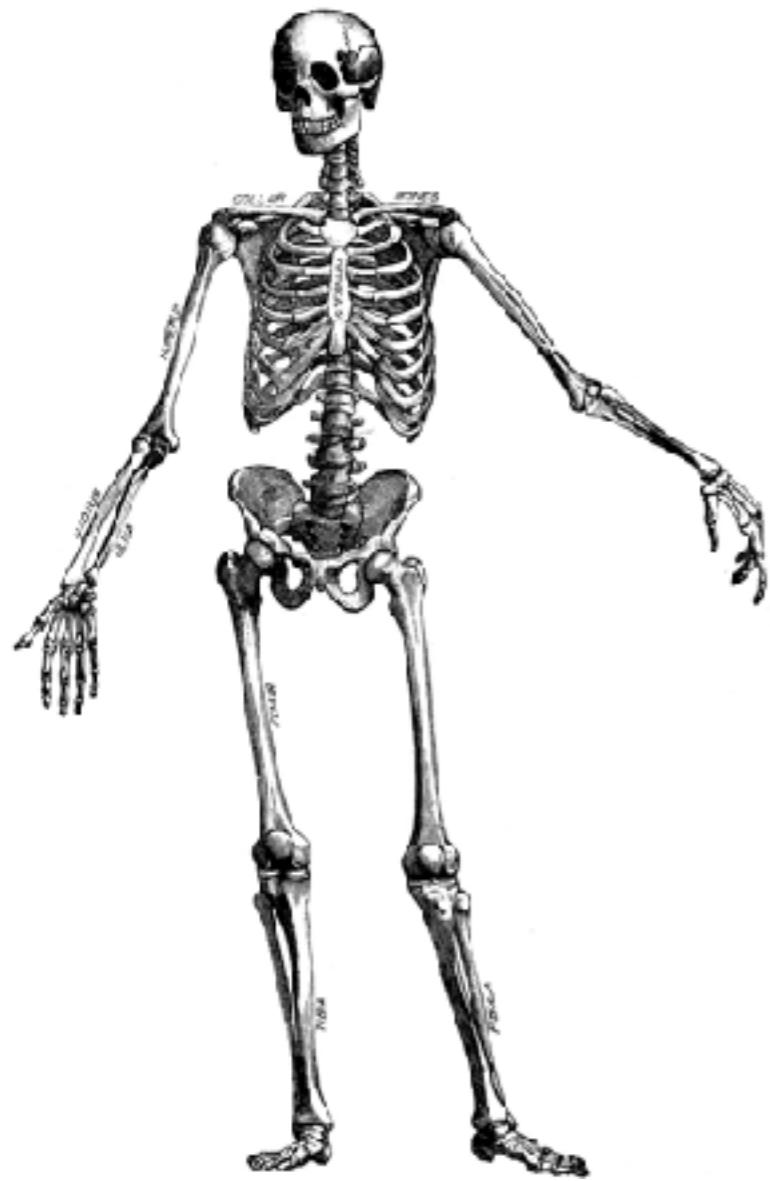


HTML

basics

instructor: Dmitry Kharchenko



HTML
the structure



CSS
the looks



Javascript
the action

A quick glance

```
<!doctype html>
<html class="no-js" lang="">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="x-ua-compatible" content="ie=edge">
    <title>Hello World</title>
    <meta name="description" content="">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <link rel="apple-touch-icon" href="apple-touch-icon.png">

    <link rel="stylesheet" href="css/main.css">
  </head>
  <body>
    <!--[if lt IE 8]>
    |   <p class="browserupgrade">You are using an <strong>outdated</strong> browser. Please <a href="http://browsehappy.com/">upgrade your browser</a> to improve your experience.</p>
    <![endif]-->

    <!-- Add your site or application content here -->
    <p>Hello world! This is HTML5 Boilerplate.</p>

  </body>
</html>
```

Doctype declaration

<DOCTYPE html>

https://developer.mozilla.org/en-US/docs/Web/HTML/Quirks_Mode_and_Standards_Mode

Elements vs Tags

Element

< p >To be, or not to be—that is the question.**< /p >**

*Opening
tag*

*Closing
Tag*

Attributes

```
<a href="http://google.com/">Go to Google</a>
```

Value

Attribute



Soft, Sweet & Never too heavy

The most significant fruit ever, Banana.



Banana tour



Comes in different colors

Every type of banana has a uniqueness inside it, its own taste.
Choose a banana on basis of your favourite colour and taste.



Red Banana

Sweet & creamy
with a hint of Raspberry



Yellow Banana

Softer & sweeter
with a hint of Grape



Green Banana

Firm & starchly
with a hint of Kiwi

To know what is inside, peel a Banana

Banana is full of nutrients you need,
it helps you to stay healthy and strong.

110
Calories



30g
Carbohydrate

Essential elements



<h1> Soft, Sweet & Never too heavy </h1>

The most significant fruit ever, Banana.



Banana tour



<h1> Comes in different colors </h1>

Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste.



<h2> Red Banana </h2>

Sweet & creamy
with a hint of Raspberry



<h2> Yellow Banana </h2>

Softer & sweeter
with a hint of Grape



<h2> Green Banana </h2>

Firm & starchy
with a hint of Kiwi

Semantic Markup Rule #1

Size does not matter.

Do not use heading (**<h1>** to **<h6>**) elements
just to add style to text.

Headings are supposed to give structure.



Soft, Sweet & Never too heavy

The most significant fruit ever, Banana.



Banana tour



<h1>

</h1>

Comes in different colors

Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste.



Red Banana

Sweet & creamy
with a hint of Raspberry



<h2>

</h2>

Yellow Banana

Softer & sweeter
with a hint of Grape



Green Banana

Firm & starchy
with a hint of Kiwi



<h1> Soft, Sweet & Never too heavy </h1>

The most significant fruit ever, Banana.



Banana tour



<h1> Comes in different colors </h1>

Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste.



<h2> Red Banana </h2>

Sweet & creamy
with a hint of Raspberry



<h2> Yellow Banana </h2>

Softer & sweeter
with a hint of Grape



<h2> Green Banana </h2>

Firm & starchy
with a hint of Kiwi



Soft, Sweet & Never too heavy

<p> The most significant fruit ever, Banana. </p>



Banana tour



Comes in different colors

<p> Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste. </p>



Red Banana

<p> Sweet & creamy
with a hint of Raspberry </p>



Yellow Banana

<p> Softer & sweeter
with a hint of Grape </p>



Green Banana

<p> Firm & starchy
with a hint of Kiwi </p>



ABOUT FEATURES USE REVIEW BUY IT NOW

Soft, Sweet & Never too heavy

The most significant fruit ever, Banana.



Banana tour



Comes in different colors

Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste.



Red Banana

Sweet & creamy
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Yellow Banana

Softer & sweeter
with a hint of Grape



Green Banana

Firm & starchy
with a hint of Kiwi



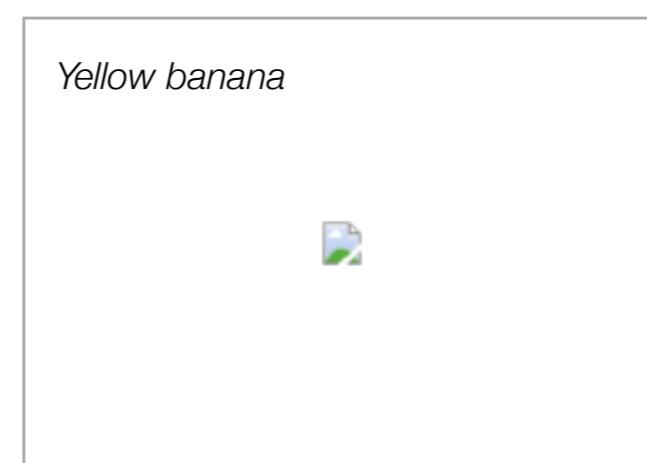
Comes in different colors

Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste.



Red Banana

Sweet & creamy
with a hint of Raspberry



Yellow Banana

Softer & sweeter
with a hint of Grape



Green Banana

Firm & starchy
with a hint of Kiwi

To know what is inside, peel a Banana

Banana is full of nutrients you need,
it helps you to stay healthy and strong.

Semantic Markup Rule #2

Use the **** elements for the pictures that are an essential part of **the content or the story.**

Icons, decorations and backgrounds are usually not.

Do not forget to specify the **alt** attribute—it helps search engines and screen readers make sense of your images.

Recap

<h1>...<h6>

<p>

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

How often have I said to you
that when you have eliminated
the impossible, whatever
remains, however improbable,
must be the truth?



<div>



ABOUT

FEATURES

USE

REVIEW

BUY IT NOW

Soft, Sweet & Never too heavy

The most significant fruit ever, Banana.



Banana tour

</div>

<div>

Comes in different **colors**

Every type of banana has a uniqueness inside it, it's own taste.
Choose a banana on basis of your favourite colour and taste.



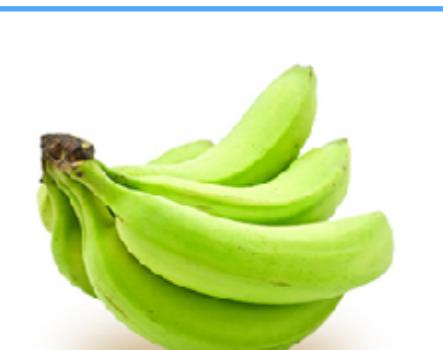
Red Banana

Sweet & creamy
with a hint of Raspberry



Yellow Banana

Softer & sweeter
with a hint of Grape



Green Banana

Firm & starchy
with a hint of Kiwi

</div>



<[a href="#buy-now"](#buy-now)>Buy it now

Soft, Sweet & Never too heavy

The most significant fruit ever, Banana.



Banana tour



Red Banana

Sweet & creamy
with a hint of Raspberry



Yellow Banana

Softer & sweeter
with a hint of Grape



Green Banana

Firm & starchy
with a hint of Kiwi

/colors.html
../colors
colors] Relative

<http://banana.com/colors>

Absolute

Open in a new window/tab

[Go to Google](http://google.com/)

Try Banana, Buy it now!

For Solo



For Couple



For Family



at just ₹6

- **
- Beats hunger
 - Fits in your pocket
 - Highly nutritional
 - Eat anywhere
- **

Buy it now

at just ₹10

- **
1. Best enjoyed share
 2. Double nutrition
 3. Twice as delicious
 4. Mini meal
- **

Buy it now

at just ₹25

- Family sharing
- Nutrition bomb
- Get 1 banana free
- Make tasty dishes

Buy it now

[Nirav Bhatt](mailto:nirav.bhatt@gmail.com)

Recap

<div>,

<a>

,,



Links

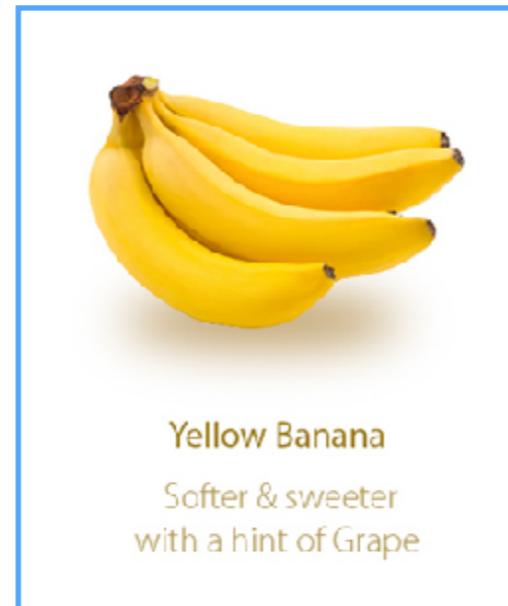
- 1. Ordered lists • Unordered lists
- 2. Unordered lists • Unordered lists

Essential attributes

```
<div id="banana-grid" class="product">...</div>
```



Red Banana
Sweet & creamy
with a hint of Raspberry



Yellow Banana
Softer & sweeter
with a hint of Grape



Green Banana
Firm & starchy
with a hint of Kiwi

Semantic Markup Rule #3

The value of the `id` attribute should be **unique**.
No two elements should share the same `id`.

`class`, on the other hand, can and should be used on similar elements multiple times.

Class name should reflect **the role** of the element in the structure, not what it looks like. Example:



`class="red"`



`class="warning"`

Tables

```
<table>
  <thead>
    <tr>
      <th></th><th></th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td></td><td></td>
    </tr>
    <tr>
      <td></td><td></td>
    </tr>
    <tr>
      <td></td><td></td>
    </tr>
    <tr>
      <td></td><td></td>
    </tr>
  </tbody>
</table>
```

Tables

<table>

<thead> <tr>

<th>	<th>	<th>	<th>
------	------	------	------

</tr> </thead>

<tbody> <tr>

<td>	<td>	<td>	<td>
------	------	------	------

</tr>

<tr>

<td>	<td>	<td>	<td>
------	------	------	------

</tr>

<tr>

<td>	<td>	<td>	<td>
------	------	------	------

</tr>

<tr>

<td>	<td>	<td>	<td>
------	------	------	------

</tr> </tbody>

</table>

Table layout

Welcome To HTML Web Site

HOME Services About Us Contact Us Our Motive

The Method Of Making Table web Site In HTML

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.



Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.



Copy Rights By Computerfever.com

Semantic Markup Rule #4

Do not use tables for layout.

Only use <**table**> when you actually need a table.

HTML5 Boilerplate

<https://html5boilerplate.com>

<http://codepen.io/unclenorton/pen/mAqydw>

```
<!doctype html>
<html class="no-js" lang="">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="x-ua-compatible" content="ie=edge">

    <title>Hello World</title>

    <meta name="description" content="">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <link rel="apple-touch-icon" href="apple-touch-icon.png">

    <link rel="stylesheet" href="css/main.css">
  </head>
  <body>
    <!--[if lt IE 8]>
      <p class="browserupgrade">You are using an <strong>outdated</strong> browser. Please <a href="http://browsehappy.com/">upgrade your browser</a> to improve your experience.</p>
    <![endif]-->

    <!-- Add your site or application content here -->
    <div>
      <h1>Hello world!</h1>
      <p>This is a simplified HTML5 Boilerplate. It is just a basic structure without any actual content.</p>
    </div>

  </body>
</html>
```

HTML5 Boilerplate

<https://html5boilerplate.com>

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<html class="no-js" lang="">
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    <meta name="description" content="">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <link rel="apple-touch-icon" href="apple-touch-icon.png">

    <link rel="stylesheet" href="css/main.css">
  </head>
  <body>
    <!--[if lt IE 8]>
      <p class="browserupgrade">You are using an <strong>outdated</strong> browser. Please <a href="http://browsehappy.com/">upgrade your browser</a> to improve your experience.</p>
    <![endif]-->

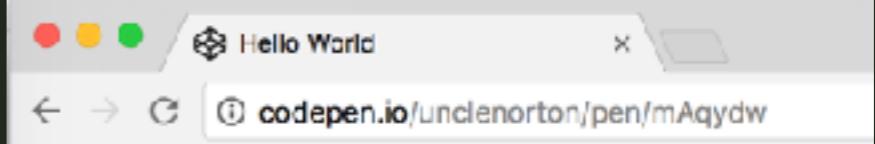
    <!-- Add your site or application content here -->
    <div>
      <h1>Hello world!</h1>
      <p>This is a simplified HTML5 Boilerplate. It is just a basic structure without any actual content.</p>
    </div>

  </body>
</html>
```

HTML5 Boilerplate

<https://html5boilerplate.com>

<http://codepen.io/unclenorton/pen/mAqydw>



```
<!doctype html>
<html class="no-js" lang="">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="x-ua-compatible" content="ie=edge">
      <title>Hello World</title>
    <meta name="description" content="">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <link rel="apple-touch-icon" href="apple-touch-icon.png">

    <link rel="stylesheet" href="css/main.css">
  </head>
  <body>
    <!--[if lt IE 8]>
      <p class="browserupgrade">You are using an <strong>outdated</strong> browser. Please <a href="http://browsehappy.com/">upgrade your browser</a> to improve your experience.</p>
    <![endif]-->

    <!-- Add your site or application content here -->
    <div>
      <h1>Hello world!</h1>
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</html>
```

HTML5 Boilerplate

<https://html5boilerplate.com>

<http://codepen.io/unclenorton/pen/mAqydw>

```
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  <body>
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      <p class="browserupgrade">You are using an <strong>outdated</strong> browser. Please <a href="http://browsehappy.com/">upgrade your browser</a> to improve your experience.</p>
    <![endif]-->

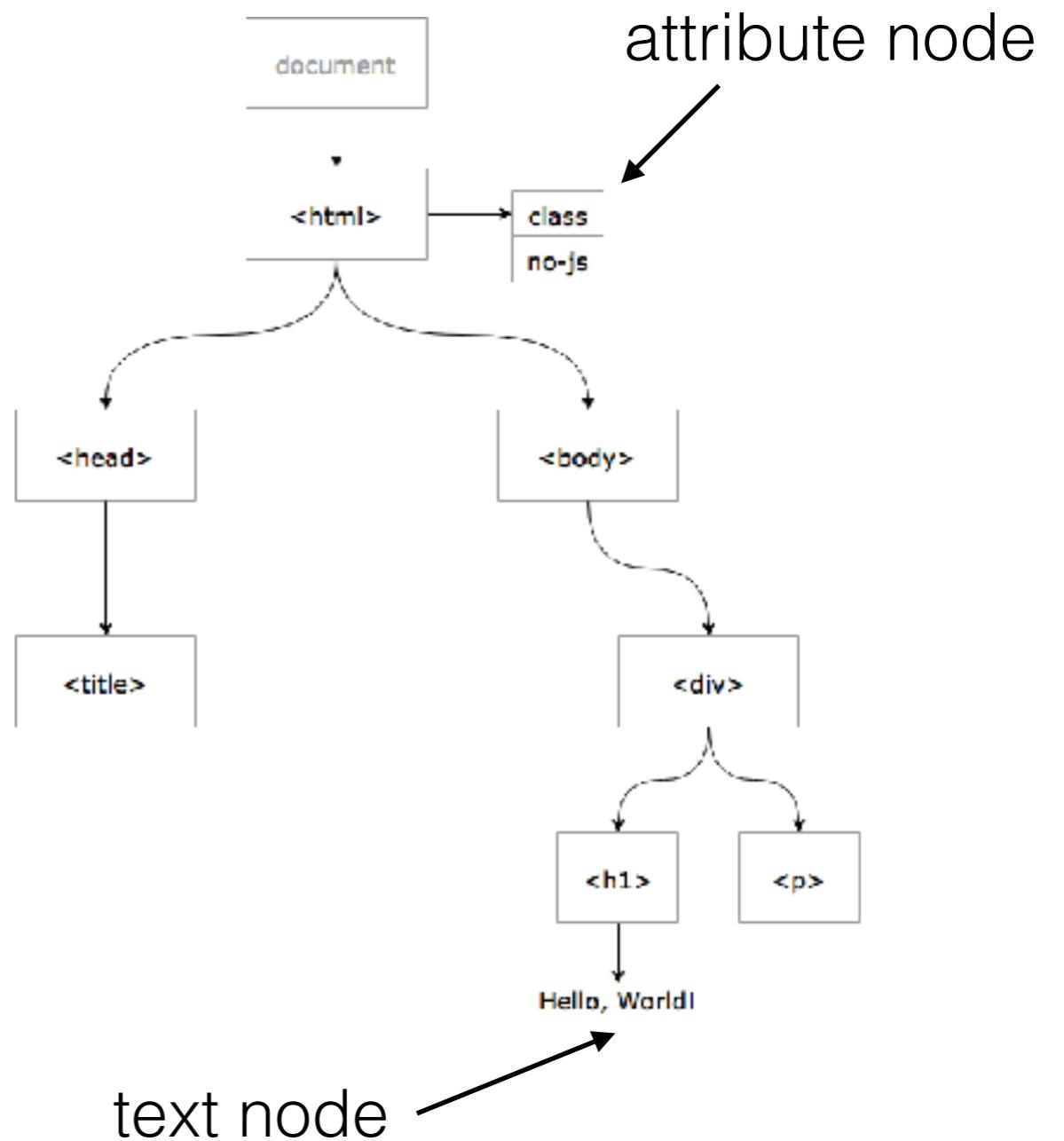
    <!-- Add your site or application content here -->
    <div>
      <h1>Hello world!</h1>
      <p>This is a simplified HTML5 Boilerplate. It is just a basic structure without any actual content.</p>
    </div>
  </body>
</html>
```

DOM structure

DOM = Document Object Model

1. Tree-like structure.
2. All elements are nodes, but not all nodes are elements.
3. Text and attributes are nodes, too.

