

CMPS 369

Web Application Development

Today's Topics

- Course Introduction
 - Topics
 - Syllabus
 - Pre-requisites and Previous Experience
 - Textbooks
 - Grading Expectations
 - Schedule
 - Survey

Course Goals

Web Development is extremely broad, with many languages, frameworks, and platforms.

Goals:

1. Enough exposure to many different technologies so you feel confident on an interview
2. Enough depth in a smaller set of technologies so you gain insight into real-world development

Course Goals

Misconception: “Web programming is easy, anyone can learn it”

- If you want to whip together a simple HTML / Wordpress web site... that may be...
- If you want to earn a real living being a web developer, this couldn't be more wrong!

Course Goals

This course covers web development from an application developer perspective

- Its not about graphics design
- Its not about using wordpress / drupal / etc.
- Its about developing real programming skills in web-related languages and tools

Course Goals

- Client-side
 - Code that is sent from the web server and run within the browser
- Server-side
 - Code that executes on the server in response to requests. Typically the output is the client-side code.

And then of course, you also need to work with the networking in between... [HTTP](#)

What's out there?

Client side languages?

- What are some?
- What do they do?

Server side languages / frameworks?

- What are some?
- What do they do?

Course Topics

On the client-side, we will cover

- HTML
- CSS
 - and LESS - a dynamic form of CSS
- JavaScript
 - and jQuery
 - and some others...

We will not cover Flash

We will spend considerable time learning JavaScript... it has become an exceptionally important programming language

Course Topics

- The bridge between the client and server is very important as well
- We will cover (first) all the important parts of the networking that allows the web to work
 - Sockets and TCP programming
 - The HTTP Protocol

Later in the semester we will also cover **REST** and Web Services

Course Topics

Server-side, there are is an incredible variety of choices we could focus on.

- An emerging framework that fits is based on JavaScript (server side) - called Node.js



We'll use Node on the server - but later in the semester I'll overview some of the other options

Databases

Its hard to think of a lot of web applications that do not use a database

The focus of this course is **not** databases, and I try to stay away from the topic as much as possible

We will, later in the semester, see how we can integrate a database into a Node application.

Expectations

We will do a lot of programming...

You are not expected to have previous experience in HTML, CSS, or JavaScript... however

- However - HTML and CSS are declarative languages that I expect you to be able to master quickly
- JavaScript is modeled after C and C++, so again - I do expect that you will be able to pick it up quickly

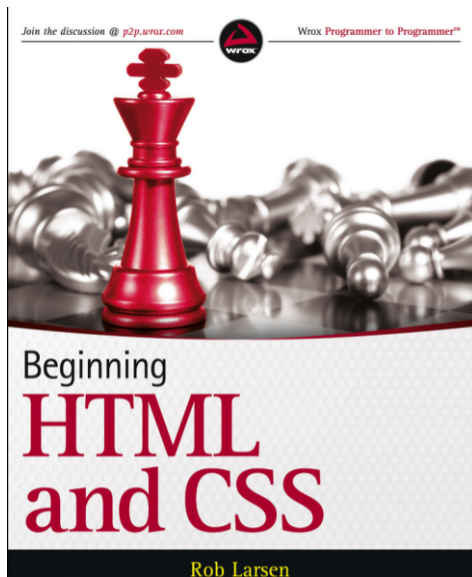
Requirements

You will need to have access to a machine that you can install program on.

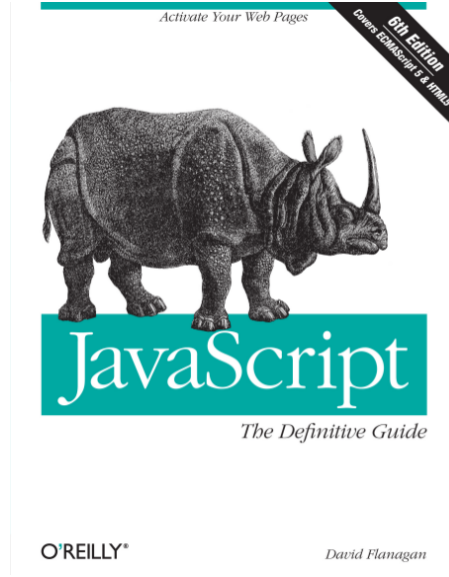
- Node.js will likely not be installed on the lab machines on campus
- Node.js and the text editors we use to do development are available on ALL operating systems

Textbooks

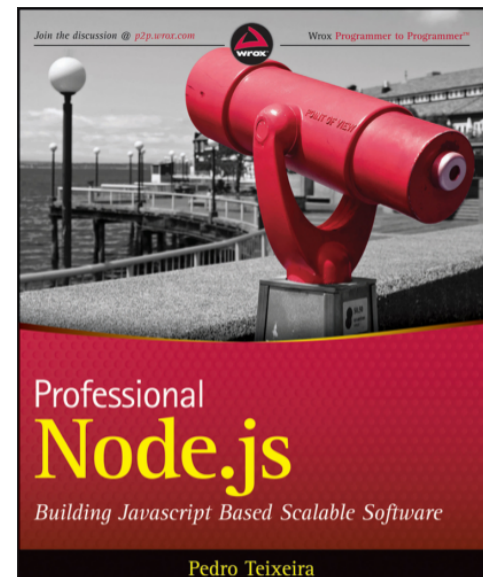
You need a “definitive” source for information...



Required



Required



Recommended

There is less information on the web about Node.js than for HTML and core JavaScript

Grading Policy

Weekly Quizzes (8-10)	5%
Homework Problems Sets (4-5)	15%
Programming Projects (3)	30%
Quizzes (2)	30%
Final Exam	20%

Weekly Quizzes

Around once a week, a short (5 minutes) quiz will be given on the previous lecture topic

- Multiple choice / True and False
- Given at start of lecture
- If you are late, you cannot make up the quiz

If you paid attention in class, you shouldn't have much of a problem answering the questions... they will not be designed to be very difficult

Late Policy

- Homework: 10 points per day late
 - Homework is usually worth 100 points.
 - Weekend will count as 1 day late
 - No assignment over 5 days late will be accepted
- Exams & Quizzes: No makeup will be given.
- Assignments will be turned in electronically
 - Submission format (file types, filenames, etc.) will be given for each assignment

Contact Information

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- Mondays 3:30-5pm
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Next Lecture

Overview of Web Essentials

- Understanding the networking involved
- Understanding the relationship between client-side and server-side development
- Understanding the history of the web.

Survey

I want to know what you already know...

Please take the survey found here:

<http://tinyurl.com/osvrw6x>