# LESSON 4
# LAYOUTS

# HOMEWORK REVIEW

## Image Alt Text

```
<img src="path/to/file.jpg" alt="Description">
```

-Alt text lets the browser fall back to at least a word description of your content if the image doesn't load

-This is increasingly a big deal since bad mobile connections often fail to load imagery

-Screenreaders for visually impaired also rely on this: https://www.youtube.com/watch?v=UzffnbBex6c

# DONT DO THIS

## Image Sizing

```
<img src="path/to/file.jpg" width="100">
```

-Sizing images in HTML worked back in 2002 when everyone was using a desktop tower with IE6
-Today, image height and width is fluid and needs to be controlled in the CSS layer.

# CODE INDENTION

-Close every tag you open
-Use two space tabs for each level of nesting
-Nest content in containers

```
<html>
  <head>
    <title>Something Unique</title>
  </head>
  <body>
    <nav class="container">
      <ul>
        <li>Item</li>
      </ul>
    </nav>
  </body>
</html>
```

# DONT DO THIS EITHER

```
<table>
  <tr>
    <td>
      <h1>My page</h1>
    </td>
    <td>
      <p>It's so great now</p>
    </td>
  </tr>
</table>
```

-Tables are for data, not page layouts
-People did this before CSS existed because they had no choice - you don't live in the digital desert like they did

