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Homework Assignment

- **Also, at this point everyone should have access to the homework repository in GitHub.**

  https://github.com/RutgersCodingBootcamp/All-Classwork-Homework

- **Homework Assignment #1 is** Due:
    - **MW Class - Monday (2/1/16)**
    - **TTH Class – Tuesday (2/2/16)**

Advice for this Assignment…

- **Really, work hard on this assignment!** This assignment introduces you to fundamental concepts that we'll be building the entire course-long.

- **Review In Class Material *especially* Exercises:** https://github.com/RutgersCodingBootcamp/0125-mw-class-content

- **Work with your peers!** It's much better than screaming at your computer alone.

- **Ask Questions on Slack!** Your peers, TAs, and Instructors are all here to help when they can.

Day 3

Heroes of CSS

Rutgers Coding Bootcamp | January 29, 2016

CSS Stylin'

HTML / CSS Definitions (*yawn* unimportant)

- **HTML:** Hypertext Markup Language – (Content)

- **CSS:** Cascading Style Sheets – (Appearance)

- **HTML/CSS are the "languages of the web".** Together they define both the content and the aesthetics of a webpage – handling everything from the layouts, colors, fonts, and content placement. (Javascript is the third – handling logic, animation, etc.)

HTML vs HTML/CSS

HTML Alone

- Like writing papers in "Notepad".

- Can only write unformatted text.

HTML / CSS

- Like writing papers in Microsoft Word.

- Can format text, page settings, alignment, etc. based on "highlighting" and menu options.

Basic HTML Page

```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <title>My First Website</title>
5   </head>
6   <body>
7       <h1>Awesome Header</h1>
8       <h2>Smaller Awesome Header</h2>
9       <h3>Even Smaller Header</h3>
10
11      <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit.
        Quis, molestiae modi accusantium animi magnam veniam, impedit
        asperiores sint consequuntur debitis fugit quibusdam dolor,
        iusto sed porro ab minus voluptatibus amet.</p>
12      <img src="http://www.envsci.rutgers.edu/~robock/
        RU_LOGOTYPE_CMYK_S.jpg" alt="Rutgers" width="25%">
13
14      <h3>Menu Links</h3>
15      <ul>
16          <li><a href="http://www.google.com">Google</a></li>
17          <li><a href="http://www.facebook.com">Facebook</a></li>
18          <li><a href="http://www.twitter.com">Twitter</a></li>
19      </ul>
20  </body>
21  </html>
```

Basic HTML Page

Awesome Header

Smaller Awesome Header

Even Smaller Header

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quis, molestiae modi accusantium animi magnam veniam, impedit asperiores sint consequuntur debitis fugit quibusdam dolor, iusto sed porro ab minus voluptatibus amet.

RUTGERS

Menu Links

- Google
- Facebook
- Twitter

Basic HTML Page

Awesome Header

Smaller Awesome Header

Even Smaller Header

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quis, molestiae modi accusantium animi magnam veniam, impedit asperiores sint consequuntur debitis fugit quibusdam dolor, iusto sed porro ab minus voluptatibus amet.

RUTGERS

Menu Links

- Google
- Facebook
- Twitter

Hella Boring...

Enter CSS

```css
23 ▼ <style>
24 ▼     h1 {
25           font-size: 60px;
26           text-align: center;
27           margin-bottom: 15px;
28           text-decoration: underline;
29           background-color: black;
30           color: white;
31       }
32
33 ▼     h2 {
34           font-size: 40px;
35           text-align: center;
36           margin-top: 15px;
37           margin-bottom: 15px;
38       }
39
40 ▼     h3 {
41           font-size: 20px;
42           text-align: center;
43           margin-top: 15px;
44       }
45
46 ▼     img {
47           display: block;
48           margin-left: auto;
49           margin-right: auto
50       }
51
52 ▼     p {
53           text-align: center;
54           font-size: 20px;
55           font-weight: bold;
56       }
57 ▼     ul {
58           text-align: center;
59           font-size: 35px;
60           list-style-position: inside;
61           border-style: solid;
62           border-width: 5px;
63       }
64 </style>
```

Enter CSS

CSS Syntax

- CSS works by hooking onto **selectors** added into HTML using "**classes** and **identifiers**".

