

HTML



CSS



HTML & CSS: LEVEL 1

Instructor: Beck Johnson

Week 4



SESSION OVERVIEW

- Review box model of CSS, classes and ids
- Floats and positioning
- Using web fonts



REVIEW!

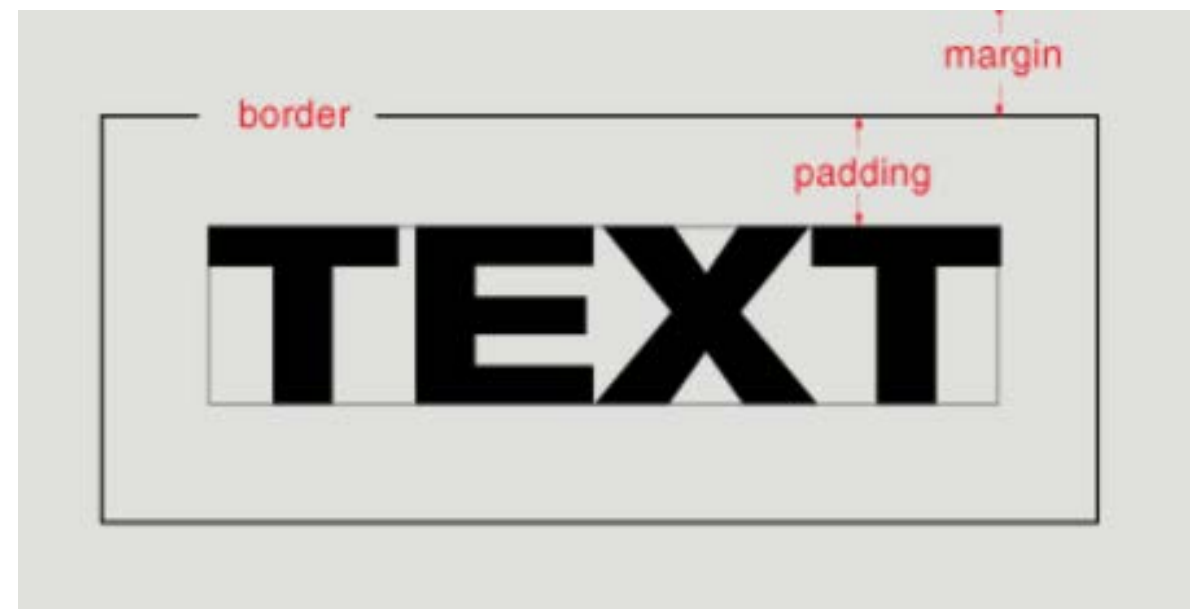
{ CSS BOX MODEL

CONTENT: stuff in the box

PADDING: bubble wrap and packing peanuts

BORDER: sides of the box

MARGIN: space between multiple boxes



{ PADDING

- Padding creates space **inside** an element
- Padding affects how far content is from the border

Padding is the space inside the border, between the border and the actual image or text.

{ MARGIN

- Margin creates space **outside** an element.
- Margin affects how far elements are from each other

Margin is the space between one object and its surrounding elements.

{ BORDER

Between margin and padding, you can set a **border**

- Width (usually in pixels)
- Border style (solid, dotted, dashed, etc)
- Color

p

border: 2px dotted #ff0000;

}

{ BORDER-RADIUS

To make an element appear curved, use the property **border-radius**

- The value is a number (in px or em) or percentage
- You can use **border-radius** even if you don't explicitly set a **border**

```
li {  
    border-radius: 50%;  
    height: 3em;  
    width: 3em;  
}
```



{ BLOCK ELEMENTS

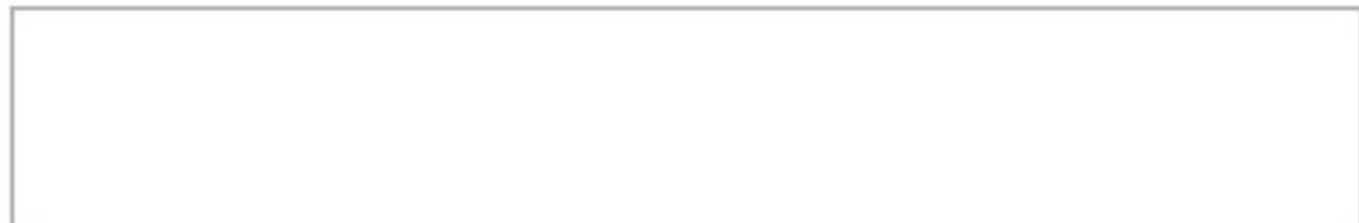
BLOCK ELEMENTS

- Expand naturally to fill their parent container
- Can have margin and/or padding

BLOCK ELEMENTS EXPAND NATURALLY



AND NATURALLY DROP BELOW OTHER ELEMENTS



{ INLINE ELEMENTS

INLINE ELEMENTS

- Flow along with text content
- Ignores height, width, top margin, and bottom margin
- Honors left and right margins (and any padding)

INLINE ELEMENTS FLOW WITH TEXT

PELLENTESSQUE HABITANT MORBI TRISTIQUE SENECTUS
ET NETUS ET MALESUADA FAMES AC TURPIS EGESTAS.
VESTIBULUM **INLINE ELEMENT** VITAE, ULTRICIES
EGET, TEMPOR SIT AMET, ANTE. DONEC EU LIBERO SIT
AMET QUAM EGESTAS SEMPER. AENEAN ULTRICIES MI
VITAE EST. MAURIS PLACERAT ELEIFEND LEO.

{ INLINE-BLOCK ELEMENTS

INLINE-BLOCK ELEMENTS

- A hybrid of block and inline
- Flow along with text content
- Has height, width, margin, and padding

Pellentesque *inline
block* *inline
block* *inline
block* morbi tristique

senectus et netus et malesuada fames ac turpis egestas. Vestibulum tortor
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amet quam egestas semper. Aenean ultricies mi vitae est. Mauris placerat
eleifend leo.

