INFORMATION ORGANIZATION LAB

OCTOBER 1, 2012

Monday, October 1, 12
LAST TIME ON IO LAB

The only valid measurement of code quality: WTFs/minute

Good code. Bad code.

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Software Engineering
TODAY

• Review of AJAX/XSS
  • Same-origin policies / cross-site scripting (XSS)
  • Callbacks / JSON-P

• Working with APIs
  • Documentation, JSON-P support, OAuth
  • jQuery Promises/Deferred

• Open Lab: Group Time / Proj 2 Q&A
SAME-ORIGIN POLICY
(No cross-site scripting!)

Further reading: http://en.wikipedia.org/wiki/Same_origin_policy
WORKAROUNDS
(Cross-site scripting, yay!)

• Proxy server
• JSONP
CALLBACKS

• Like a restaurant queue, a “server” needs a name/number to call you back at

• This allows you to go do other things while you’re waiting for the callback!
JSON-P

• JSON with Padding
  • A string
  • Wrapped in Parenthesis
ASYNCHRONOUS DATA
PROMISES

• Only one callback?

```javascript
var promise = $.ajax({
  url: "/myServerScript"
});

promise.done(mySuccessFunction);
promise.done(mySuccessFunction2);
promise.fail(myErrorFunction);
```

http://www.bitstorm.org/weblog/2012-1/Deferred_and.promise.in_jQuery.html
DEFERRED OBJECTS

• Implements the Promise interface

• But it also allows you to create your own callbacks within JavaScript.

  • use resolve() and reject() to denote whether or not your callback succeeded or failed.
**DEFERRED EXAMPLE**

```javascript
$( '#result' ).html( 'waiting...' );

var promise = wait();
promise.done(result);

function result() {
  $( '#result' ).html( 'done' );
}

function wait() {
  var deferred = $.Deferred();

  setTimeout(function() {
    deferred.resolve();
  }, 2000);

  return deferred.promise();
}
```
API’S
OAUTH 2.0

- Allows access to protected data
- Authentication System
  - Token-Based
  - Doesn’t need user credentials.
OAUTH ROLES

- Client Application
- User
- Server
- User Data
OAUTH ROLES

https://developers.google.com/accounts/docs/OAuth2
OPEN LAB
Project 2 Group Time / Open Q&A
FOR NEXT TIME

OAuth Lab (Get a Facebook account)

Post your project ideas by Wednesday!

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