

< web design 101 >

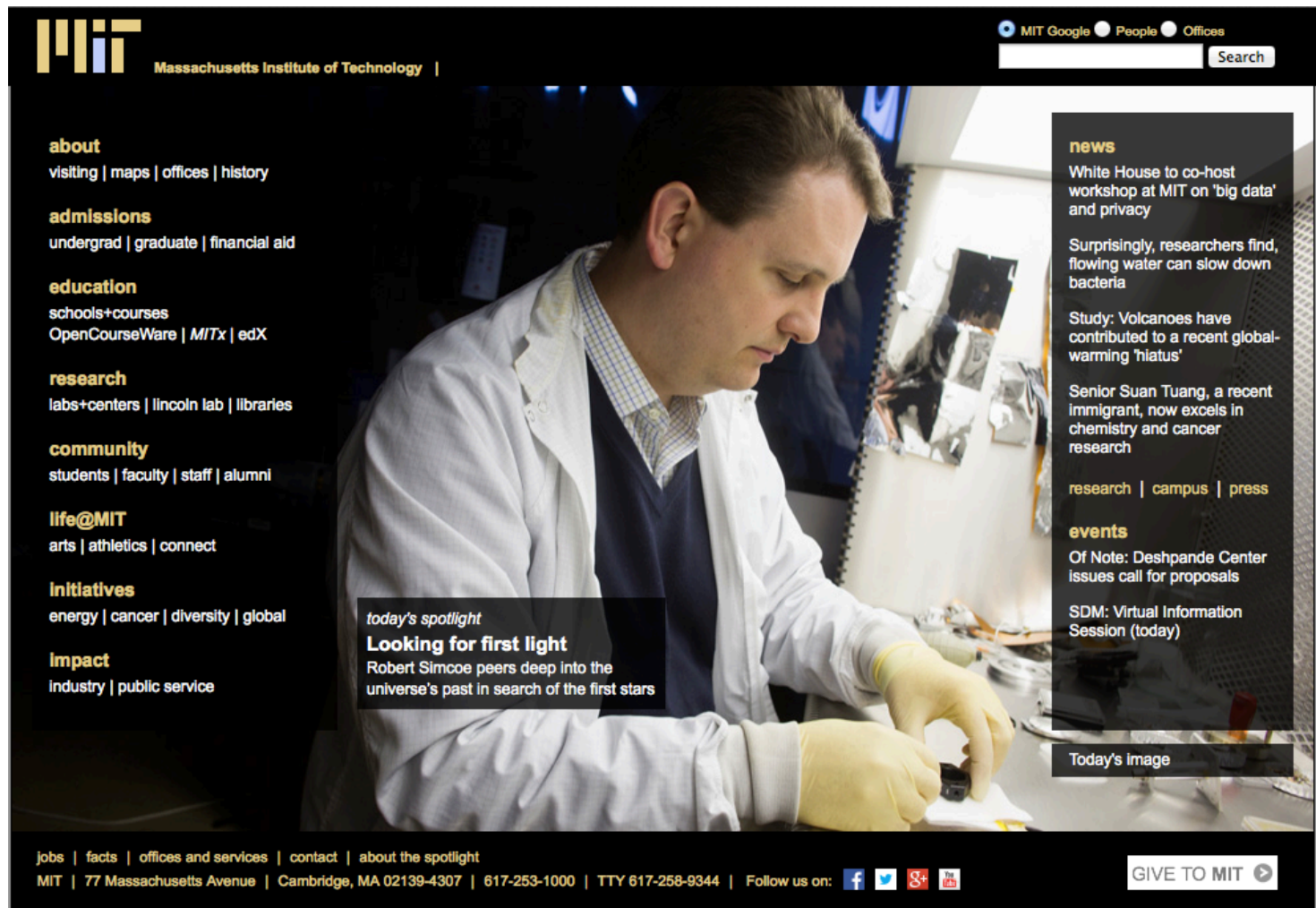
< web design 101 >

have you installed?

- a text editor
- Cyberduck (or another FTP client)
- a web inspector for your browser

details on web.mit.edu/2.744/www

what's in a webpage?