- Once hooked, we apply **styles** to those HTML elements using css .
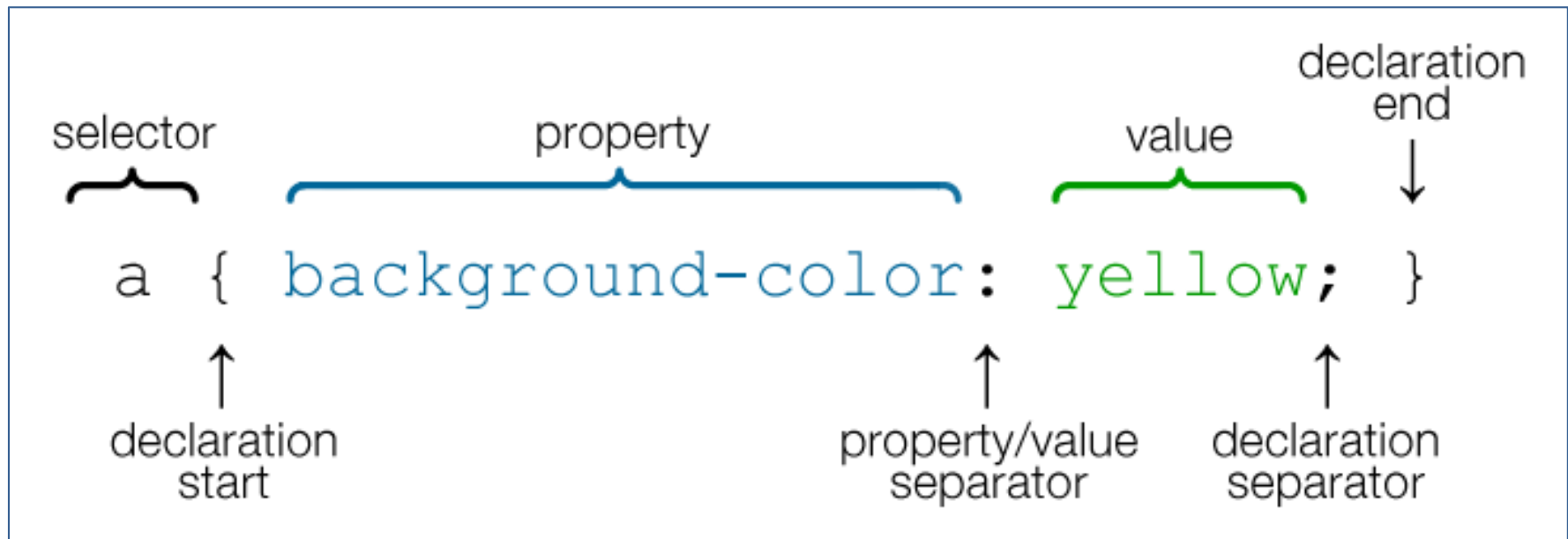
CSS Example

- In the below example the "Header" would be turned blue and MUCH larger, because of the CSS.

- If we'd like to apply a CSS style selectively, we can incorporate a class or ID. Just remember to include the necessary symbol (. or #) before the css.

Example (HTML):

```
<p class="bigBlue">Header</p>
```

Example (CSS):

```
.bigBlue
{
    font-size: 100px;
    color: blue;s
}
```

Key CSS Attributes

Font / Color:
- **color**: Sets color of text
- **font-size**: Sets size of the font
- **font-style**: Sets italics
- **font-weight**: Sets bold

Alignment / Spacing:
- **margin-top(bottom/left/right):** Adds space between element and its own border.

- **margin-top (bottom/left/right):** Adds space between element and surrounding elements.

- **float:** Forces elements to the sides, centers, or tops

Background:
- **background-color:** sets background color
- **background-image:** sets background image

Powerful Duo

Believe it or not… HTML / CSS is all you need to develop a full-blown rich looking website.

CSS Show!

> YOUR TURN!!

Assignment

In this activity, you'll be upgrading your previous HTML bio using CSS styles. Once you are done with your changes, you'll commit and push these changes up to GitHub.

Additional instructions, sent via Slack.

CSS Resets

Loading Multiple CSS Files ***(Very Important!!!)***

```html
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Multiple CSS Files!!</title>
5      <link rel="stylesheet" href="assets/style1.css">
6      <link rel="stylesheet" href="assets/style2.css">
7      <link rel="stylesheet" href="assets/style3.css">
8  </head>
9  <body>
10     <header>
```

- One of the most powerful aspects of CSS is the ability to deploy multiple CSS files simultaneously.

- This allows developers the ability to create complex designs – made up of multiple design elements.

- Just remember the loading ***order matters!!!***

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Battle of the Browsers

- Under-the hood there are often significant differences between how browsers **render** webpages.

- These differences in rendering agents can mean HTML/CSS gets displayed differently in each.

- As designers/developers, creating **cross-browser compatible** websites is critical.

