Eric Boyer

https://eboyer.io/teaching

# **HELLO!**



**ERIC BOYER** 

## **HELLO!**

NAME,

WHAT YOU DO NOW,

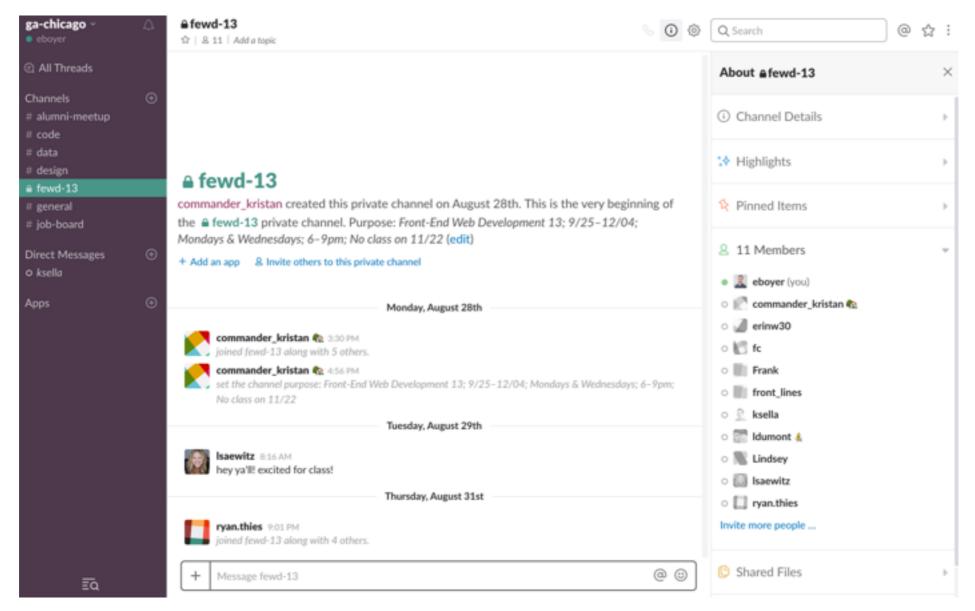
**YOU + A NEIGHBOR** 

WHAT INSPIRED YOU TO TAKE THE CLASS,

ONE INTERESTING THING SOMEONE MAY NOT KNOW ABOUT YOU.

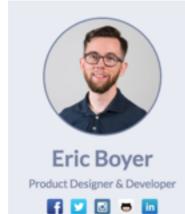
# A TOUR OF COURSE MATERIALS







# https://eboyer.io/teaching



Home > Teaching > FEWD13

#### FEWD13

Schedule

Sep 25 - Lesson 1: HTML Basics

Sep 27 - Field Trip: Chicago Design Systems Meetup @ Sprout Social

Oct 1 - Remote Office Hours via Google Hangouts (6pm - 8pm)

Oct 2 - Lesson 3: Nested Elements, Box Model, CSS "Cascade", Classes and IDs

Oct 4 - Lesson 4: Floats, multi-column layouts, display

Oct 8 - Remote Office Hours via Google Hangouts (6pm - 8pm)

Oct 9 - Lesson 5: CSS Positioning and Layout Lab

Oct 11 - Lesson 6: Layout Lab Cont.

Oct 15 - Remote Office Hours via Google Hangouts (6pm - 8pm)

Oct 16 - Lesson 7: Intro to Programming

Oct 18 - Lesson 8: Intro to jQuery

Oct 22 - Remote Office Hours via Google Hangouts (6pm - 8pm)

Oct 23 - Lesson 9: Variables and Conditionals

Oct 25 - Lesson 10: Functions

Oct 29 - Remote Office Hours via Google Hangouts (6pm - 8pm)

Oct 30 - Lesson 11: Arrays

Nov 1 - Lesson 12: Arrays Lab

Nov 5 - Remote Office Hours via Google Hangouts (6pm - 8pm)

Nov 6 - Lesson 13: Responsive Design

Nov 8 - Lesson 14: Responsive Design Cont.

Nov 12 - Remote Office Hours via Google Hangouts (6pm - 8pm)

# FOLDER STRUCTURE

# FINAL PROJECT

# EXIT TICKETS

# HOMEWORK FEEDBACK PROCESS

# STUDY GROUP / OFFICE HOURS

# SHOW N' TELL W/ SOME SNACKS

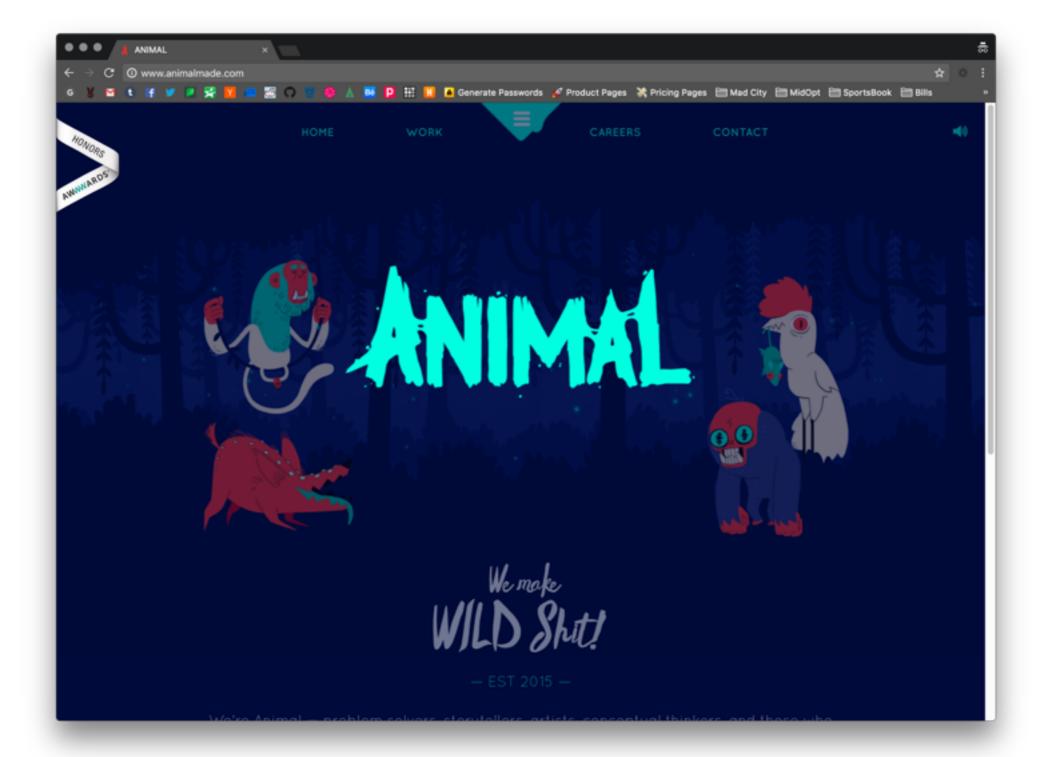
# WED MARCH 8TH FIELD TRIP!