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Initiatives
energy | cancer | diversity | global

Impact
industry | public service

today's spotlight
Looking for first light
Robert Simcoe peers deep into the universe's past in search of the first stars

news
White House to co-host workshop at MIT on 'big data' and privacy
Surprisingly, researchers find, flowing water can slow down bacteria
Study: Volcanoes have contributed to a recent global-warming 'hiatus'
Senior Suan Tuang, a recent immigrant, now excels in chemistry and cancer research

research | campus | press

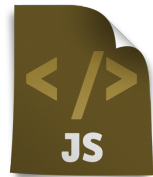
events
Of Note: Deshpande Center issues call for proposals
SDM: Virtual Information Session (today)

Today's Image

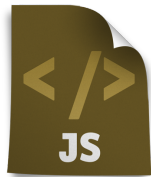
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what's in a webpage?



date.js



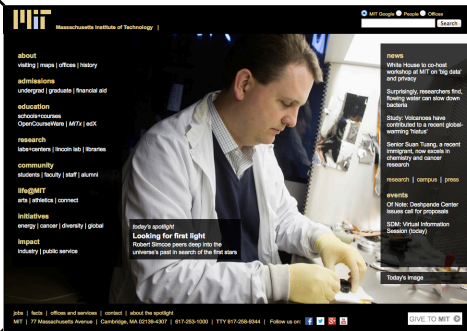
6778.js



ga.js

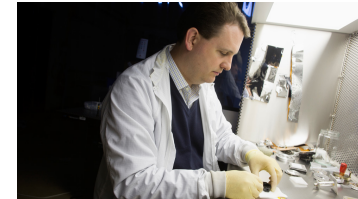


index.html



style3941.css

6 images



what's in a webpage?



