

HTML



CSS



HTML & CSS: FUNDAMENTALS OF DEVELOPMENT

Instructor: Beck Johnson

Week 5



SESSION OVERVIEW

- Review Week Four
- CSS positioning
- Responsive design
- Fun CSS tricks
- “The Grid”
- Evaluations



REVIEW!

{ 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**

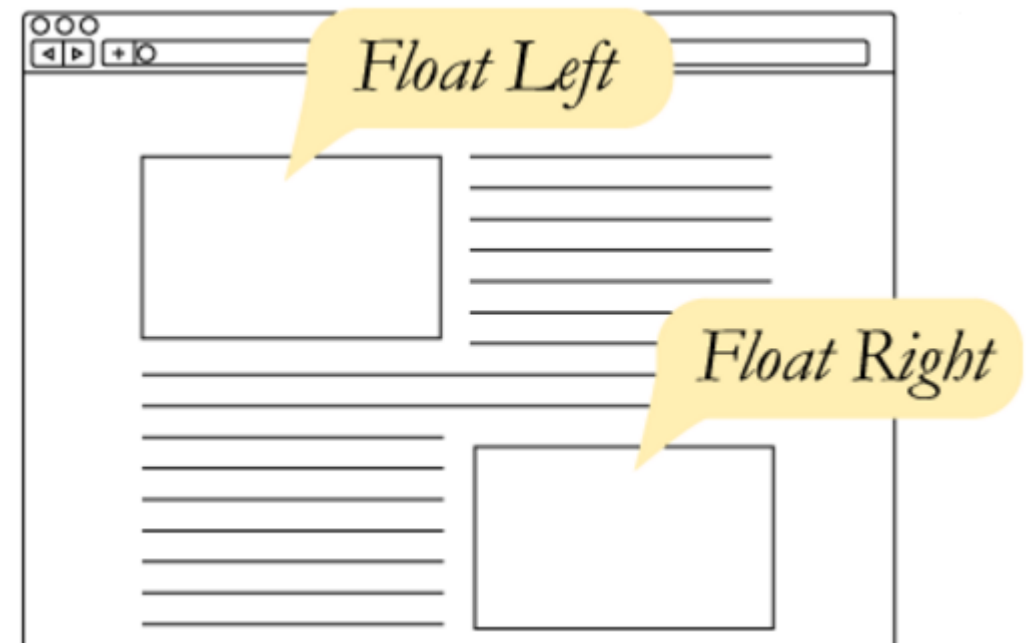
If your element needs to be linked to directly, use **id**