# CHICAGO DESIGN SYSTEMS

https://www.meetup.com/ChicagoDesignSystems/

@ SPROUT SOCIAL 131 S DEARBORN ST

# TODAY! ERIC



# LET'S GET STARTED!

# HTML BASICS

# **HTML BASICS**

# **LEARNING OBJECTIVES**

- Provide an overview of the world of web development
- Articulate the role of HTML, CSS and JavaScript in frontend development.
- Recognize the different roles and responsibilities in web development.
- Apply and experiment with HTML tags.

# **AGENDA**



- Web Development Overview
- ▶ Intro to Front-End Development
- Intro to HTML
- Lab Time

**FEWD** 

# WEB DEVELOPMENT OVERVIEW

## WHAT IS FRONT-END WEB DEVELOPMENT?

# WHY WEB DEVELOPMENT?

Make ideas come to life

**Opportunities** 

Communication

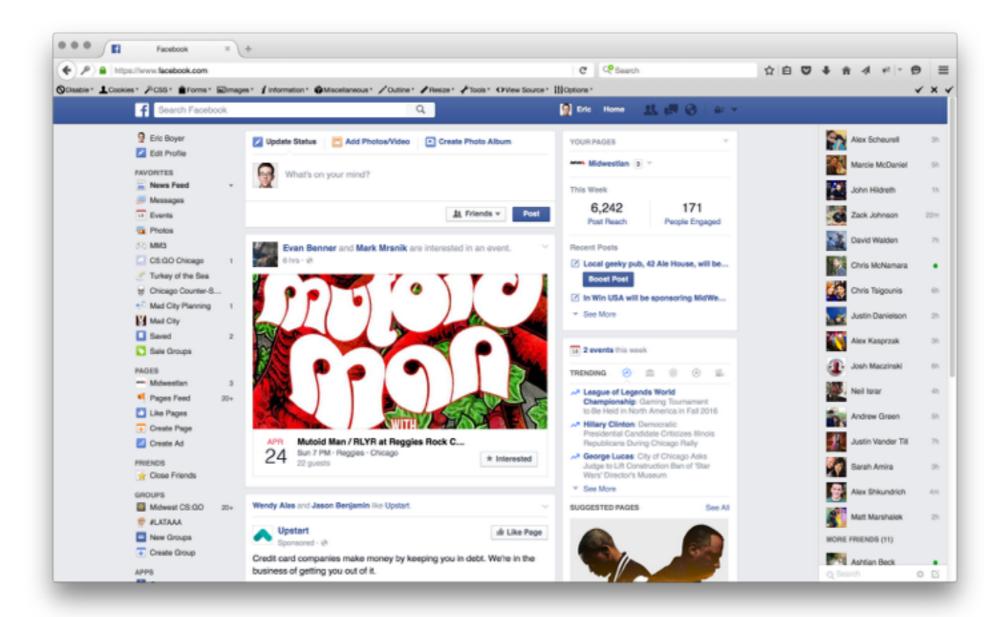
**Customize Websites** 

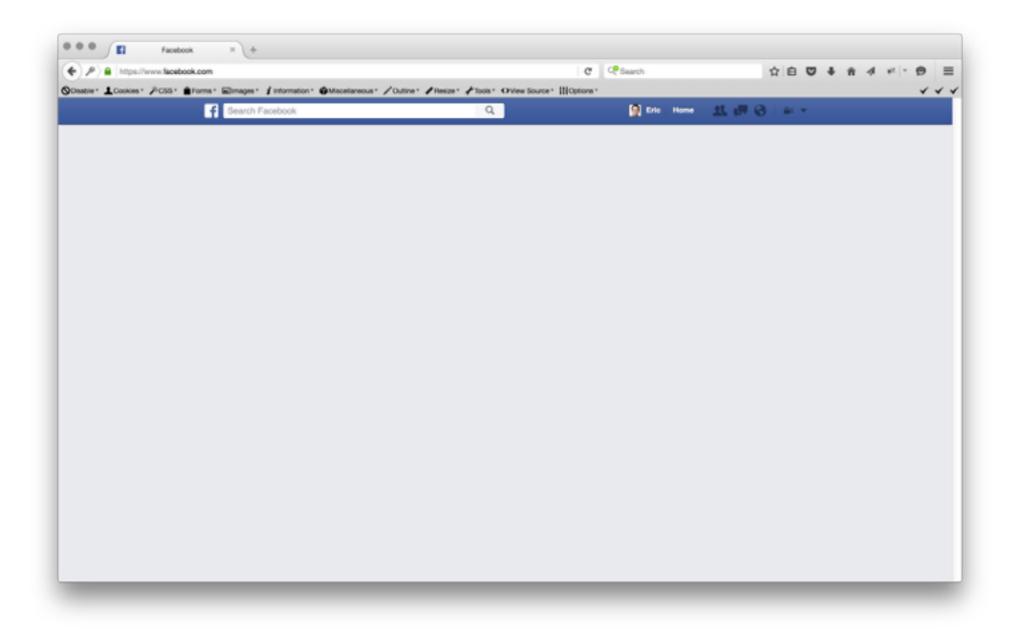
Help Others

Jobs

Leads to other tech related interests

"I think everybody in this country should learn how to program a computer because it teaches you how to think." — Steve Jobs





