기초 웹

22 Winter CNU 기초 스터디

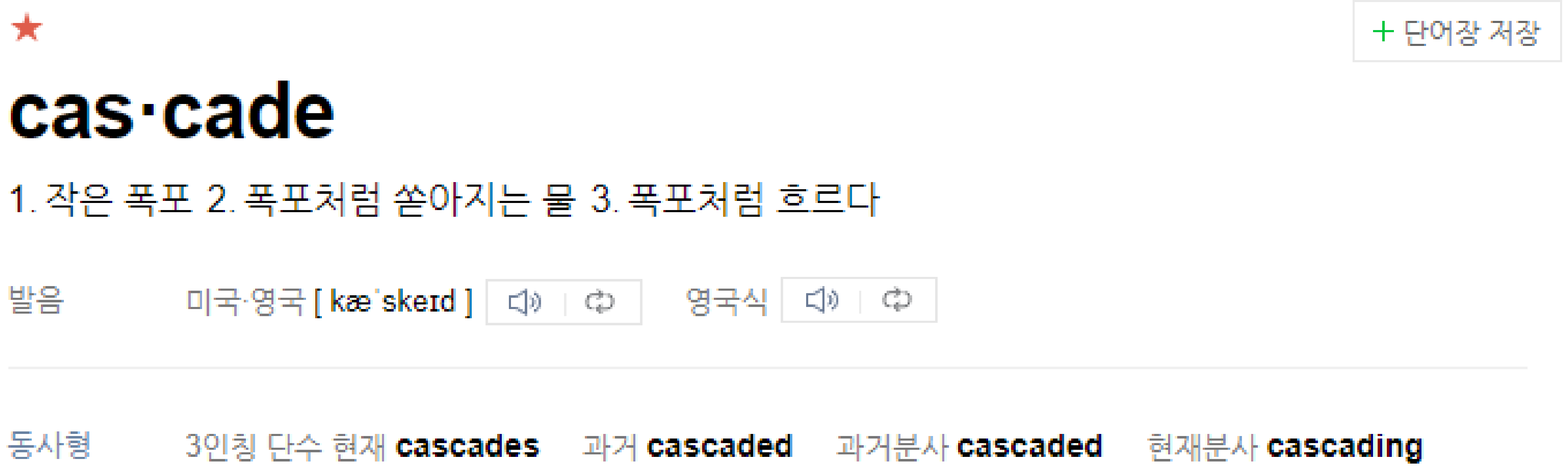
21 남정연
21 박준서

What is CSS?

Cascading Style Sheet

종속되는 스타일 시트

What is Cascading?



cas·cade

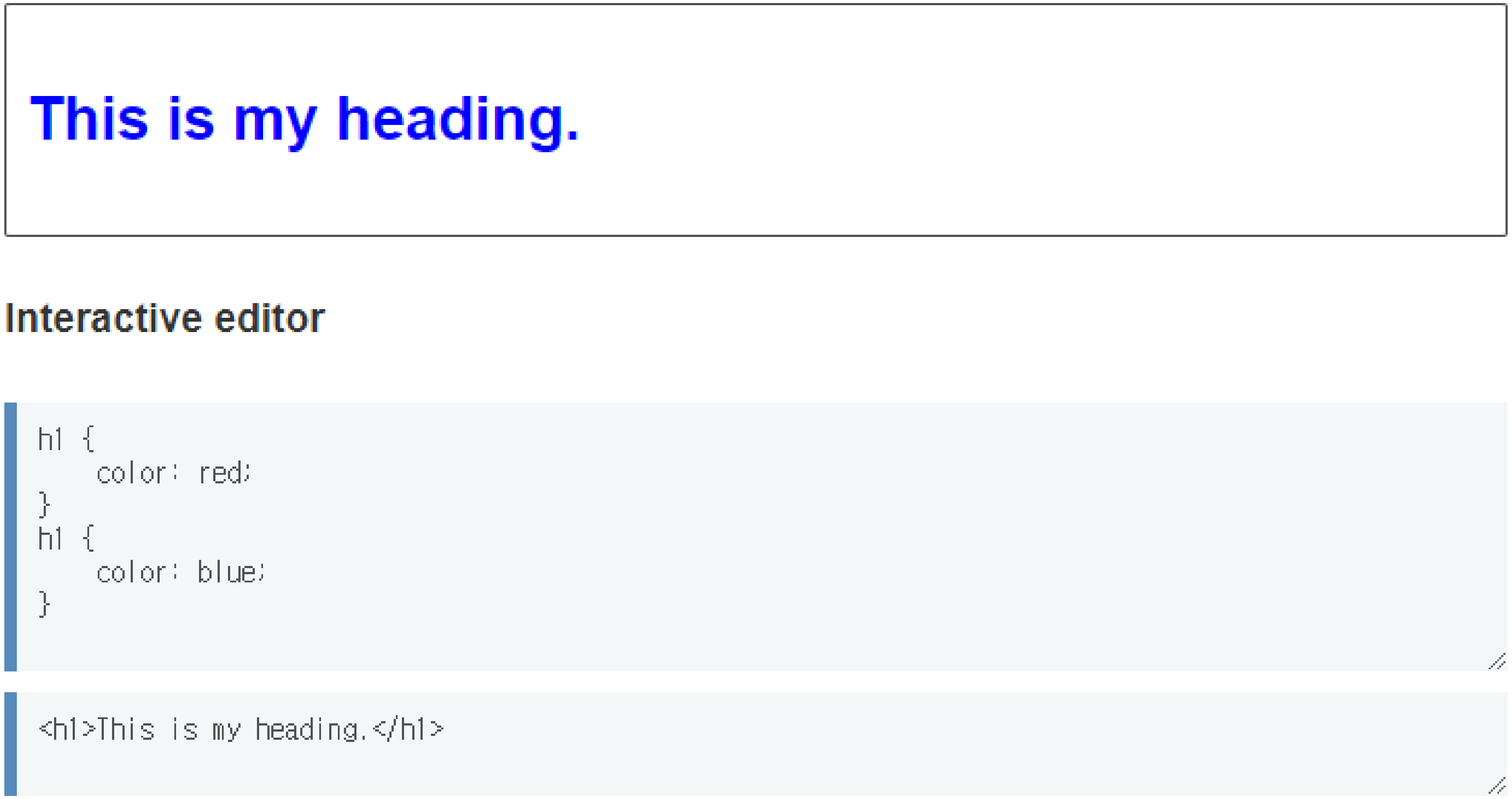
1. 작은 폭포 2. 폭포처럼 쏟아지는 물 3. 폭포처럼 흐르다

발음 미국·영국 [kæˈskeɪd] 영국식

동사형 3인칭 단수 현재 **cascades** 과거 **cascaded** 과거분사 **cascaded** 현재분사 **cascading**

CSS Cascade

1. Source Order
2. Specificity
3. Importance



This is my heading.

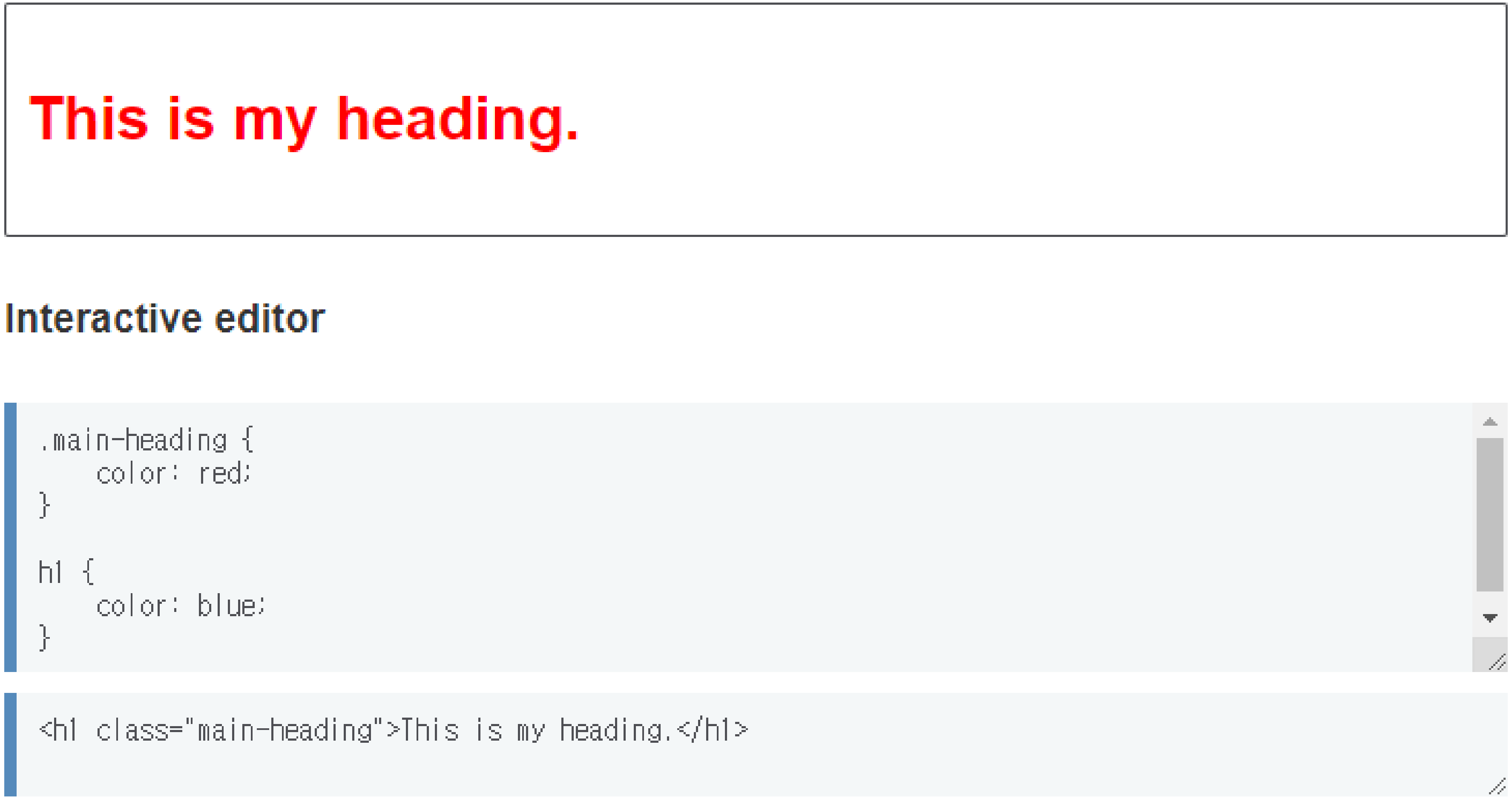
Interactive editor

```
h1 {
    color: red;
}
h1 {
    color: blue;
}
```

```
<h1>This is my heading.</h1>
```

CSS Cascade

1. Source Order
2. Specificity
3. Importance



This is my heading.

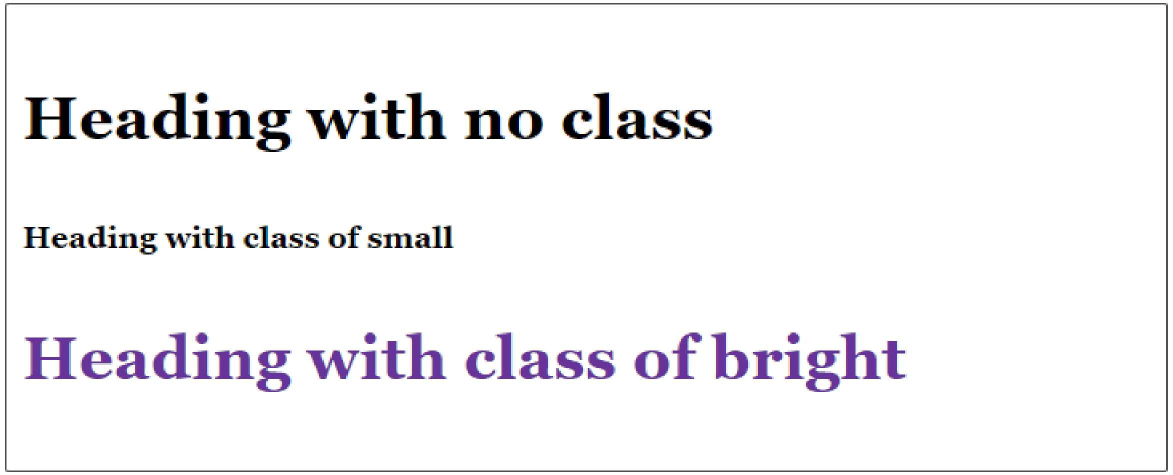
Interactive editor

```
.main-heading {
    color: red;
}

h1 {
    color: blue;
}
```

```
<h1 class="main-heading">This is my heading.</h1>
```

CSS Cascade

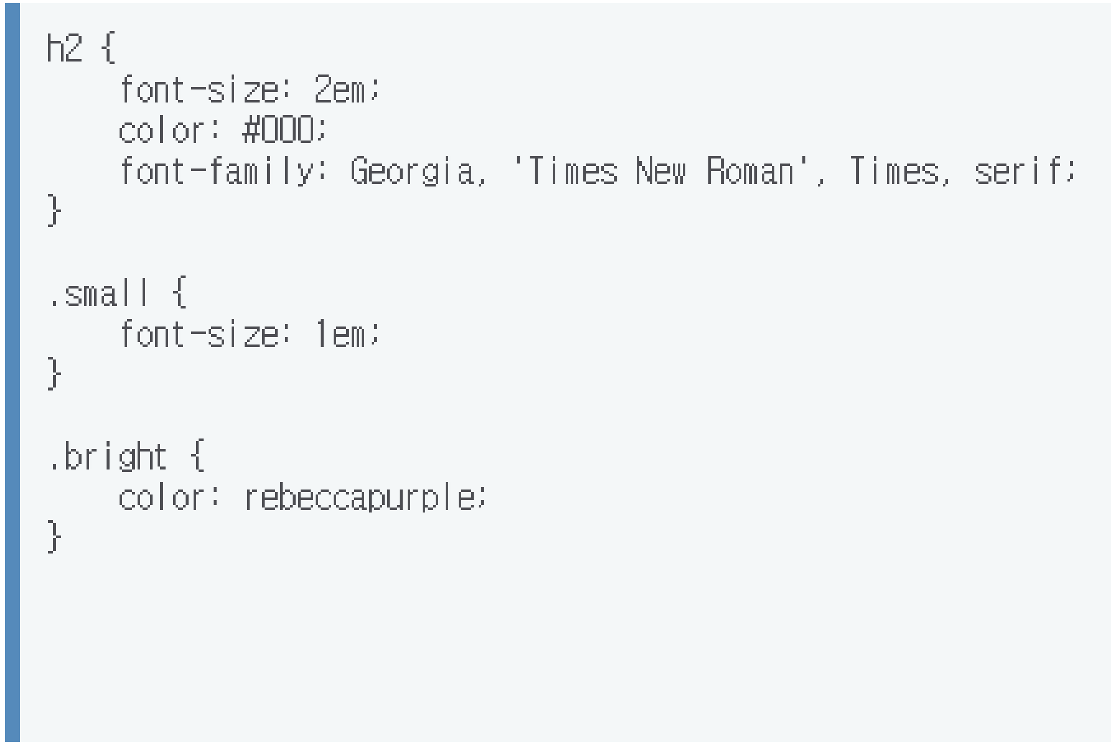
1. Source Order
2. Specificity
3. Importance



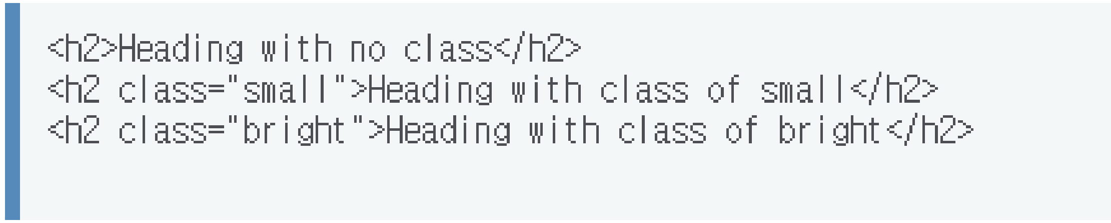
Heading with no class

Heading with class of small

Heading with class of bright



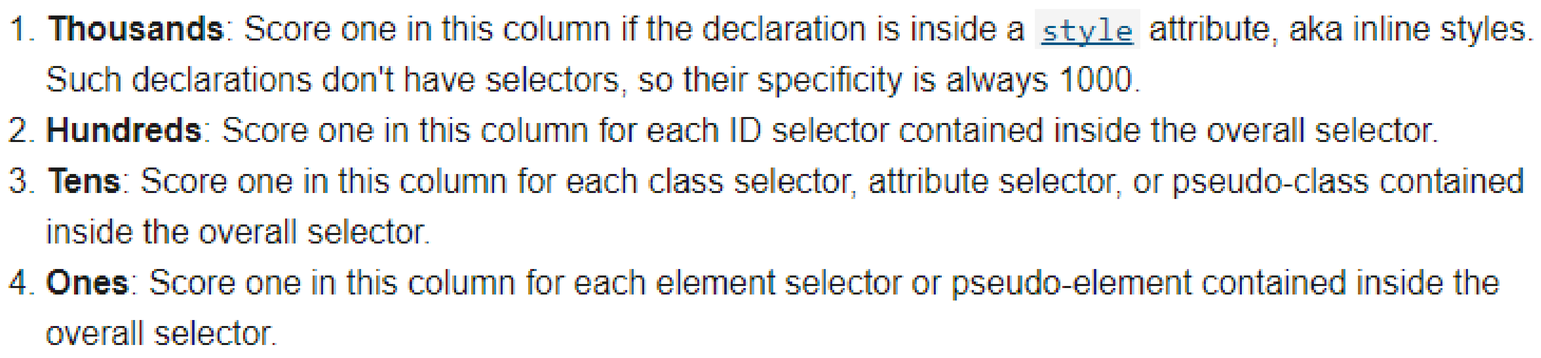
```
h2 {
    font-size: 2em;
    color: #000;
    font-family: Georgia, 'Times New Roman', Times, serif;
}

.small {
    font-size: 1em;
}

.bright {
    color: rebeccapurple;
}
```



