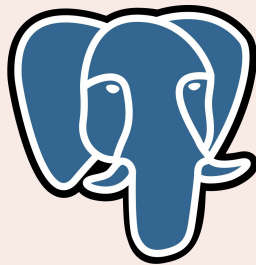


Web 2.0 & Databases

CSCI 39549

September 12, 2018

Web 2.0 & Databases



Agenda

- 1 Announcements
- 2 Retrospective
- 3 Intro to Web 2.0
- 4 Ajax, JS Overview & Workshop
- 5 Bio Break
- 6 Intro to Databases
- 7 Databases Workshop
- 8 Homework & Wrap Up

Announcements

Have you installed Postgres 10.0?

<http://www.postgresqltutorial.com/install-postgresql>

Communications over Slack

Slack is the easiest way to get ahold of us - and each other!

We'll also be sending out reminders and information over Slack throughout the semester.



Retrospective

What went well with your Calculator homework assignment?

What could've gone better?

We will use ideaBoardz for this exercise:

<http://www.ideaboardz.com/for/Arylee%20McSweeney/2719631>



What's Web 2.0 all about?



“ A Web 2.0 website may allow users to interact and collaborate with each other ... as creators of user-generated content in a virtual community, in contrast to the first generation of Web 1.0-era websites where people were limited to the passive viewing of content.

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Examples of 1.0 and 2.0 websites?

Interact & Collaborate



Storage of Content





AJAX



AJAX

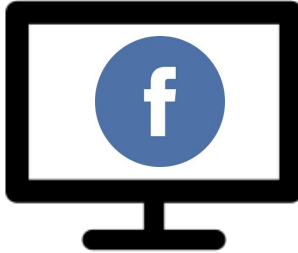


Asynchronous
JavaScript And XML

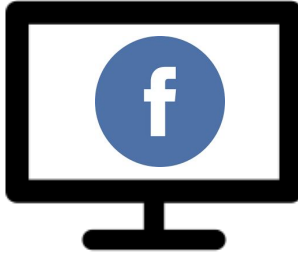
“ AJAX is all about updating parts of a webpage without having to reload the entire thing. That's pretty useful if your website is big and involved.

You don't want your users having to load the same piece of information multiple times.