hypertext markup language
contains text and links to other pages



cascading style sheets
defines the look and feel of your site

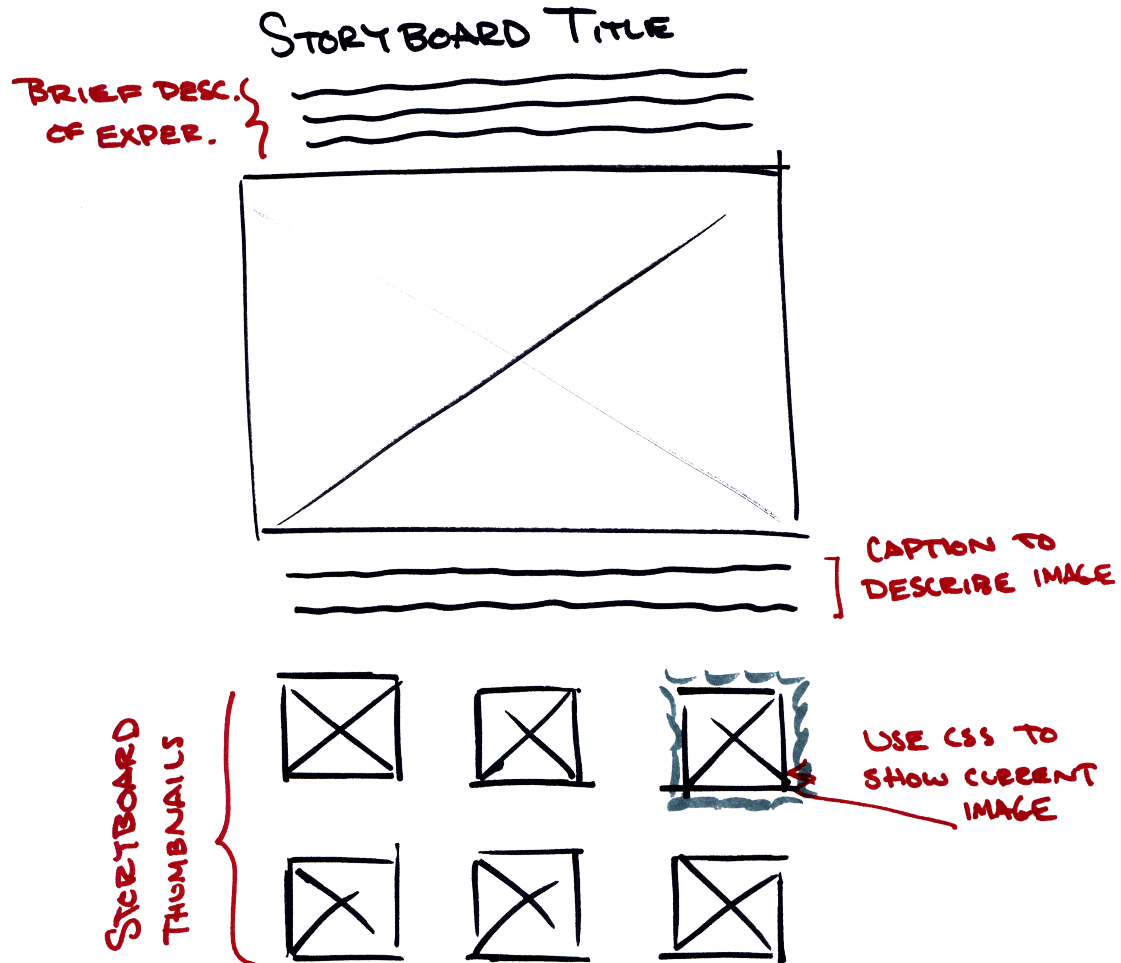


javascript
adds interactivity to your site