# TAKE A LOOK AT

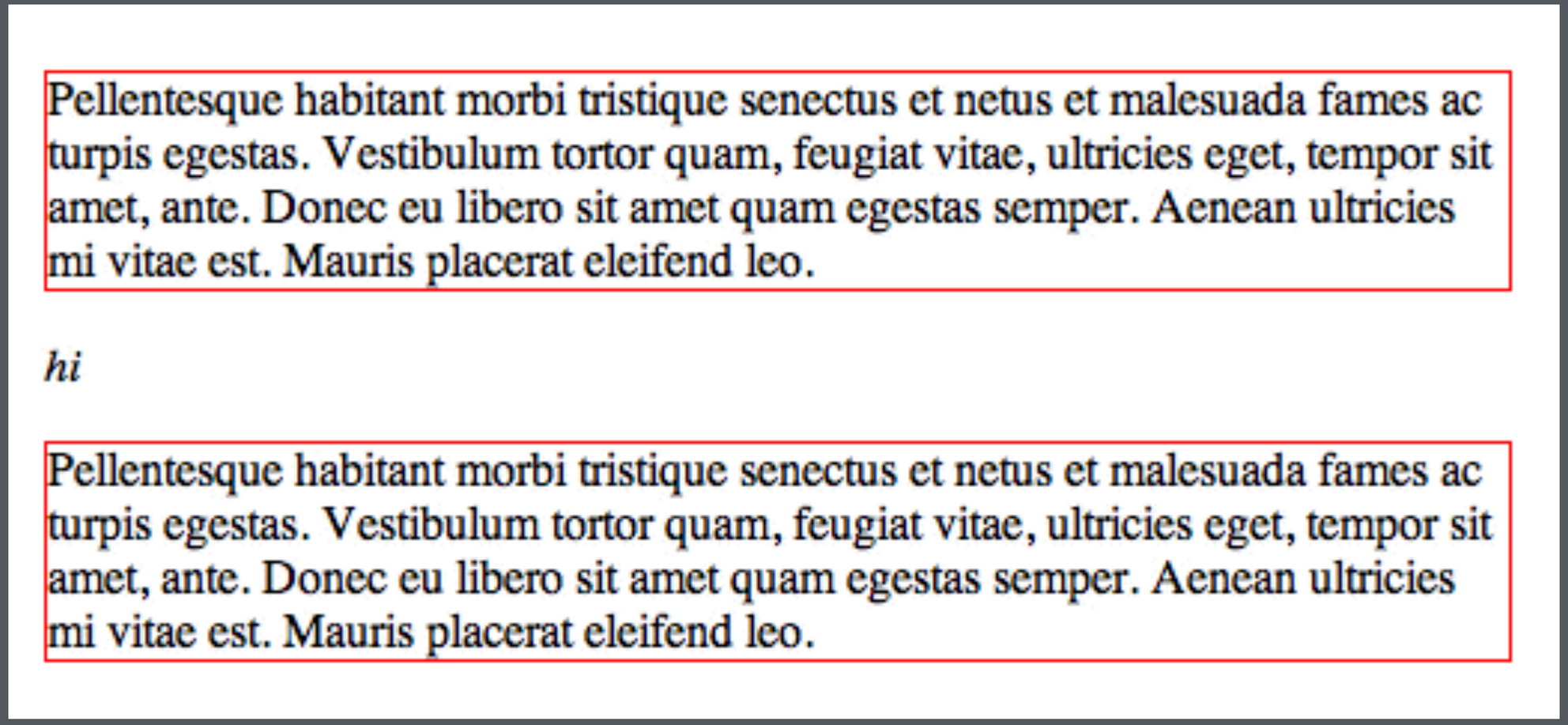
# ASSIGNMENT 01

# CSS POSITION

# POSITIONING ELEMENTS

`-display` controls behavior of the box content sits in:

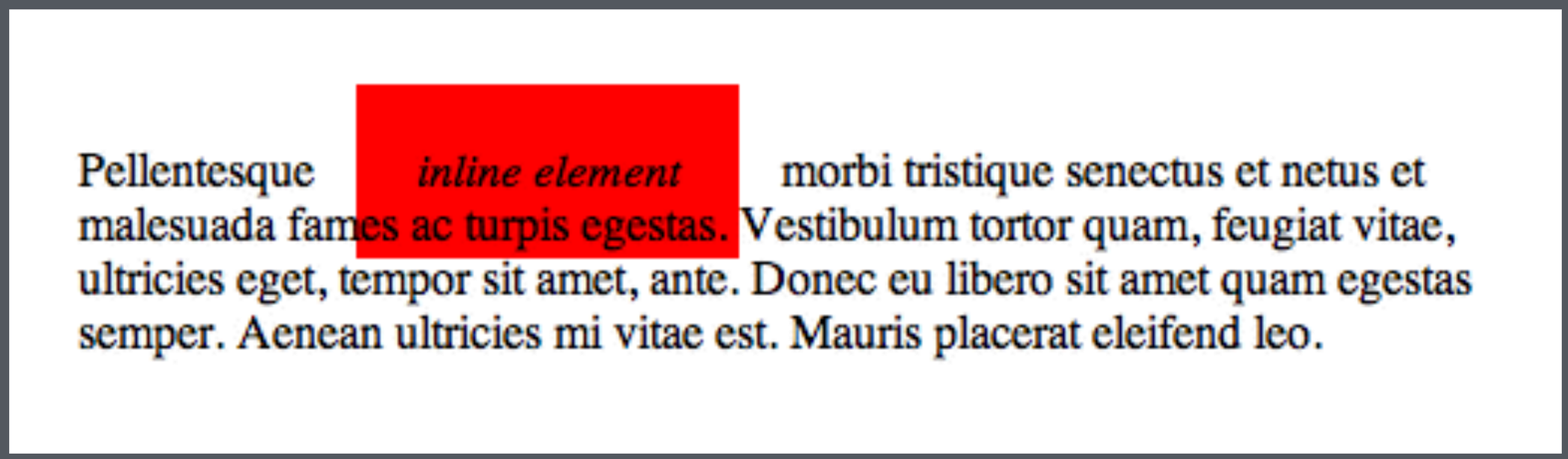
`display: block;` - element takes up as much width as possible, following element drops to a new line




