

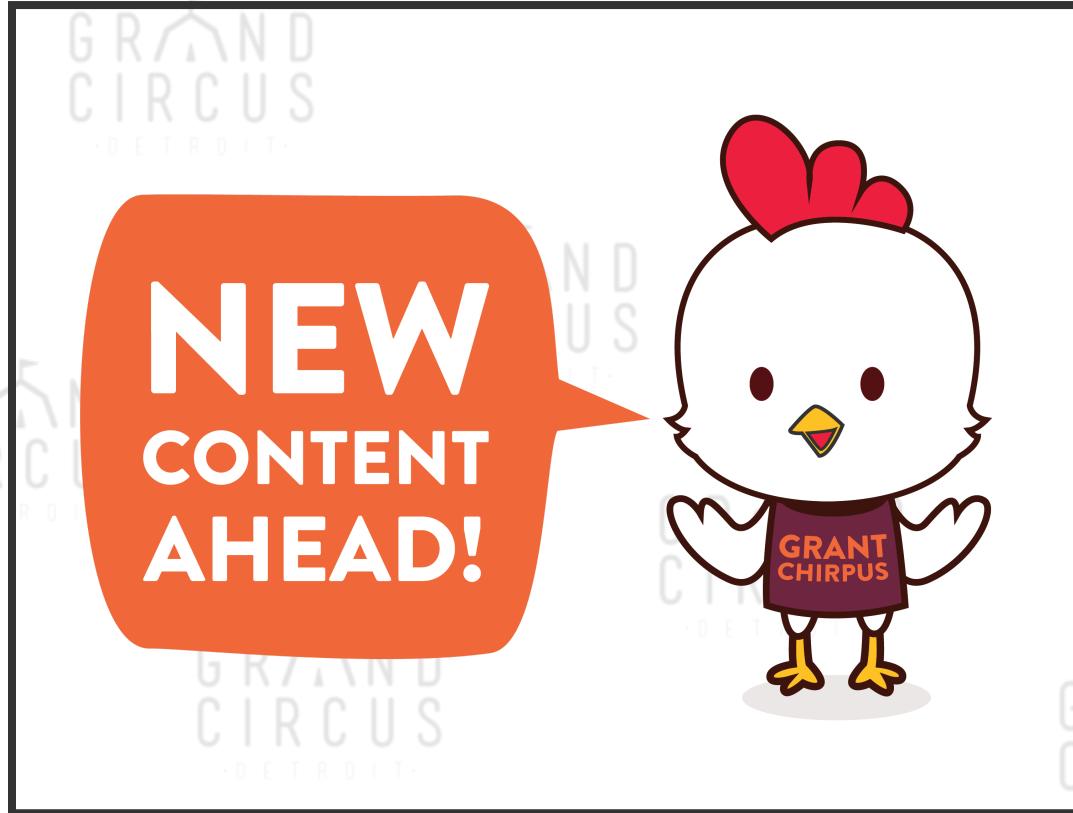
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- D E T R O I T -

GOALS FOR THIS UNIT

1. Review Yesterday's Lab
2. CSS Positioning
3. Inline vs Block Elements
4. HTML + CSS

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REVIEW

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CSS 101

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CSS POSITIONING

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BLOCK VS. INLINE ELEMENTS

BLOCK ELEMENTS

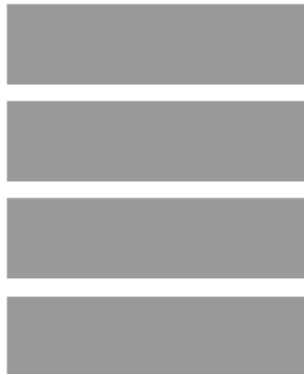
Block elements each appear on a new line of a web page, like paragraphs. Spatially, what is happening is that the block element takes up all of the horizontal space it can. It stretches to fill all the space to the left and right of the element within its parent container.

INLINE ELEMENTS

Inline elements are rendered without starting a new line. They appear side by side until reaching the edge of its parent container. Then it will start a new line.

BLOCK VS. INLINE ELEMENTS

BLOCK:



INLINE:



Demo

BLOCK VS. INLINE ELEMENTS

- *Inline element:* `<a> `
- *Block element:* `<div> <p> <table>`

...and just about everything else.

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THE BOX MODEL

THE BOX MODEL

Every HTML element is in a box, regardless of its visible shape.