### **FEWD**

# HOW DOES THE INTERNET WORK?

# **CLIENT AND SERVER**





# **INTERNET PROTOCOL**



# **CLIENT AND SERVER**



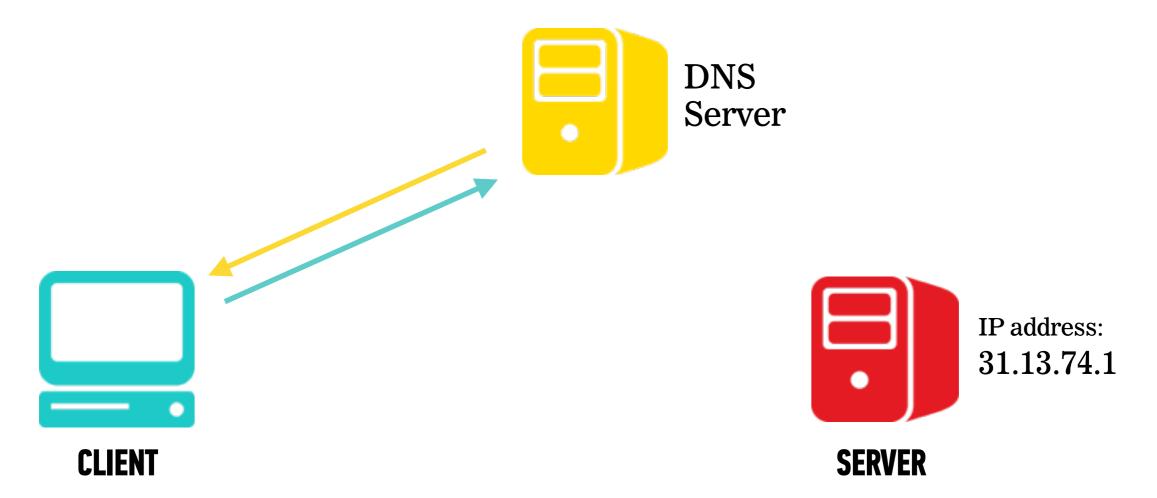
IP Address: 192.168.1.72



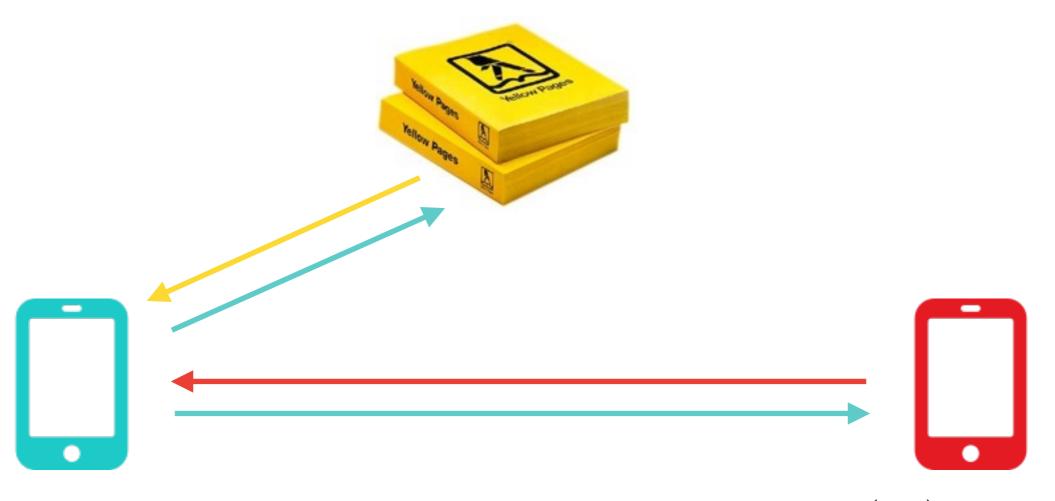
IP Address: 31.13.74.1

## DNS SERVER — URL -> IP ADDRESS

- Client (me): I need directions to www.facebook.com"
- DNS Server: "The domain name www.facebook.com maps to this IP address: 31.13.74.1"



# DNS SERVER — URL -> IP ADDRESS



(312) 234-4321

# **REQUEST/RESPONSE**



CLIENT RUNNING A
WEB BROWSER

Your browser connects to a server and requests a page

Server sends back requested page



SERVER MACHINE RUNNING A WEB SERVER

## **HOW CAN YOU DO THIS?**

# **HOW CAN YOU DO THIS?**

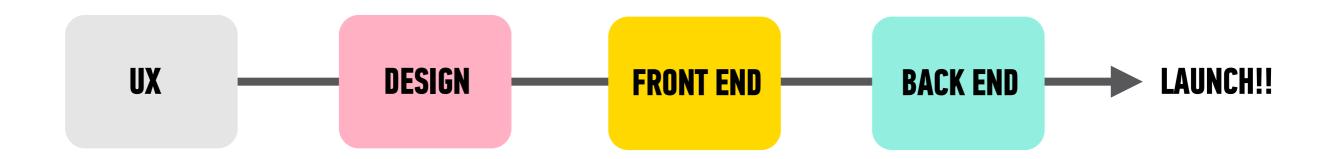
DOMAIN NAME (GANDI.NET, NAME.COM)