CSS FLOATS

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; }
```

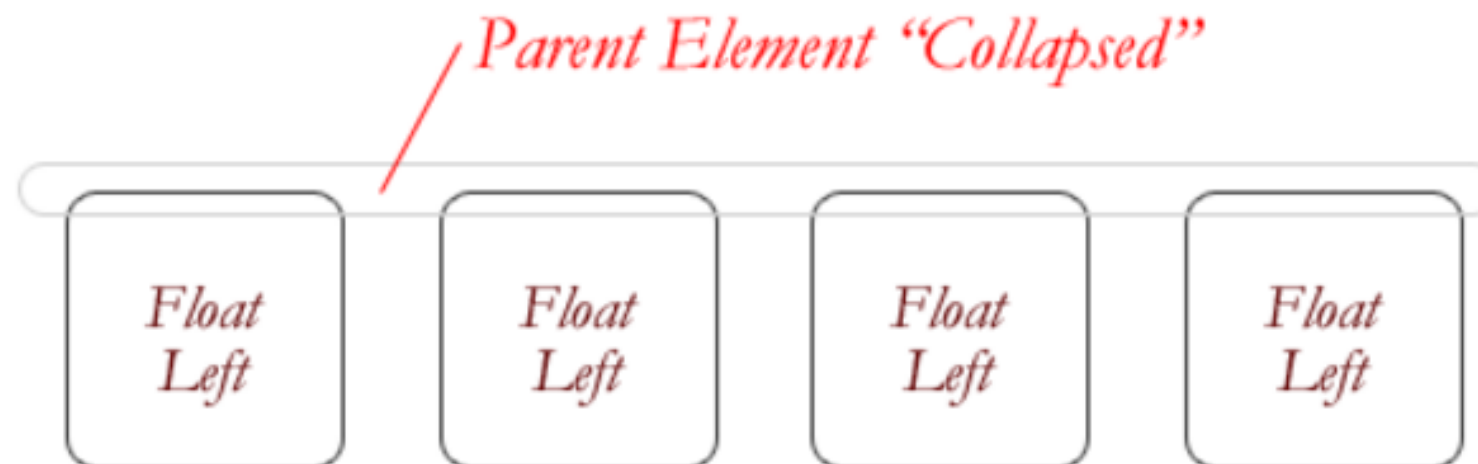


CSS FLOATS

The three values for `float` are:

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

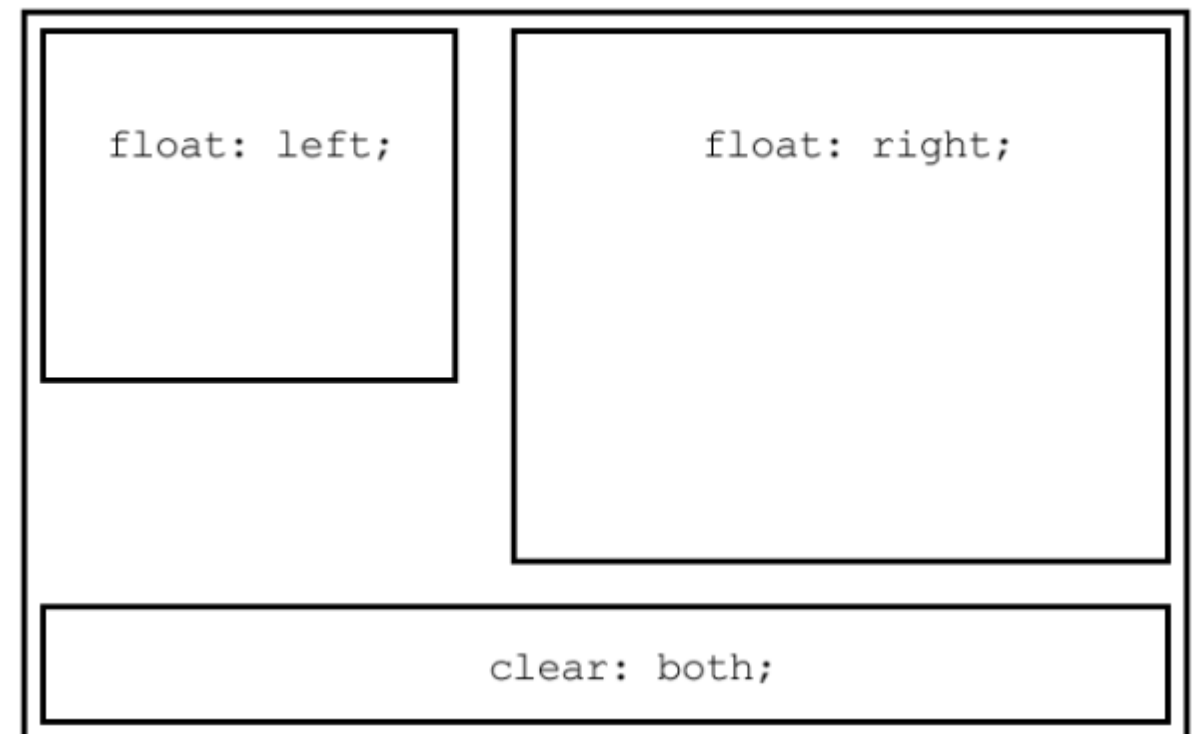
If everything in a container is floated, then the container thinks it's empty.



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 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.

overflow: auto adds scrollbars when the content is bigger than its container.



QUESTIONS?



CSS POSITIONING

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

CSS POSITIONING

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

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

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

CSS POSITIONING

There are 4 directional properties that affect positioning:

- `left`
- `right`