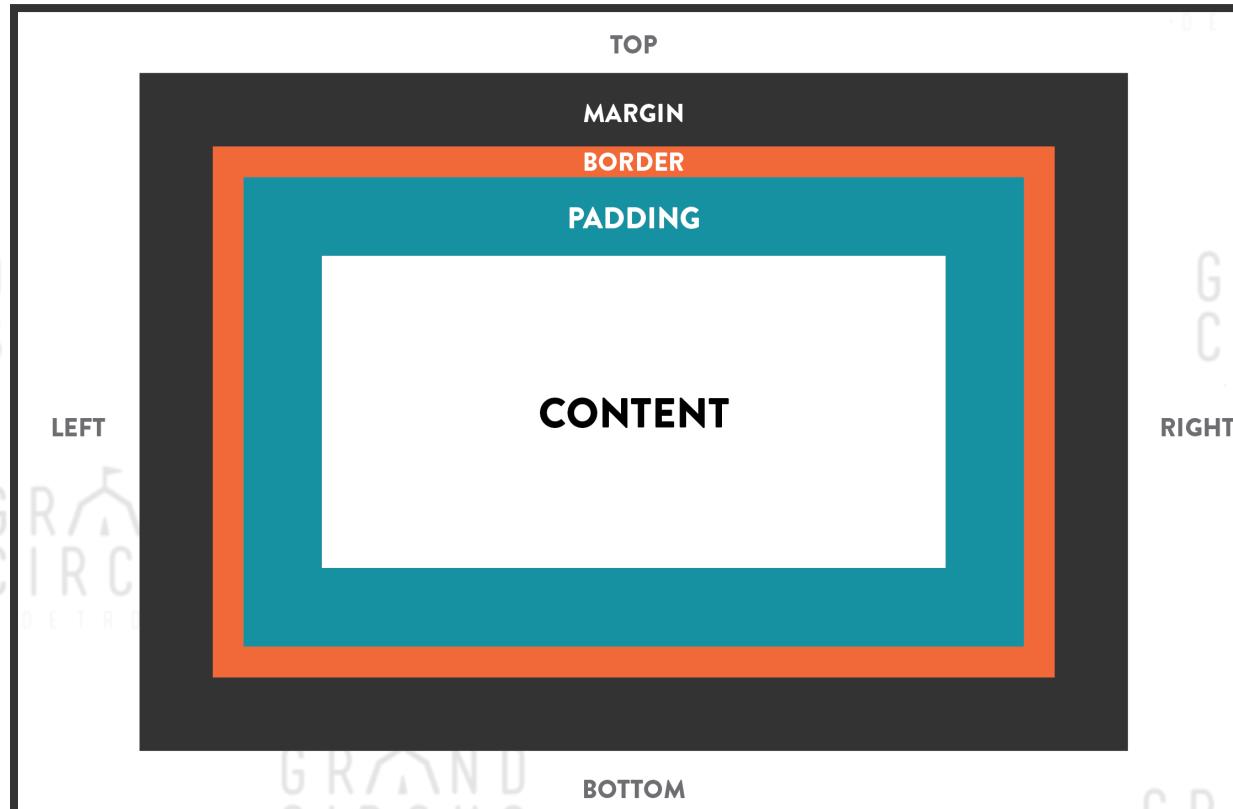


THE BOX MODEL

The total size of an element is a combination of the following:

- Content
- Padding
- Border
- Margin

THE BOX MODEL



Demo

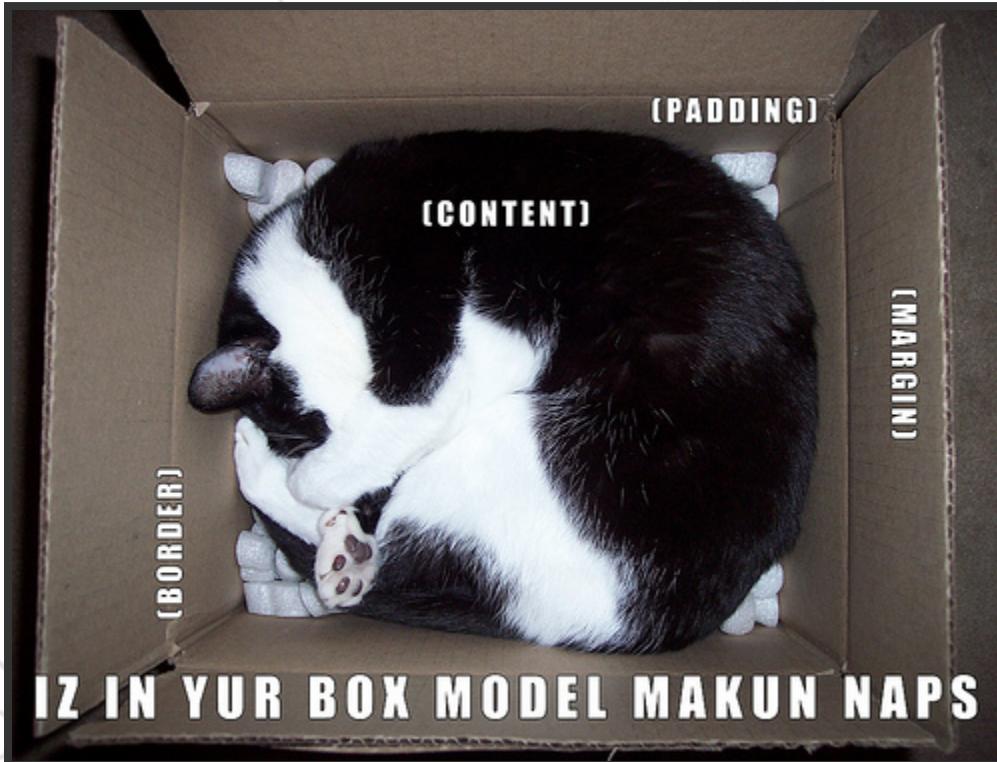
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THE BOX MODEL