{ CLASSES AND IDS

You can add **class** and **id** to any HTML element to identify it for styling.

- You decide the **class** and **id** values – be descriptive!

```
<p class="important">Big text</p>
```

```
<p class="anyLettersOrNumbersOr_Or-">Still  
totally valid</p>
```

{ CLASSES

Multiple elements can have the same **class**

In CSS, target a class with a **period**

```
.kittens { color: gray; }
```

```
<p class="kittens">This will be gray.</p>
```

`{ }` IDS

Only **one** element per page can use the same **id**

In CSS, target an id with a **hash**:

```
#kittenContainer { color: gray; }
```

```
<div id="kittenContainer">This will be  
gray.</div>
```

{ HOW TO CHOOSE BETWEEN THEM

If you think it's likely or possible that you'll want to apply the same style to multiple things, definitely use `class`

If your element is guaranteed to be the only one on the page, you can use `id` – or you can still use `class`

If your element needs to be linked to directly, use `id`

QUESTIONS?



WEB LAYOUTS

WEB LAYOUTS

With CSS, we can use a variety of properties to arrange elements on the screen by adjusting the flow of the page.

Basically, you can put elements anywhere...which can be both a good and a bad thing!

3 WEB LAYOUT PROPERTIES

- **display:** dictates how elements behave within the box model
- **float:** moves elements around within the page flow
- **position:** takes elements entirely out of the page flow

DISPLAY PROPERTY

The `display` property tells the browser what type of box model to use:

- `inline`
- `inline-block`
- `block`

This changes how padding, margin, height and width affect an element.

You also can set `display: none` to hide an element entirely.

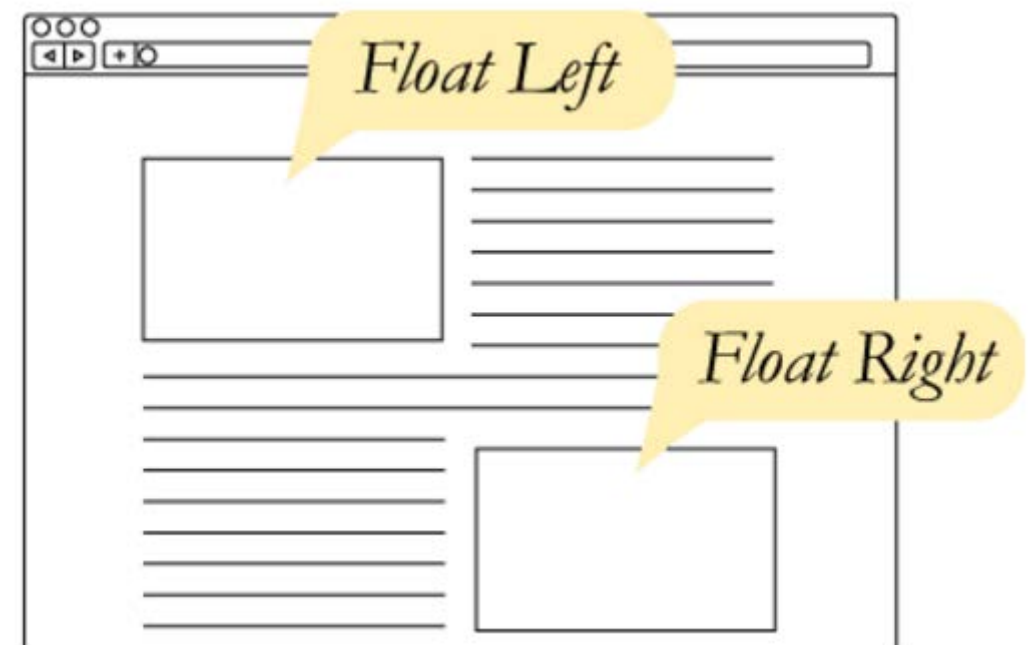
CSS FLOATS

Up to now, elements have displayed sequentially, in the order that you placed them in your HTML.

The **float** property takes an element out of the normal flow and “floats” it to the left or right side of its container.

- This allows other content to flow around it

```
img { float: left; }
```



CSS FLOATS

The three values for `float` are:

- `left`
- `right`
- `none`

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By default, elements are
`float: none`

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CSS FLOATS

```
img { float: right; }
```

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CSS FLOATS

```
img { float: left; }
```