- `top`
- `bottom`

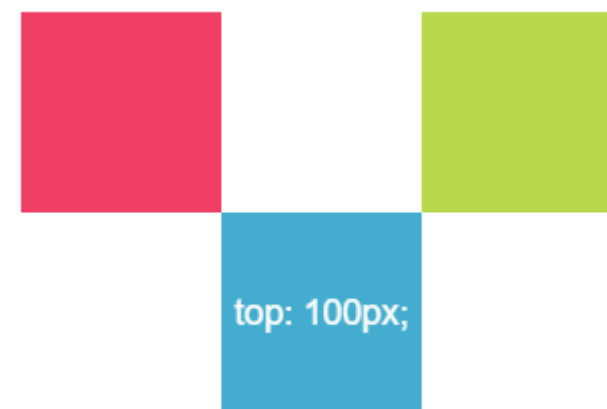
The value is a number (positive or negative) followed by a unit.

They define how far an element is offset that direction.

CSS POSITIONING

top defines how far an element is offset from its original top edge.

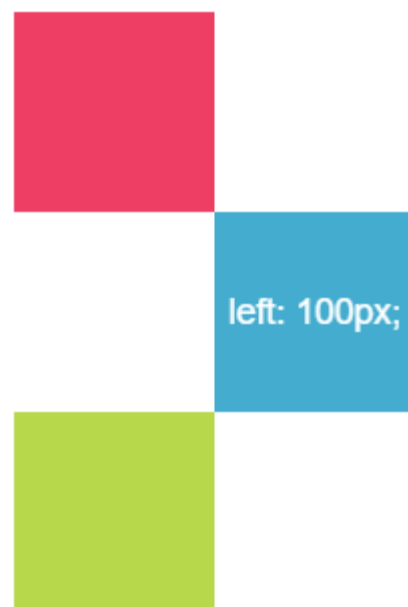
- Positive **top** values push an element **down**
- Negative **top** values push an element **up**



CSS POSITIONING

Similarly, **left** defines how far it's offset from its original left edge.

- Positive **left** values push an element **right**
- Negative **left** values push an element **left**



POSITION: FIXED

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

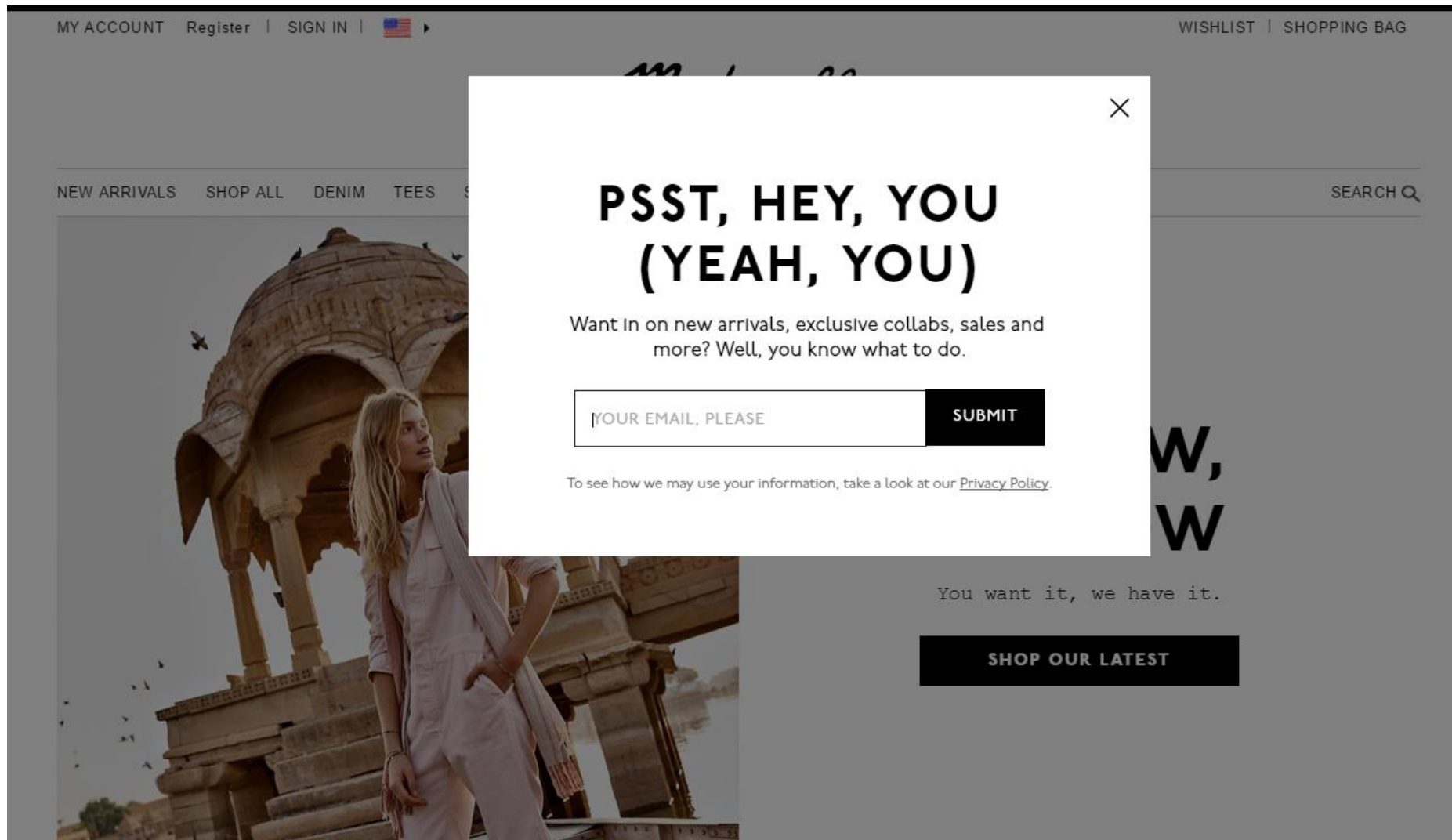
Commonly used to make headers, navigation menus, or sidebars that follow the page as it scrolls.

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

