Joseph Moore

0. Intro (10 mins)

Teacher & Student Introduction (10 mins)

Just name and 1 thing. Fast. Then scare them about coming to class on time.

I. The Web as an object (20 mins)

Class discussion (5 mins)

What is the web?
What's on the web?
What are the types of websites you can see?

EXERCISE *(10 mins)*: *Link tag. I pick one site that someone else suggested is good. Then they come up and can pick the next person's suggestion and show it.*

Class discussion (5 mins)

What is the web?
How does it work?

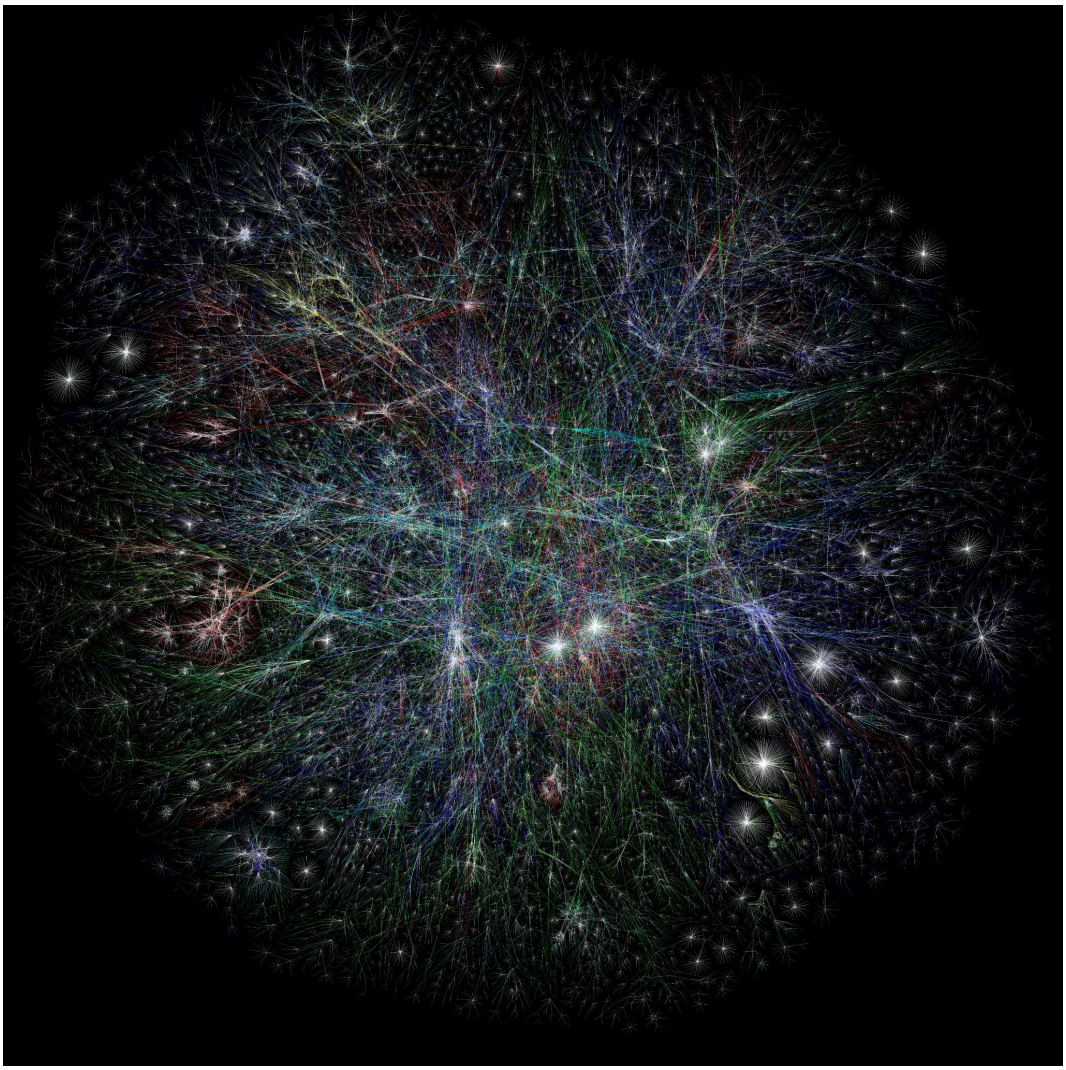
II. Web Architecture (1 hr)

Lecture/Discussion (10 mins)

The web is not a thing.
The web is not one thing.
The web is not a place.
The web is a collection of individual places and things.

