

# Layout

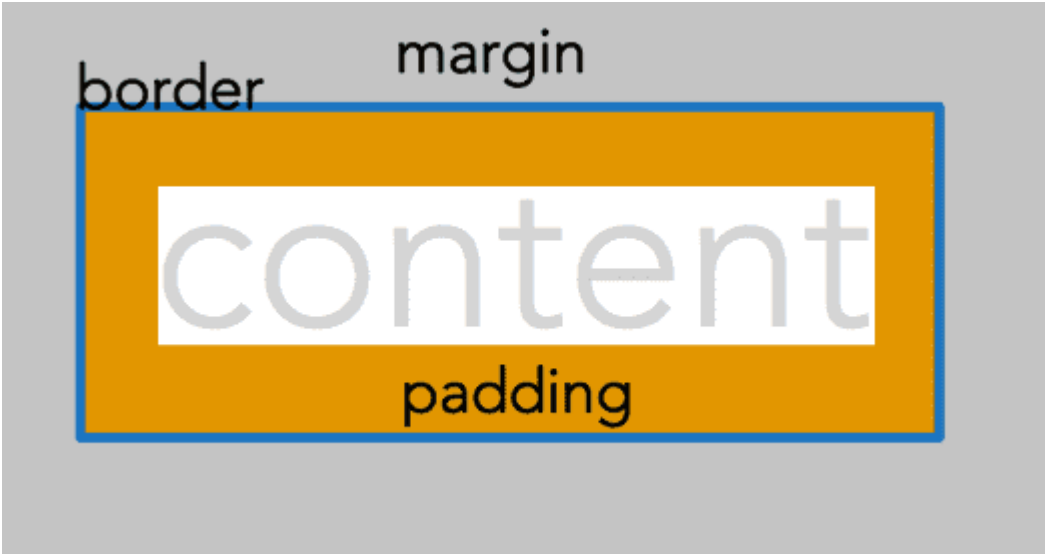
## Demo

Explore the box model, including padding, border, margin, width, and height, as well as the `display:inline` and `display: block` properties, using this CodePen link:

<https://codepen.io/jen4web/pen/JmweGL?editors=1100>

CodePen end state for the box model discussion: <https://codepen.io/jen4web/pen/zmVbrQ>

CodePen for discussion of rem vs em units of measure: <https://codepen.io/jen4web/pen/wYLOpj>



## Box model properties and values

### border

- `border-width`
- `border-style`
- `border-color`
- `border-top`
- `border-top-width`
- `border-top-style`
- `border-top-color`

Same for bottom, left, right

Requires a width, style, and color to display.

Shorthand: `border: 1px solid red;`

```
1 <style>
2 .border1 {
3   border-width: 5px;
4   border-style: solid;
5   border-color: #c02d28;
6 }
7 </style>
8
9 <p class="border1">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
  tempor incididunt ut labore et dolore magna aliqua.</p>
```

### Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

width values: can be anything you want. Default is 3px.

Style values: solid, dotted, dashed, double, groove, ridge, inset, outset. Also none, hidden. Without a style, the border will not display.

color values: Any color you want, written in any format you want! Default is black.

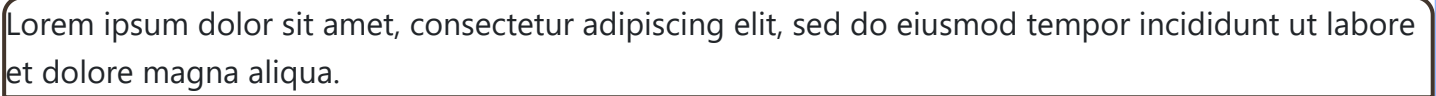
## border-radius

- border-bottom-left-radius
- border-bottom-right-radius
- border-top-left-radius
- border-top-right-radius

Creates rounded corners. Specify a large radius to make pills or circles.

```
1 <style>
2 .borderradius {
3   border: 2px solid #42352c;
4   border-top-left-radius: 10px;
5   border-top-right-radius: 10px;
6 }
7 </style>
8
9 <p class="borderradius">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
  tempor incididunt ut labore et dolore magna aliqua.</p>
```