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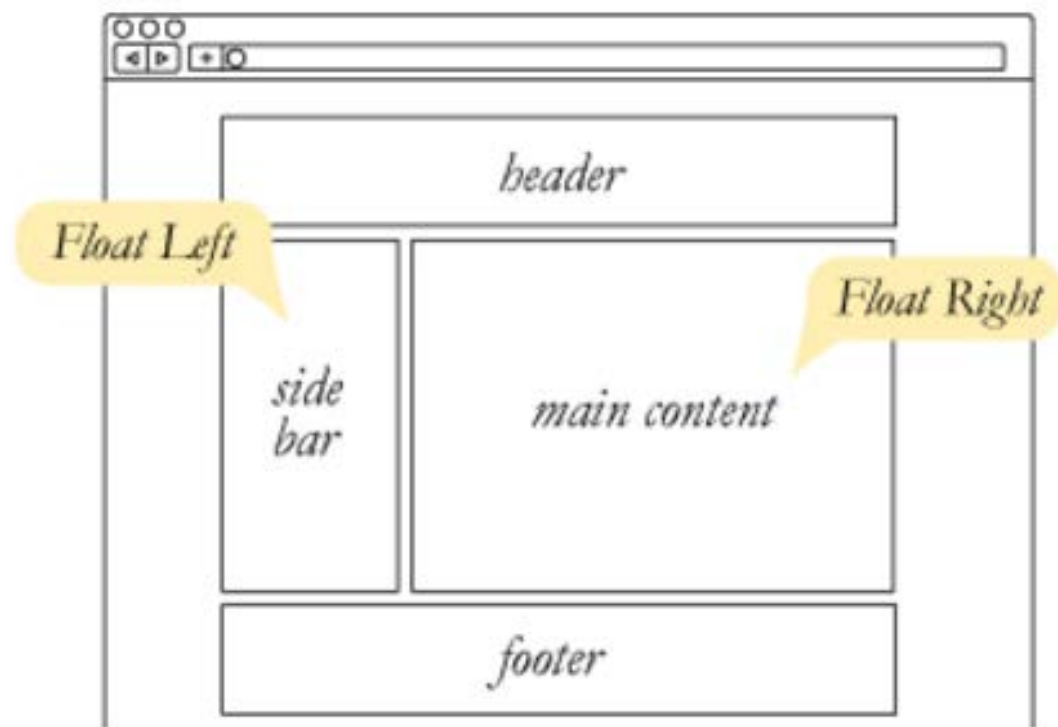
Doloribus nisi ratione necessitatibus unde veritatis commodi veniam quas eaque fugiat nihil esse, id? Tempora quis quod impedit quia, facere incidunt, voluptatum dicta in dolores suscipit temporibus quam eos odit?

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CSS FLOATS

float can be used to float text around images, but it also can be used to create entire page layouts.



CSS FLOATS

For example, this layout was built using **float**.
How do you think it was done?



BY BECK JOHNSON

Beck Johnson is a developer based in Seattle, WA. She plays board games in her spare time. Say hi at beckjohnson@gmail.com

CSS FLOATS



```
.avatar { float: left; }      .bio { float: right; }
```

Let's try that...

CSS FLOATS



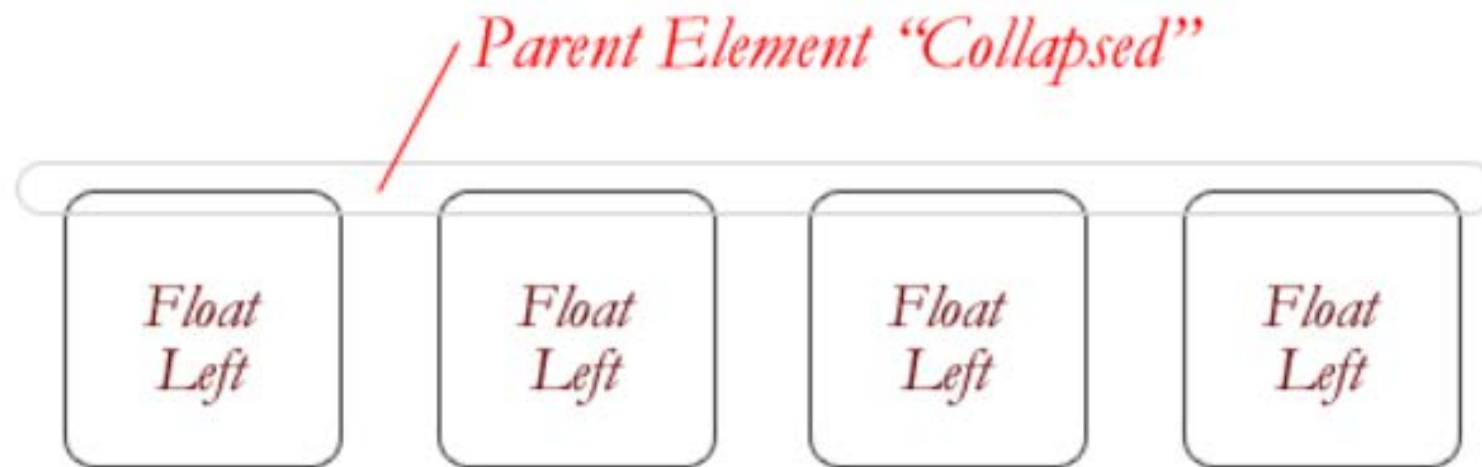
BY BECK JOHNSON

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The container thinks it has no content!

- It collapsed to the size of its padding (you can see the top and bottom **border**)
- The floated content is spilling out