HOSTING (NAME.COM, WEBFACTION.COM)

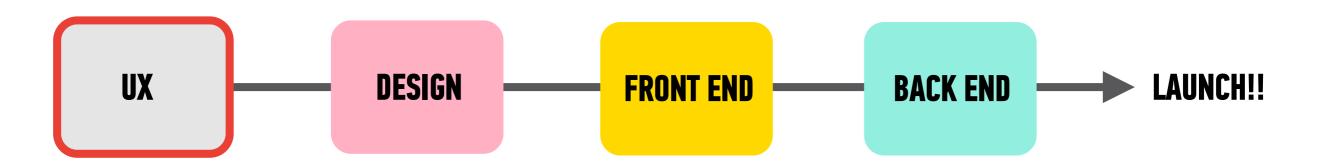
### **FEWD**

# WEB PRODUCTION WORKFLOW

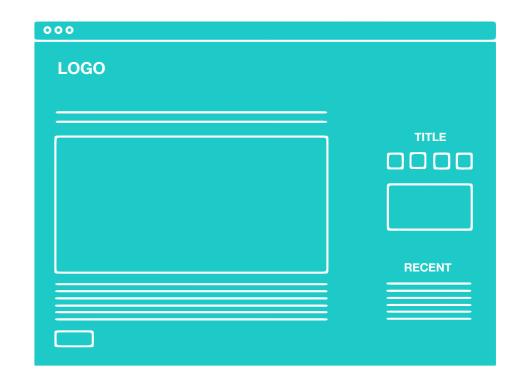
# **WEB PRODUCTION WORKFLOW**



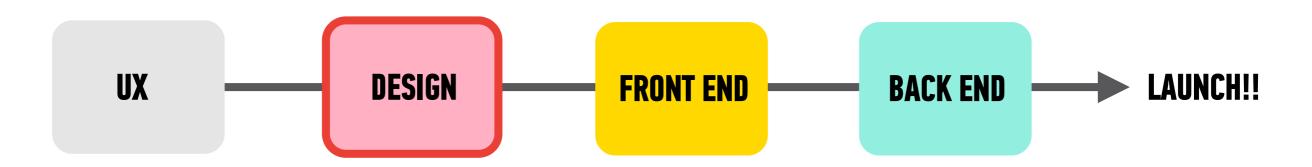
#### **WEB PRODUCTION WORKFLOW — UX DESIGNER**



- Figures out how people are going to use a webpage
- Try to make it as easy as possible for people to use a webpage while achieving the purpose of the webpage.
- Main deliverables: wireframes, flow charts



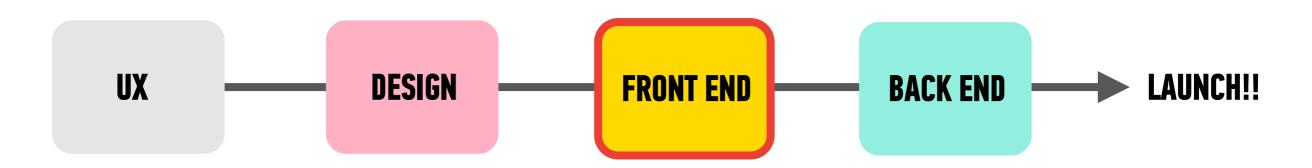
#### **WEB PRODUCTION WORKFLOW — UI DESIGNER**



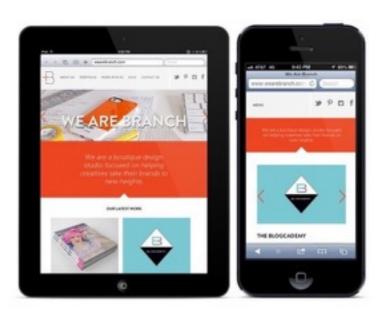
- Referred to as UI Designer/Web Designer
- ▶ Take the wireframes and make them pretty
- Logo/Fonts/Color palettes/Layout



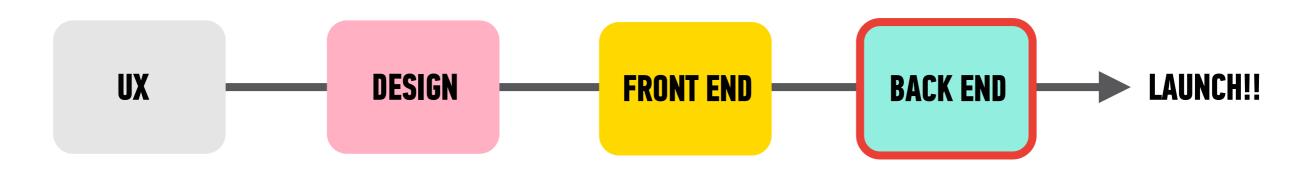
#### **WEB PRODUCTION WORKFLOW** — **FRONT END**



- Take the design and turn it into code and assets
- Uses HTML/CSS to create the structure for a page and add styles
- Add interactions with JavaScript
- Other responsibilities: accessibility, performance, cross-browser and cross-device functionality



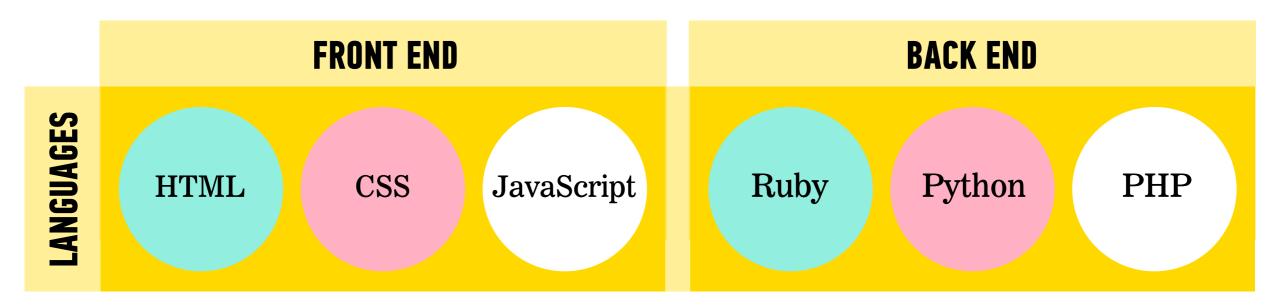
#### **WEB PRODUCTION WORKFLOW — BACK END**