Reset.css (or Normalize.css)
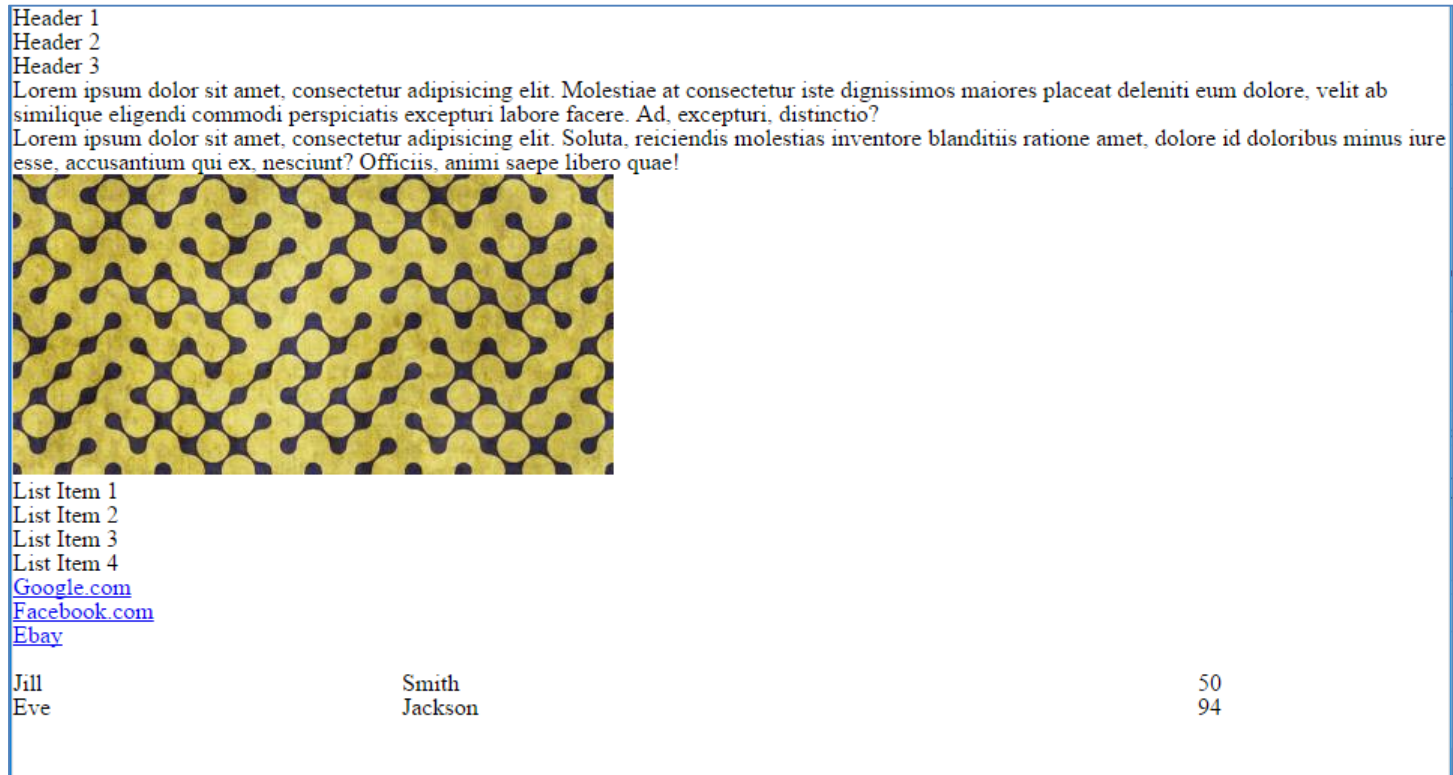
- Reset.css ensures that all browser-specific css has been reset, so it appears the same in all browsers.

- This means you will have to re-style everything yourself

Why CSS Resets Matter
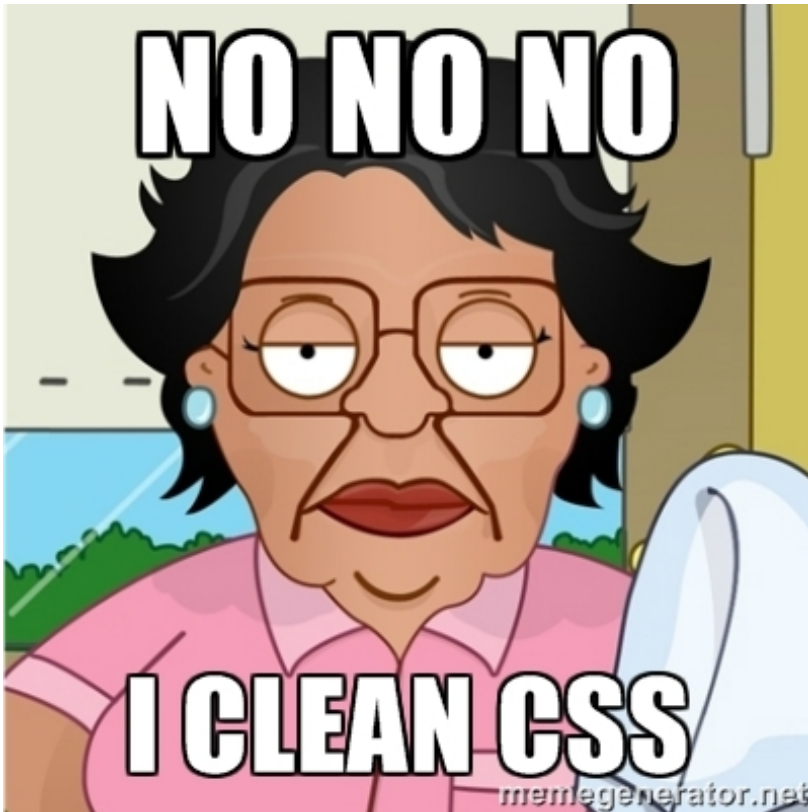
1. It's important for creating browser-compatible websites

2. It's an example of using someone else's CSS in *your* website!!!

3. It's a common Front-End Developer Interview question.

We be Floatin'

Warning!

This is a fairly "tricky"… **but VERY IMPORTANT topic.**
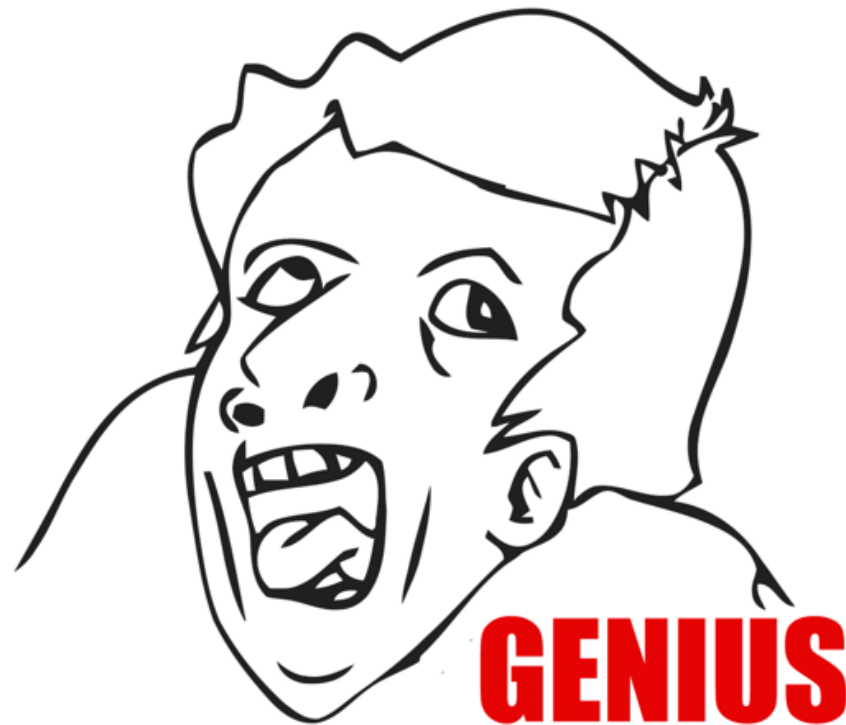
Time to channel that inner genius.

