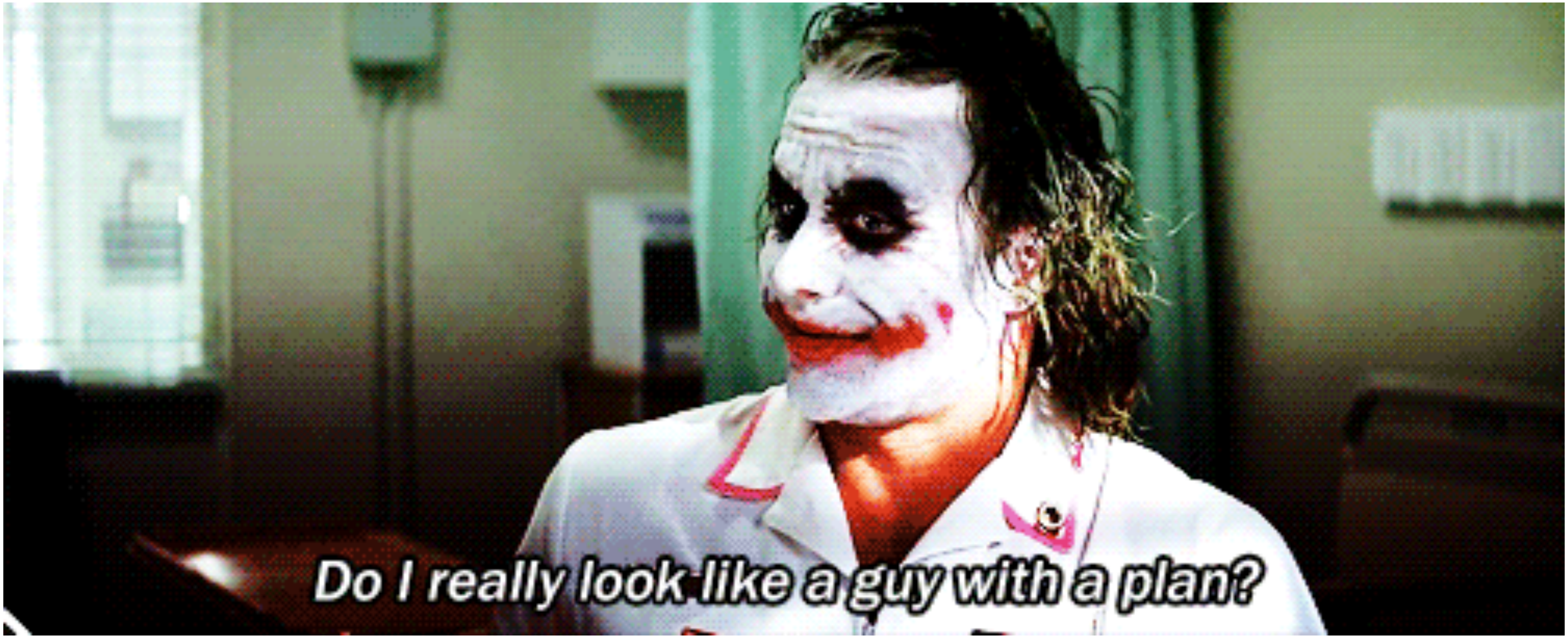
WEEK 1 - HTML AND CSS BASICS

GENERAL ASSEMBLY

FEWD: FRONT-END WEB DEVELOPMENT

Joe Bliss
Front End Web Developer

THE PLAN FOR WEEK 1



AGENDA

Introductions

House-Keeping (Procedures, Tools)

How the Internet Works

HTML Basics, Working Locally with HTML

CSS Basics, Working Locally with CSS

File / Folder Structure

Homework - Personal Website

YOUR INSTRUCTIONAL TEAM

Joe Bliss - joe.bliss@generalassemb.ly
Carolyn Cochran - cochran.cj@gmail.com

ICEBREAKER!

to share
spearmint
NATURAL & ARTIFICIAL FLAVOR
ICE BREAKERS
Ultimate Mouth Freshening
SUGAR FREE
mints
with flavor crystals
NET WT 1.5 OZ (42 g)
not to share

BRITNEY SPEARS
BREAK . THE . ICE

HOUSEKEEPING!

DATES TO NOTE

Class runs May 8th (today) - July 19th

- Monday, Wednesday @ 6:30pm - 9:30pm

May 29th: No Class

July 3rd: No Class

July 5th: WE HAVE CLASS

July 19th: Final Projects Due and Presented

HOMEWORK

There will be one homework assignment per week, submitted via Github.

It will be assigned on Wednesday night and will be due before we meet the following Monday. If you want grading, feedback before class on Monday, you need to submit by Sunday at midnight.

I will often post recommended reading, optional work over the weekend, as well.

“GRADING”

To successfully complete the course, you need to have a successful Final Project, as well as have completed 80% of Homework assignments.

Homework has a “Complete / Incomplete” rubric:

- “Complete” means you have successfully completed the minimum requirements for the assignment.
- “Incomplete” means you have not submitted or not met the minimum requirements for the assignment.

OFFICE HOURS

I'M SORRY YOU'RE HAVING A ROUGH TIME. I THINK YOU'RE PRETTY GREAT.

This s>$% is hard. We get it.

We want you to succeed and are here for you.

Carolyn will provide Office Hours Sunday afternoons, and they are bookable via the dashboard.

https://cochrancj.youcanbook.me/

PARKING LOT

They paved paradise …

FIELD TRIP!

OUR TOOLBOX

COURSE DASHBOARD

One stop shop for all your FEWD needs!

http://josephjbliss.github.io/fewdashboard

SLACK

Our in-class chatroom.
- Take attendance.
- Share relevant links.
- Ask for help from classmates.
- Laugh about the “Kick me” sign on my back.

https://ganyceveningcourses.slack.com/messages/C59PCSU9Y/

GOOGLE CHROME

Our Web Browser

https://www.google.com/chrome/browser/desktop/

SUBLIME TEXT

Our Text Editor / Best Friend

https://www.sublimetext.com/

GITHUB

Much more to come on Github.

We will use it for homework, grading, and collaboration.

https://github.com/
https://desktop.github.com/

CODEPEN

An online tool that allows us to build and share quick snippets of code.

http://codepen.io/

EXIT TICKETS

I'm dedicated to always improving, and I want you to flag up issues sooner than later. We will have a very short survey in the last five minutes of every class where you can give feedback on what you thought went well or not and what you are still struggling with.

