

---

**HELLO!**

---



**ERIC BOYER**



**ADRIANA CASTANEDA**

---

**HELLO!**

---

**YOU + A NEIGHBOR**

**NAME,**

**WHAT YOU DO NOW,**

**WHAT INSPIRED YOU TO TAKE THE CLASS,**

**ONE INTERESTING THING SOMEONE  
MAY NOT KNOW ABOUT YOU.**

# FRONT END WEB DEVELOPMENT

*Eric Boyer*

<http://teaching.eboyer.io/CHIFEWD7>

---

**FRONT-END WEB DEVELOPMENT**

---

# A TOUR OF COURSE MATERIALS



chicagoevening...  
eboyer  
★ STARRED  
# fewd-7  
CHANNELS (14)  
# fewd-6  
# general  
# random  
DIRECT MESSAGES (104)

#fewd-7  
16  
Search  
+ Add an app or custom integration  
Invite others to this channel

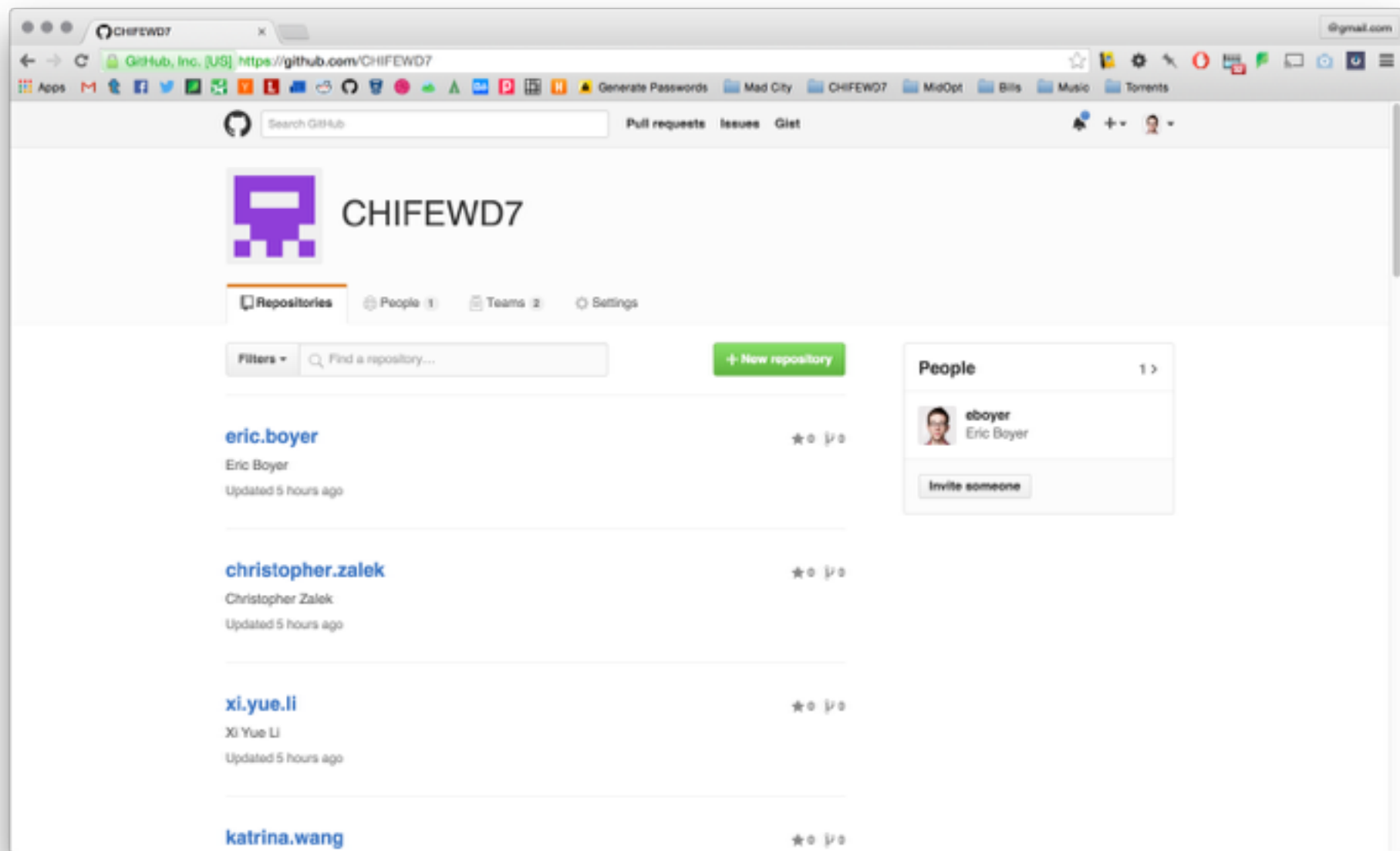
February 12th  
ksella 3:03 PM  
joined #fewd-7  
ksella 3:03 PM  
set the channel purpose: For Front-end Web Development running February 18 - April 26, 2016

February 16th  
ashley\_sullivan 11:10 AM  
joined #fewd-7. Also, @joniller joined, @mikejsena84 joined, @cd78475 joined, @tombunting joined, @peyton joined, @carinaemeruge joined, @jasonli joined, @chris.zolek joined, @allisonschaffer joined, @akcastaneda joined, @eboyer joined, @jchowes joined.

Yesterday  
jchowes 12:23 PM  
Hi everyone!  
kimbalrd 1:25 PM  
joined #fewd-7  
joniller 4:06 PM  
Hey there!  
eboyer 4:08 PM  
whats up guys!

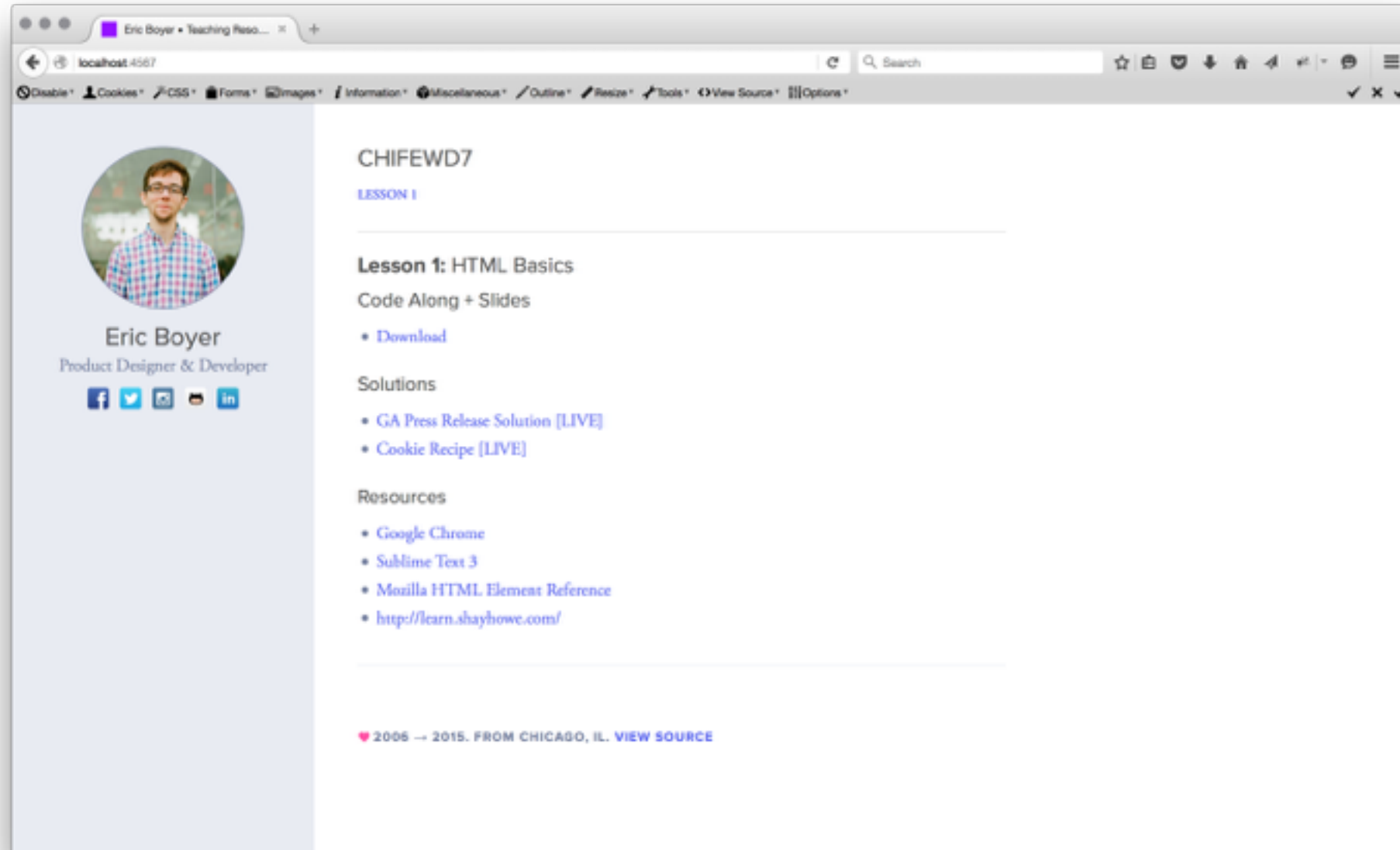
Today  
nickskeba 2:23 AM  
joined #fewd-7