The Concept of "Flow"
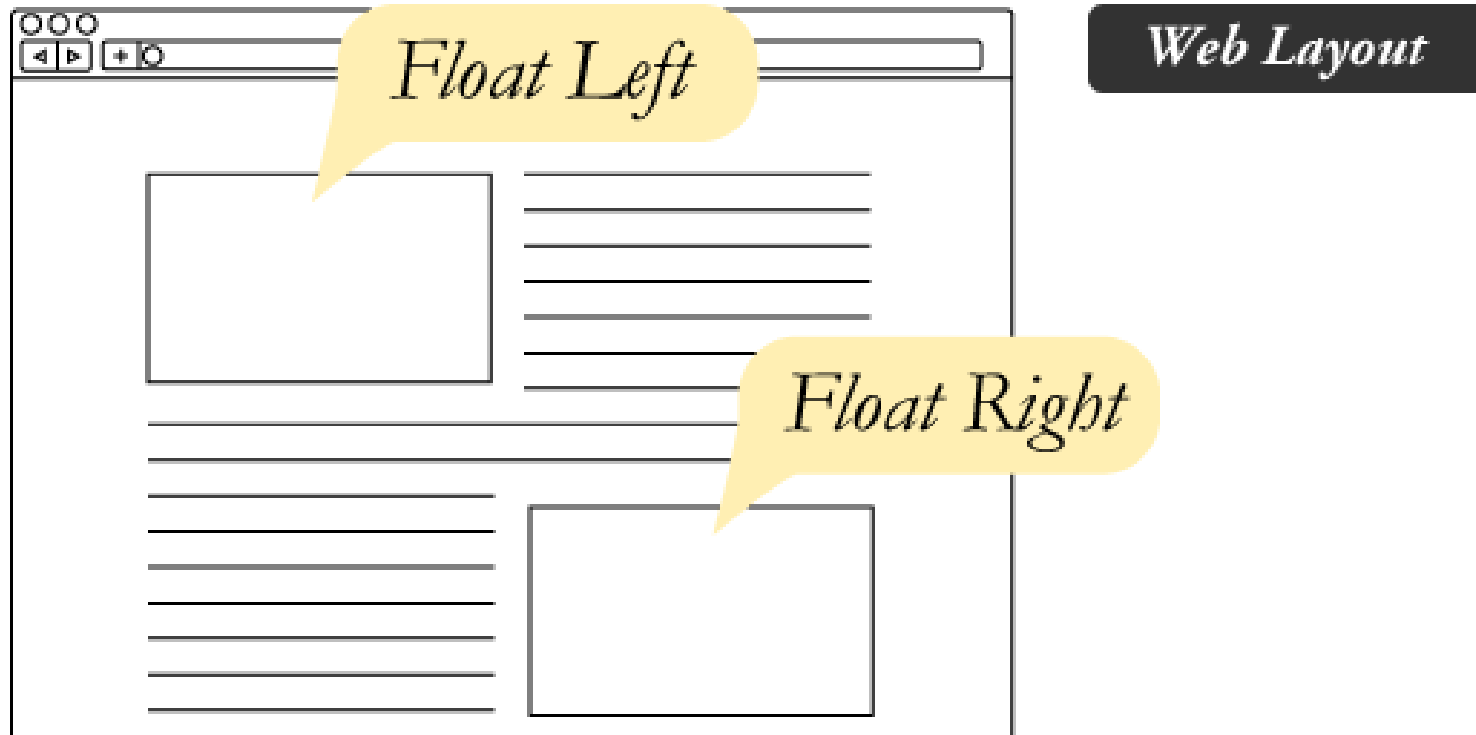
- In HTML/CSS, (by default) every element displayed is governed by a concept called "**flow**".

- This means that HTML elements force their adjacent elements to **flow around** them.