https://goo.gl/forms/faJQJu49aTEiidci2

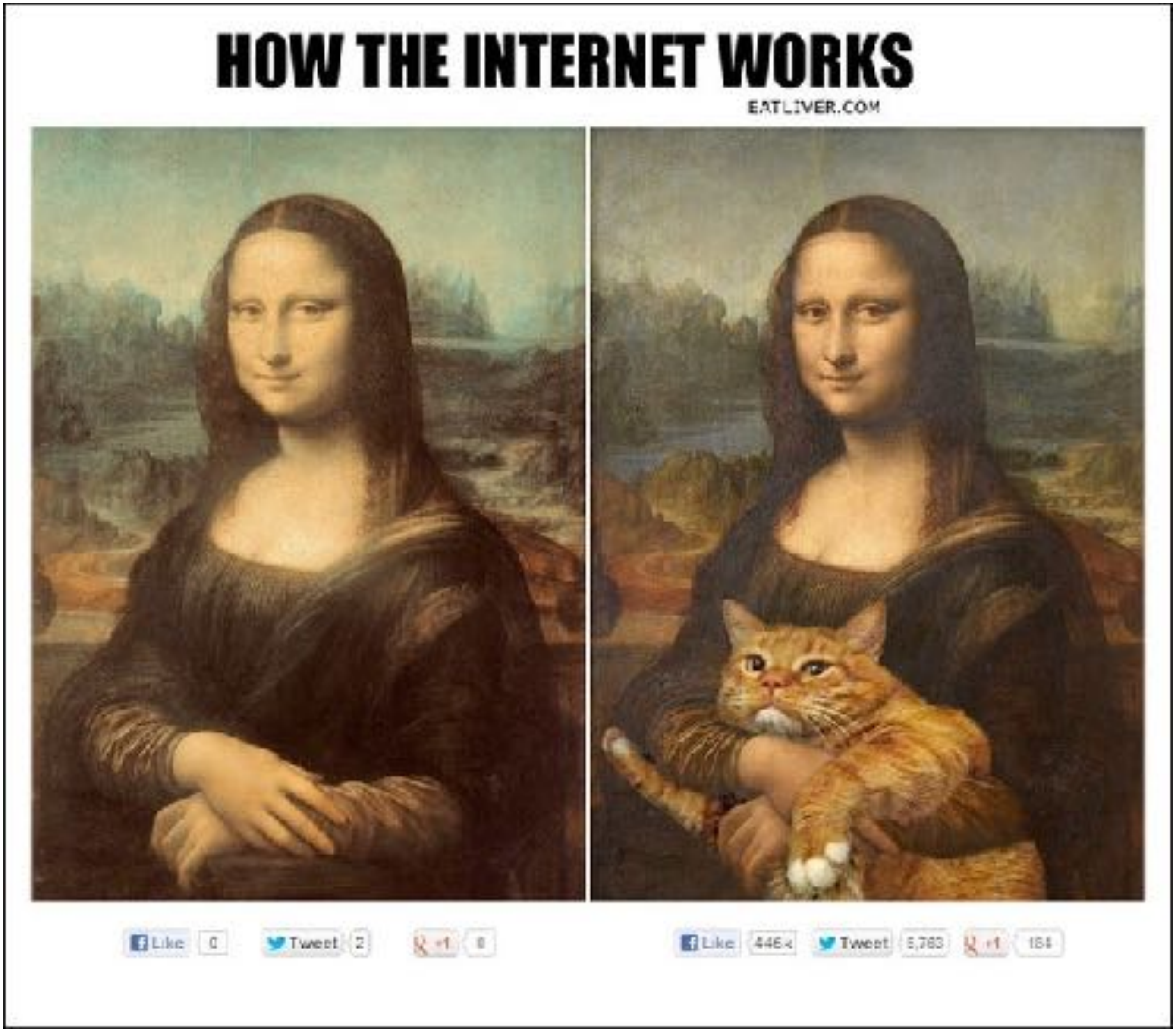
P.s. Exit tickets can be anonymous. ;)

MAKE SURE EVERYONE IS SET-UP

Especially with Github …

HOW THE INTERNET WORKS

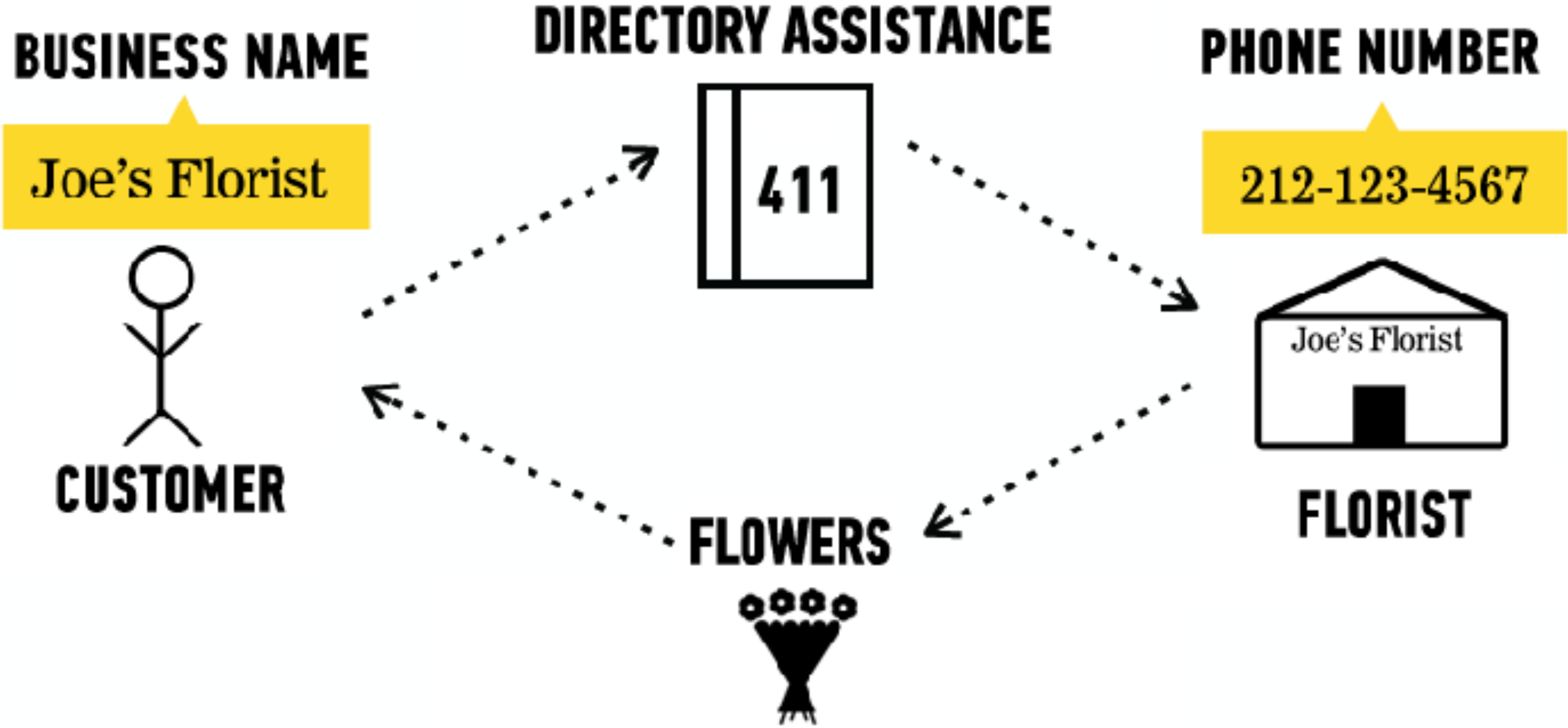
AL GORE HAD VERY LITTLE TO DO WITH IT ...


HOW THE INTERNET WORKS
EATLIVER.COM
Like 0
Tweet 2
+1 0
Like 446k
Tweet 5,783
+1 184