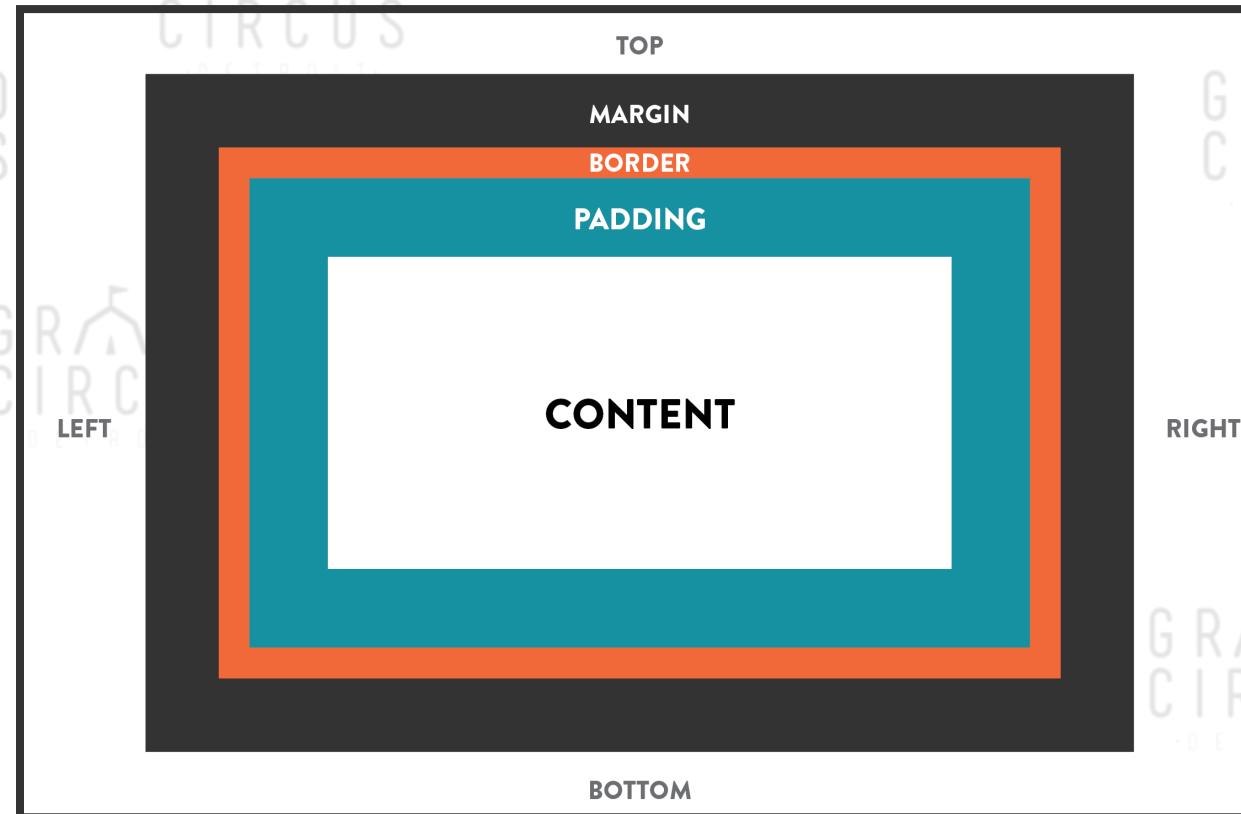


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BORDER

THE BOX MODEL





BORDER

Border is the edge around the element. It has elements of thickness, style, and color.

BORDER

Like padding, border is a CSS property and is defined using CSS rules. Also like padding, there are a few different ways to specify a border.

