

# The Zen of Coding

# Jared Nielsen

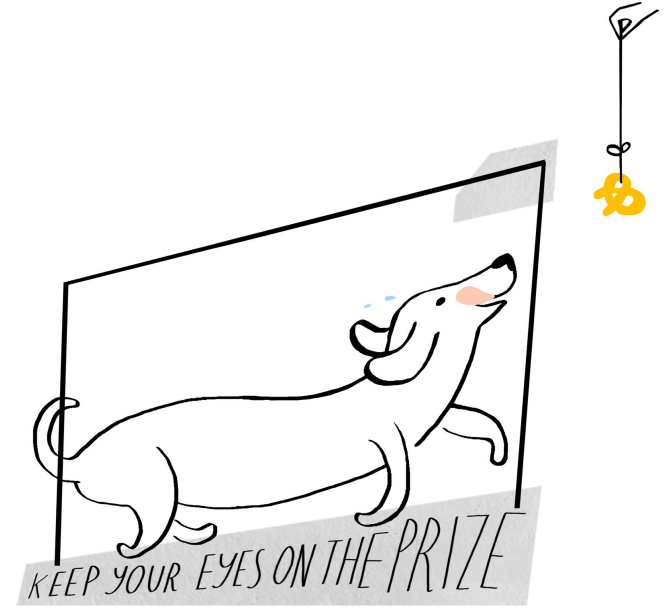
- 20 years teaching + webdev
- Grew up in rural Utah
- First full time job teaching wilderness survival



# Introductions

- Who are you?
- Where are you from?
- What's your background?
- Why are you here?
- Fun fact?

# Goals



# The Path of Learning

# Lifelong Learning



David Parkins

# What is Code?



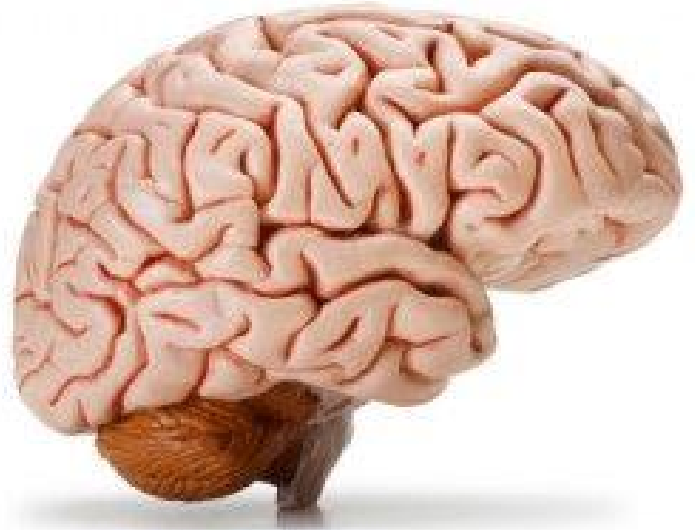
What is programming?