images courtesy of css-tricks.com

# POSITIONING ELEMENTS

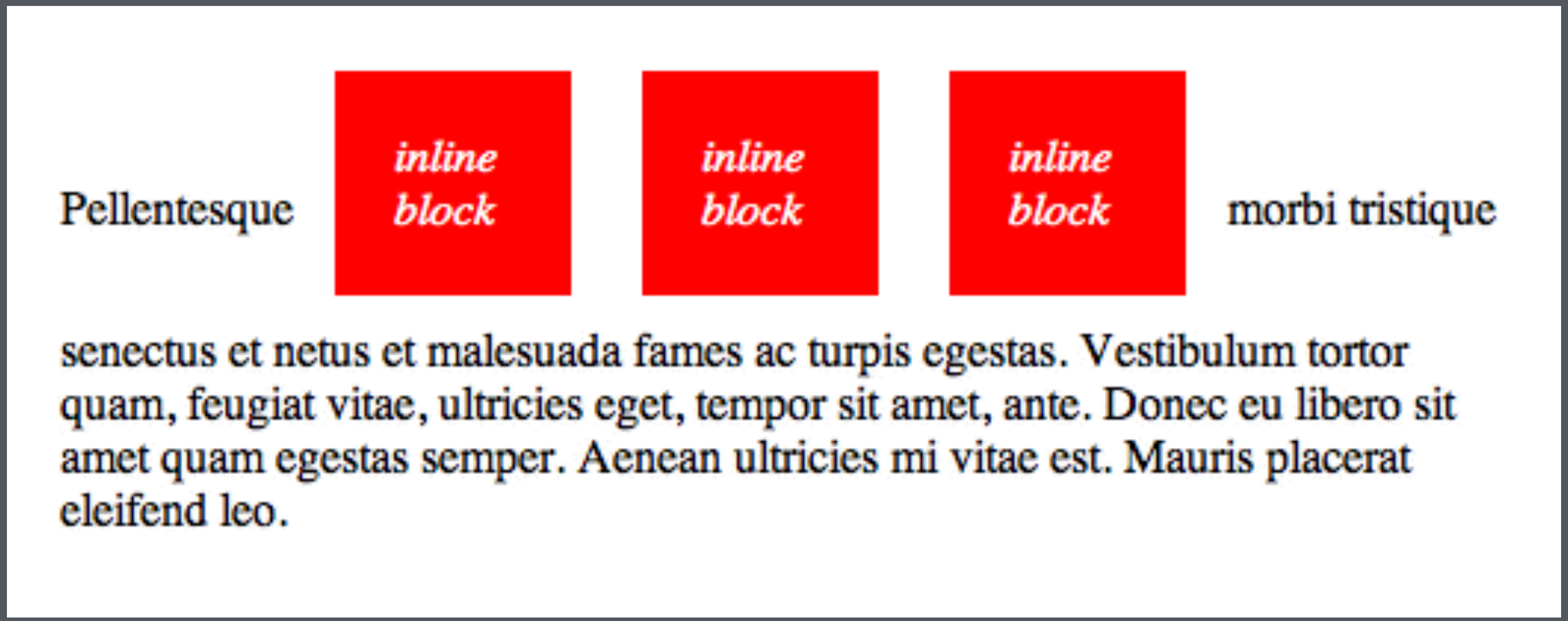
`display: inline;` - element takes up only as much width as it needs, `padding / margins` only work left + right, not top and bottom. Top and bottom spacing is controlled by `line-height` property because the content is in line.




images courtesy of css-tricks.com

# POSITIONING ELEMENTS

`display: inline-block;` - combination of the two concepts. The item(s) will display inline with other items but you can use all margin, padding, height and width properties on an inline-block.




images courtesy of css-tricks.com

# POSITIONING ELEMENTS

`display: none;` - nothing shows up at all. It's in the DOM the browser sees but the user won't see it. Seems useless now but just wait till we hit Javascript. You're going to love display none.