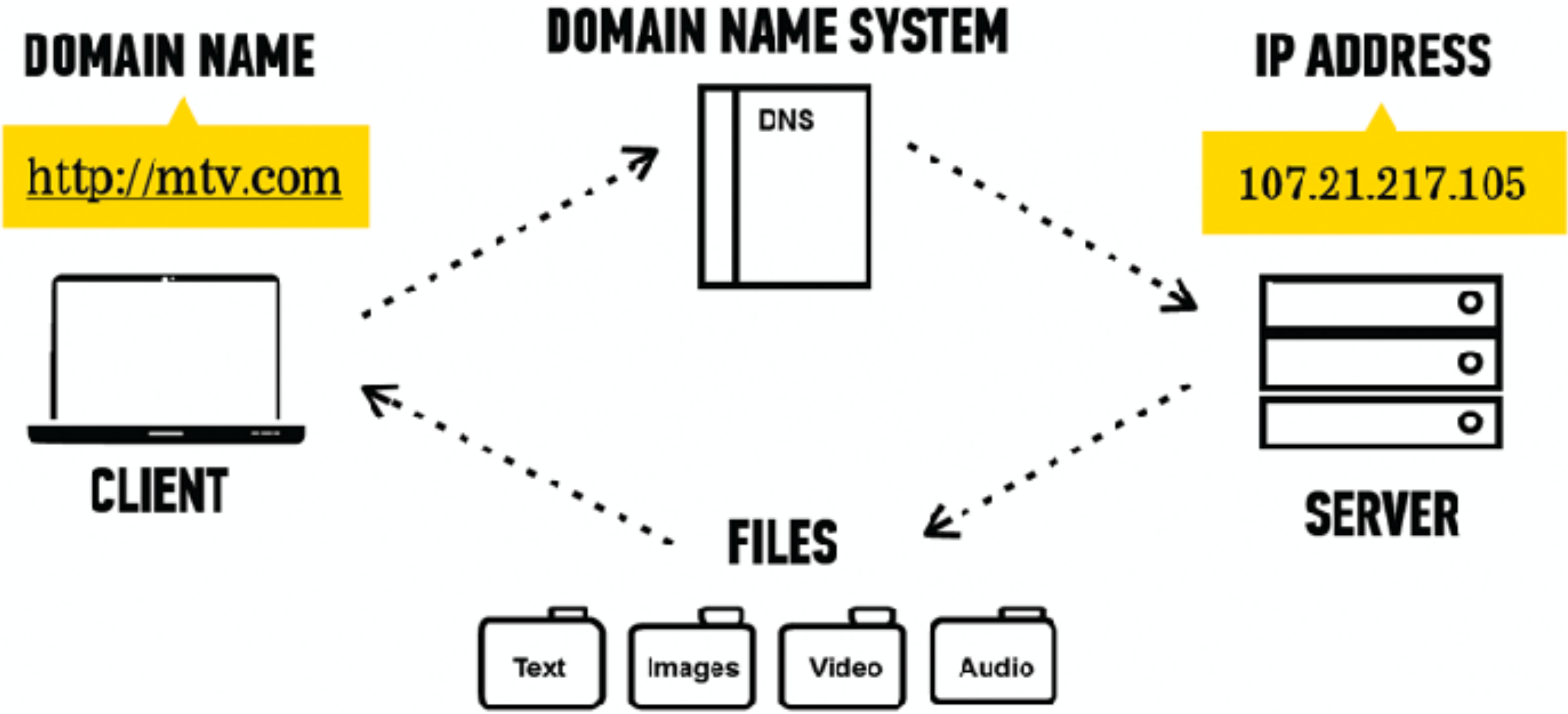
HOW THE WEB WORKS

Websites are collections of files that are hosted on special computers know as servers. Unlike your computer at home, servers have only one purpose: to host massive amounts of files and to “serve” those files to you.

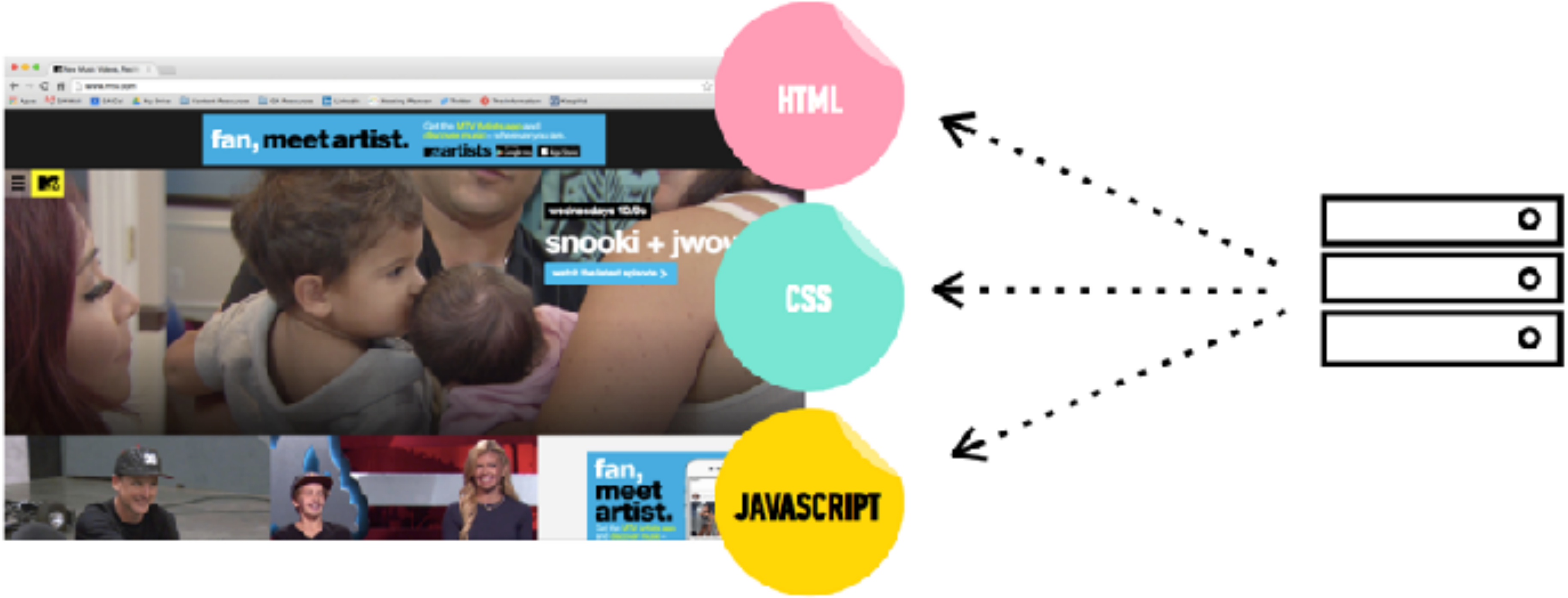
HOW THE WEB WORKS: AN ANALOGY



HOW THE WEB WORKS



WHAT GETS SENT BACK?



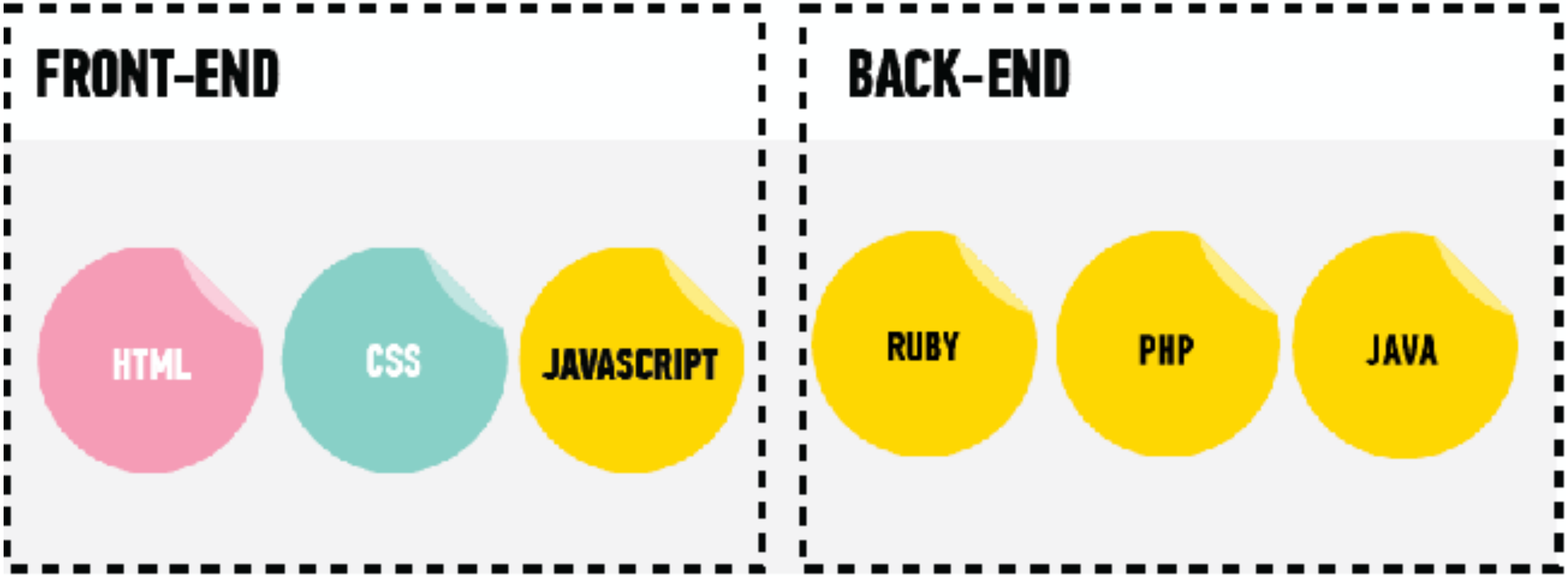
HTML = CONTENT / STRUCTURE

CSS = STYLE / DESIGN

JAVASCRIPT = BEHAVIOR / INTERACTION

http://codepen.io/ga-joe/pen/wWoozd

FRONT-END VERSUS BACK-END



WHAT *ARE* HTML, CSS, AND JAVASCRIPT?