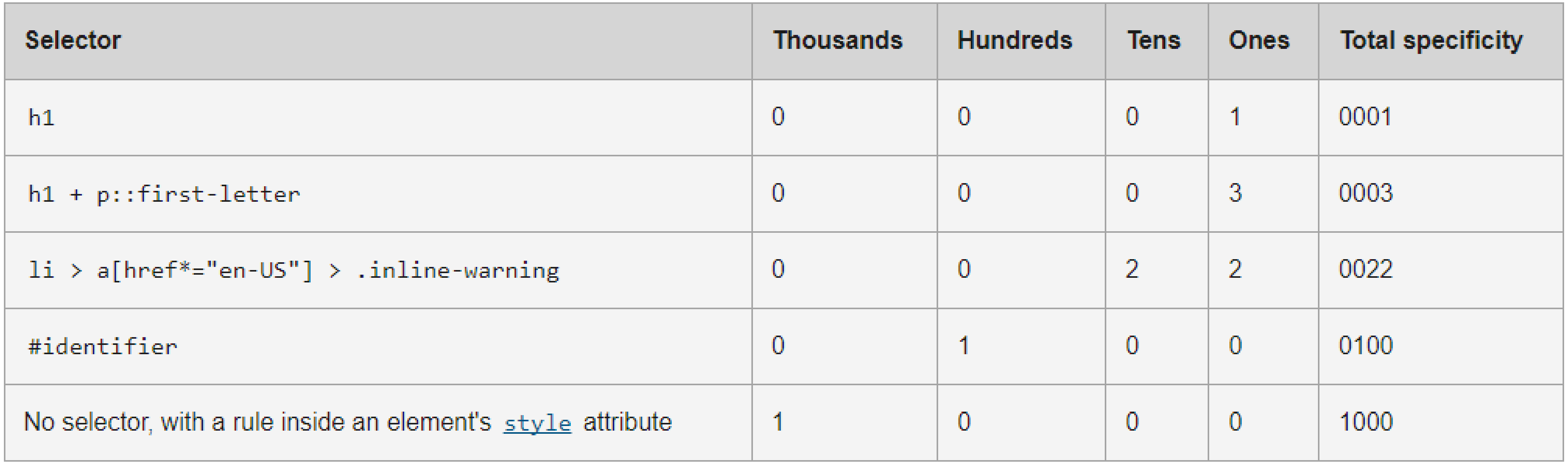
```
<h2>Heading with no class</h2>
<h2 class="small">Heading with class of small</h2>
<h2 class="bright">Heading with class of bright</h2>
```

CSS Cascade

1. Source Order
2. Specificity
3. Importance



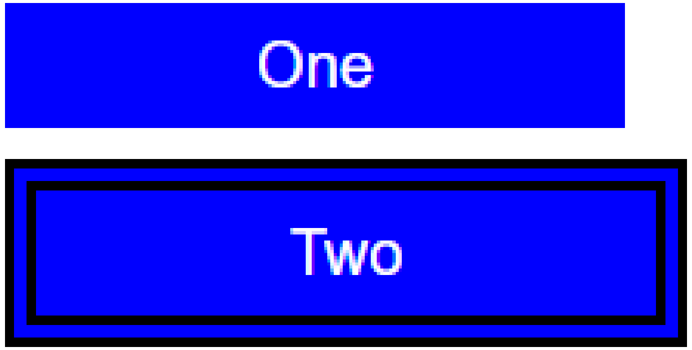
1. **Thousands**: Score one in this column if the declaration is inside a `style` attribute, aka inline styles. Such declarations don't have selectors, so their specificity is always 1000.
2. **Hundreds**: Score one in this column for each ID selector contained inside the overall selector.
3. **Tens**: Score one in this column for each class selector, attribute selector, or pseudo-class contained inside the overall selector.
4. **Ones**: Score one in this column for each element selector or pseudo-element contained inside the overall selector.



Selector	Thousands	Hundreds	Tens	Ones	Total specificity
`h1`	0	0	0	1	0001
`h1 + p::first-letter`	0	0	0	3	0003
`li > a[href*="en-US"] > .inline-warning`	0	0	2	2	0022
`#identifier`	0	1	0	0	0100
No selector, with a rule inside an element's `style` attribute	1	0	0	0	1000

CSS Cascade

1. Source Order
2. Specificity
3. Importance

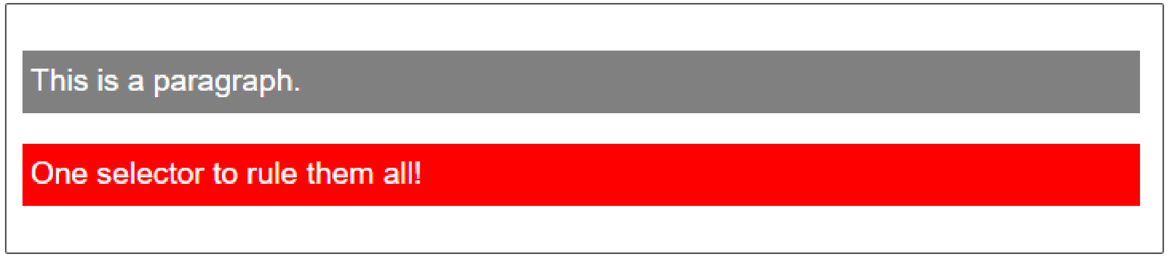


```
<div id="outer" class="container">
    <div id="inner" class="container">
        <ul>
            <li class="nav"><a href="#">One</a></li>
            <li class="nav"><a href="#">Two</a></li>
        </ul>
    </div>
</div>
```

```
/* specificity: 0024 */
div div li:nth-child(2) a:hover {
    border: 10px solid black;
}

/* specificity: 0023 */
div li:nth-child(2) a:hover {
    border: 10px dashed black;
}

/* specificity: 0033 */
div div .nav:nth-child(2) a:hover {
    border: 10px double black;
}
```

CSS Cascade

1. Source Order
2. Specificity
3. Importance



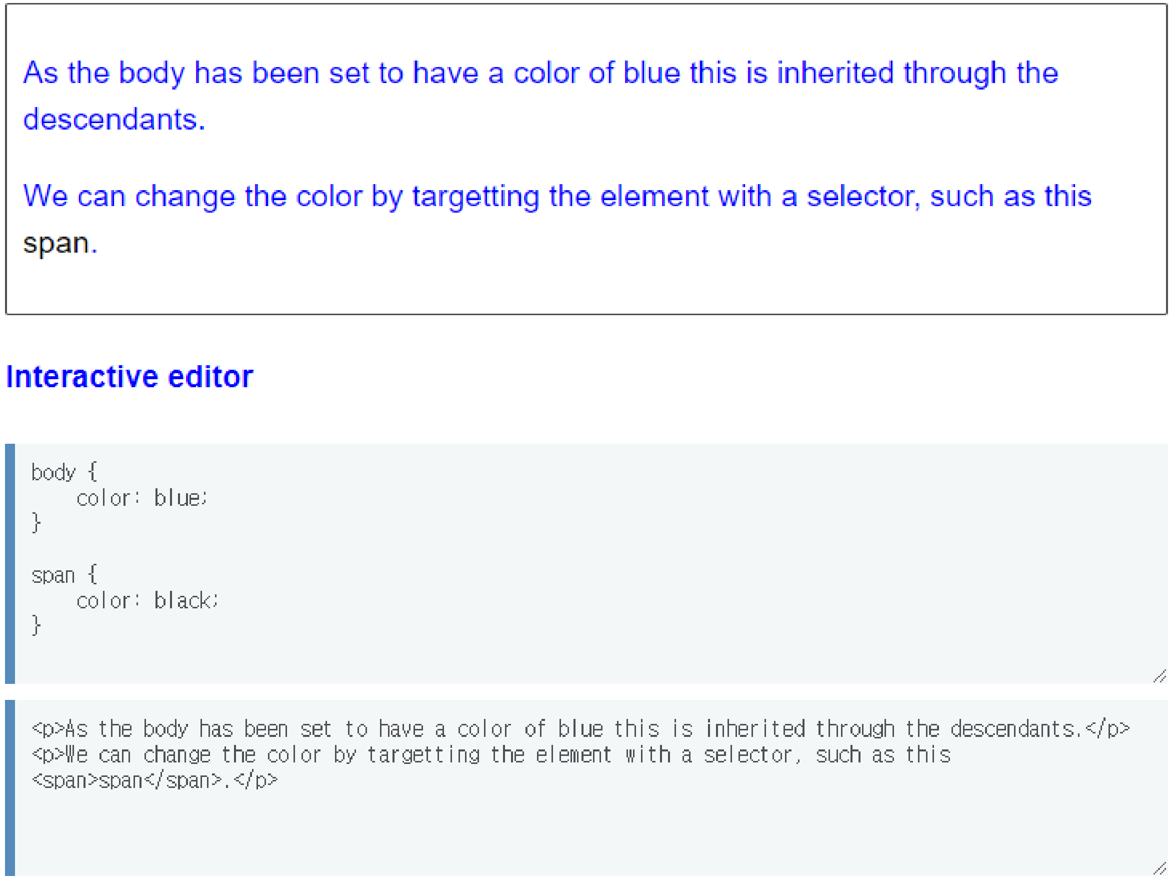
This is a paragraph.

One selector to rule them all!

```
#winning {
    background-color: red;
    border: 1px solid black;
}

.better {
    background-color: gray;
    border: none !important;
}

p {
    background-color: blue;
    color: white;
    padding: 5px;
}
```

```
<p class="better">This is a paragraph.</p>
<p class="better" id="winning">One selector to rule them all!</p>
```

CSS Inheritance



As the body has been set to have a color of blue this is inherited through the descendants.

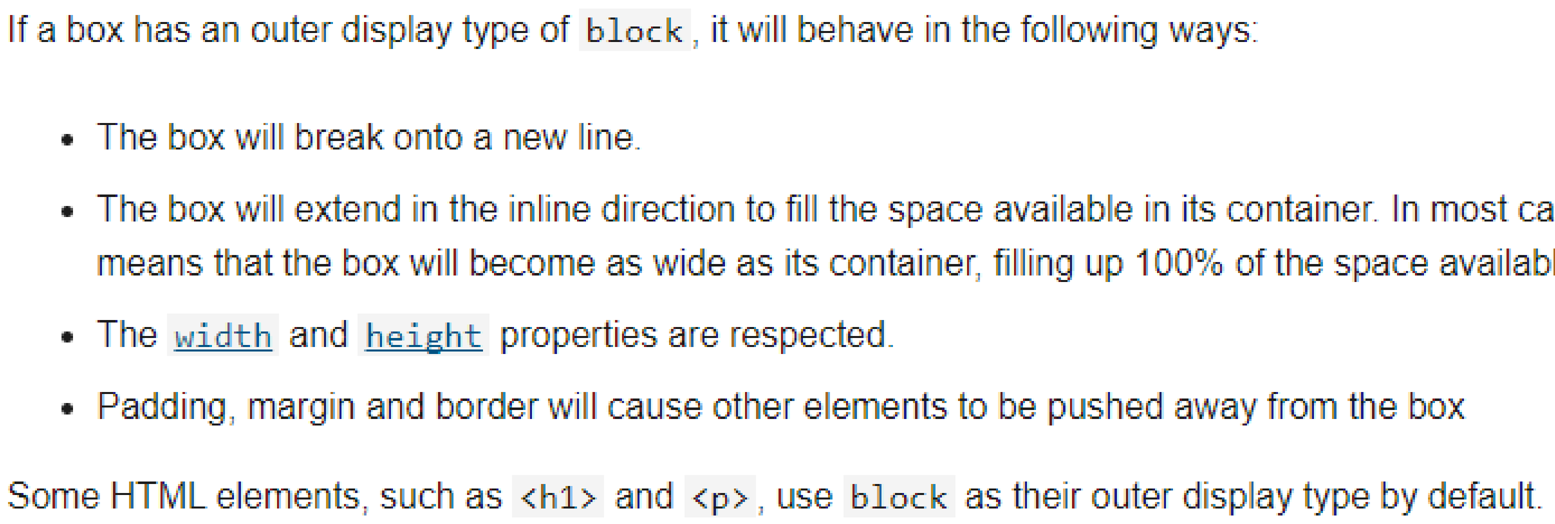
We can change the color by targetting the element with a selector, such as this span.

```css
body {
    color: blue;
}

span {
    color: black;
}
```

```html
<p>As the body has been set to have a color of blue this is inherited through the descendants.</p>
<p>We can change the color by targetting the element with a selector, such as this
<span>span</span>.</p>
```

Inherited Attribute의 경우 부모의 CSS가 자식의 CSS로 전파

Block and Inline

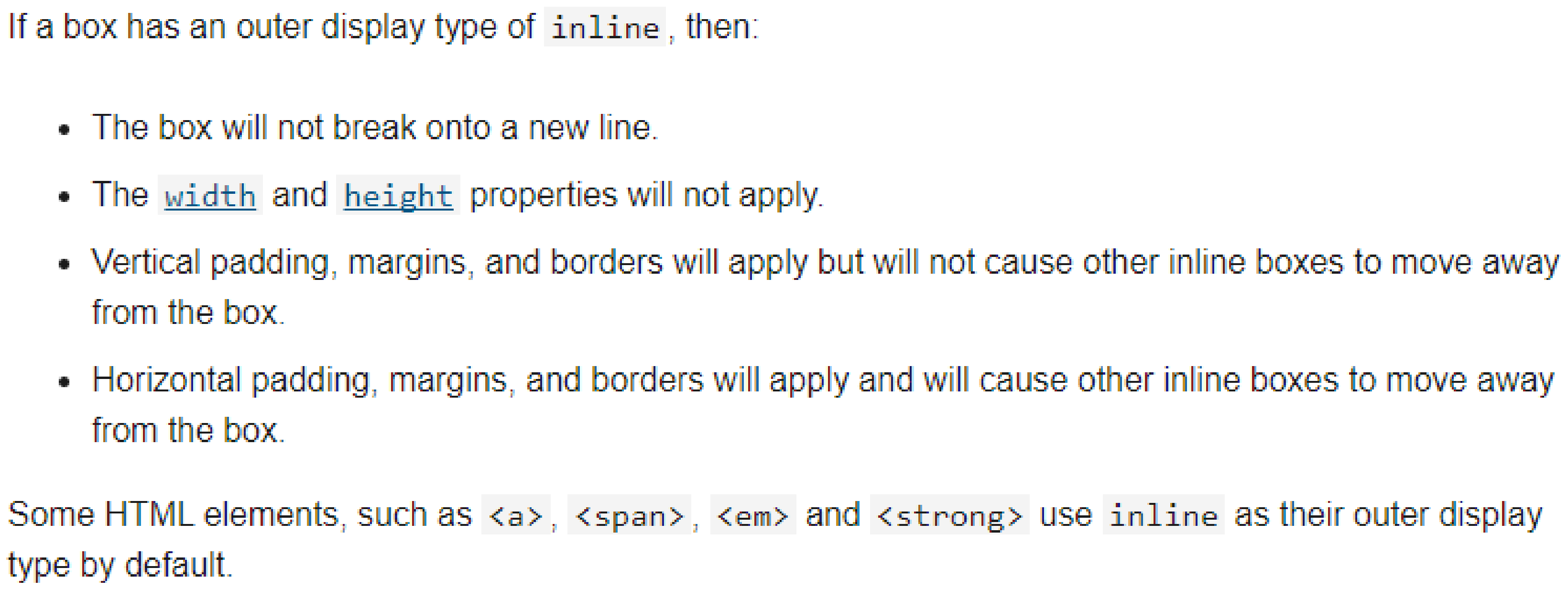


If a box has an outer display type of `block`, it will behave in the following ways:

- The box will break onto a new line.
- The box will extend in the inline direction to fill the space available in its container. In most cases this means that the box will become as wide as its container, filling up 100% of the space available.
- The `width` and `height` properties are respected.
- Padding, margin and border will cause other elements to be pushed away from the box

Some HTML elements, such as `<h1>` and `<p>`, use `block` as their outer display type by default.

Block and Inline

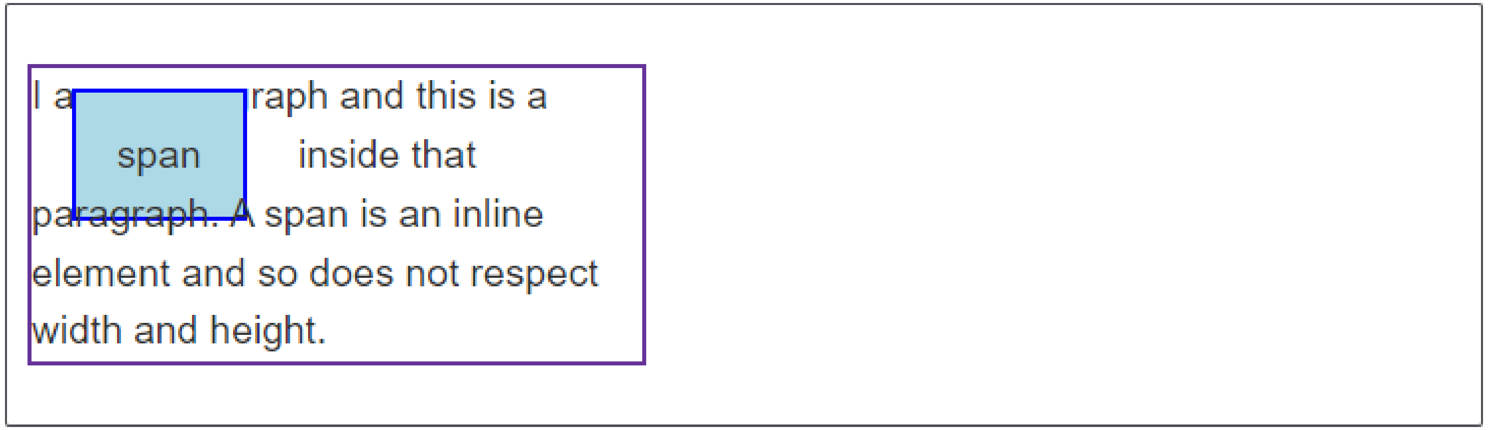


If a box has an outer display type of `inline`, then:

- The box will not break onto a new line.
- The `width` and `height` properties will not apply.
- Vertical padding, margins, and borders will apply but will not cause other inline boxes to move away from the box.
- Horizontal padding, margins, and borders will apply and will cause other inline boxes to move away from the box.