When building

# LAYOUTS

Every Container Should Be A

# BLOCK

# CSS SIZING

# UNITS

-You get five options because the internet gods love you that much:

```
px (pixels)
% (percentage)
em (literally Ms)
rem (relative Ms)
vh/vw (viewport height / viewport width)
```

-Concentrate on pixels and percentages to understand box models and layouts at a basic level

# PIXELS

-Pixels are very straightforward. Your screen width is measured in pixels so a pixel unit is that part of your screen.

```
/* Moves aside element 15 pixels left */
aside {
  margin-left: 15px;
}
```

-Problem: screens are often different sizes and pixel densities, what would you do here?

# PERCENTAGES

-Percentages help fix this. Your screen width is always 100%, so now we don't have to worry about the actual pixel size of the screen.

```
/* Makes container 25% of screen width */
.homepage-content-container {
  width: 25%;
}
```

-NOTE: Percentages are RELATIVE to their containers. If parent HTML element is 50% of page width and child HTML element is set to 50%, the child will be 25% of page width.

# USAGE TIPS

-Percentages typically work well for layout, things like `margin, padding and width.`

-Pixels typically work better for style needs, like `font-size` on `h1, h2, p, etc.` `em/rem` sometimes work even better but don't go there just yet.

-You can use combinations of sizing units within the same selector, but doing the math on that is very difficult.

When building

# LAYOUTS

Every Container Sizing Unit Should Be in

# PERCENTAGES

# LET'S DO A CODE ALONG

# FLOATS
# LAYOUTS

# FLOATS

-Floating block level elements is a way to compose layouts where the elements can sit side-by-side

# FLOATS

HTML:

```
<section class="container">
  <div class="element"></div>
  <div class="element"></div>
  <div class="element"></div>
  <div class="element"></div>
</section>
```

CSS:

```
.element {
  display: block;
  float: left;
  width: 25%;
}
```

# BONUS ROUND


You didn't win $25000 unfortunately, but with every `float: left;` declaration you get a `display: block;` for FREE

# FLOATS

HTML:

```
<section class="container">
  <div class="element"></div>
  <div class="element"></div>
  <div class="element"></div>
  <div class="element"></div>
</section>
```

CSS:

```
.element {
  float: left;
  width: 25%;
}
```

# NOT QUITE THAT EASY

If you want to start a new row, you need to use the clear property. It should be applied to the floated element's container, like this:

HTML:
```
<section class="container clearfix">
    <div class="element"></div>
    <div class="element"></div>
</section>
```

CSS:
```
.clearfix:after {
    clear: both;
    content: " ";
    display: block;
}
```

# USAGE TIPS

-When doing multi-column layouts, always float in ONE direction. Since English is a left > right language, I prefer `float: left;` so the containers line up left to right.

-Keep the box model simple when you are starting. Add in padding and border to layouts SLOWLY and test often to understand how it all comes together.

-Clear your floats to start a new row.

