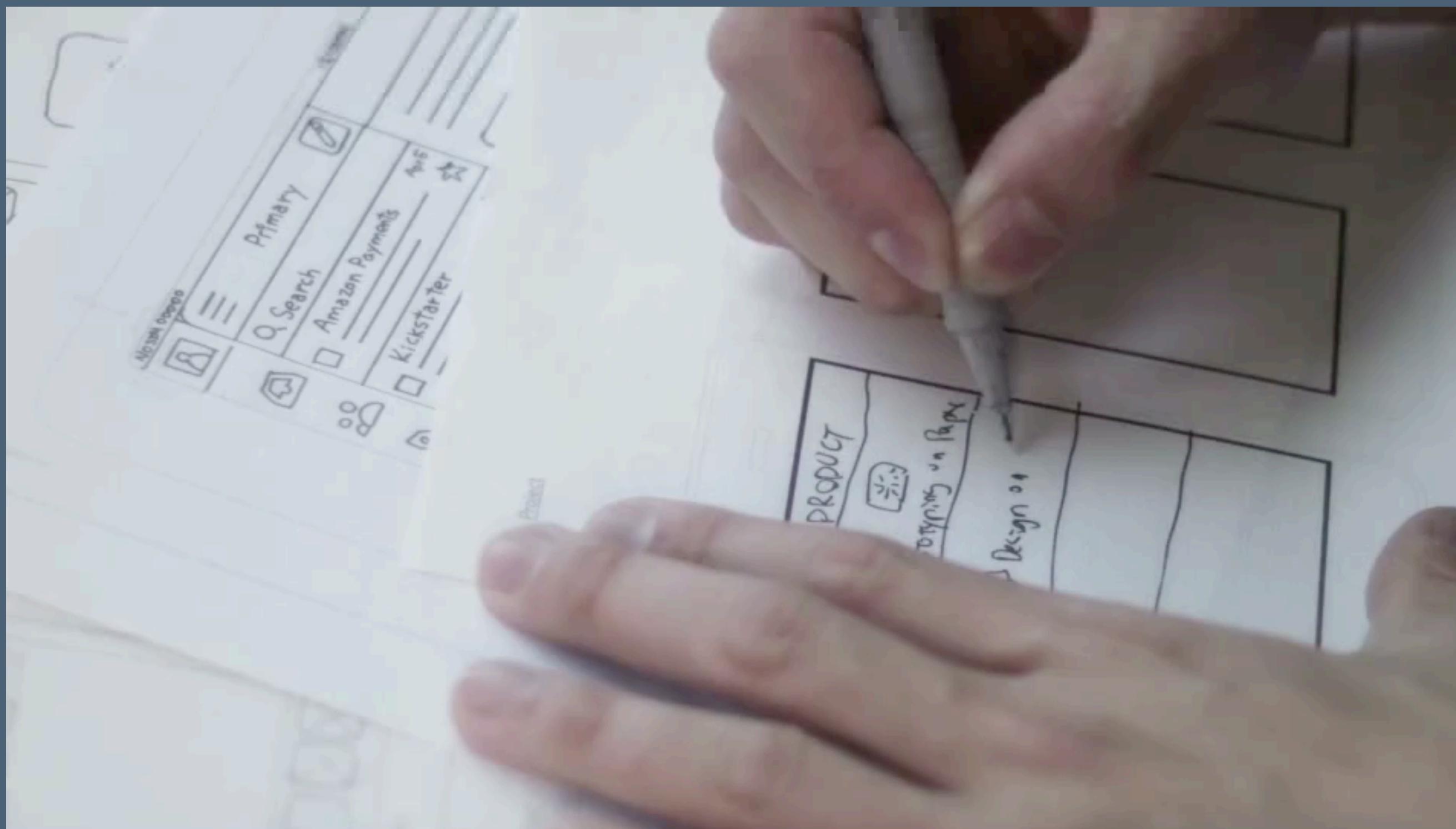
CREATE YOUR ACCOUNT

What's the difference?