- Give the application/webpage a 'memory'
- Handle page request and send back the right page
- Talking to the database getting data, adding and updating data
- Authenticate users
- Communicate with APIs



# FRONT END VS. BACK END



...and many, many more

## HTML / CSS / JAVASCRIPT

# EVERYTHING THAT YOU SEE AND INTERACT WITH WHEN USING THE WEB IS HTML, CSS, AND JAVASCRIPT.

## HTML / CSS / JAVASCRIPT

# **CHALLENGES**

**DEVICE RESOLUTIONS** (RETINA, 4K, LOW RESOLUTIONS)

**DEVICE SIZES** (PHONE, TABLET, DESKTOP)

**BROWSERS** (FIREFOX, CHROME, SAFARI, INTERNET EXPLORER 7, 8, 9, MICROSOFT EDGE)

**PERFORMANCE** 

# **ACTIVITY**



#### **KEY OBJECTIVE**

Describe the role and responsibilities of the front-end developer. How do these differ from those of the back-end developer?

#### **TIMING**

1 min

1. Turn to partner and discuss

2 min

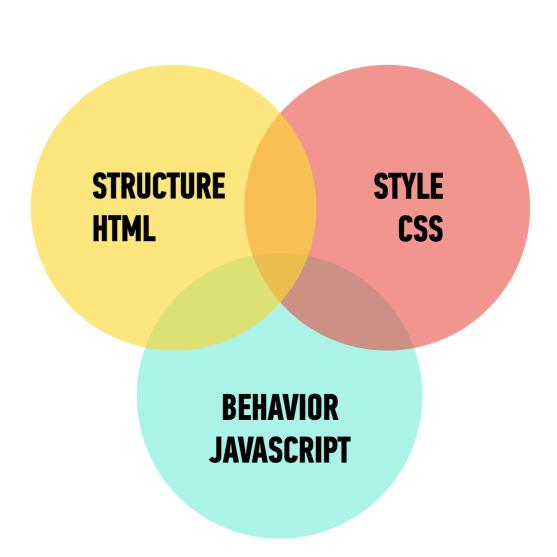
2. Share with rest of class

#### **FEWD**

# INTRO TO FRONT-END WEB DEVELOPMENT

# THE THREE AMIGOS: STRUCTURE, STYLE, BEHAVIOR

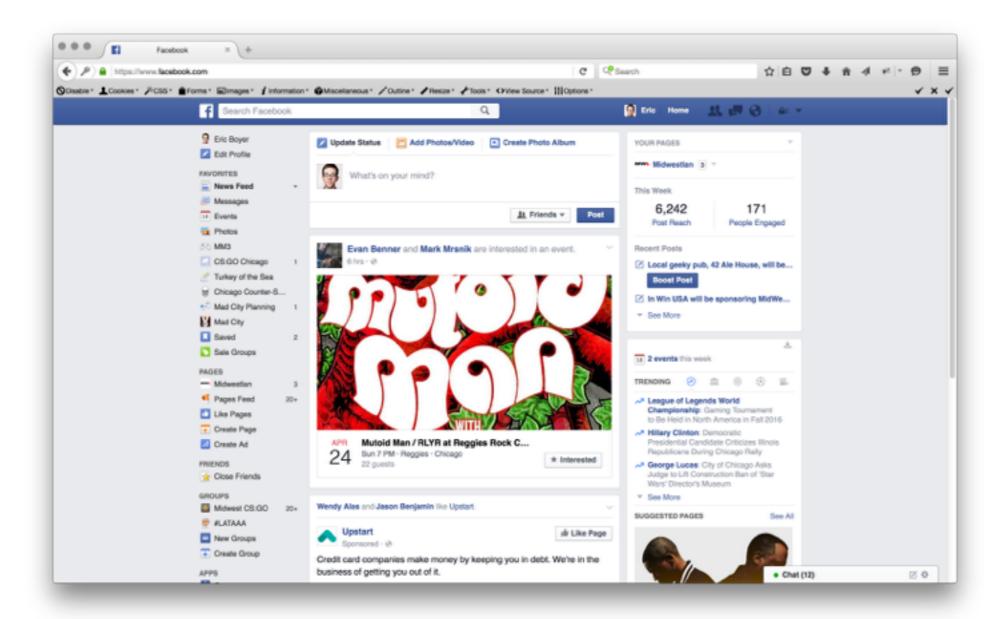
- ▶ HTML = Noun
- CSS = Adjective
- Javascript = Verb

