Announcements

- Final in this room, Wds June 11, 8AM
- Course evaluations - https://eval.ucdavis.edu
- Review session Monday?
- Pedometers!
- Today: More things we missed: JQuery

Final

- Comprehensive; so review midterm material
- Django
  - Relationship to Apache, sqlite
  - Model, view, template; what code goes where?
  - Working with a database – tables, ForeignKey
  - When are functions called?

JQuery

- A library (or collection of libraries) to simplify and extend Javascript
- Kind of like the modules in Python, but taking over the language
- There are other Javascript libraries but JQuery is by far the biggest
- Nice Web animation tricks
- Much simpler Ajax data fetching
- Different syntax than pure Javascript

Recall Ajax interaction

- Need to define a callback function for button or whatever (to do the interaction with the user); this function initiates loading more data from the server
- Need a second callback to wait for the load to complete
- They have to share the same XMLHttpRequest object, since that is going to contain the response
  
  ...all of this adds up to some complexity.
Importing the JQuery library

- Can get it from Google, Amazon, Yahoo, some other commercial server, or load it onto your own server

- Google:
  `<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.4.4/jquery.js"></script>`

- Own server:
  `<script src="jquery.js"></script>`

JQuery does this for you

```javascript
$(document).ready( function() {
  $('button').click(function () {
    $('#myDiv').load("ajax_info.txt");
  });
});
```

- `$(function)` selects a part of the DOM, same selectors as CSS
- `$(document)` is the whole document
- `$('button')` is all button objects
- `$('#myDiv')` is the object with id="myDiv"

JQuery does this for you

```javascript
$(document).ready( function() {
  $('button').click(function () {
    $('#myDiv').load("ajax_info.txt");
  });
});
```

- Ready event is when document is completely loaded and DOM created in browser
- That last “load” method loads the contents of the element from URL “ajax_info.txt” on server

Is this worth the different syntax?

- There’s more different syntax, but then again there are a lot more cool tricks

Fades

```javascript
$('#removeBut').click(function () {
  $('canvas').fadeOut(2000);
});

$('#addBut').click(function () {
  $('canvas').fadeIn(2000);
});
```

- Like magic!

Slides

```javascript
$('#removeBut').click(function () {
  $('canvas').slideUp(2000);
});

$('#addBut').click(function () {
  $('canvas').slideDown(2000);
});
```

- Seriously, how is this done?
### Ajax from other servers

- Attempt at security: `ajax` is only able to get files from the same server as the Web page it's on.
- This is to prevent arbitrary Web pages from trying to access `BofA`, for instance, through `Ajax`, if you happen to be logged in to `BofA`.
- But this is so annoying! I want to add a Google Map to my Arboretum page!
- Work-around: JSONP. As far as I can tell, this is like, well, OK, you can get files from other sites.

### Additional library called GoMap

- I had to download the library, which was compressed Javascript
- I added a map JQuery command and a `<div>` to hold the map.
- Wow

### Where I learned all this – books!

  David McFarland
- JavaScript: The Good Parts
  Douglas Crockford
- Python Web Development with Django
  Forcier, Bissex, Chun
- Learning Web Design
  Jennifer Robbins