Some HTML elements, such as `<a>`, `<span>`, `<em>` and `<strong>` use `inline` as their outer display type by default.

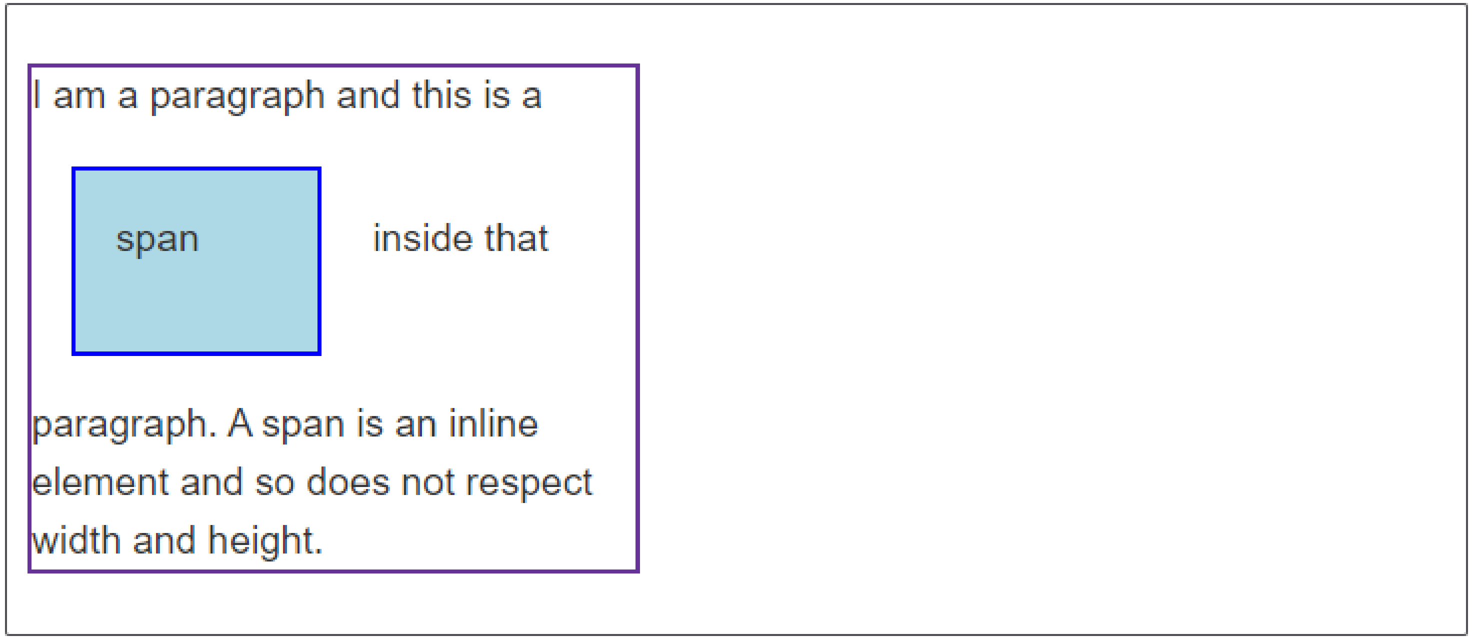
Inline box



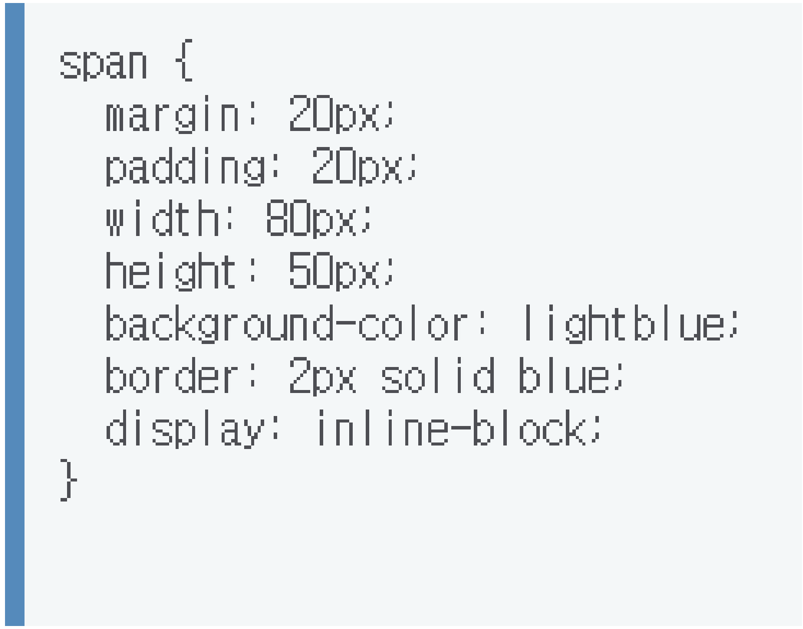
I a raph and this is a
span inside that
paragraph. A span is an inline
element and so does not respect
width and height.

```
span {
  margin: 20px;
  padding: 20px;
  width: 80px;
  height: 50px;
  background-color: lightblue;
  border: 2px solid blue;
}
```

Inline-block

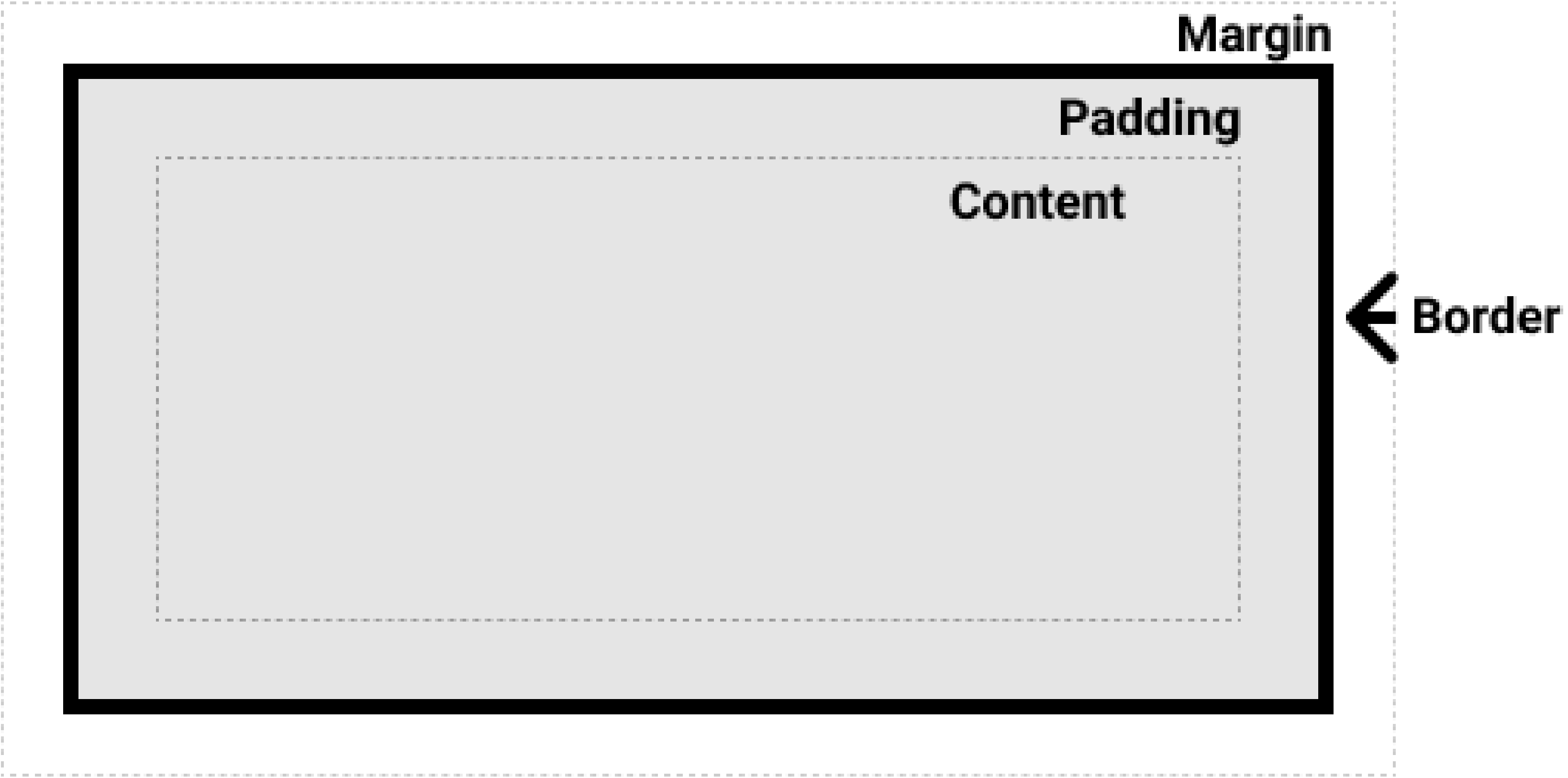


I am a paragraph and this is a span inside that paragraph. A span is an inline element and so does not respect width and height.

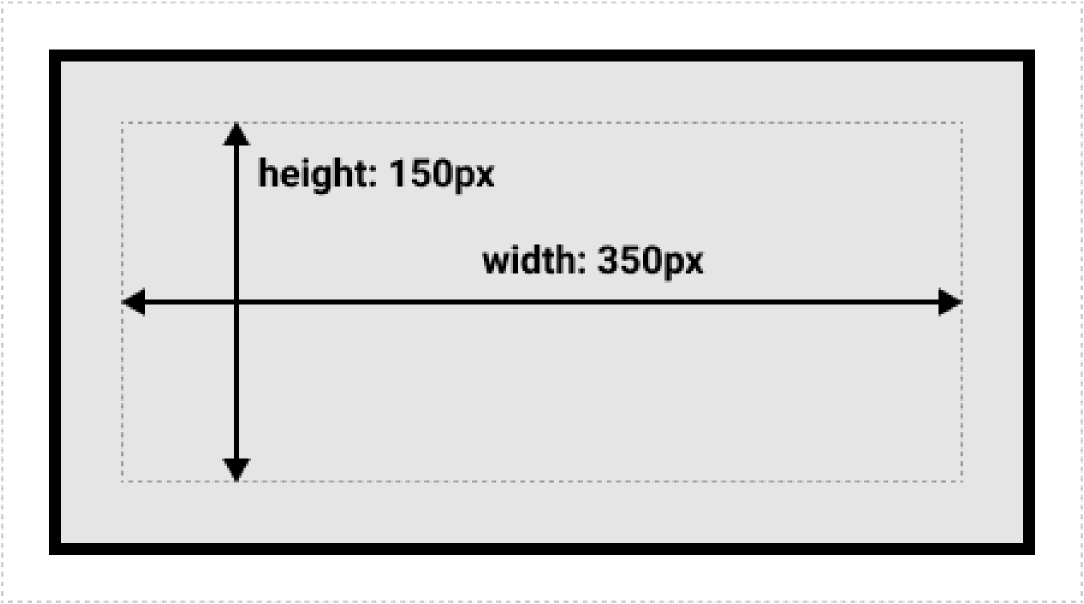


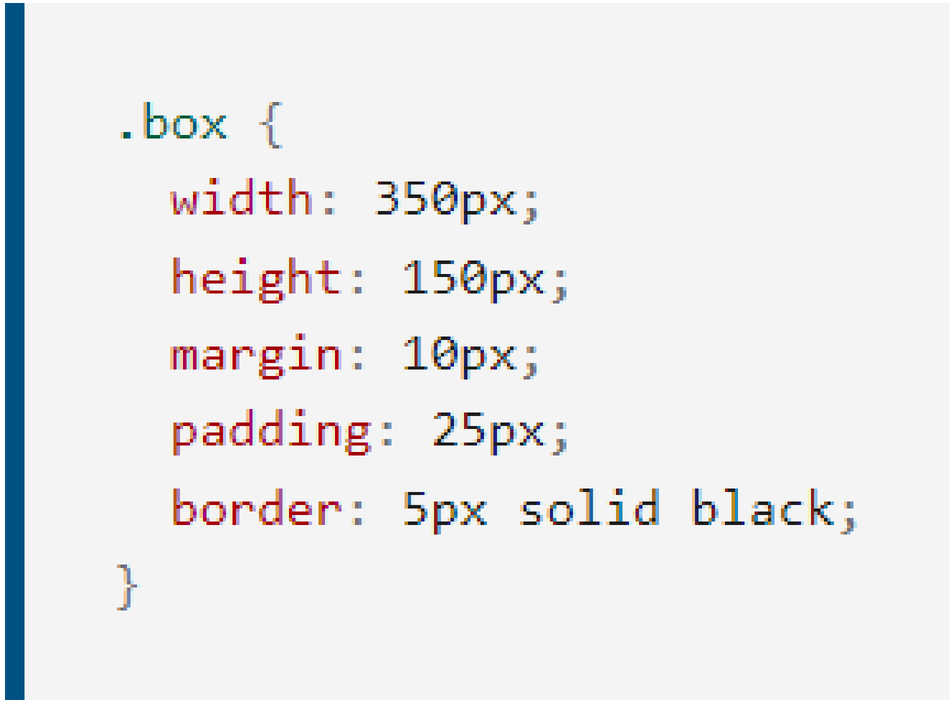
```
span {
  margin: 20px;
  padding: 20px;
  width: 80px;
  height: 50px;
  background-color: lightblue;
  border: 2px solid blue;
  display: inline-block;
}
```

CSS Box!



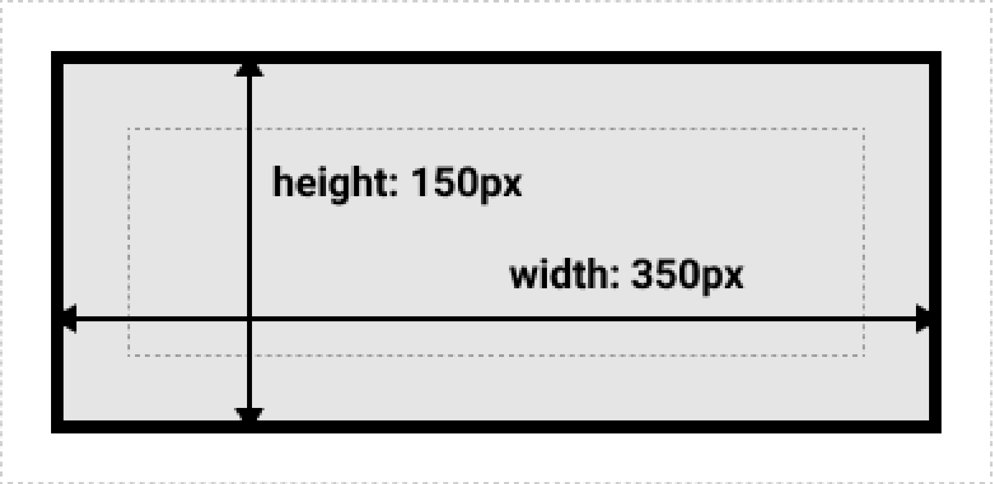
CSS Box!

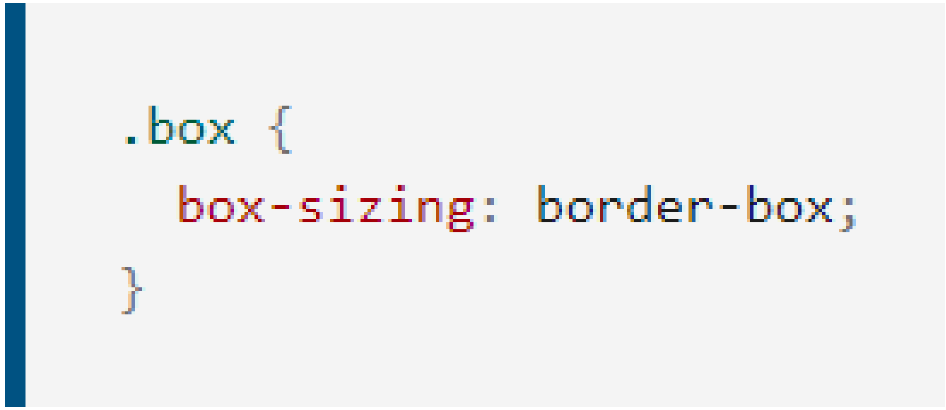




```
.box {
  width: 350px;
  height: 150px;
  margin: 10px;
  padding: 25px;
  border: 5px solid black;
}
```

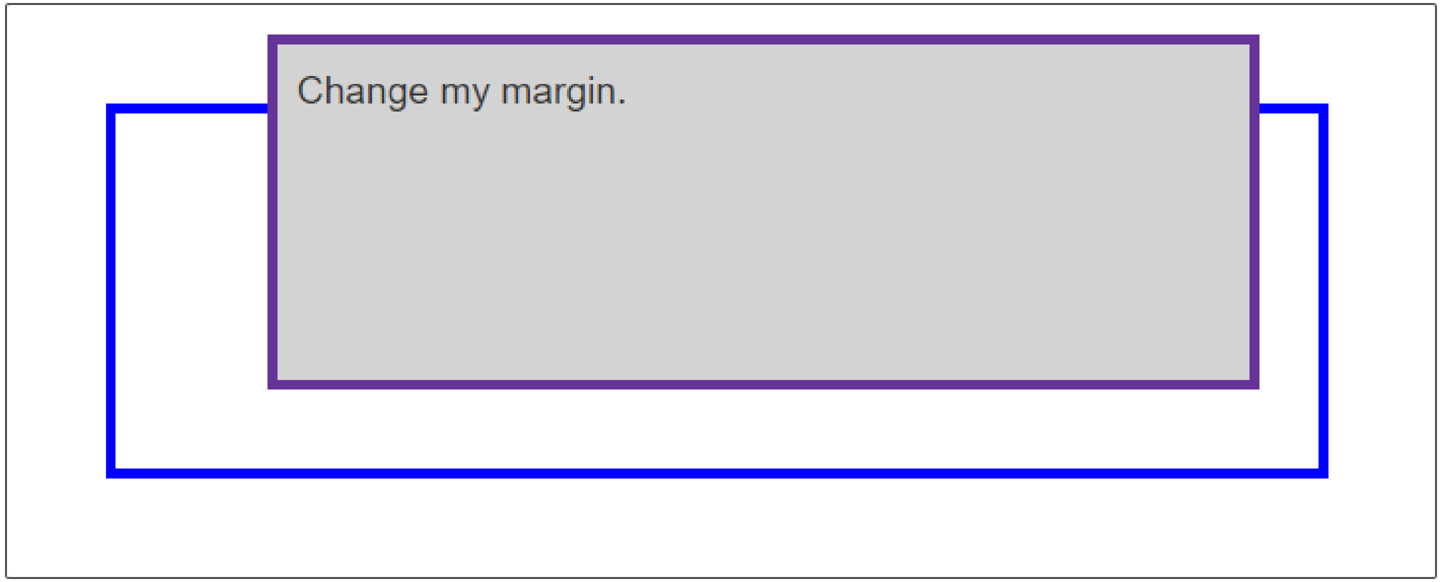
CSS Box!





```
.box {
  box-sizing: border-box;
}
```