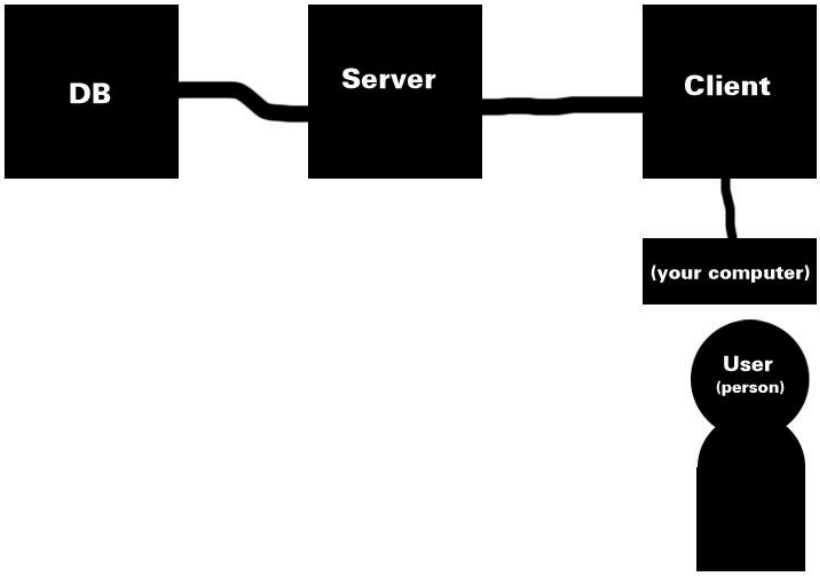
The web is space. Your site is your space. You can do anything in that space. The most basic web page is a blank page. But that space lives in... well, space.

It's called a web for a reason. Every website is a station in a massive subway map.
Show image with hubs (http://entropychaos.wordpress.com/)



Websites connect to each other and to us. They live on big central hubs that make it possible for a lot of people to access a site at once. **What are these hubs called?** Servers.

Explain the difference between servers and clients.
Diagram of db server client architecture.

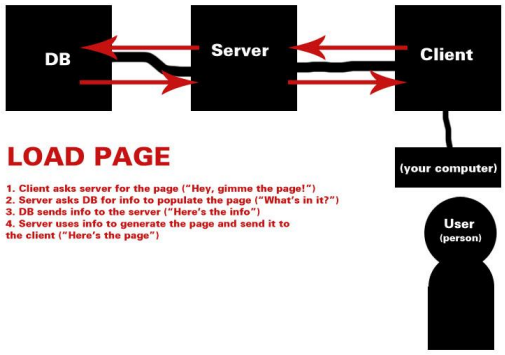


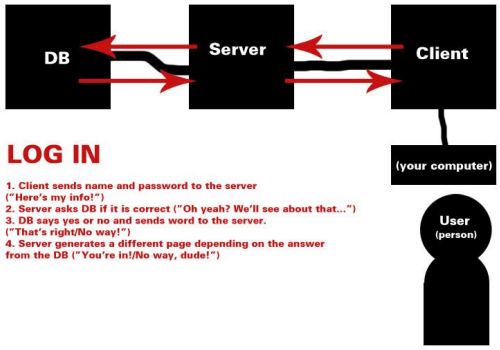
Explain functionality of each part:

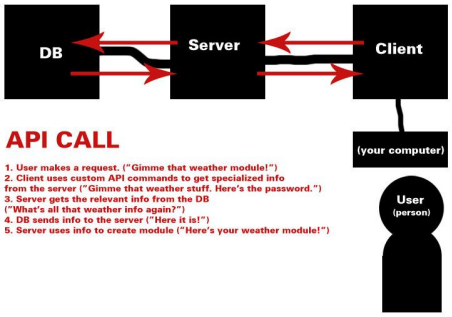
DB - Stores organized lists of information (generally in tables, if using SQL)
Server - Powerful computer where the website lives. Calculations done here are hidden from the public. Complex calculations, secret information lives here.
Client - Your computer. Any information about you, or what you do or the input you give or get starts here.