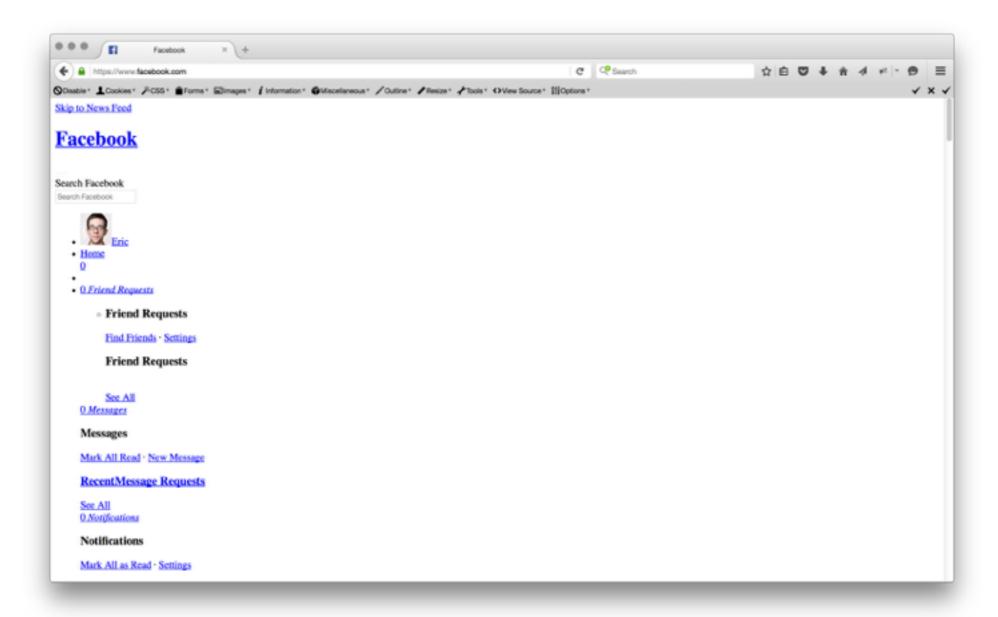


- HyperText Markup Language
- Describes the **structure** of a webpage
- Originally designed to share scientific research papers

# HTML describes the organization and structure of pages

- I. Background of 1893 Columbian Exposition
  - A. Continued tradition of big fairs
    - Previous world's fairs
      - a. London and the Crystal Palace, 1851
      - b. Philadelphia, 1876
    - 2. Chicago fair to be larger than earlier fairs
  - B. Emphasized cultural achievements
    - Planners D. H. Burnham and F. L. Olmsted
    - 2. Nation's top artists, inventors, industrialists
- II. Background of George W. G. Ferris



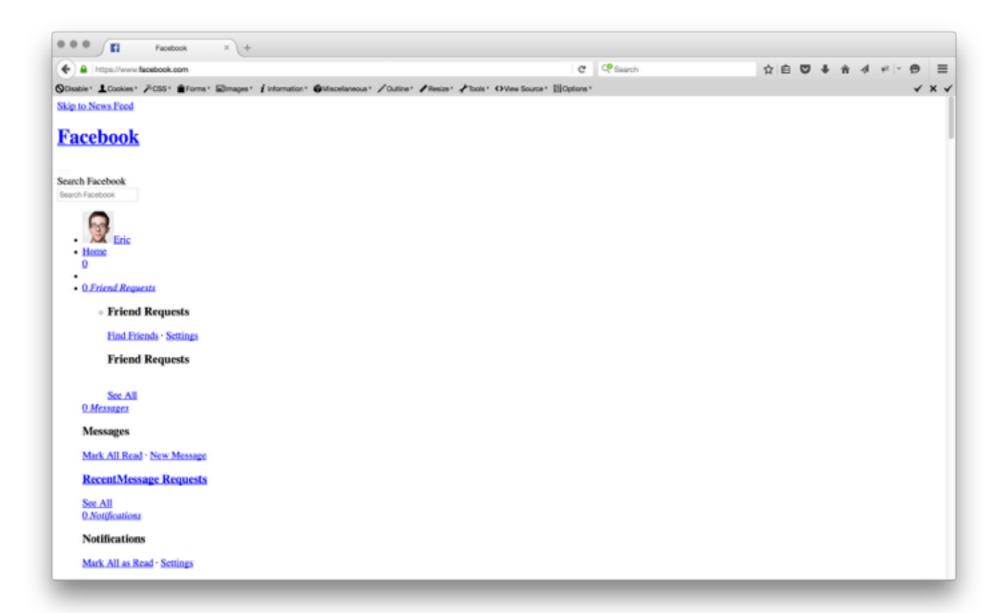


### WHAT IS CSS?

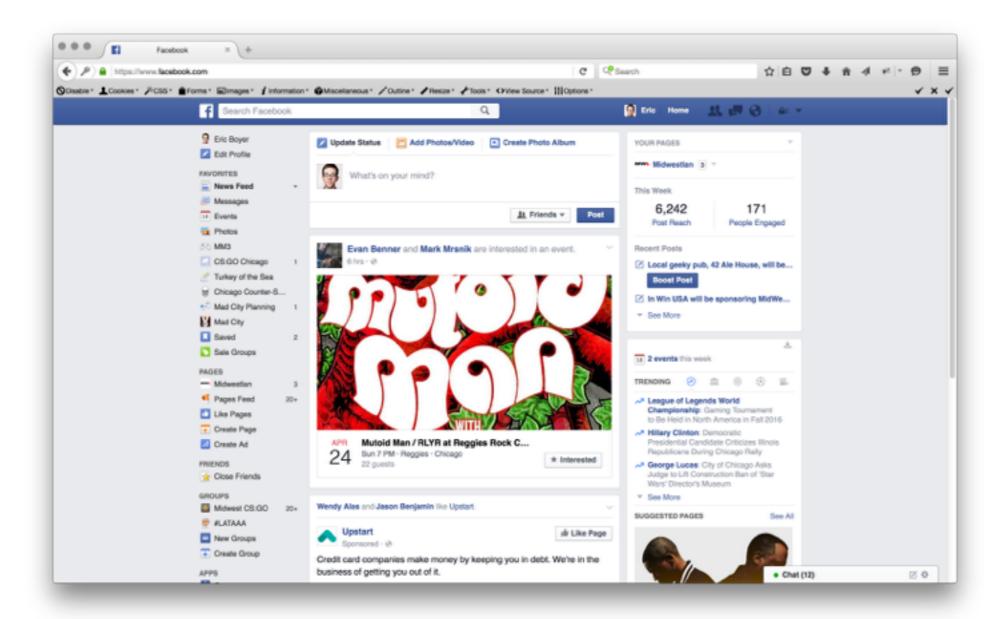
▶ CSS associates style rules with HTML elements

```
body {
    font-family: Arial;
    color: white;
    background-color: blue;
}
```