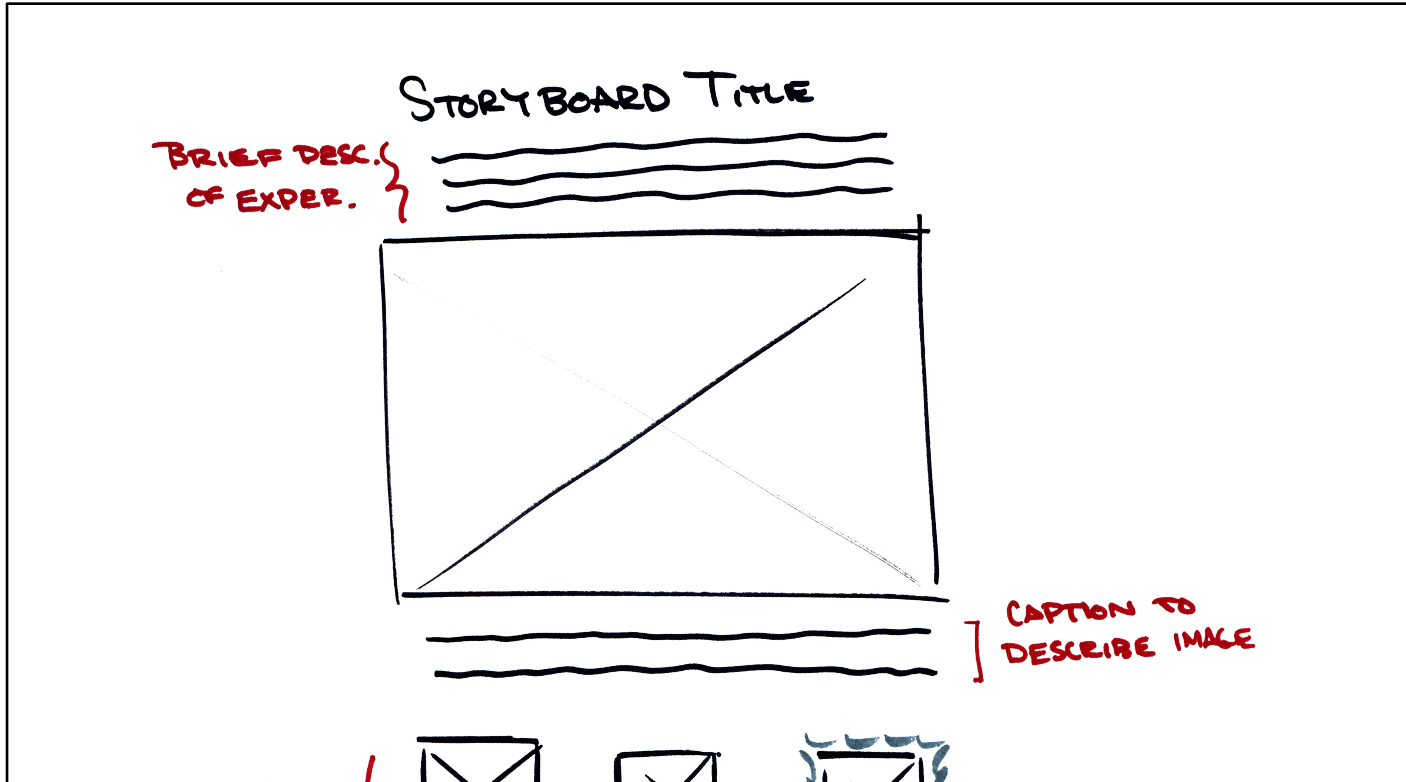
design guidelines

enhancing **usability** and **readability**

sketch then code

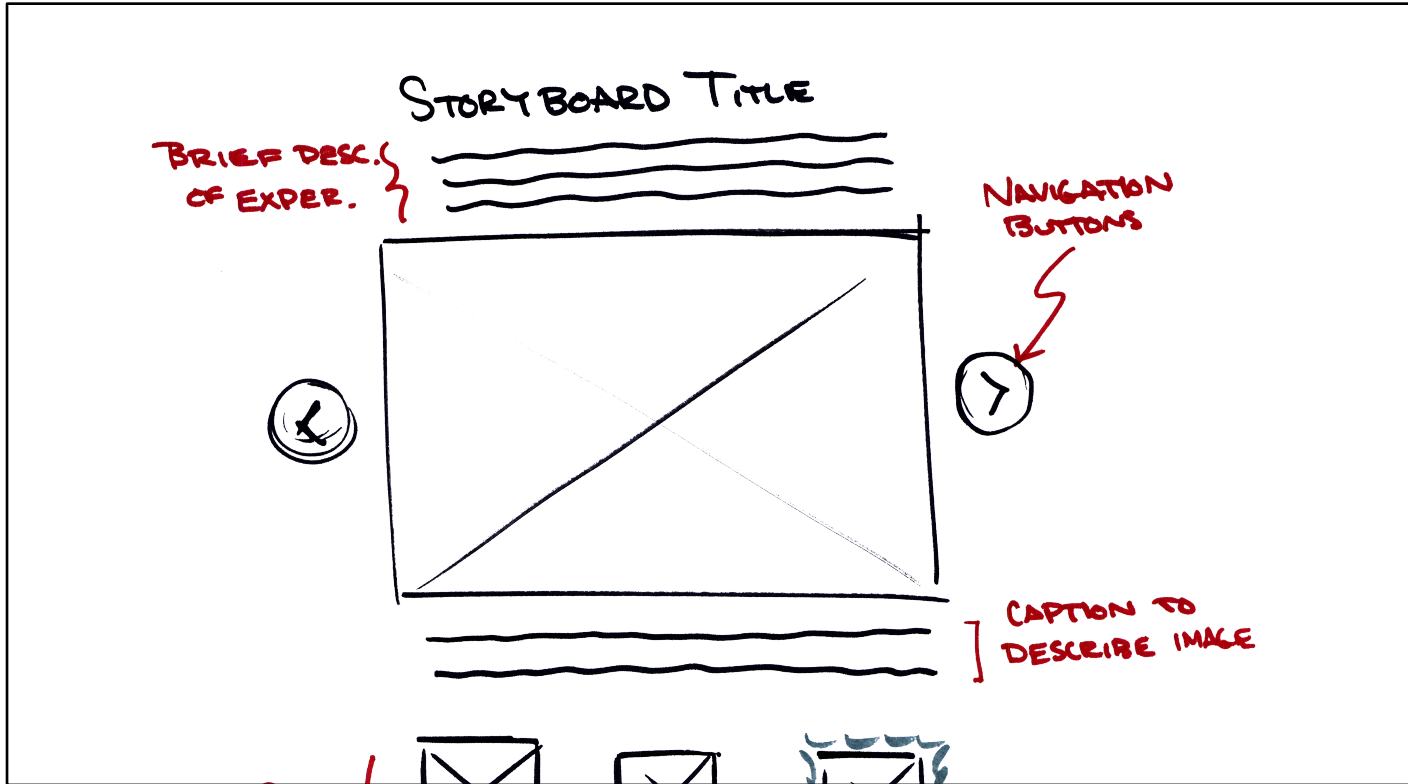


sketch then code



some content may be “below the fold”