Simply plain text files … SURPRISE!

As opposed to ending in ".txt", though, HTML files extensions end in ".html", CSS files end in ".css", and Javascript files end in ".js".

There are special text editors (like Sublime Text) that do what is called "syntax highlighting", which assigns different colors to different types of code.

OUR GOAL

Our objective is to teach you how to create, organize, and host these HTML, CSS, and JS files.

BEGIN WITH THE END IN MIND

What will we make? http://gallery.ga.co/

For the final project, you'll be designing and building a website of your choice. This project will test your knowledge of front-end web development and ask you to apply everything you've learned in this course. You could create: a portfolio website; a marketing website for a startup or business; or a prototype for a simple web-app.

CODEALONG

CODEALONG - OUR FIRST WEBSITE

Let's create a basic webpage and get in posted on Github.

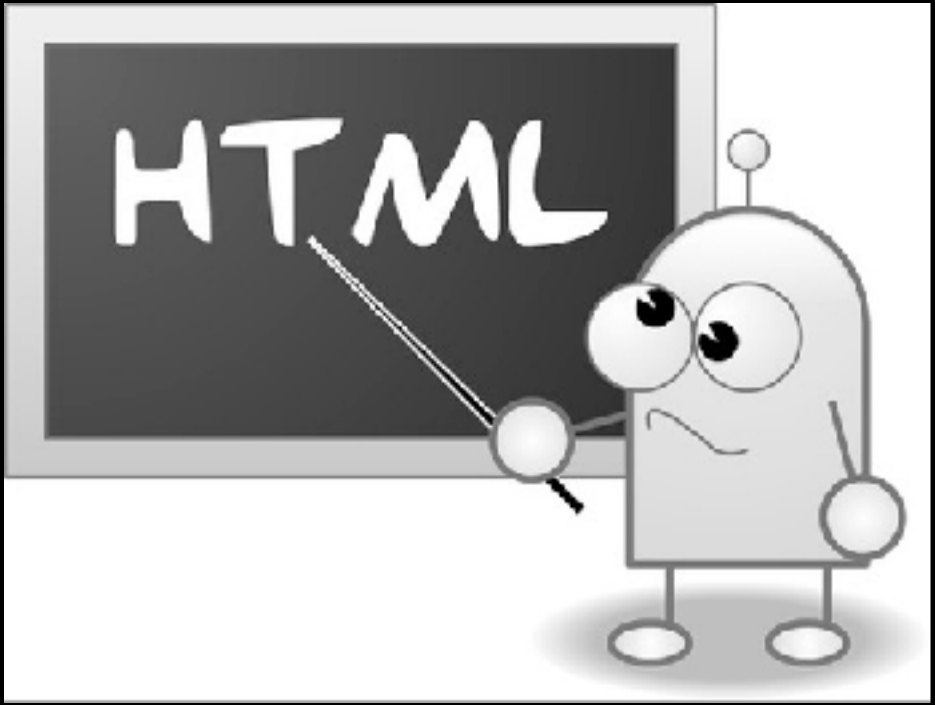
Your Name

Your Job Title

A List of Skills

Why you are taking FEWD

HTML BASICS



THE BORING HISTORY …

HTML was invented in 1989 by Sir Timothy Berners-Lee, a British physicist often credited as the inventor of the World Wide Web.

Berners-Lee created HTML as a way to annotate text to give clues as to how that text should be treated when rendered in a browser.

EVERY website that you’ve ever gone to is displayed with HTML.

BUT WHAT DOES IT ALL MEAN?

HT - Hypertext

HyperText means that we are sending text files over the internet.

M - Markup

The term “Markup” describes a system for annotating -- or “marking up” -- text. These markups describe the structure of a website along with cues for presentation. They instruct the software displaying your text to carry out appropriate actions and fit a particular format.

L - Language

Just like any language, HTML has its own vocabulary, grammar, and syntax. You can think of HTML as the language that the web speaks.

HTML

The fundamental building-block of HTML is the Element. Think of an Element as a structural piece of your site.

Elements in turn consist of starting tags, content, and ending tags.

The content is what is displayed on the website. The tags tell the browser what TYPE of content it is and how to present it.

I’M GONNA POP SOME TAGS …

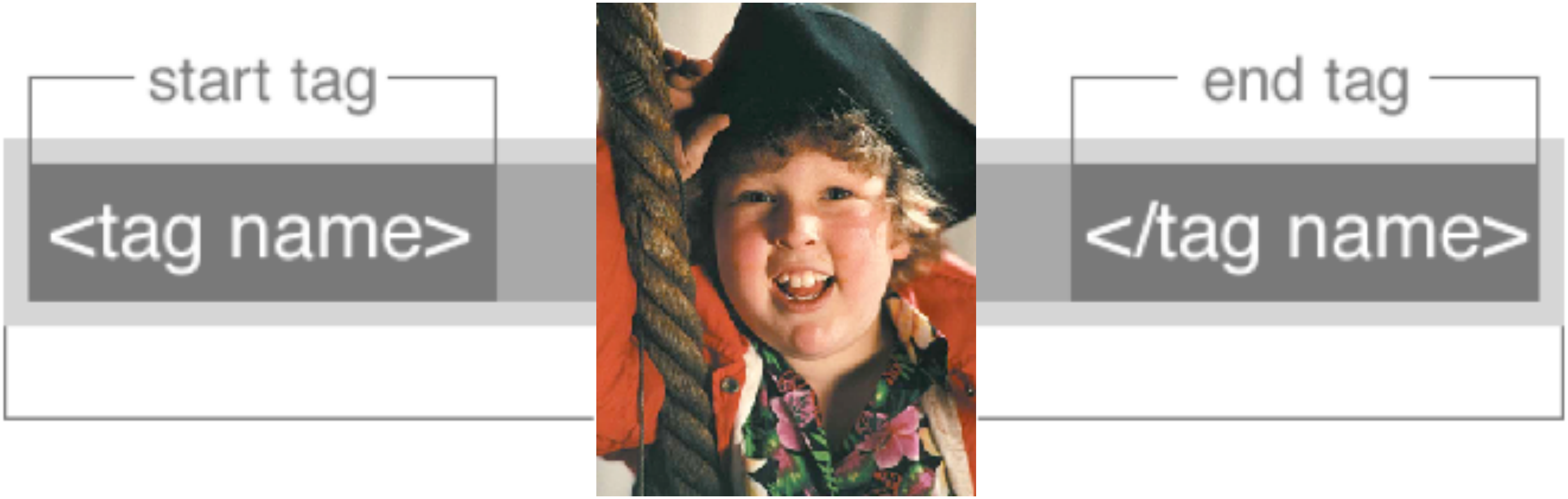
I’M GONNA POP SOME TAGS …

We use code called “tags” to group content into different chunks.

```
<p>Hello!</p>
```

There generally is an opening tag “<sometag>” and a closing tag “</sometag>” wrapping the chunk of content.