- Basic UI elements are now included as stock
- Even a wireframe chooses some elements to instantiate more carefully

Paper

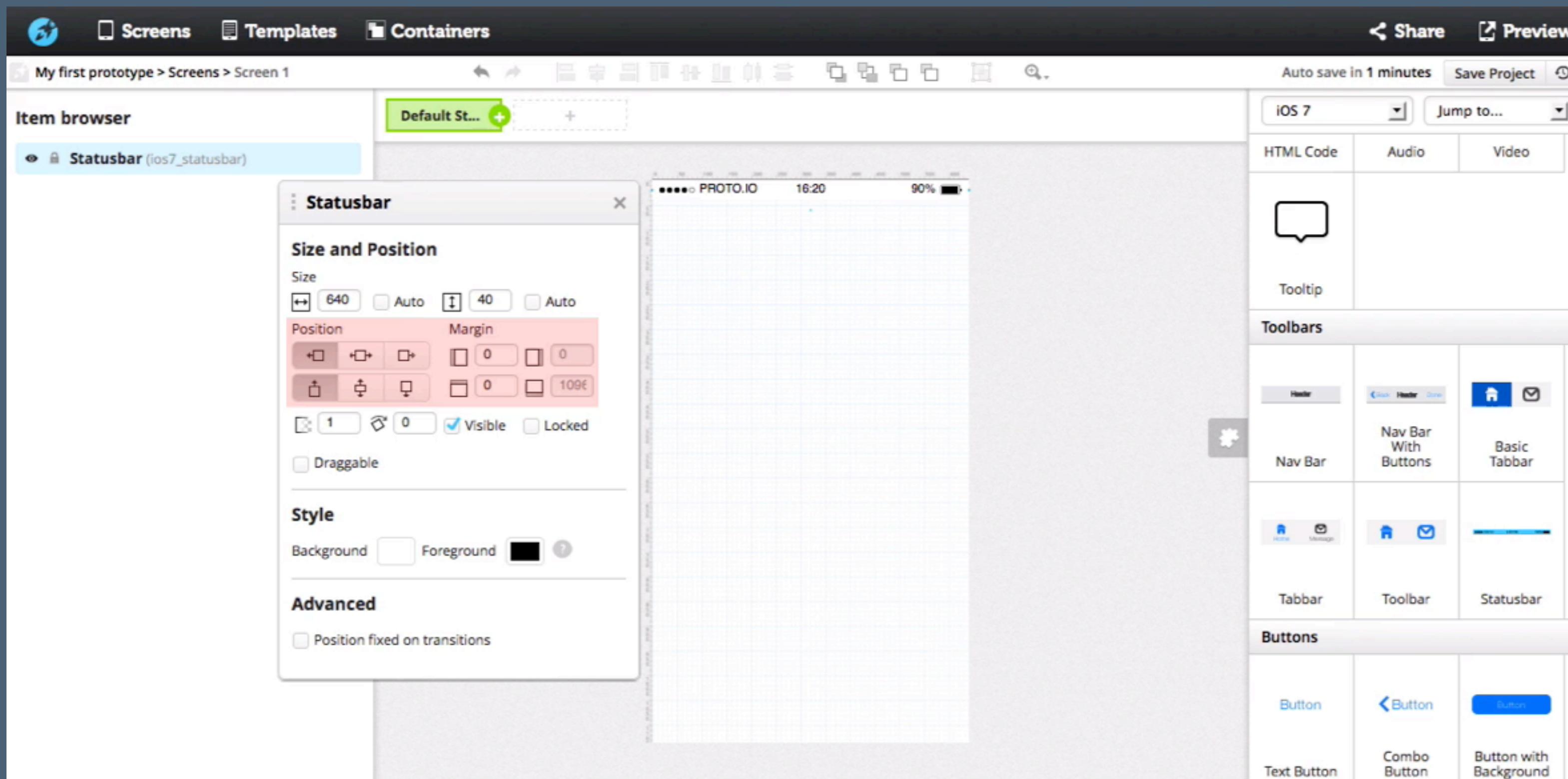
- Sketch on paper, take photos, and load it into a digital solution with hotspots to make it interactive