```
<!doctype html>
<html class="no-js" lang="">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="x-ua-compatible" content="ie=edge">
    <title>Hello World</title>
    <meta name="description" content="">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="apple-touch-icon" href="apple-touch-icon.png">
    <link rel="stylesheet" href="css/main.css">
  </head>
  <body>
    <!--[if lt IE 8]>
      <p class="browserupgrade">You are using an <strong>outdated</strong> browser. Please <a href="http://browsehappy.com/">upgrade your browser</a> to improve your experience.</p>
    <![endif]-->
    <!-- Add your site or application content here -->
    <div>
      <h1>Hello world!</h1>
      <p>This is a simplified HTML5 Boilerplate. It is just a basic structure without any actual content.</p>
    </div>
  </body>
</html>
```



Resources: images

- **Unsplash** (free stock photos): <http://unsplash.com/>
- **The Noun Project** ((almost) free monochrome icons for anything): <http://thenounproject.com/>
- **Icons8** (more free icons, coloured): <http://icons8.com/>

Resources: learning

- **Mozilla Dev Network** (probably the best reference out there): [https://developer.mozilla.org/en-US/docs/
Web/HTML](https://developer.mozilla.org/en-US/docs/Web/HTML)
- **HTML5 for Web Designers** (online/offline book):
[https://abookapart.com/products/html5-for-web-
designers](https://abookapart.com/products/html5-for-web-designers)
- **HTML Dog** (a collection of tutorials, examples and references): <http://www.htmldog.com>

Practice 1

1. Open <https://codepen.io/unclenorton/pen/mAqydw> for the boilerplate reference
2. Re-create the page on the right with your own content. Here's what should be there:
 1. Headings
 2. Paragraphs
 3. Image(s)
 4. Link(s) (to be opened in a new window).
 5. A table
3. Share your results on Dojo

Hello, I am Dmitry

Bio

I can code websites, swim medium distances and bake a cake.

I have never been to [Antarctica](#).

Preferences

Things I like

- Sushi
- Cycling
- Movies

Things I don't like

1. Warm beer
2. Hot weather
3. Mirror ceilings

Singapore Grand Prix 2016 winners

Position	Racer	Team
1	Lewis Hamilton	Mercedes
2	Daniel Ricciardo	Red Bull
3	Valteri Bottas	Mercedes

Mandatory cat image



CSS

basics 1

instructor: Dmitry Kharchenko

A quick glance

```
* {
  box-sizing: border-box;
  -webkit-font-smoothing: antialiased;
}

.page {
  height: 100%;
  min-height: 100%;
  overflow-y: auto;
}

.page-wrapper {
  min-height: 100%;
  min-width: 992px;
  /*.screen-md-min(@wrapper);*/
  overflow: hidden;
  padding-bottom: 25px;
  background-color: #f4f8fa;
}

.container-fluid {
  padding: 0;
}

.page_error .container-fluid {
  min-width: 100%;
}

.page_error a {
  color: #1aacc6;
}

.page_error h3 {
  margin-bottom: 120px;
  font-size: 30px;
  line-height: 60px;
  font-weight: normal;
  text-align: center;
  color: #3e4651;
}

.page_error h1 {
  margin-top: 122px;
  font-family: 'lato-bold', Arial, 'Helvetica Neue', sans-serif;
  text-align: center;
  color: #4f5760;
}
```

CSS Rule anatomy



CSS Rule anatomy

```
.page, .page-wrapper,  
body {  
    height: 100%;  
    max-width: 960px;  
}
```

CSS Reference

<https://developer.mozilla.org/en-US/docs/Web/CSS/Reference>

Selectors

Type (element)

<http://codepen.io/unclenorton/pen/KgkQrP>

The screenshot shows a code editor interface with two panels: HTML and CSS.

HTML Panel:

```
1 <div>
2   DECIUS BRUTUS: Great Caesar,--
3 </div>
4
5 <p>
6   CAESAR: Doth not Brutus bootless
7     kneel?
8 </p>
9
10 <div>
11   CASCA: Speak, hands for me! CASCA first, then the
12     other Conspirators and BRUTUS stab CAESAR
13 </div>
```

CSS Panel:

```
1 p {
2   background-color: #ffff00;
3 }
```

The output on the right side of the editor shows the rendered HTML with specific elements highlighted in yellow:

- DECIUS BRUTUS: Great Caesar,--
- CAESAR: Doth not Brutus bootless kneel?
- CASCA: Speak, hands for me! *CASCA first, then the other Conspirators and BRUTUS stab CAESAR*
- CAESAR: Et tu, Brute! Then fall, Caesar. *Dies*

CSS best practice #1

Avoid using type selectors as much as possible.

They might seem like an easy shortcut.
But the more complex your stylesheet gets,
the more potential issues they may cause.

Often you might end up with something like this:

```
.page ul li.active ul li p span {  
    color: #ff0000;  
}
```

Selectors

ID

<http://codepen.io/unclenorton/pen/kkvZGX>



The screenshot shows a code editor interface with two tabs: 'HTML' and 'CSS'. The 'HTML' tab contains the following code:

```
11  </div>
12
13  <p>
14    CAESAR: Et tu, Brute! Then fall,
15      Caesar.
16  </p>
```

The 'CSS' tab contains the following code:

```
1  p {
2    background-color: #ffff00;
3  }
4
5  #the-end {
6    background-color: #ff0000;
7  }
```

To the right of the code, the rendered text is displayed in three colored boxes:

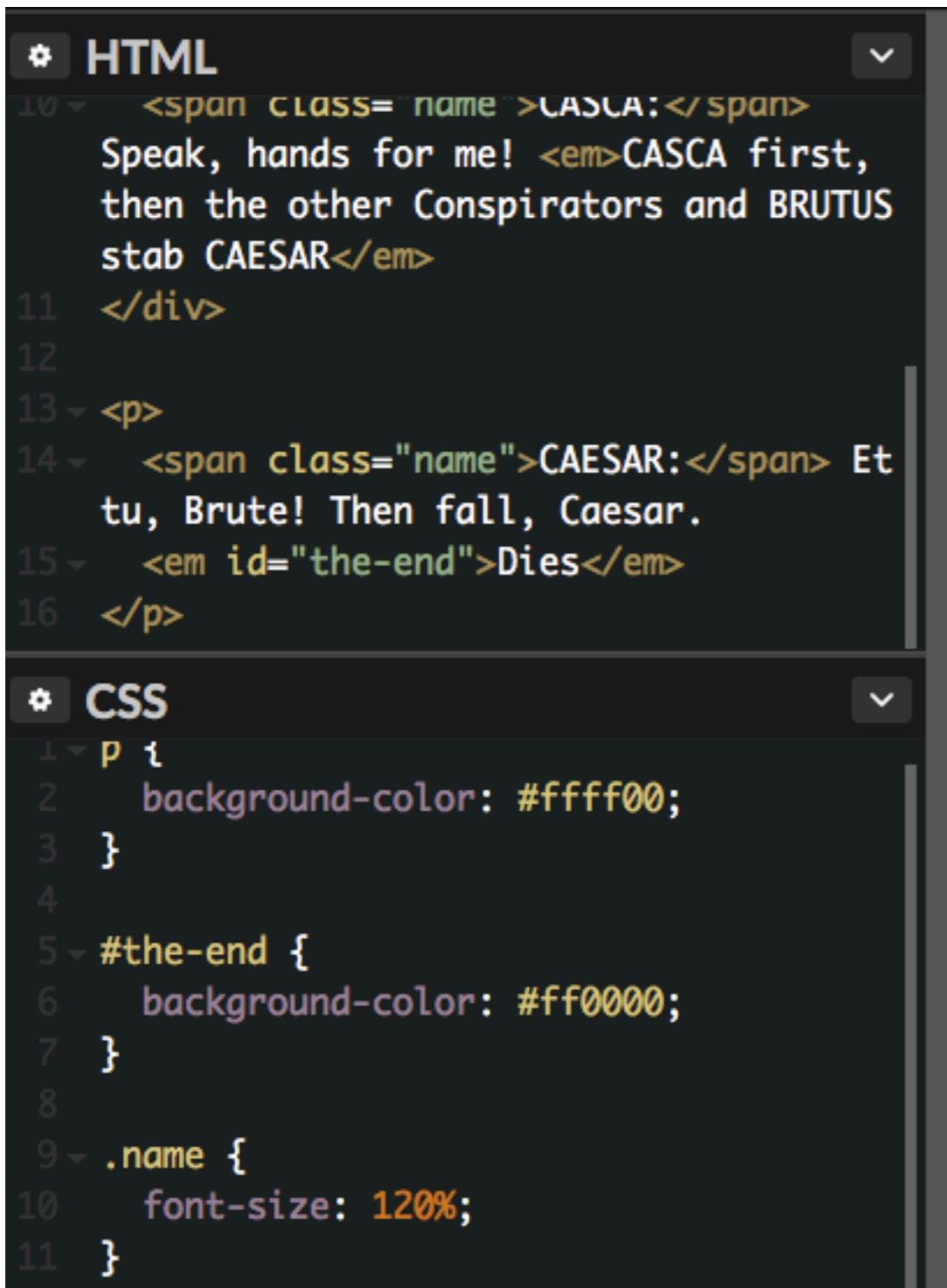
- DECIUS BRUTUS: Great Caesar,--
- CAESAR: Doth not Brutus bootless kneel?
- CASCA: Speak, hands for me! *CASCA first, then the other Conspirators and BRUTUS stab CAESAR*
- CAESAR: Et tu, Brute! Then fall, Caesar. *Dies*

The word 'Dies' in the final line is highlighted in red, matching the color of the CSS selector for the paragraph containing it.

Selectors

Class

<http://codepen.io/unclenorton/pen/GjyQdP>



The screenshot shows a code editor with two panels: HTML and CSS.

HTML Panel:

```
<span class="name">CASCA:</span>
  Speak, hands for me! <em>CASCA first,
  then the other Conspirators and BRUTUS
  stab CAESAR</em>
</div>
12
13<p>
14<span class="name">CAESAR:</span> Et
  tu, Brute! Then fall, Caesar.
15<em id="the-end">Dies</em>
16</p>
```

CSS Panel:

```
1 p {
  background-color: #ffff00;
}
2
3
4
5 #the-end {
  background-color: #ff0000;
}
6
7
8
9 .name {
10   font-size: 120%;
11 }
```

The right side of the image displays the rendered莎翁对话框，其中包含以下内容：

- DECIUS BRUTUS: Great Caesar,--
- CAESAR: Doth not Brutus bootless kneel?
- CASCA: Speak, hands for me! *CASCA first, then the other Conspirators and BRUTUS stab CAESAR*
- CAESAR: Et tu, Brute! Then fall, Caesar. *Dies*

在对话框中，`CAESAR`和*Dies*被高亮显示，而其他文本则未被高亮。

Selectors

Combinators

<http://codepen.io/unclenorton/pen/ozpEKP>

```
<div id="header">
  <div id="nav">

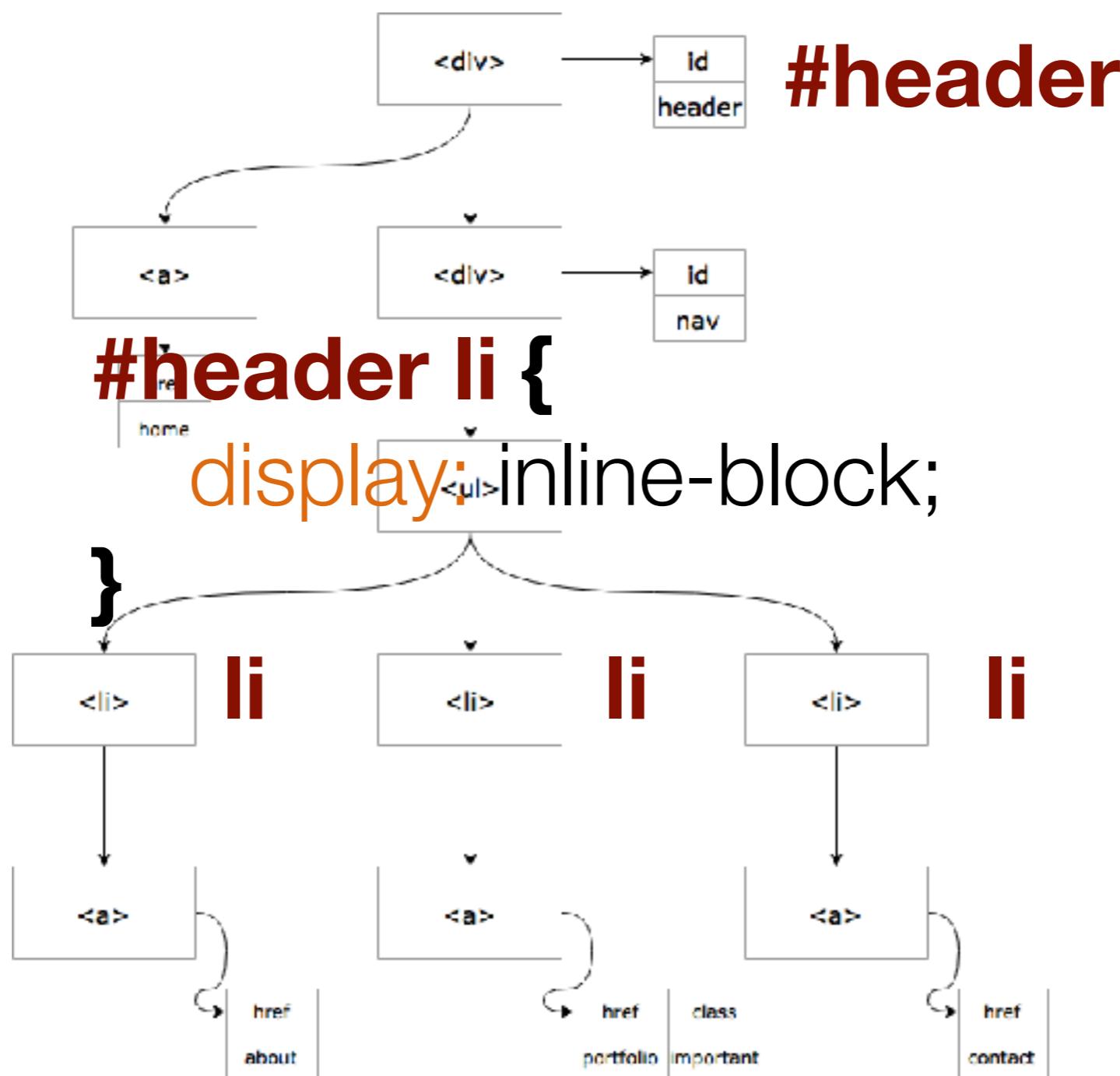
    <ul>
      <li>
        <a href="about.php">About</a>
      </li>
      <li>
        <a href="portfolio.php">Portfolio</a>
      </li>
      <li>
        <a href="contact.php">Contact</a>
      </li>
    </ul>

  </div>
</div>
```

Selectors: combinators

1. Descendant

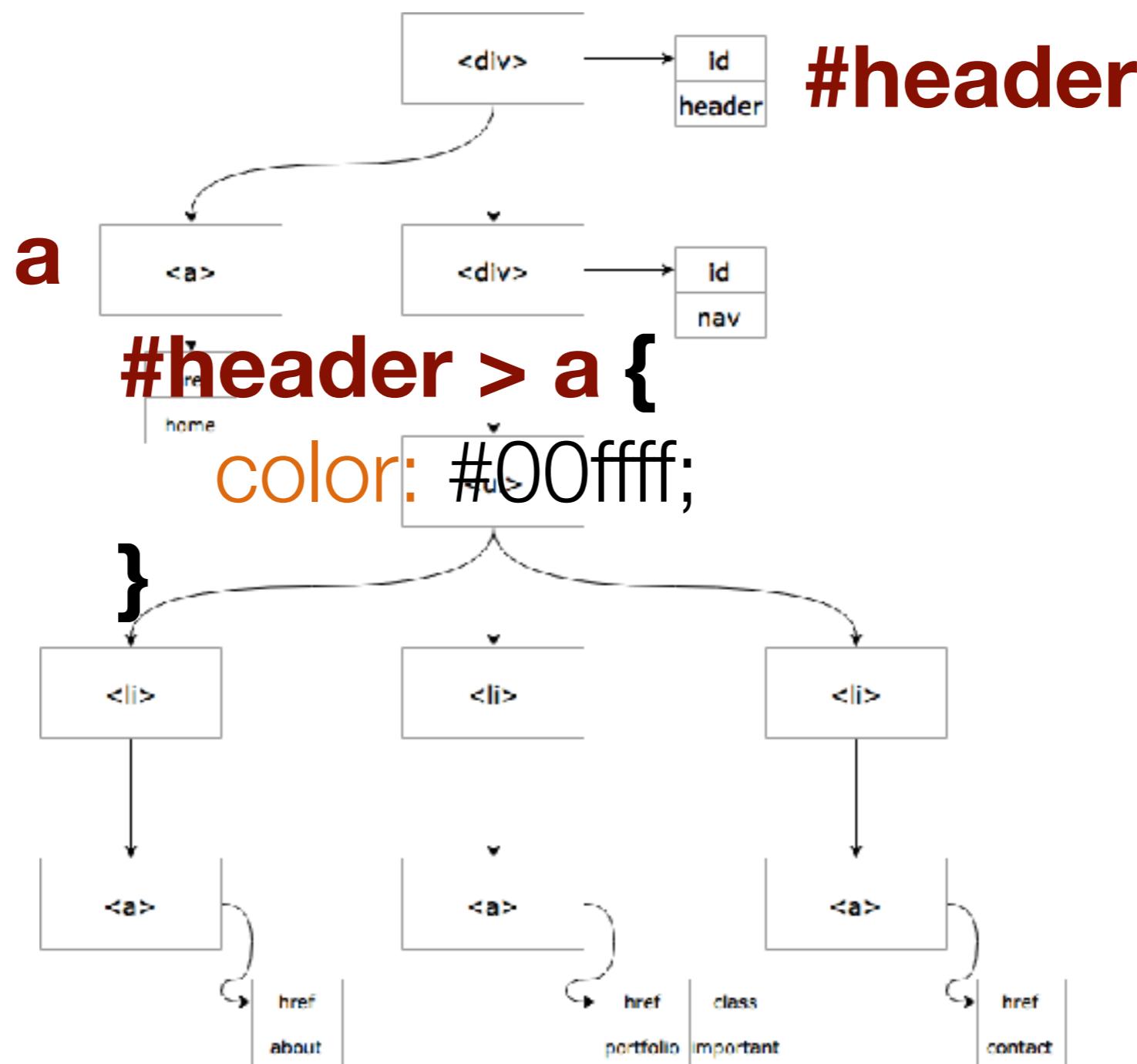
<http://codepen.io/unclenorton/pen/ozpEKP>



Selectors: combinators

2. Child

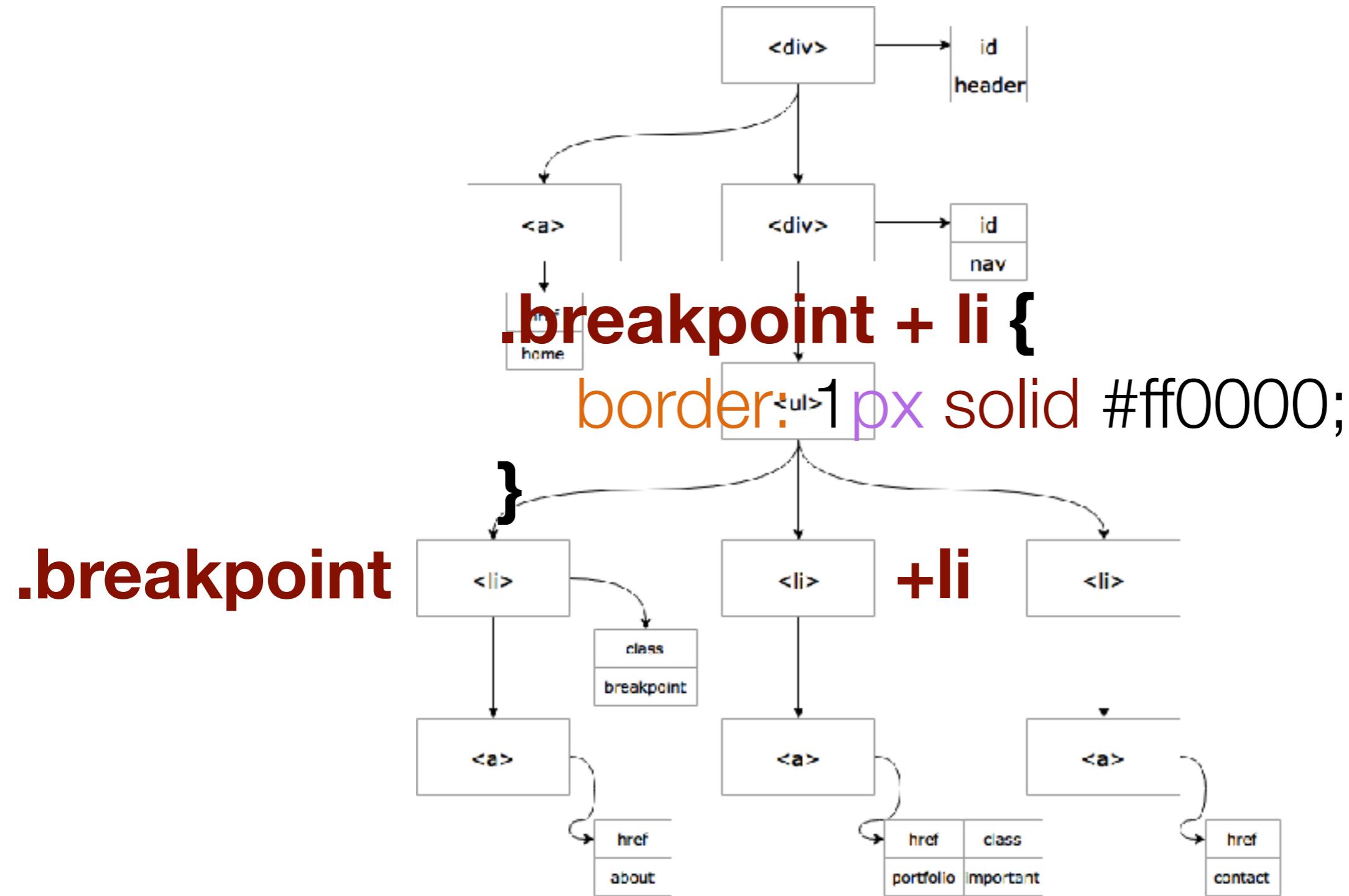
<http://codepen.io/unclenorton/pen/BLJAPQ>



Selectors: combinator

3. Adjacent sibling

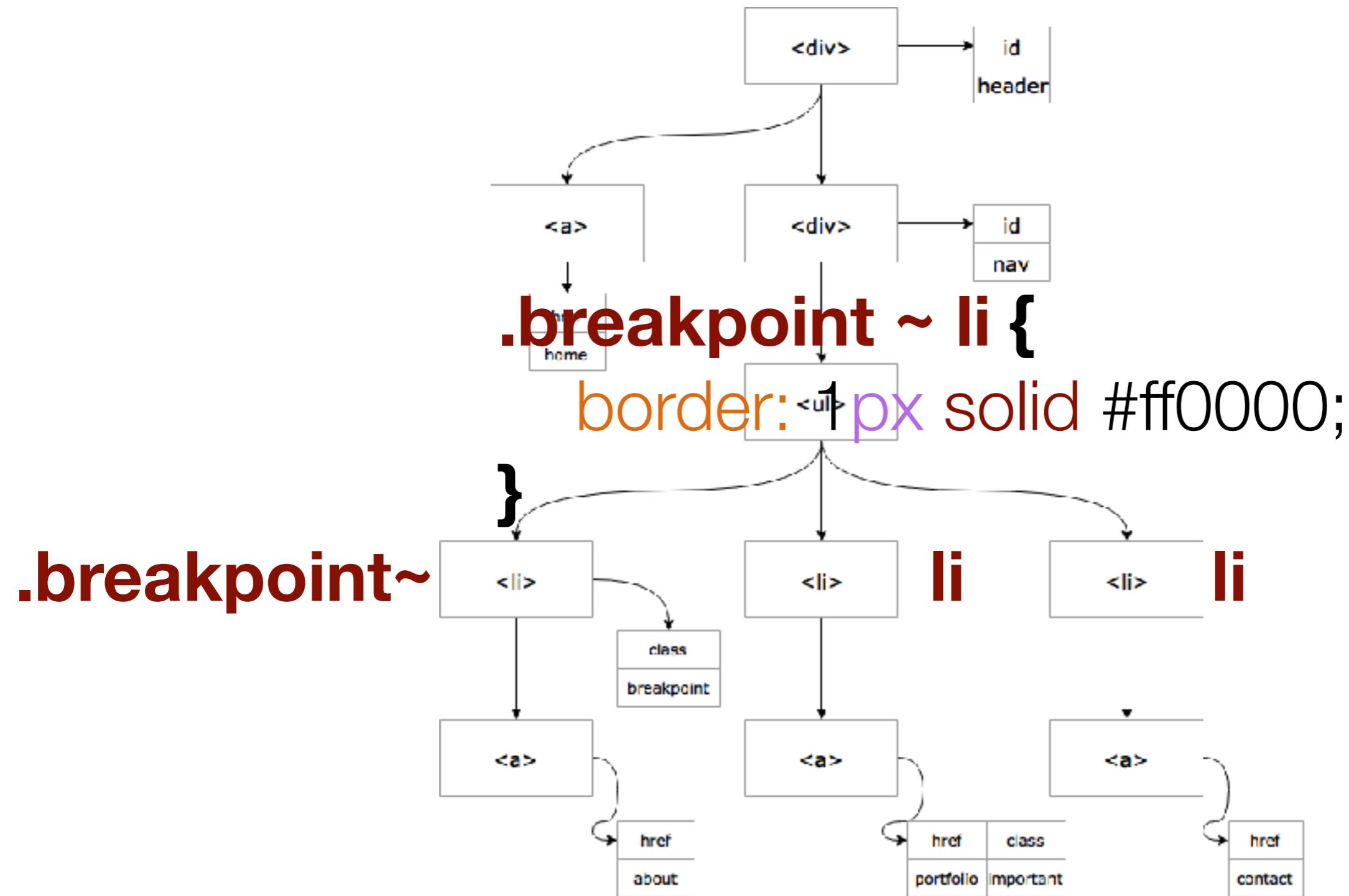
<http://codepen.io/unclenorton/pen/LRZdjq>



Selectors: combinators

4. General sibling

<http://codepen.io/unclenorton/pen/LRZdBo>



Selectors

Attribute

<http://codepen.io/unclenorton/pen/mApxoP>

The image shows a code editor interface with two tabs: 'HTML' and 'CSS'. The 'HTML' tab displays the following code:

```
1 <form>
2   <div class="control-group">
3     <label class="control-label" for="inputEmail">Email</label>
4     <div class="controls">
5       <input type="text" id="inputEmail" placeholder="Email">
6     </div>
7   </div>
8   <div class="control-group">
9     <label class="control-label" for="inputPassword">Password</label>
10    <div class="controls">
11      <input type="password" id="inputPassword" placeholder="Password">
12    </div>
13  </div>
14  <div class="control-group">
15    <div class="controls">
16      <label class="checkbox">
17        <input type="checkbox" name="remember" checked="checked" />
18        Remember me
19      </label>
20      <button type="submit" class="btn">Sign in</button>
21    </div>
22  </div>
```

The 'CSS' tab contains the following rule:

```
[type="text"] {
  background-color: #ffff00;
}
```

To the right of the code editor, there is a preview of a sign-in form. The 'Email' input field is highlighted with a yellow background, demonstrating the effect of the CSS selector.

Selectors

First/last/nth

<http://codepen.io/unclenorton/pen/pEpLXV>

HTML

```
1 <ul>
2   <li>1</li>
3   <li>2</li>
4   <li>3</li>
5   <li>4</li>
6   <li>5</li>
7   <li>6</li>
8   <li>7</li>
9   <li>8</li>
10  <li>9</li>
11  <li>10</li>
12 </ul>
```

CSS

```
1 li:nth-child(2n+1) {
2   background-color: #ccc;
3 }
4
5 li:first-child {
6   background-color: red;
7 }
8
9 li:last-child {
10  background-color: green;
11 }
12
13 li:nth-child(2) {
14  background-color: yellow;
15 }
```



Essential properties

Layout (box)

display

position

float

width

height

overflow

border

margin

padding

...

Others

color,

background

font

...

<http://www.w3schools.com/cssref/>

Essential properties

display: inline

< p > A quick brown fox < span class = “action” > jumps over < /span > the lazy dog < /p >



```
.action {  
    font-weight: bold;  
    border: 1px solid #ff0000;  
}
```

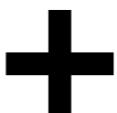


A quick brown fox **jumps over** the lazy dog

Essential properties

display: inline

< p > A quick brown fox < span class = “action” > jumps over < /span > the lazy dog < /p >



```
.action {  
    border: 1px solid #ff0000;  
    font-weight: bold;  
}
```



A quick brown fox **jumps**
over the lazy dog

Essential properties

display: inline by default

<a>

 !!!

<input>

...

Essential properties

display: block

```
<div class="container">
```

```
  <p>A quick brown fox jumps over the lazy dog</p>
```

```
  <p>'twas brillig, and the slithy toves did gyre and gamble in the wabe</p>
```

```
</div>
```

+

```
.container {
```

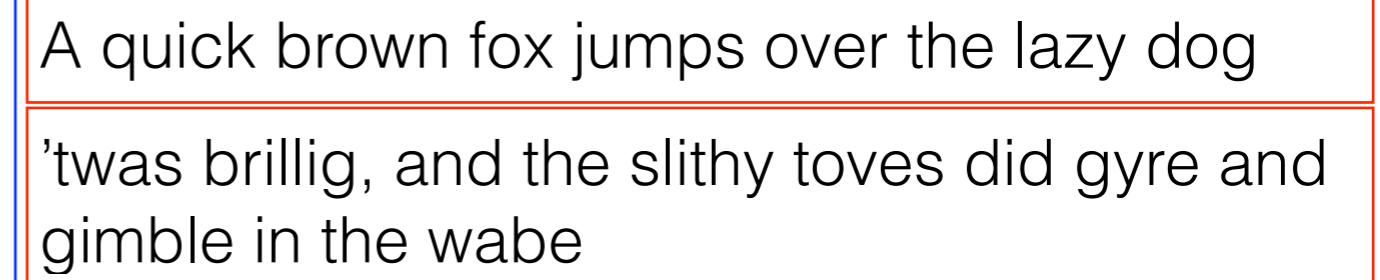
```
  border: 1px solid #0000ff;
```

```
}
```

```
.container > p {
```

```
  border: 1px solid #ff0000;
```

```
}
```



Essential properties

display: block by default

<div>
<p>
<h1>...<h6>
<form>
<header>
<footer>
...

Essential properties

display: inline-block

<**pspan** class="action">jumps over</**span**> the lazy dog</**p**



```
.action {  
    display: inline-block;  
    height: 20px;  
    border: 1px solid #ff0000;  
    font-weight: bold;  
}
```



A quick brown fox **jumps over** the lazy dog

Essential properties

display: inline-block

<**pspan** class="action">jumps over</**span**> the lazy dog</**p**



```
.action {  
    display: inline-block;  
    height: 20px;  
    border: 1px solid #ff0000;  
    font-weight: bold;  
}
```



A quick brown fox

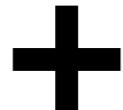
jumps over the lazy dog

Essential properties

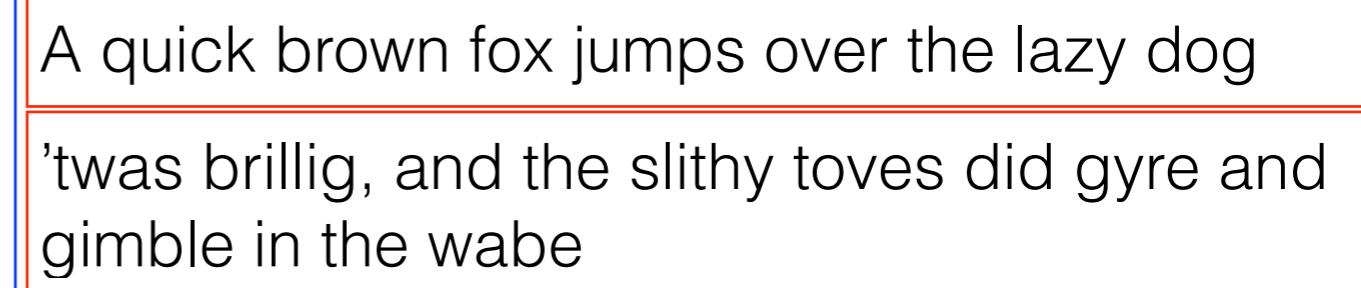
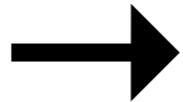
visibility: hidden and display: none

```
<div class="container">  
  <p class="hidden">A quick brown fox jumps over the lazy dog</p>  
  <p>'twas brillig, and the slithy toves did gyre and gamble in the wabe</p>
```

```
</div>
```



```
.container {  
  border: 1px solid #0000ff;  
}  
.container > p {  
  border: 1px solid #ff0000;  
}  
.hidden {  
  visibility: hidden;  
}
```



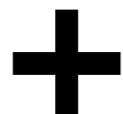
A quick brown fox jumps over the lazy dog
'twas brillig, and the slithy toves did gyre and
gimble in the wabe

Essential properties

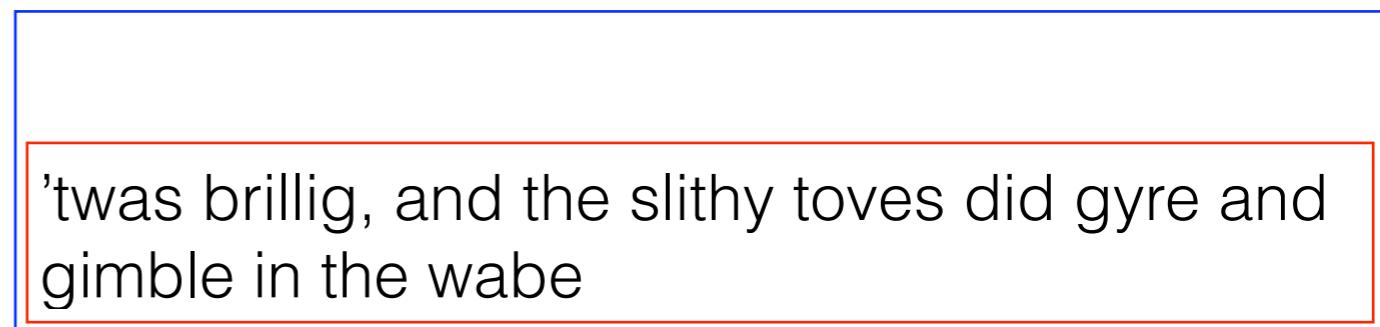
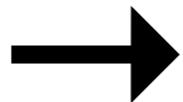
visibility: hidden and display: none

```
<div class="container">  
  <p class="hidden">A quick brown fox jumps over the lazy dog</p>  
  <p>'twas brillig, and the slithy toves did gyre and gamble in the wabe</p>
```

```
</div>
```



```
.container {  
  border: 1px solid #0000ff;  
}  
.container > p {  
  border: 1px solid #ff0000;  
}  
.hidden {  
  visibility: hidden;  
}
```



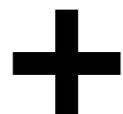
'twas brillig, and the slithy toves did gyre and
gimble in the wabe

Essential properties

visibility: hidden and display: none

```
<div class="container">  
  <p class="hidden">A quick brown fox jumps over the lazy dog</p>  
  <p>'twas brillig, and the slithy toves did gyre and gamble in the wabe</p>
```

```
</div>
```



```
.container {  
  border: 1px solid #0000ff;  
}  
→
```

```
.container > p {  
  border: 1px solid #ff0000;  
}  
.hidden {  
  display: none;  
}
```

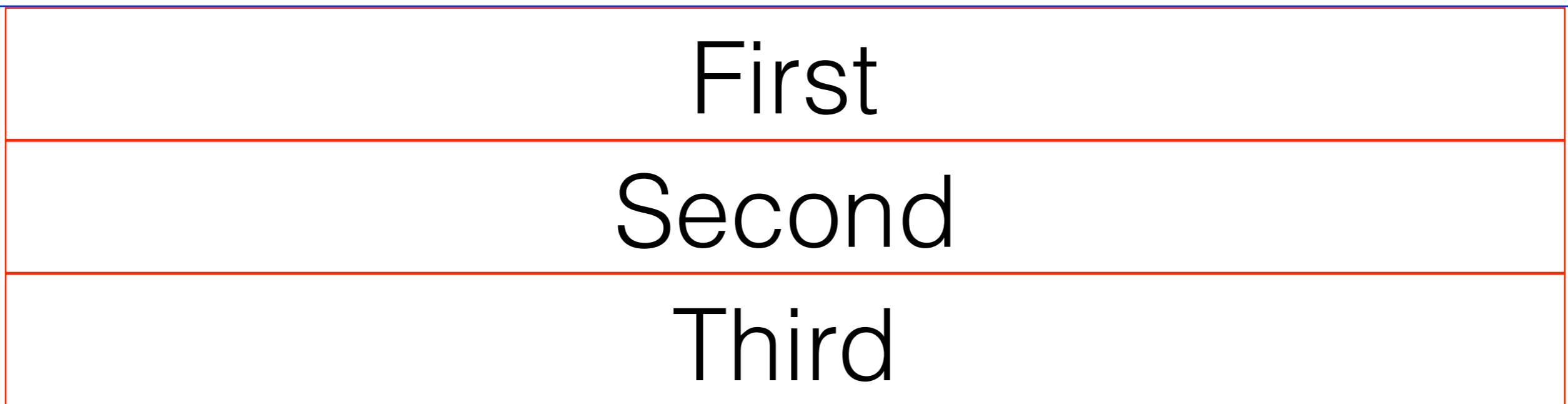
'twas brillig, and the slithy toves did gyre and
gimble in the wabe

Essential properties

position

```
<div class="container">  
  <div id="first" class="item">First</div>  
  <div id="second" class="item">Second</div>  
  <div id="third" class="item">Third</div>  
</div>
```

```
.item {  
  position: static;  
  border: 1px solid #ff0000;  
}
```

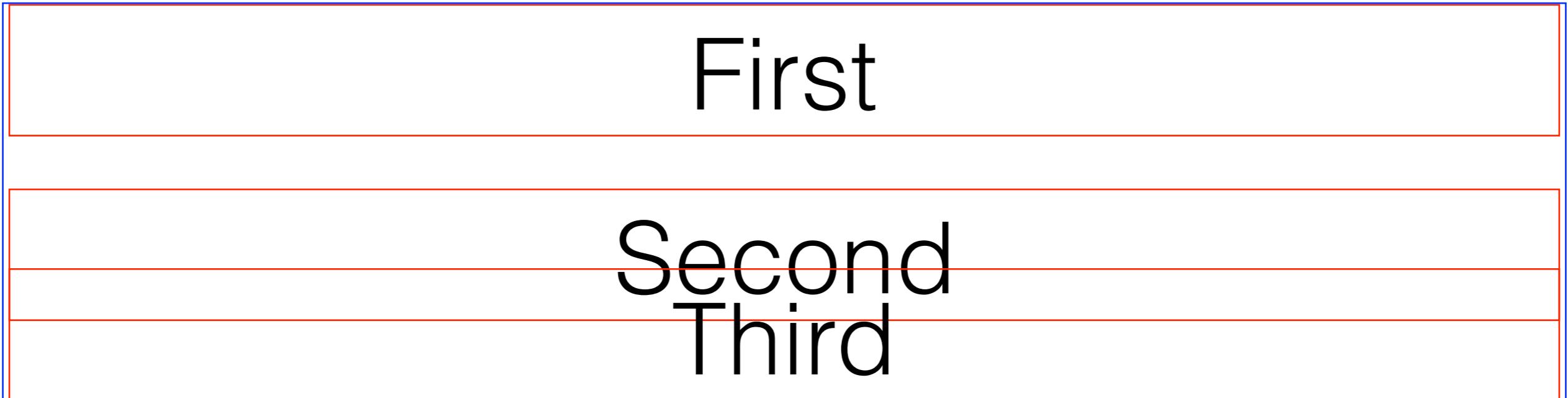


Essential properties

position

```
<div class="container">  
  <div id="first" class="item">First</div>  
  <div id="second" class="item">Second</div>  
  <div id="third" class="item">Third</div>  
</div>
```

```
.item {  
  position: static;  
  border: 1px solid #ff0000;  
}  
  
#second {  
  position: relative;  
  top: 20px;  
}
```



First

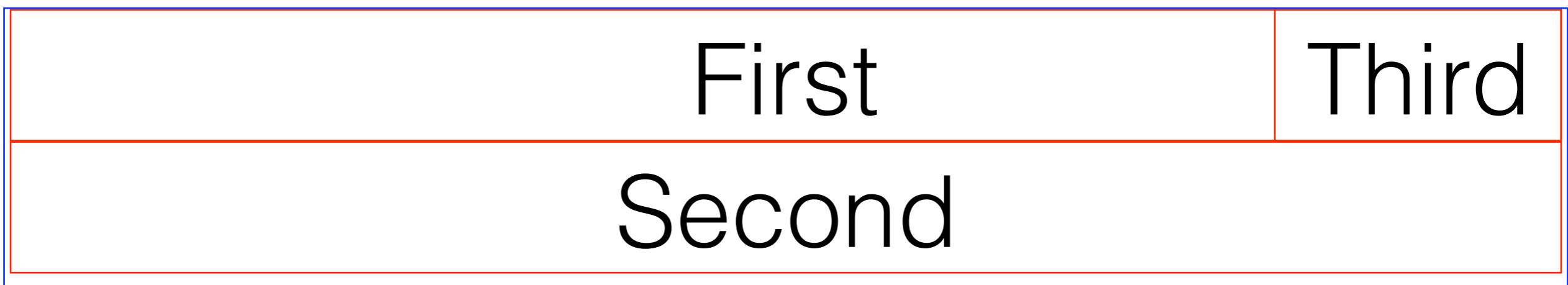
Second
Third

Essential properties

position

```
<div class="container">  
  <div id="first" class="item">First</div>  
  <div id="second" class="item">Second</div>  
  <div id="third" class="item">Third</div>  
</div>
```

```
.container {  
  position: relative;  
}  
.item {  
  border: 1px solid #ff0000;  
}  
#third {  
  position: absolute;  
  top: 0;  
  right: 0;  
}
```



Essential properties

position