Flow Analogy to MS Word
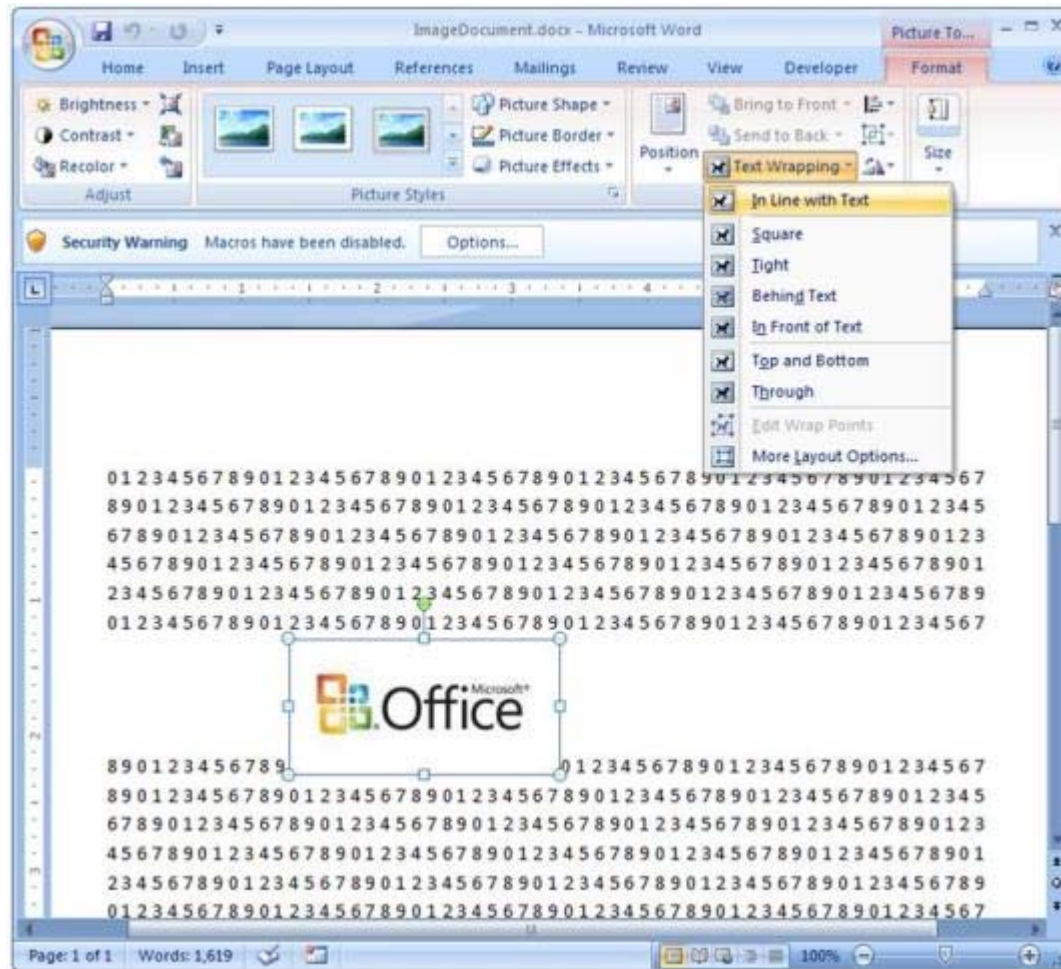
- This concept of "flow" is very similar to the **wrap-text options** you may be familiar with in Microsoft Word.

- Just as in MS Word, you can have images in-line with text, on-top of text, etc.

Block Elements
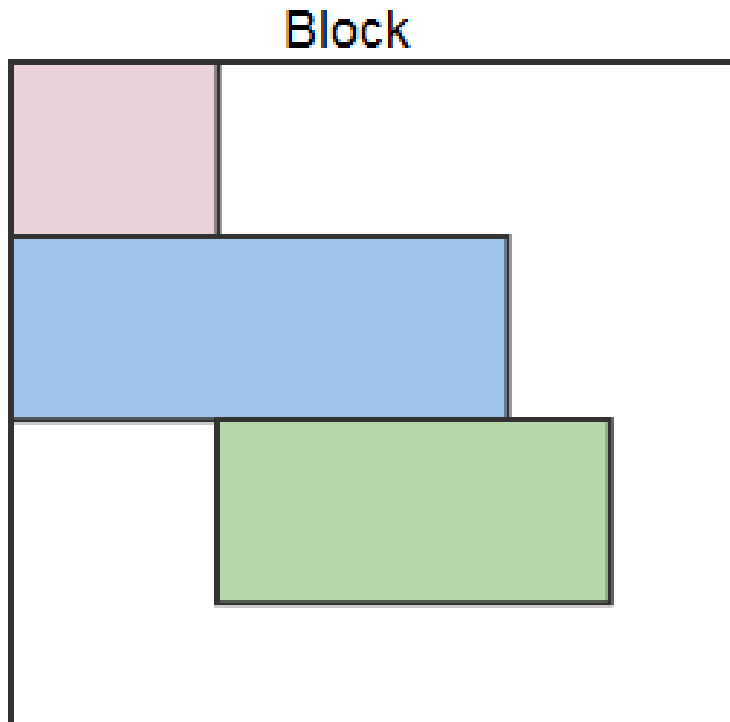
- By default, many HTML elements (paragraphs, headers, div, etc..) are treated as **block elements.**

- This means, they take up an entire line of space, unless you intervene with CSS properties.