sketch then code



add navigation arrows

design for the screen



1997



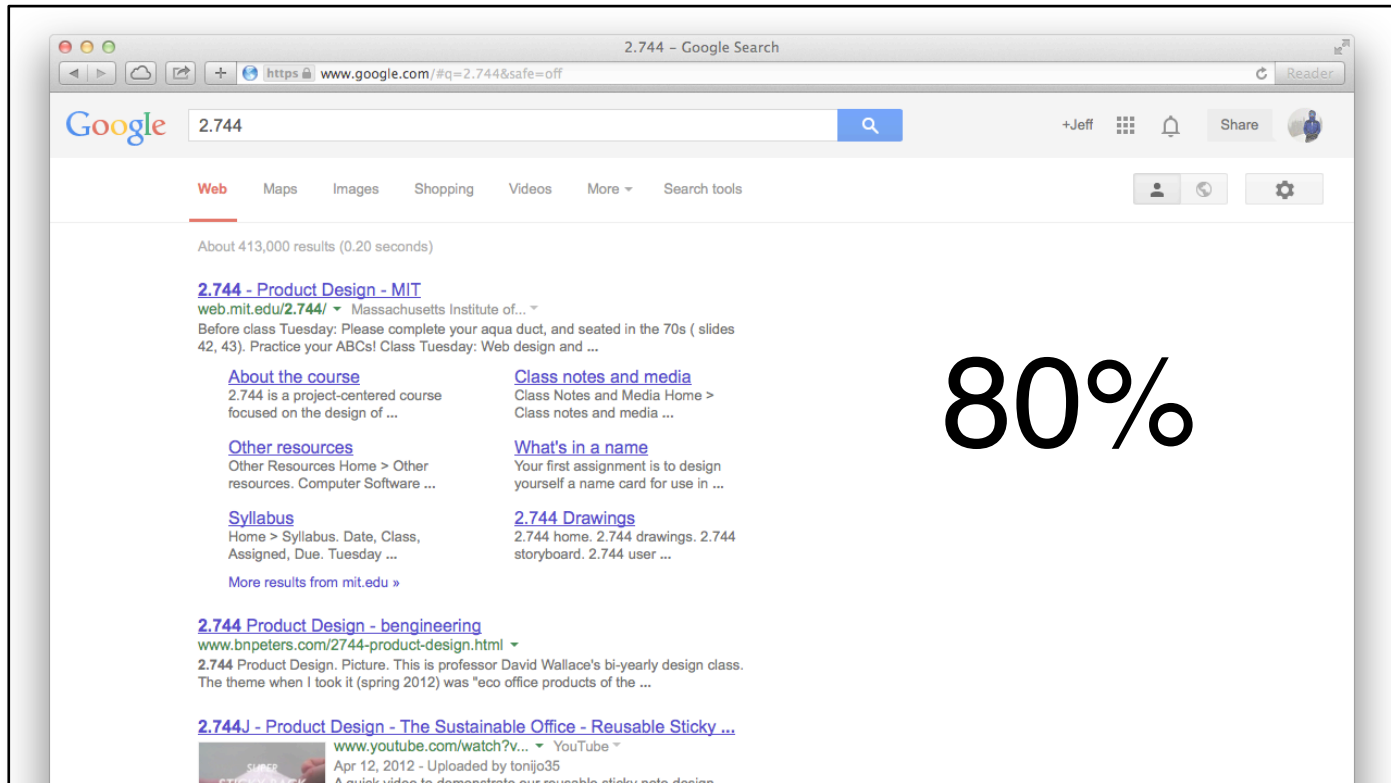
today

design for the screen

responsive design



design for the screen



80%

10 CFR 2.744 - Production of NRC records and documents.

www.gpo.gov/.../content-detail.html United States Governmen...
Subpart G - Rules of General Applicability Subgrp - Depositions and Written
Interrogatories; Discovery; Admission; Evidence Section 2.744 - Production of NRC ...

Collecting, Managing, and Assessing Data Using Sample Surveys

books.google.com/books?isbn=0521863112
Peter Slopher - 2012 - Business & Economics
... and fourth powers Green phase Vehicles Deviation (Deviation)3 (Deviation)4 1 5 0 4
0.064 0.0256 2 7 2.4 13.824 33.1776 3 6 1.4 2.744 3.8416 4 6 1.4 2.744 ...

Convert metric prefixes: 2.744 h (hecto) to ...

20%

provide context

tell the user where he/she is

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about

The mission of MIT is to advance knowledge and educate students in science, technology and other areas of scholarship that will best serve the nation and the world in the 21st century — whether the focus is cancer, energy, economics or literature (learn more about MIT's [current initiatives](#)).