Result



Size can be the same on 4 sides, or different sizes such as border-radius: 20px;. See "shorthand" below for understanding values.

```
1 <style>
2 .borderradius2 {
3   border: 2px solid #42352c;
4   border-radius: 100px;
5 }
6 </style>
7
8 
```

Result



## padding

- padding-top
- padding-right
- padding-bottom
- padding-left

Padding is the distance between the content and the border. **Padding values must always be positive.**

```
1 <style>
2 p.padding1 {
3   padding: 20px;
4   background-color: #d74f25;
5   color: white;
6 }
7 </style>
8
9 <p class="padding1">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
  tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
  exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco

laboris nisi ut aliquip ex ea commodo consequat

```
1 <style>
2 p.padding2 {
3   padding: 10px 30px;
4   background-color: #d74f25;
5   color: white;
6 }
7 </style>
8
9 <p class="padding2">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

```
1 <style>
2 p.padding3 {
3   padding: 5% 0 20px 1rem;
4   background-color: #d74f25;
5   color: white;
6 }
7 </style>
8
9 <p class="padding3">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

```
1 <style>
2 p.padding4 {
3   padding-left: 15px;
4   background-color: #d74f25;
5   color: white;
6 }
7 </style>
8
9 <p class="padding4">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

See "shorthand" below for understanding values.

margin

- margin-top
- margin-right
- margin-bottom
- margin-left

Margin is the area outside of the border. **Margin values may be positive or negative.**

```
1 <style>
2 p.margin1 {
3   margin: 20px;
4   background-color: #d74f25;
```

```
5     color: white;
6 }
7 </style>
8
9 <p class="margin1">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

```
1 <style>
2 p.margin2 {
3     margin: 10px 30px;
4     background-color: #d74f25;
5     color: white;
6 }
7 </style>
8
9 <p class="margin2">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

```
1 <style>
2 p.margin3 {
3     margin: 5% 0 20px 1rem;
4     background-color: #d74f25;
5     color: white;
6 }
7 </style>
8
9 <p class="margin3">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

```
1 <style>
2 p.margin4 {
3     margin-left: 15px;
4     background-color: #d74f25;
5     color: white;
6 }
7 </style>
8
9 <p class="margin4">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

See "shorthand" below for understanding values.

width

The width of a particular element. In general, use relative units like %, em, rem, rather than px.

```
1 <style>
2 p.example-width {
```

```
3   width: 20%;
4 }
5 </style>
6
7 <p class="example-width">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
  eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
  nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor
 sit amet,
 consectetur
 adipiscing elit, sed
 do eiusmod tempor
 incididunt ut labore
 et dolore magna
 aliqua. Ut enim ad
 minim veniam, quis
 nostrud exercitation
 ullamco laboris nisi
 ut aliquip ex ea
 commodo
 consequat

height

The height of a particular element. In general, use of height is to be avoided on content, so it can expand as needed with changes in font size or the type of content.

```
1 <style>
2 p.example-height {
3   height: 12rem;
4   background-color: #d74f25;
5 }
6 </style>
7
8 <p class="example-height">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
  eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
  nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore
 et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut
 aliquip ex ea commodo consequat

display

HTML tags have two methods of display by default: block and inline. Every HTML tag is assigned one of these values.

There are other values for this property including flex and inline-block.

display: block;

display: flex;