Block Elements vs. Inline Elements
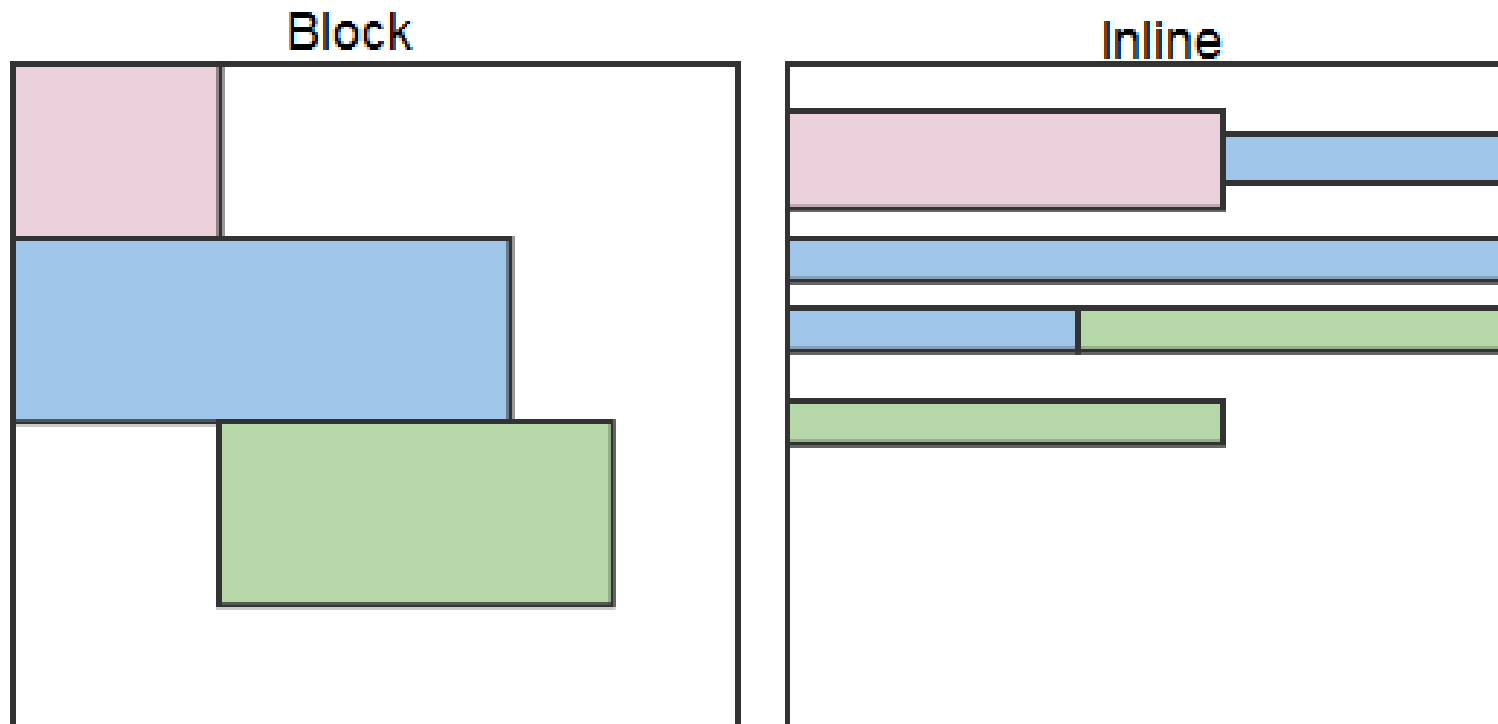
- Now… contrast the block elements with **inline elements**.

- By using **float CSS** properties, we can command our website to display multiple CSS elements adjacently.

Floating
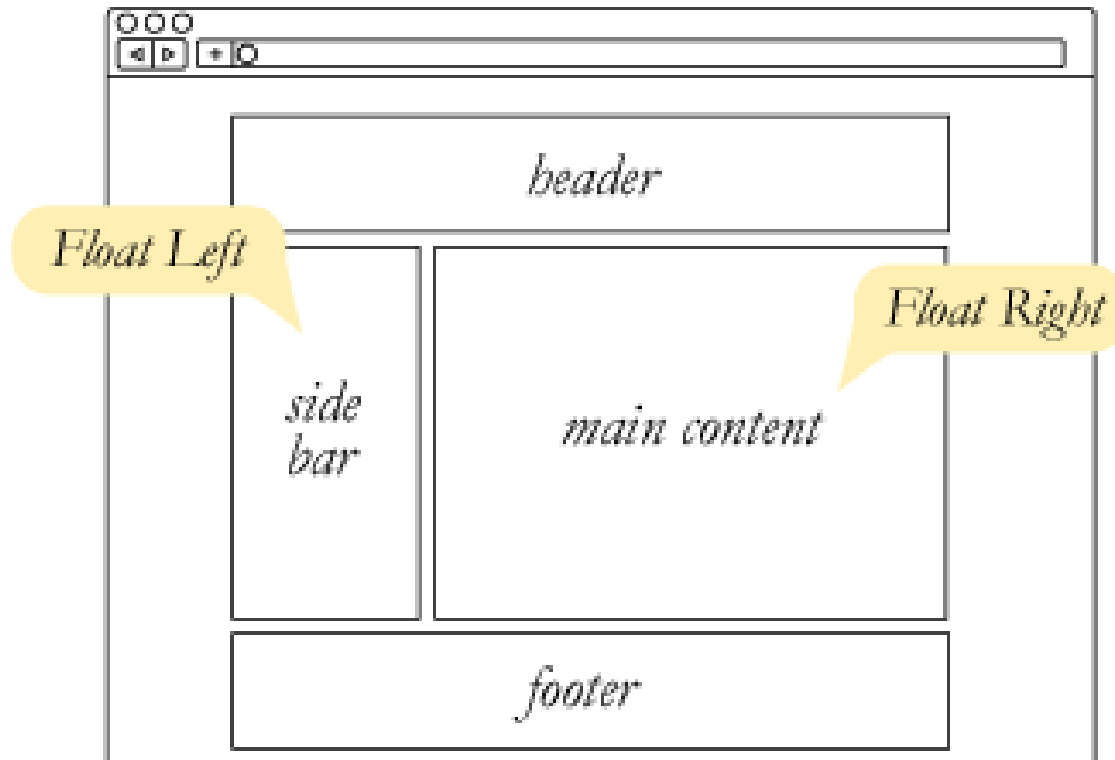
- In order to convert these block elements into inline elements, we utilize a CSS property called **float.**

