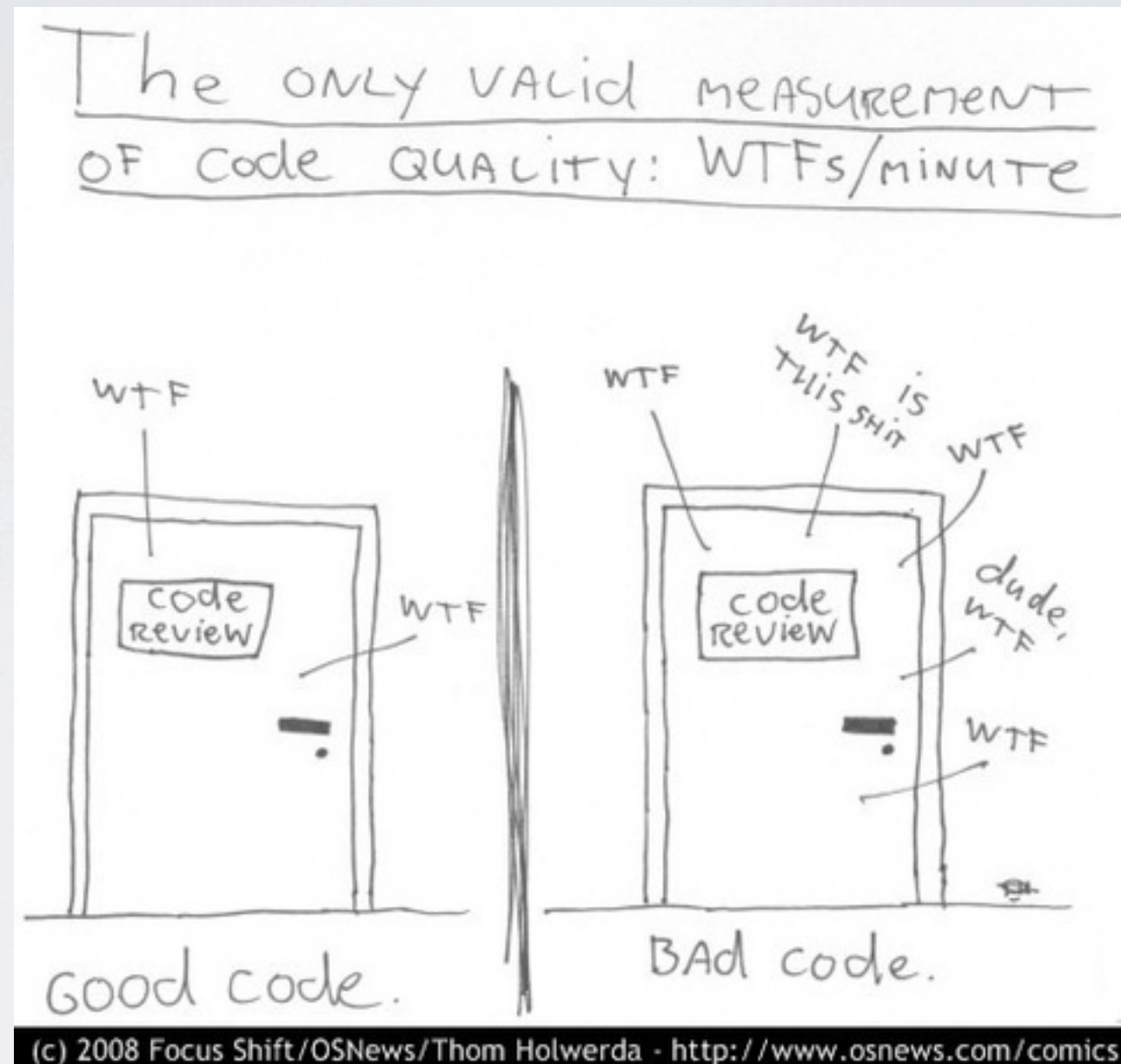# INFORMATION ORGANIZATION LAB

LAST TIME ON IO LAB

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?**

```