Video from: Prototyping on Paper

Wireframe

- Use a digital tool to sketch out the basic interactions and visuals



Music Player

Website 2 of 2

Landing Page

Footer

- Share the love
- Tweet
- Share
- Footer

Testimonials

3 Steps

Sign Up

- Input
- Button
- email@example.com
- Text Field

Donec a dolor lobort

Access your music fr

Header

- Text + Button
- Mobiles
- Overlay
- Images
- Base

Filter 1

Insert Symbol Group Ungroup Create Symbol - Q + Edit Transform Rotate Flatten Mask Union Subtract Intersect Difference Forward Backward Mirror View Export

60%

Position X: 421 Y: 596

Size Width: 558 Height: 33

Transform Rotate: 0° Flip:

H2 Typeface: Avenir Weight: Book

Options Color Size: 24

Alignment

Width Auto Fixed

Spacing Character: 0 Line: 33 Paragraph: 0

Opacity: 100%

Blending Normal

Fills

Borders

Shadows

Inner Shadows

Gaussian Blur

Reflection

Make Exportable

Music in your pocket, from the Cloud.

Music in your pocket, from the Cloud.

Download Now

Access your music from the place you trust the most.

Donec a dolor lobortis, pharetra eros in, cursus magna. Quisque in tristique arcu. Vestibulum auctor elit quis libero pharetra pulvinar non id magna. Suspendisse vitae est et enim dapibus euismod. eu turpis faucibus, ornare ligula vel, convallis enim ekrir edir.

email@example.com Sign Up

1. Connect to the Cloud
Simply enter in your email address and password of your favourite service to login quickly and securely.

2. Create playlists
Creating playlists doesn't need a lot of effort. The only thing you need to do is order tracks in folders.

3. Listen and enjoy
Yup. No more steps required. It's up to you now, enjoy beautiful moments with your own customized playlists.

sketch-intro.sketch — Edited

Insert Group Ungroup Create Symbol - 100% Edit Transform Rotate Flatten Mask Scale Union Subtract Intersect Difference Forward Backward Mirror View Export

Page 1 1 of 2 0 100 200 300 400 500 600 700 800

0 100 200 300 400 500

+

iPhone Screens

- Portrait 640x1136px
- Landscape 1136x640px

iPad Screens

- Landscape 1024x768px
- Landscape Retina 2048x1536px
- Portrait 768x1024px
- Portrait Retina 1536x2048px

Responsive Web Design

- Mobile Portrait 320x1024px
- Tablet Portrait 768x1024px
- Desktop 1024x1024px
- Desktop HD 1440x1024px

Paper Sizes

- A4 595x842px
- A5 420x595px
- A6 297x420px
- Letter 612x792px

iOS 7 Icons

- 152 - iPad App Icon 152x152px
- 120 - iPhone App I... 120x120px
- 80 - Spotlight 80x80px
- 58 - Settings 58x58px

iOS Icons (Legacy)