```
<div class="container">  
  <div id="first" class="item">First</div>  
  <div id="second" class="item">Second</div>  
  <div id="third" class="item">Third</div>  
</div>
```

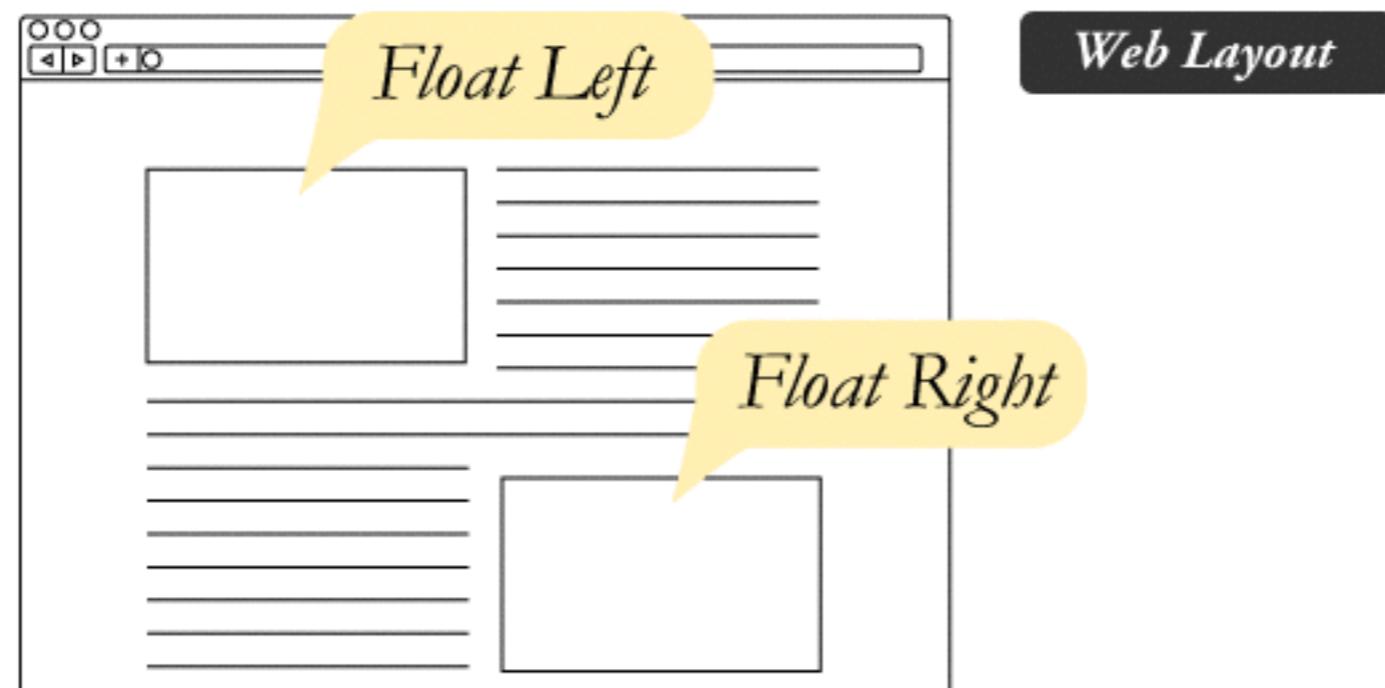
```
.container {  
  position: relative;  
}  
.item {  
  border: 1px solid #ff0000;  
}  
#third {  
  position: fixed;  
  top: 0;  
  right: 0;  
}
```

First

Second

Essential properties

float



Essential properties

float

Example: <http://codepen.io/unclenorton/pen/WGdWgg>
Read more: <http://css-tricks.com/all-about-floats>

Resources: books

- **Mozilla Dev Network** (probably the best reference out there): <https://developer.mozilla.org/en-US/docs/Web/CSS>
- **CSS3 for Web Designers** (online/offline book): <https://abookapart.com/products/css3-for-web-designers>
- **HTML Dog** (a collection of tutorials, examples and references): <http://htmldog.com/guides/css/>

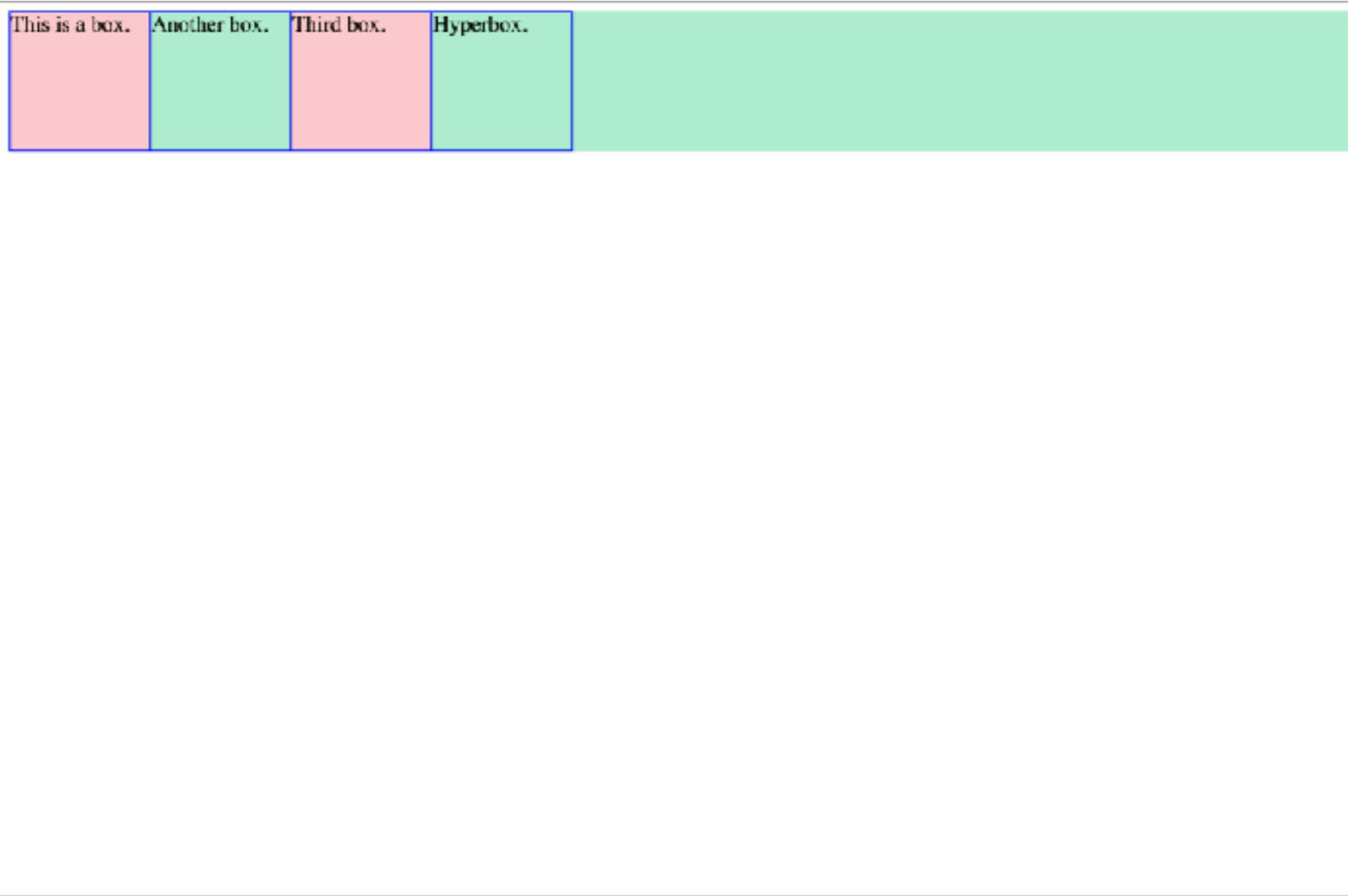
CSS Practice 1

1. Open <http://codepen.io/unclenorton/pen/zKpXZx>
2. Copy the code locally
3. Create the following layouts

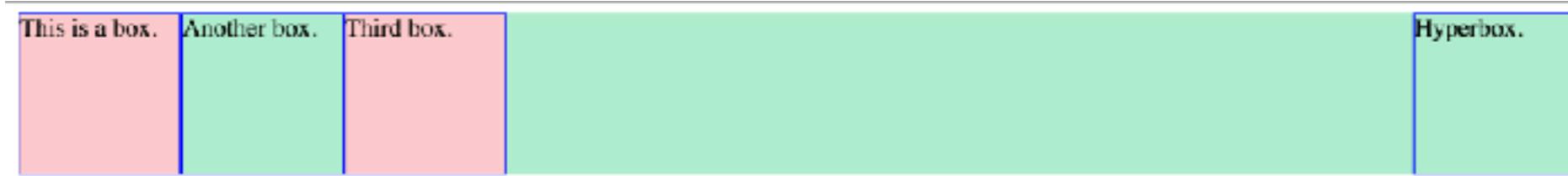
Layout 1

This is a box.	Another box.	Third box.	Hyperbox.	
----------------	--------------	------------	-----------	--

Layout 2



Layout 3

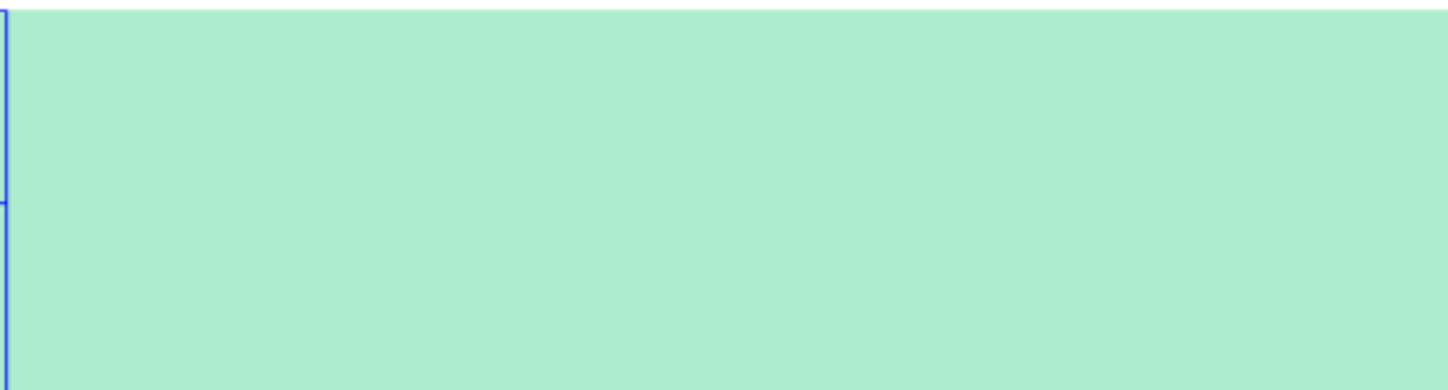


Layout 4

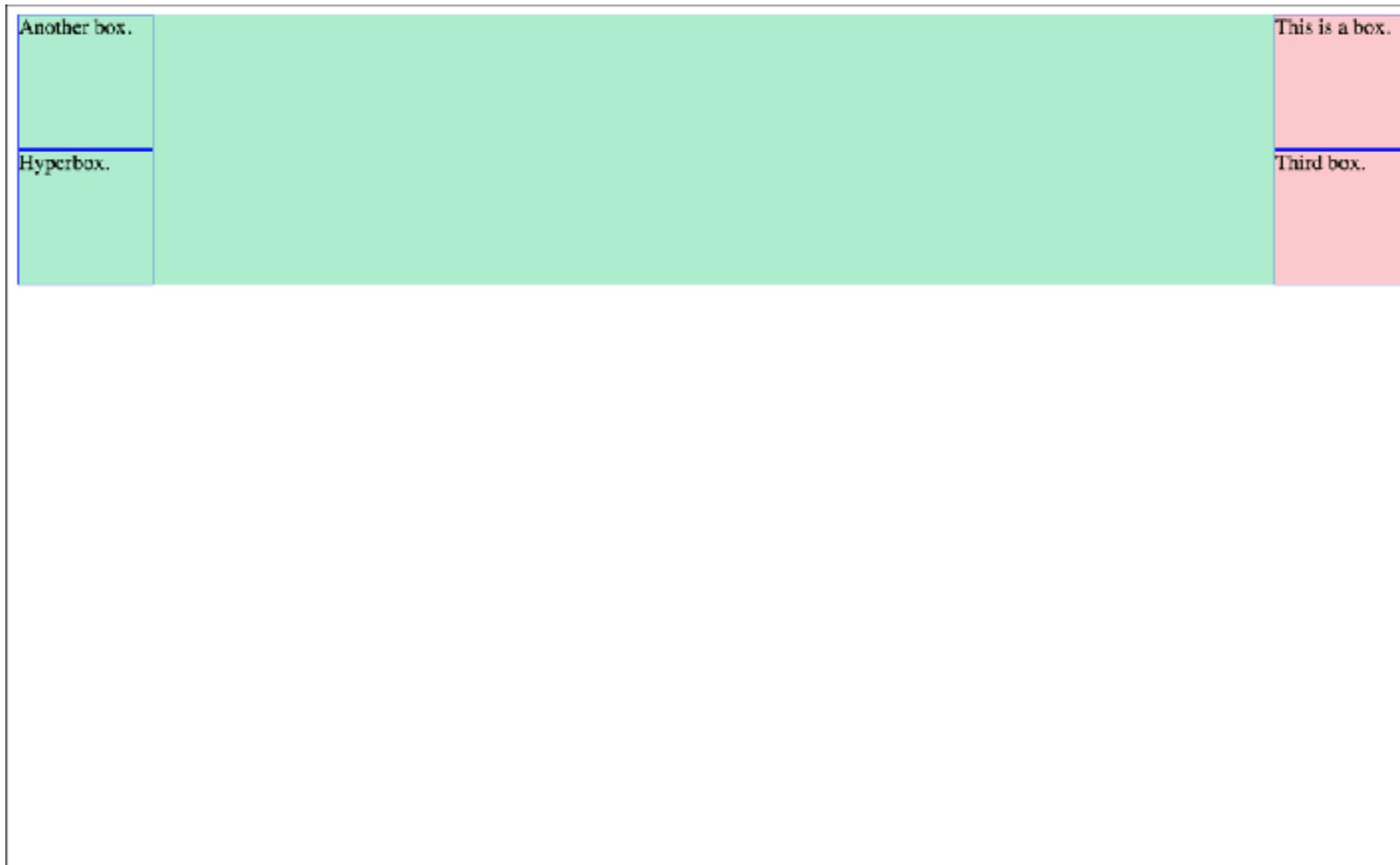


Layout 5

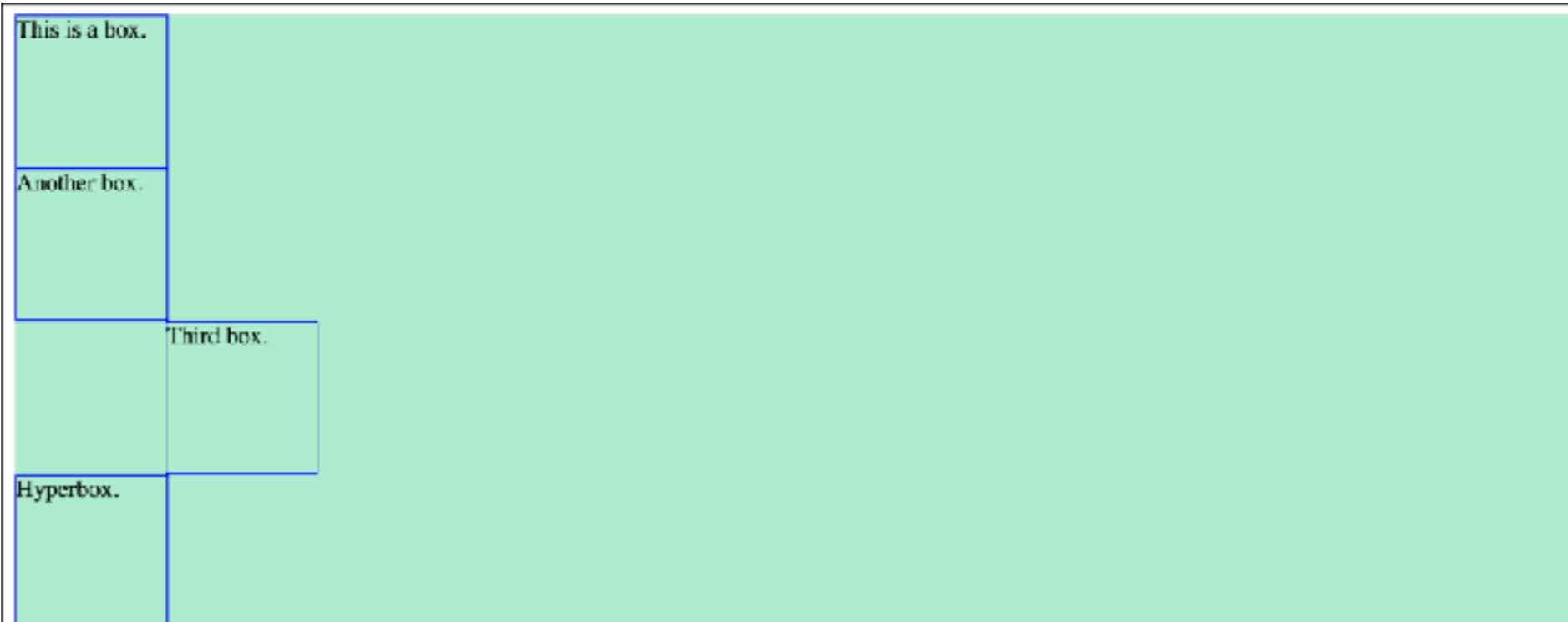
This is a box.	Another box.
Third box.	Hyperbox.



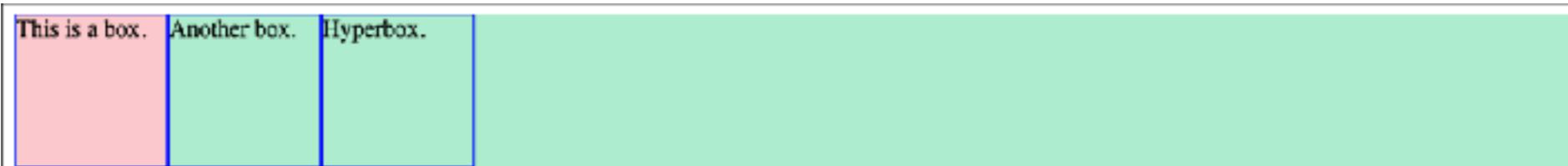
Layout 6



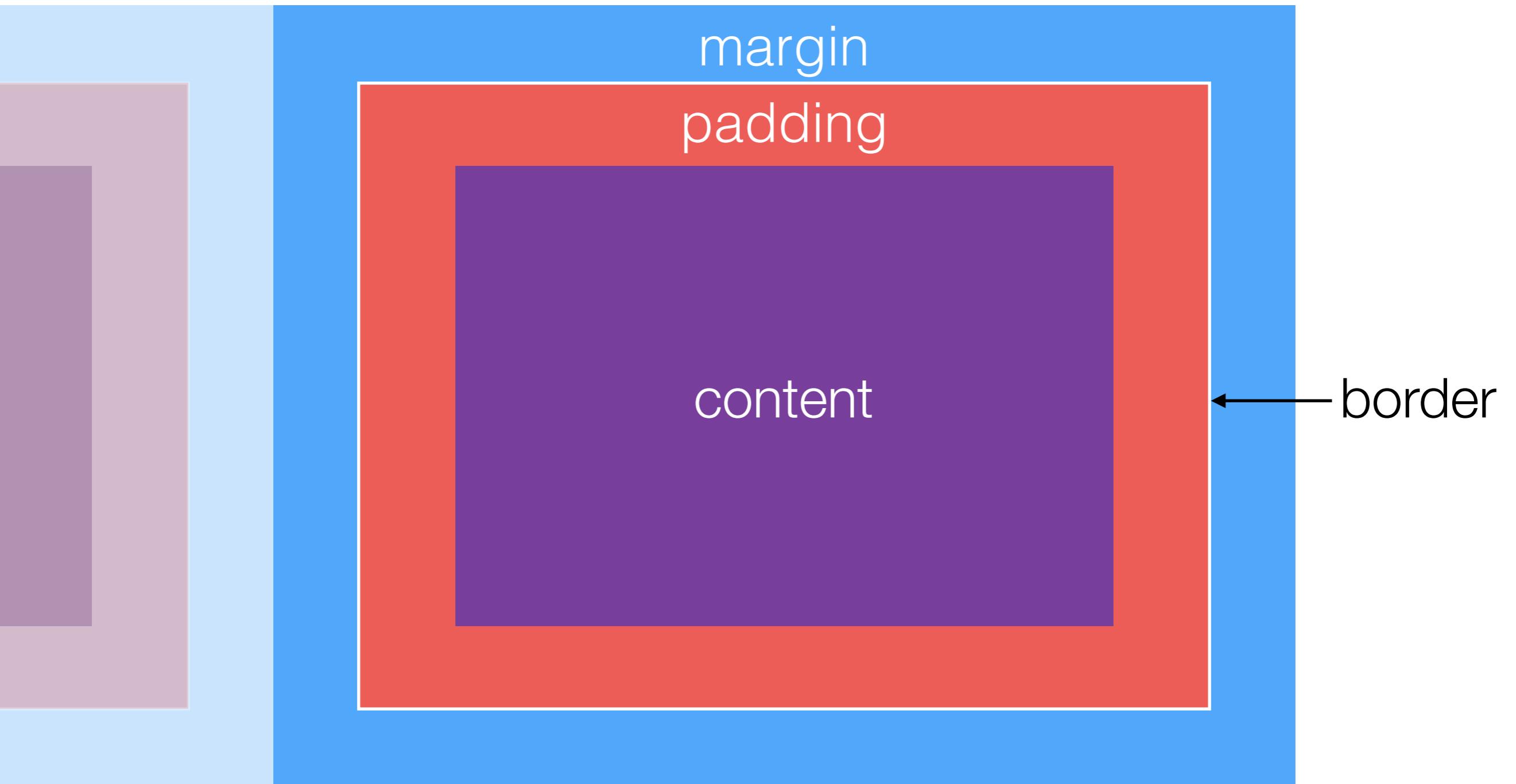
Layout 7



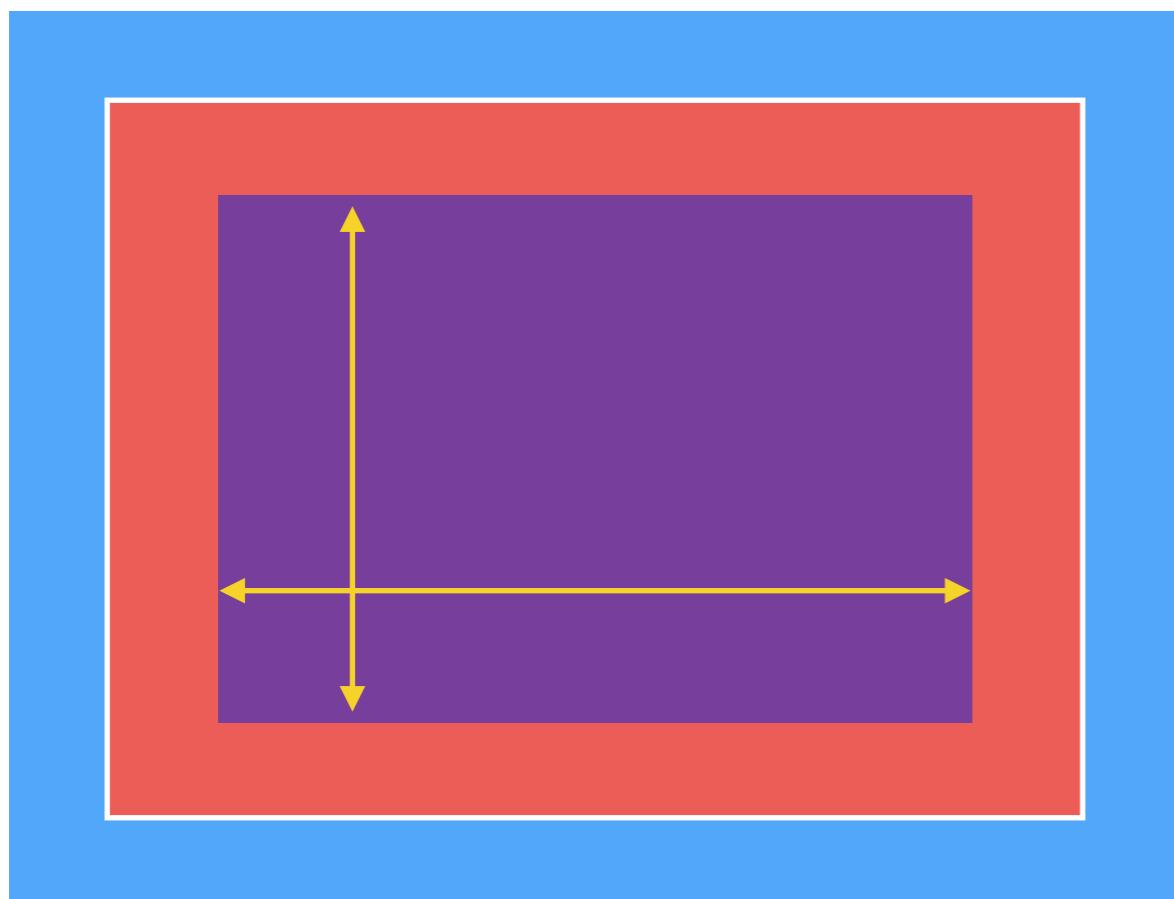
Layout 8



The CSS Box Model

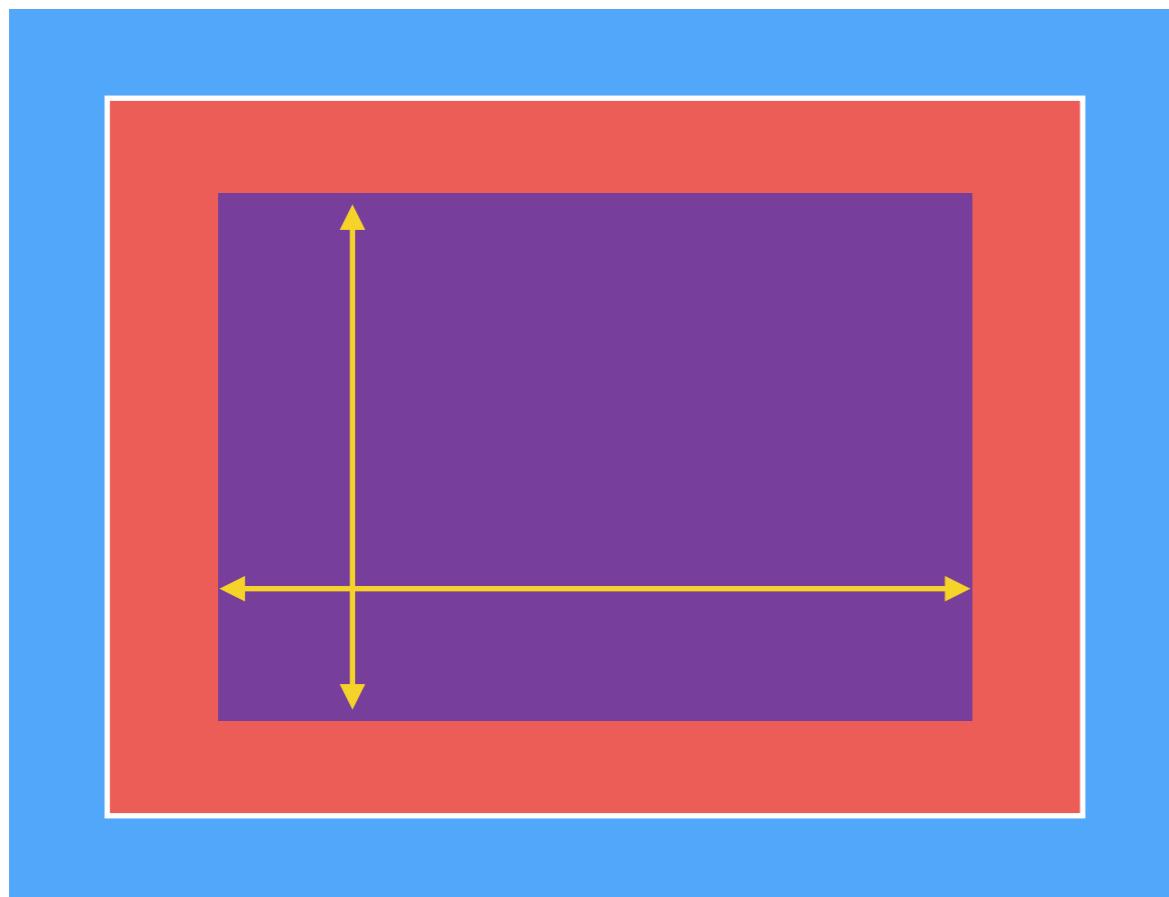


The CSS Box Model



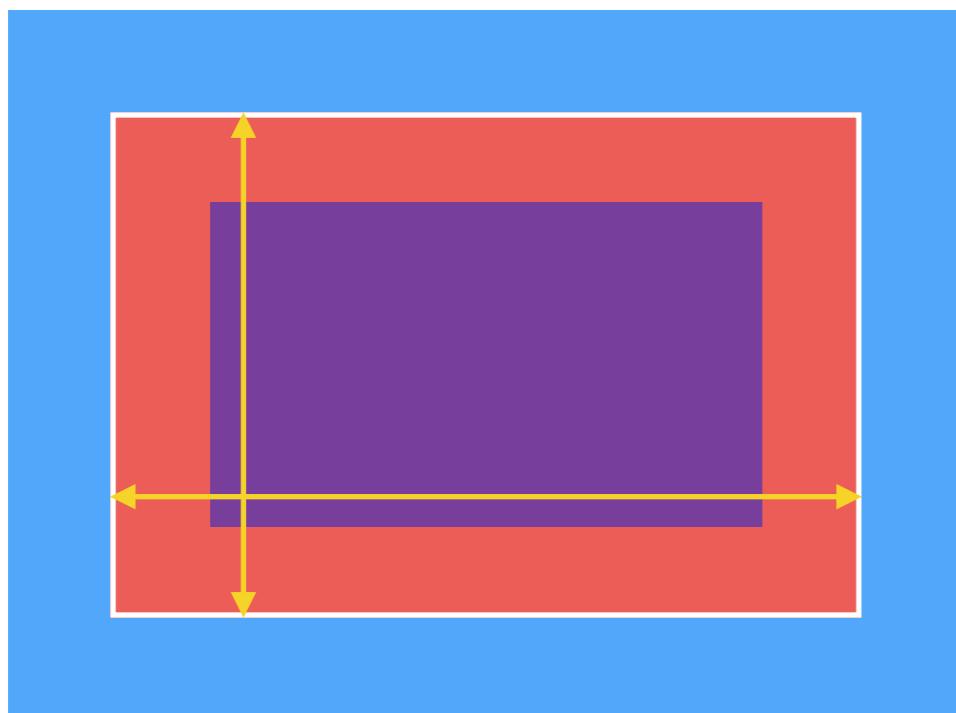
`width: 290px;
height: 200px;`

The CSS Box Model