Hard to describe, see a [live demo](#)

FIXED

This popup background uses **position: fixed** to grey-out the entire page, even if the user scrolls.



ABSOLUTE

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

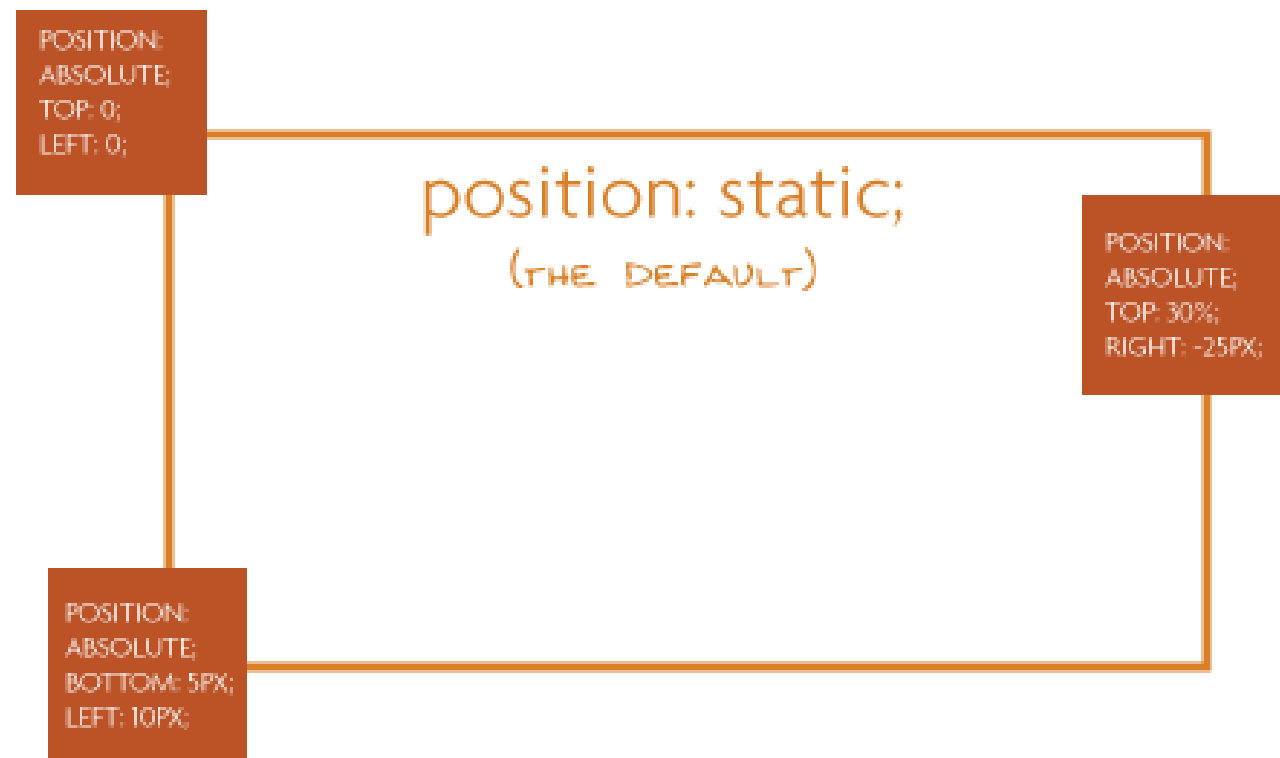
When an element has `position: absolute`, it is entirely removed from the normal flow of the page.

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

ABSOLUTE

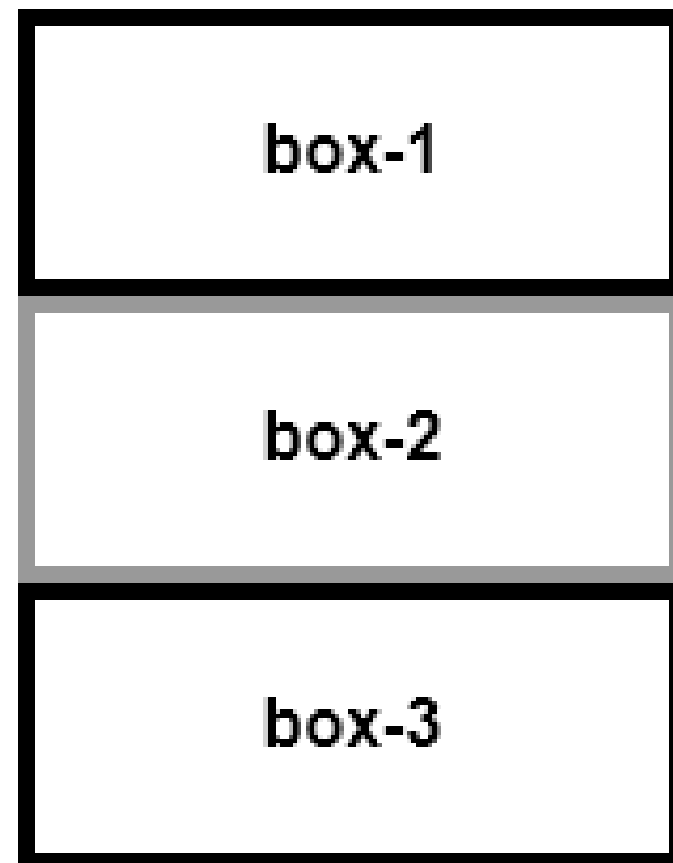
An element with **position: absolute** is absolutely positioned:

- To its closest parent with positioning
- Or if it has no parents with positioning (other than **static**), to the **body** of the page



DEFAULT POSITIONING

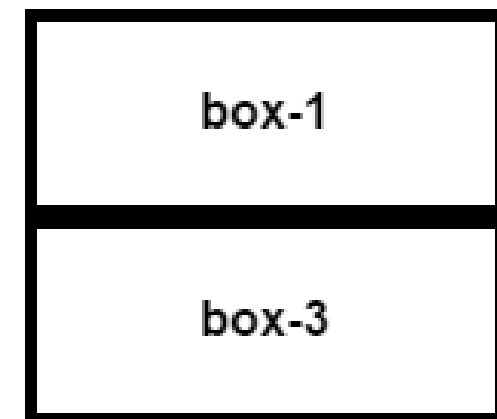
Remember that by default, block elements full up their entire row, and push any content to the next line, like this:



ABSOLUTE

If we give box-2 absolute positioning:

```
#box-2 {  
    position: absolute;  
    right: 0px;  
    bottom: 0px;  
}
```

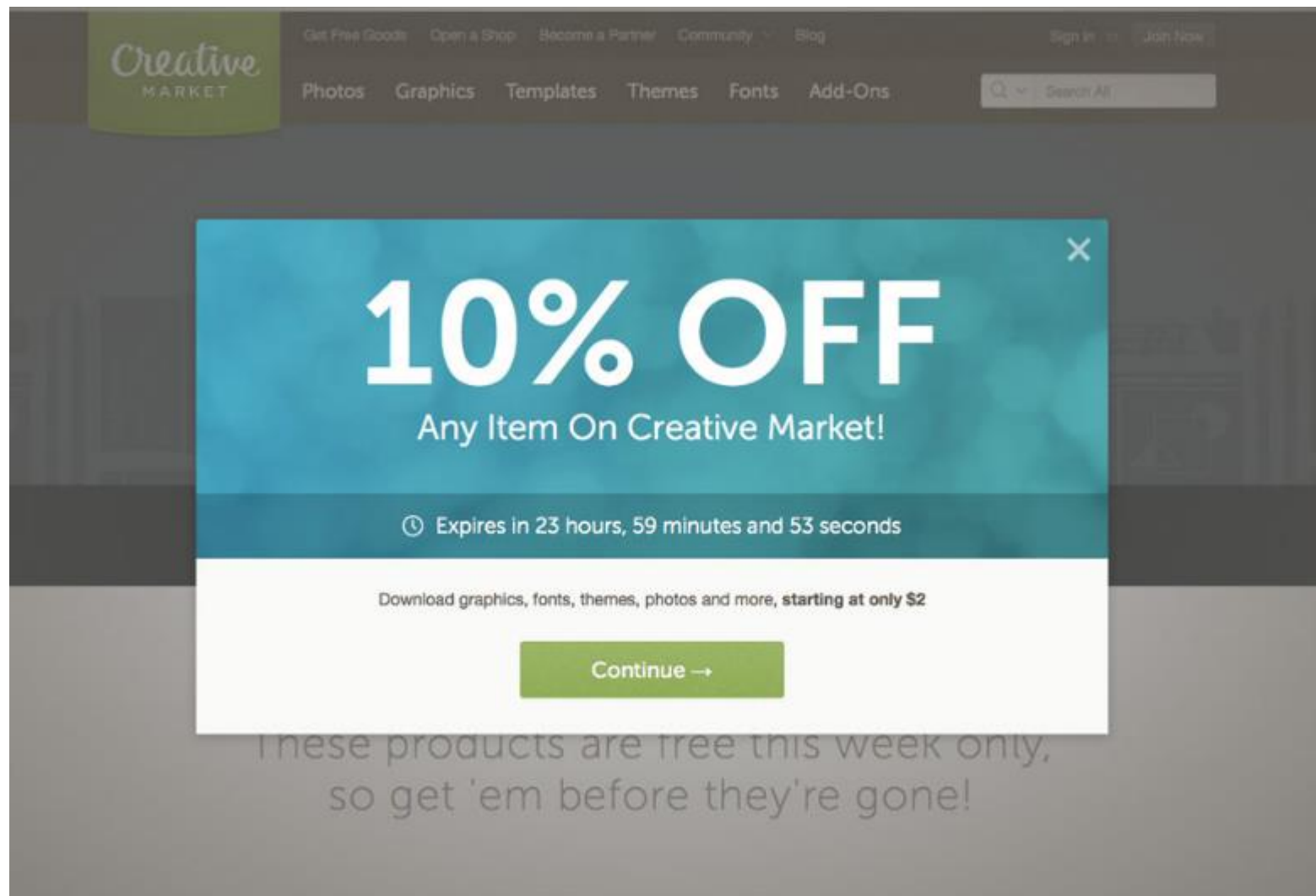


- **box-2** is moved to the bottom right of the page
- **box-3** moves up to occupy the space vacated by **box-2**



ABSOLUTE POWER

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



GET YOUR Z'S

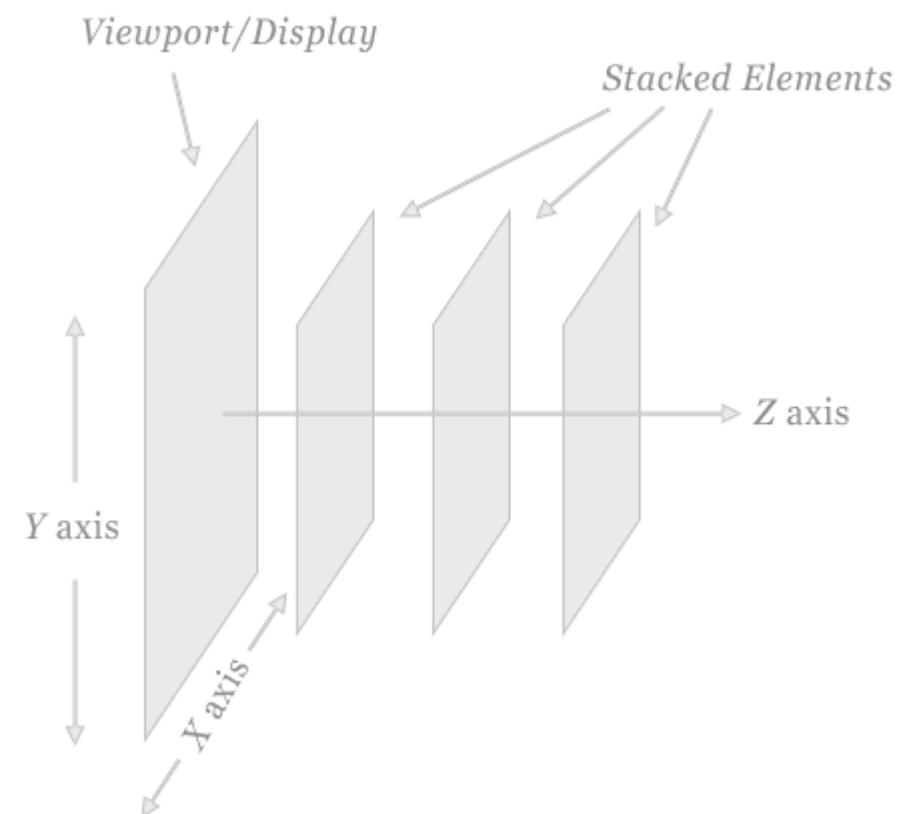
When you start changing how elements are positioned, you may need to specify which ones should be “on top”, if they begin to overlap.

- Elements with no **position** declared will appear under elements that have absolute, fixed, or relative positioning
- By default, the *last* item on the webpage will appear on top of earlier elements that have the same type of **position**