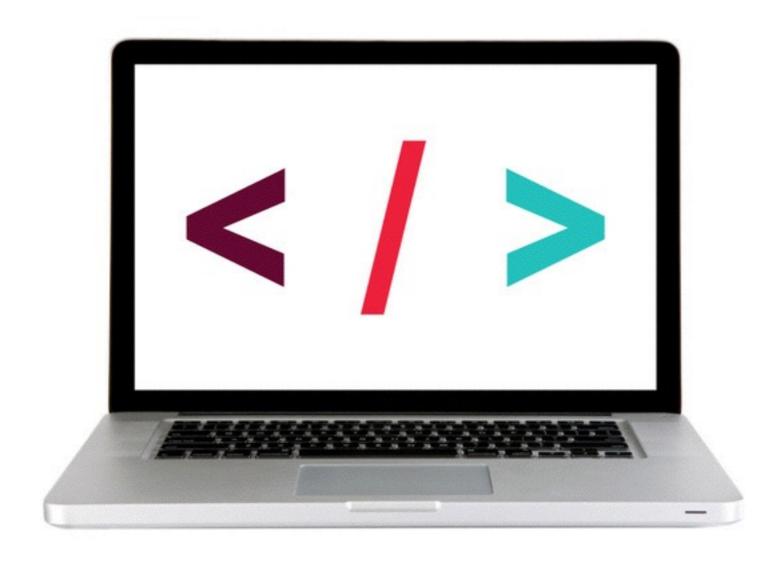
# **WHAT IS CSS?**



### WHAT IS CSS?



# **LET'S TAKE A CLOSER LOOK**



#### WHAT IS JAVASCRIPT?

- Javascript defines how content behaves
- Interactions and animations
- Heavily used in single-page web apps

```
var color = prompt("What is your favorite color?");
document.getElementsByTagName('h1')[0].innerHTML = color
```

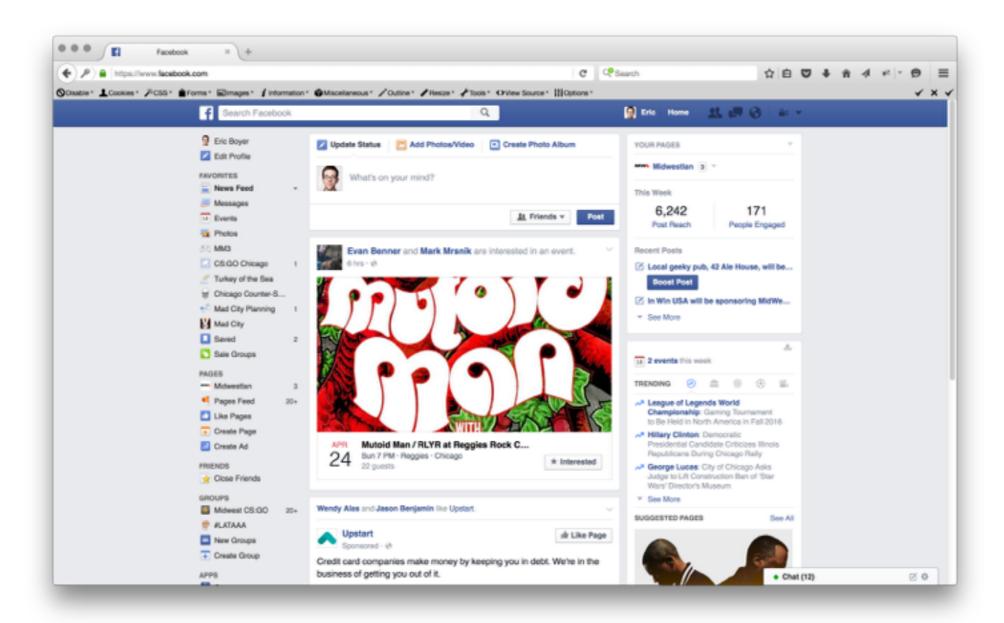
#### **JQUERY IS YOUR FRIEND**

\$('h1').html(color);

# Fast, small, feature-rich JavaScript library

```
Javascript
document.getElementsByTagName('h1')[0].innerHTML = color
jQuery
```