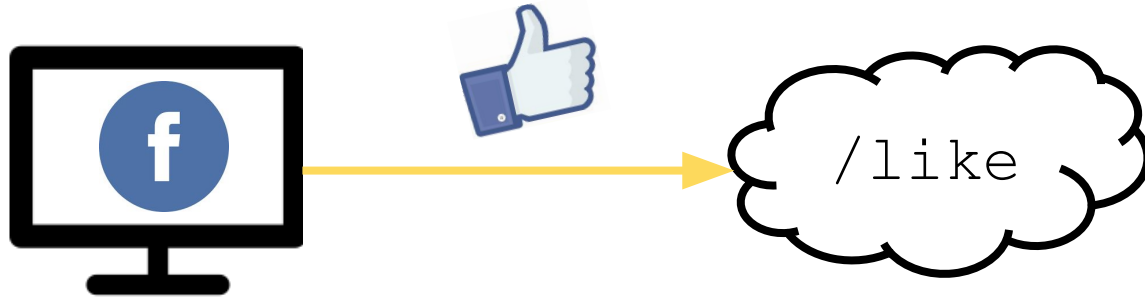
How AJAX requests work



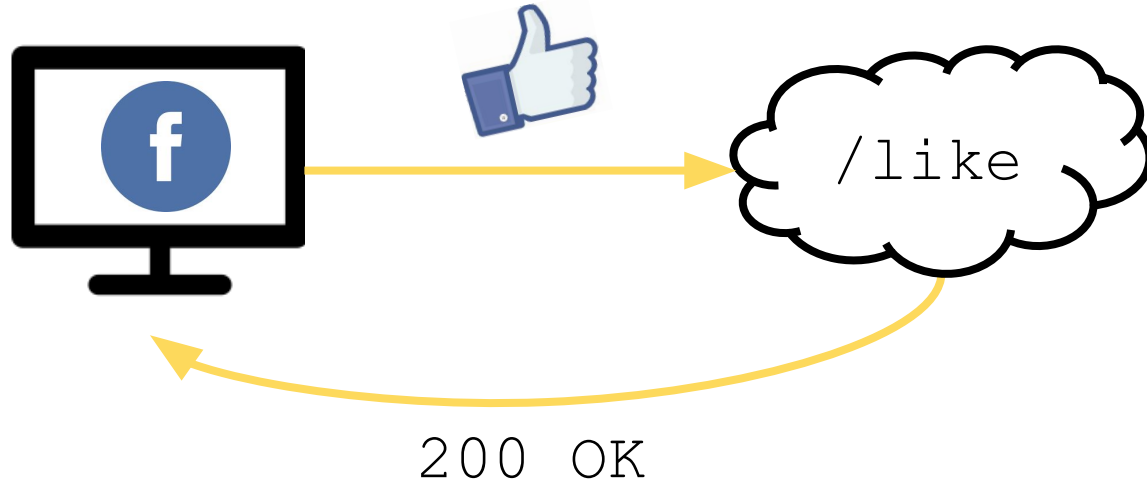
How AJAX requests work



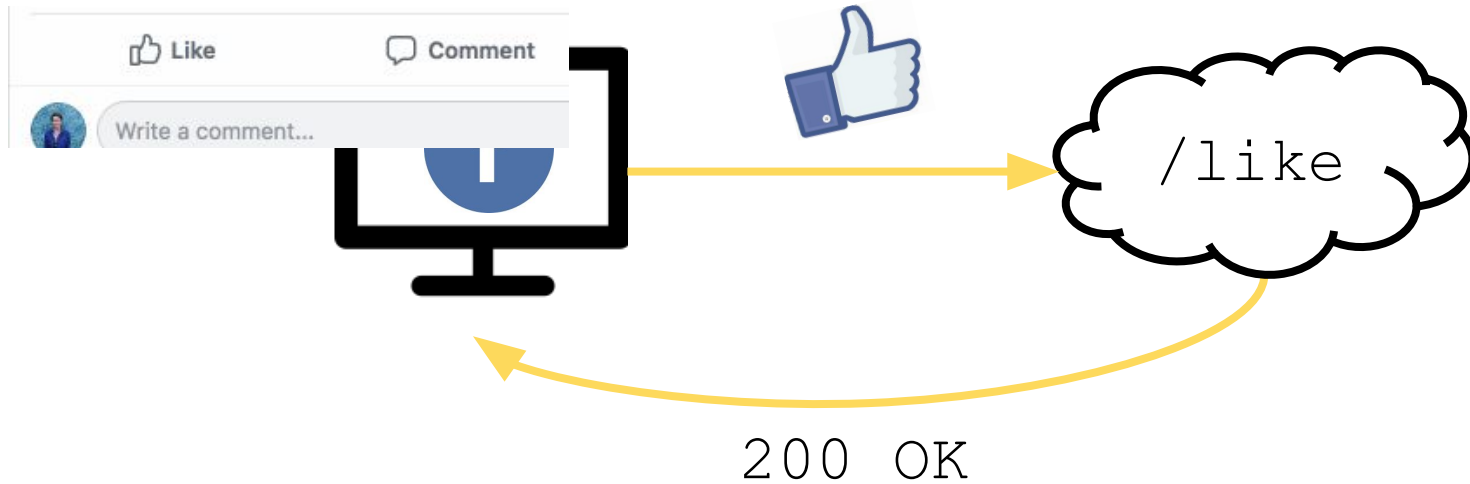
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Let's try it ourselves

👉 TODO: Visit <https://bit.ly/2OhHG3a> to read about an API we'll be making requests to

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👉 TODO: Update the code to display “Percent of Volunteers” per year instead

How was that?