GROUP “CHUNK”’S OF CONTENT



start tag

end tag

<tag name>

</tag name>

HEADING ELEMENTS

Heading Elements

<h1>Largest Heading</h1>

<h2> . . . </h2>

<h3> . . . </h3>

<h4> . . .</h4>

<h5> . . . </h5>

<h6>Smallest Heading</h6>

HEADING ELEMENTS

Heading tags <h1> through <h6> are meant to be used for text that you want to appear as a title or headline on your webpage. Think of the way that headlines look in a newspaper or an online news website.

PARA–NORMAL ACTIVITY

<p>This is a paragraph.</p>

One of our bread-and-butter tags. The <p> tag gives us paragraphs of wrapping content.

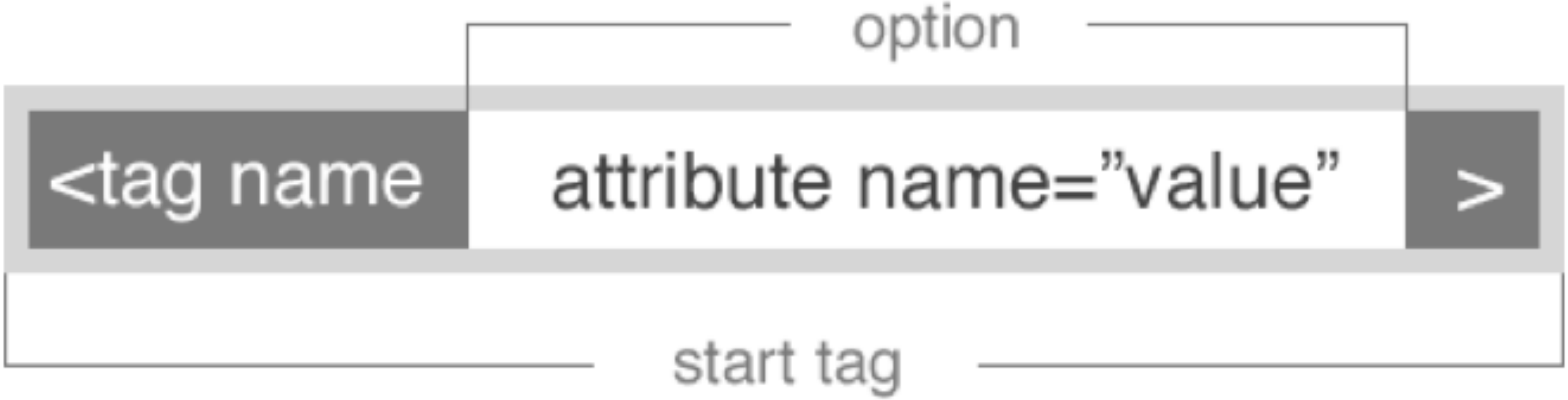
Think of it as a paragraph of content in a book, article or word processing program.

LISTS – UNORDERED LIST

```
<ul>
    <li>First Item</li>
    <li>Second Item</li>
    <li>Third Item</li>
</ul>
```

HTML ATTRIBUTES

Some elements require attributes.



ANCHORS AWEIGH!

Links to other pages in our HTML are referred to as “anchors” and use the <a> tag.

```
<a href="http://www.google.com">Google</a>
```

Happy Anchor is Happy ->

CODEALONG - GA PRESS RELEASE

What types of elements should we use for each chunk of content?

Mark-up the content appropriately with HTML tags.

Save as index.html.

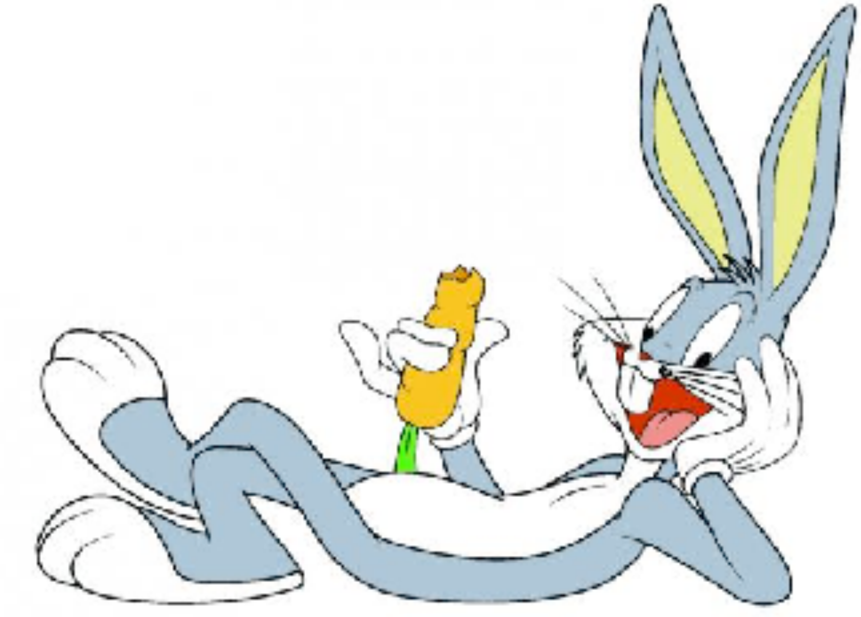
Open index.html in Chrome.

Stare in awe.

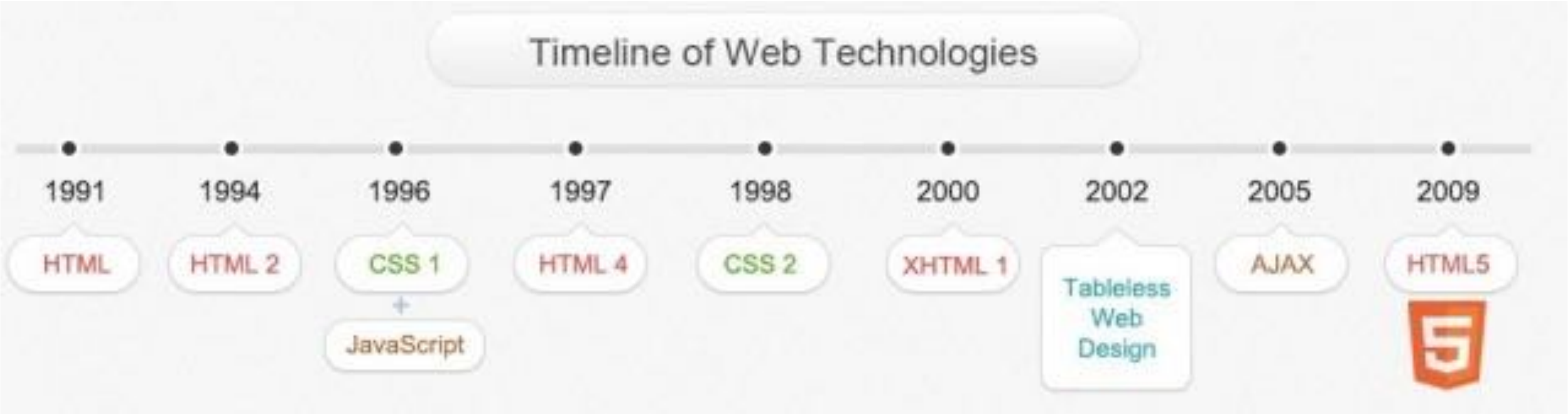
WHAT'S UP, DOCTYPE?

The first line of your .html files should always be a DOCTYPE. This tells the browser which “flavor” of HTML we are using. All new websites should use the HTML5 DOCTYPE:

```
<!DOCTYPE html>
```



HTML5 IS HTML IS HTML5



Other DOCTYPES

http://alistapart.com/article/doctype

<HTML> IS HTML

In every HTML document, all of our code needs to be written between an opening and a closing <html> tag, this indicates all of the text in between these tags is HTML.

Within our <html> tags, we have <head> and <body> tags.

IT’S ALL IN YOUR <HEAD>

We create a <head> element, which is used to add additional content to our site that isn’t part of our actual web page.