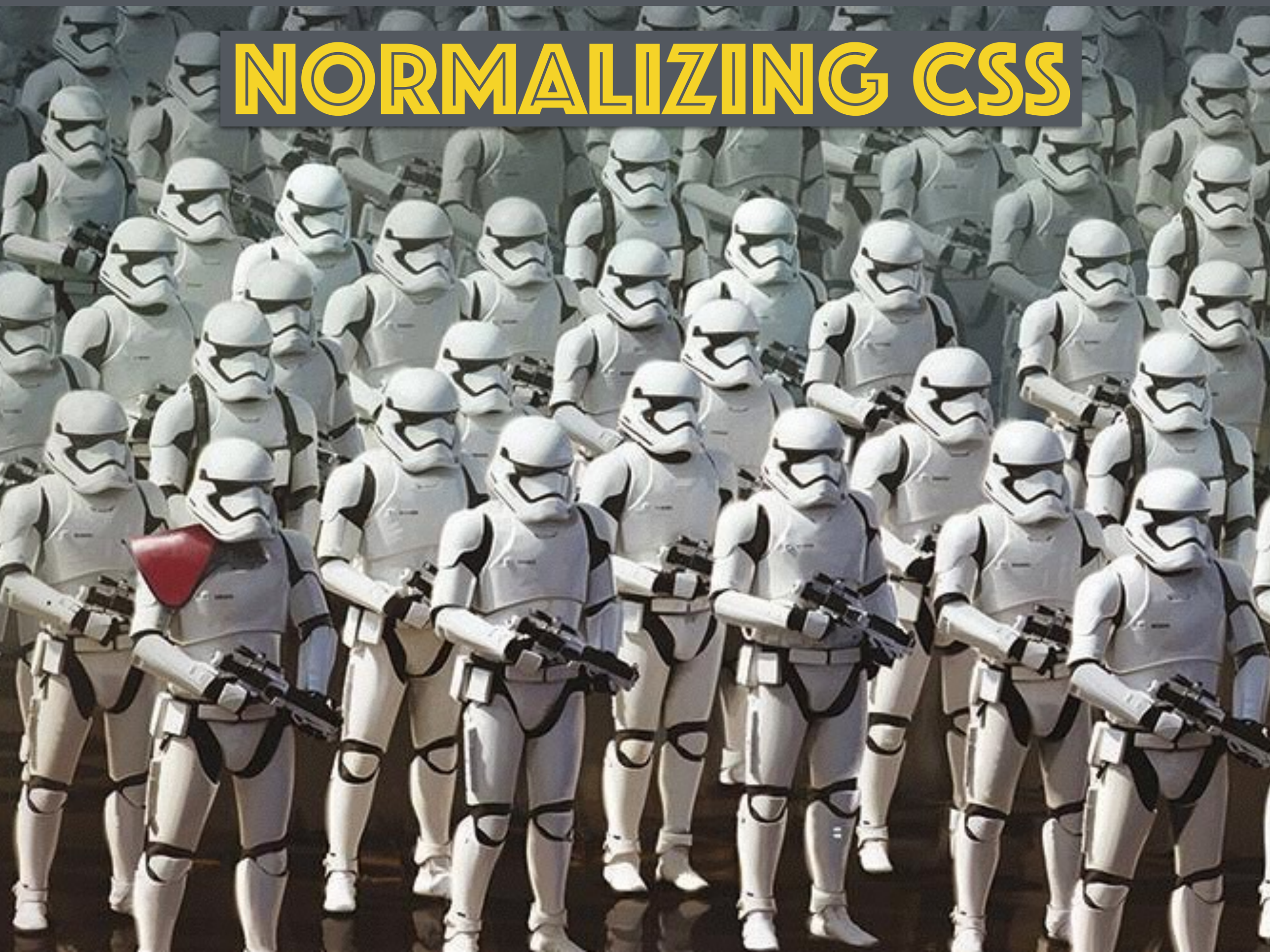
-When doing a layout with percentages, don't use margin left/right as they will complicate the math.

-Remember, widths are RELATIVE to containers.
50% of 50% is 25% not 50%!!!!

# TAKE A LOOK AT

# ASSIGNMENT 02

# NORMALIZING CSS



# NORMALIZING OUTPUT

- Browsers are all a little unique in how they render things

- Very smart people have compared and contrasted these very minor differences and fixed them for you - how nice.

-There are many of them but I'm going to make your life simple and joint point you to the best one:

Normalize.css: http://necolas.github.io/normalize.css/

# HOW TO USE NORMALIZE

```
<head>
  <title>Something Unique</title>
  <link rel="stylesheet" href="css/normalize.css">
  <link rel="stylesheet" href="css/main.css">
</head>
```

1) Download normalize
2) Place normalize CSS before your external CSS
3) Code away like normal

Let's check it out in action:
http://codepen.io/staypuftman/pen/VjPEpJ

# USE NORMALIZE ON THIS WEEKS HW

# FOR NEXT TIME

HW Assignment for Week 2 Due Monday Night

Layout Lab

JS is coming...prepare yourself