+  
EQ





<http://teaching.eboyer.io/CHIFEWD7>



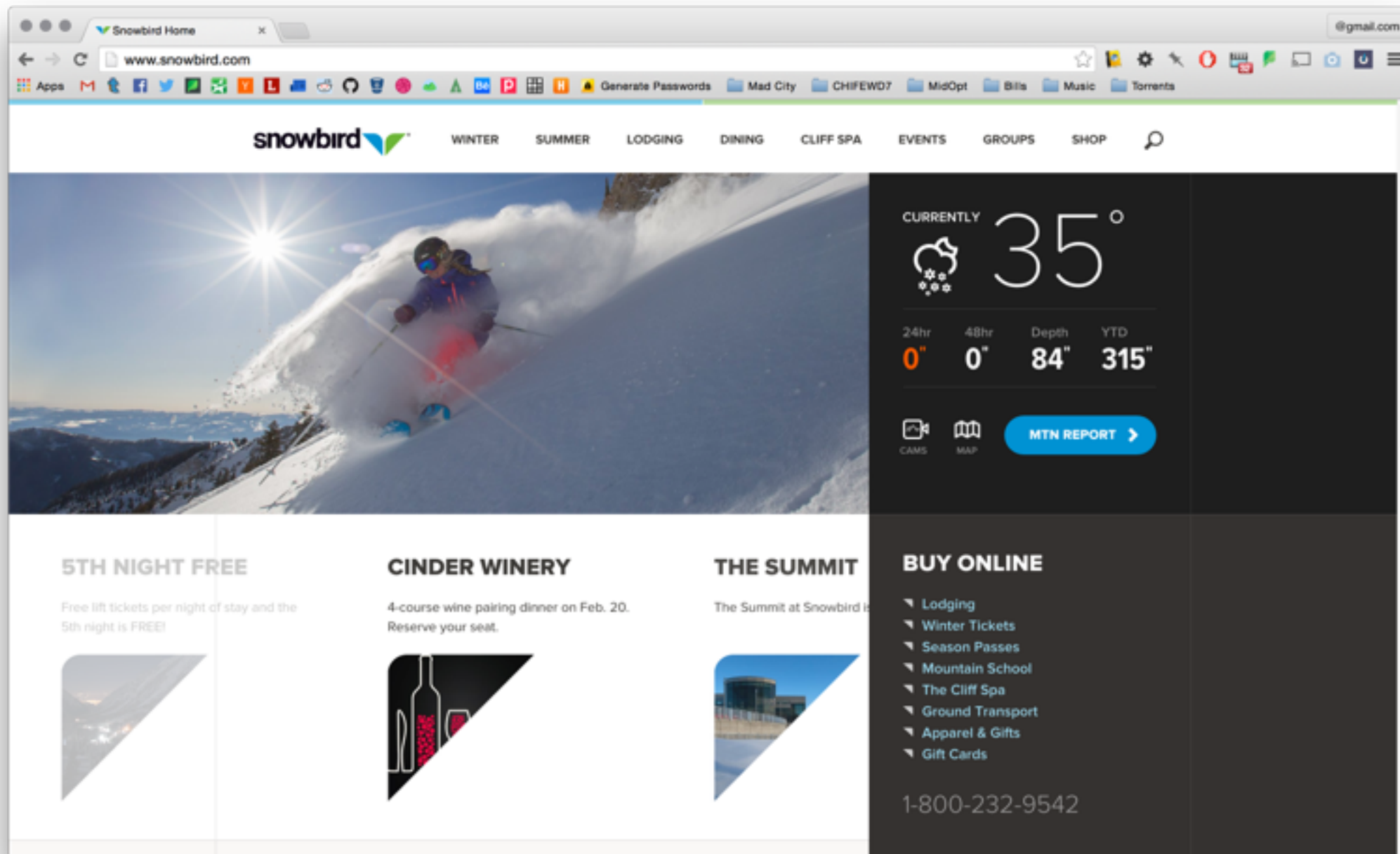
---

**FRONT-END WEB DEVELOPMENT**

---

**SHOW N' TELL W/ SOME SNACKS**





**TUESDAY FEB 23RD**

**KIMBERLY BAIRD & KATIE ALLYN**

**(GOOGLE SHEET WILL BE SHARED IN SLACK)**

---

**FRONT-END WEB DEVELOPMENT**

---

**LET'S GET STARTED!**

# HTML BASICS

*Eric Boyer*

# LEARNING OBJECTIVES

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

# AGENDA

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

---

**FEWD**

---

# WEB DEVELOPMENT OVERVIEW

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**WHAT IS FRONT-END WEB DEVELOPMENT?**

---

# **WHY WEB DEVELOPMENT?**



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## WHY?