```
box-sizing: content-box;  
width: 290px;  
height: 200px;
```

The CSS Box Model



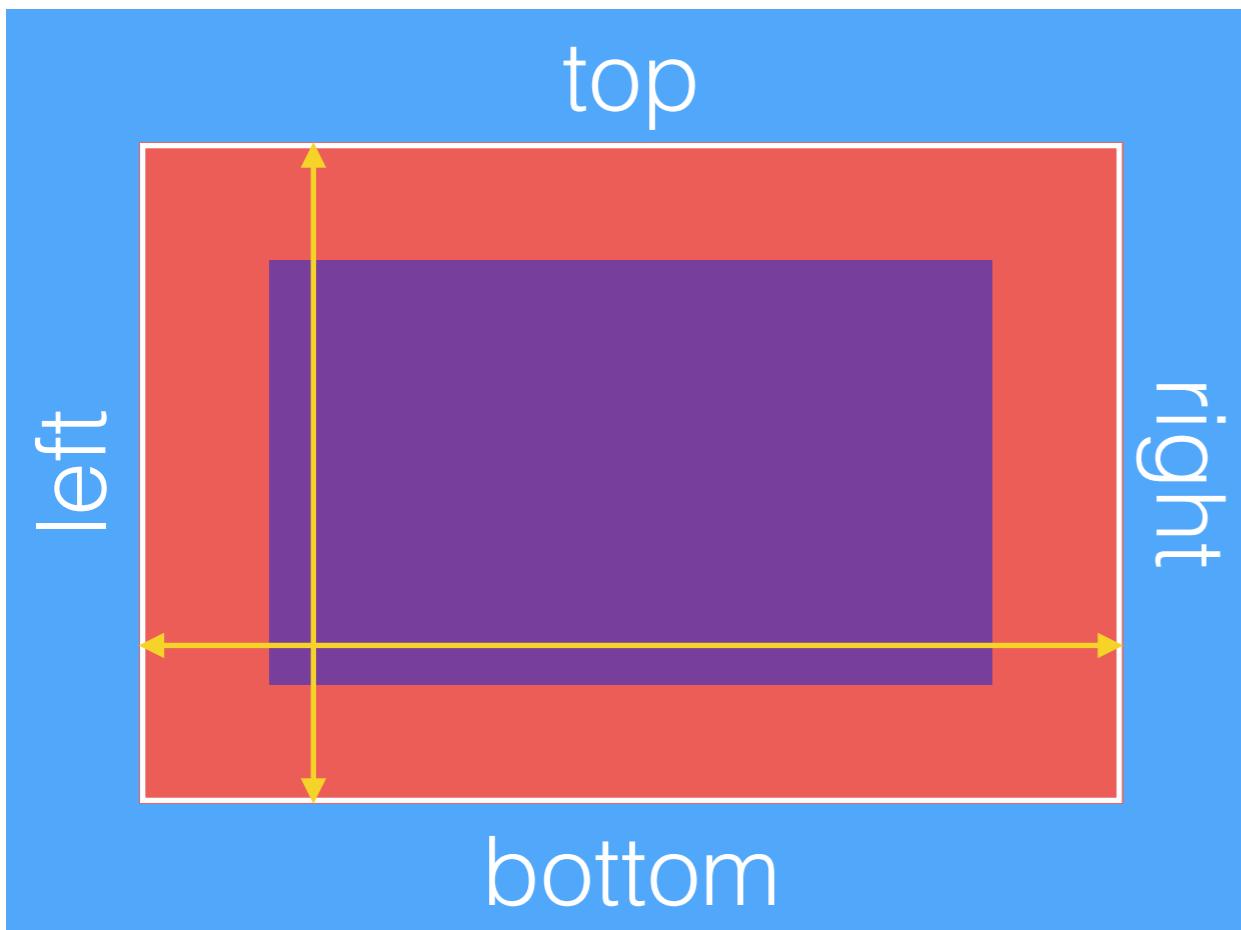
```
box-sizing: border-box;  
width: 290px;  
height: 200px;
```

Resetting box-sizing

using universal selector

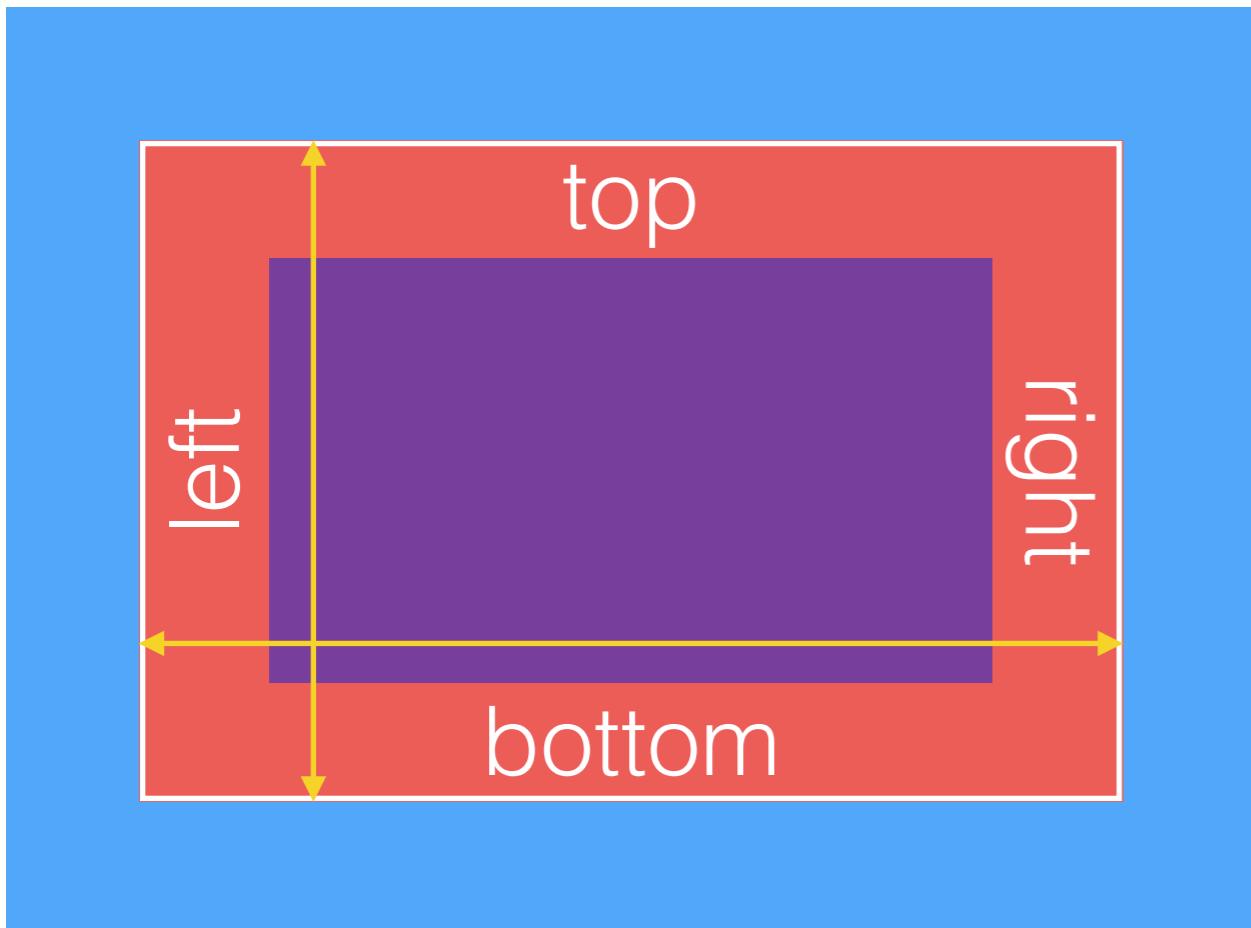
```
* {  
    box-sizing: border-box;  
}
```

The CSS Box Model



`margin-top: 20px;`
`margin-right: 20px;`
`margin-bottom: 20px;`
`margin-left: 20px;`

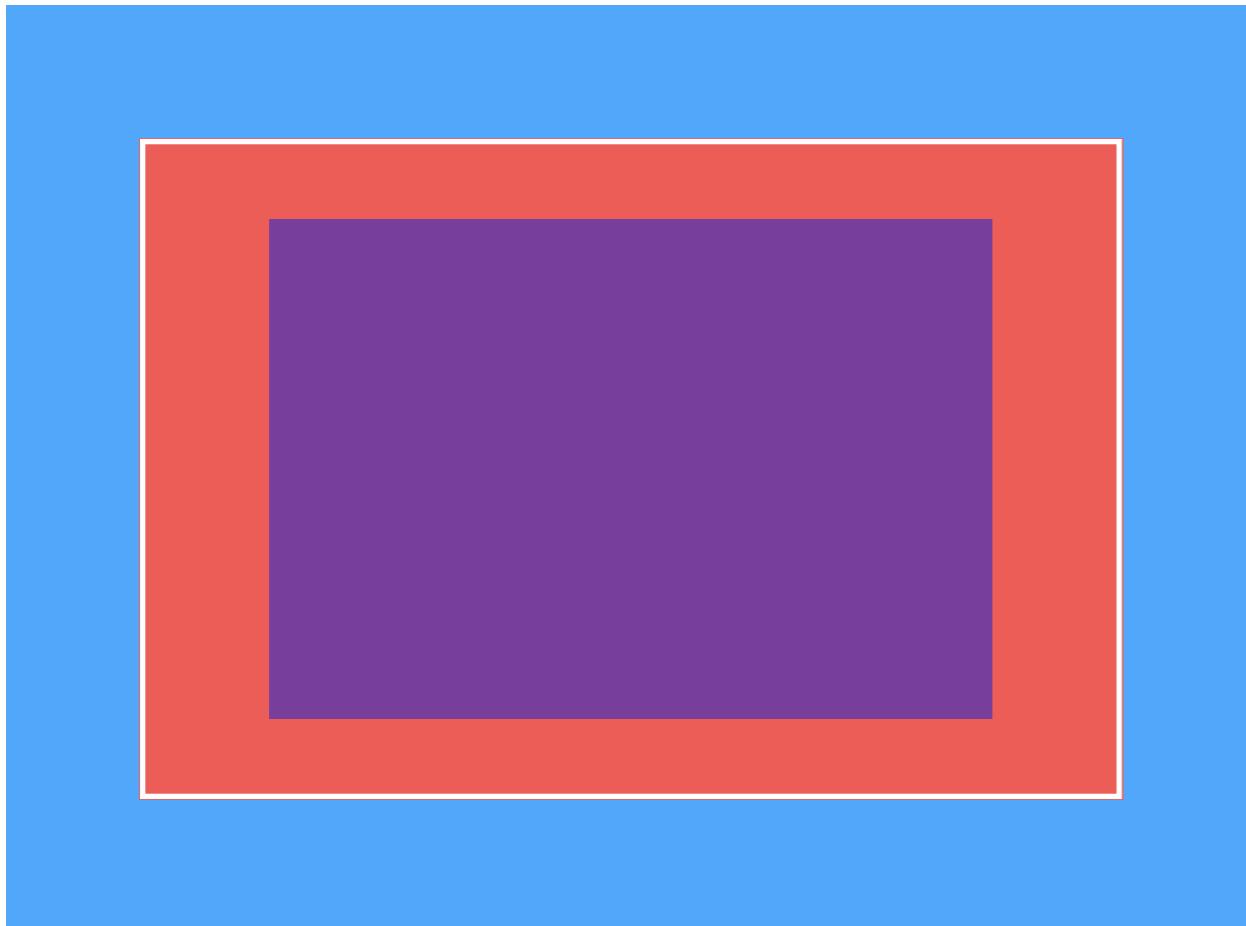
The CSS Box Model



`padding-top: 20px;`
`padding-right: 20px;`
`padding-bottom: 20px;`
`padding-left: 20px;`

The CSS Box Model

shorthand notation



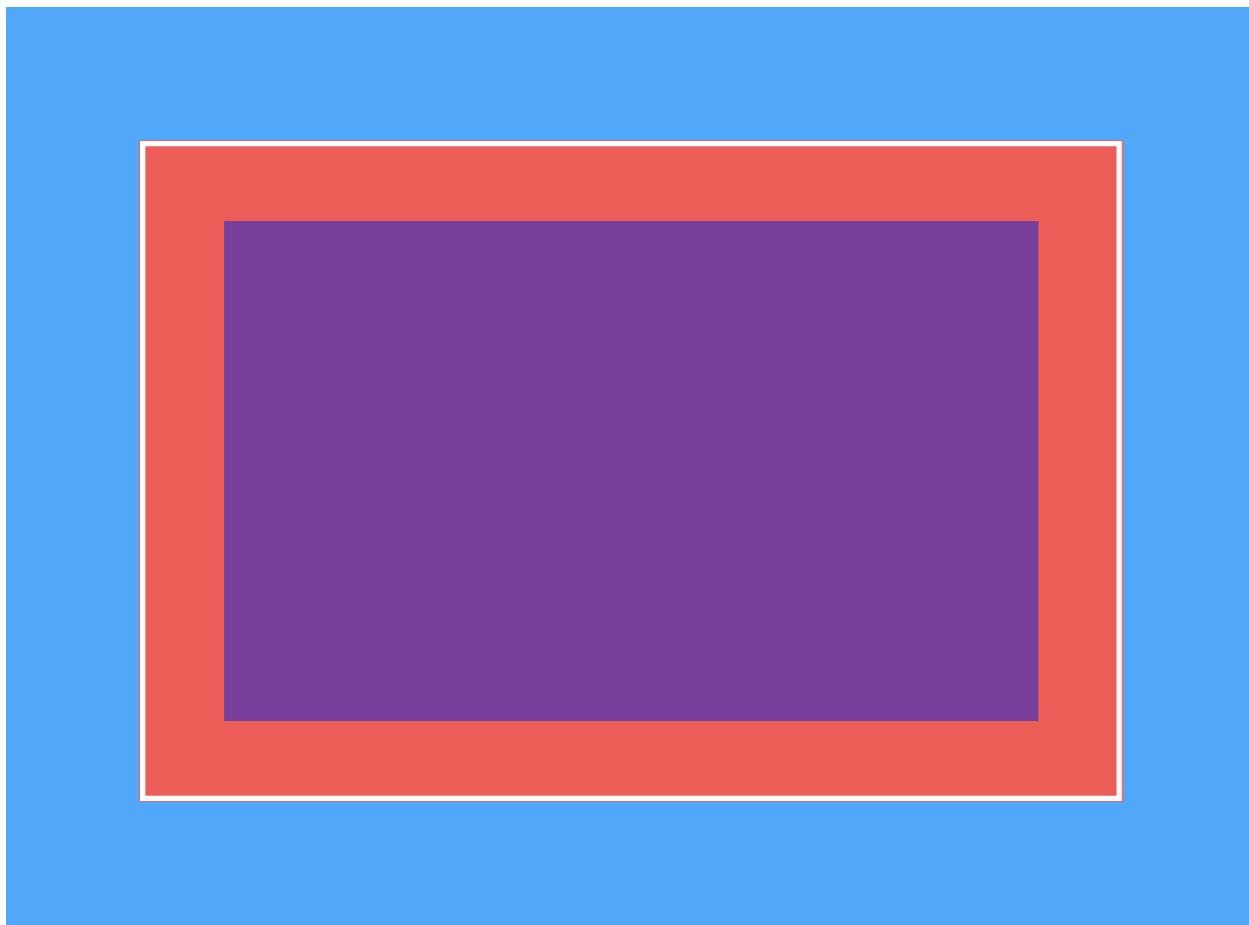
t r b l
padding: 10px 20px 10px 20px;

t r,l b
padding: 10px 20px 10px;

t,b r,l
padding: 10px 20px;

The CSS Box Model

shorthand notation



t r b l
padding: 10px 20px 10px 20px;

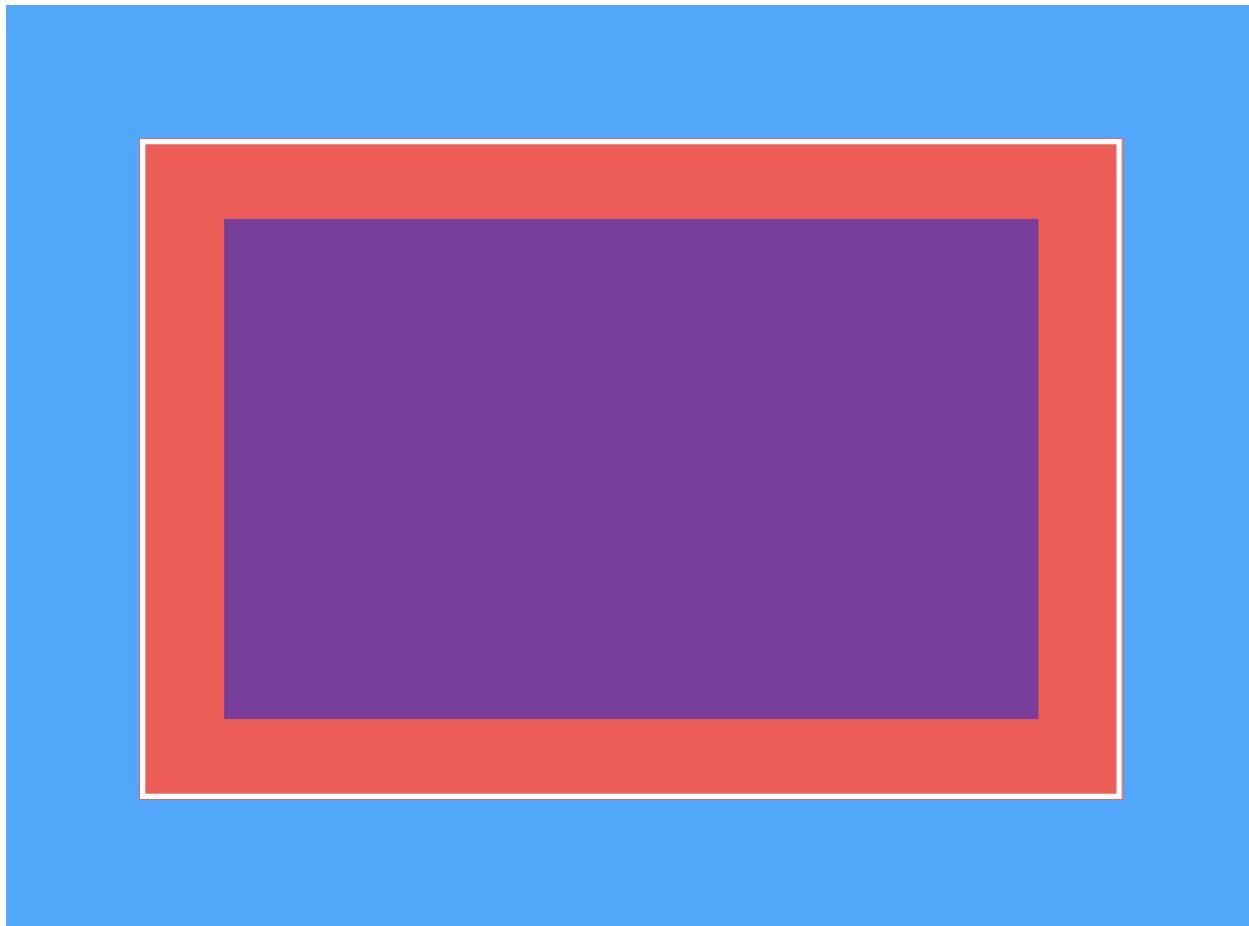
t r,l b
padding: 10px 20px 10px;