Within the <head> element, we include a <title> for our page.

```
<title>My Awesome Webpage</title>
```

BASIC HTML FILE STRUCTURE

```
<!DOCTYPE html>
<html>
	<head>
		<title>The Website Title</title>
	</head>

	<body>
		All of the HTML code that gets rendered on the page.
	</body>
</html>
```

CODEALONG - GA PRESS RELEASE

Add appropriate scaffolding code to make it a fully-fledge webpage.

PARTNER EXERCISE – COOKIE RECIPE

Pick a partner.

Your mission, should you choose to accept it, is to create a cookie recipe website from the .txt file included, picking which tags you should use for each part.

You will need a new tag to make a numeric list. Ask Google for help here.

Challenge: Add the cookie image using the <img> tag. How would you include an email address? (*Google is your friend)

OMG! <IMG>

Images are placed using the <img> tag.

The <img> doesn’t wrap content, so it doesn’t close!

The img tag requires a src attribute, which tells the browser where to find the image to be placed.

```
<img src="cookie.png">
```

<IMG> CONTINUED

They can be linked relative to a local file or to an absolute address on the internet:

<img src="mycat.jpg"> - Relative

<img src="https://s3.amazonaws.com/launchgram/static/img/RelatedProductImages/funny-product-images/kitten/bear-kitten.jpeg"> - Absolute

IMAGE FILE FORMATS

PNG

Supports transparency and semi-transparency, great for logos, icons, and repeating background tiles. Almost always preferable to a gif, unless semi-transparency is not needed, and the gif format is significantly smaller.

GIF

Can have basic transparency, typically a png is used instead. Can create multiple “slides” for animation effects.

JPG

No transparency, can be stored at different compression levels with varying amounts of "lossy-ness", typically the best format for photos. (Try to balance between photo quality and file size.)

CSS BASICS

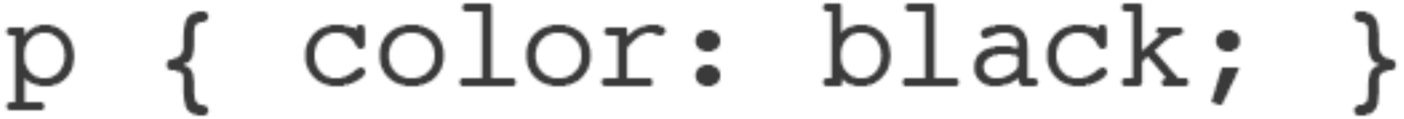
THE BORING STUFF …

CSS stands for “Cascading Style Sheets.”

CSS was first proposed in 1994 by Håkon Lie (“How Con Lee”), a colleague of HTML’s inventor, Tim Berners-Lee.

CSS was designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control, enable multiple pages to share formatting, and reduce repetition.

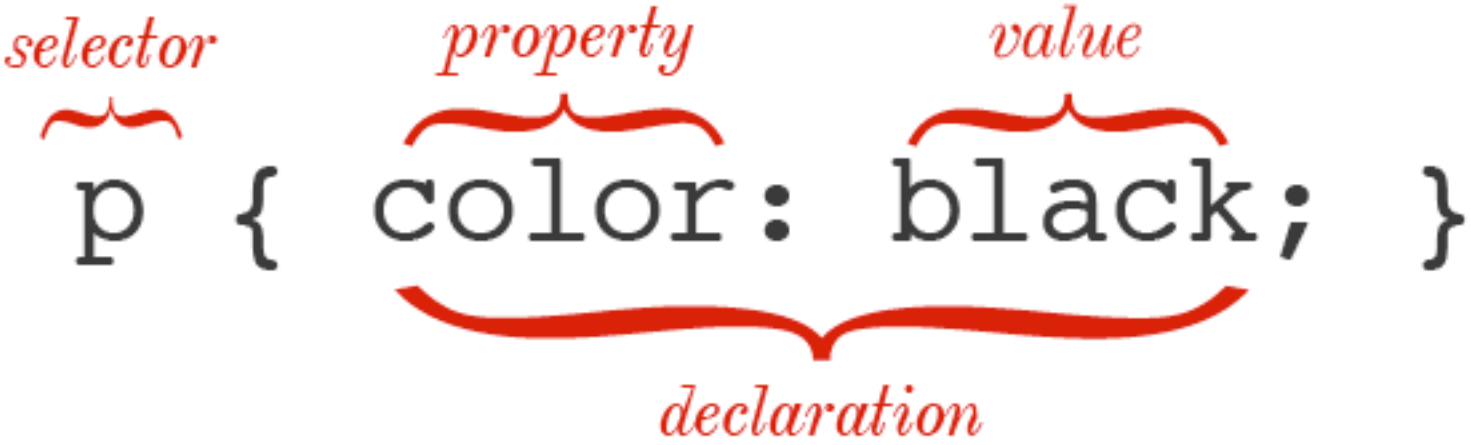
CSS SYNTAX



```
p { color: black; }
```

This CSS statement turns the text of every paragraph - <p> - on our page black.

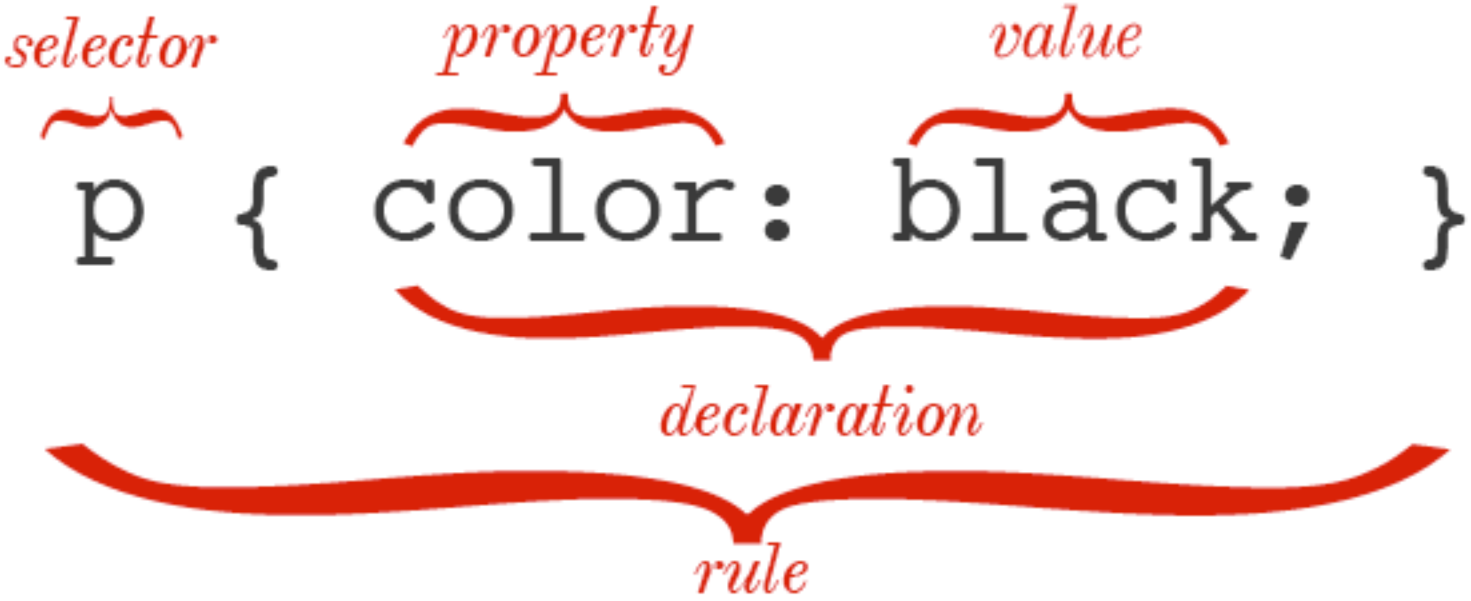
CSS SYNTAX



```
p { color: black; }
```

We refer to what we are changing as a “selector”, what we are changing about it as the “property”, and what we are changing that property to as the “value”. property: value; pairs are referred to as a “declaration”.