### WHAT IS JS?



#### WHAT IS JS?



# LET'S GET EVERYTHING SET UP!

# FIRST THINGS FIRST — TOOLS



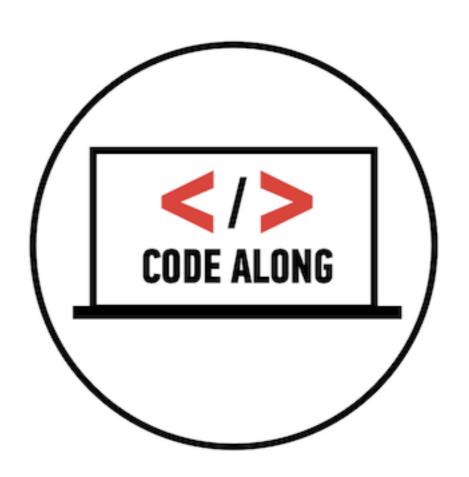
# **SUBLIME TEXT 3**

Download here

# **CHROME**

Download here

# **FIRST THINGS FIRST**

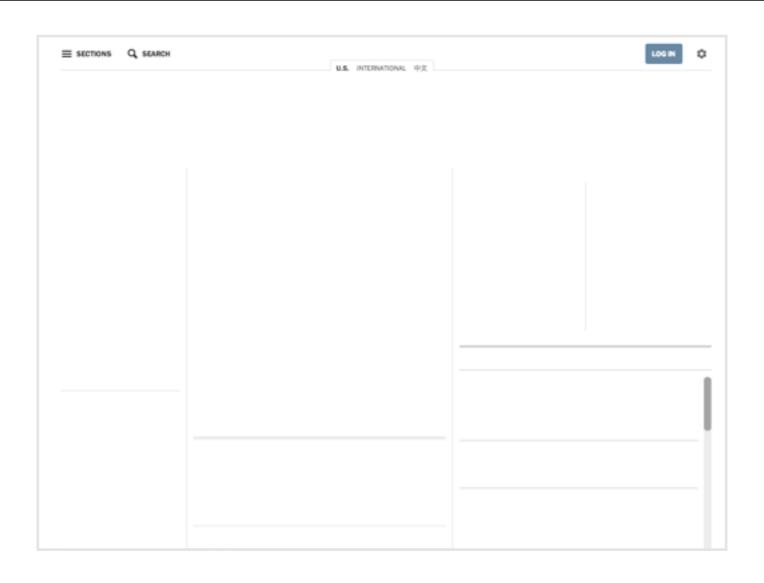


# **FEWD**

# HTML BASICS

#### **HTML BASICS**















#### **HTML BASICS**

# STRUCTURAL MARKUP

#### HTML SYNTAX — TAGS

Opening tag

Closing tag

## <tag name>content</tag name>

Element

#### STRUCTURAL TAGS — HEADINGS

- HTML has six "levels" of headings
- <h1> is used for main headings
- ▶ <h2> <h6> are used for subheadings

- <h1>
- <h2>
- <h3>
- <h4>
- <h5>
- <h6>

#### STRUCTURAL TAGS — PARAGRAPHS

- The tag defines a paragraph of text.
- By default, browsers will show each paragraph on a new line with some space between it and any subsequent paragraphs.



#### STRUCTURAL TAGS — UNORDERED LISTS

- An unordered list is created with the element.
- Each item in the list is placed between an opening and closing tag.
- 'li' stands for list item





#### STRUCTURAL TAGS — WHITE SPACE

- When the browser comes across two or more spaces next to each other, it only displays one space.
- Similarly, if the browser comes across a line break, it treats that as a white space.
- This is known as white space collapsing.
- Developers often take advantage of this to make their code easier to read.



#### **ACTIVITY**



#### **KEY OBJECTIVE**

▶ Add markup to the GA press release

#### **TIMING**

5 min

1. Add markup to the press release. Use tags such as the  $\langle h1 \rangle$ ,  $\langle p \rangle$ ,  $\langle ul \rangle$ , and  $\langle li \rangle$  tags.

### SEMANTIC MARKUP

Add extra information to web pages

#### SEMANTIC TAGS — STRONG, EM

- The <strong> element indicates that its content has a strong importance.
- By default, browsers will show the contents of a strong element in **bold**.

- The <em> tag indicates emphasis that may subtly change the meaning of a sentence.
- By default, browsers will show the contents of a strong element in *italic*.

I think John was there

I think *John* was there



<em>

#### **SEMANTIC TAGS — QUOTATIONS**

• Blockquote is used for longer quotes that take up an entire paragraph.



- The element is still used inside the <br/> <blockquote> element.
- The <q> element is used for shorter quotes that sit within a paragraph.



# LINKS

#### ATTRIBUTES — EXAMPLE

<pizza crust="thin" toppings="pepperoni"></pizza>

#### HTML SYNTAX — ATTRIBUTES

Attribute Name

# <tagName name="value"></tagName>

Attribute Value

#### **SEMANTIC TAGS — LINKS**

- Specify which page you want to link using the href attribute.
- Users can click on anything between the opening and closing <a> tags.

Page the link takes you to

<a href="http://www.amazon.com/">Amazon</a>
<a href="http://www.amazon.com/">Amazon</a>
<a href="http://www.amazon.com/">Amazon</a>
<a href="http://www.amazon.com/">Amazon</a>

#### **ACTIVITY**



#### **KEY OBJECTIVE**

▶ Finish adding markup to the GA Press Release

#### **TIMING**

3 min

1. Finish adding markup to the press release by adding in the <br/> <br/>blockquote> and <a> tags.

#### **ACTIVITY**



#### **KEY OBJECTIVE**

- Add markup to chocolate chip cookie recipe
- Google and implement tag
- ▶ *Optional*: Google and implement <img> tag

#### **TIMING**

2 min 15 min

- 1. Review copy in index.html and plan out structure with partner
- 2. Add markup to recipe. You'll want to use at least 8 of the tags discussed in class as well as the tag.
- 3. Optional: Google and implement <img> tag
- 4. Optional: Add extra tags not covered in class

#### IF YOU FINISH EARLY

Start on resume, which will be homework for next week

#### **LEARNING OBJECTIVES**

- Provide an overview of the world of web development
- Articulate the role of HTML, CSS and JavaScript in frontend development.
- Recognize the different roles and responsibilities in web development.
- Apply and experiment with HTML tags.

## HOMEWORK

#### **HOMEWORK**

- ▶ Familiarize yourself with Slack (PINNED MESSAGES)
- Begin to organize what you're doing in the class into folders
- ▶ Sign up for github.com and message me your username on Slack
- Optional: Start thinking about an "About Me" / Resume page

#### **HIGHLY RECOMMENDED COURSE MATERIALS:**

Jon Duckett - Web Design with HTML, CSS, JavaScript and jQuery Set



# WED SEPT. 27TH FIELD TRIP TO SPROUT. FREE PIZZA + BEER

(GOOGLE SHEET FOR SNACKS + DESIGN WILL BE SHARED/PINNED IN SLACK)

## EXIT TICKETS