t,b r,l
padding: 10px 20px;

t,b,r,l
padding: 10px;

The CSS Box Model

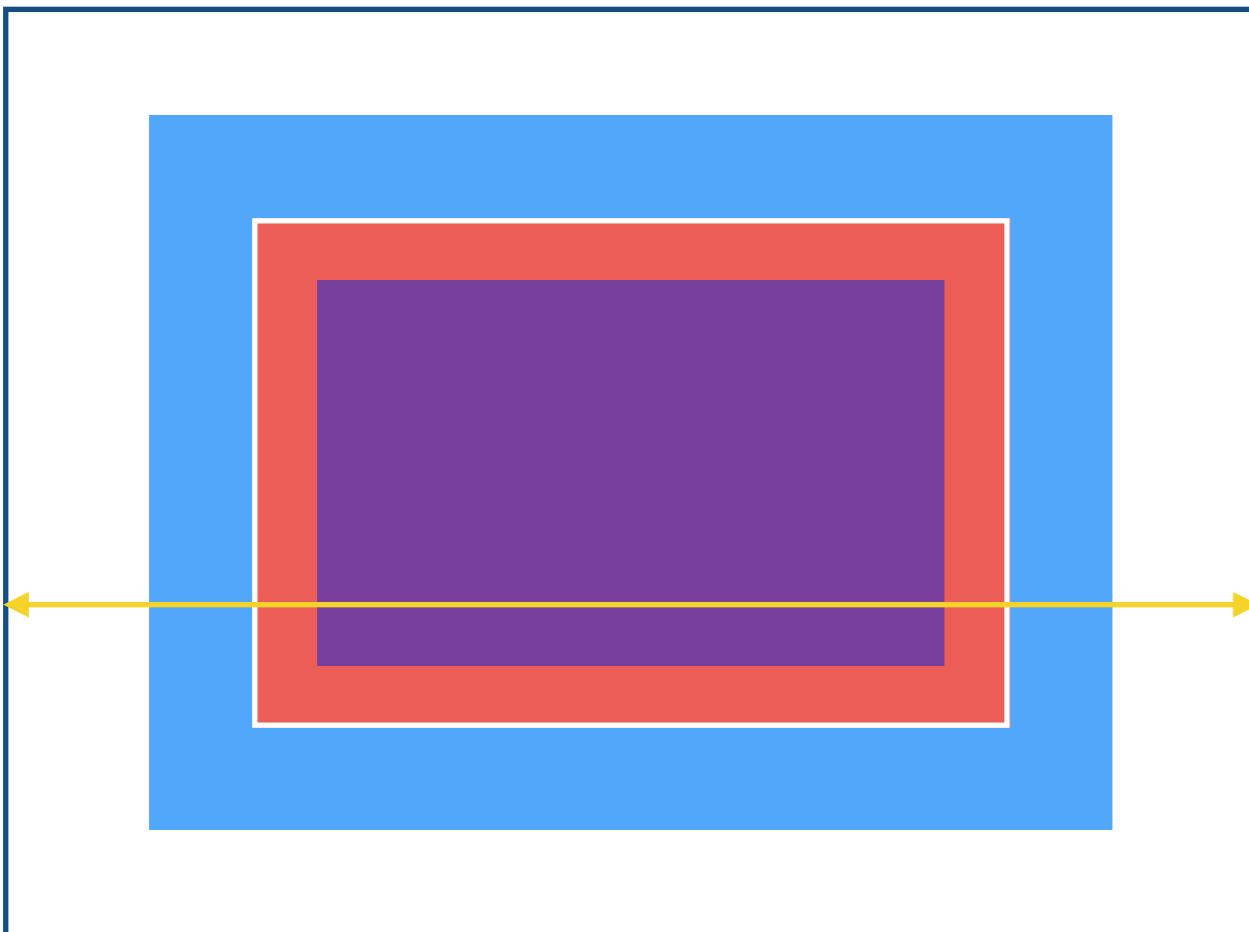
units



padding: 10px;

The CSS Box Model

units

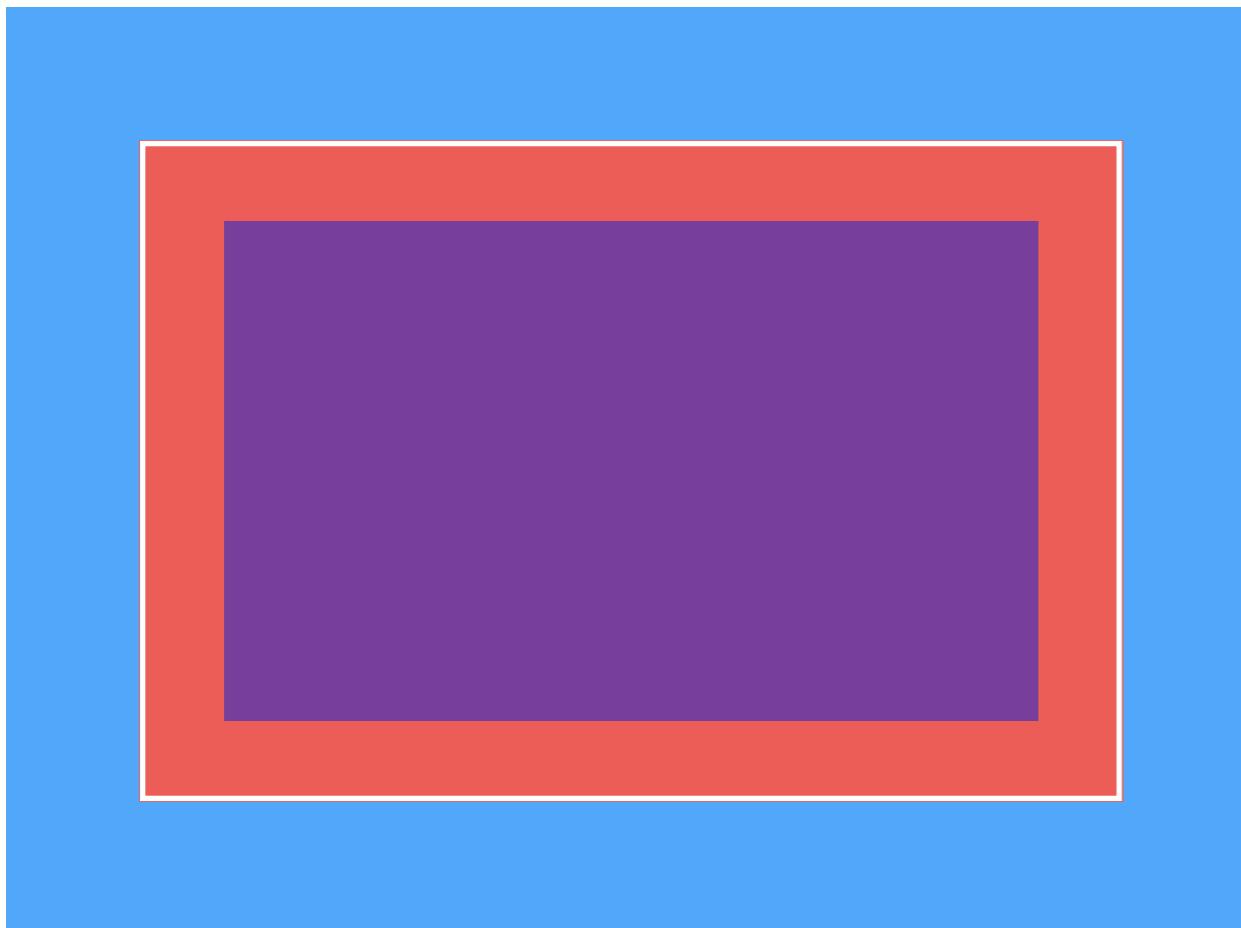


`padding: 10%;`

*relative to the **width** of the **container**,
not the element itself*

The CSS Box Model

units



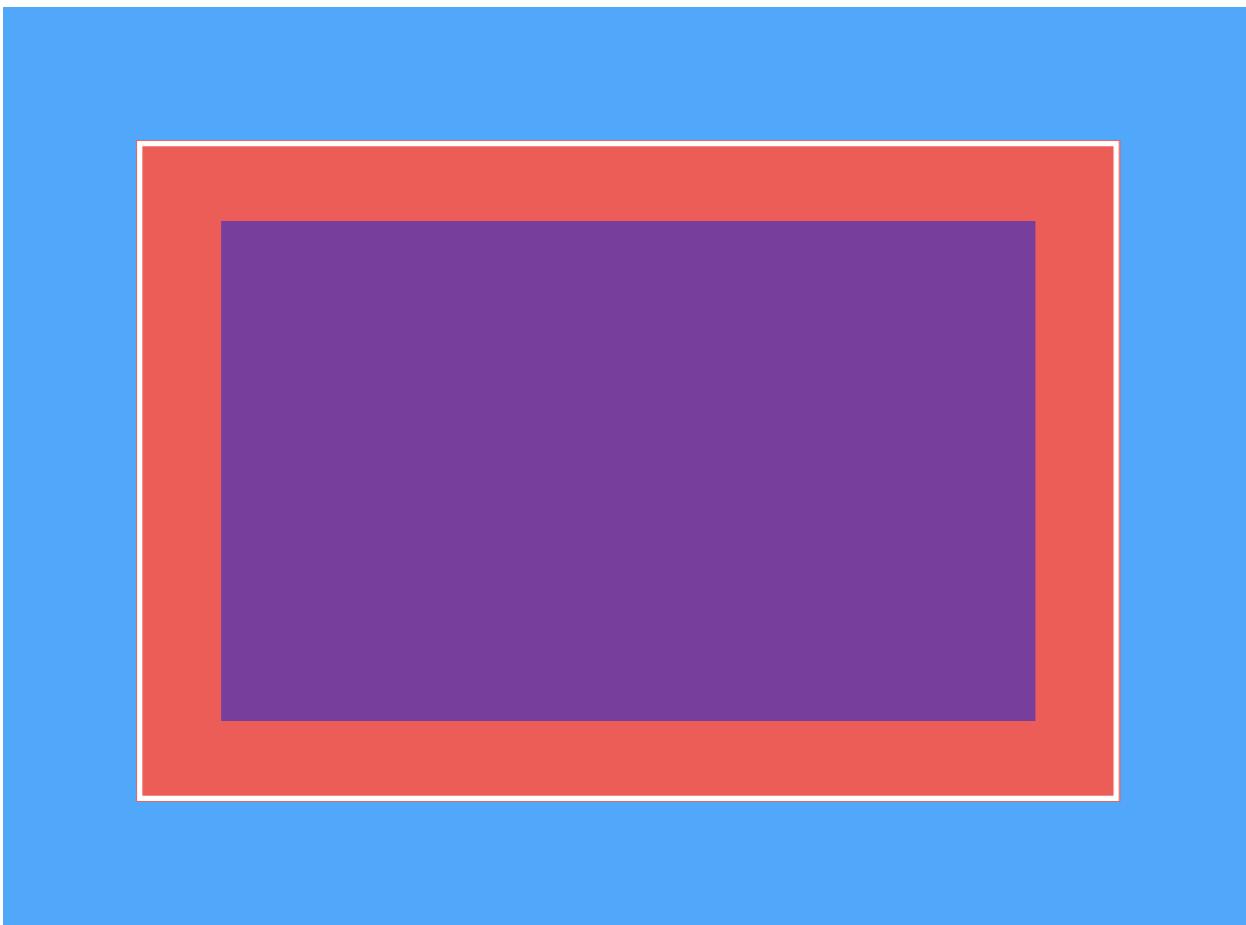
`padding: 1em;`

*will use the current font size,
especially useful for vertical margins/paddings*



The CSS Box Model

units



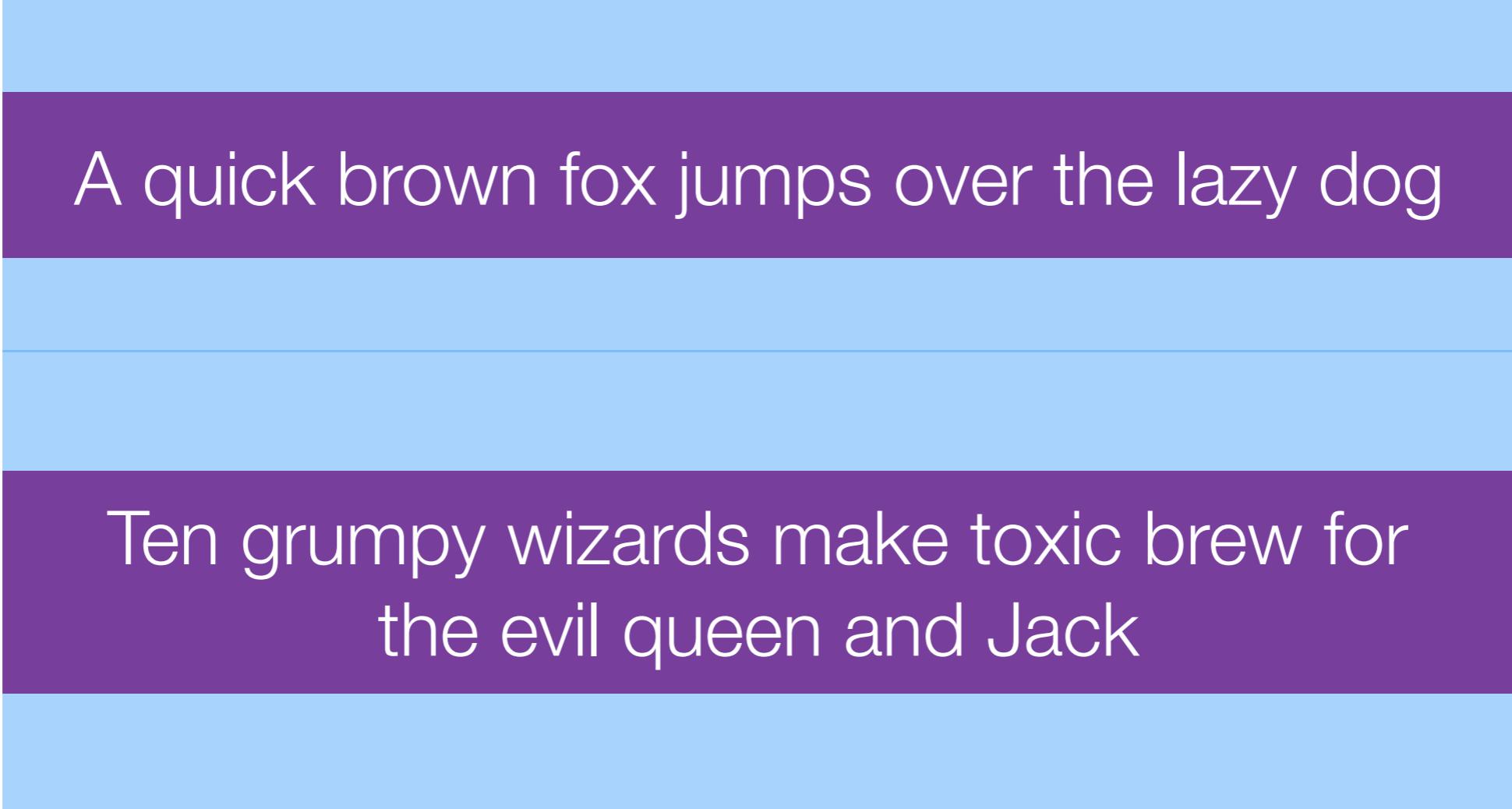
`padding: 1ex;`

will use the height of a lowercase “x” with the current font size, somewhat vague



Margin collapse

adjacent siblings

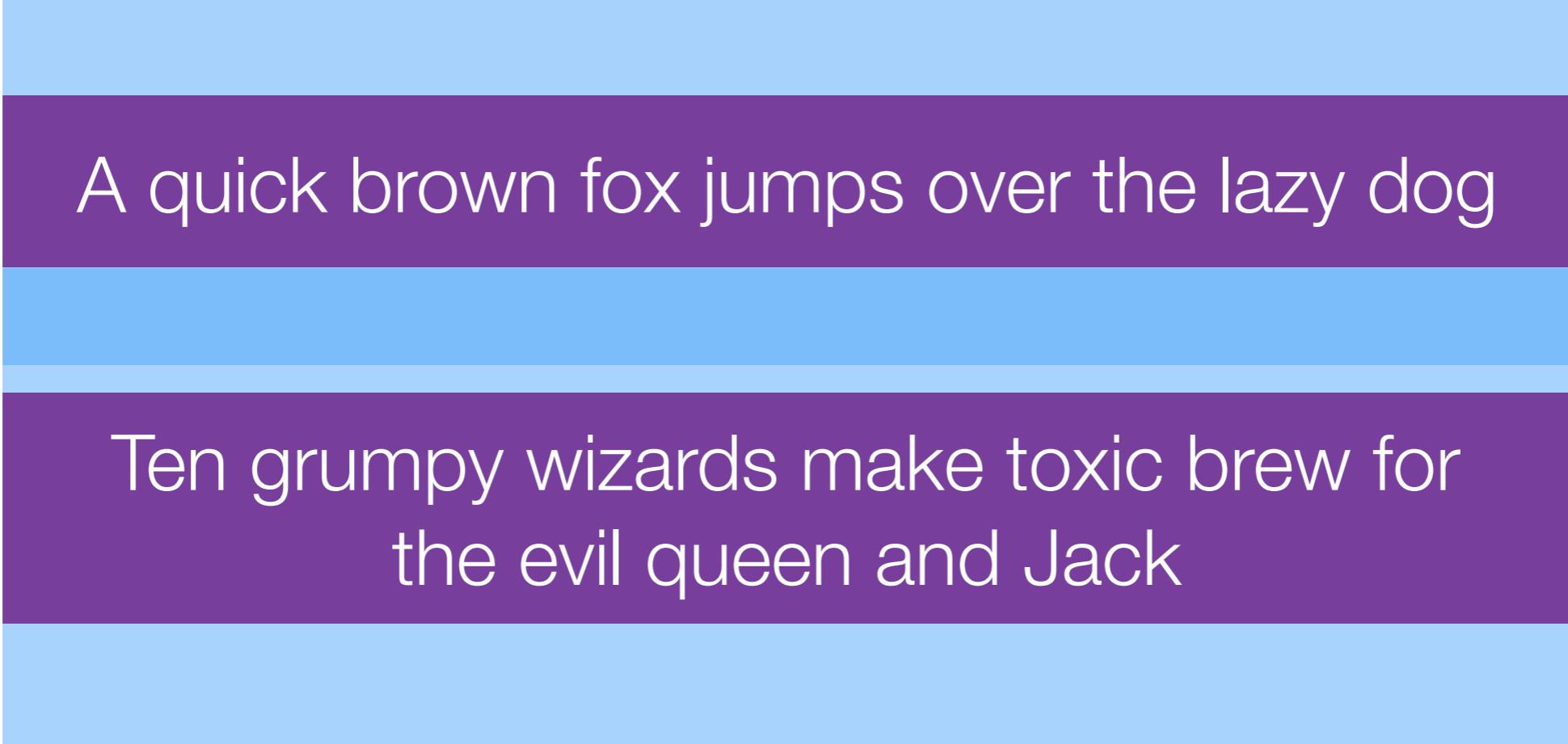


A quick brown fox jumps over the lazy dog

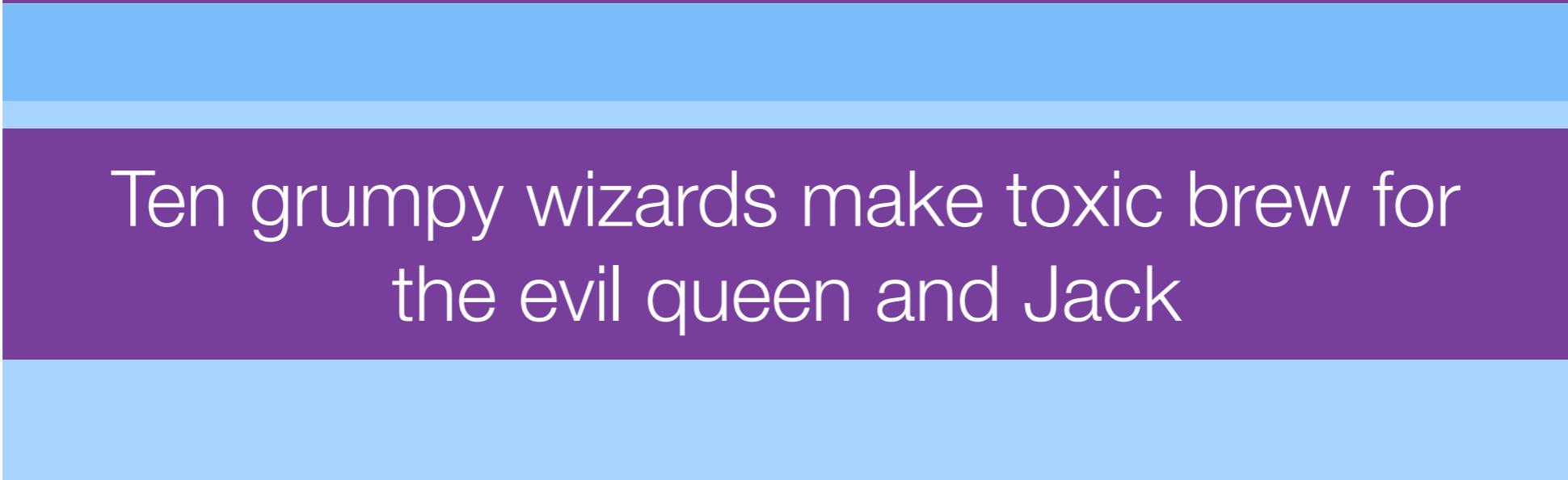
Ten grumpy wizards make toxic brew for
the evil queen and Jack

Margin collapse

adjacent siblings



A quick brown fox jumps over the lazy dog