- Floats are **necessary** for building web layouts

Clearing the Float

Main Content
(float left)

Sidebar
(float right)

Footer *(not cleared!)*
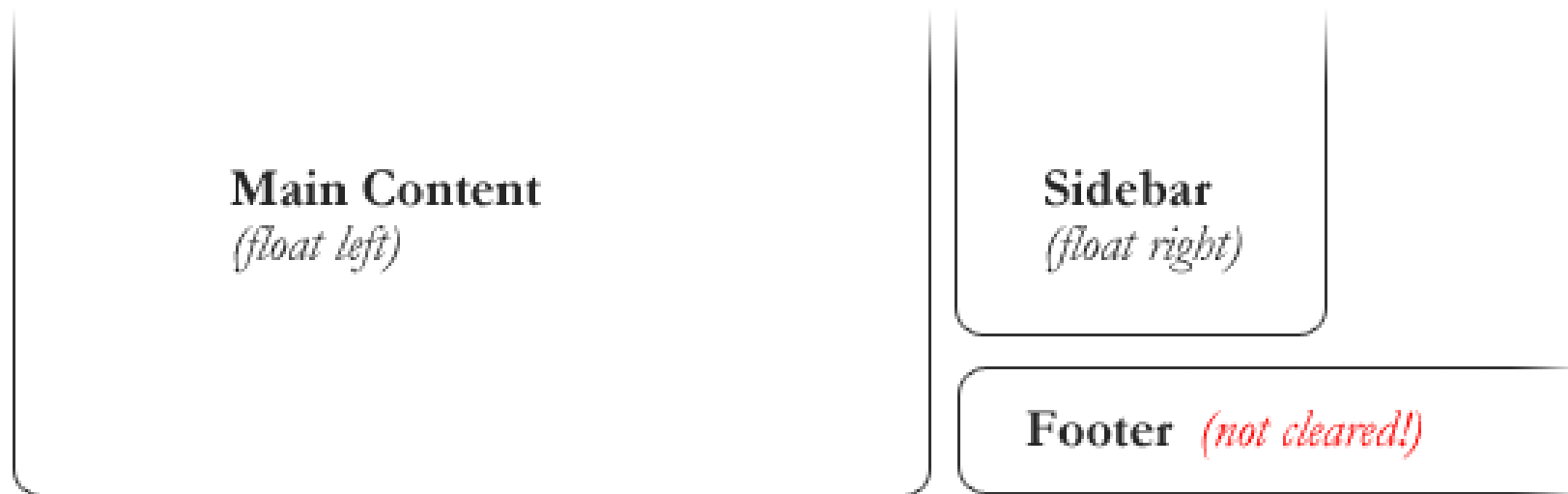
- Sometimes… **floats** get in the way, and elements that we don't want to be "in-line" are treated as such.

Clearing the Float

Main Content
(float left)

Sidebar
(float right)

```css
CSS

#footer {
    clear: both;
}
```

Footer *(cleared)*
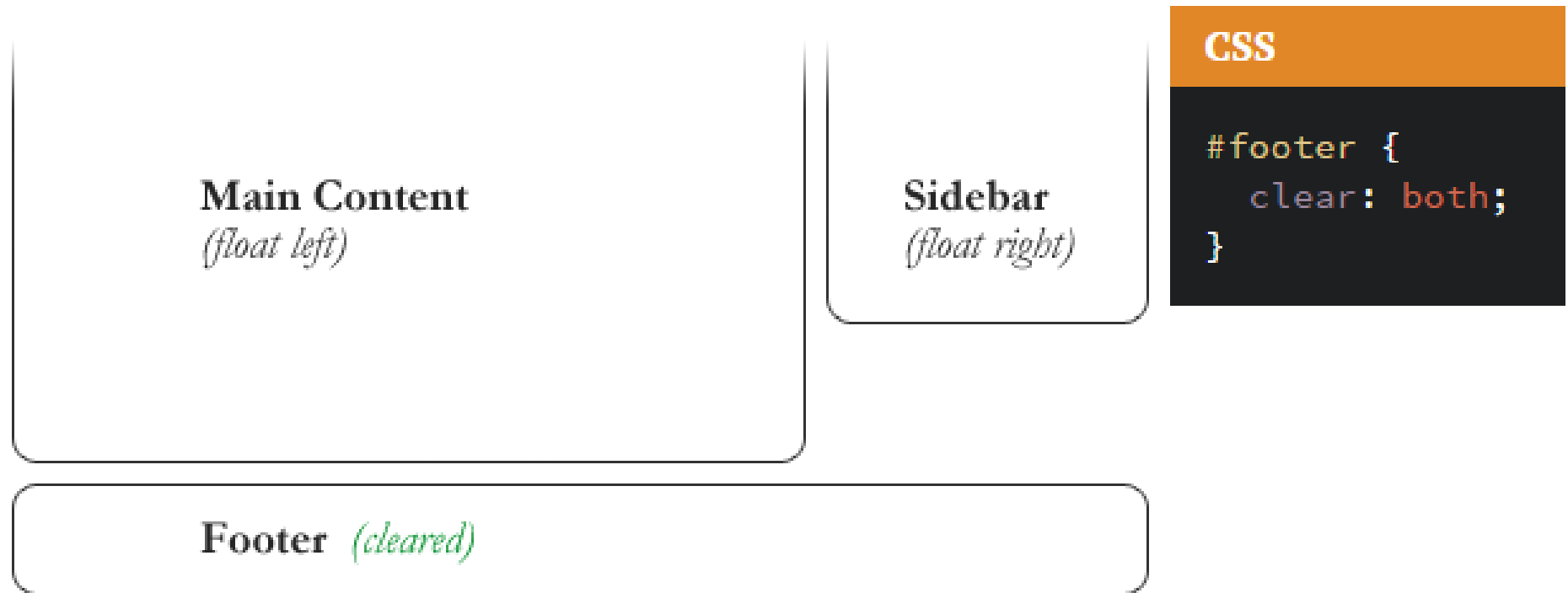
- We use the CSS property **clear** to re-force elements to behave as block elements or to avoid being pulled in by a float.