CSS Margin

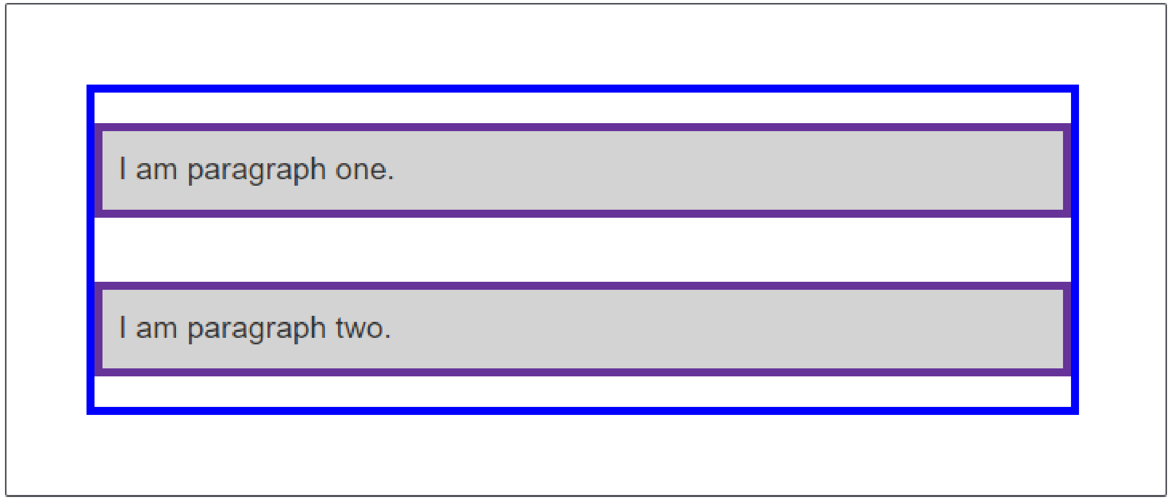


Change my margin.

```
.box {
  margin-top: -40px;
  margin-right: 30px;
  margin-bottom: 40px;
  margin-left: 4em;
}
```

```
<div class="container">
  <div class="box">Change my margin.</div>
</div>
```

Margin Collapsing

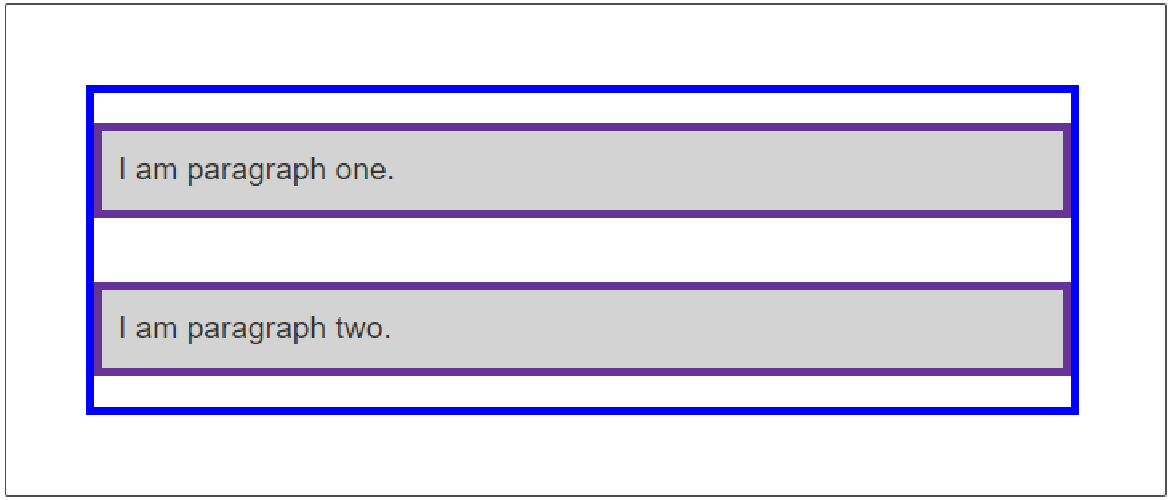


I am paragraph one.

I am paragraph two.

```
.one {
  margin-bottom: 40px;
}

.two {
  margin-top: 10px;
}
```

Margin Collapsing

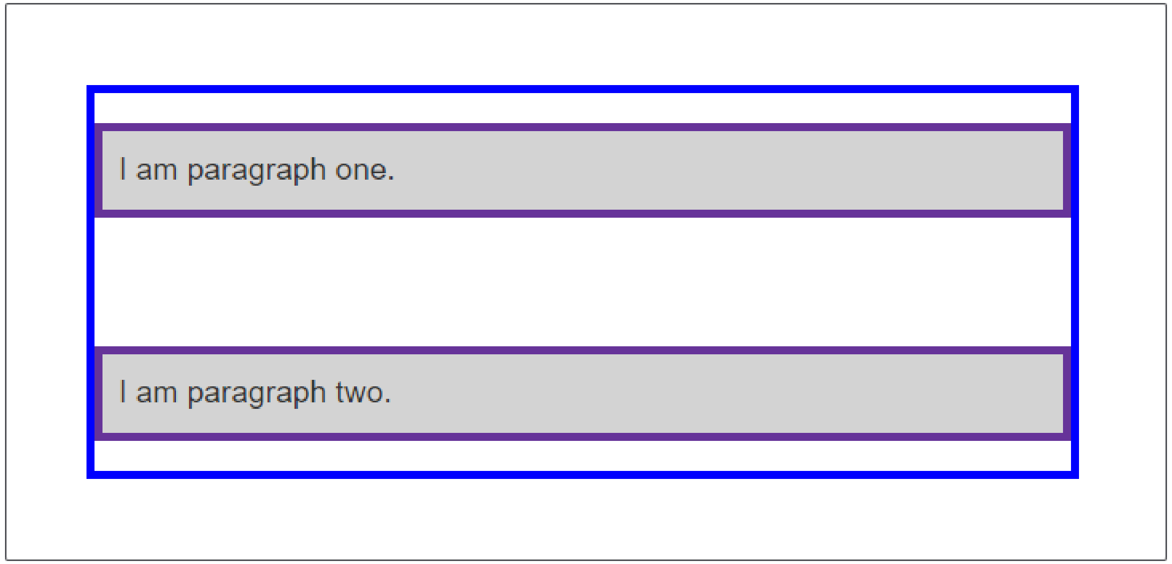


I am paragraph one.

I am paragraph two.

```
.one {
  margin-bottom: 40px;
}

.two {
  margin-top: 30px;
}
```

Margin Collapsing

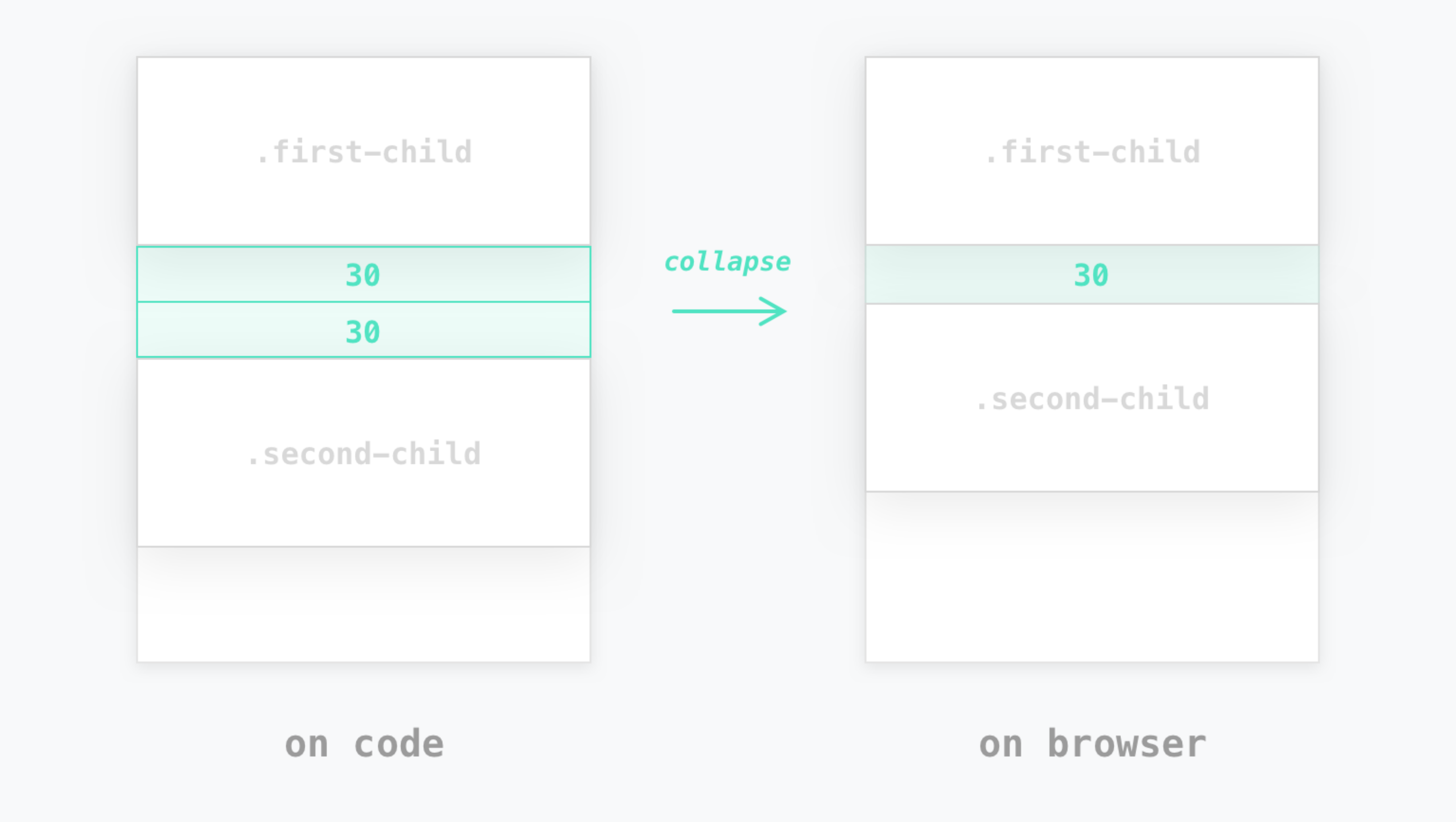


I am paragraph one.

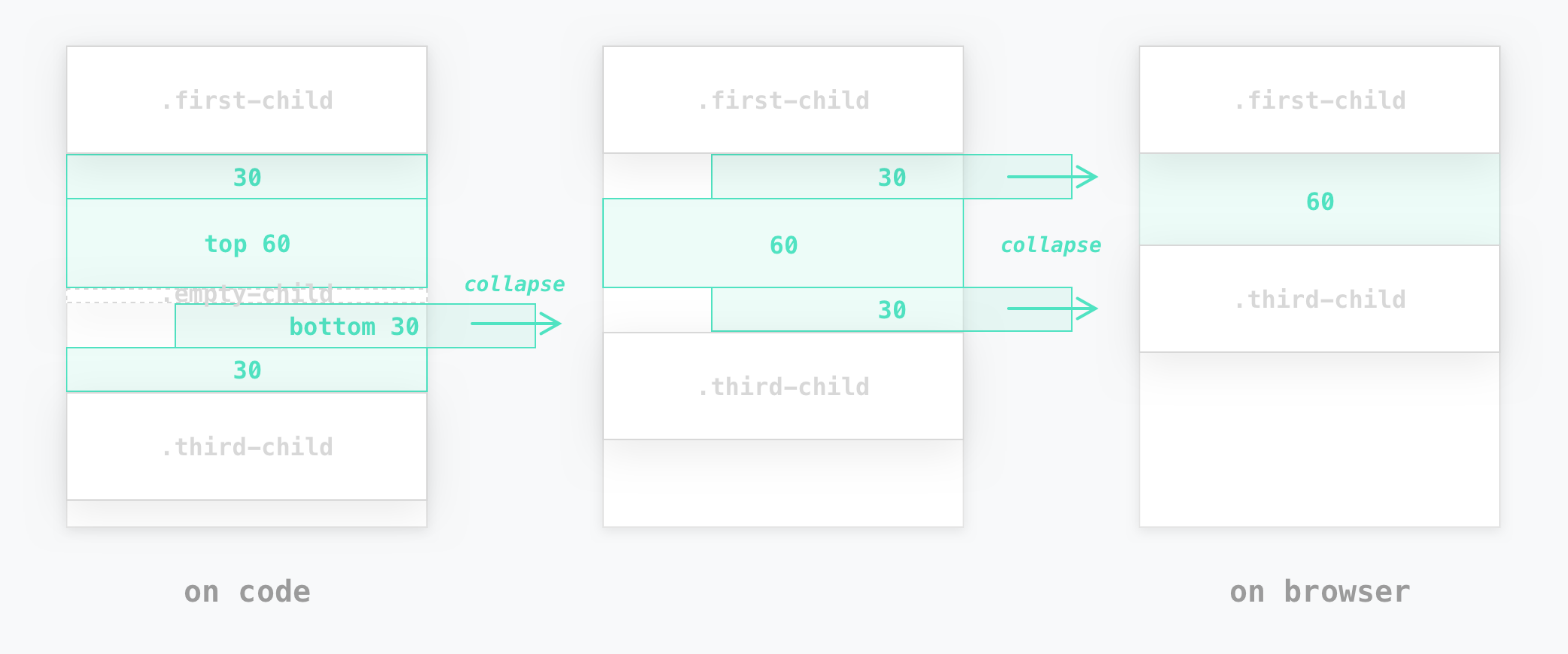
I am paragraph two.

```
.one {
  margin-bottom: 40px;
}

.two {
  margin-top: 80px;
}
```