Ten grumpy wizards make toxic brew for
the evil queen and Jack

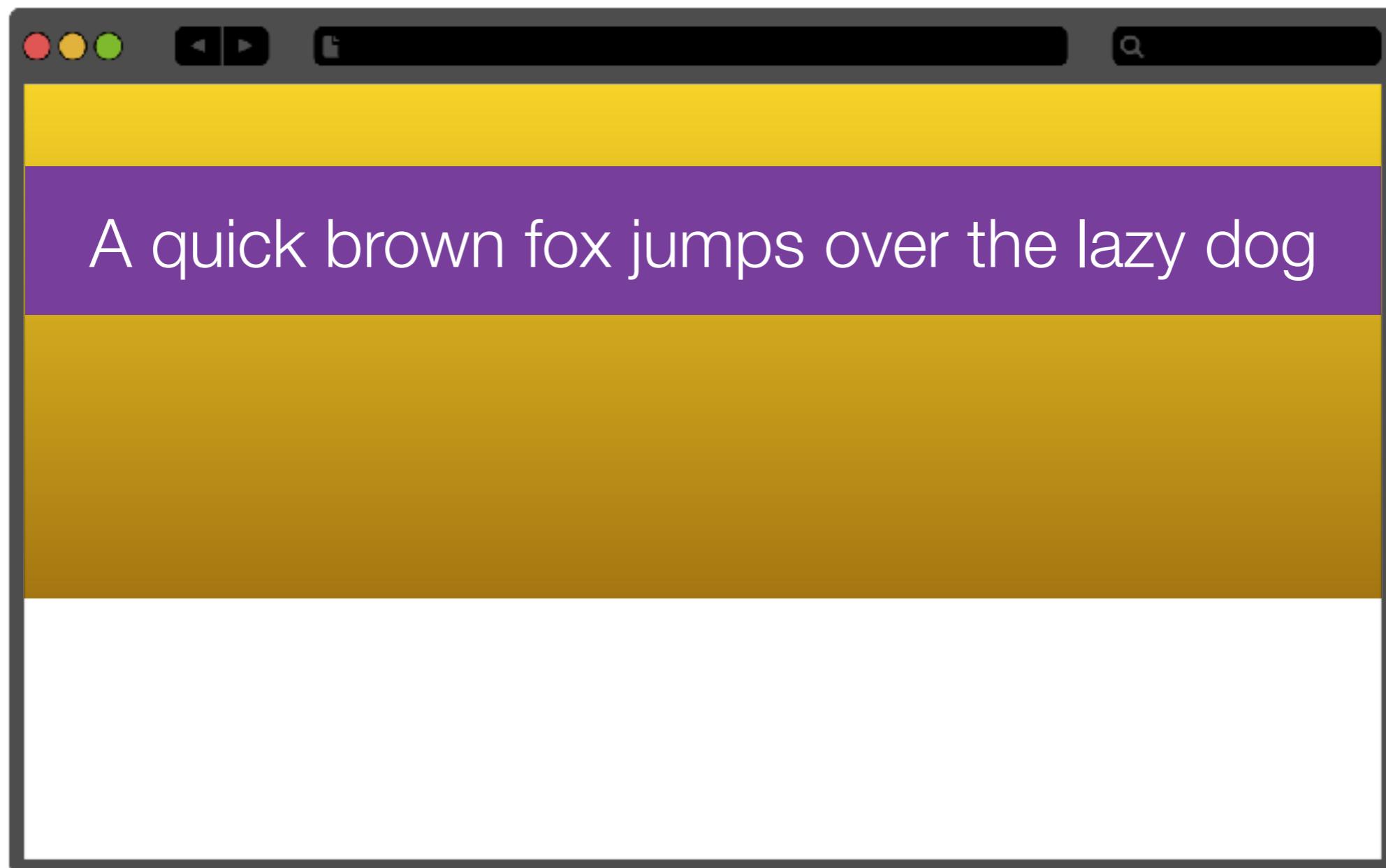
Margin collapse

first/last child in a container



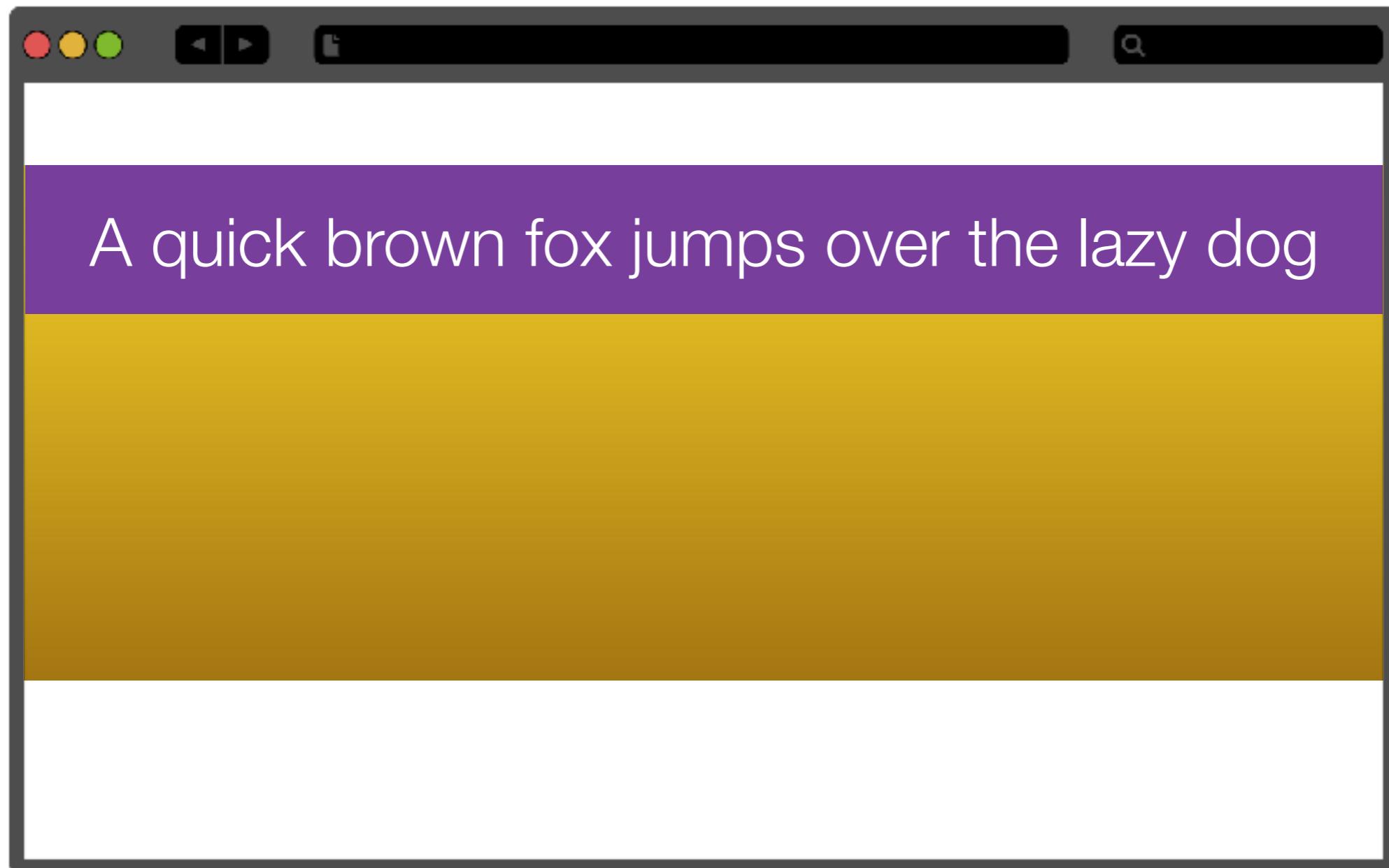
Margin collapse

first/last child in a container



Margin collapse

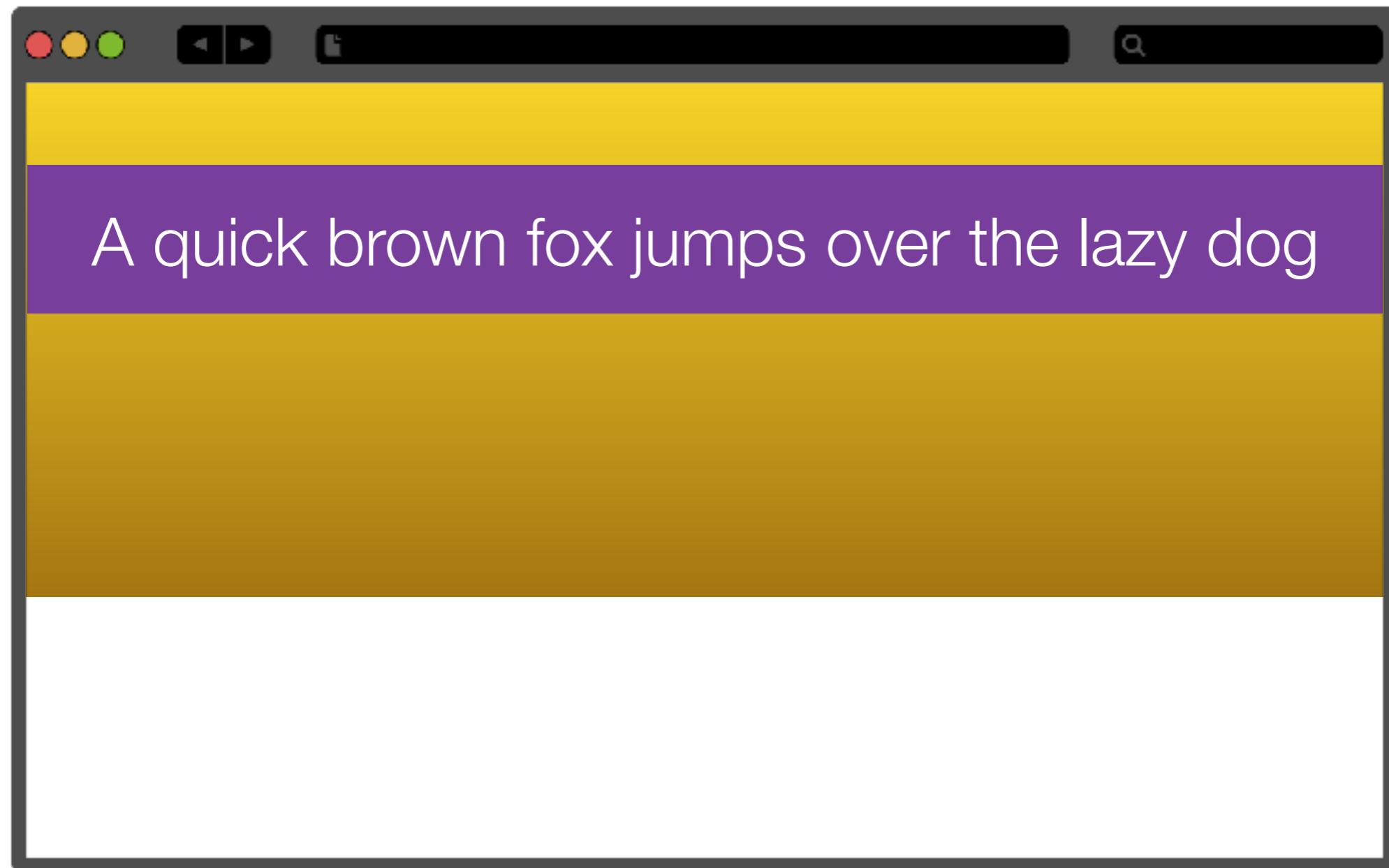
first/last child in a container having no border/padding



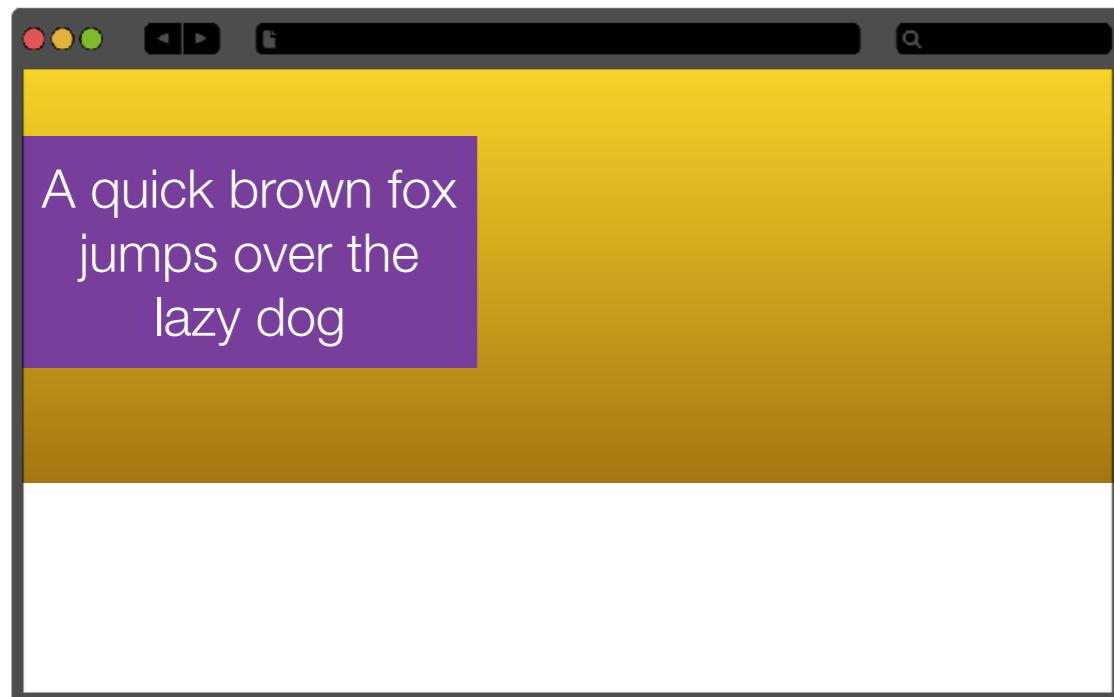
Margin collapse

[https://developer.mozilla.org/en-US/docs/Web/CSS/
CSS Box Model/Mastering margin collapsing](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Box_Model/Mastering_margin_collapsing)

Centering with margins

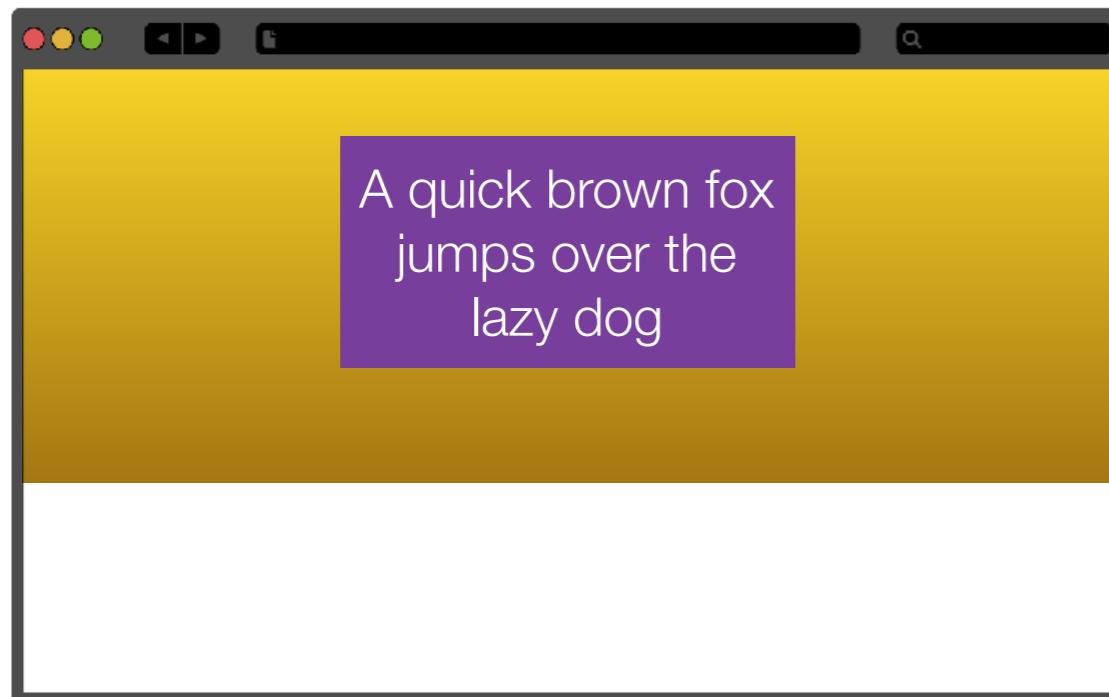


Centering with margins



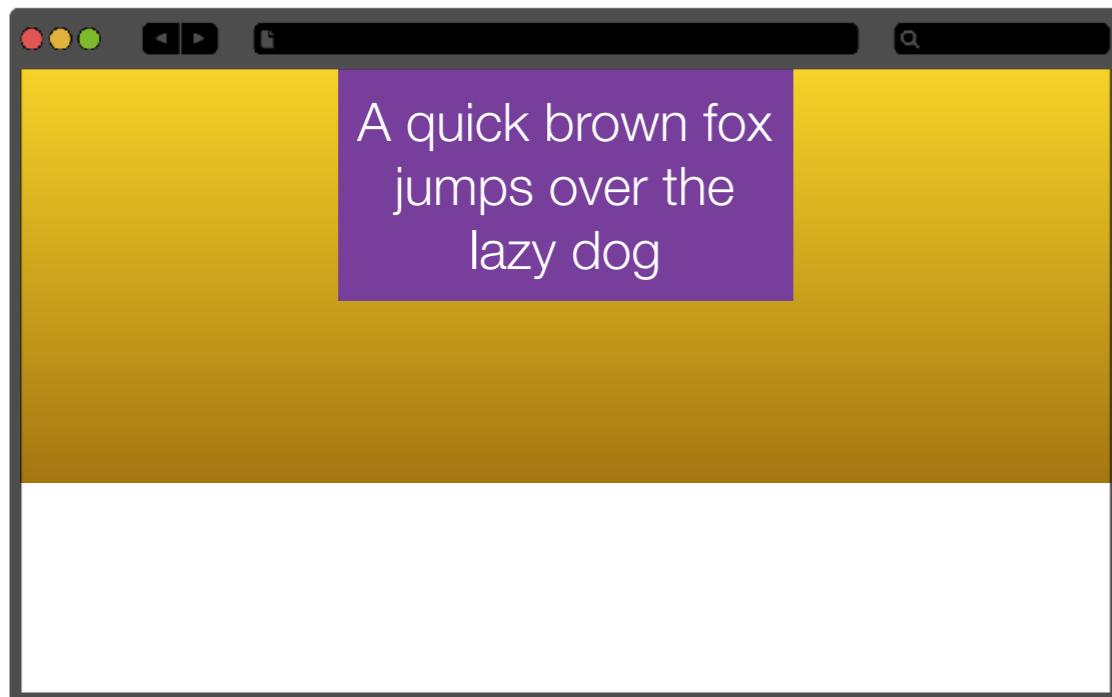
width: 40%;

Centering with margins



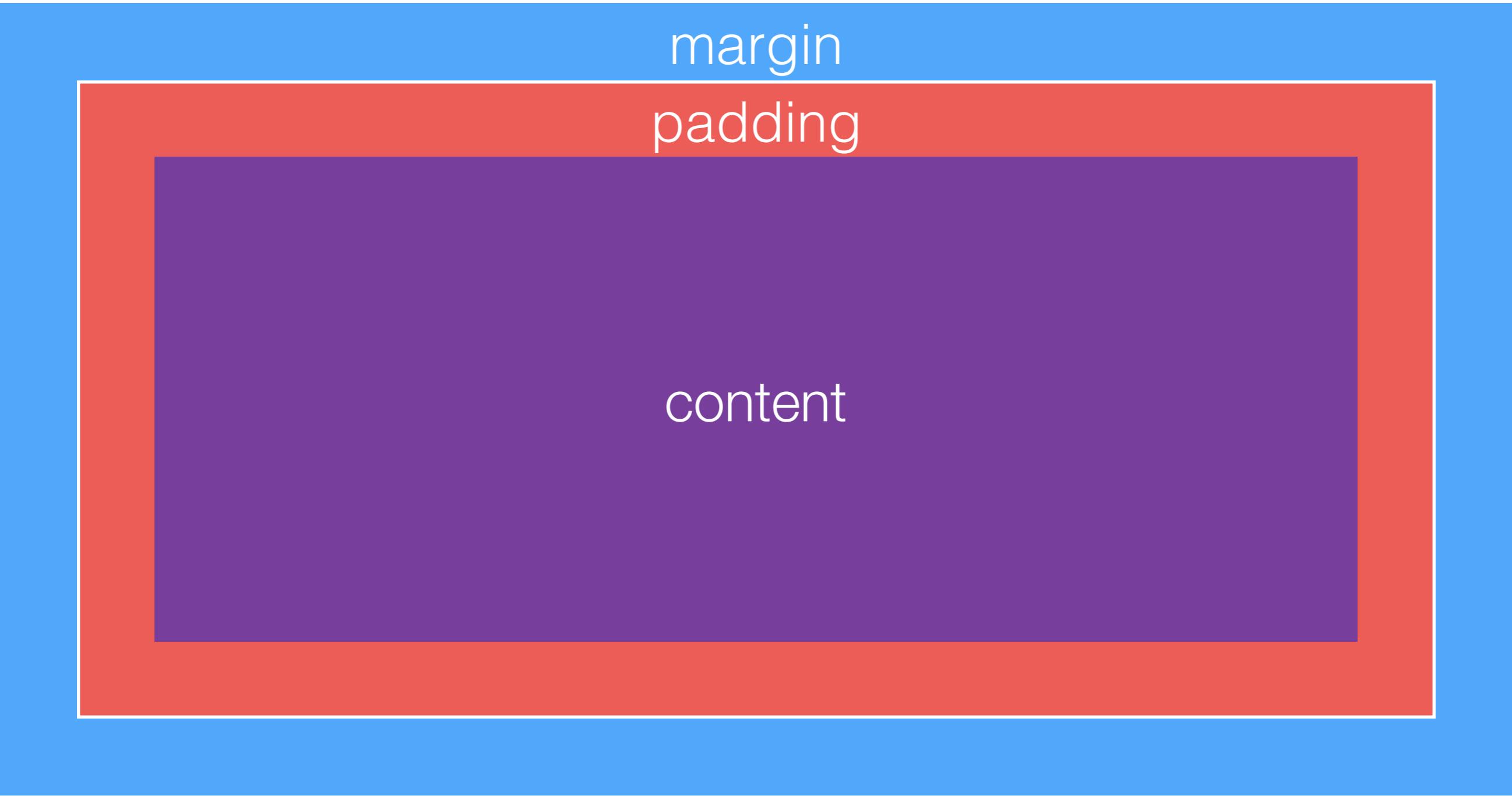
```
width: 40%;  
margin-left: auto;  
margin-right: auto;
```

Centering with margins



