LAST TIME ON IOLAB

- Node.JS
TODAY

COURSE REVIEW
I SCHOOL TOOLBOX
DOCUMENT OBJECT MODEL

<html>
<body>
<div id="header">
  <h1>Document Object Model</h1>
</div>
<div id="content">
  <p>This is my first paragraph</p>
  <p>My second paragraph has a list:
      <ul>
        <li>Item One</li>
        <li>Item Two</li>
        <li>Item Three</li>
      </ul>
  </p>
  <p>This is the third paragraph</p>
</div>
</body>
</html>
CASCADING STYLE SHEETS
jQuery
write less, do more
AJAX AND CROSS-SITE SCRIPTING
Web 2.0 FTW
GIT IN REVIEW

- git add
- git commit -m
- git commit -a
- git rm
- git reset
- git reset --hard
- git checkout
- git diff
- git log
- git status
- git pull
- git push
MEMEX (PROJ 1)
NEW TAGS & FEATURES

- header, footer
- menu, nav
- section, article
- figure
- new input types
- placeholder text
- localStorage
- GeoLocation API
- web video
- web audio
- 3D, graphics, effects
- web sockets
NEW FEATURES

- RGBA & opacity
- rounded corners
- image borders
- box shadows
- multi-column layouts
- multiple backgrounds
- text shadows
- word-wrapping
- @font-face
- pseudo-classes
- new selectors
- combinators
WHAT IS GOOD CODE?

The only valid measurement of code quality: WTFs/minute

Good code.

BAD code.

(c) 2008 Focus Shift/OSNews/Thom Holwerda - http://www.osnews.com/comics
METACRAP (PROJ 2)
Cory Doctorow

• People lie
• People are lazy
• People are stupid
• Mission: Impossible -- know thyself
• Schemas aren’t neutral
• Metrics influence results
• There’s more than one way to describe something
OAUTH ROLES

https://developers.google.com/accounts/docs/OAuth2
## MOBILE VS. NATIVE

<table>
<thead>
<tr>
<th>Mobile Web</th>
<th>Native App</th>
</tr>
</thead>
<tbody>
<tr>
<td>less overhead to get started</td>
<td>Access native functionality</td>
</tr>
<tr>
<td>accessible to more devices</td>
<td>Faster performance</td>
</tr>
<tr>
<td>HTML, CSS, Javascript</td>
<td>Objective C, Java</td>
</tr>
</tbody>
</table>
PROGRESSIVE ENHANCEMENT VS. GRACEFUL DEGRADATION
GRACEFUL DEGRADATION

Providing an alternative version of your functionality or making the user aware of shortcomings of a product as a safety measure to ensure that the product is usable.
PROGRESSIVE ENHANCEMENT

Starting with a baseline of usable functionality, then increasing the richness of the user experience step by step by testing for support for enhancements before applying them.
MOBILE FIRST

• Mobile is Exploding
• Mobile forces you to focus
• Mobile extends your capabilities
RESPONSIVE WEB DESIGN

• Fluid Grids
• Flexible Images & Media
• Media Queries
VISUALIZATION GOALS

Exploration

Communication
# VISUAL VARIABLES

<table>
<thead>
<tr>
<th>position</th>
<th>length</th>
<th>area</th>
</tr>
</thead>
<tbody>
<tr>
<td>value</td>
<td>color</td>
<td>shape</td>
</tr>
<tr>
<td>orientation</td>
<td>texture</td>
<td></td>
</tr>
</tbody>
</table>
SEMIOLGY OF DATA
Jacques Bertin, 1967
PRE-ATTENTIVE PROCESSING

“unconscious accumulation of information from the environment”
U.S. Unemployment, 2008

D3
Choropleth Map of U.S. Unemployment
GOOGLE FUSION TABLES

Elliot Nahman

https://docs.google.com/presentation/d/1htRKjDzkd6iHIPSzonIqs_BNn2Yrsd-XixrfP_qLro/edit
PROJECT 3
Social & Distributed Classification
tagging
folksonomy
tagsonomy

vs.

authority
vocabulary control
TEST DRIVEN DEVELOPMENT
Object-oriented programming (OOP)
a programming paradigm using “objects” consisting of “properties” and “methods” together with their interactions - to design computer programs.

- Modularity (eliminate task duplication & reuse code)
- Abstraction (trust the implementation)
- Encapsulation (isolate variables/functions from other code)
FLASK
A Python Micro-framework

• Routing (WSGI)
• Templating (jinja2)
• Database access (sqlite3)
NODE.JS
FINAL LAB: DOT VOTING
CLASS SURVEY
FOR NEXT TIME

Last Lab

Final Project

You can find links to help with all of these on the course website at http://courses.ischool.berkeley.edu/290ta-iol/f12