Show some common flows (focus on direction of information travel, not details):

- page load
- sign in
- api call







EXERCISE (15 mins): Architecture relay race. Students group into 3 groups. One is the DB. They have a spreadsheet of the class roster with made up facts about each one. They cannot move. One group is the server. They run back and forth from the db. The last group is the client. They have to write down student names and run them to the server group. I am the user. I give the client a name I want. The client writes down the name and runs it to the server. The server group runs to the db. the db tells the fact to the server who writes it down. They run the answer back to the client who runs it to me and I put it on the board. Check against spreadsheet at the end.

Concept checking/Review (5 mins)

Where are lists of information usually kept?
Where does the heaviest computation occur? Why?
Where does secret information live?
Where are user interactions usually handled?

(write this and their answers on the board so they can see it for the next assignment)

**********BREAK**********

ASSIGNMENT (20 mins): *Write a paragraph explaining in plain english how one of the following things happen (i.e. what talks to what and in what order to get the information):*

- *A user logs into a site*
- *A list of products display when you go to a site*
- *A website loads*
- *A user's geolocation position is translated into an opacity scale*
- *A chat program*

Check work (10 mins)

Peer check papers. Pick selections to read to the class. Ask writers to explain to the people who don't know.

III. Web 101 Basics (1 hr)

Lecture/Discussion (10 mins)

Local server is a server on your computer.
Why? You need a server to read some languages, and you want to work offline.
Why? Prevents making irreperable mistakes. Copies save time.

Show MAMP on my computer. Show hosts file.

Lecture/Discussion (10 mins)

The purpose of this isn't to give them complete knowledge, btu to generally familiarize them with some of the bigger concepts in this realm. Explain that these are the basics

Web standards - About clean easier to maintain write and take over in HTML. Organization of thought.
Open Source - Sharing makes us stronger. Javascript is better than Flash because it was open. The most important languages of the web are open. (Collaboration, not competition)
Nomenclature - markup, stylesheet, selector, element, object, json, jquery, href
Resources - IDEs, MAMP
Process:

Explain how to google - key words, sites you trust
Explain stack overflow - great community. great answers. every problem you have is there.
Briefly explain Git - why version control matters: sharing of code, fixing mistakes

Q&A (10 mins)

HOMEWORK: *Find 5 websites you really like something about and write a half a page explaining exactly what you like about each one. Then, draw a diagram of the architecture of the site based on what you can see. AND* Read and respond to the reading on the blog.

These are the books and sites that made me who I am at this job. None of these are required, but couldn't be more highly recommended.

Jeffrey Zeldman - Designing With Web Standards
Steve Krug - Don't Make Me Think!
Steve Krug - Rocket Surgery Made Easy
Jason Fried and David Heinemeier Hansson - Rework
Jesse James Garrett - The Elements of User Experience
Douglas Crockford - JavaScript: The Good Parts
Kristina Halvorson - Content Strategy for the Web
Jeremy Keith - DOM Scripting
Dan Cederholm and Ethan Marcotte - Handcrafted CSS: More Bulletproof Web Design
Dan Roam - Unfolding the Napkin
Donald A. Norman - The Design of Everyday Things

http://github.com
http://stackoverflow.com
http://jquery.com
http://www.colorzilla.com/gradient-editor/
http://www.jslint.com/
http://validator.w3.org/
http://www.lipsum.com/
http://wordpress.org/
http://www.mamp.info/en/index.html