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();
}
```
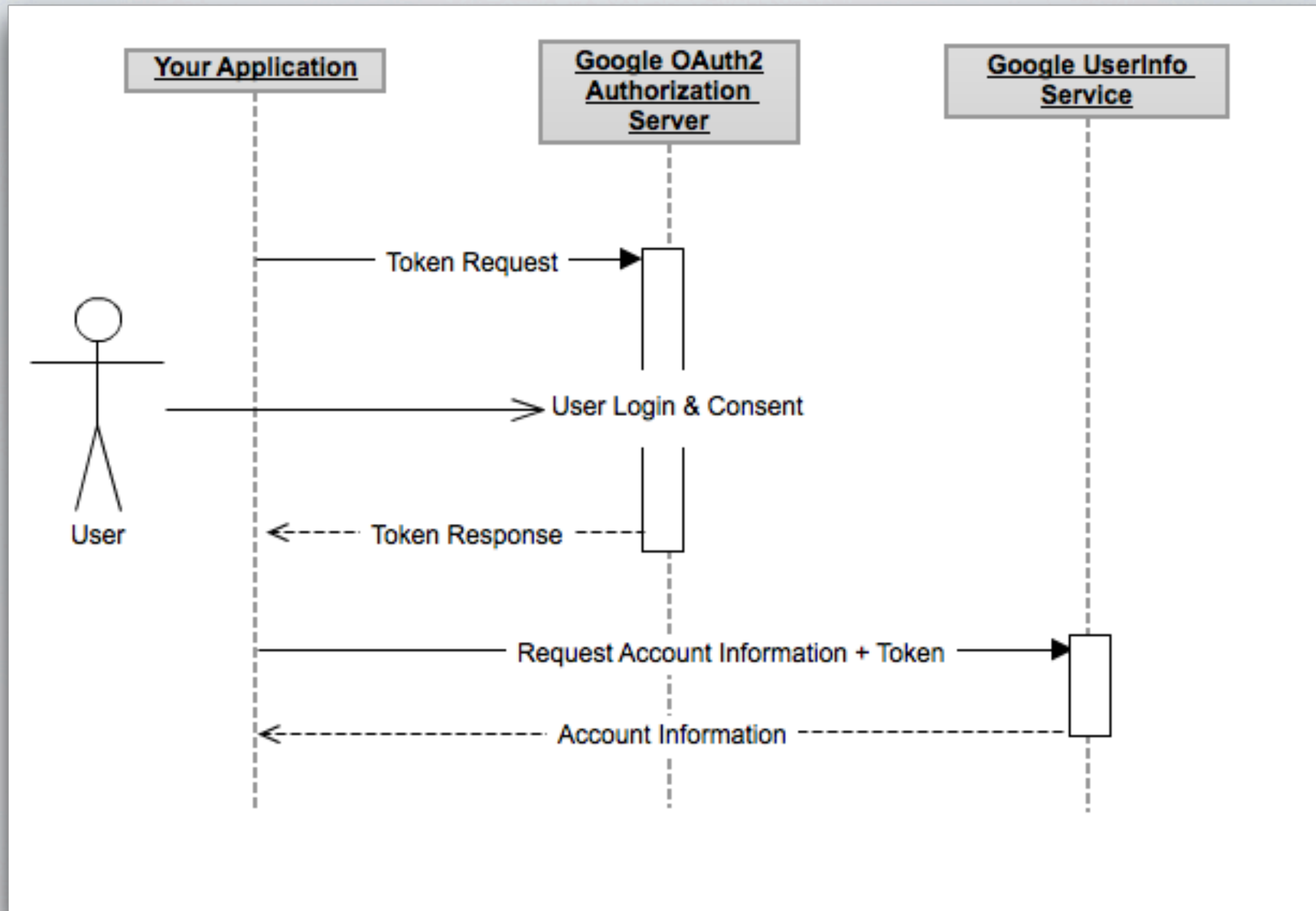
API'S

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