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Make ideas come to life

Opportunities

Communication

Customize Websites

Help Others

Jobs

Leads to other tech related interests

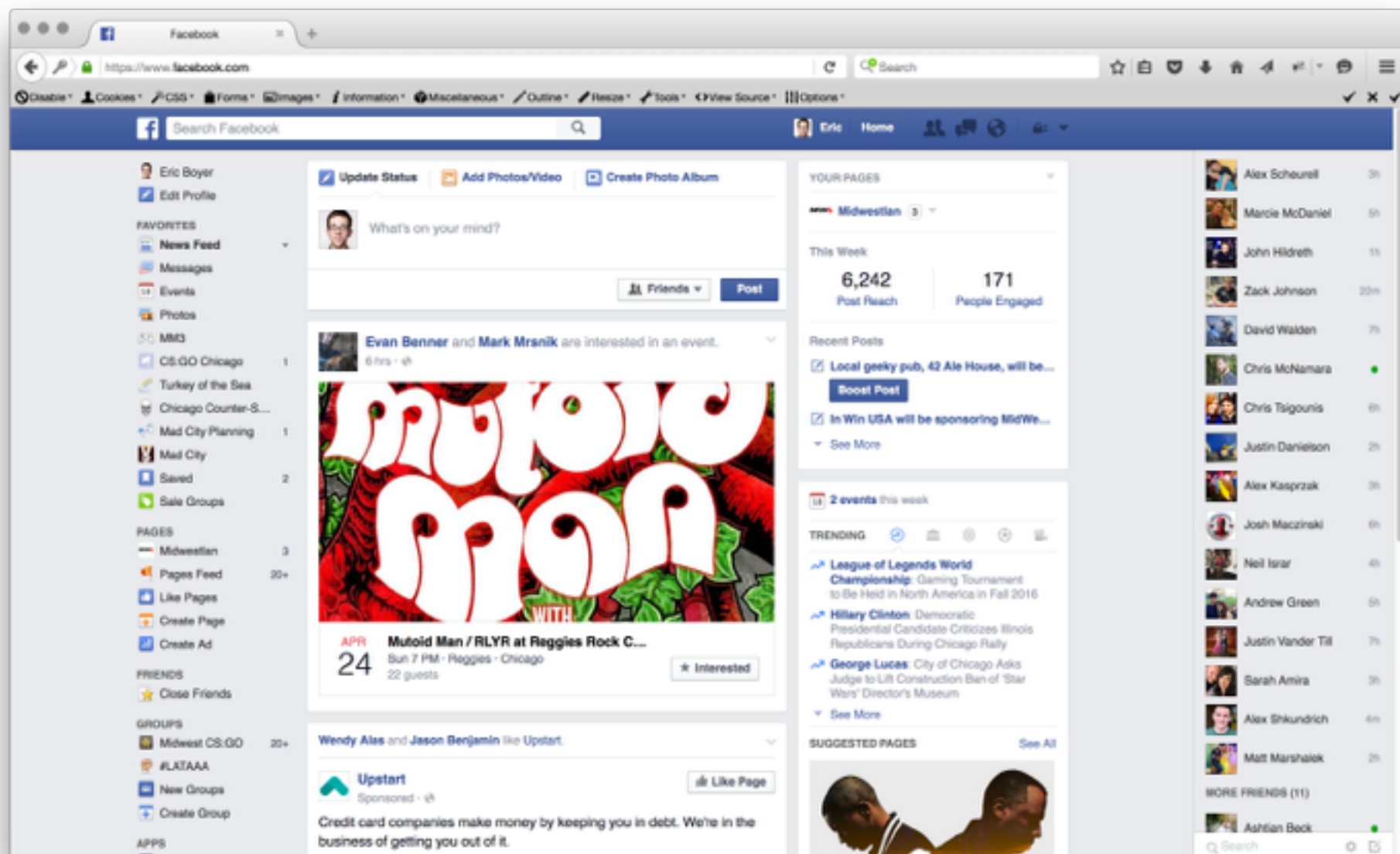
---

## WHY?

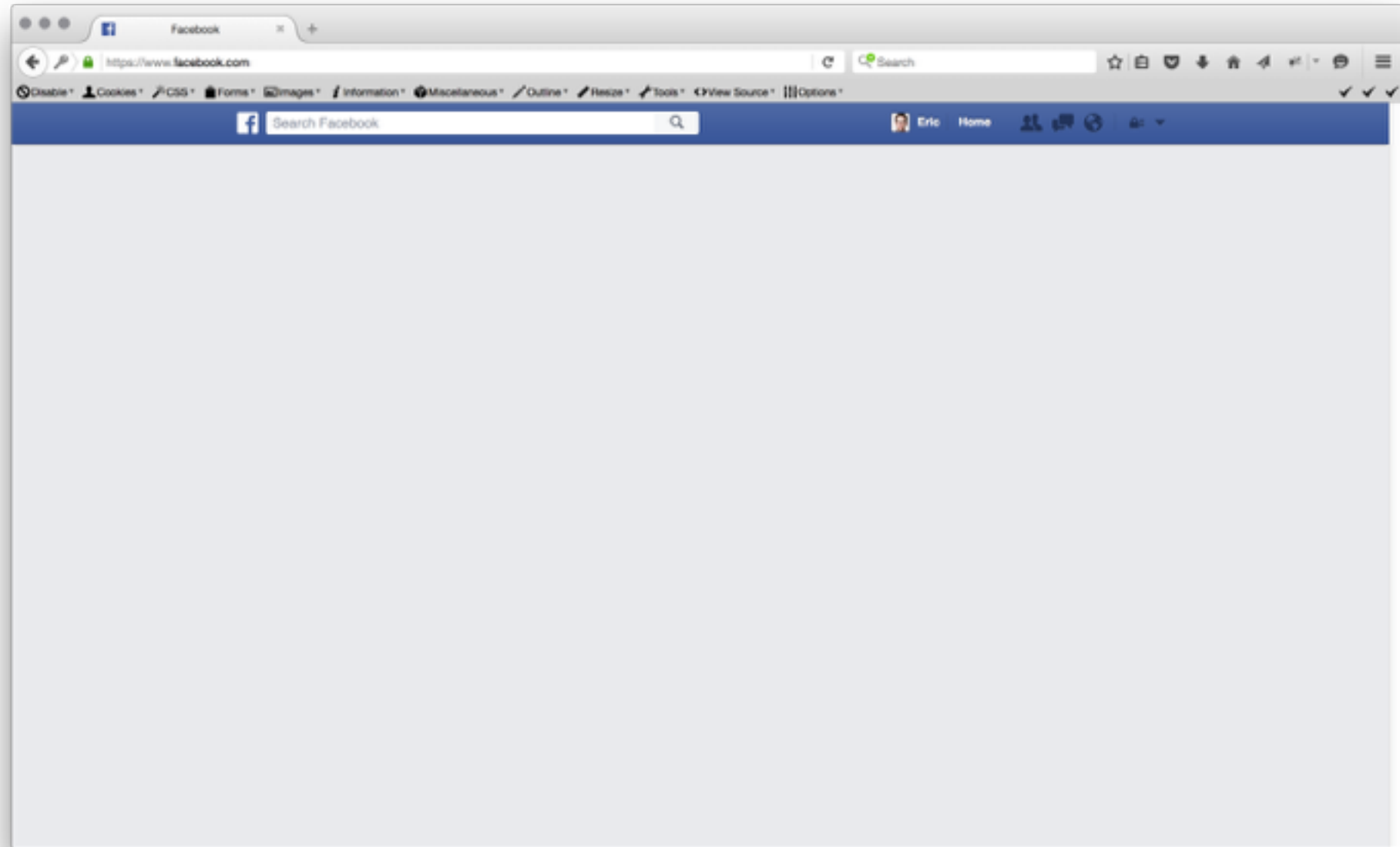
---

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

# WHY?



# WHY?



---

**FEWD**

---

# HOW DOES THE INTERNET WORK?

---

## CLIENT AND SERVER

---



**CLIENT**



**SERVER**

---

# INTERNET PROTOCOL

---

IP

---

## CLIENT AND SERVER

---



**CLIENT**

IP Address: 192.168.1.72



**SERVER**

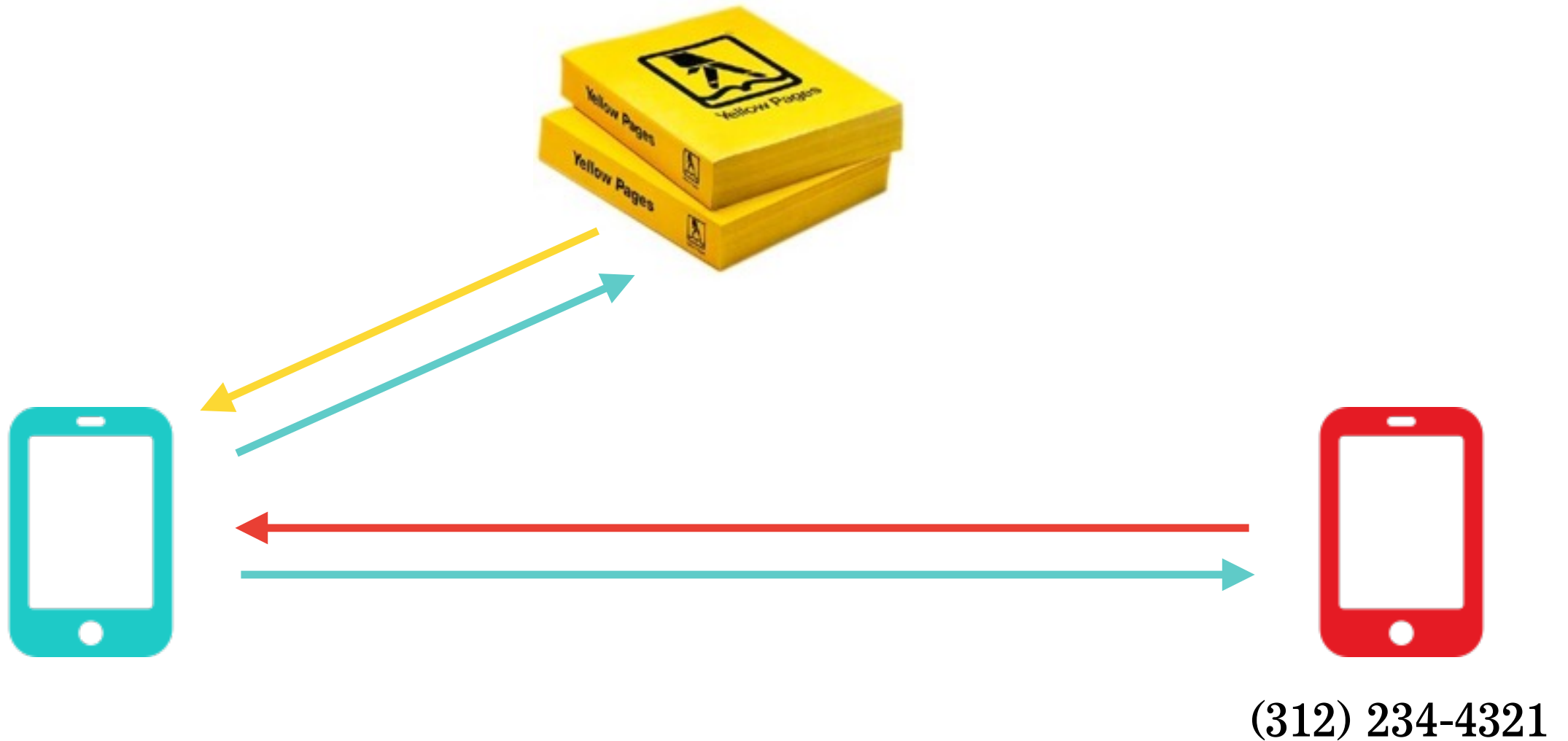
IP Address: 31.13.74.1



---

## DNS SERVER — URL -> IP ADDRESS

---

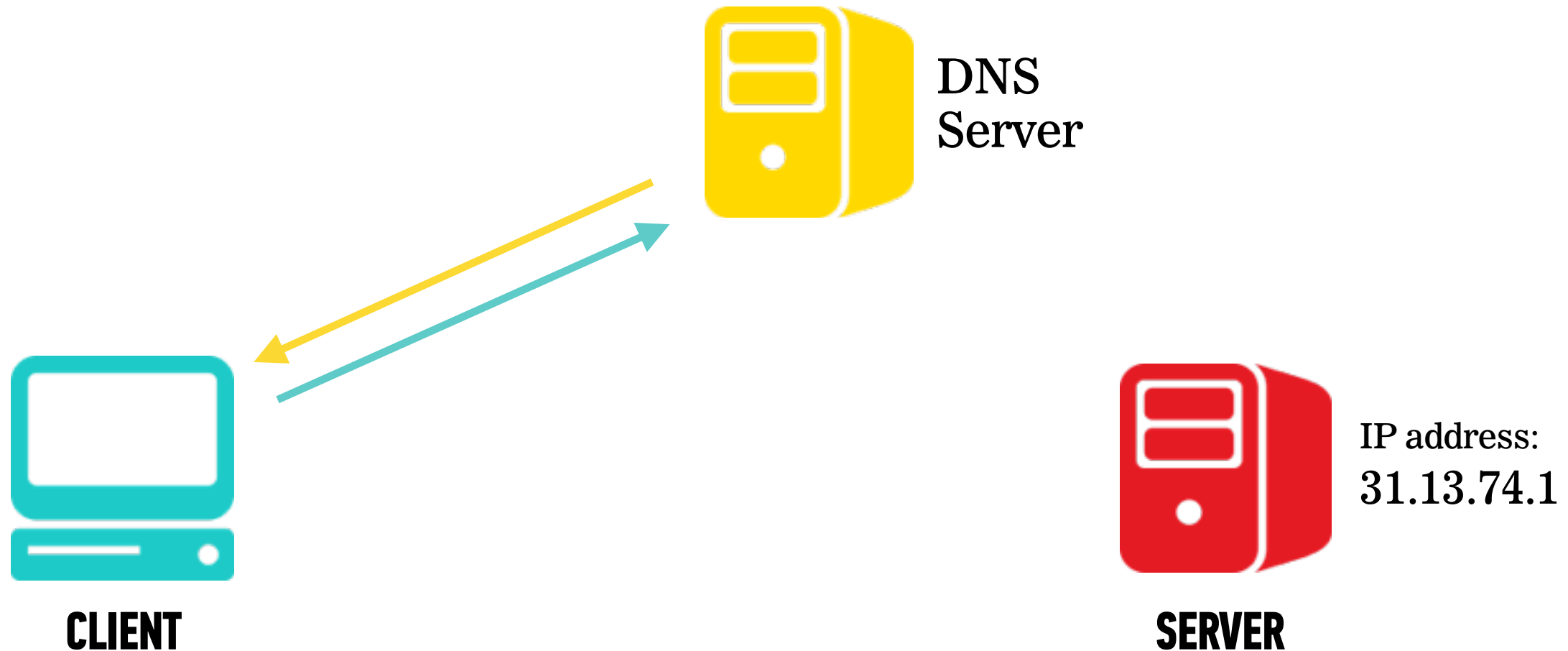


---

## 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`”



---

# **HYPER TEXT TRANSFER PROTOCOL**

---

**HTTP**

---

## 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**

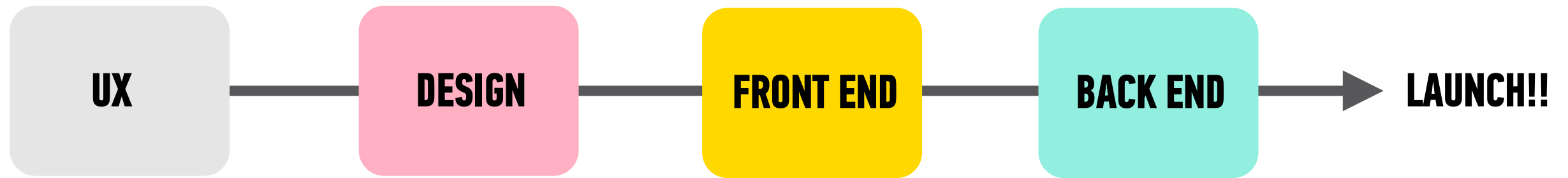
---

# WEB PRODUCTION WORKFLOW

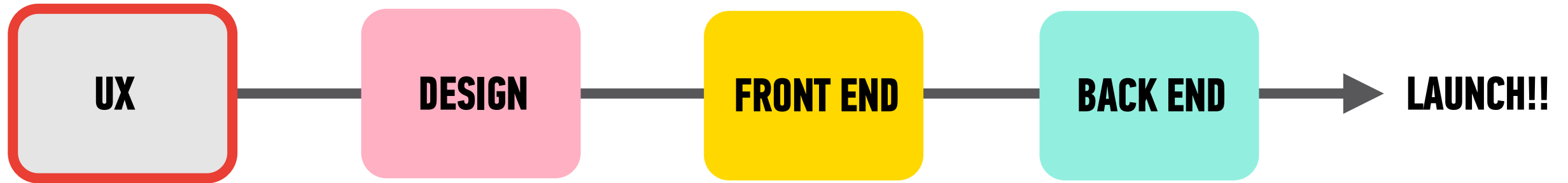
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## WEB PRODUCTION WORKFLOW