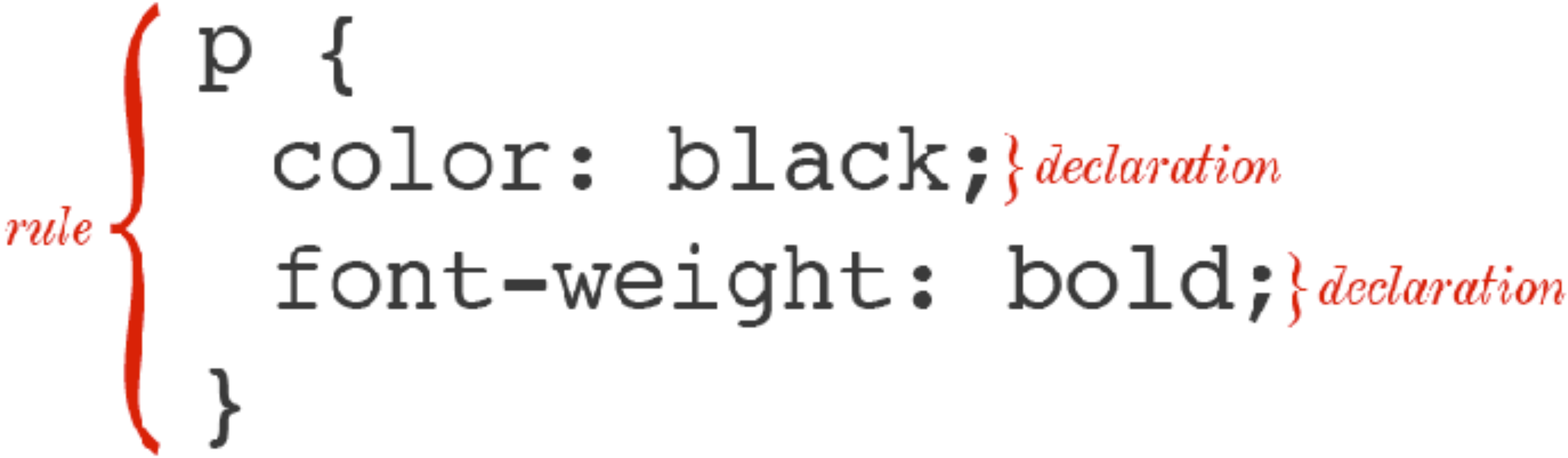
CSS SYNTAX



```
p { color: black; }
```

The entire block of CSS is referred-to as a “CSS rule”. Your CSS files will have many CSS rules.

CSS SYNTAX



```
p {
  color: black;
  font-weight: bold;
}
```

One selector can have multiple declarations (that is, property: value; pairs). This is still referred-to as a rule. It’s common for each declaration to be on its own line.

TO CODEPEN!

Let’s use codepen to explore some CSS properties, adding some style to our Cookie Recipe:

http://codepen.io/ga-joe/pen/ZOBBEo?editors=110

PAINT WITH ALL THE COLORS OF CSS

CSS COLOR PROPERTY

Colors can be specified in CSS in a variety of ways:

- keyword
- rgb
- hex codes

Other types of colors:
http://www.w3schools.com/cssref/css_colors_legal.asp

COLOR KEYWORDS

These are used less frequently, but are handy for basic colors like black, white, red, blue.

Full list can be found here:

http://www.w3.org/TR/css3-color/#svg-color

http://www.crockford.com/wrrrld/color.html

With basic colors like “blue”, “red” and fun ones like “moccasin”, “olivedrab”, and “mediumaquamarine”

COLOR PICKERS

Color keywords are not particularly useful as they severely limit the colors available. Color pickers allow you to scrape a precise, custom color. There will be one in any Design program you use. Look for the "eyedropper" icon.

RGB VALUES

rgb(0,0,0);

The first value is red, the second green, the third blue. Each value can range from 0 to 255.

You can think of it as how much red you have, how much green you have, and how much blue you have. The higher the numbers, the LIGHTER the color. The closer the numbers are together the more MUTED the color.

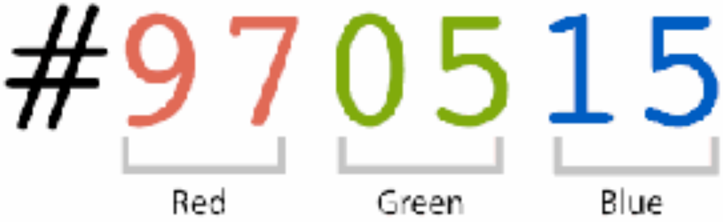
HEX CODES

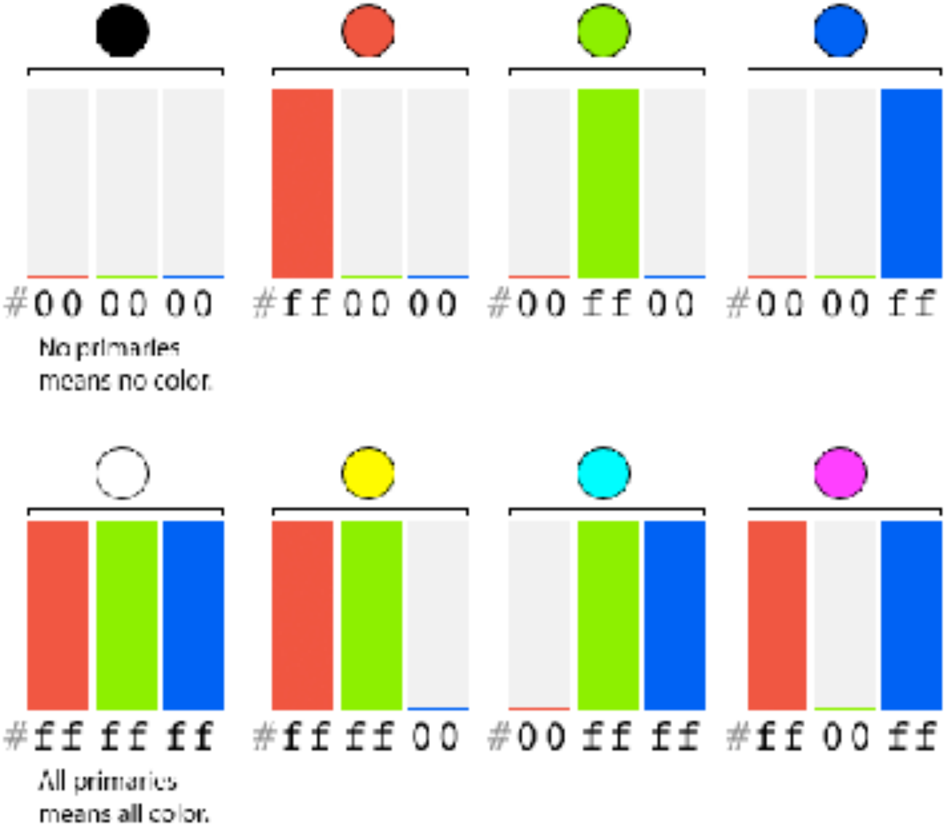
We can express the same values of RGB with Hex Codes.

"Hex codes” are so-called because they use hexadecimal, or base-16, to describe the color values for red, green, and blue. Each of the 3 color values is expressed by two hexadecimal digits, from 00 (no color) to FF (full color), and are written in the order red, green, then blue, after an initial # sign.

#00 in hexadecimal notation is equal to 0 in decimal notation
#FF in hexadecimal notation is equal to 255 in decimal notation

MORE ON HEX CODES





Shamelessly stolen from:
http://www.smashingmagazine.com/2012/10/04/the-code-side-of-color/

SO … WE HAVE OPTIONS

These are the same:

```
color: black;
color: rgb(0, 0, 0);
color: #000000;
```

These are also the same:

```
color: powderblue;
color: rgb(176, 224, 230);
color: #b0e0e6;
```

Uppercase and lowercase hexidecimal letters are interchangeable. It’s a personal choice.