Problem solving

# The Keys to Success

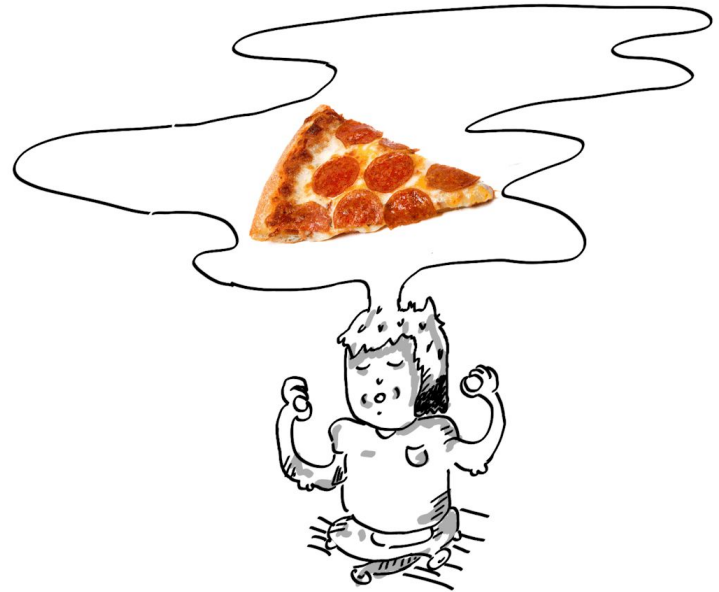
# Mindset



# Teamwork



# Focus



# Google Fu



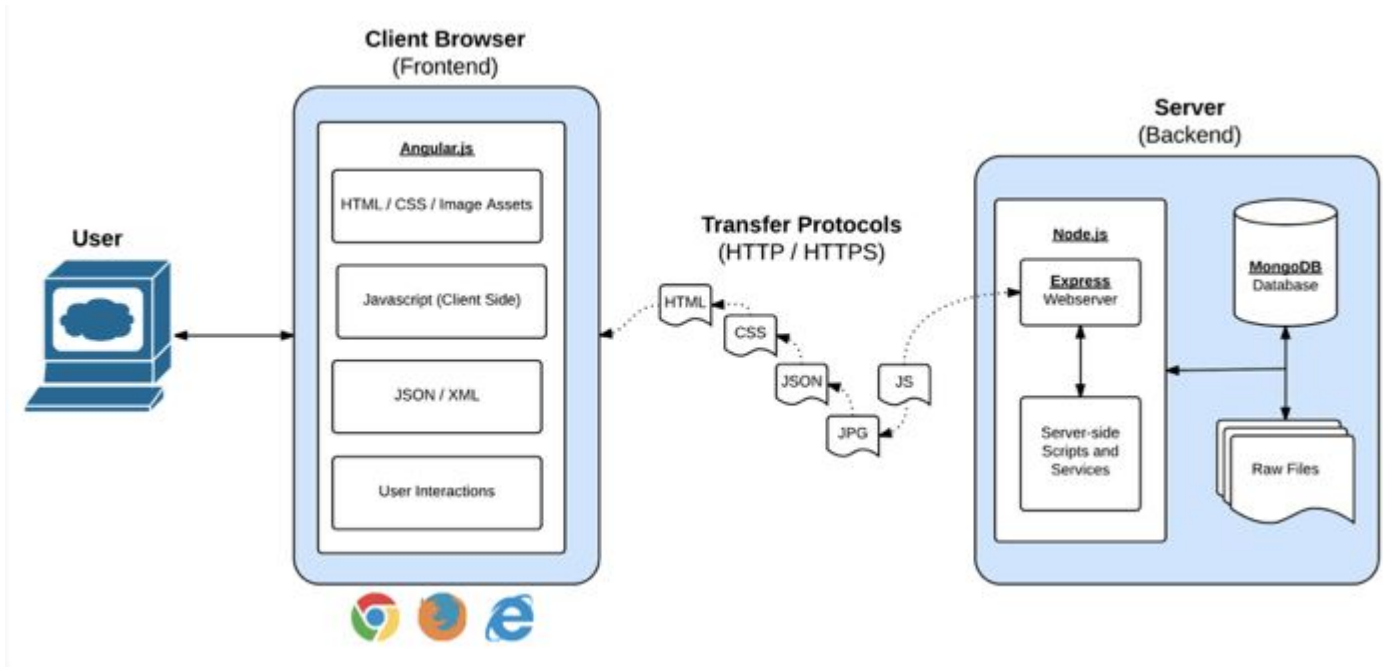
# On the Modern Web

# What is Full Stack Development?





# Front End, Meet Back End. Back End, Front End.



# Building Blocks



# Course Structure

# Daily Schedule

- Set objectives
- Lecture
- Demo(s)
- Discussions
- In-class exercise
- Homework and projects

# Weekly Schedule

- Homework

AND/OR

- Group Project

# Learning to Code Requires Coding



Pre-Work

# Accounts

- GitHub
- GitLab
- Heroku
- LinkedIn
- Stack Overflow
- Google



# Installation Checklist

- Slack
- VSCode or Atom
- Git
- CLI
  - Git Bash (Windows)
  - Terminal (Apple)
- Node.js
- Heroku
- Chrome

# Test

- Open VS or Atom
- Open Git Bash or Terminal
  - `node -v`
  - `git --version`
  - `heroku --version`

In the Beginning was  
the Command Line...