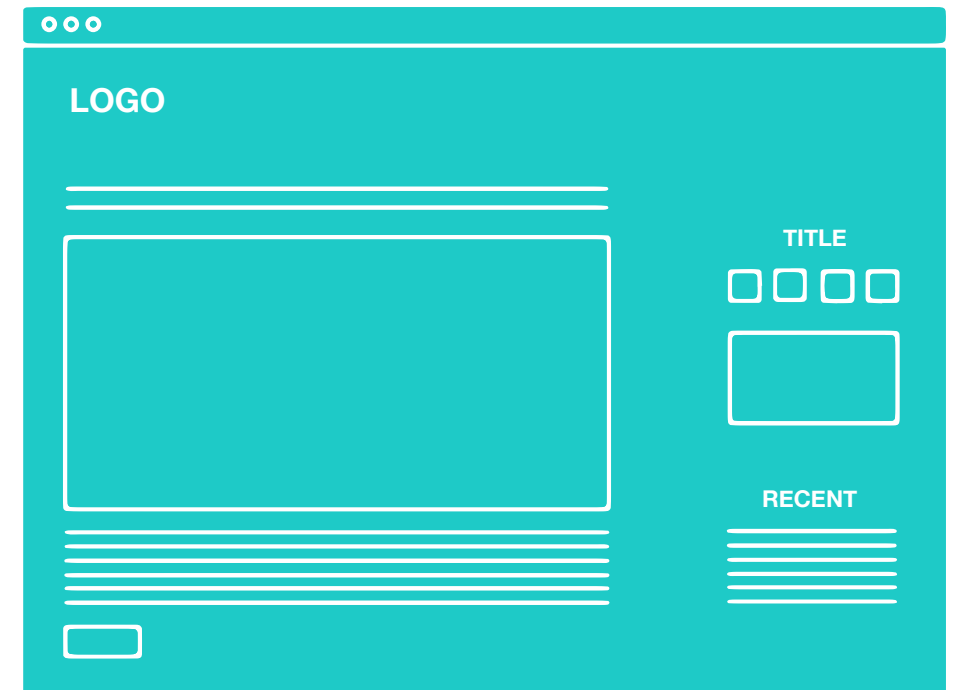
---



## 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

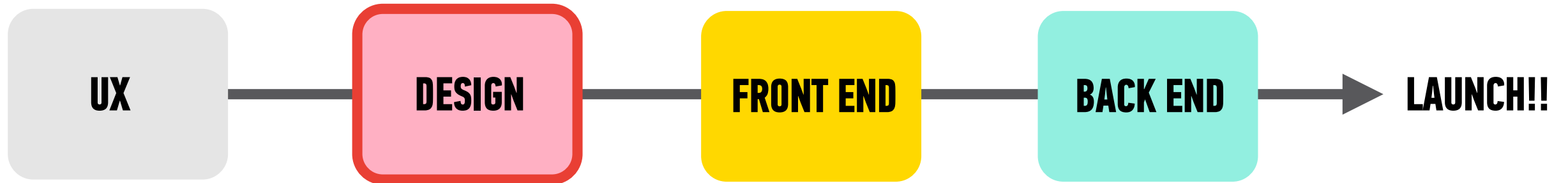




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## WEB PRODUCTION WORKFLOW — UI DESIGNER

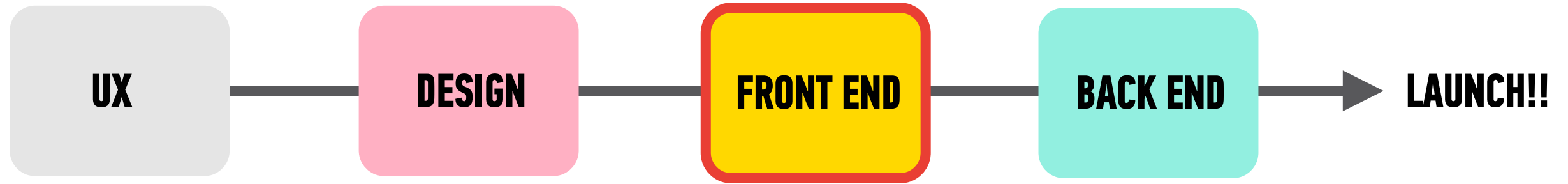
---



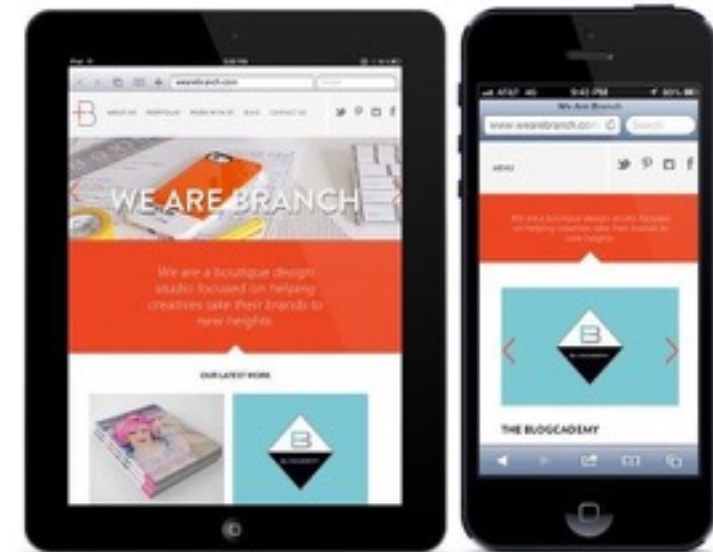
- Referred to as UI Designer/Web Designer
- Take the wireframes and make them pretty
- Logo/Fonts/Color palettes/Layout



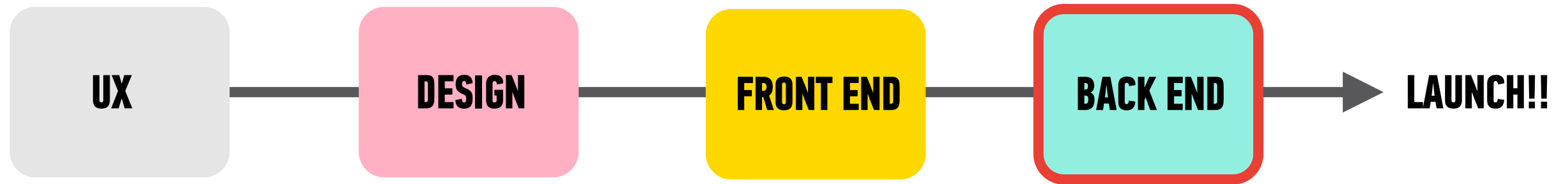
## WEB PRODUCTION WORKFLOW — FRONT END



- ▶ 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



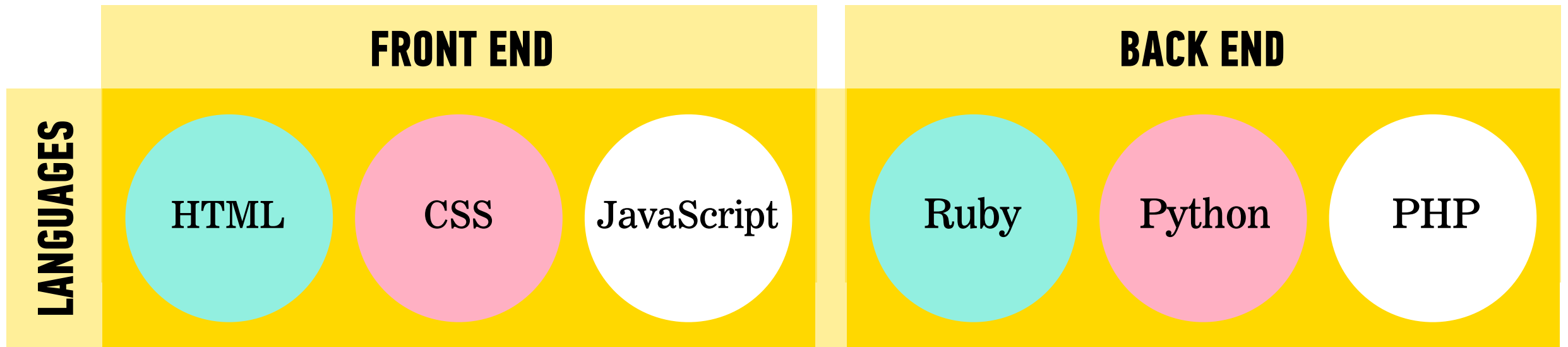
- Give the application/webpage a 'memory'
- Handle page request and send back the right page
- Talking to the database - getting data, adding and updating data
- Authenticate users
- Communicate with APIs



---

## FRONT END VS. BACK END

---



...and many, many more

**EVERYTHING THAT YOU SEE AND INTERACT WITH WHEN USING  
THE WEB IS HTML, CSS, AND 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

---



## EXERCISE

### 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

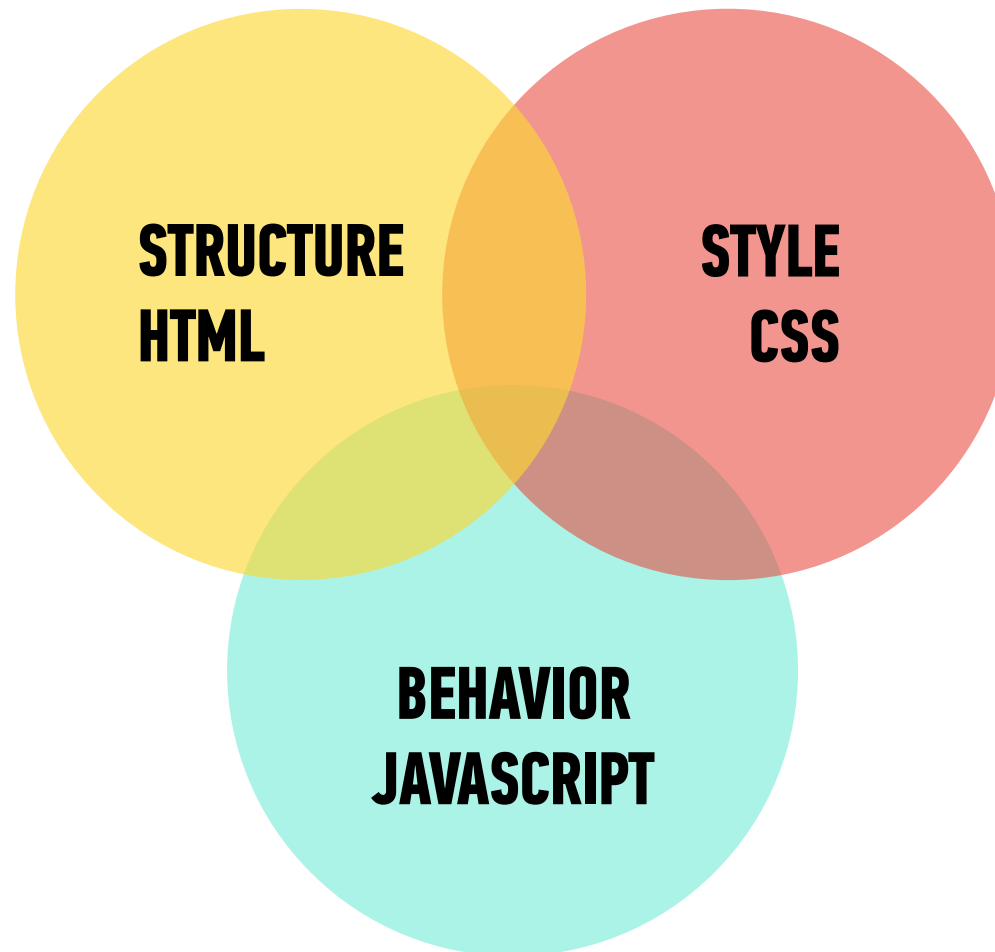


---

## THE THREE AMIGOS: STRUCTURE, STYLE, BEHAVIOR

---

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



---

## WHAT IS HTML?

---

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

---

## WHAT IS HTML?

---

HTML describes the organization and structure of pages

- I. Background of 1893 Columbian Exposition
  - A. Continued tradition of big fairs
    - 1. 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
    - 1. Planners D. H. Burnham and F. L. Olmsted
    - 2. Nation's top artists, inventors, industrialists
- II. Background of George W. G. Ferris