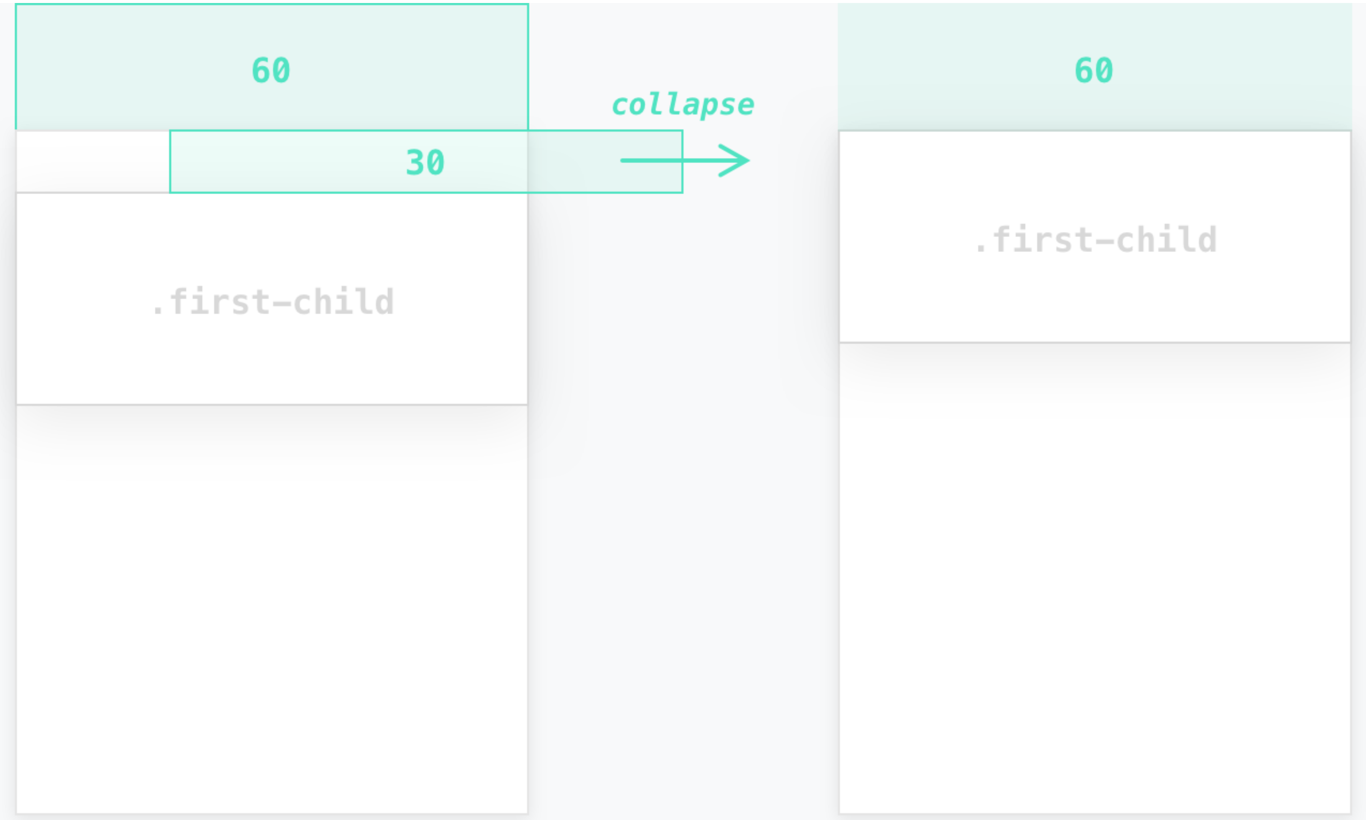
Margin Collapsing



Margin Collapsing

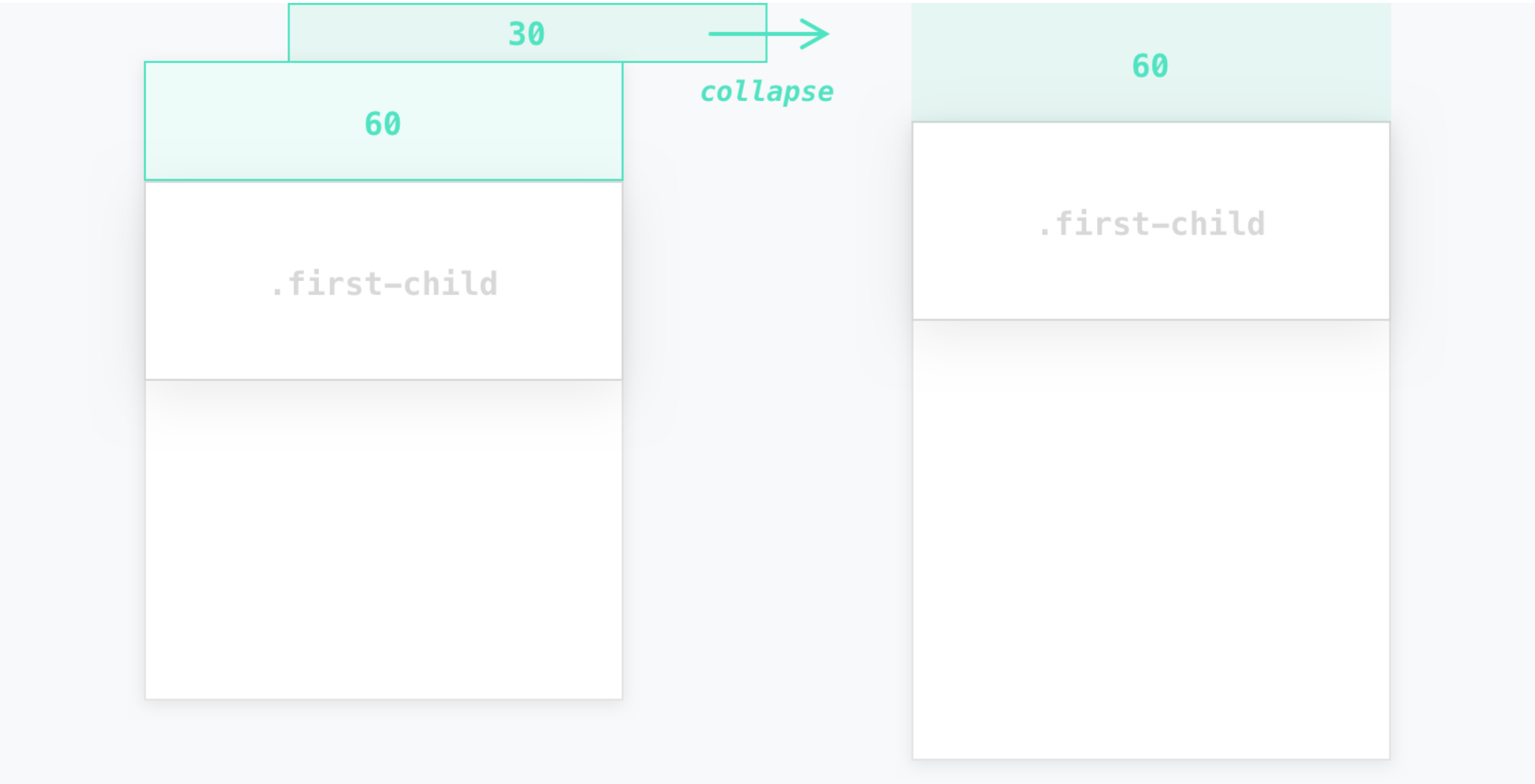


Margin Collapsing



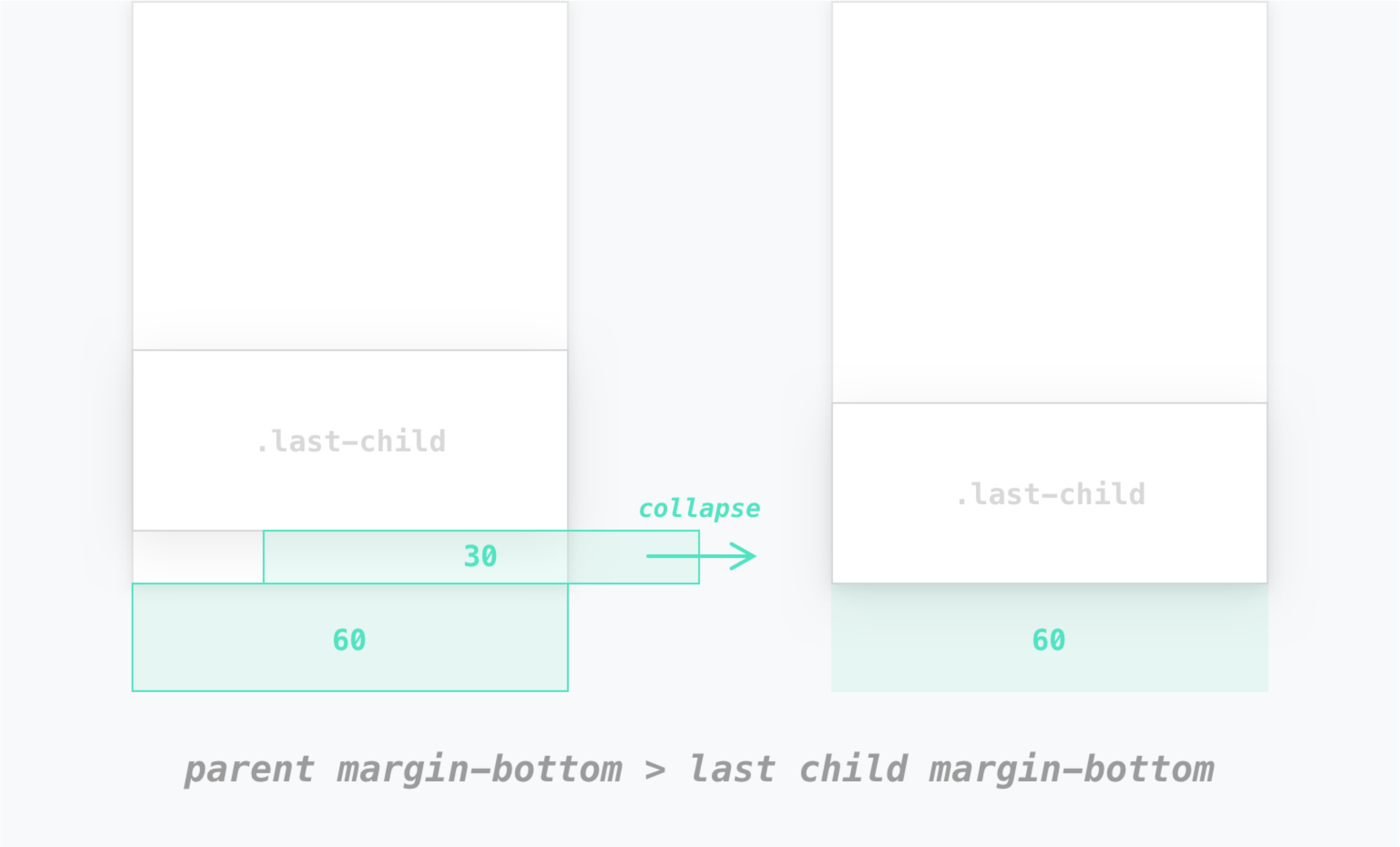
parent margin-top > first child margin-top

Margin Collapsing



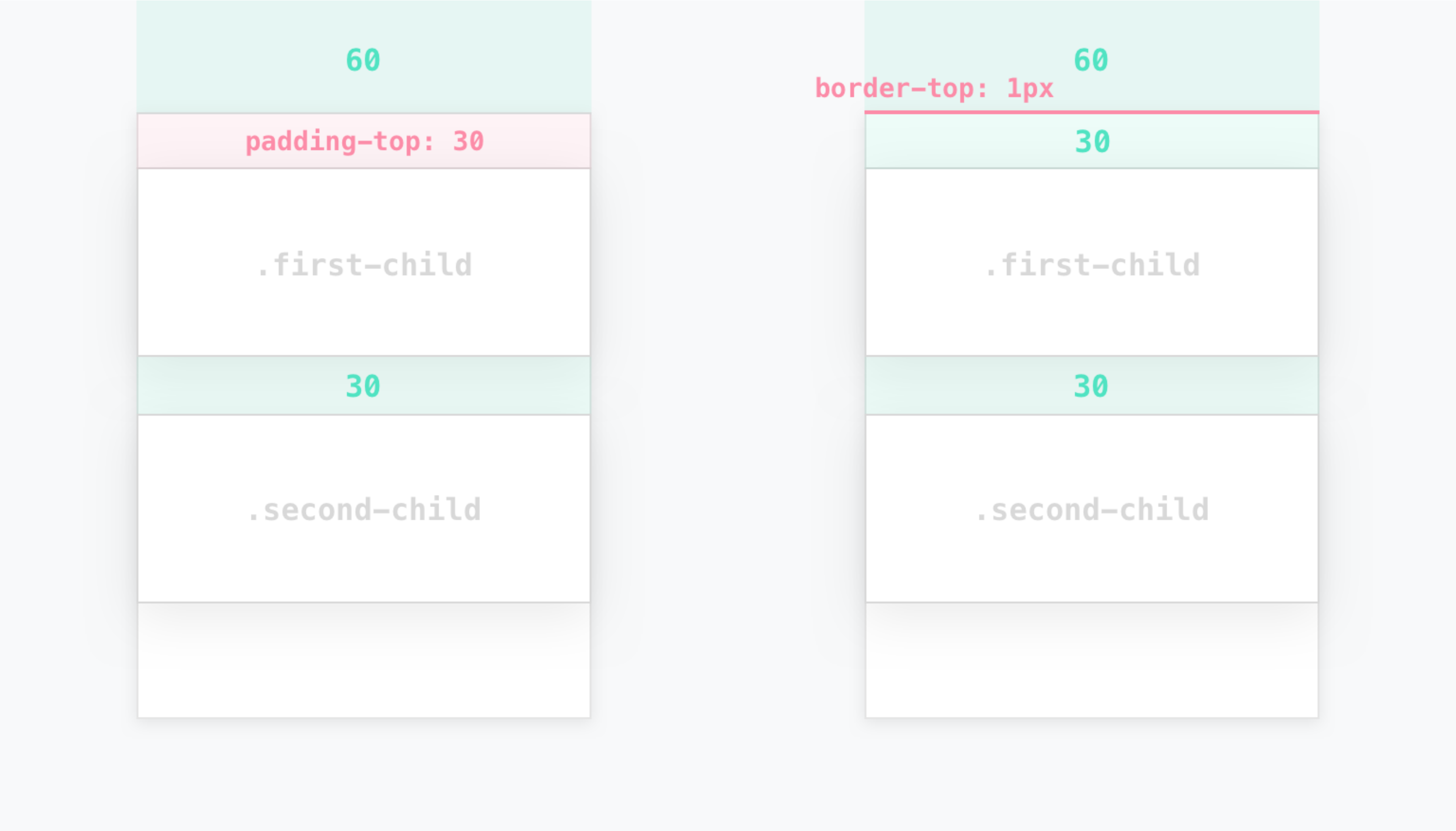
parent margin-top < first child margin-top

Margin Collapsing

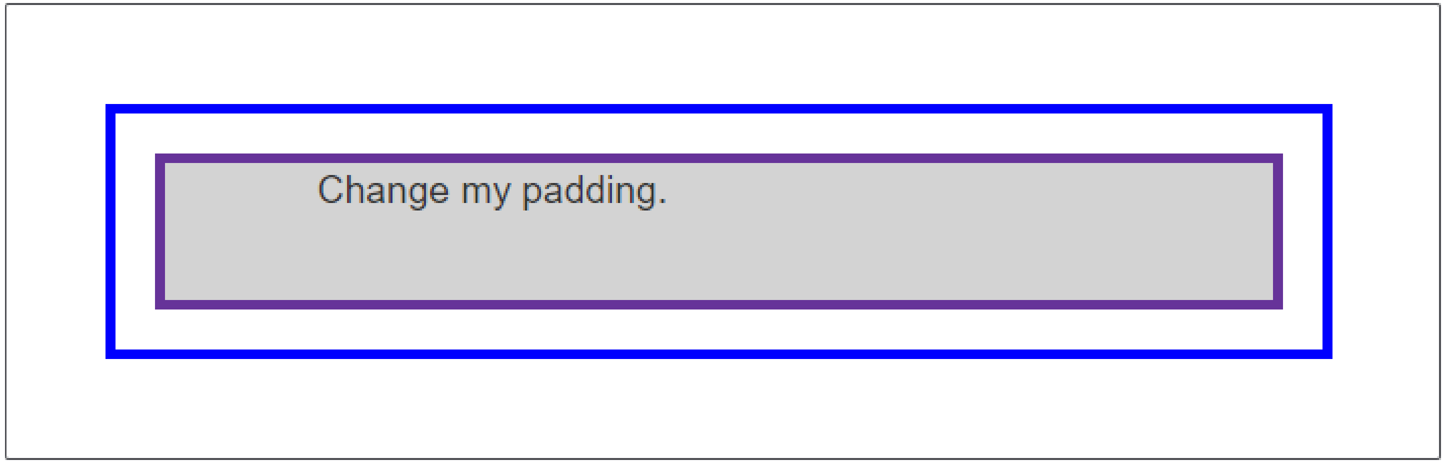


parent margin-bottom > last child margin-bottom

Margin Collapsing



CSS Padding

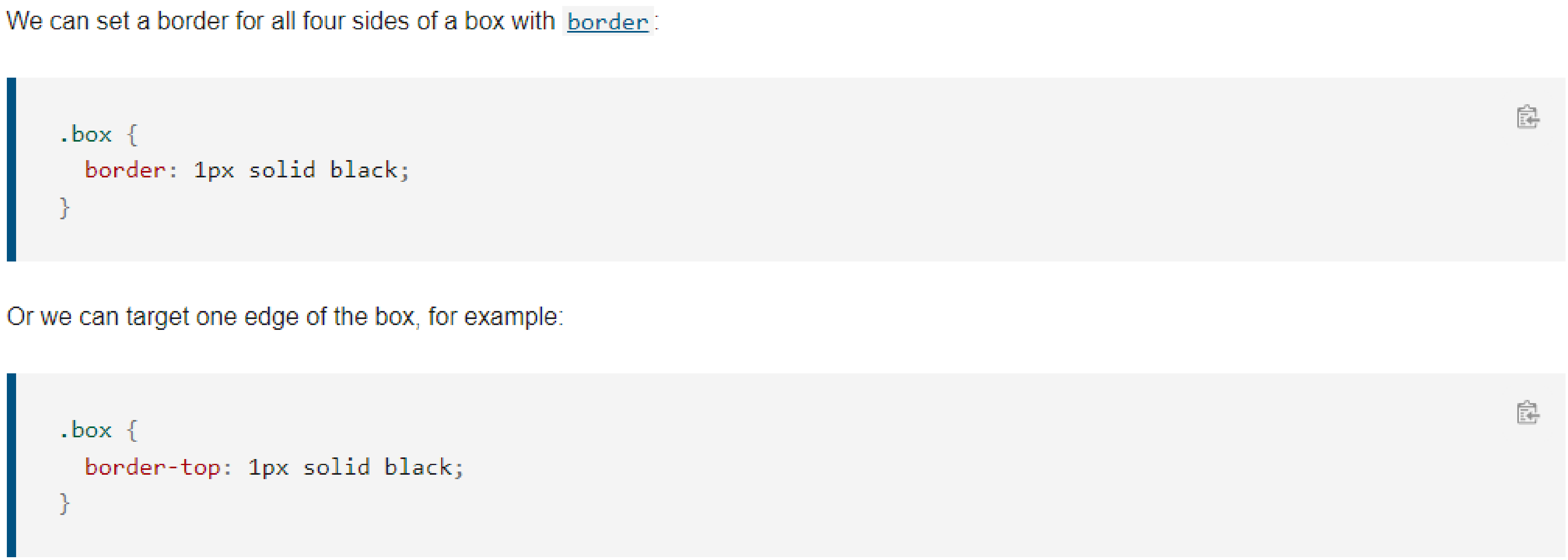


Change my padding.

```
.box {
  padding-top: 0;
  padding-right: 30px;
  padding-bottom: 40px;
  padding-left: 4em;
}

.container {
  padding: 20px;
}
```

```
<div class="container">
  <div class="box">Change my padding.</div>
</div>
```