GET YOUR Z'S

The CSS property **z-index** can be applied to force an element with position on top of any other by giving it a *higher* number

- By default all elements have **z-index: 0**
- Can assign negative or positive values to **z-index**



RELATIVE

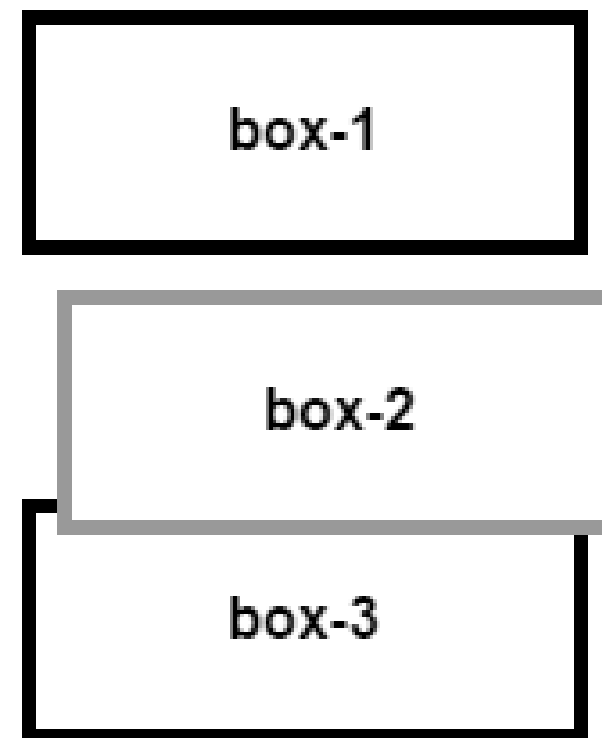
`position: relative` allows you to move an element using directional attributes (`top`, `bottom`, etc).

- If you set `position: relative` but no directional attributes, the element won't change at all
- If you set `top: 10px;` then it will be shifted 10 pixels down from where it would normally be

RELATIVE

box-2 has the following style, which moves it down and right:

```
#box-2 {  
    position: relative;  
    left: 10px;  
    top: 10px;  
}
```



The other boxes behave like **box-2** was in its original position (unlike using negative margins).

RELATIVE

More commonly, **position: relative** is used to position other absolutely-positioned elements inside the container





PRACTICE TIME!

ASSIGNMENT

Create a new page using this page as a template:

<http://kweeket.github.io/dev-101/demos/modal.html>

Write CSS so that the modal (the `div` with the class `modal`) appears over the boilerplate text

- Apply box model properties to the content until it looks nice

Recall that you target a class in CSS like this:

`.modal`

RESPONSIVE DESIGN

MOBILE FIRST

An important principle of responsive design is “Mobile First”

- Both design and code should default to mobile resolution, adding progressive enhancements as the screen gets larger
- One benefit of considering mobile first is that it trims down website content to its most vital elements
 - Mobile first = content first

RESPONSIVE != ADAPTIVE

Responsive design means that your design (and code) needs to function on a continuum of devices and screen sizes

- Although you should make care that things look great at specific “breakpoints” (640px wide for iPhone 4/5, 768px for iPad), it’s just as important to make sure things look good at *any* resolution
 - Users resize their browser windows
 - Technology changes

EXAMPLE — MOBILE


PROUDLY INTRODUCING OUR SHANGHAI STARBUCC...

Starbucks

Sign In

Q L

**STARBUCKS
for LIFE**



The most wonderful game of the year

Starbucks Rewards members can play to instantly win free drinks and food, or collect game pieces for the ultimate holiday prize – Starbucks for Life.

PLAY NOW

**STARBUCKS
REWARDS™**

Make every sip more rewarding

Join Starbucks Rewards™ to earn Gold level benefits like free drinks and food, get free refills, pay and order with your phone, and more.

JOIN NOW

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Starbucks

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**STARBUCKS
REWARDS™**

JOIN NOW

SIGN IN

EXAMPLE — DESKTOP

PROUDLY INTRODUCING OUR SHANGHAI STARBUCKS RESERVE™ ROASTERY. [Learn more »](#)

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STARBUCKS *for* LIFE

The most wonderful game of the year

Starbucks Rewards members can play to instantly win free drinks and food, or collect game pieces for the ultimate holiday prize – Starbucks for Life.

[PLAY NOW](#)

Make every sip more rewarding

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[JOIN NOW](#) [SIGN IN](#)

MEDIA QUERIES

Media queries are used to apply different CSS to different devices.

Some things you can use a media query to detect:

- The minimum or maximum screen height or width
- Whether the screen is rotated (in “landscape view”)
- If the page is being printed
- If the user is on a touch screen device
- The screen’s resolution

MEDIA QUERIES

Media queries have a different format than any other CSS we've seen so far

They always start with `@media` and have curly braces that contain all the CSS that applies to that media query rule

Multiple rules can be tested for, separated by `and`