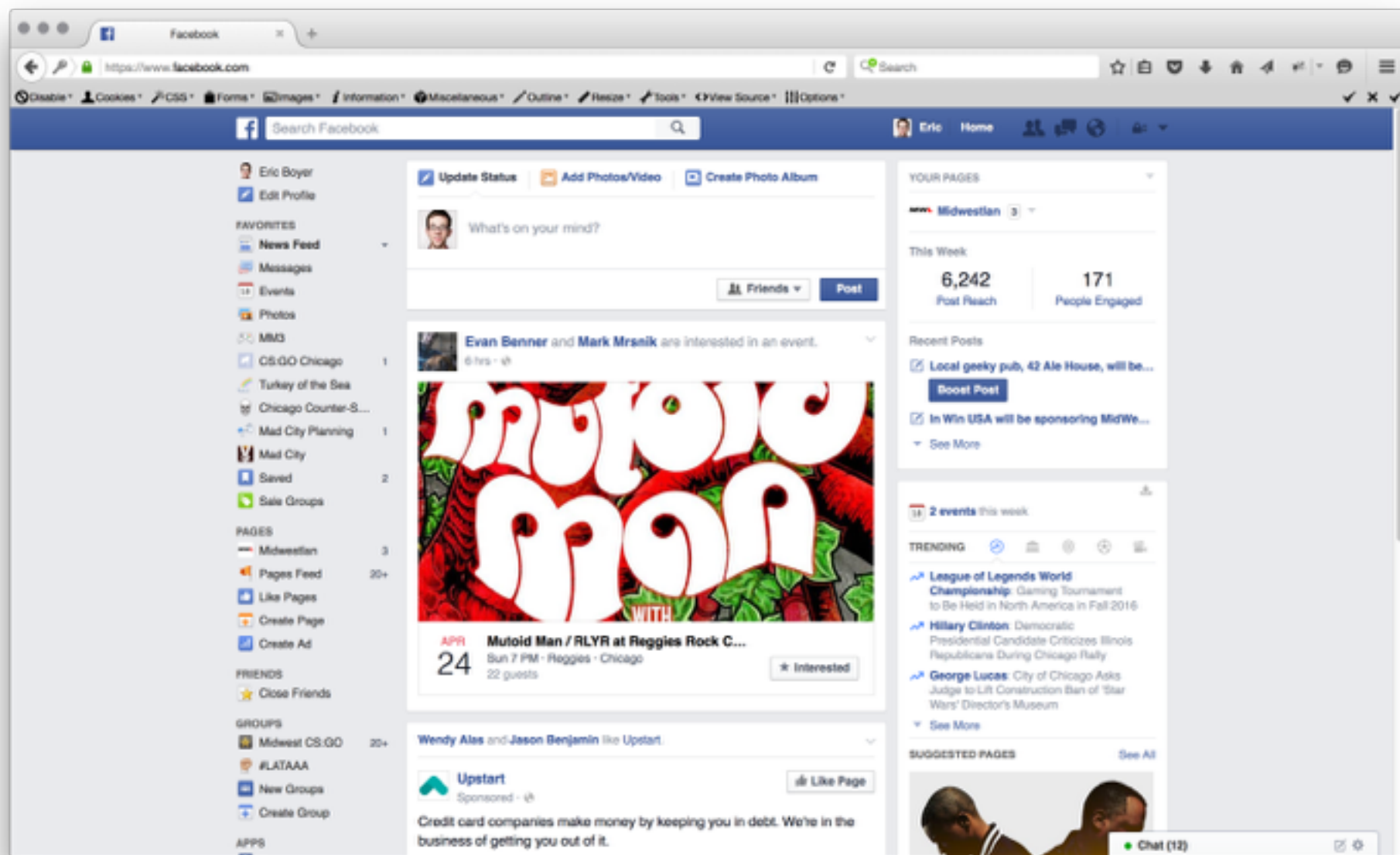
---

## WHAT IS HTML?

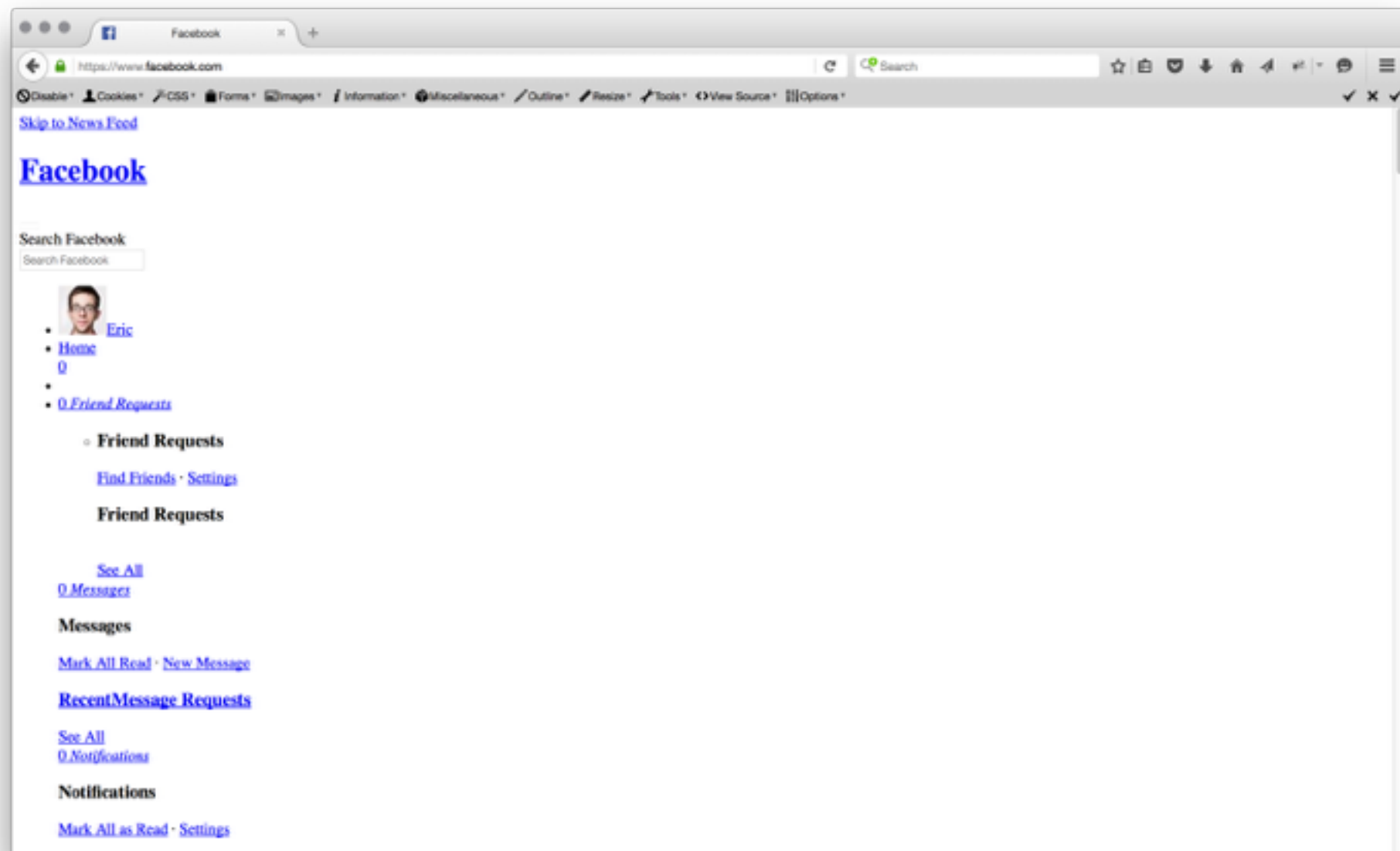
---

```
<!DOCTYPE html>
<html>
  <head>
    <title> This is a Web Page </title>
  </head>
  <body>
    <p> This is a paragraph about web pages. </p>
    <a href="...."> This is a link to another page. </a>
  </body>
</html>
```

# WHAT IS HTML?



# WHAT IS HTML?



---

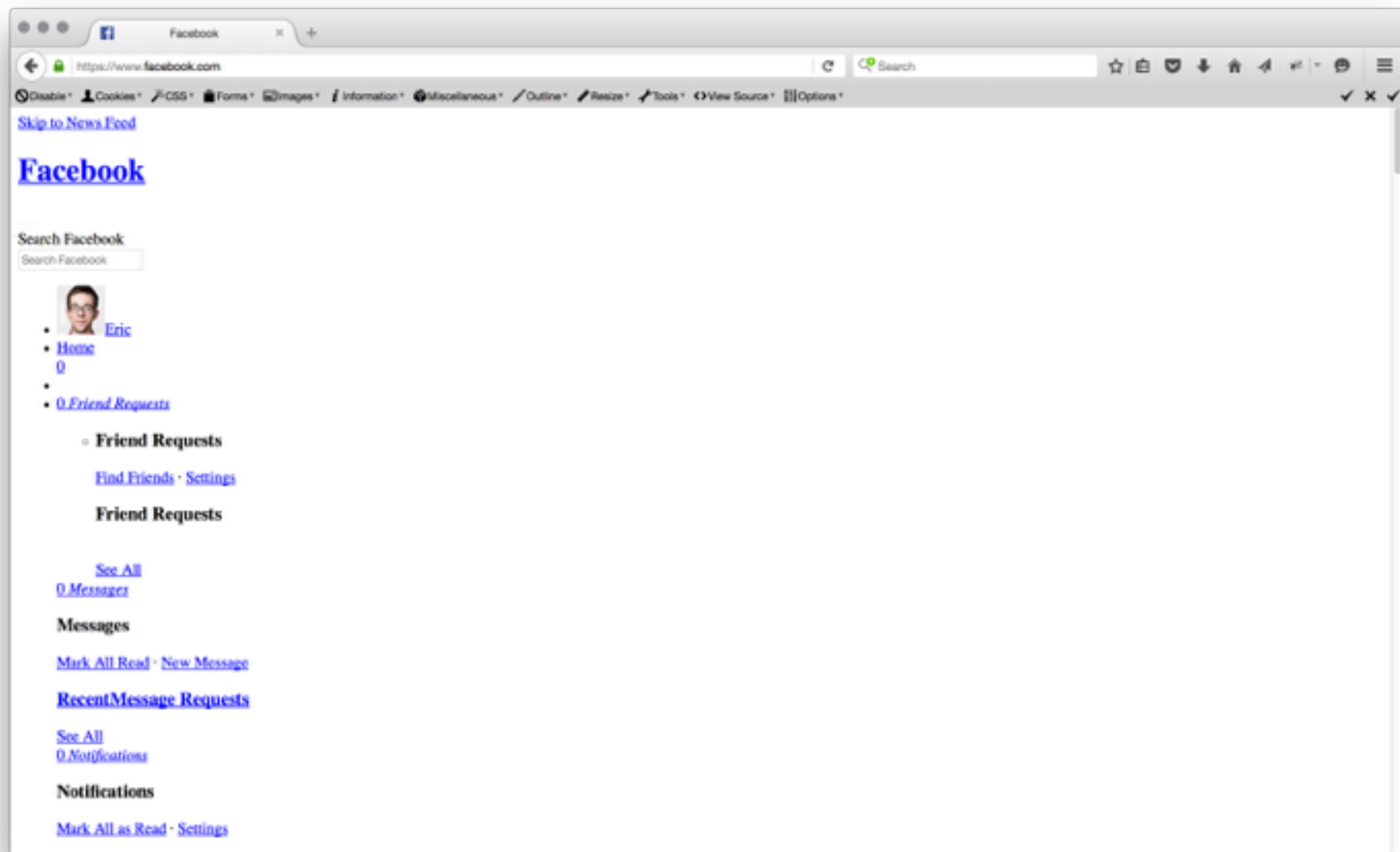
## WHAT IS CSS?