COLOR PALETTE GENERATORS

You may not be familiar with picking colors. If you aren't and you're not working with a Designer, check out the following resources for generating color palettes, or selecting colors from pre-existing palettes.

https://kuler.adobe.com/

http://paletton.com/

http://coolors.co/app

FONT STUFF

font-weight

- Sets the thickness of the font.
- Common values are: normal, bold

font-style

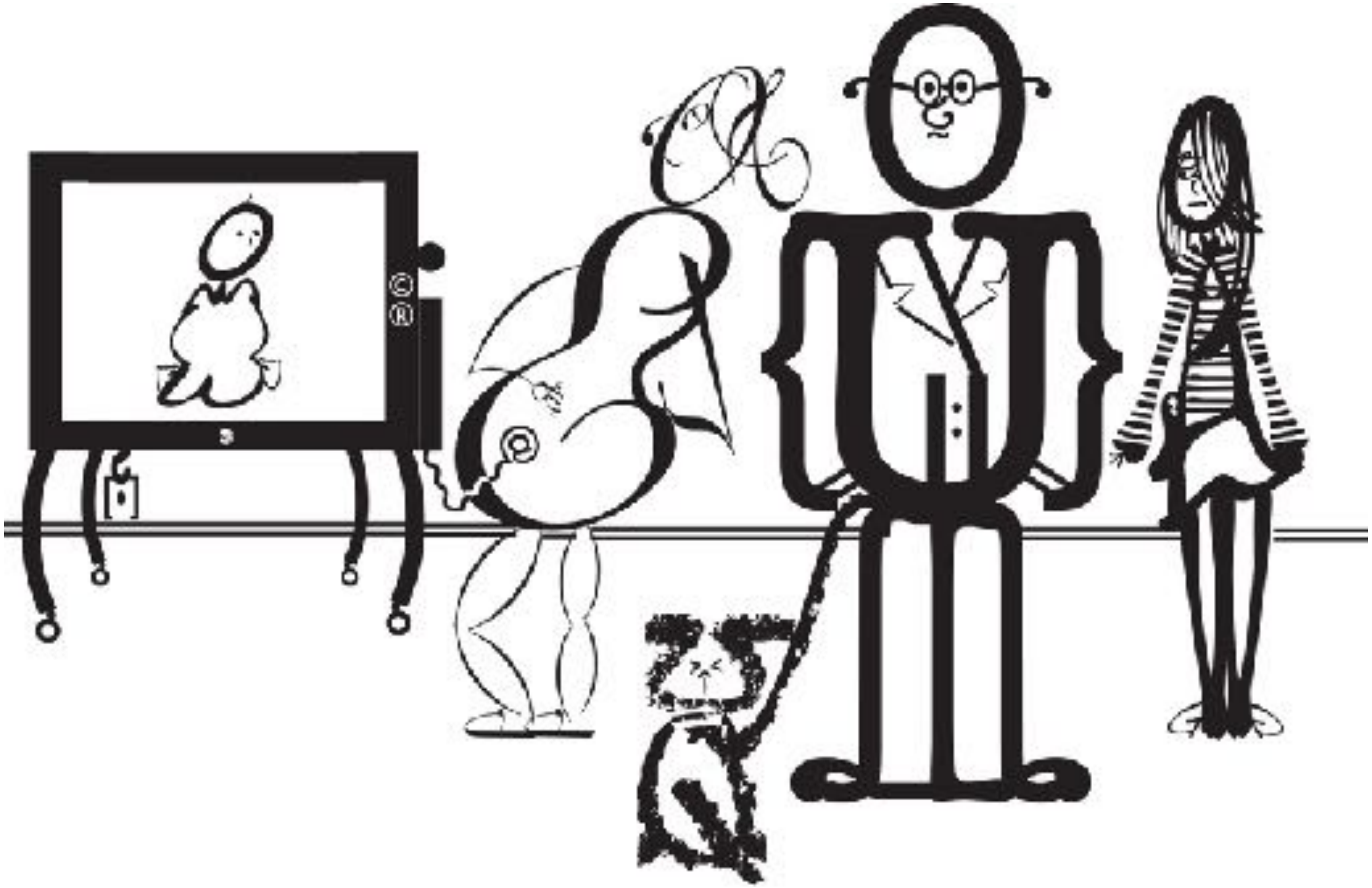
- Sets the slant of the font.
- Common values are: normal, italic

font-size

- Sets the height of the font.
- Most common value is the pixel - px.

FONT STUFF

FONT-FAMILY



FONT-FAMILY

font-family

- Tells what font the selector should use.
- Will accept multiple font names in a comma-delimited list.
- Should always end with serif, sans-serif, cursive, monospace, or fantasy.
- Font-families that are multiple words are enclosed in double quotes: “Times New Roman”.

FONT-FAMILY

Some common serif fonts:

- Georgia, Times, Palatino, “Times New Roman”

Common sans-serif fonts:

- Arial, Helvetica, Verdana, “Lucida Grande”, Impact

Common monospace fonts:

- "Courier New", Courier

http://www.ampsoft.net/webdesign-l/WindowsMacFonts.html
http://cssfontstack.com/

DON'T CALL ME ARIEL
MY NAME IS HELVETICA

TEXT

text-align

- How text is oriented within the containing block.
- Common values are: left, right, center.

text-decoration

- Any extra-textual visual emphasis.
- Common values are: none, underline.

text-transform

- Controls capitalization of text.
- Common values are: none, uppercase, lowercase, capitalize

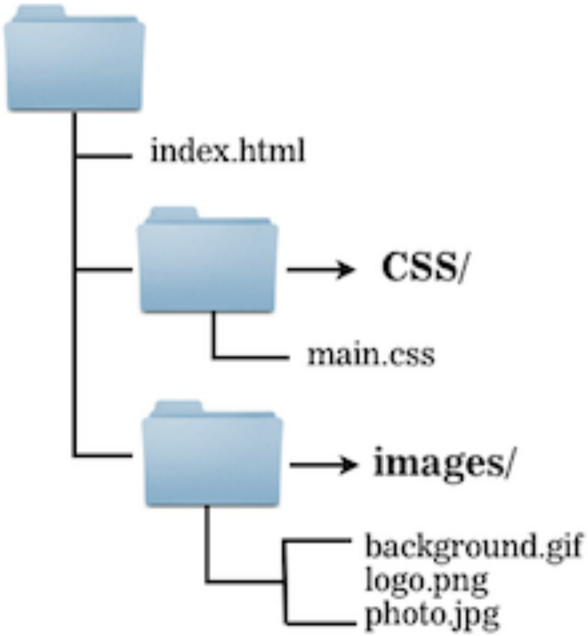
CODEALONG – WORK LOCALLY WITH CSS

Let’s now reproduce our cookie styles locally (sustainably, organically, grass-fed).

HOW DO WE GET IT TO OUR PAGE?

Using a separate .css file that we create just like .html.

In order to stay organized / separate types of files, we will create a folder for “css” that will house our stylesheets and “images” that will house our images.



YOUR STYLE IS GOING TO YOUR <HEAD>

Like the <title>, links to our CSS go in the <head> tag.

```
<title>My Awesome Webpage</title>
```

```
<link rel="stylesheet" type="text/css" href="css/style.css">
```

CODEALONG - WENDY BITE

Create and link a css stylesheet.

Add whatever styles to the CSS stylesheet that we would like.

Create a simple navigation by linking both pages together.

EXERCISE - PERSONAL WEBSITE

Create a Personal Website for yourself, including and About Me page and Resume.

First step should be to create the web site folder and the index.html file. Then write plain text for the content and add the markup. Should definitely use paragraphs, headings, links, lists.

Then add CSS Styles, an image. Link the two pages together.

Use Wendy Bite's site as a guide, but feel free to branch-our or get creative as your current skills allow.

This will be completed for your homework.