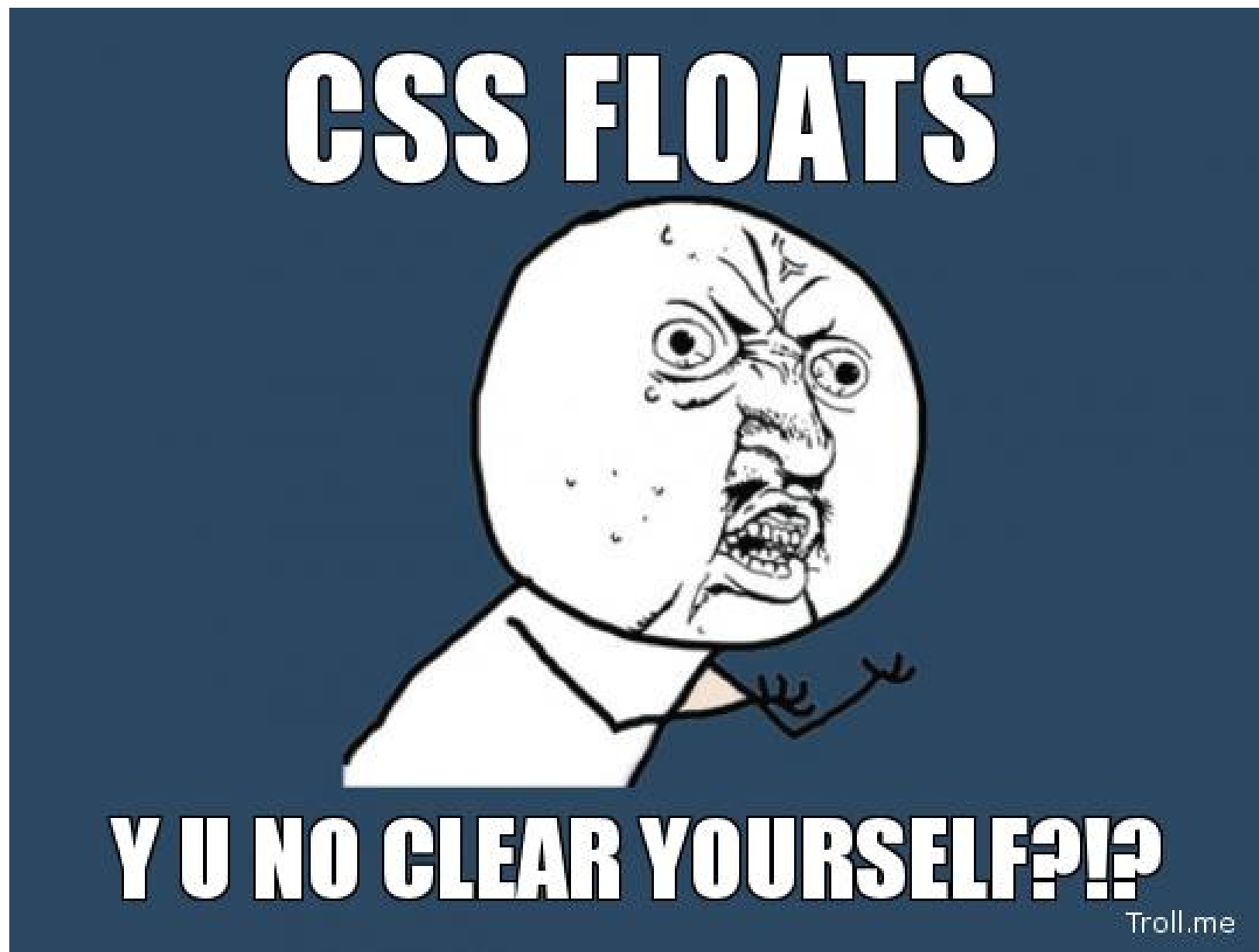
CSS FLOATS



If you float an element, it is no longer in the normal document flow.

If all elements in a container are floated, that means that the container is effectively “empty.”

HOW TO FIX FLOATS?



HOW TO FIX FLOATS?

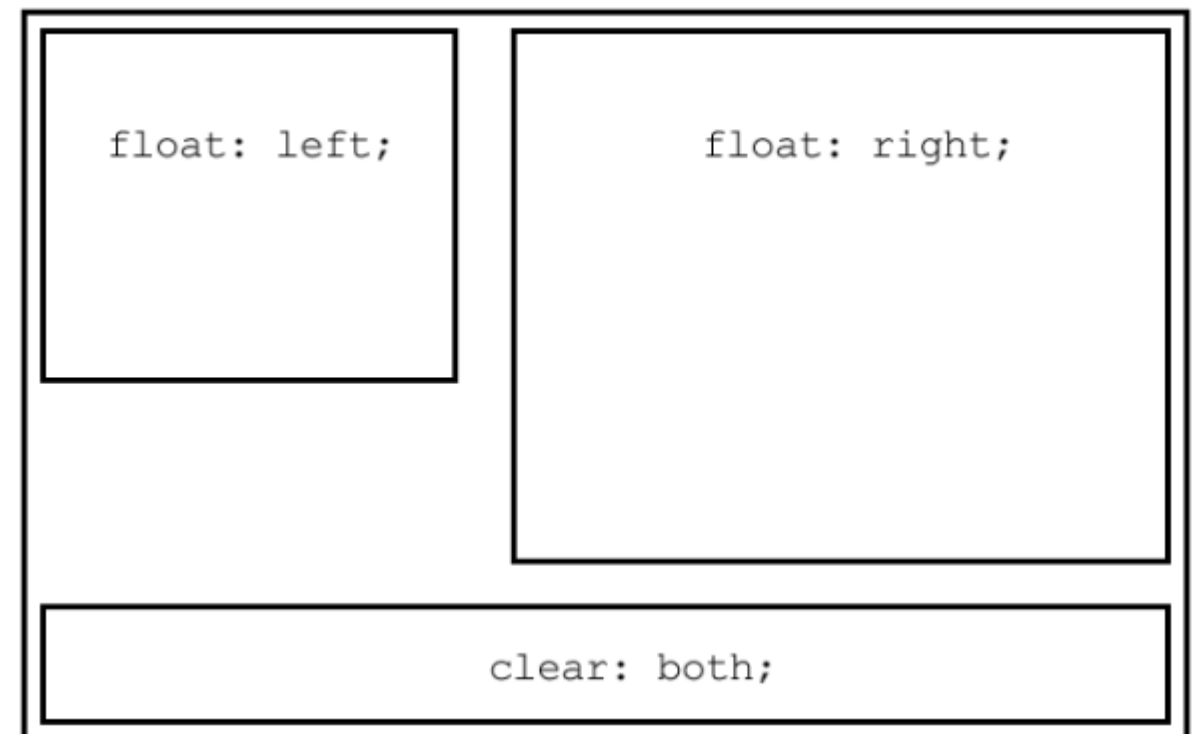
There are 2 ways to fix this:

1. Apply the CSS rule `clear: both` to an element **after** the floated content
2. Apply a CSS rule using the property `overflow` to the **container**

THE CLEAR PROPERTY

The **clear** property is the sister property to **float**

- It doesn't do much until there are floated elements on the page
- An element with **clear** applied to it will force itself **below** the floated element
- Everything after that will be back in the normal flow
- This “stretches” out the container and keeps it from collapsing