---

- ▶ CSS associates style rules with HTML elements

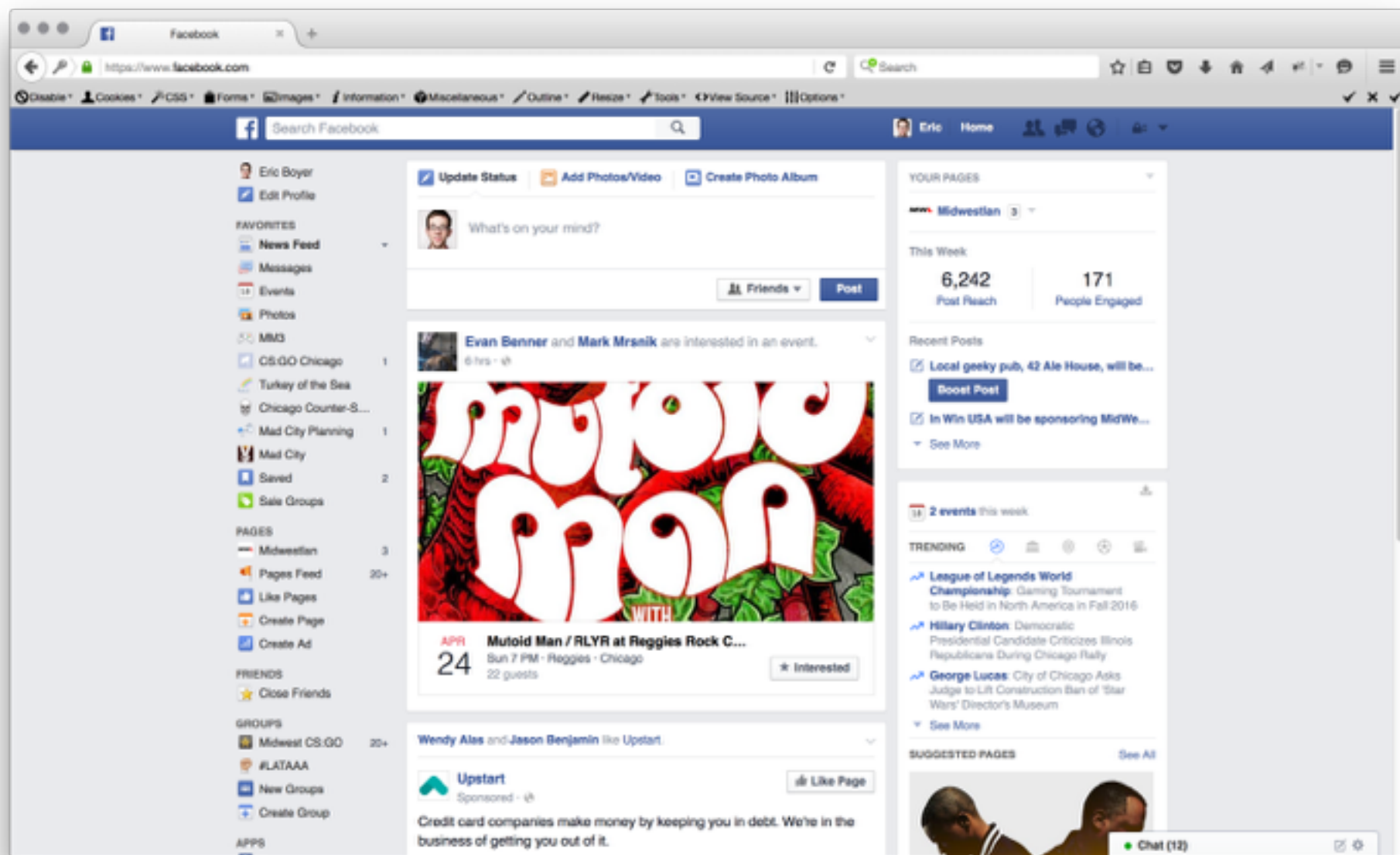
```
body {  
    font-family: Arial;  
    color: white;  
    background-color: blue;  
}
```

# WHAT IS CSS?





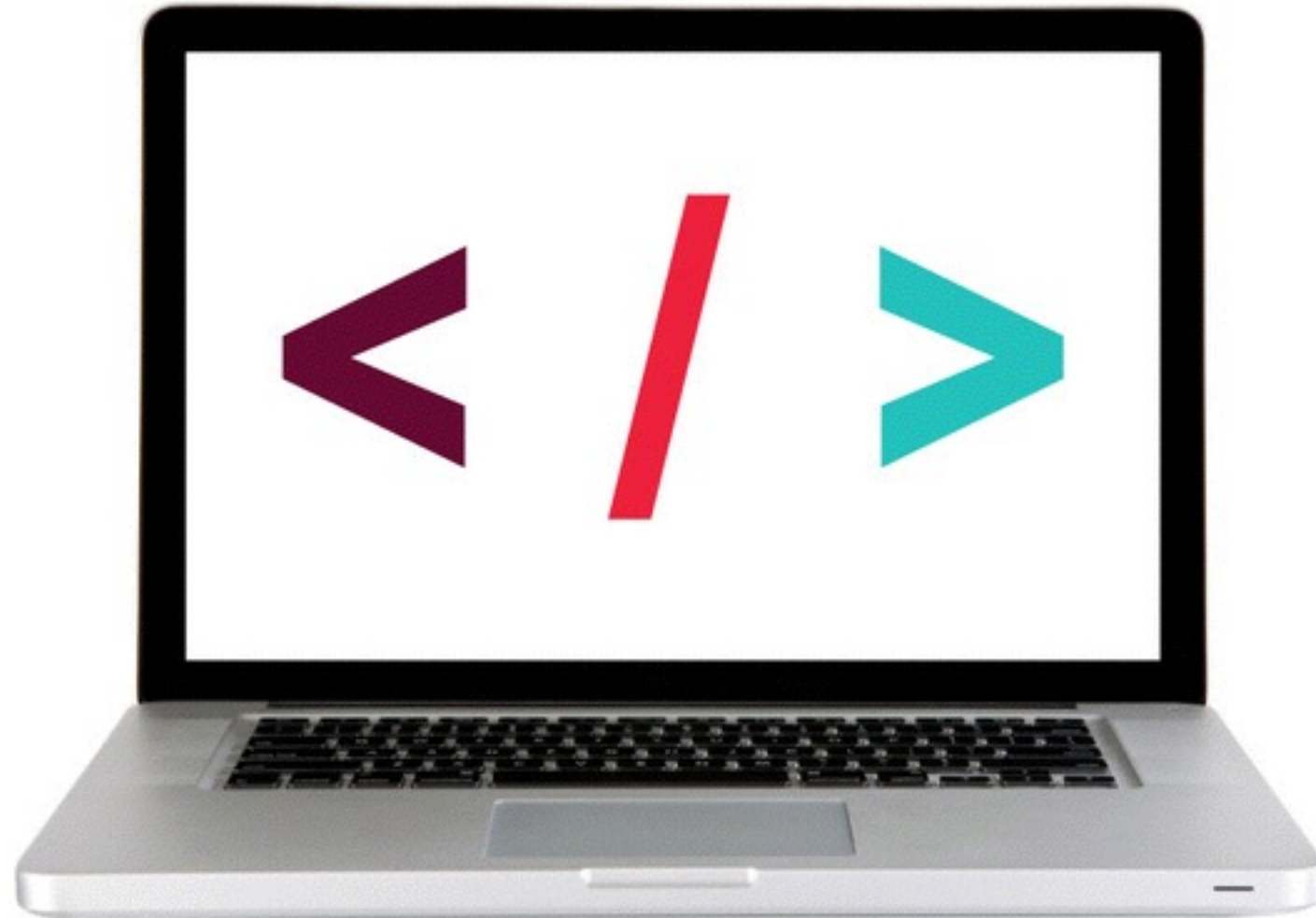
# WHAT IS CSS?