CSS Border



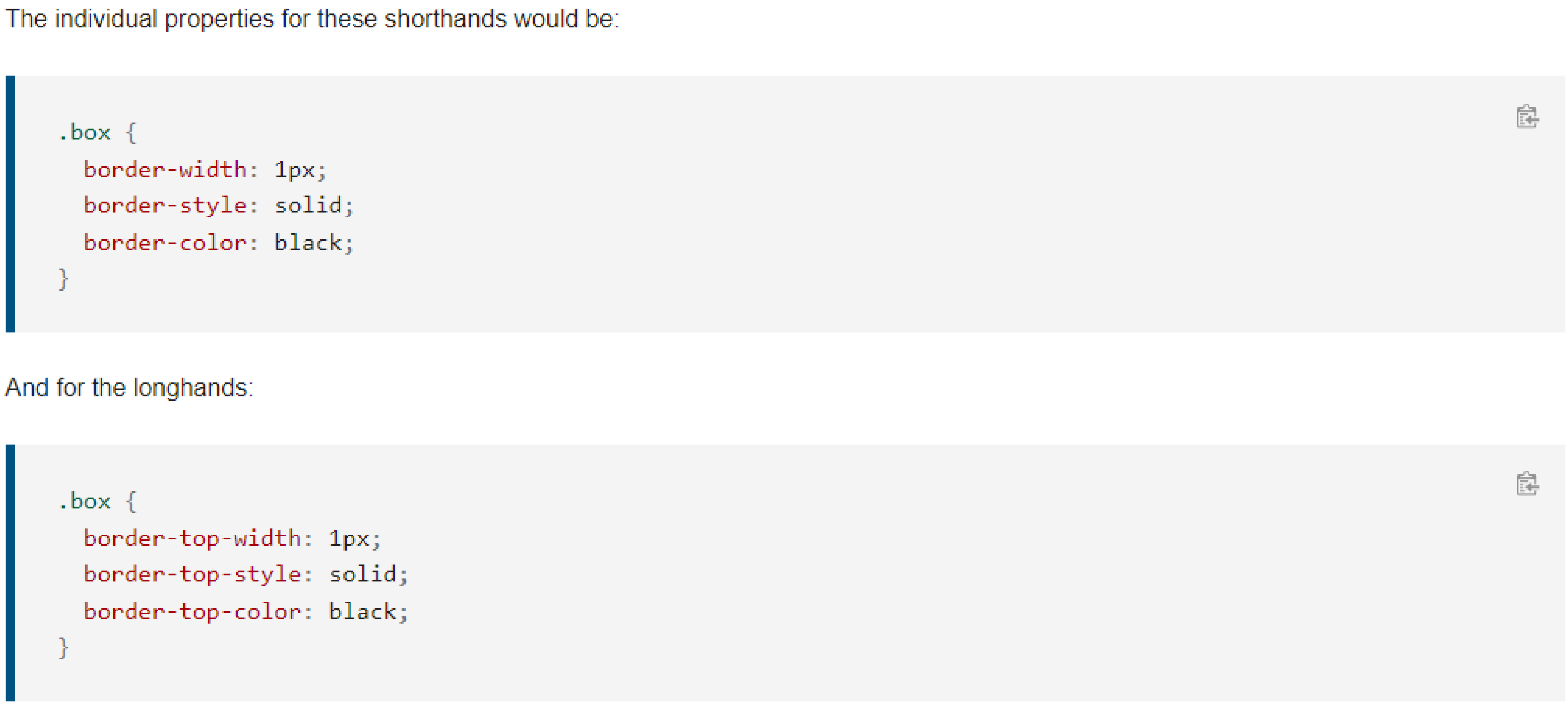
We can set a border for all four sides of a box with `border`:

```
.box {
  border: 1px solid black;
}
```

Or we can target one edge of the box, for example:

```
.box {
  border-top: 1px solid black;
}
```

CSS Border



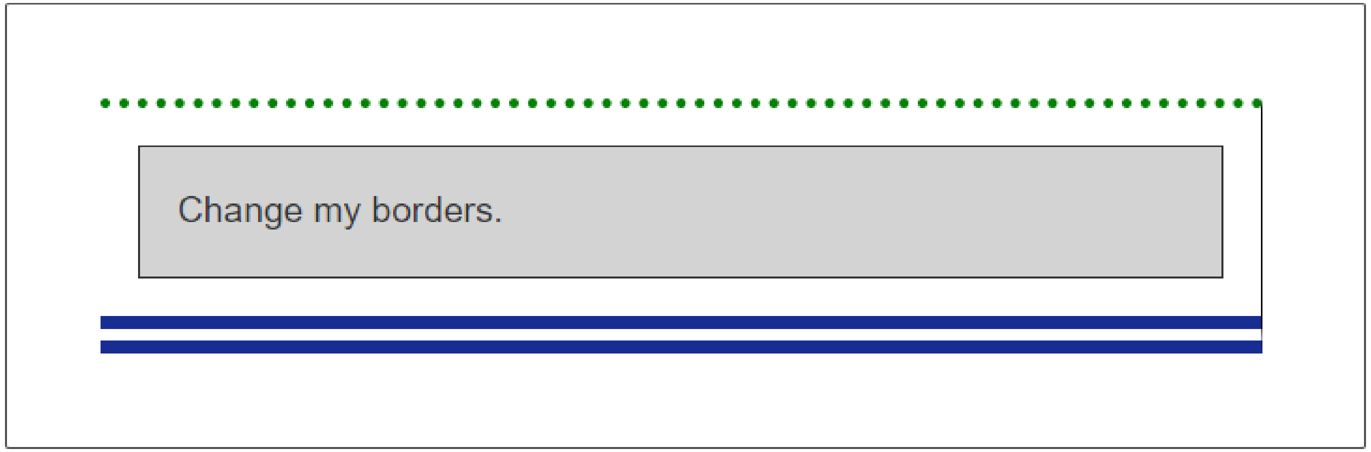
The individual properties for these shorthands would be:

```
.box {
  border-width: 1px;
  border-style: solid;
  border-color: black;
}
```

And for the longhands:

```
.box {
  border-top-width: 1px;
  border-top-style: solid;
  border-top-color: black;
}
```

CSS Border

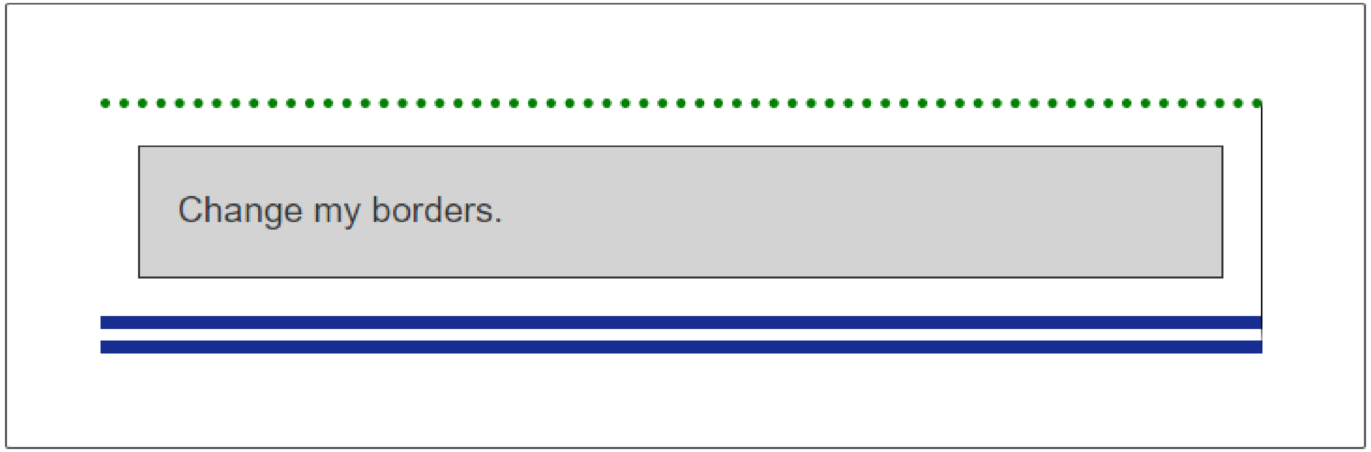


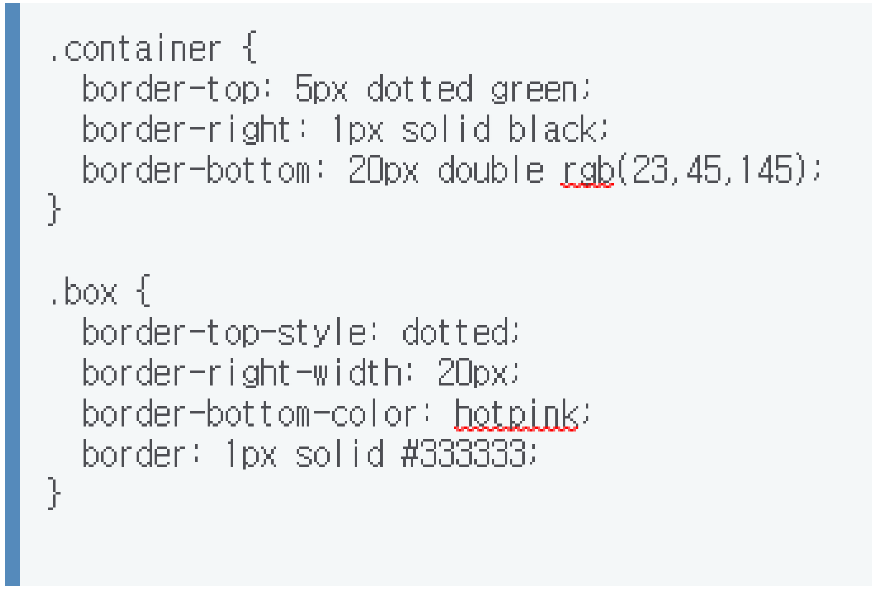
Change my borders.

```
.container {
  border-top: 5px dotted green;
  border-right: 1px solid black;
  border-bottom: 20px double rgb(23,45,145);
}

.box {
  border-top-style: dotted;
  border-right-width: 20px;
  border-bottom-color: hotpink;
  border: 1px solid #333333;
}
```

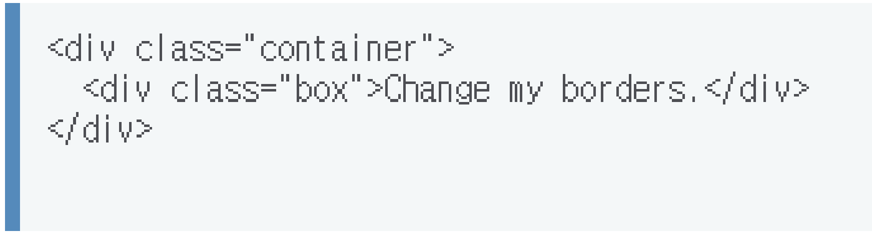
```
<div class="container">
  <div class="box">Change my borders.</div>
</div>
```

CSS Border



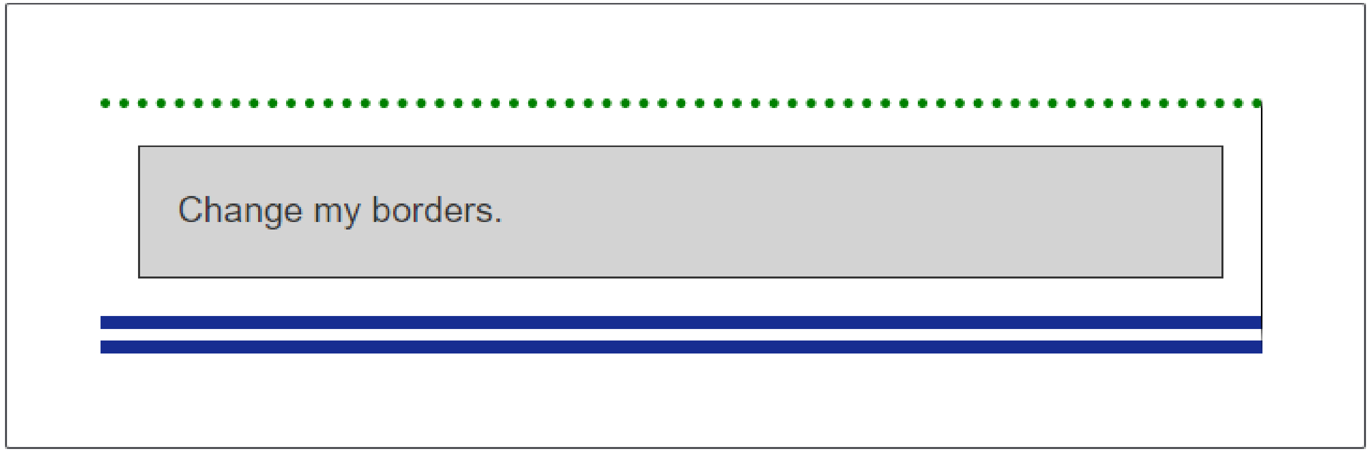


```
.container {
  border-top: 5px dotted green;
  border-right: 1px solid black;
  border-bottom: 20px double rgb(23,45,145);
}

.box {
  border-top-style: dotted;
  border-right-width: 20px;
  border-bottom-color: hotpink;
  border: 1px solid #333333;
}
```

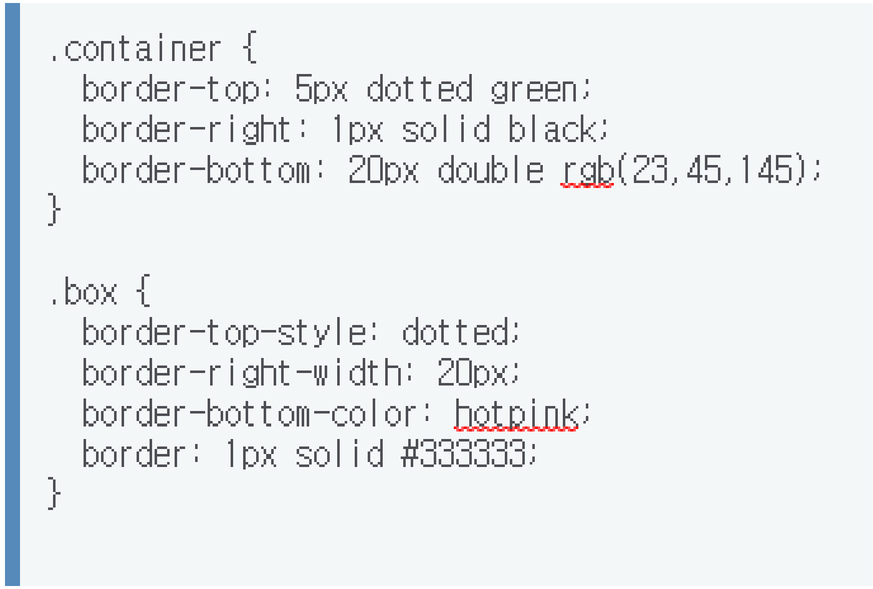


```
<div class="container">
  <div class="box">Change my borders.</div>
</div>
```

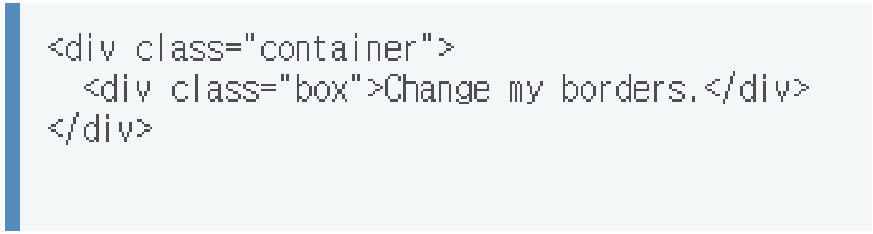
CSS Border



Change my borders.

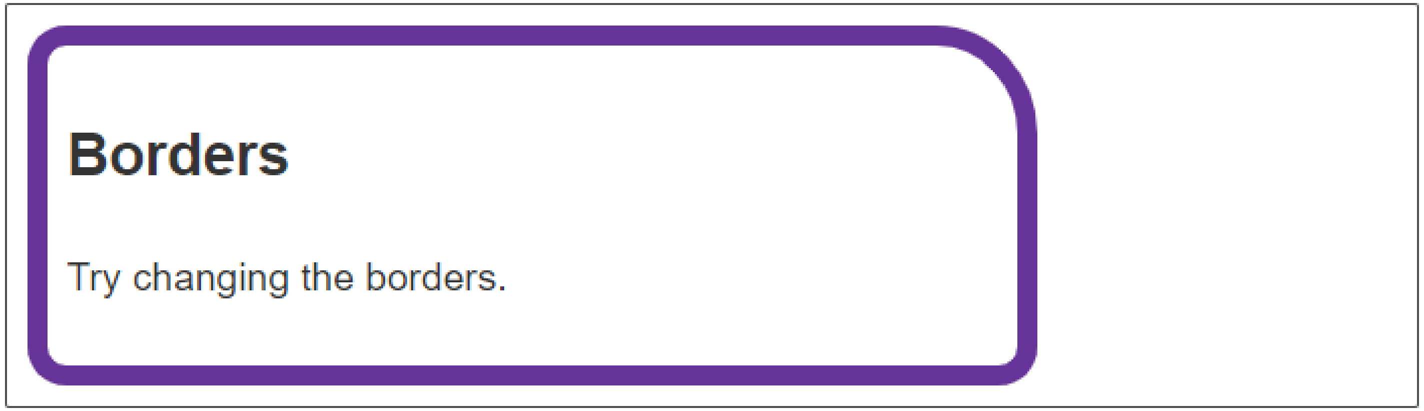


```
.container {
  border-top: 5px dotted green;
  border-right: 1px solid black;
  border-bottom: 20px double rgb(23,45,145);
}

.box {
  border-top-style: dotted;
  border-right-width: 20px;
  border-bottom-color: hotpink;
  border: 1px solid #333333;
}
```



```
<div class="container">
  <div class="box">Change my borders.</div>
</div>
```

CSS Border



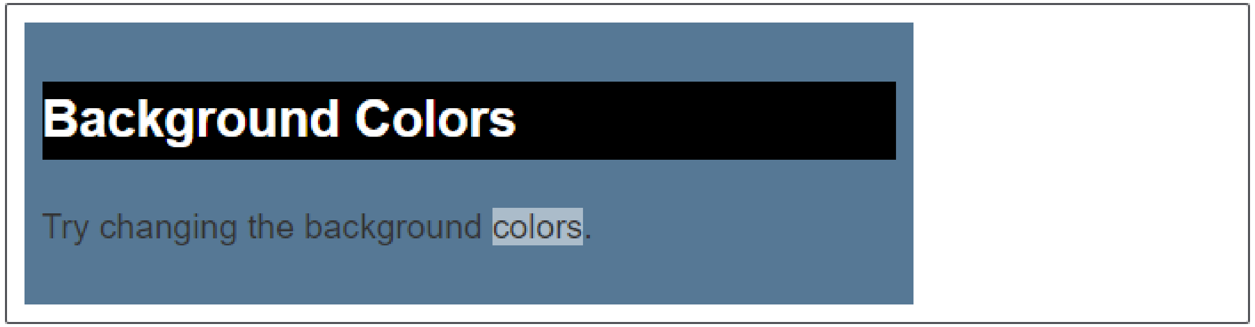
Borders

Try changing the borders.

```
.box {
  border: 10px solid rebeccapurple;
  border-radius: 1em;
  border-top-right-radius: 10% 30%;
}
```

```
<div class="box">
  <h2>Borders</h2>
  <p>Try changing the borders.</p>
</div>
```