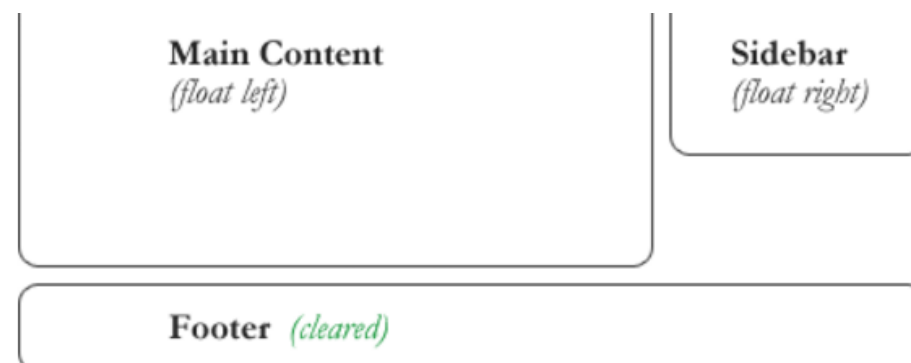
THE CLEAR PROPERTY

clear has similar values to **float**:

- **clear: none** – the element does **not** move down to clear past floating elements (this is the default value)



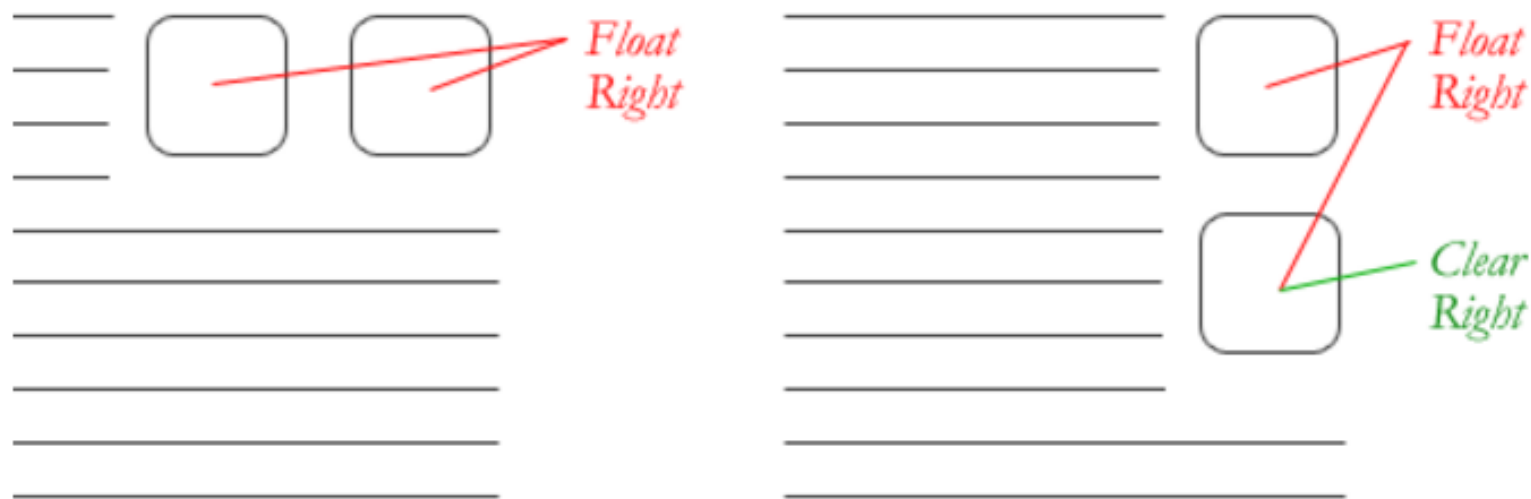
- **clear: both** – the element is moved down to clear **both** right- and left-floated elements



THE CLEAR PROPERTY

Sometimes, you want to let some content after a **clear** continue floating, but not other content:

- **clear: left** – only clear **left-floated** elements
- **clear: right** – only clear **right-floated** elements



THE CLEAR PROPERTY

So to solve our problem, you could add this empty `div` after the bio container:



BY BECK JOHNSON

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```
<div style="clear: both"></div>
```

(We could apply the class to any type of element, but the benefit of using a `div` is that it has no style of its own.)

THE MAGIC FLOAT FIX

The preferred solution is to use a class that automatically clears itself.

- Apply a class to the parent container called `clearfix`
- Create a CSS rule for `clearfix` class using the **pseudo-element** `:after`

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

THE MAGIC FLOAT FIX

The **pseudo-element** `:after` inserts a tiny bit of content (specified by the `content` property) after the parent element

- In this case, the content is empty (`""`), but it's sufficient to trigger the `clear: both` rule

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

THE OVERFLOW PROPERTY

The other way to force a container to expand around floated content is to apply a CSS rule with **overflow** to the container that the floated content is inside.

Any valid value for **overflow** will cause floated content to stretch out the container

- Too complicated to explain, but it basically forces the container to re-assess the content inside it

THE OVERFLOW PROPERTY

overflow is a CSS property that governs how content looks when it breaks out of its container.

By default, elements have **overflow: visible**, which means all content is fully visible

- Even if that means overflowing its container!



THE OVERFLOW PROPERTY

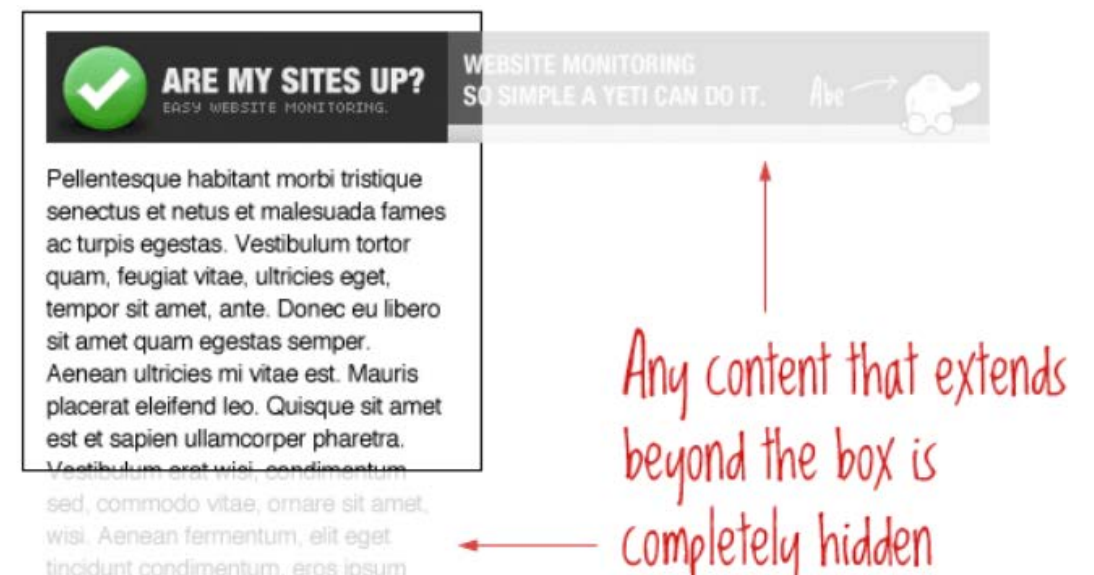
overflow: scroll makes scrollbars appear both horizontally and vertically...even if they don't need to be there.

- None of the content that would overflow appears outside the box



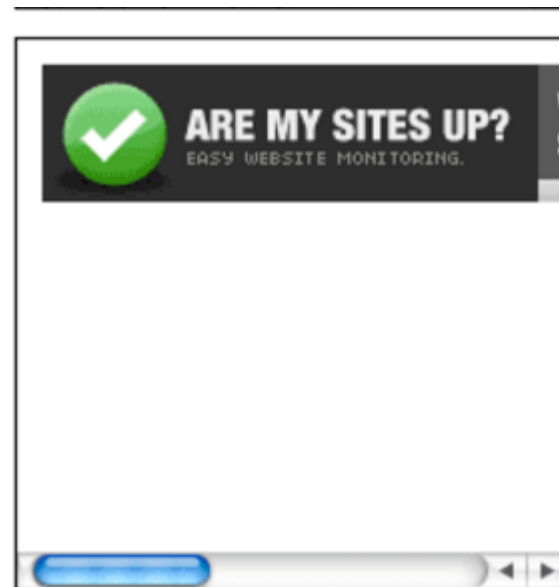
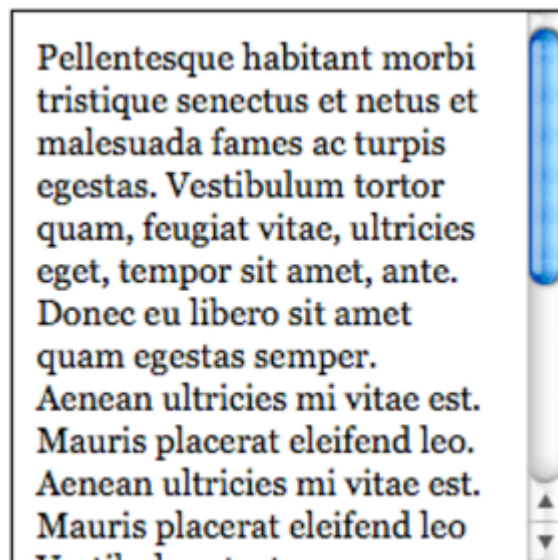
overflow: hidden cuts off any content that “sticks out” of its box

- No way to scroll, so content is no longer accessible



THE OVERFLOW PROPERTY

overflow: **auto** only adds scrollbars when the content requires it (which may mean no scrollbars are added at all)





PRACTICE TIME!

ASSIGNMENT

Create a container that has an image floated to the side of some text.

- Give the container a background color, gradient, or borders (to make sure floated content is really clearing properly)
- Try both techniques to force the container to expand around floated content
 - What happens when you use different **overflow** options?
- Apply box model properties like padding and margin so that your content looks nice



CSS POSITIONING

CSS POSITIONING

The `position` property specifies how an element is positioned on the page. Possible values are:

- `relative`
- `absolute`
- `fixed`
- `static`

The default `position` is `static`, which just means that the element obeys whatever its box model rules tell it to do.

CSS POSITIONING

`position: absolute` is a powerful tool that allows you to place any page element exactly where you want it, down to the pixel.

When an element has `position: absolute`, it is entirely removed from the normal flow of the page.

- That means its padding, margins, and borders no longer affect the elements around it

CSS POSITIONING

We can dictate where elements go on the page down to the pixel!

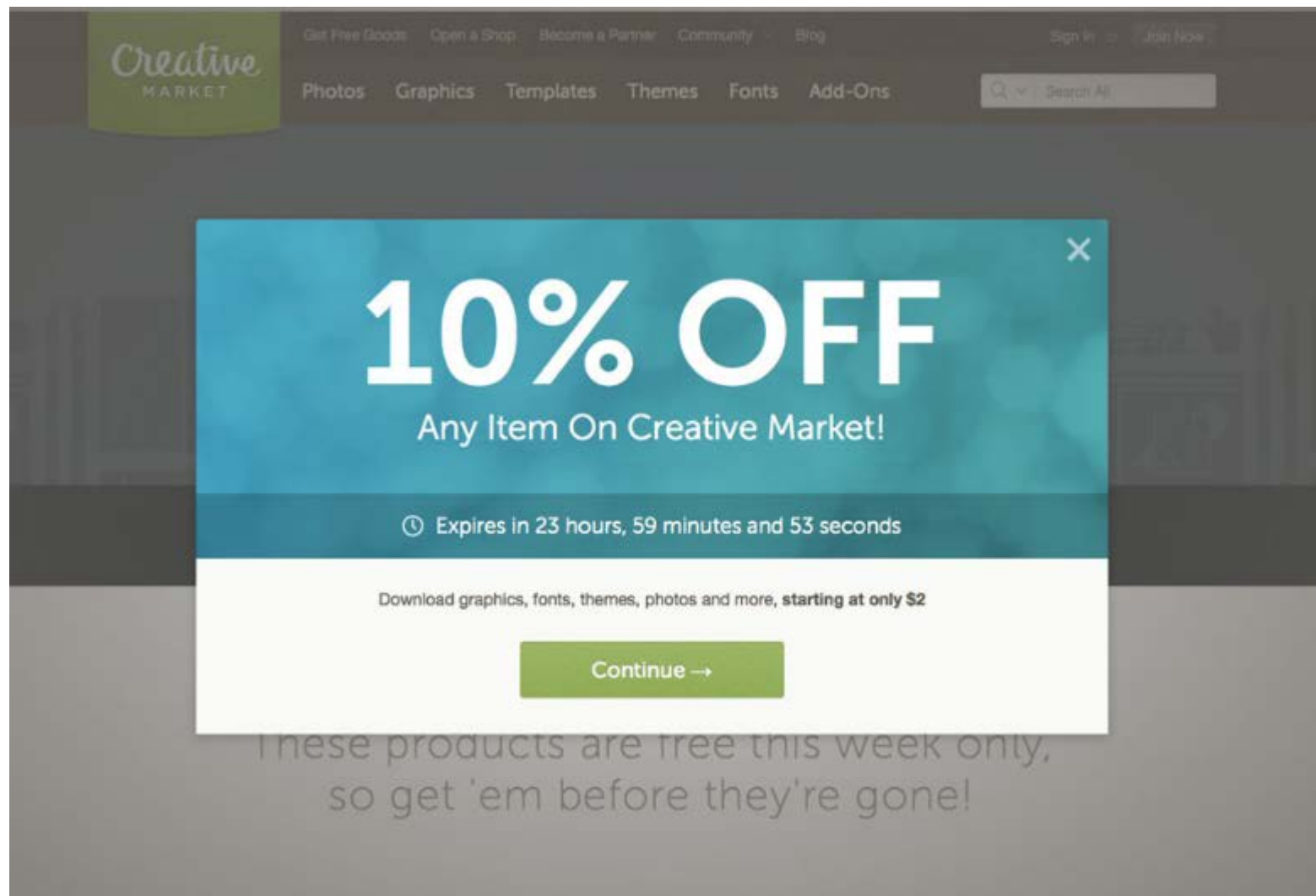
left, right, top, bottom

Can tweak positively or negatively

