CPEN 400A

Building Modern Web Applications

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Enter

Agenda

- Introductions
- Git
- Running a web app (demo)
- To-do list
- Resources

Instructor: Karthik Pattabiraman

Course TAs:

- Xueqin
  - L1A: Wed (10 am to 12 pm)

- Abraham
  - L1B: Fri (2 pm to 4 pm)

Lab Information

- Labs begin on the week of September 14 & 16
- First lab is **mandatory**
- Subsequent labs are only mandatory on the week of assignment submission
- Otherwise, use them as TA office hours

Git

- Open source distributed version control system
- We will be using Git for version control and GitHub for hosting
- Each group will receive a private GitHub repository
- Once you find a partner, send a private Piazza post with the names of your group + lab section + GitHub usernames

Assignment Submission

- Assignment submissions will take place through GitHub
- Create an assignment branch by the due date (more info posted on Piazza under Resources)
- No late commits will be accepted (unless with instructor permission)

Git Demo

- Clone repository
- Setting up .gitignore
- Commit changes
- Push/pull from repository
- Branching

Useful Git Commands

git clone

git pull origin master

git push origin master
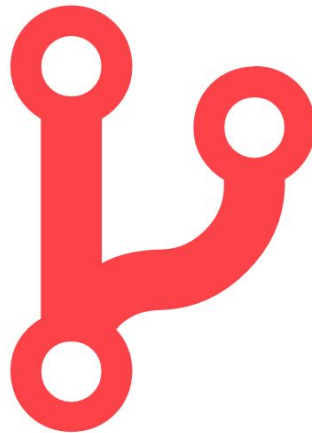
Creating Branches

git branch assignment-X

git checkout assignment-X

git push -u origin assignment-X

git checkout master

git branch

git branch -r

Modern Web App Architecture

Web App Component	Human Analogy
HTML	Skeleton
CSS	Clothing
Client Side Javascript	Behaviour
Server Side Script	Brain (Thought Processing)
Database	Brain (Memory)

Running a Web App (Demo)

- Client Side Web App
  - https://github.com/erkartik91/erkartik91.github.io

- Full Stack Web App (Server + Client)
  - https://github.com/meanjs/mean

To-do List

- Find a partner to do the assignments with
  - Must be in the same lab session as you - no exceptions
  - Ask them whether they're going to drop the course
  - Both you and your partner get the same marks
  - If you break up with your partner at any point, you need to do the work alone for future assignments (both of you'll get the common code)
  - Once you find a partner, **one of you should send a private Piazza post**, indicating your names, lab section, and GitHub usernames
- Start learning JavaScript
  - JavaScript ≠ Java
  - Course will build quickly upon JavaScript concepts
  - JavaScript quiz **on Sep 27**

Books for JavaScript

1. "Eloquent JavaScript: A Modern Introduction to Programming" by Marijn Haverbeke
2. "JavaScript: The Good Parts" by Douglas Crockford (where JavaScript quiz is from)
3. "Programming JavaScript Applications: Robust Web Architecture with Node, HTML5, and Moderns JS Libraries" by Eric Elliott
4. "Effective JavaScript: 68 Specific Ways to Harness the Power of JavaScript" by David Herman
5. "JavaScript: The Definitive Guide" by David Flanagan
6. "You Don't Know JS" by Kyle Simpson
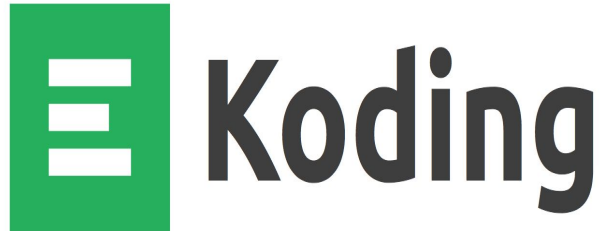
IDEs for JavaScript Development

Cloud9 - GitHub Sign In

https://c9.io/

Using Github with Koding

http://www.koding.com/docs/using-github

WebStorm: JavaScript IDE

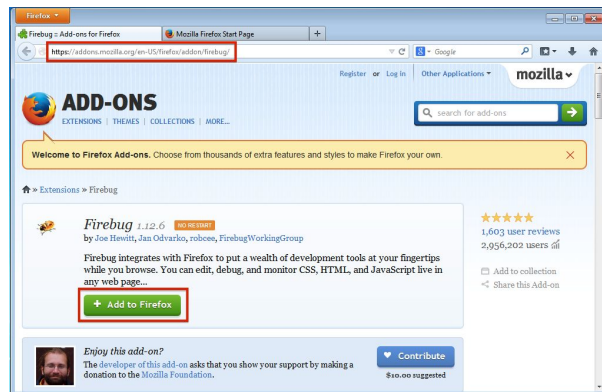https://www.jetbrains.com/student/

Web Developer Tools & Editors

Your favorite web browser + built in web dev tools

- Chrome DevTools
- Firebug for Firefox

Sublime Text 2 for General purpose

Installation List

- Install Git
- (Optional) Install: Github Desktop / Git Extensions
- Node.js
- MongoDB