```
@media (max-width: 480px) and (orientation: landscape) {  
}
```

MEDIA QUERIES

Most modern “mobile first” websites have CSS that apply to phone-sized screens first, then anything that is specific to bigger screens goes in media queries that test for a minimum screen width

```
@media (min-width: 768px) {  
}
```


MEDIA QUERIES

```
/* CSS that is used for phones, and also  
   applies generally  
*/  
  
@media (min-width: 768px) {  
    /* CSS that is different for tablets */  
}  
  
@media (min-width: 920px) {  
    /* CSS that is different for desktops */  
}
```



PRACTICE TIME!

ASSIGNMENT

Apply a media query to an element on your page so that it looks different when you resize your browser screen

Things to consider:

- Float a section right only in desktop
- Give buttons or links in navigation a bigger “click target” in mobile

FUN CSS TRICKS

ANIMATE

To allow elements on your page to animate using CSS, use the **transition** property

The value is which CSS properties to animate and how long the animation should occur

Separate those options with spaces, like this:

```
nav { transition: all 1s; }
```

This means, animate all CSS properties for 1 second.

FILTER

The **filter** property can be used to apply graphical effects similar to Photoshop filters on images, backgrounds, or borders.

Options include (but are not limited to) blur, grayscale, brightness, saturate, and sepia.

Its value is one of the above options, followed by parenthesis indicating how much to apply the effect, like this:

```
img { filter: grayscale(1); }
```

FILTER

Original image



filter: `grayscale(1);`

Converts the image to gray. 1 is fully gray, 0 is original. Any value between 0 and 1 is allowed



filter: `sepia(1);`

Converts the image to sepia. 1 is fully sepia, 0 is original. Any value between 0 and 1 is allowed



FILTER

filter: saturate(8);

Larger values are more saturated.
Anything under 1 will make the element less saturated than the original



filter: hue-rotate(90deg);

Must be an angle of rotation in degrees, that will affect how far around the color circle the input is adjusted



filter: invert(.8);

Must be a percentage. Flips RGB values by that amount



FILTER

filter: brightness(3);

Larger values are brighter. Anything under 1 will make the element darker



filter: contrast(4);

Larger values apply greater contrast. Anything under 1 will apply less contrast than the original



filter: blur(5px);

Applies a Gaussian blur. The px value is how many pixels will blend into each other



FILTER ON HOVER

Remember that you can give elements different styling when the user hovers on them using the CSS rule **:hover**

- A simple combination of **transition** and **filter** can provide neat effects when the user hovers or focuses on an element with no Javascript needed!

FILTER ON HOVER

```
img {  
  filter: grayscale(0);  
  transition : all 1s;  
}
```

```
img:hover {  
  filter: grayscale(1);  
}
```

Note that a `grayscale` of `0` (ie, none) is applied to the “normal” image. This allows the `transition` to run both when the user hovers *and* when they move their mouse away

TRANSFORMATION

The **transform** property lets you manipulate an element by skewing, rotating, moving, or scaling

Like **filter**, the value is the type of transformation you want to apply, with the degree of transformation in parenthesis

```
.bigger {  
  transform: scale(20);  
}
```

TRANSFORMATION

Potential uses:

- Flip an arrow when sorting or expanding a menu

```
.toggle {  
  transform: rotateZ(0deg);  
  transition: all .11s;  
}
```

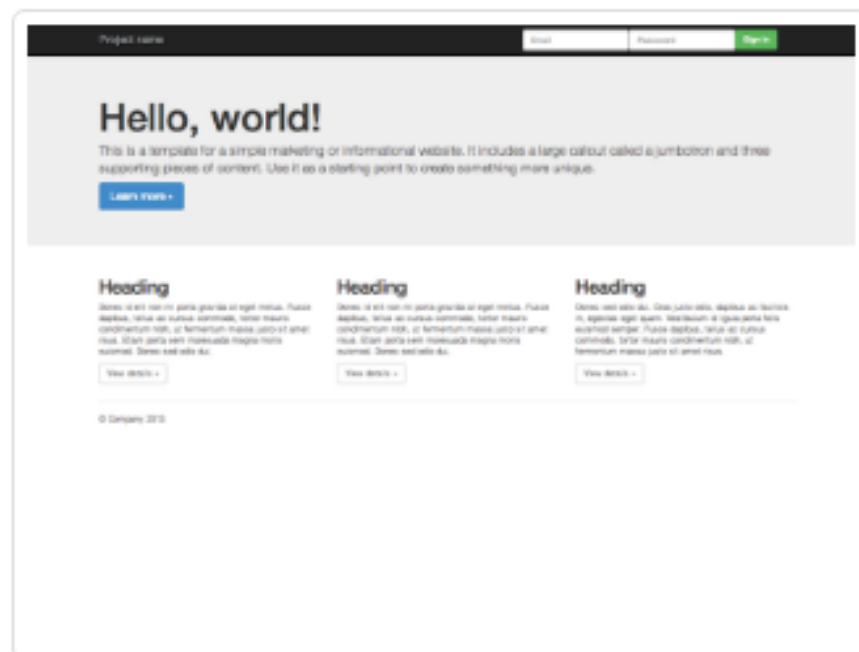
```
.toggle:hover {  
  transform: rotateZ(180deg);  
}
```

“THE GRID”

BOOTSTRAP

Bootstrap is a CSS library you can import into a project to quickly provide some base styles for your project.

<http://getbootstrap.com/getting-started/>



BOOTSTRAP

The main thing Bootstrap provides is a grid framework

THATS ALL FOLKS!

Please provide feedback for this class!

<http://svcseattle.com/evaluation>