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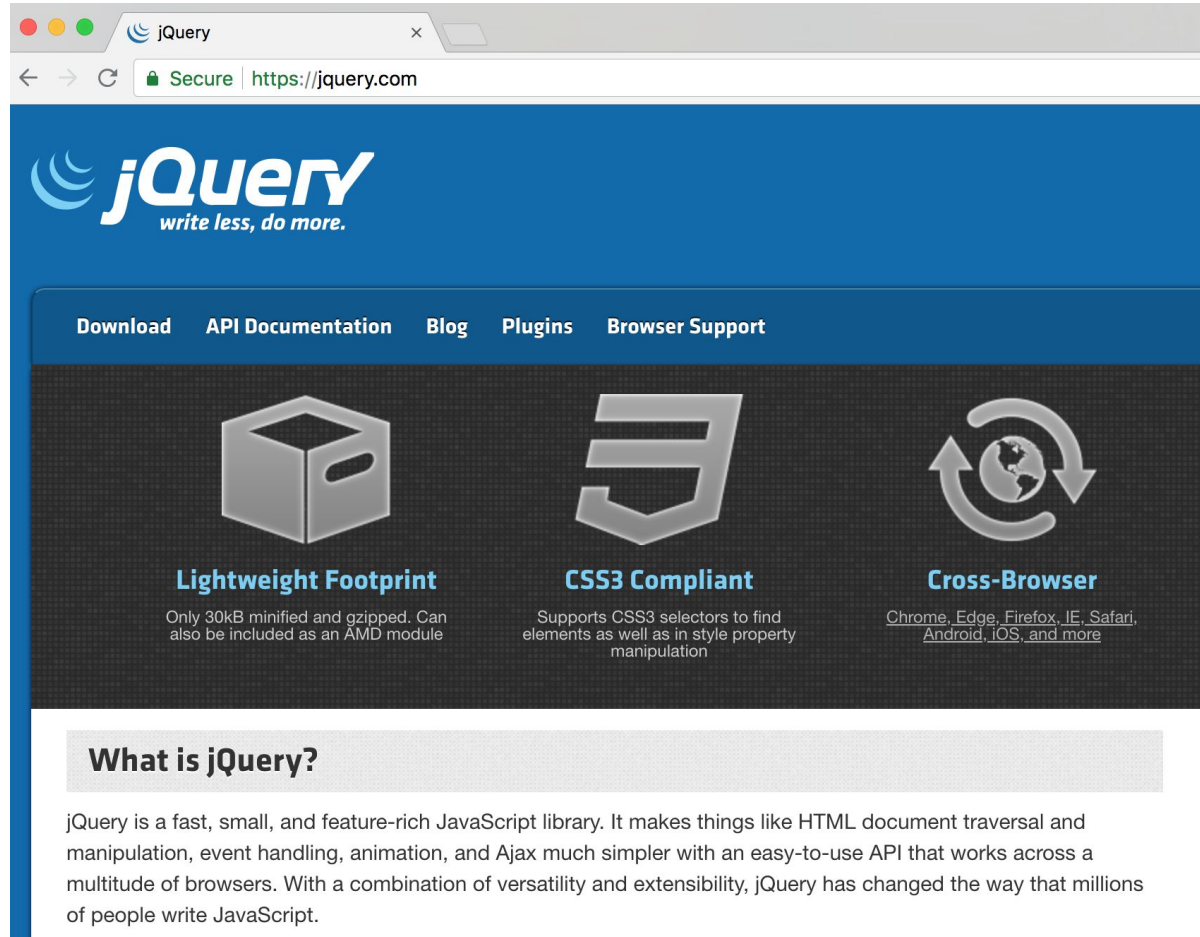
It's a lot of code!

*You have to really understand how the
browser works*

*Mixed JavaScript and HTML is hard to
understand*




jQuery





The image is a screenshot of the jQuery website homepage. At the top, there is a browser window with the title 'jQuery' and the URL 'https://jquery.com'. The page has a blue header with the jQuery logo and the tagline 'write less, do more.'. Below the header is a navigation bar with links: 'Download', 'API Documentation', 'Blog', 'Plugins', and 'Browser Support'. The main content area is dark gray and features three large icons: a box for 'Lightweight Footprint', a stylized 'E' for 'CSS3 Compliant', and a globe with arrows for 'Cross-Browser'. Each icon has a title and a brief description. At the bottom, there is a light gray box with the heading 'What is jQuery?' and a paragraph describing the library.

jQuery
write less, do more.

[Download](#) [API Documentation](#) [Blog](#) [Plugins](#) [Browser Support](#)


Lightweight Footprint
Only 30kB minified and gzipped. Can also be included as an AMD module


CSS3 Compliant
Supports CSS3 selectors to find elements as well as in style property manipulation


Cross-Browser
[Chrome](#), [Edge](#), [Firefox](#), [IE](#), [Safari](#), [Android](#), [iOS](#), and [more](#)

What is jQuery?

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

AJAX + jQuery = 

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If you're stuck, check
out api.jquery.com

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If you're stuck, check out api.jquery.com

Postgres

Understanding How Databases Work



In Class Exercise

Verify Postgres is Installed Correctly:

 Connect to Postgres and run the below commands:

```
\d
```

```
\du
```

```
\dt
```

Getting Started with Databases:

Using Postgres

👉 Goal: Create a database storing NYC's
Daily Water Consumption records

Interactive Lab: DVD Rentals


- 👉 1. Using Postgres, download and restore the dvd rentals database

Interactive Lab: DVD Rentals

- 👉 2. Answer the following questions about DVD Rentals.

Homework: Flask Calculator

Homework

-  **TODO: Update your Flask web app to have a user interface for a calculator.**
Requirements:
- The calculator app should have a web form;
 - The web form should submit calculation commands through Ajax requests.

Once you're done, push it to your calculator repository on Github.

If you're stuck ask in Slack! We'll be checking it periodically over the next week.