Shorthand

```
1 <style>
2 p.padding-shorthand1 {
3   padding-left: 4em;
4   padding-right: 2em;
5   padding-top: 1em;
6   padding-bottom: 3em;
7 }
```

```
8 </style>
9
10 <p class="padding-shorthand1">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
    eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
    nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

**Result**

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

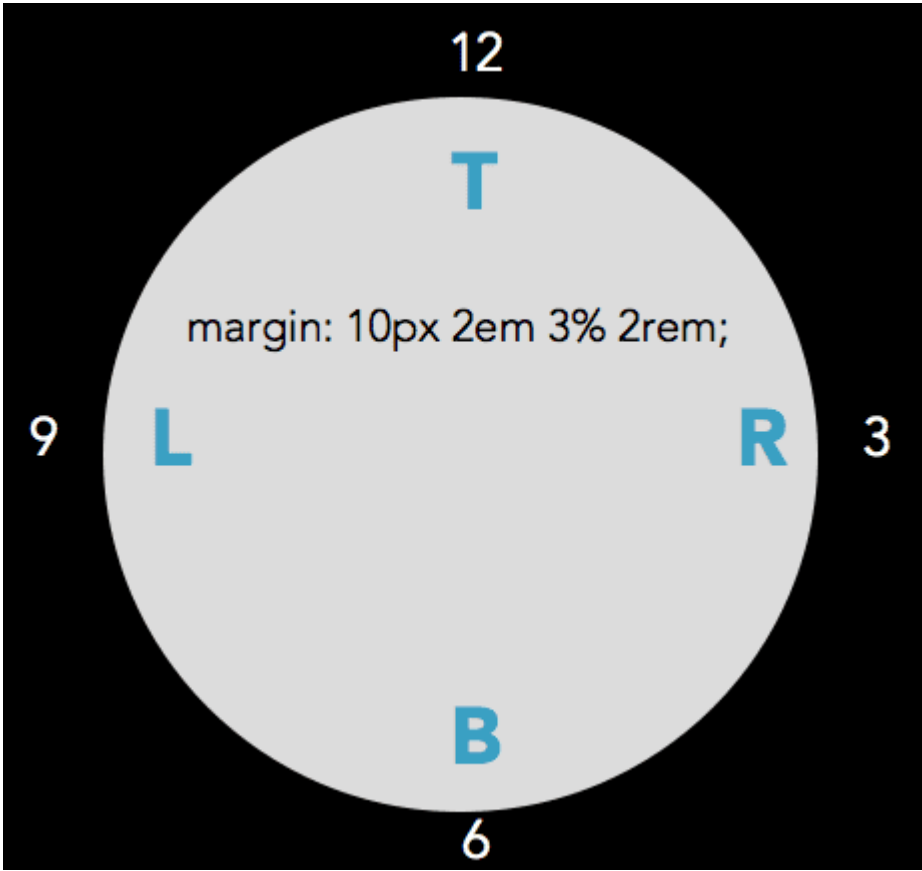
Will generally be written as: TRouBLe -- top, right, bottom, left

Some people think of this as clockwise as well:

```
1 <style>
2 p.padding-shorthand2 {
3   padding: 1em 2em 3em 4em;
4 }
5 </style>
6
7 <p class="padding-shorthand2">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
    eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
    nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

**Result**

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat



```
margin-top: 10px;
margin-right: 2em;
margin-bottom: 3%;
margin-left: 2rem;
```

A shorthand declaration typically contains 1-4 values. For example, the rule below will apply 5em of padding to all sides of a box:

```
1 <style>
2 p.example-shorthand1 {
3   padding: 5em;
4   background-color: #d74f25;
5 }
6 </style>
```

```
7 |
8 | <p class="example-shorthand1">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
   | eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
   | nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
 tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,
 quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo
 consequat

This declaration will apply 1em of padding to the top and bottom, and 5em of padding to the left and right of the box.

```
1 | <style>
2 | p.example-shorthand2 {
3 |   padding: 1em 5em;
4 |   background-color: #d74f25;
5 | }
6 | </style>
7 |
8 | <p class="example-shorthand2 ">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
   | eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
   | nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod
 tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,
 quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo
 consequat

This declaration will apply 1em of padding to the top, 3em of padding to the left and right, and 5em to the bottom of the box. (Note: a 3-number shorthand is almost never used... maybe because no one can remember which numbers stand for what dimension!)

```
1 | <style>
2 | p.example-shorthand3 {
3 |   padding: 1em 3em 5em;
4 |   background-color: #d74f25;
5 | }
6 | </style>
7 |
8 | <p class="example-shorthand3">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
   | eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
   | nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor
 incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
 exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

This declaration will apply 1em of padding to the top, 3em of padding to the right, 5em of padding to the bottom and 7em of padding to the left of the box.