CSS background-color



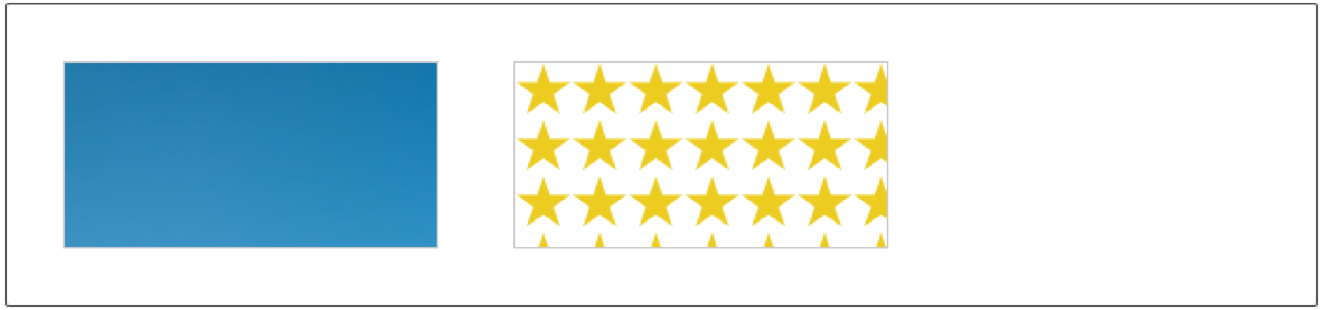
Background Colors

Try changing the background colors.

```
.box {
  background-color: #567895;
}

h2 {
  background-color: black;
  color: white;
}
span {
  background-color: rgba(255,255,255,.5);
}
```

```
<div class="box">
  <h2>Background Colors</h2>
  <p>Try changing the background <span>colors</span>.</p>
</div>
```

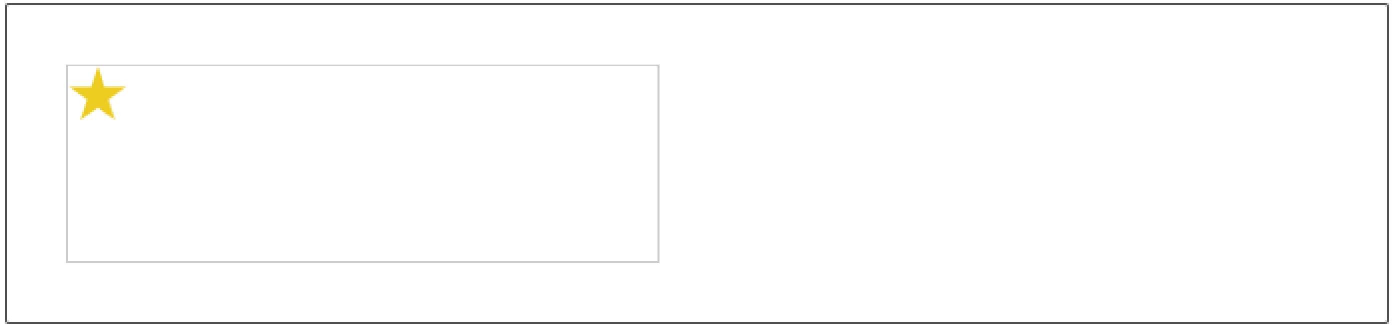
CSS background-image



```css
.a {
  background-image: url(balloons.jpg);
}

.b {
  background-image: url(star.png);
}
```

```html
<div class="wrapper">
  <div class="box a"></div>
  <div class="box b"></div>
</div>
```

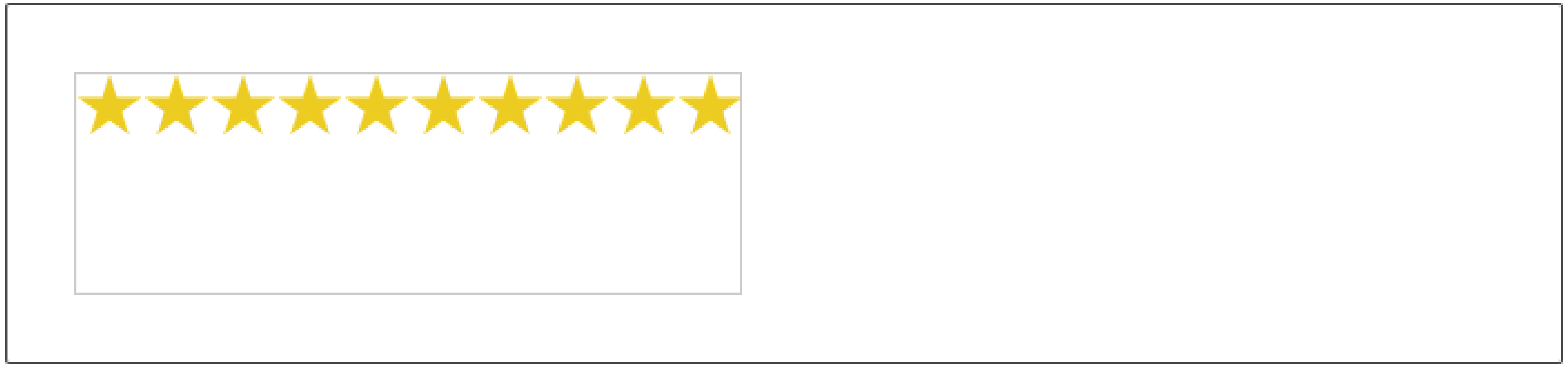
CSS background-repeat

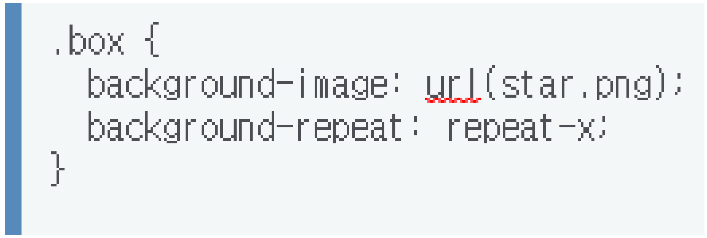


```css
.box {
  background-image: url(star.png);
  background-repeat: no-repeat;
}
```

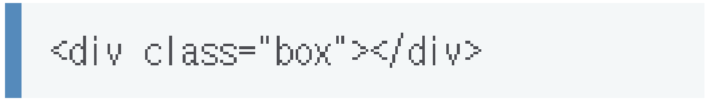
```html
<div class="box"></div>
```

CSS background-repeat



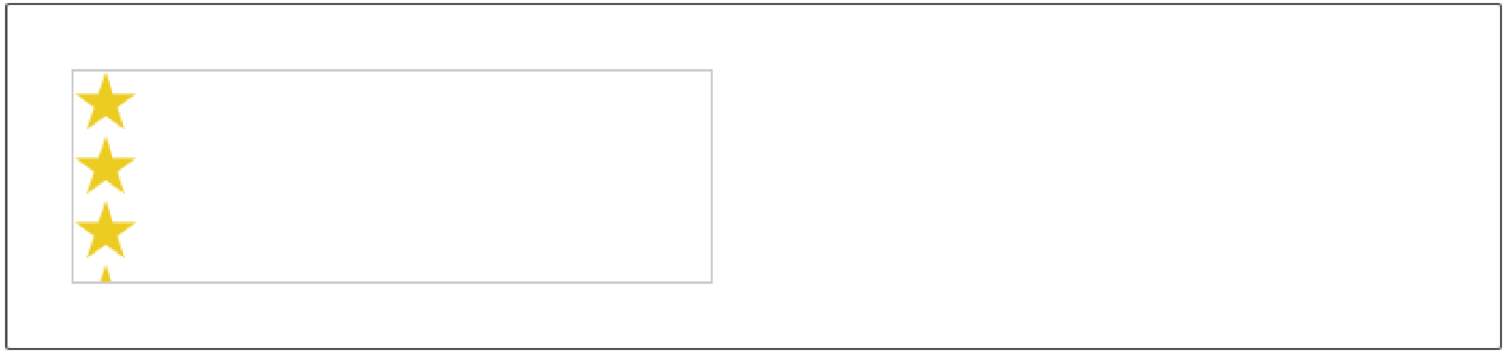


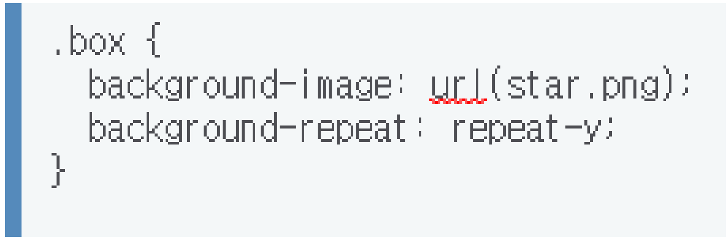
```
.box {
  background-image: url(star.png);
  background-repeat: repeat-x;
}
```



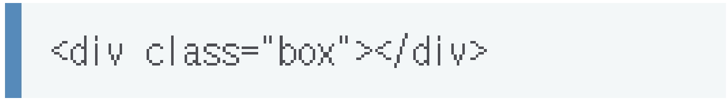
```
<div class="box"></div>
```

CSS background-repeat



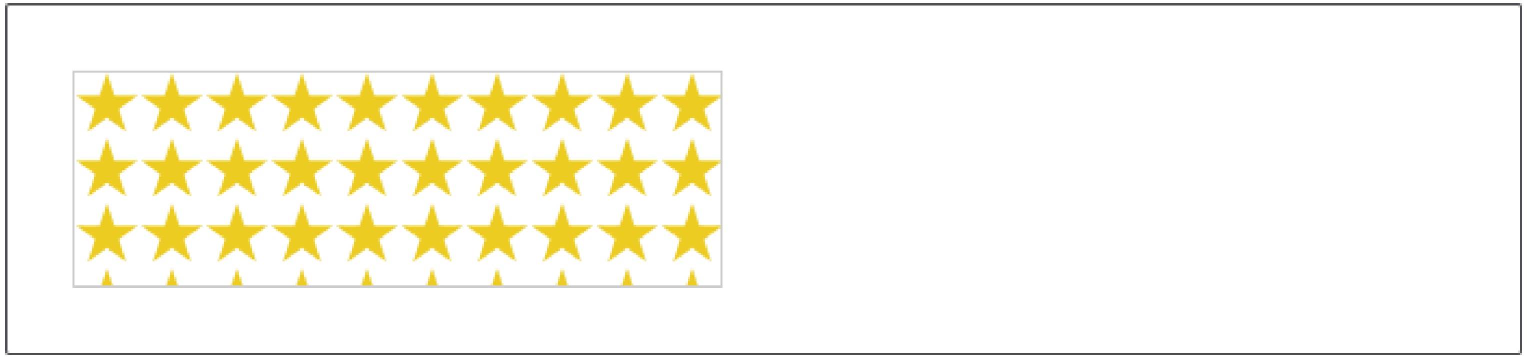


```
.box {
  background-image: url(star.png);
  background-repeat: repeat-y;
}
```



```
<div class="box"></div>
```

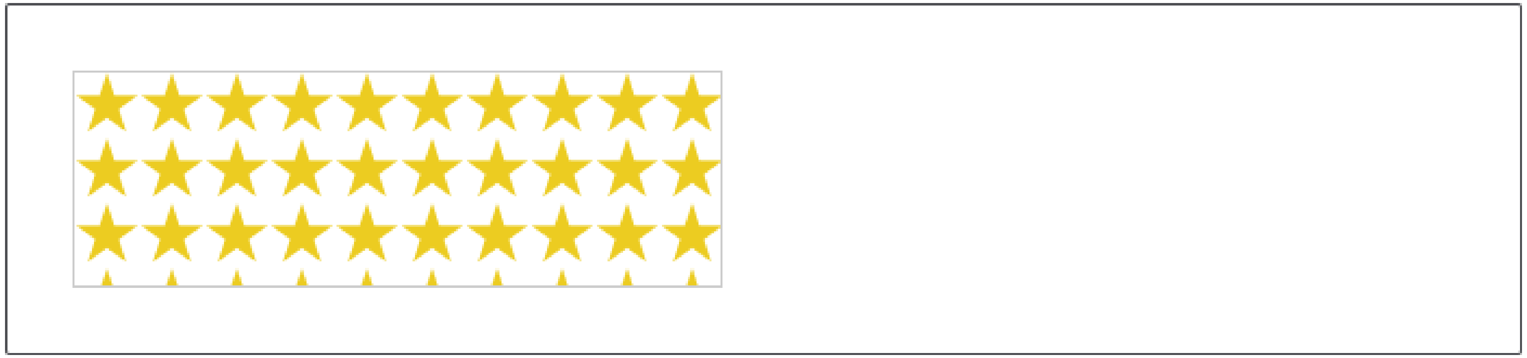
CSS background-repeat



```
.box {
  background-image: url(star.png);
  background-repeat: repeat;
}
```

```
<div class="box"></div>
```

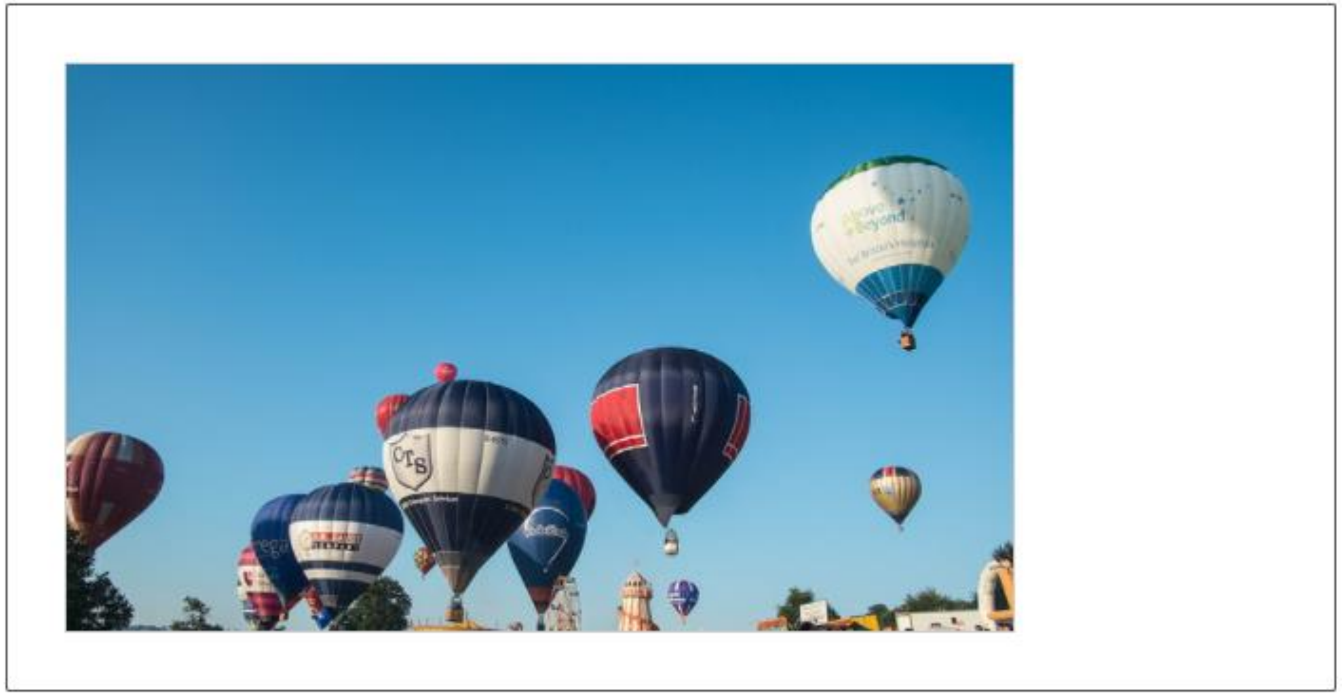
CSS background-repeat

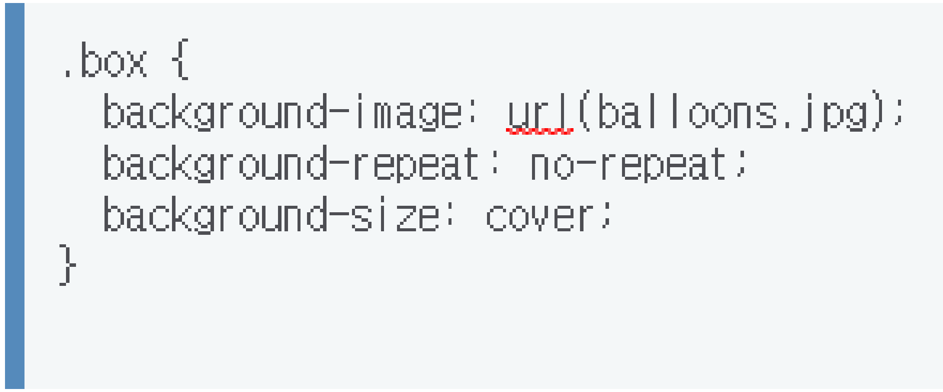


```
.box {
  background-image: url(star.png);
  background-repeat: repeat;
}
```