---

## 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

---

**Fast, small, feature-rich JavaScript library**

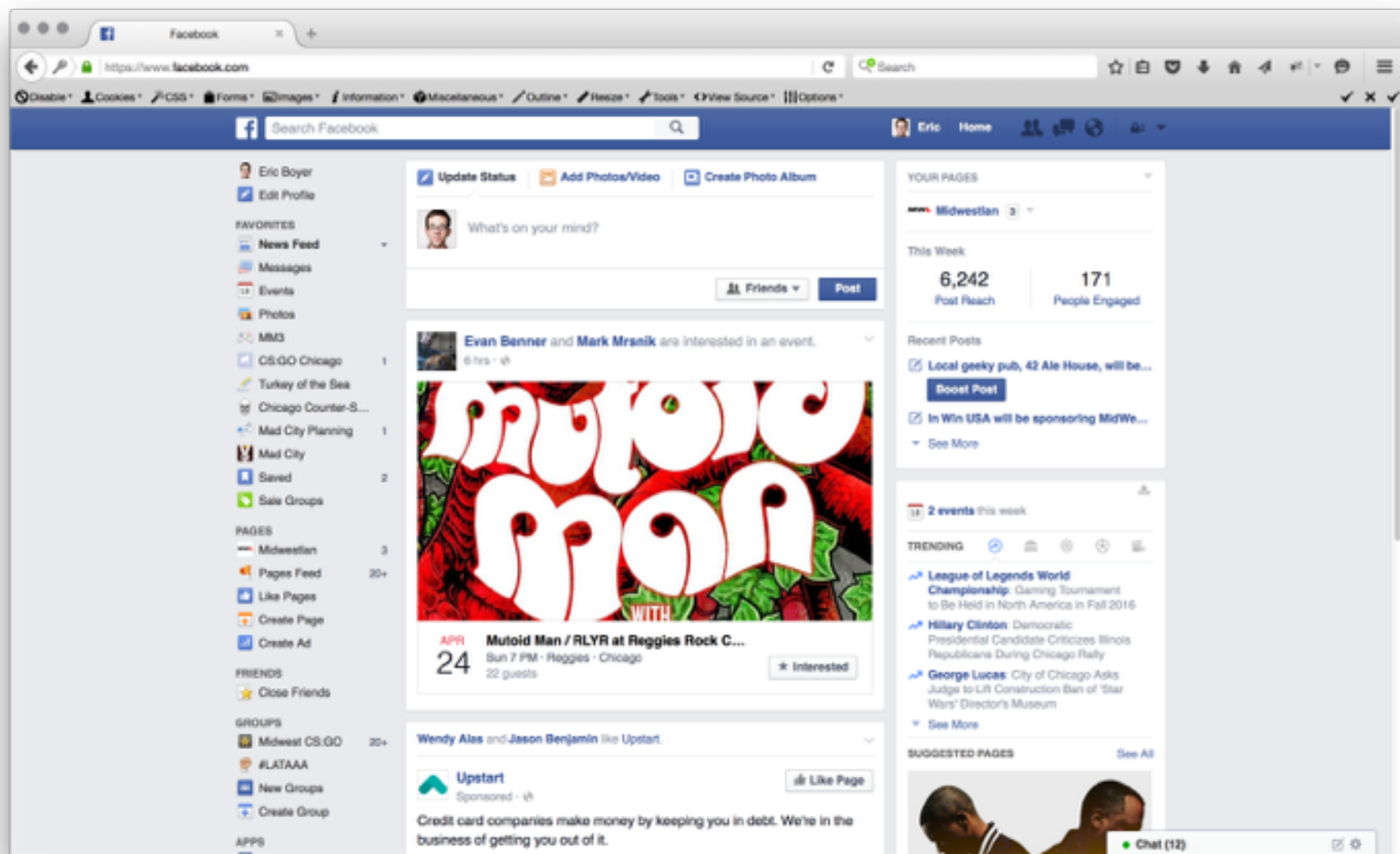
Javascript

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

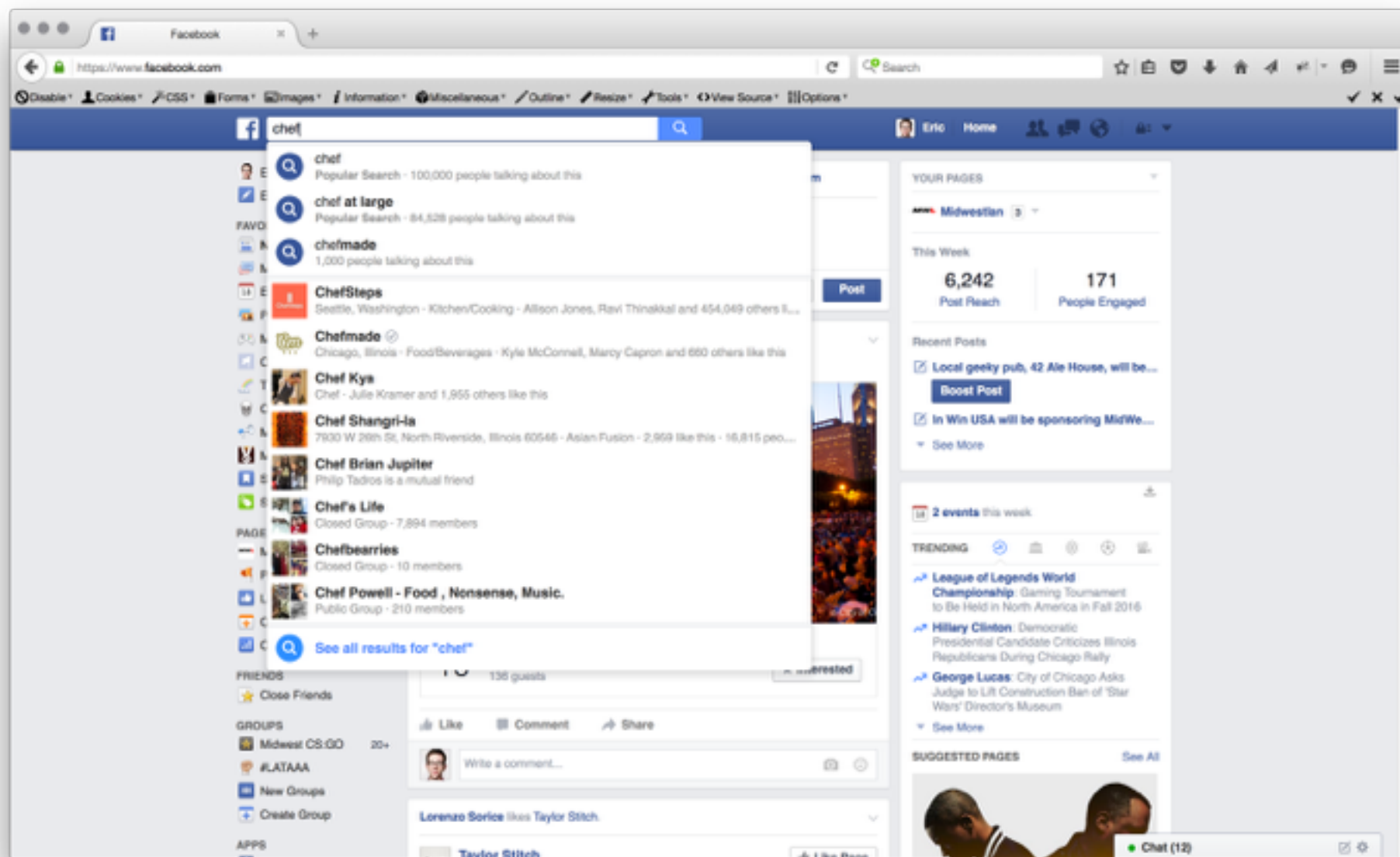
jQuery

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

# WHAT IS JS?



# WHAT IS JS?



---

**FEWD**

---

**LET'S GET EVERYTHING  
SET UP!**

---

## FIRST THINGS FIRST — TOOLS

---



### **SUBLIME TEXT 3**

[Download here](#)

### **CHROME**

[Download here](#)

### **PACKAGE CONTROL**

[Install here](#)

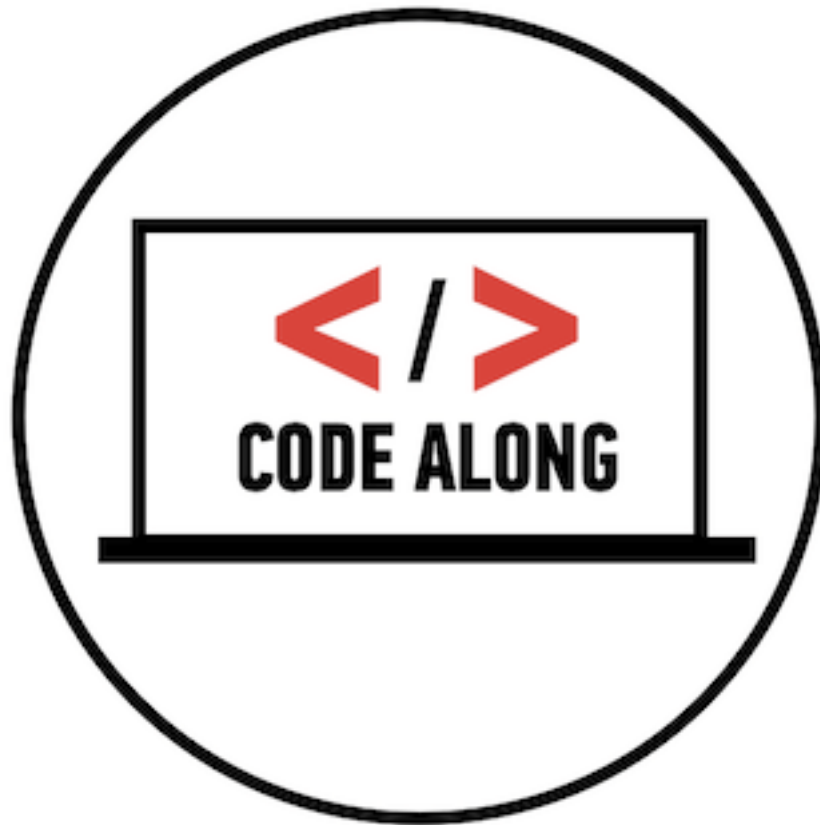
To open package control:  
command + shift + p



---

## FIRST THINGS FIRST

---



---

**FEWD**

---

# HTML BASICS

---

## HTML BASICS

---

# WHAT IS HTML?

# WHAT IS HTML?

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## New York City Police Sharply Cut Arrests for a Second Week

By J. DAVID GOODMAN and AL BAKER 53 minutes ago

Police officers arrested less than half as many people and wrote more than 90 percent fewer summonses than in the same period a year ago, building on a drastic drop in activity that began shortly after the murder of two uniformed patrol officers.

108 Comments

## Republicans Say They'll Act Fast to Push Their Agenda

By CARL HULSE

Eager to show that it can govern well, the Republican Party that takes control of Congress beginning Tuesday is likely to begin by trying to quickly advance energy and health care legislation.

830 Comments



Fred R. Conrad/The New York Times

## Bess Myerson, a Beauty Queen Who Reignited in Politics, Dies

Ms. Myerson, the first Jewish Miss America, was one of a select group of American figures to parlay pop culture celebrity into positions of public influence. She was 90.

By ENID NEMY and WILLIAM McDONALD

## Afghan Cares for the Living by Carrying the Dead

By AZAM AHMED 12:07 PM ET

Malik Abdul Hakim, who has lost two sons, is revered for collecting and returning the bodies of both Taliban and government casualties.



## Home Schooling: More Pupils, Less Regulation

### The Opinion Pages

#### When Skepticism Counts

Novelist David Baldacci and others on the role of conspiracy theories in society.

- Editorial: Race and Voting Rights in Ferguson

OP-ED COLUMNISTS

- Blow: Privilege of 'Arrest Without Incident'
- Krugman: Presidents and the Economy

#### The Central Crisis in New York Education

By THE EDITORIAL BOARD

New York, which regards itself as a bastion of liberalism, has the most racially and economically segregated schools in the nation.

- Editorial: Shifting Politics on the Death Penalty
- Op-Ed: Losing the Fight Against Tuberculosis

### Watching

now A judge in Wisconsin ordered a trial for **Dustin Diamond**, best known as Screech from "Saved by the Bell," on charges stemming from a bar fight on Christmas night.

Milwaukee Journal Sentinel >



22m Markets tumbled in Europe and the U.S. as the declining price of oil sent ripples around the world.