# CLI vs. GUI

```
Macintosh HD -- top -- 80x24
Processes: 218 total, 2 running, 9 stuck, 199 sleeping, 901 threads  23:30:03
Load Avg: 1.48, 1.75, 1.88  CPU usage: 4.15% user, 4.40% sys, 91.44% idle
SharedLibs: 1648K resident, 0K data, 0K linkedIt.
MemRegions: 31278 total, 1892M resident, 117M private, 564M shared.
PhysMem: 5893M used (1193M wired), 10G unused.
VM: 523G vsize, 1826M framework vsize, 0(0) swaptins, 0(0) swapouts.
Network: packets: 12105/8925K in, 11987/1964K out.
Disks: 80156/2205M read, 21235/425M written.

PID  COMMAND      %CPU  TIME    %PR  %MG  %PORT  MEM      PARG  CMPL  PGPR  PPID
392  screencaptur  0.0   00:00.02  7   5   55+  1952K+  28K+  00   262  262
398  mdworker     0.0   00:00.01  3   0   44   2032K  00   00   598  1
389  mdworker     0.0   00:00.01  3   0   44   1572K  00   00   585  1
100  top          1.7   00:00.11  1/1  0   22+  2800K  00   00   100  584
504  dash        0.0   00:00.00  1   0   15   588K  00   00   584  583
183  login        0.0   00:00.01  3   1   28   1218K  00   00   583  482
574  auditd       0.0   00:00.00  2   0   25   560K  00   00   574  1
367  System Prefe  0.0   00:01.23  3   0   270  39M   6164K  00   00   567  1
561  systemstatd  0.0   00:00.01  2   1   19   1040K  00   00   561  1
568  com.apple.Me  0.0   00:01.42  9   0   229  25M   00   00   568  1
558  com.apple.Me  0.0   00:05.07  15  3   224  151M  1715K  00   00   558  1
555  dash        0.0   00:00.00  1   0   15   604K  00   00   555  554
554  login        0.0   00:00.01  3   1   28   1178K  00   00   554  482
550  dash        0.0   00:00.00  1   0   15   600K  00   00   550  548
```



# Files

- touch
- ls (list)
- open (Apple), explorer (Windows)
- cat (concatenate)
- rm (remove)
- atom <file-name>

# Directories

- `pwd` (print working directory)
- `mkdir` (make directory)
- `cd` (change directory)
- `cd ..` (move up)
- `cd ~` (go home)
- `open .` (Apple), `explorer .` (Windows)
- `rm -r` (remove directory)

# RTFM

- man (manual)
- Tab
- Up/Down

# Activity! Command Line (15 min)

- From the command line:
  - Make a new directory titled: **apps**
  - Change into **apps**
  - Create a file titled: **index.html**
  - Open **apps**
- Bonus
  - In one command, make multiple directories titled: **dir\_one** and **dir\_two**
  - In one command, create multiple files: **one.html** and **two.html**



# Activity! Find a Friend (5 min)

- Friend on the right, explain:
  - How to make a directory
  - How to change into a directory
  - How to create a file
  - How to open directories and files
- Friend on the left, answer:
  - What is Full Stack Web Development?

Hello, HTML!

# Demo: Intro to HTML

# Activity! Intro to HTML (10 min)

- Open **index.html**, and include the following:
  - DOCTYPE declaration
  - head tag with a title tag
  - h1 tag with a heading of your choice
  - Embed an image
  - Add three links:
    - One standard
    - One that opens in a new tab
    - One that is a bold placeholder
- Bonus
  - Use an alternative way of separating links without line breaks
  - Create an ordered list of steps to make a sandwich
  - Create an unordered list of your favorite bands
  - Embed a YouTube video of one of your favorite songs

# Review: Intro to HTML

Git?

# Git!

- What?
  - Organized system for managing code
  - Allows multiple developers to collaborate
- Why?
  - Strict system for resolving conflicts
  - Version history
- See also:
  - GitHub
  - GitLab



First Commit, er... Steps, with Git



# Basic Git Commands

- `git clone` (copy a repo)
- `git add` (add file(s) to the repo)
- `git commit` (notes changes to the repo)
- `git push` (send changes to GitHub)
- `git pull` (update repo locally)

Demo: Git add, commit & push

# Activity! Git add, commit & push (20 min)

- Using GitHub and the command line:
  - Create a new public GitHub repo, initialized with a README
  - Clone the repo to your laptop
  - Create an HTML file in the local repo directory
  - add, commit and push the repo to GitHub
- Bonus!
  - Find a friend in class and **fork** their repo
  - Clone this fork to your laptop
  - Create an HTML file in the repo
  - add, commit and push
  - Submit a **pull** request to your friend's repo

See class repo for Steps\_To\_Upload\_Github.pdf

# Netflix && Chill

<https://www.youtube.com/watch?v=ieb6Svbc10E>

Watch this walkthrough for review.

# Demo: Homework

# See Also

- [Difference between git add . & git add -A](#)