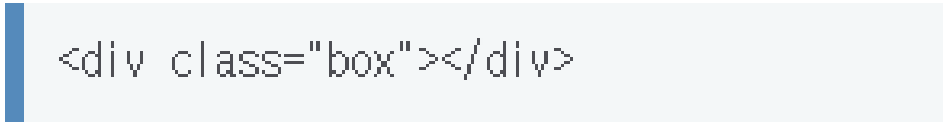
```
<div class="box"></div>
```

CSS background-size



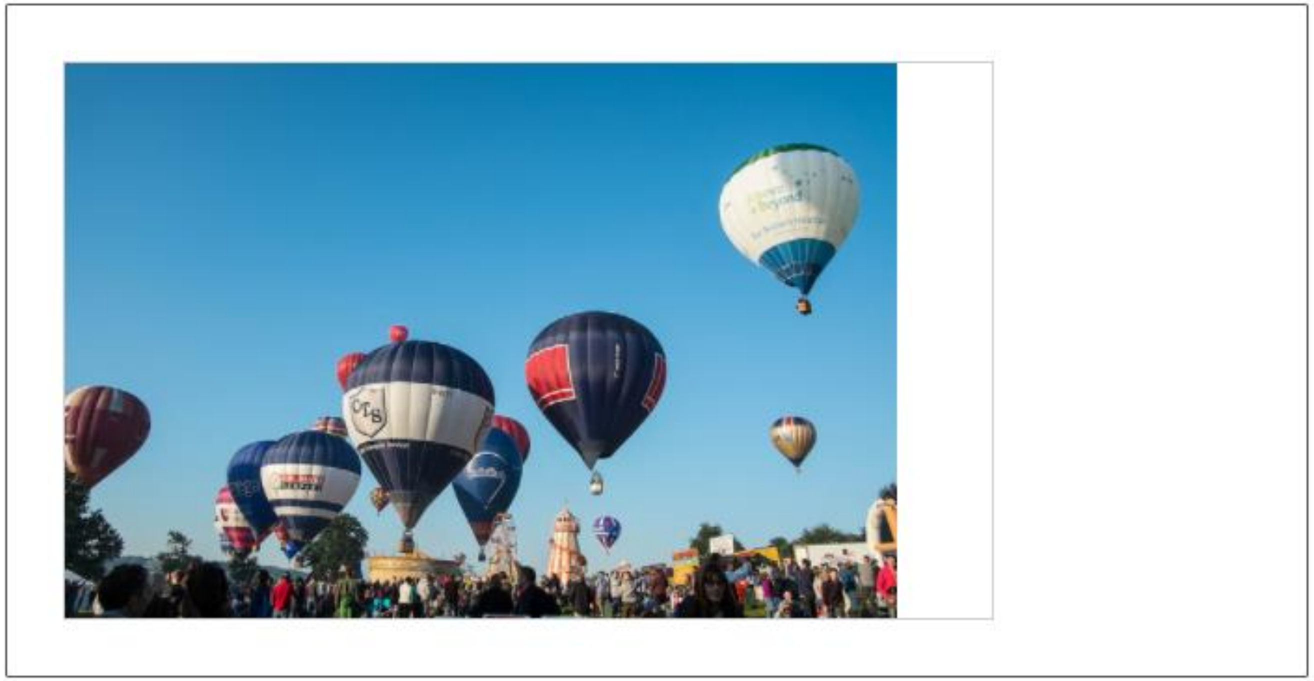


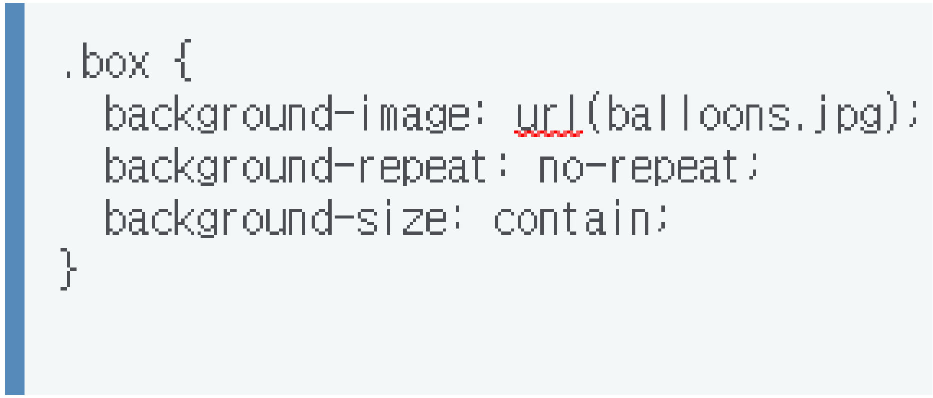
```
.box {
  background-image: url(balloons.jpg);
  background-repeat: no-repeat;
  background-size: cover;
}
```



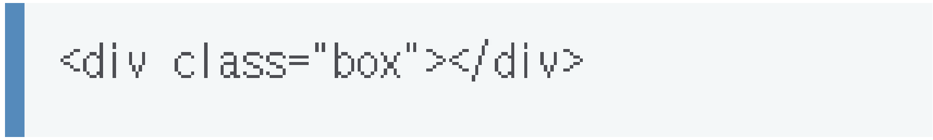
```
<div class="box"></div>
```

CSS background-size



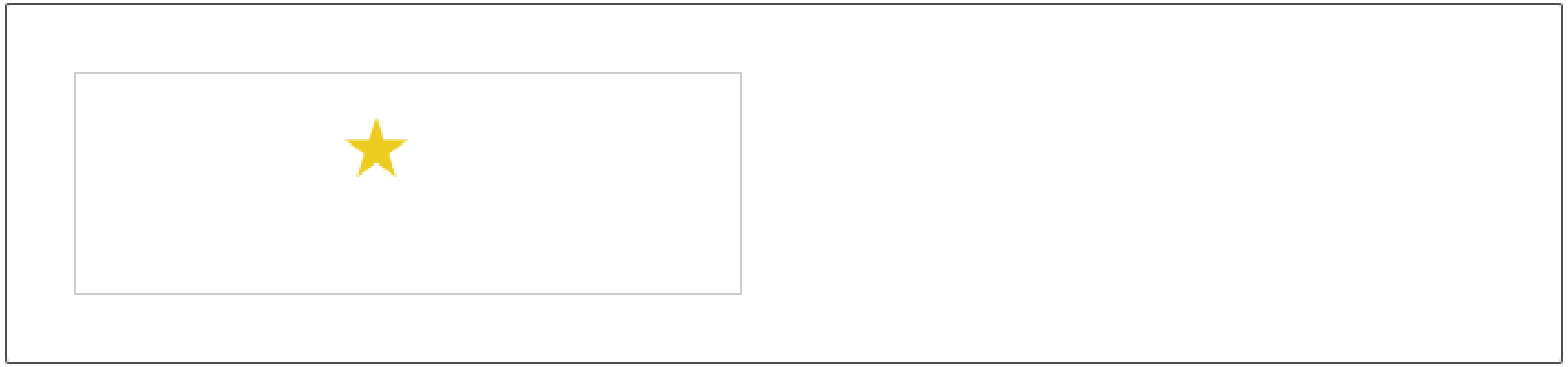


```
.box {
  background-image: url(balloons.jpg);
  background-repeat: no-repeat;
  background-size: contain;
}
```



```
<div class="box"></div>
```

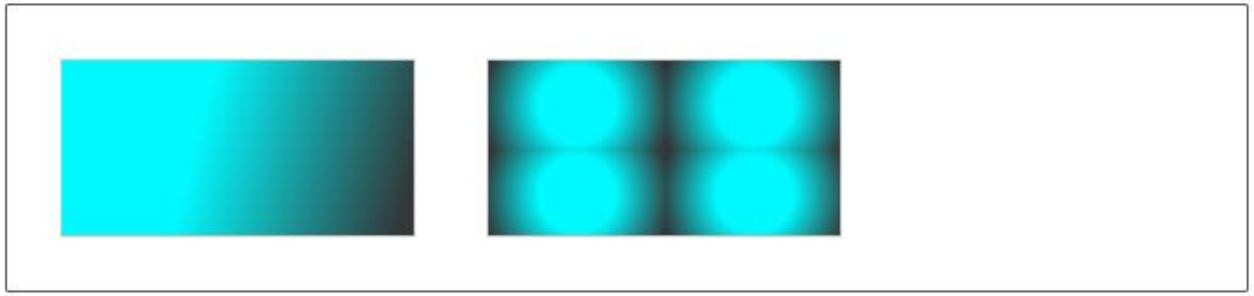
CSS background-position

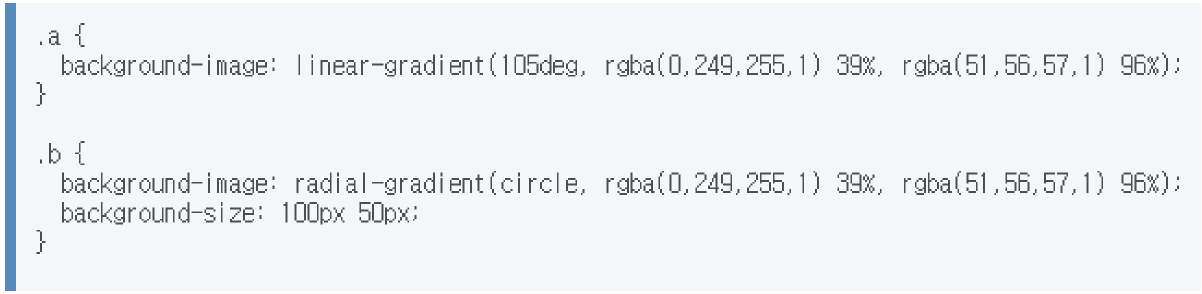


```
.box {
  background-image: url(star.png);
  background-repeat: no-repeat;
  background-position: 120px 1em;
}
```

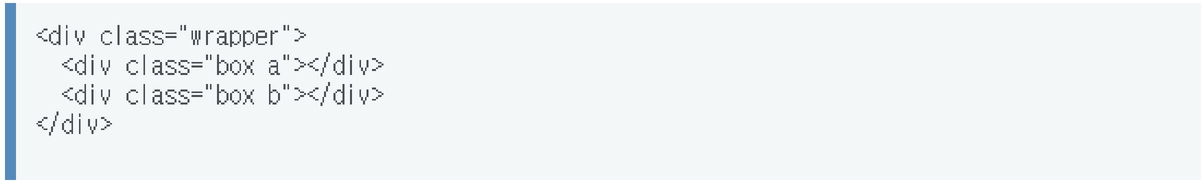
```
<div class="box"></div>
```

CSS Gradient background



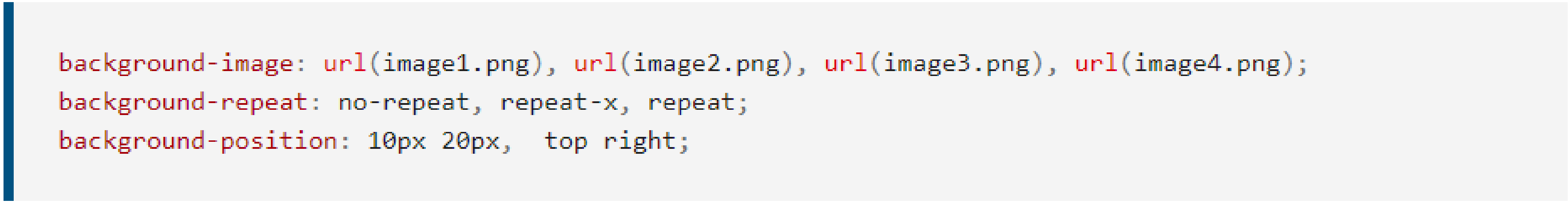


```
.a {
  background-image: linear-gradient(105deg, rgba(0,249,255,1) 39%, rgba(51,56,57,1) 96%);
}

.b {
  background-image: radial-gradient(circle, rgba(0,249,255,1) 39%, rgba(51,56,57,1) 96%);
  background-size: 100px 50px;
}
```



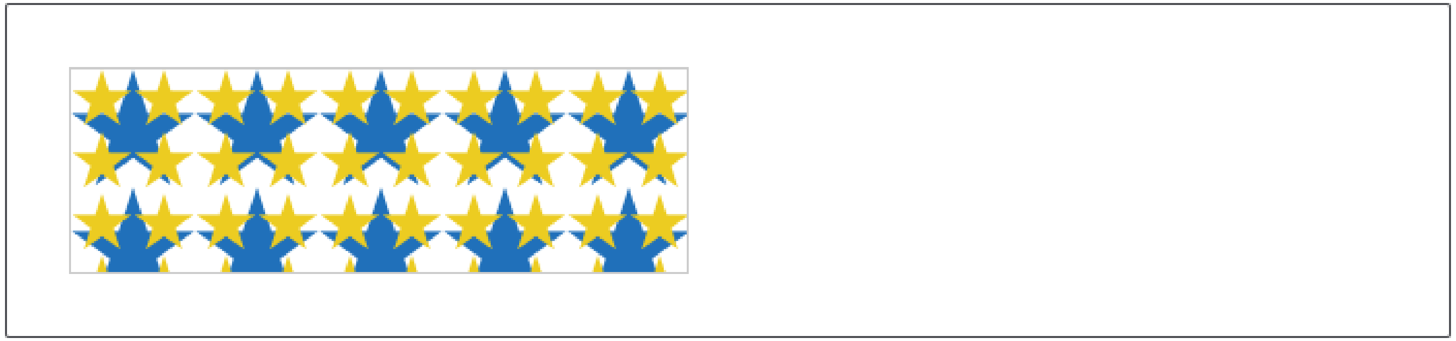
```
<div class="wrapper">
  <div class="box a"></div>
  <div class="box b"></div>
</div>
```

CSS Multiple Background



```
background-image: url(image1.png), url(image2.png), url(image3.png), url(image4.png);
background-repeat: no-repeat, repeat-x, repeat;
background-position: 10px 20px,  top right;
```

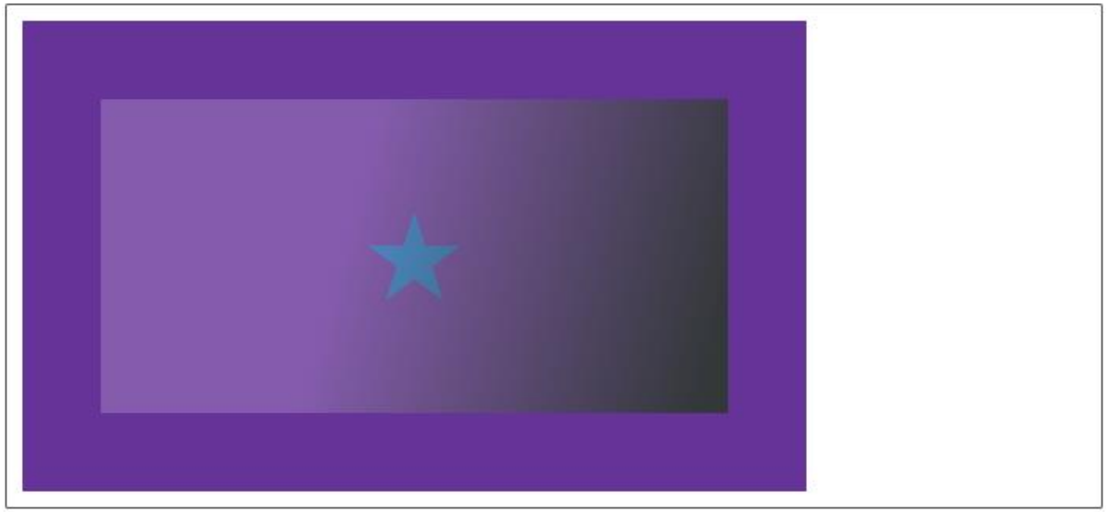
CSS Multiple Background

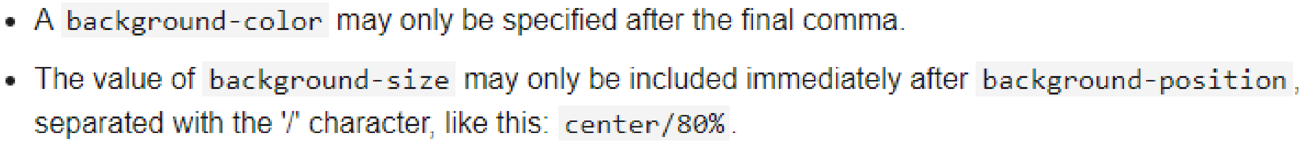


```
.box {
  background-image: url(star.png), url(big-star.png);
}
```

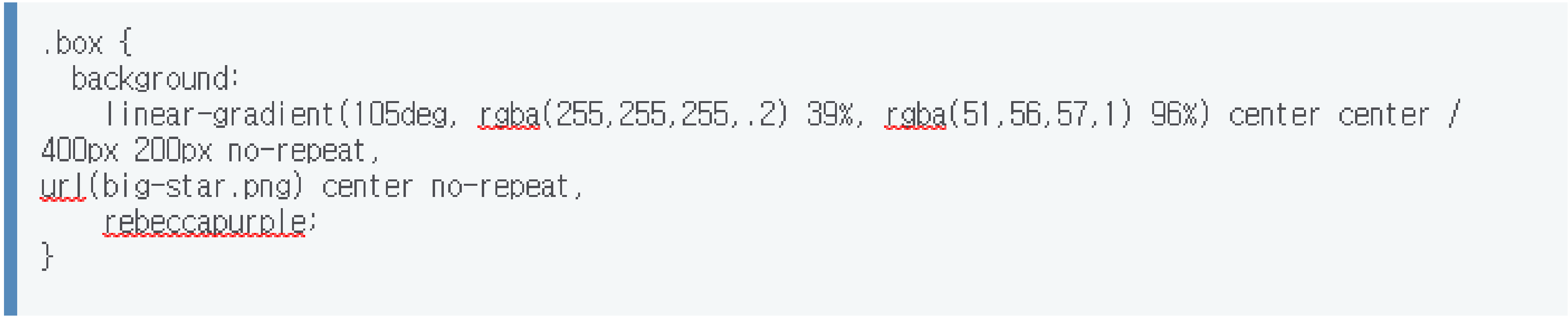
```
<div class="wrapper">
  <div class="box"></div>
</div>
```

CSS Background Shorthand





- A `background-color` may only be specified after the final comma.
- The value of `background-size` may only be included immediately after `background-position`, separated with the '/' character, like this: `center/80%`.



```
.box {
  background:
    linear-gradient(105deg, rgba(255,255,255,.2) 39%, rgba(51,56,57,1) 96%) center center /
400px 200px no-repeat,
url(big-star.png) center no-repeat,
    rebeccapurple;
}
```