Institute facts
A pocket-sized compendium of essential facts about MIT

MIT mission
Information on our origins and focus

Institute history
Highlights of key milestones from MIT's history; also visit [additional MIT history resources](#)

Visiting MIT
How to get here and get around campus

Administration
Organization chart

Offices+Services
Need help? Find a department or office here

research and educational initiatives
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MITx
MIT OpenCourseWare
Inventing our Future: MIT's diversity story
Report on the status of women in science and engineering at MIT
MIT's affirmative action amicus brief

rankings and awards
[MIT sixth overall among U.S. universities in U.S. News rankings](#)
Engineering, science and management graduate programs continue to excel
MIT ranked No. 1 among world's top universities
MIT named one of 100 best values among private schools

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media relations

President L. Rafael Reif
L. Rafael Reif has served as the 17th president of the Massachusetts Institute of Technology since July 2012.
[Visit President Reif's site for more information](#)

Giving to MIT
MIT is a place of extraordinary interactions. It's a setting where people and ideas come together in new ways—illuminating mysteries, making sparks fly, and fostering intellectual breakthroughs.
But these extraordinary interactions need a strong financial foundation. We will rely on the support of our alumni and friends as we work to strengthen the Institute's work.
[Learn more about Giving to MIT](#)

don't reinvent the wheel

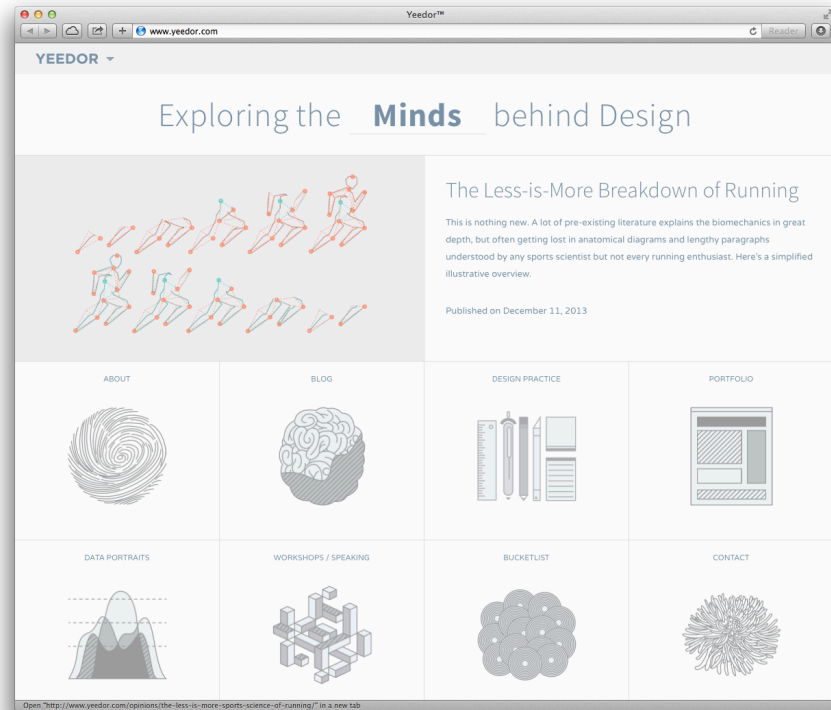
modify existing layouts and templates



getbootstrap.com



foundation.zurb.com



verynicesites.com

Search

- + Paul Bennett on Creativity in *NYT*
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- + IDEO Featured on *60 Minutes*
- + David Kelley at TED
- + *Creative Confidence*, now on shelves
- + Celebrating Bill Moggridge: 1943-2012
- + *Harvard Business Review*: Creative Confidence

IDEO We are a global design consultancy. We create impact through design.

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Peru Champs
Future Champs, a foundation created by Innova to support education of underprivileged kids