BORDER

```
p { /* each property specified separately */
  border-width: 10px; /* thickness */
  border-style: solid;
  border-color: blue;
}
p { /* all properties specified in one rule */
  border: 1px dashed black;
}
p { /* Two separate styles on one element */
  border-top: 1px dotted #FF0000;
  border-bottom: 1px groove #FF0;
}
```

BORDER STYLES

none hidden dotted dashed;
solid double groove ridge
inset outset

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PADDING

PADDING

Padding is the space between the content within an element and the border. Padding can be specified in units of pixels (px), Ems (em), or points (pt) or percentage (%) of the containing element.



PADDING

Padding is a CSS property (just like color or font-family) and is defined using the same rules. The only difference is that there are a few different ways to write them.

PADDING

```
p {  
    padding: 10px; /* 10 px of padding on all sides */  
}  
p {  
    padding: 10px 5px; /* 10 px on top/bottom, 5px on left/right */  
}  
p {  
    padding-top: 5px;  
    padding-right: 10px;  
    padding-bottom: 15px;  
    padding-left: 20px;  
}  
p {  
    padding: 5px 10px 15px 20px; /* top, right, bottom, left */  
}
```

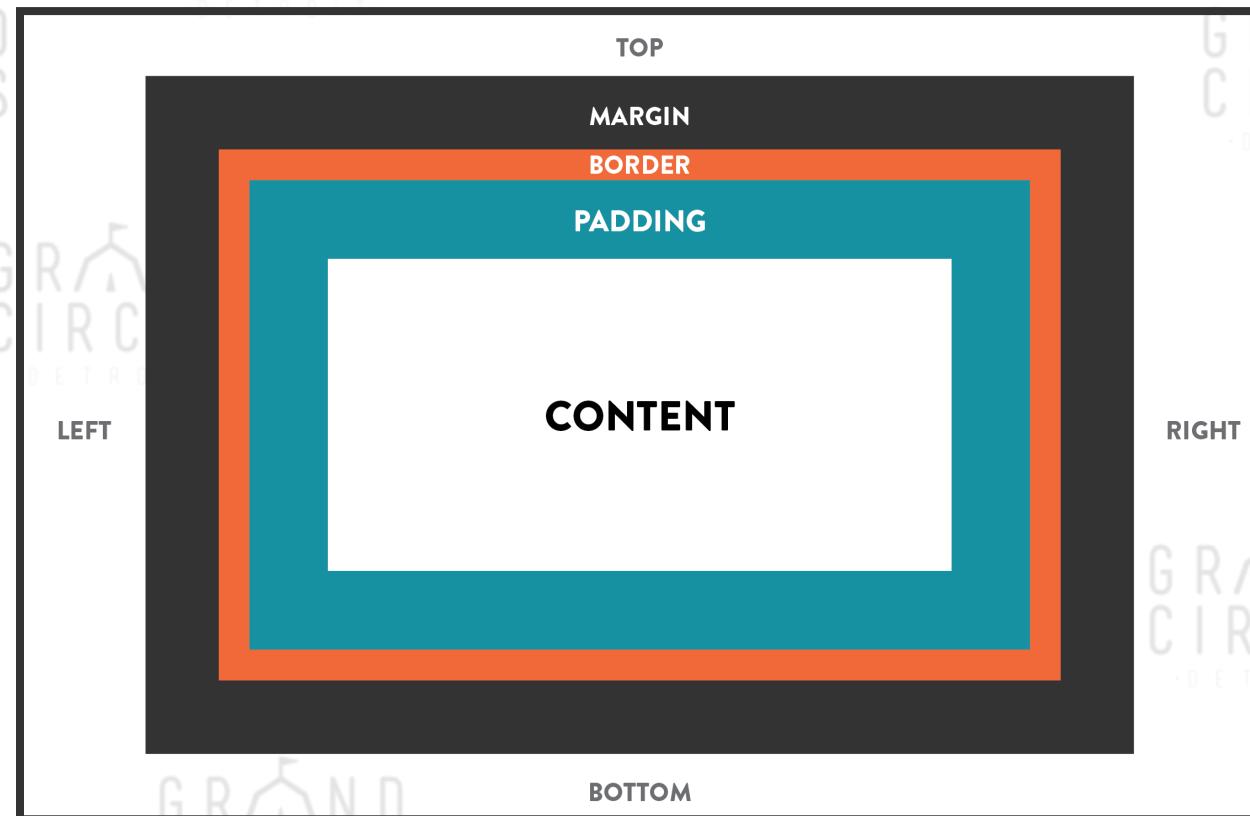
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THE BOX MODEL



MARGIN

Margins are the space outside the element that separates it from other elements. It is 'outside the fence' in terms of its relationship to the border.

MARGIN

Like padding & border is a CSS property and is defined using CSS rules. Much like padding, there are a few different ways to specify it.