```
nav {  
    position: absolute;  
    right: -10px;  
    top: 30px;  
}
```

ABSOLUTE POWER

position: **absolute** is commonly used when creating page modals that pop up over other content



POSITION: FIXED

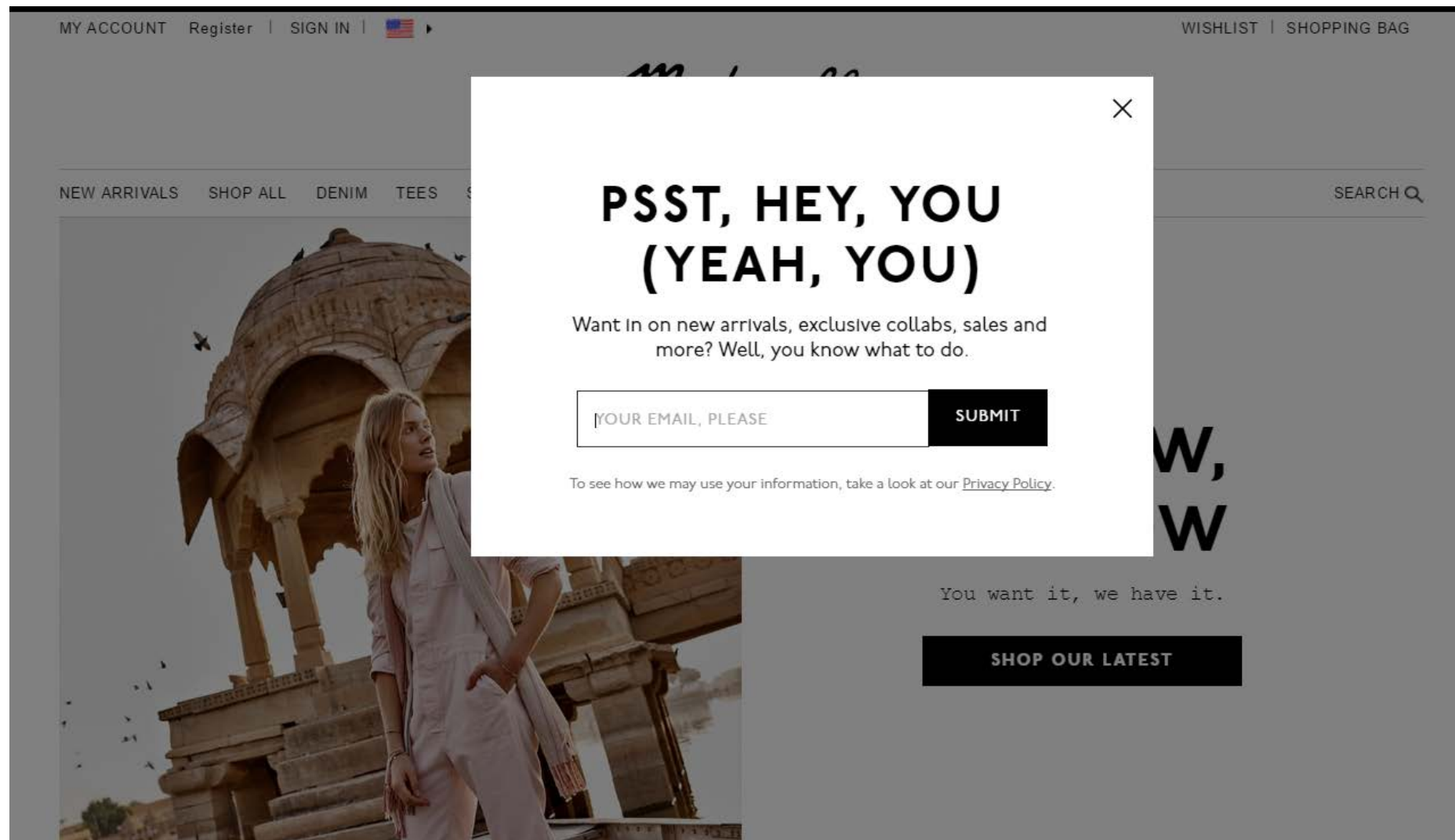
`position: fixed` makes content “stick” to the browser window, regardless of where the user scrolls.

Commonly used to make headers, navigation menus, or sidebars that follow the page as it scrolls.