Designs On—
A playground without constraints

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12 column grid

SPARK CAMERA
for IDEO



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12

SPARK CAMERA
for IDEO



8

PERU CHAMPS

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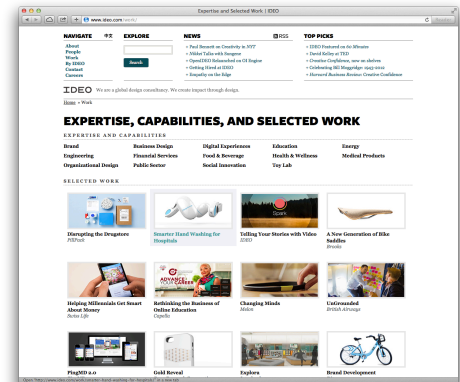
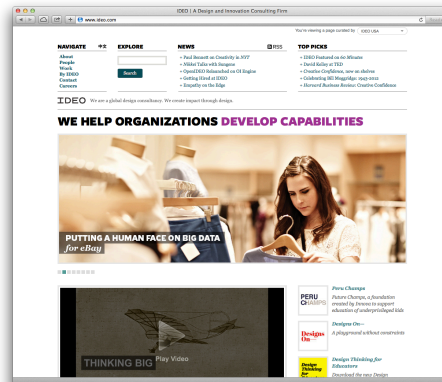
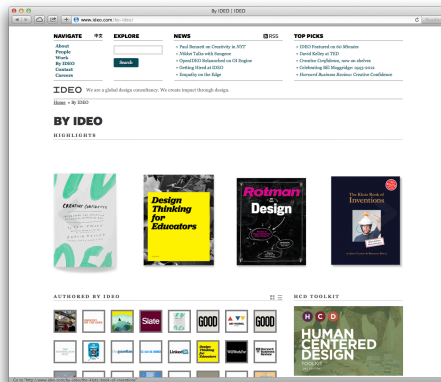
Designs On

Designs On
A playground without constraints

4

...why 12?

$$\frac{1}{12} = \text{lcd} \left(\frac{1}{1}, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{6} \right)$$



can achieve many different layouts

HTML basics

HTML structure



```
<lunch>  
  <hamburger>  
    <bun></bun>  
    <lettuce></lettuce>  
    <tomato></tomato>  
    <cheese></cheese>  
    <patty></patty>  
    <bun></bun>  
  </hamburger>  
</lunch>
```

HTML structure

```
<!DOCTYPE html>  
<html>  
  <head>  
    <title>My First Page</title>  
  </head>  
  <body>  
    <p>Hello World!</p>  
  </body>  
</html>
```

HTML tags

tag structure

open tag *<tag* *attribute(s)*
attr="value">
content...

close tag *</tag>*

HTML tags

tag structure

```
<patty cooked="med">
```

```
  yum.
```

```
</patty>
```

HTML tags

typography

`<p>` - paragraph

`<h1>...<h6>` - headings

`<a>` - link / anchor

``, ``, `` - lists

`<table>`, `<tr>`, `<td>` - tables

``, `<video>` - images, videos

view all the tags at: <http://www.w3schools.com/tags/>

HTML tags

text formatting

``, `` - bold

`<i>`, `` - italics

`<sup>`, `<sub>` - super/subscript

view all the tags at: <http://www.w3schools.com/tags/>

HTML tags

organization

`<div>` - container

`<section>` - section

`<article>` - article

`
` - line break

`<hr />` - horizontal rule

view all the tags at: <http://www.w3schools.com/tags/>


```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
  <head>
    <meta name="TITLE" content="...">
    <meta name="KEYWORDS" content="...">
    <meta name="DESCRIPTION" content="...">
    <link rel="stylesheet" type="text/css" href="...">
    <script language="javascript" src="...">
  </head>
  <body bgcolor="#ffffff" width="100%">
```

adding style

CSS basics

inline styling

```
<p style="font-size:14px;">...</p>
```

pros

highly specific

cons

highly specific

hard to maintain

HTML/CSS coupled

CSS basics

block styling

```
<style>  
  p { font-size: 14px; }  
</style>
```

pros

affects *all* matched elements

cons

HTML/CSS coupled

CSS basics

separate file

```
p {  
  font-size: 14px;  
}
```

pros

write once for whole site
HTML & CSS decoupled

cons

harder to control

CSS basics

rule syntax

```
selector {  
    property: value;  
    property: value;  
    ...  
}
```

CSS basics

properties

Typography

font-size
font-weight
font-family
line-height
text-align

Colors

color
background-color
background-image
line-height
text-align

Positioning

position
width, height
margin
padding
border

[view all](#)

<http://htmldog.com/reference/cssproperties/>
<http://www.w3schools.com/cssref/>

CSS basics

selectors

HTML element

CSS rule

```
<p>
```

```
p {  
  font-size: 14px;  
}
```

```
<p class="bp">
```

```
.bp {  
  color: gray;  
}
```

```
<p id="headline">
```

```
#headline {  
  font-size: 20px;  
}
```

CSS basics

cascading selectors

HTML element

```
<div class="intro">  
  <h1>...</h1>  
</div>
```

CSS rule

```
.intro h1 {  
  font-size:18px;  
}
```

style **h1** inside every element with **class="intro"**

CSS basics

box model



references

<http://htmldog.com/reference/cssproperties/>

<http://www.w3schools.com/cssref/>

CSS Zen Garden

csszengarden.com

CSS ZEN GARDEN

The Beauty of CSS Design

A DEMONSTRATION OF WHAT CAN BE ACCOMPLISHED
THROUGH CSS-BASED DESIGN. SELECT ANY STYLE SHEET
FROM THE LIST TO LOAD IT INTO THIS PAGE.