```
1 | <style>
2 | p.example-shorthand4 {
3 |   padding: 1em 3em 5em 7em;
4 |   background-color: #d74f25;
5 | }
6 | </style>
```

```
7 |
8 | <p class="example-shorthand4">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
   | eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
   | nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat</p>
```

Result

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat

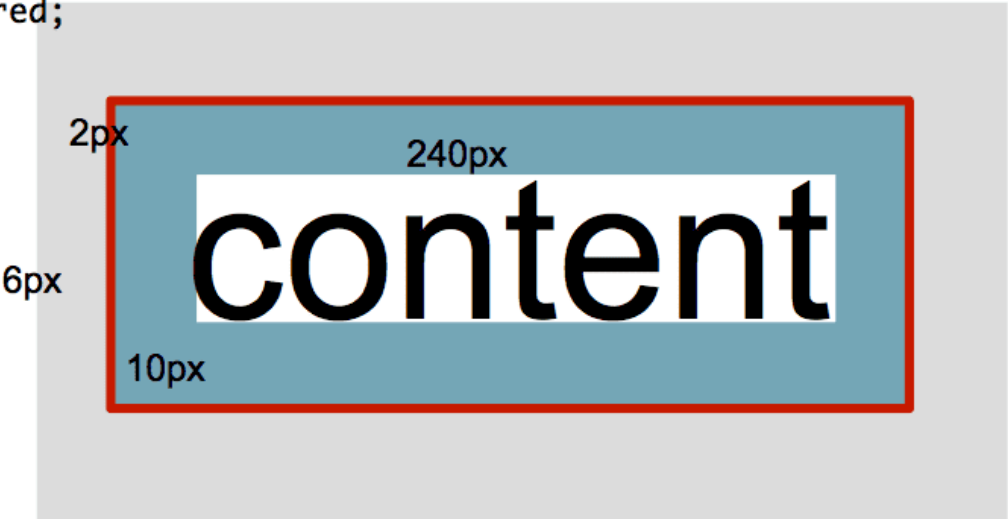
# Box model types

## Content box model

There are two box model types that you will encounter in CSS: the content box model, and the border box model.

Content box model is what is used by default by CSS. In the case of the content box model, the `width` property in CSS refers to the width of the content. To determine the total width of the box, add together the value of `width`, plus any left and/or right `padding`, `margin`, and `border` that may be present.

```
article {
  width: 240px;
  border: 2px solid red;
  padding: 10px;
  margin: 6px;
}
```



6px + 2px + 10px + 240px + 10px + 2px + 6px = 276px wide

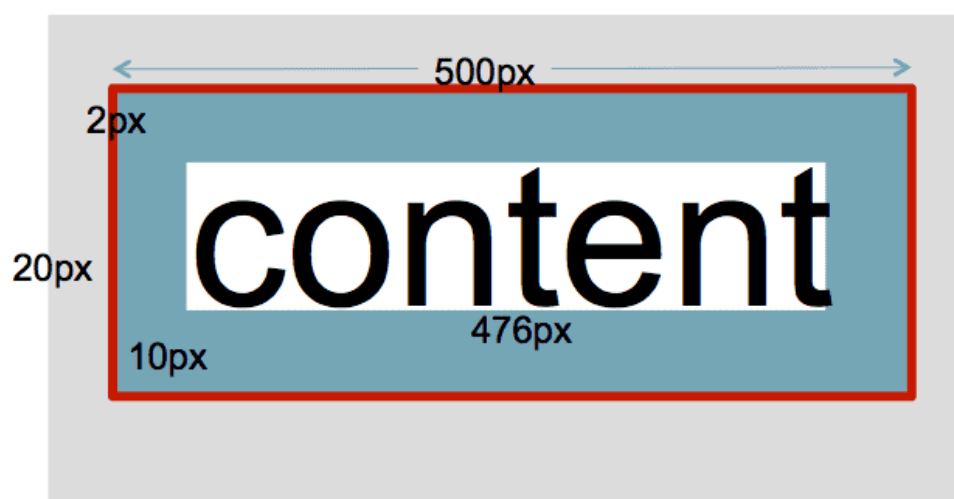
If the type of box model is not declared at the top of the CSS document, you may assume you're working with the content box model.

## Border box model

The border box model says something different about the `width` property. It says that `width` is the total width of the border, padding, and the content. Any margin present is *not* included in the `width` property.