MARGIN

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```
p {  
  margin: 10px; /* 10 pixels of margin on all sides */}  
p {  
  margin: 10px 5px; /* 10 px on top/bottom, 5px on left/right */}  
p {  
  margin-top: 5px;  
  margin-right: 10px;  
  margin-bottom: 15px;  
  margin-left: 20px;  
}  
p {  
  margin: 5px 10px 15px 20px; /* top, right, bottom, left */  
}
```



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AUTO MARGIN

If margin is set to `auto` on an element that has a set width, it will take up as much space as possible. You can use this to center or left or right justify an element. This only works for horizontally centering.



AUTO MARGIN

```
p {  
  margin: 0 auto;  
  width: 300px;  
}  
p {  
  margin-right: auto;  
  margin-left: 10px;  
  width: 25%;  
}
```



QUESTIONS?



CSS POSITIONING

CSS POSITIONING

Every HTML element has a property called **position** which dictates how that element flows on a document. This property can be set to a number of different values, each of which behave slightly differently. This gives a web developer greater control over the design and overall look of a page.



CSS POSITIONING

Demo

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STATIC POSITIONING

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STATIC POSITIONING

Static positioning is the default for all HTML elements. And it adheres to the previously discussed behavior of block and inline elements. Block elements flow from top to bottom and each element appears on a new line. Inline elements flow from left to right, wrapping as needed.

RELATIVE POSITIONING

RELATIVE POSITIONING

Relative positioned elements appear in the normal flow of the document but can be offset by using the top, bottom, left and right properties.

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RELATIVE POSITIONING

Demo

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ABSOLUTE POSITIONING

ABSOLUTE POSITIONING

Absolutely positioned are removed from the normal flow of the document. They are not affected by and do not affect other elements in the flow, regardless of their position in the document.

ABSOLUTE POSITIONING

Absolute positioned elements appear relative to their parent container elements, using the top/bottom/right/left properties for offsets.

ABSOLUTE POSITIONING

You can think of absolutely positioned elements as being stuck onto a page with a magnet. Once placed, they don't move.

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ABSOLUTE POSITIONING

Demo

FIXED POSITIONING

FIXED POSITIONING

Fixed positioned elements are very similar to absolutely positioned elements. Fixed positioned elements are also removed from the normal flow of the document. They are not affected by and do not affect other elements in the flow, regardless of their position in the document.



FIXED POSITIONING

Fixed positioned elements appear relative to the view port (the browser window), using the top/bottom/right/left properties for offsets.



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FIXED POSITIONING

Fixed elements do not move when you scroll up or down the page. They seem fixed to the window.



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FIXED POSITIONING

Demo

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FLOAT

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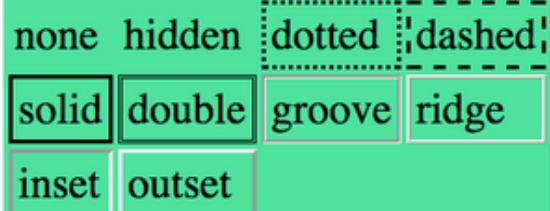
FLOAT

"Floating" takes an element in the normal flow and pushes it as far to the left or right of its parent element as possible. When an element is floated, other elements will wrap around it

FLOAT

- Always specify a width when floating an element
- Specify whether an element should float left or right
- If two or more elements are floated, they will 'stack up' on whichever side they are floated to.

FLOAT



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CLEAR



CLEAR

Clear specifies on which side of an element other elements cannot appear. You can clear left, right, or both.

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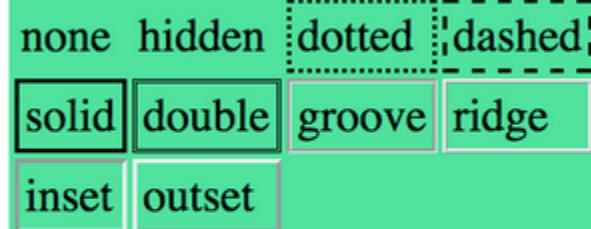
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Not cleared Item
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Not cleared Item

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Z-INDEX



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Z-INDEX

When elements are moved out of the normal flow of content, they can overlap. Z-index can be used to define the order of overlapping elements. The element with the highest z-index goes on top.

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Z-INDEX

Demo

INLINE-BLOCK

There's an even better way to get the float effect. It's called [display: inline-block](#).

DEMO

RECAP

You should understand and be able to use:

- CSS Syntax
- Declarations
- Selectors
- Common Properties
- Correct Folder Structure
- Inline VS Block Elements
- Positioning Properties (Static, Relative, Absolute)
- Floats
- The Box Model

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NEW
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WELCOME BACK!



GOALS FOR THIS UNIT

- CSS psuedoselectors & psuedoclasses
- CSS Media Queries



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REVIEW



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CSS PSUEDO-CLASSES AND PSUEDO- SELECTORS

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CSS PSUEDOCCLASSES

Psuedo-classes are used to add special effects to some selectors.

PSUEDO-CLASS SYNTAX