DOWNLOAD THE EXAMPLE [HTML FILE](#) AND [CSS FILE](#)

Select a Design:

[Garments](#) by [Dan Mall](#)

[Steel](#) by [Steffen Knoeller](#)

[Apothecary](#) by [Trent Walton](#)

[Screen Filler](#) by [Elliot Jay
Stocks](#)

[Fountain Kiss](#) by [Jeremy
Carlson](#)

[A Robot Named Jimmy](#) by
[meltmedia](#)

[Verde Moderna](#) by [Dave Shea](#)

[Under the Sea!](#) by [Eric Stoltz](#)

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Resources:

CSS Zen Garden

csszengarden.com

CZG

MADE LOCALLY

CSS ZEN GARMENTS

IMPECCABLE
QUALITY

WASHES & STYLES



GARMENTS

by Dan Mall

STEEL

by Steffen Knoeller

APOTHECARY

by Trent Walton

SCREEN FILLER

by Elliot Jay Stocks

FOUNTAIN KISS

by Jeremy Carlson

A ROBOT NAMED JIMMY

by meltmedia

VERDE MODERNA

by Dave Shea

UNDER THE SEA!

by Eric Stoltz

A DEMONSTRATION OF WHAT CAN BE
ACCOMPLISHED THROUGH `css`-BASED DESIGN.
SELECT ANY STYLE SHEET FROM THE LIST TO LOAD
IT INTO THIS PAGE.



Littering a dark and dreary road lay the past relics of
browser-specific tags, incompatible `DOMS`, broken `css`
support, and abandoned browsers.

We must clear the mind of the past. Web enlightenment
has been achieved thanks to the tireless efforts of folk
like the `w3c`, `WASP`, and the major browser creators.

A FASHION-
FORWARD FUTURE

2.744 Zen Garden

2.744 Zen Garden: The Beauty of CSS Design

file:///Users/jmekler/Dropbox/web%20design/activities/instructions.html

2.744 Zen Garden

The Beauty of CSS Design

A exploration of what can be accomplished using CSS-based design.

View the base [html file](#) and [css file](#)

The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, broken CSS support, and abandoned browsers.

We must clear the mind of the past. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP, and the major browser creators.

The 2.744 Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the time-honored techniques in new and invigorating fashion. Become one with the web.

So What is This About?

There is a continuing need to show the power of CSS. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The HTML remains the same, the only thing that has changed is the external CSS file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. Designers and coders alike have contributed to the beauty of the web; we can always push it further.

Instructions

1. Update the <meta> tags and <title> tag in index.html and instructions.html.
2. Modify css/app.css in any way you wish, but don't modify the HTML in <body>.
3. When you're done, upload all of the files in your 2744WebDesign folder to /afs/athena.mit.edu/course/2/2.744/www/Results/studentSubmissions/websiteTest/ATHENA USERN
4. Have fun!

Challenges

If you're feeling ambitious...

1. Hide the instructions and challenges sections using CSS.
2. Mix in some other fonts using [Adobe Edge Web Fonts](#).
3. Make your CSS [responsive](#) so that the layout changes on smaller screens (e.g. cell phones).
4. Add some interactivity using Javascript by modifying js/app.js.


View Designs By

- [Sherry Ren](#)

2.744 Zen Garden: The Beauty of CSS Design

web.mit.edu/2.744/www/Results/studentSubmissions/websiteTest/jmekler/index.html

2.744 Zen Garden: The Beauty of CSS Design



2.744 Zen Garden

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View Designs By

- Matthew Metlitz
- Chase Olle
- Audrey Bosquet
- James Christian
- Richard Mullen
- Daniel Bloch

what's next?

for class Thursday, February 27
no official class

tutorial: building your storyboard site?