```
article {  
  width: 500px;  
  border: 2px solid red;  
  padding: 10px;  
  margin: 20px;  
}
```



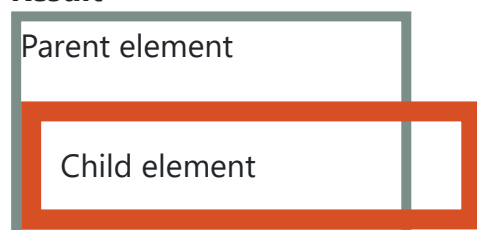
$500\text{px} + 20\text{px} + 20\text{px} = 540\text{px}$  total width

$500\text{px} - 10\text{px} - 10\text{px} - 2\text{px} - 2\text{px} = 476\text{px}$  content width

You must declare, in your CSS document, that you are working with the border box model.

```
1 <style>  
2 .parent {  
3   width: 200px;  
4   box-sizing: border-box;  
5   border: 5px solid #7c8e88;  
6 }  
7  
8 .child {  
9   box-sizing: content-box;  
10  /* box-sizing: border-box; */  
11  border: 10px solid #d74f25;  
12  padding: 10px;  
13  width: 100%;  
14 }  
15 </style>  
16  
17 <section class="parent">  
18   <p>Parent element</p>  
19   <section class="child">  
20     Child element  
21   </section>  
22 </section>
```

#### Result



The best way to apply a consistent box model throughout a web page is to use this code as follows:

```
<style>  
html {  
  box-sizing: border-box;  
}  
*, *:before, *:after {  
  box-sizing: inherit;  
}  
</style>
```

The first declaration sets the `<html>` tag to the border box model. However, this property is not inherited. The second declaration says for everything in the universe (\*) and everything before it (`*:before`) and everything after it (`*:after`), inherit the border box model declaration. You can place this at the top of every CSS document you write going forward!

Read more about that formula here: <https://www.paulirish.com/2012/box-sizing-border-box-ftw/>



```
5      /* clear: both; */
6  }
7  p.p-float5 {
8      float: left;
9      width: 66%;
10     height: 75px;
11     border: 5px solid #7c8e88;
12     clear: none;
13 }
14 p.p-noclear {
15     clear: none;
16 }
17
18 </style>
19
20 <section class="group">
21     <p class="p-float5">Lorem ipsum </p>
22     <p class="p-float5">Lorem ipsum </p>
23     <p class="p-float5">Lorem ipsum </p>
24 </section>
25 <p class="p-noclear">Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut
    aliquip ex ea commodo consequat</p>
```

Result



Read more about clearing: <https://css-tricks.com/snippets/css/clear-fix/>

# Styling navigation bars in a horizontal and vertical direction

We'll work with CodePen for learning how to style navigation bars using all of the box model information we've covered so far.

For our vertical navigation bar, we'll turn off the bullets in the list, then style the list of links to look like buttons.

Vertical navigation bars start for lecture: <https://codepen.io/jen4web/pen/xymQoM>

Vertical navigation bars finish state: <https://codepen.io/jen4web/pen/ZqdZeW>

For our horizontal navigation bar, we'll make our unordered list go vertically on the page using `display: inline-block;`.

Horizontal navigation bars start for lecture: <https://codepen.io/jen4web/pen/OBrrLR>

Horizontal navigation bars finish state: <https://codepen.io/jen4web/pen/oarRXQ>

# Introducing Flexbox

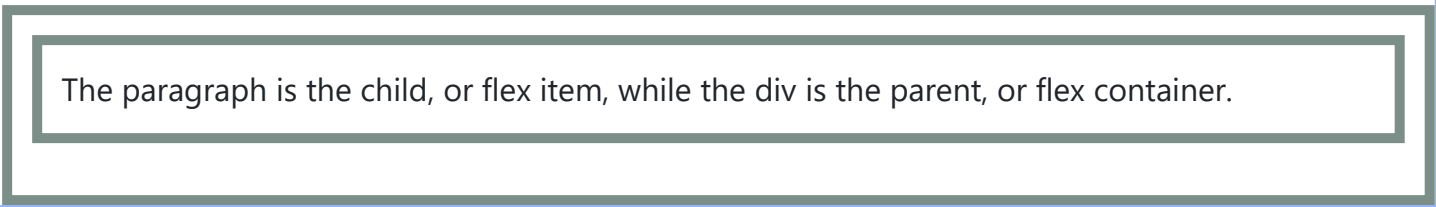
Flexbox is a new way of managing the layout of web pages. It has recently become extremely popular and useful. Flexbox itself would take an entire day to explain well, so we are going to focus on just a few properties you'll need to make simple layouts. You can find much more about Flexbox at Frontend Masters: <https://frontendmasters.com/courses/css-grids-flexbox/>

To make flexbox work, you need two HTML tags that have a parent-child relationship. These are called the *flex container* (parent) and the *flex item* (child). Example:

```
1 <style>
2 div.parent-flex {
3     border: 5px solid #7c8e88;
4     padding: 10px;
```

```
5 }
6 p.child-flex {
7   border: 5px solid #7c8e88;
8   padding: 10px;
9 }
10 </style>
11
12 <div class="parent-flex">
13   <p class="child-flex">The paragraph is the child, or flex item, while the div is the parent,
14   or flex container.</p>
15 </div>
```

Result



To get started with flexbox, set the display property on the flex container: `display: flex;`

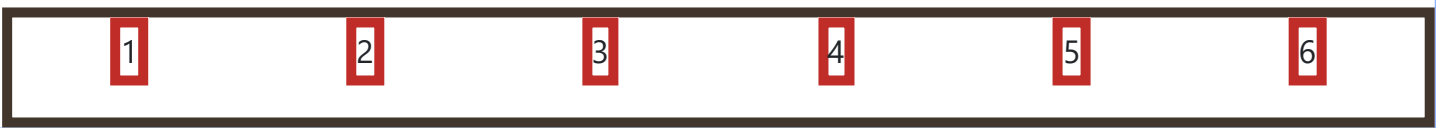
## Flex container properties

`flex-flow` will set up the direction of flexbox and some behaviors. There are two values specified for `flex-flow`. The first is the `flex-direction`. This is typically set to `row` or `column`. The second value is the `flex-wrap`. This specifies whether the boxes should wrap to another row/column or not. Typical values are `wrap` or `nowrap`.

One other property that might be useful is `justify-content`. Do you want all of the boxes pushed to the beginning of the row (`flex-start`), the end of the row (`flex-end`), centered (`center`), or have any extra space distributed across the row (`space-around`)?

```
1 <style>
2 div.parent-flex2 {
3   display: flex;
4   flex-flow: row nowrap;
5   justify-content: space-around;
6   border: 5px solid #42352c;
7 }
8 p.child-flex2 {
9   border: 5px solid #c02d28;
10  background-color: #e7e6d2;
11 }
12 </style>
13
14 <div class="parent-flex2">
15   <p class="child-flex2">1</p>
16   <p class="child-flex2">2</p>
17   <p class="child-flex2">3</p>
18   <p class="child-flex2">4</p>
19   <p class="child-flex2">5</p>
20   <p class="child-flex2">6</p>
21 </div>
```

Result



## Flex item properties

By default in flexbox, if you decide to set up a row of boxes, all boxes will have the same width by default. So if you decide to have a row (a flex container) containing 4 children (or flex items), each child will be 25% wide. If you don't want to use the default width, then assign the `flex-basis` property to the flex item. This number should be a percentage, if you choose to use it.

```
1 <style>
2 div.parent-flex3 {
3   display: flex;
4   flex-flow: row nowrap;
5   justify-content: space-around;
6   border: 5px solid #42352c;
7 }
8 p.child-flex3 {
9   flex-basis: 10%;
10  border: 5px solid #c02d28;
```