Filter

“Wireframing with Sketch3”
by Masaaki Komori
on YouTube

Edit
Create ▾
Delete
Append
Prepend

All users
Verified
Banned
Deleted

Dropdown ▾
Dropdown ▾
Dropdown ▾
Dropdown ▾

Left Middle Right
Left Middle Right
Left Middle Right
Left Middle Right

Button
Button
Button
Button
Button
Button

Wireframing: goals

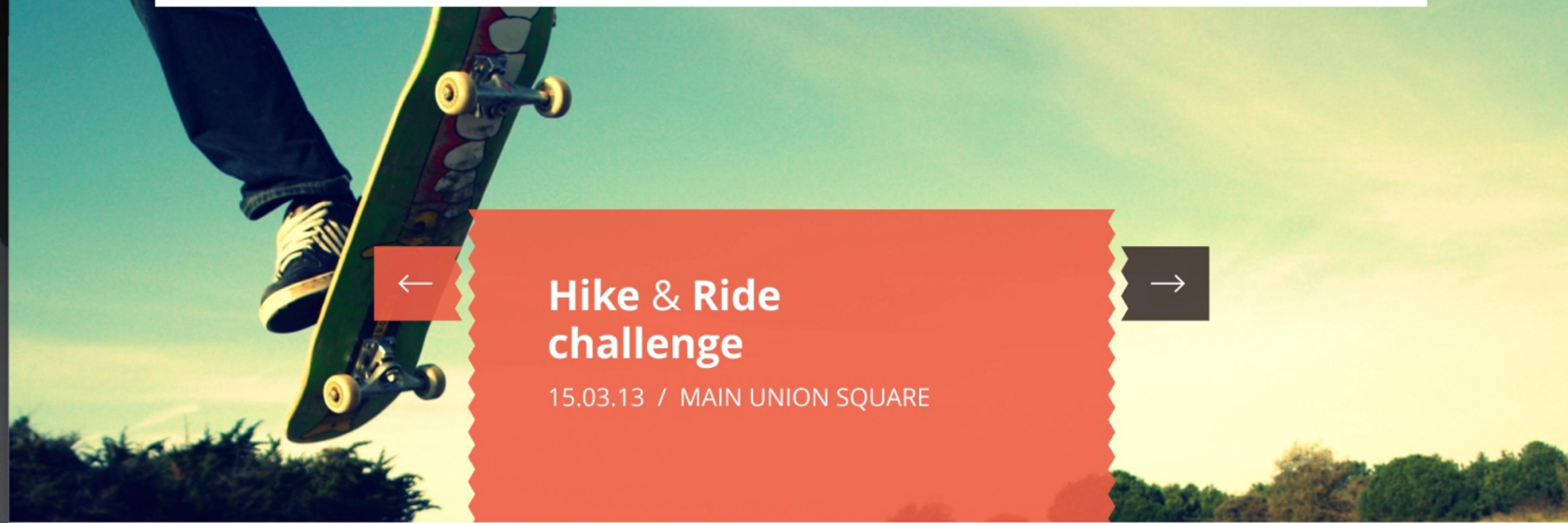
- Instantiate the major design elements
- Hash out the central interaction and visual design problems
- Utilize UI components from kits
- Still relatively quick to iterate on and explore with

HTML wireframes

- Often transitioned from static wireframes
- Used to ensure that the interactivity and flow makes sense

Pixel-perfect mocks

- After your wireframe has settled
- Pixel-perfect mocks are a spec for development
- Focus on low-level visual design and interaction design decisions



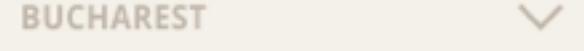
Hike & Ride challenge

15.03.13 / MAIN UNION SQUARE



City select

BUCHAREST



354 EVENTS / 123 VENUES



Events this week 14.13 / 21.13



ENTER THE RABBIT HOLE

SUBSOUL PARTY

ALCHEMIA PARTY

ALCHEMIA DRAMA PARTY

HERE TO GROOVE

SUBSOUL PARTY

★ ★ ★ SUBSOUL PARTY

HIKE & RIDE CHALLENGE

HERE TO GROOVE

HERE TO GROOVE

DUBIOZA KOLECTIV

REDBULL MUSIC ACADEMY

REDBULL MUSIC ACADEMY

RAMMSTEIN ROMEXPO

HIKE & RIDE CHALLENGE

HIKE & RIDE CHALLENGE



Prototypes have politics.

- Wireframe: communicate high-level ideas
- Pixel-perfect: orient the viewer to detail
- Get comfortable with both of them. P2 will help.