

ECS 89

6/2

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?

- Javascript
 - Checking form data
 - Events
 - Canvas
 - Objects
- General stuff
 - DOM; selection of items in CSS or Javascript
 - Regular expressions (a little)

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

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

- ```
$(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

- ```
$("#removeBut").click(function () {
 $("canvas").fadeOut(2000);
});

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

- Like magic!

## Slides

- ```
$("#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!

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