```
11     background-color: #e7e6d2;
12 }
13 </style>
14
15 <div class="parent-flex3">
16   <p class="child-flex3">1</p>
17   <p class="child-flex3">2</p>
18   <p class="child-flex3">3</p>
19   <p class="child-flex3">4</p>
20   <p class="child-flex3">5</p>
21   <p class="child-flex3">6</p>
22 </div>
```

#### Result



#### Why not width?

The width property means to make something a certain width -- period! If it's 25%, it will never be 24.99% or 25.01%.

The flex-basis property, however, is more flexible. It says to make the width 25%, but a little more or less than that is OK too.

## References

### Box Model

- The CSS Box Model: <https://css-tricks.com/the-css-box-model/>
- CSS box-sizing property: <https://developer.mozilla.org/en-US/docs/Web/CSS/box-sizing>
- Paul Irish on border-box: <https://www.paulirish.com/2012/box-sizing-border-box-ftw/>

### Understanding Floats and Clears

- All About Floats: <https://css-tricks.com/all-about-floats/>
- Floatutorial: <http://css.maxdesign.com.au/floatutorial/>
- How Floating Works: <https://bitsofco.de/how-floating-works/>
- The Clearfix: <https://css-tricks.com/snippets/css/clear-fix/>

### Block level vs. inline elements; inline-block

- List of block-level elements: [https://developer.mozilla.org/en-US/docs/Web/HTML/Block-level\\_elements](https://developer.mozilla.org/en-US/docs/Web/HTML/Block-level_elements)
- List of inline elements: [https://developer.mozilla.org/en-US/docs/Web/HTML/Inline\\_elements](https://developer.mozilla.org/en-US/docs/Web/HTML/Inline_elements)
- Should you use inline-blocks as a substitute for floats? <http://vanseodesign.com/css/inline-blocks/>

### Interneting is Hard

- The Box Model <https://internetingishard.com/html-and-css/css-box-model/>
- Floats <https://internetingishard.com/html-and-css/floats/>

### Flexbox References

- Flexbox Froggy, a game for learning flexbox <http://flexboxfroggy.com/>
- Flexbox Defense, another Flexbox game <http://www.flexboxdefense.com/>
- A complete guide to Flexbox <https://css-tricks.com/snippets/css/a-guide-to-flexbox/>
- MDN CSS Flexible Box Layout [https://developer.mozilla.org/en-US/docs/Web/CSS/CSSFlexibleBox\\_Layout](https://developer.mozilla.org/en-US/docs/Web/CSS/CSSFlexibleBox_Layout)
- Almost complete guide to flexbox (without flexbox) <https://kyusuf.com/post/almost-complete-guide-to-flexbox-without-flexbox>

## Exercises

### Layout Lesson Files

Files on Github <https://github.com/FrontendMasters/bootcamp/tree/master/static/exercises/3-layout>

[Download ZIP of Files](#)

# Waaaa, it "doesn't work"!!!

Remember to use the HTML and CSS validators if things are looking odd in the browser, or if the colors in the editor seem off. That's an indicator that you've made some errors along the way. The HTML validator is great for catching errors pertaining to syntax, tag spelling, tag nesting, and applying the right attributes to a given tag. The CSS validator will find unclosed curly brackets, properties and values that don't exist, and more.

HTML validator: <http://validator.w3.org/>

CSS validator: <http://jigsaw.w3.org/css-validator>

## Code a Blog Page

I've given you some images and a picture of a web page layout. You have everything you need to lay this page out as a blog page. Can you figure out how to code this? To complete the layout, you will need:

- Think about borders, margin, and padding to make the page pretty.
- Think about horizontal nav bars for styling the top navigation. How about the bottom alien social media links?
- Consider floats for arranging images and text.
- Consider flexbox for making the header work correctly.

Work on this first, and ask questions in Slack. I'll address questions in the afternoon.

Starting HTML, CSS, and images are here:

<https://github.com/FrontendMasters/bootcamp/tree/master/static/exercises/3-layout/blog-begin>

## Box Model Worksheets

I've given you some worksheets that have you calculate the width of the content and the total width of the area, based on either the content box model or the border box model. Work through the math and check your answers, provided separately. Ask questions if you have them!

Worksheets found at: <https://github.com/FrontendMasters/bootcamp/tree/master/static/exercises/3-layout/boxmodel>

## Finish the book chapter

Once again, visit your book chapter. Choose some images and include them, floating them in place. (Don't forget to clear!) Consider including some quotes, or navigation to subheads.

## Additional CSS practice

If you finish early, and/or you want some more practice, work through the following sections of exercises at W3Schools: <https://www.w3schools.com/css/exercise.asp>

- CSS Border
- CSS Margin
- CSS Padding
- CSS Height/Width
- CSS Box Model

## On Your Own

Finally, finish the styling of your about and hobby web pages.

Create a navigation bar with appropriate styling to link the pages together. Link your book excerpt page to this site as well.

Create columns on your page, with main content and a side bar.

In the side bar, feature favorite photos, favorite quotes, links to favorite websites, or other content that supplements the main message of the web page.

[← CSS](#)

[Forms →](#)