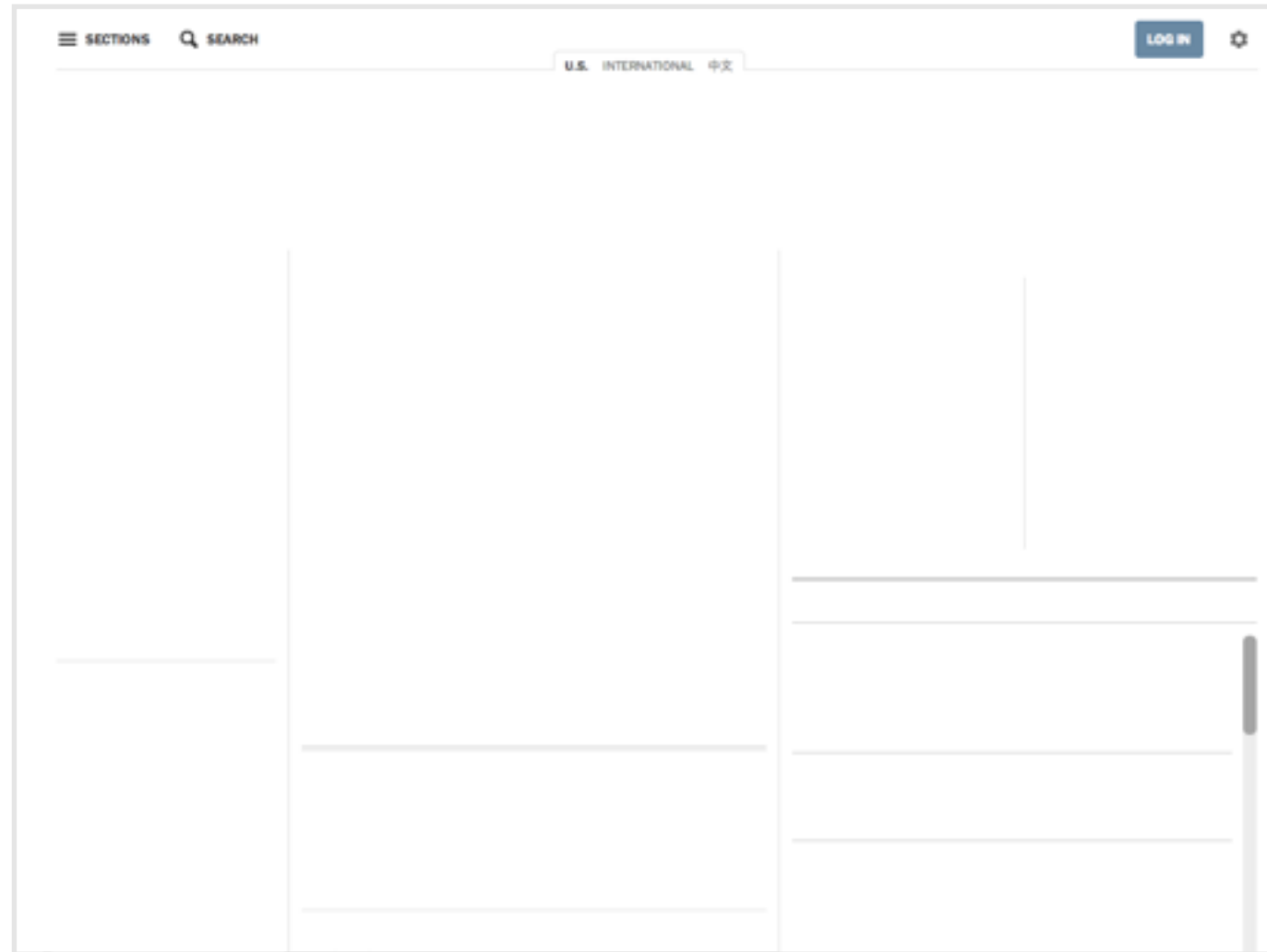
The New York Times

25m Gov. **Jerry Brown**, already California's longest-serving governor, will be sworn in Monday for his fourth term. He has said he aims to shore up the state's fiscal turnaround.

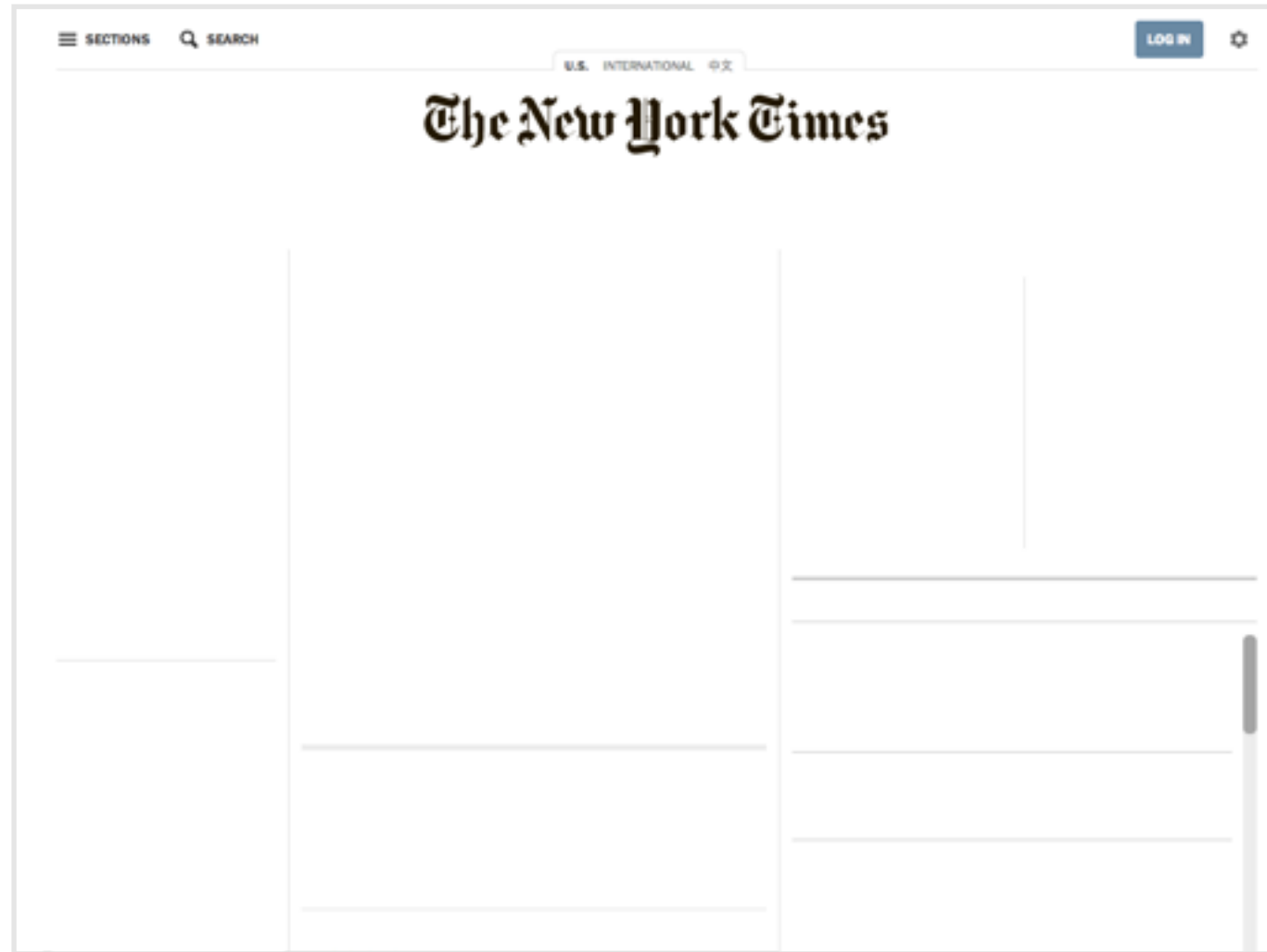
The Los Angeles Times >



# WHAT IS HTML?



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# The New York Times

Monday, January 5, 2015 [Today's Paper](#) [Video](#)  36°F [Dow -1.80%](#)

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[The New York Times](#)

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[The Los Angeles Times](#)



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Photo: R. Conrad/The New York Times

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ROOM FOR DEBATE

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The Los Angeles Times >



---

**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 `<p>` 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.

`<p>`

---

## STRUCTURAL TAGS — UNORDERED LISTS

---

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

`<ul>`

`<li>`

---

## 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.

<br>



---

# ACTIVITY

---



## EXERCISE

### KEY OBJECTIVE

---

- ▶ Add markup to the GA press release

### TIMING

---

*5 min*

1. Add markup to the press release. Use tags such as the `<h1>`, `<p>`, `<ul>`, and `<li>` 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**.

`<strong>`

- 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*.

`<em>`

I *think* John was there

I think *John* was there

---

## SEMANTIC TAGS — QUOTATIONS

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- Blockquote is used for longer quotes that take up an entire paragraph.
- The `<p>` element is still used inside the `<blockquote>` element.
- The `<q>` element is used for shorter quotes that sit within a paragraph.

`<blockquote>`

`<q>`

---

## HTML BASICS

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# LINKS

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**ATTRIBUTES — EXAMPLE**

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

---

## HTML SYNTAX — ATTRIBUTES

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Attribute  
Name

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

Attribute  
Value

---

## SEMANTIC TAGS — LINKS

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- 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



The diagram shows the HTML code `<a href="http://www.amazon.com/">Amazon</a>` with two annotations. A bracket above the href value points to the text "Page the link takes you to". A bracket below the word "Amazon" points to the text "Text to display".

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

Text to display



# ACTIVITY

---



## EXERCISE

### KEY OBJECTIVE

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- Finish adding markup to the GA Press Release

### TIMING

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*3 min*

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

# ACTIVITY

---



## EXERCISE

### KEY OBJECTIVE

---

- Add markup to chocolate chip cookie recipe
- Google and implement `<ol>` 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 `<ol>` tag.
3. *Optional:* Google and implement `<img>` tag
4. *Optional:* Add extra tags not covered in class

### IF YOU FINISH EARLY

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- 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 front-end development.
- › Recognize the different roles and responsibilities in web development.
- › Apply and experiment with HTML tags.

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## HTML BASICS

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# HOMEWORK

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## HOMework

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- Familiarize yourself with Slack
- Begin to organize what you're doing in the class into folders
- Sign up for [github.com](https://github.com) and message me your username on Slack
- Optional: Start thinking about an “About Me” page that you'll be creating next week

### HIGHLY RECOMMENDED COURSE MATERIALS:

- [Jon Duckett - Web Design with HTML, CSS, JavaScript and jQuery Set](#)



**TUESDAY FEB 23RD**

**KIMBERLY BAIRD & KATIE ALLYN**

**(GOOGLE SHEET WILL BE SHARED IN SLACK)**

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**HTML BASICS**

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**EXIT TICKETS**