```
nav {  
    position: fixed;  
    left: 0;  
    top: 0;  
}
```

ABSOLUTE POWER

This greyed-out background uses **position: fixed** to cover the entire page, even if they scroll





PRACTICE TIME!

ASSIGNMENT

Create a new page that has a modal popup covering the main content

WEB FONTS

WEB FONTS

Remember that `font-family` looks for a font installed on the user's local machine.

```
body { font-family: Tahoma, sans-serif; }
```

If the Tahoma font isn't found, the browser will default to a generic sans-serif font instead.

What if you want to use an interesting font that most people aren't likely to have installed?

WEB FONTS

The absolutely easiest way to get custom fonts is to link to a Google font stylesheet in the head of your page:

```
<link href="https://fonts.googleapis.com/css?family=Roboto"
rel="stylesheet">
```

Then just use the font by name in **font-family**, just like you would a web-safe font:

```
p { font-family: Roboto; }
```

WEB FONTS

Downsides:

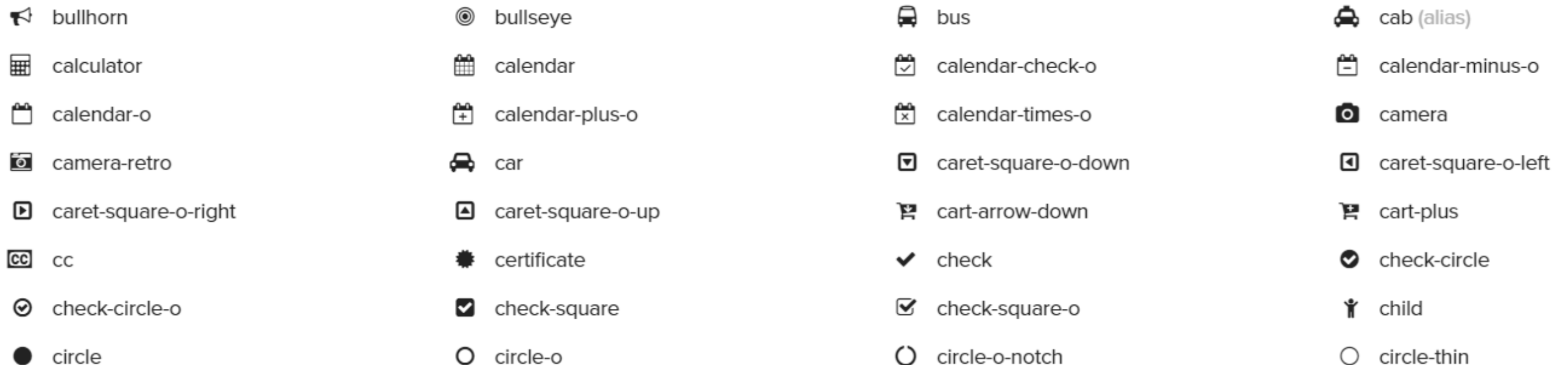
- Relies on a 3rd party to provide assets
- So if the request times out, the font won't download (so always provide fallbacks!)

Upsides:

- Extremely easy
- Possibility that user already has the font in their web cache due to visiting other sites that use the same font

ICON FONTS

Font Awesome is a free icon font that is used in real-world projects.



Characters are replaced with vector images

- So to color or re-size icons on your site, just use the CSS **font** properties we already learned.

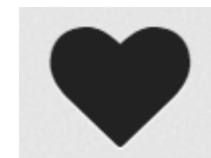
ICON FONTS

To quickly start using Font Awesome, add this stylesheet to the head of your page:

```
<link href="http://maxcdn.bootstrapcdn.com/font-awesome/latest/css/font-awesome.min.css" rel="stylesheet">
```

Click an icon from the Font Awesome list, and copy the markup:

```
<span class="fa fa-heart"></span>
```



WEB FONTS

The other way to ensure people see the correct font is to download the font onto their computer when they load your page.

- Have to consider licensing fees – most fonts cost money
- There are free fonts available for download at websites like Font Squirrel or Font Spring
- Some prohibit commercial use, or limit the number of pageviews



PRACTICE TIME!

ASSIGNMENT

Find a free font from Google fonts and use it on your site.

Include the Font Awesome stylesheet.

- Display at least two different icons
- Make them different sizes and/or colors
- Bonus points: what other CSS can you apply to the icons?
- Super bonus points: can you figure out how Font Awesome inserts an icon into the page?

“HOMEWORK”

- Practice!
- Optional: read chapters 15 and 17 of *HTML and CSS: Design and Build Websites*