```
selector:pseudo-class { property:value }
```

```
selector.class:pseudo-class { property:value }
```

ANCHOR PSUEDO-CLASSES

```
a:link { color: aliceblue; } /* unvisited link */
a:visited { color: darkblue; } /* visited link */
a:hover { color: lightblue; } /* mouse over link */
a:active { color: yellow; } /* mouse click link */
```

OTHER PSUEDO-CLASSES

class	Description
:first-child	Any element which is the first child of its parent
:first-letter	First letter of an element's content
:first-line	First line of an element's content
:last-child	Any element which is the last child of its parent
:only-child	Any element which is the only child of its parent
:empty	Any element which has no content
:nth-child	Any element which is the nth child of its parent

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PSEUDO-CLASSES

Demo

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NTH-CHILD SYNTAX

`:nth-child` takes a mathematical expression to determine which children to select.

```
element:nth-child(an + b) { property:value; }
```

NTH-CHILD EXAMPLES

These expressions can be as complex as you want.
Feel free to mess around with it.

```
div:nth-child(3) { color:red; }
```

```
p:nth-child(4n) { color:blue; }
```

```
ul:nth-child:(2n + 5) { color:yellow; }
```

NTH-CHILD EXAMPLES

Realistically though, in practice `nth-child` is usually only used to alternate styles for large groups of data like table rows, etc.

```
element:nth-child(even) { property:value; }
```

```
element:nth-child(odd) { property:value; }
```

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@FONT-FACE

The @font-face property allows you to use non-default fonts on your web sites

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@FONT-FACE USAGE

```
@font-face {  
    font-family: 'myCoolFont';  
    src: url('path/to/myCoolFont.ttf');  
}  
  
div.demo {  
    font-family: 'myCoolFont';  
}
```



@FONT-FACE

1. Download your font
2. Place the font file in your web site
3. Create a @font-face CSS rule
4. Give your font an identifier (e.g., “myCoolFont”)
5. Point the identifier to your font file(s)

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QUESTIONS

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CSS3 FEATURES

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CSS3 VENDOR PREFIX

Not all browsers support all of the newer CSS3 properties, which means we sometimes need to create rules for certain browsers.

This list is a great resource on when to use vendor prefixes!



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BORDER-RADIUS USAGE

```
.example {  
  -moz-border-radius: 5px;  
  -ms-border-radius: 5px;  
  -webkit-border-radius: 5px;  
  -o-border-radius: 5px;  
  border-radius: 5px;  
}
```

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VENDOR PREFIXES

Order matters! The non-prefixed property should always go last.

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HANDY CSS3 PROPERTIES

There are a great many very handy CSS3 properties that you may need to use on your current and future projects. They can add a level of polish to your project that really sells it. That said, we dont have a time to go over even a very few of them in details so I'll just create a list that you can investigate further.

CSS3 PROPERTIES

Property Description

border-radius creates rounded corners or circular borders for elements

Property Description

rgba An alternate way to define color and alpha

opacity Controls the transparency of an element

box-shadow Adds a calculated shadow effect to an element

text-shadow Adds a calculated shadow effect to an element

transforms Adds the ability to transform HTML elements (rotation, scale, translate)

animations Allows for one or more property changes to be applied as an animation



CSS3 PROPERTIES

Let's play with some of these using Chrome Dev Tools

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RESPONSIVE DESIGN

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RESPONSIVE DESIGN

Responsive design is an approach to design and develop applications and pages based on the device's screen size, platform, and orientation. This practice involves the use of terms such as flexible grids, fluid layouts/images, and media queries.



RESPONSIVE DESIGN

If you know ahead of time that your target audience will be mobile users, it would make sense to plan your designing and structure around a mobile first layout.

MEDIA QUERIES

Media queries are able to detect a bunch of things about the device with which you're viewing a site. The browser can use specifically developed CSS styles for those different screen sizes, and device type, orientation of the device(such as turning it sideways and what not).

They are extremely powerful. Let's walk through an example and talk about what is going on.

MEDIA QUERY EXAMPLE

```
@media (min-width: 200px) {  
    body {  
        background-color: pink;  
    }  
}  
  
@media (min-width: 600px) {  
    body {  
        background-color: blue;  
    }  
}  
  
@media (min-width: 800px) {  
    body {  
        background-color: green;  
    }  
}
```

MEDIA QUERY EXAMPLE

```
@media (max-width: 800px) {  
    body {  
        background-color: green;  
    }  
}  
  
@media (max-width: 600px) {  
    body {  
        background-color: blue;  
    }  
}  
  