Clearfix Hack

- Sometimes when elements don't match up in size, we get situations like the above…

Clearfix Hack


```
<div class="clearfix">
  Much better!
```
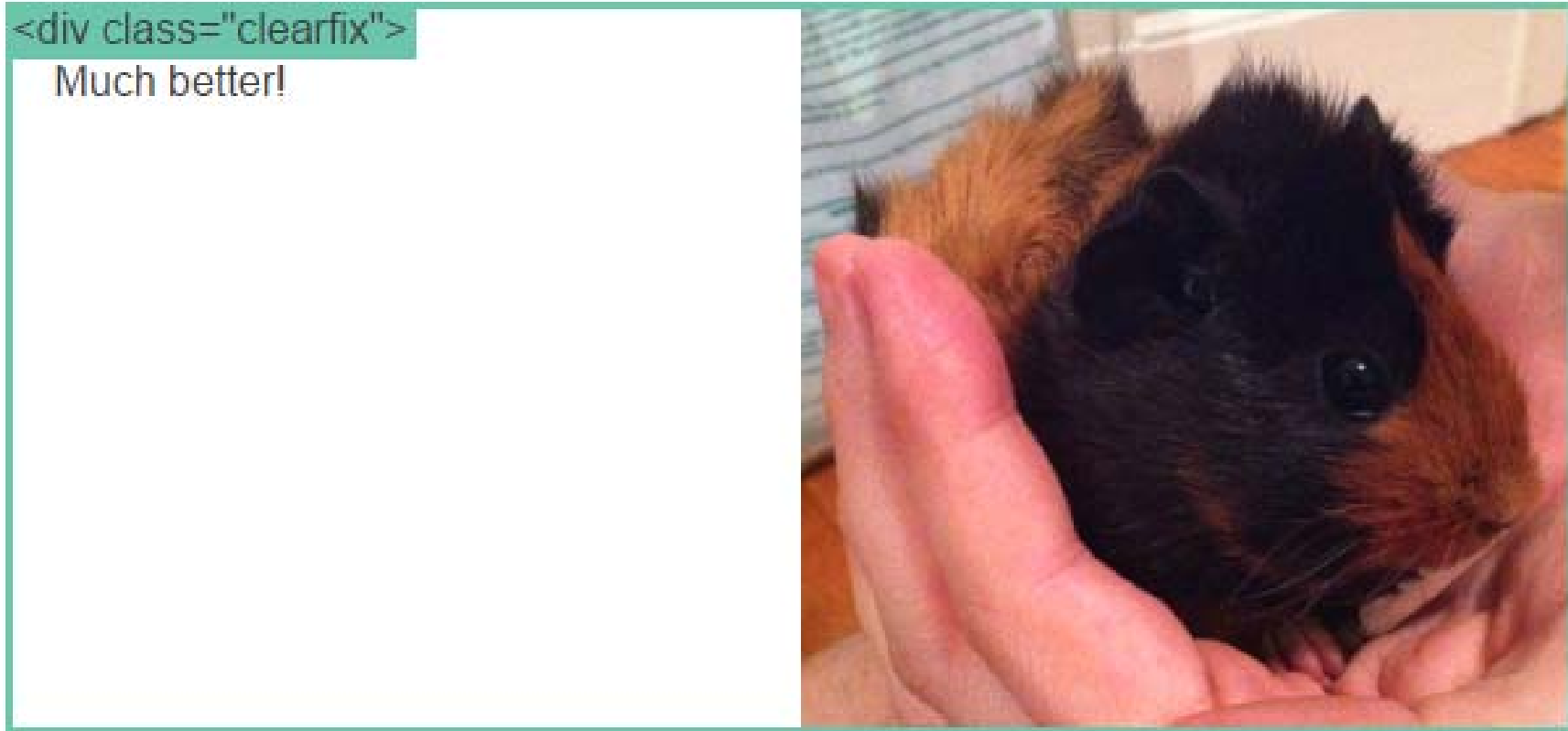
- We can get around it by using what's called the "clearfix hack". By using the CSS property **overflow: auto**, the first element will fill up the empty parts of the flow.

```
.clearfix {
  overflow: auto;
}
```

Fantastic Guide on Floats ****

- **To all serious front-end developers (this is a <u>necessary</u> read):**
  https://css-tricks.com/all-about-floats/

> YOUR TURN!!

Assignment

In this activity, you will be flexing your newfound floating skills to create a conceptual layout. Eyeball the design to your best ability.

Additional instructions, sent via Slack.

> YOUR TURN!!