@media (max-width: 200px) {  
    body {  
        background-color: pink;  
    }  
}
```

MEDIA QUERY EXAMPLES

```
<link rel="stylesheet" type="text/css" href="core.css" media="handheld">
<!-- Handheld devices -->

<link rel="stylesheet" type="text/css" href="core.css" media="braille">
<!-- Braille tactile feedback devices -->

<link rel="stylesheet" type="text/css" href="core.css" media="screen">
<!-- For color computer screens. You'll see this a lot -->
```

Alternatively, you can add queries to entire stylesheets.



MEDIA QUERIES

Demo



THINGS TO DO WITH MEDIA QUERIES

- resize images / font
- collapse navigation
- remove some larger content (video / images)

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QUESTIONS?

HOMEWORK

From HTML & CSS:

- Chapter 5: 120-125
- Chapter 7: 144-175
- Chapter 11: 254-263
- Chapter 12: 288-299
- Chapter 13: 319-329
- Chapter 14: 341-357
- Chapter 15: 377-405
- Chapter 16: 419-427
- Chapter 17: 428-451

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LAB 2

PORTFOLIO GRID LAYOUT



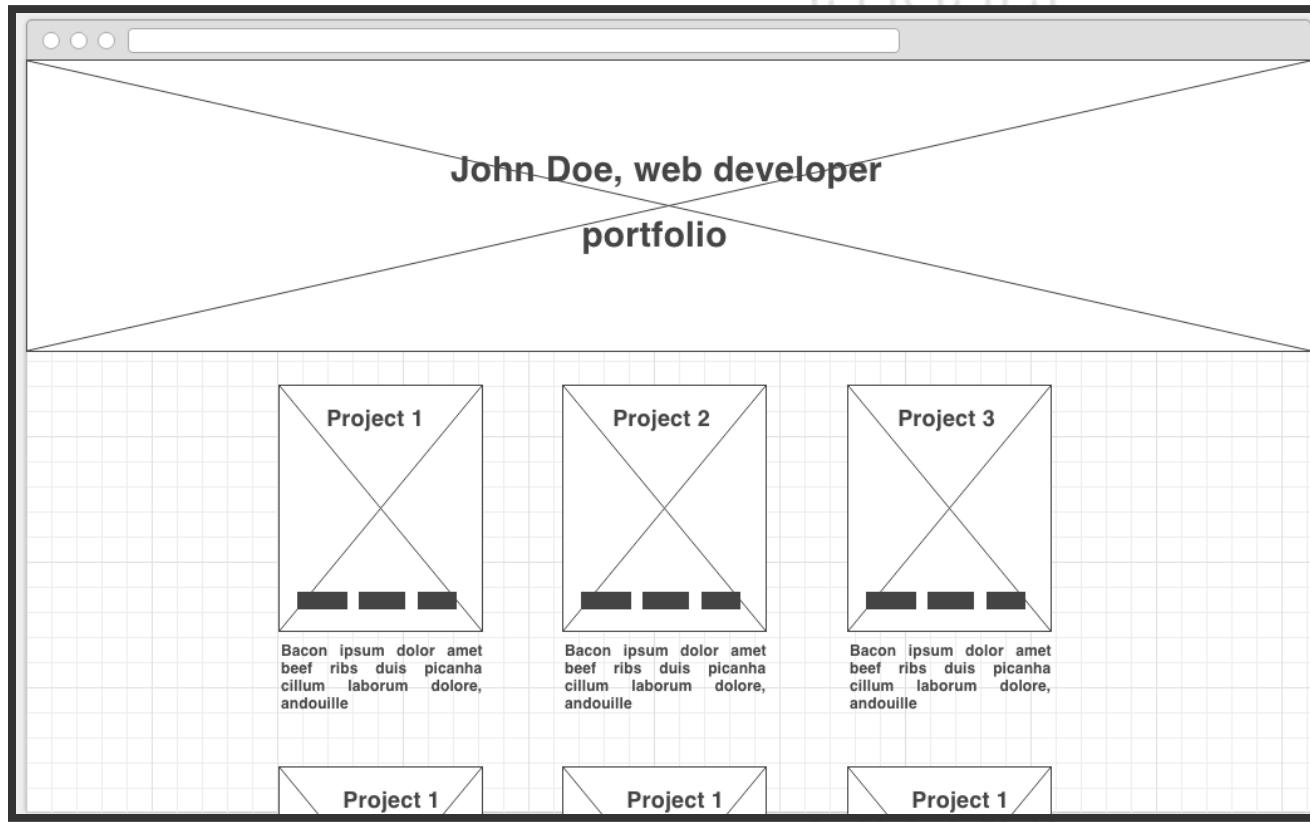
PORTFOLIO GRID LAYOUT

Create a template for the portfolio page of your personal website. For now, each project in the portfolio will be made up of dummy text and a random image. Use what we've learned about positioning and the box model to arrange a 3x3 grid of projects. Each should include:

- Heading: The title of the project
- Paragraph: A brief outline of the project
- Image: A screenshot of the project
- Link(s): Links to the github repo and/or live examples of the projects. Just use "#" for now (this can wrap another element, i.e. the screenshot)

PRE-GAME

The final design of your portfolio examples will be up to you. But if you're not sure how to get started or need some inspiration, you can use this example as a basic template.



LAB 3

MAKE IT RESPONSIVE



MAKE IT RESPONSIVE

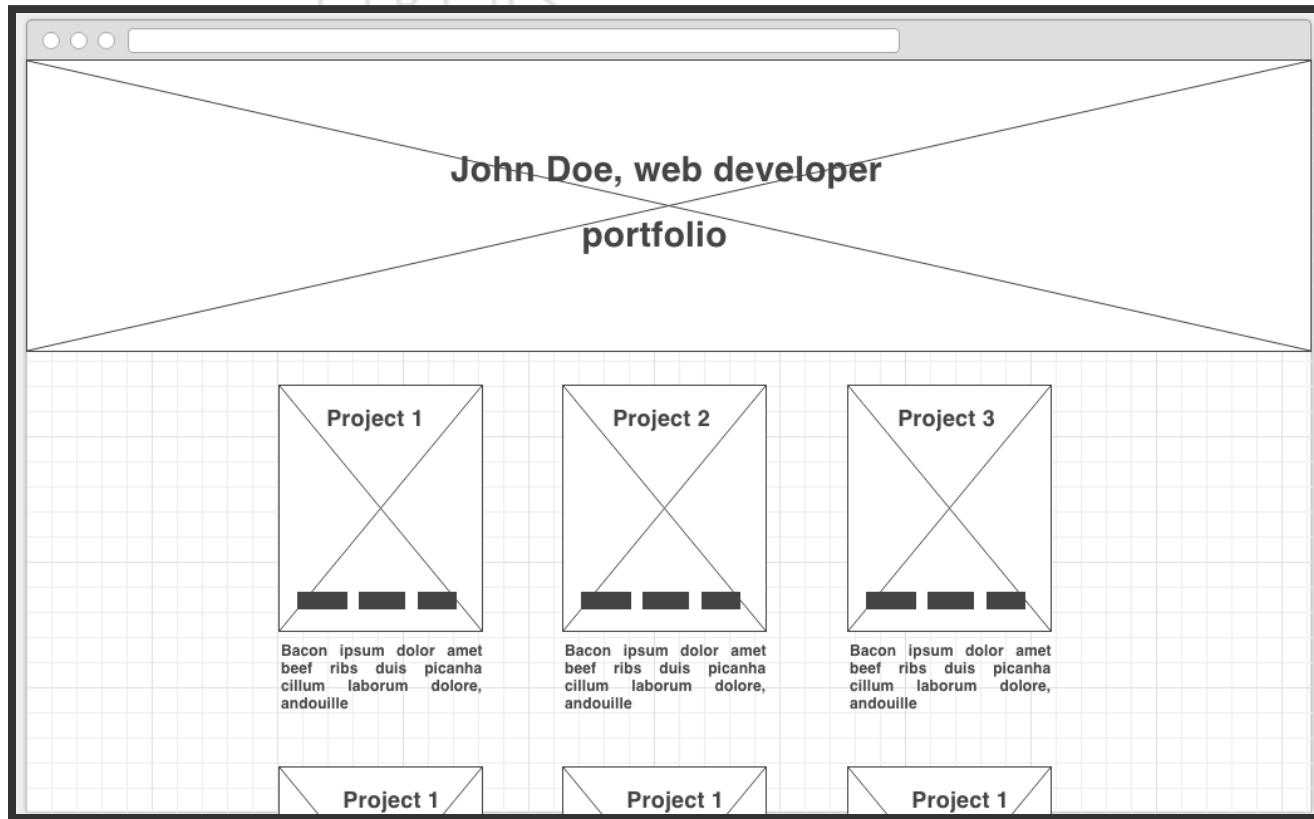
Take what you have so far for your personal website and make it responsive. Consider (at least) typical screen widths for mobile, tablet, and desktop devices.

You should end up with three distinct layouts.

- Add media queries at the end of your stylesheet.
- Make sure images scale with their containers.
- Breakpoints should be based on your content, not necessarily the devices' screen width.

PRE-GAME

As with the portfolio page, the final look of your portfolio site is up to you. But here are a couple of examples of how a design might change for different screen sizes.



PRE-GAME

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