```
width: 40%;  
margin: 0 auto;
```

Background



The diagram illustrates the CSS box model with three nested rectangular layers. The outermost layer is light blue and labeled 'margin'. Inside it is a red layer labeled 'padding'. The innermost layer is purple and labeled 'content'. All three layers have white borders.

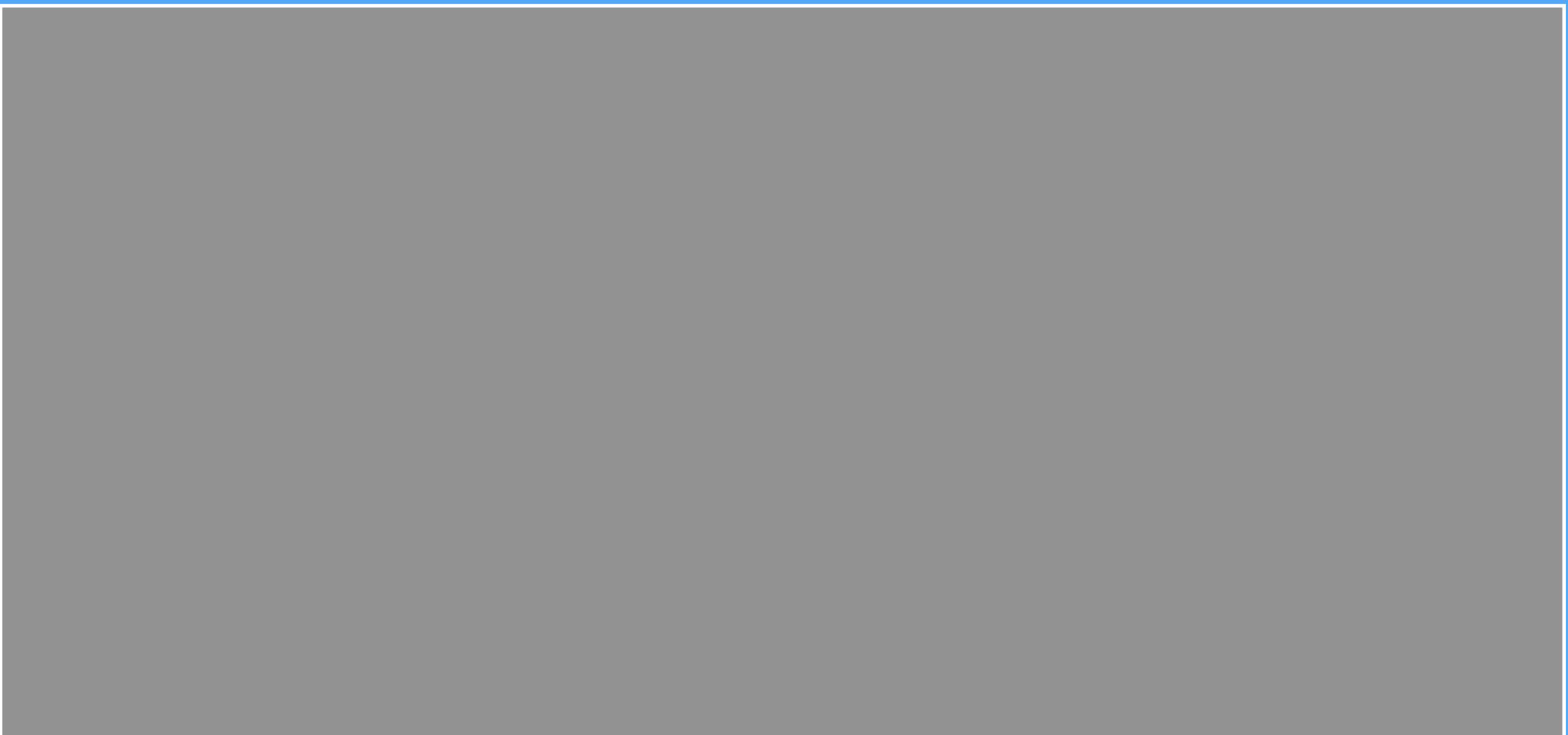
margin

padding

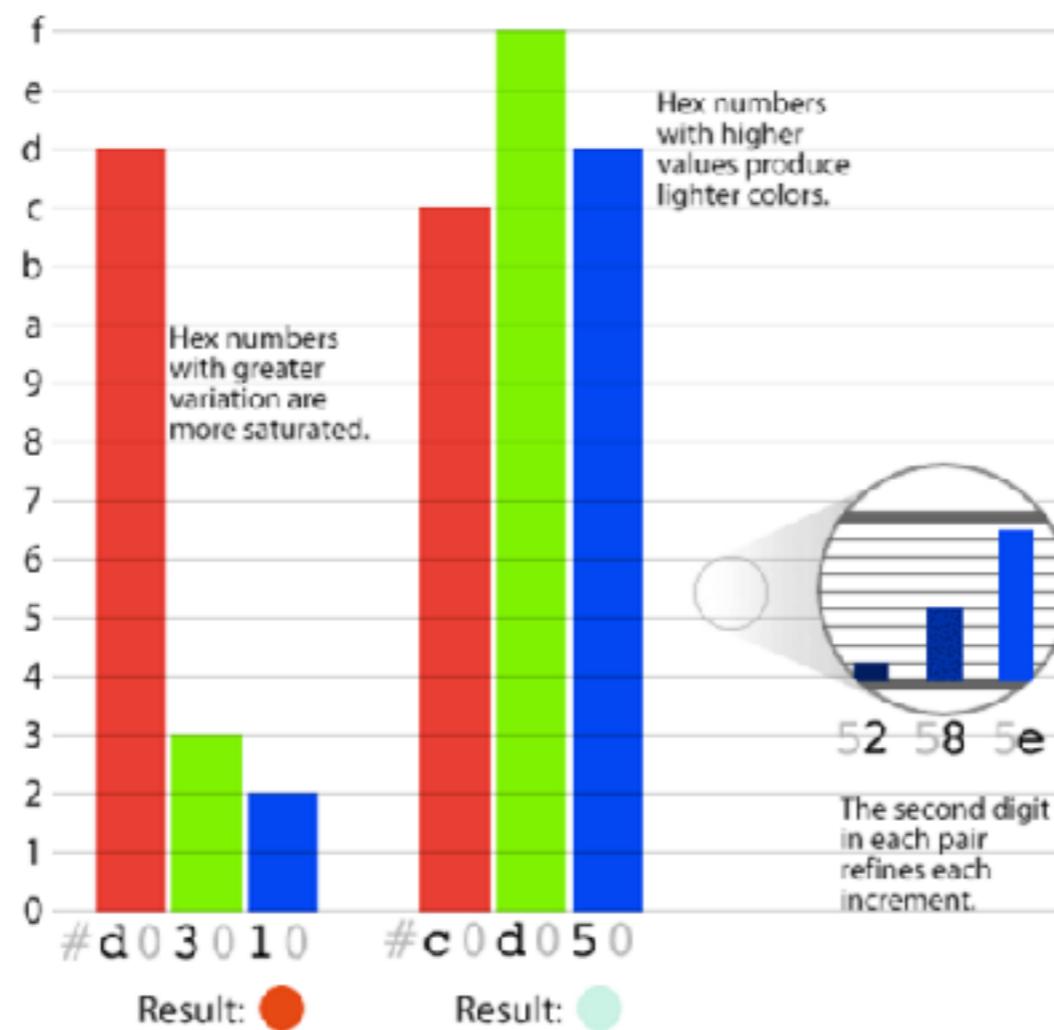
content

Background

background-color: #999999;



Understanding hex colours



<https://www.smashingmagazine.com/2012/10/the-code-side-of-color/>

bit.ly/color-picker-tool

Colour notations

color: red;

color: #ff0000;

color: rgb(255, 0, 0);

color: rgba(255, 0, 0, 1);



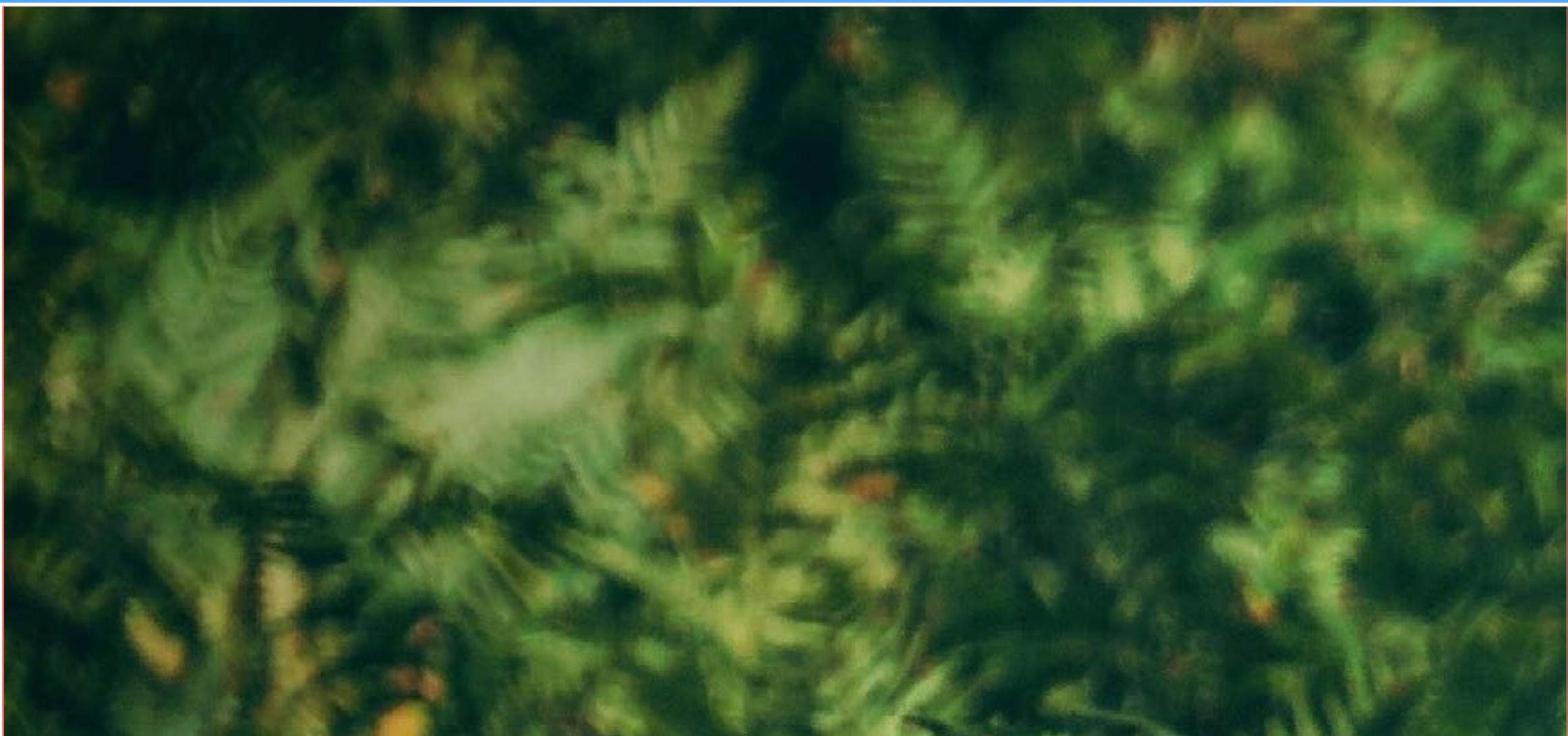
opacity:

1 - completely opaque,

0 - completely transparent

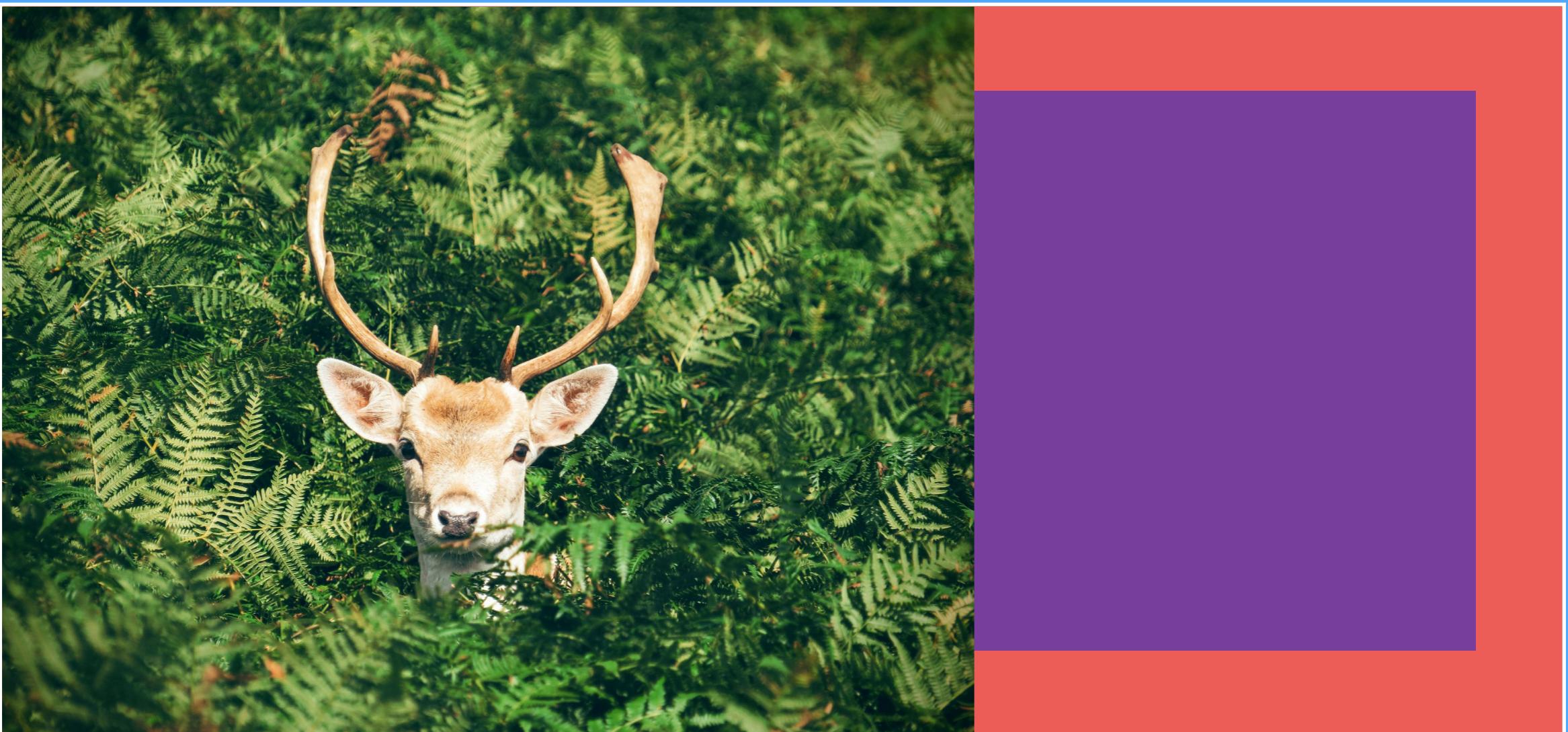
Background

background-image: url('deer.jpg');



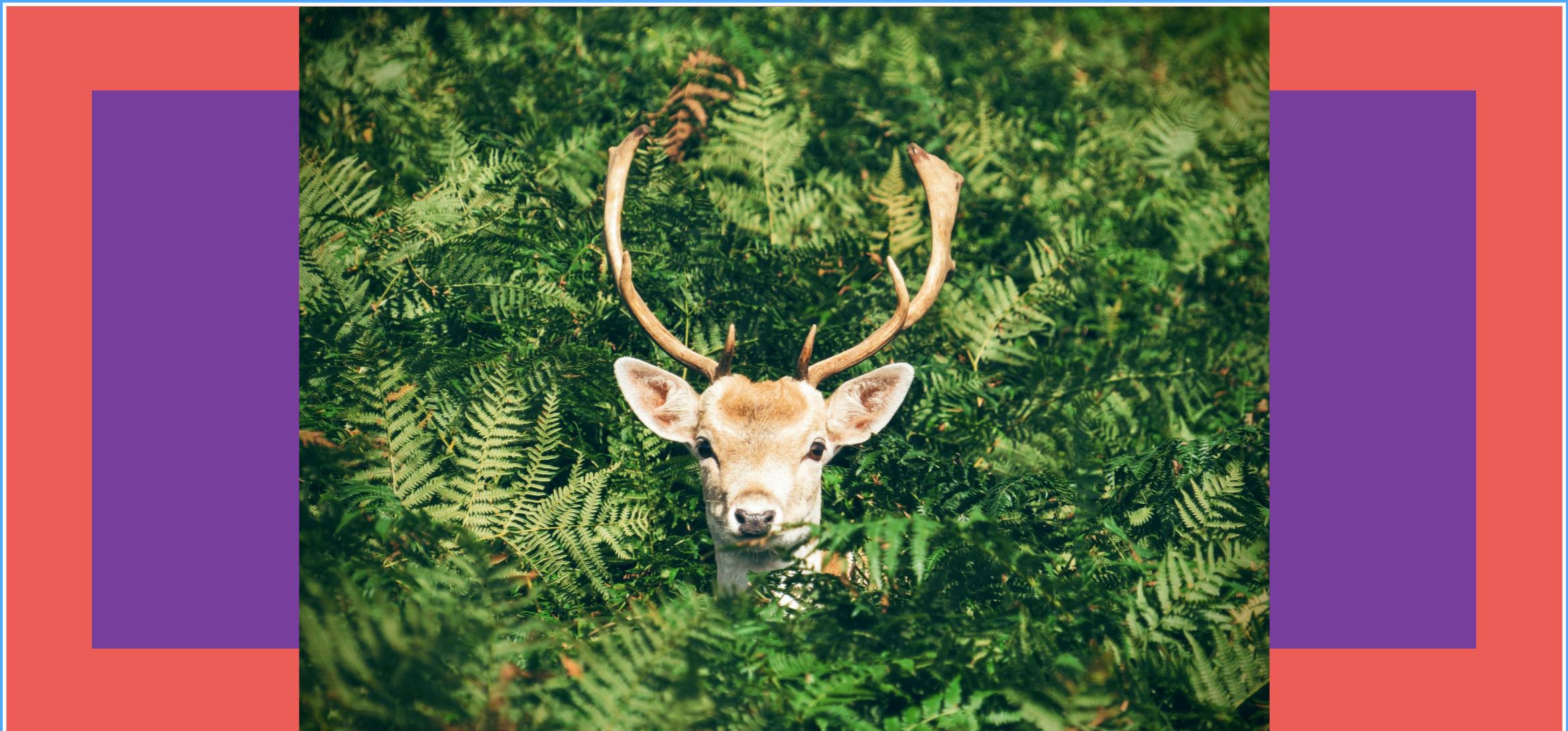
Background

```
background-image: url('deer.jpg');  
background-size: contain;
```



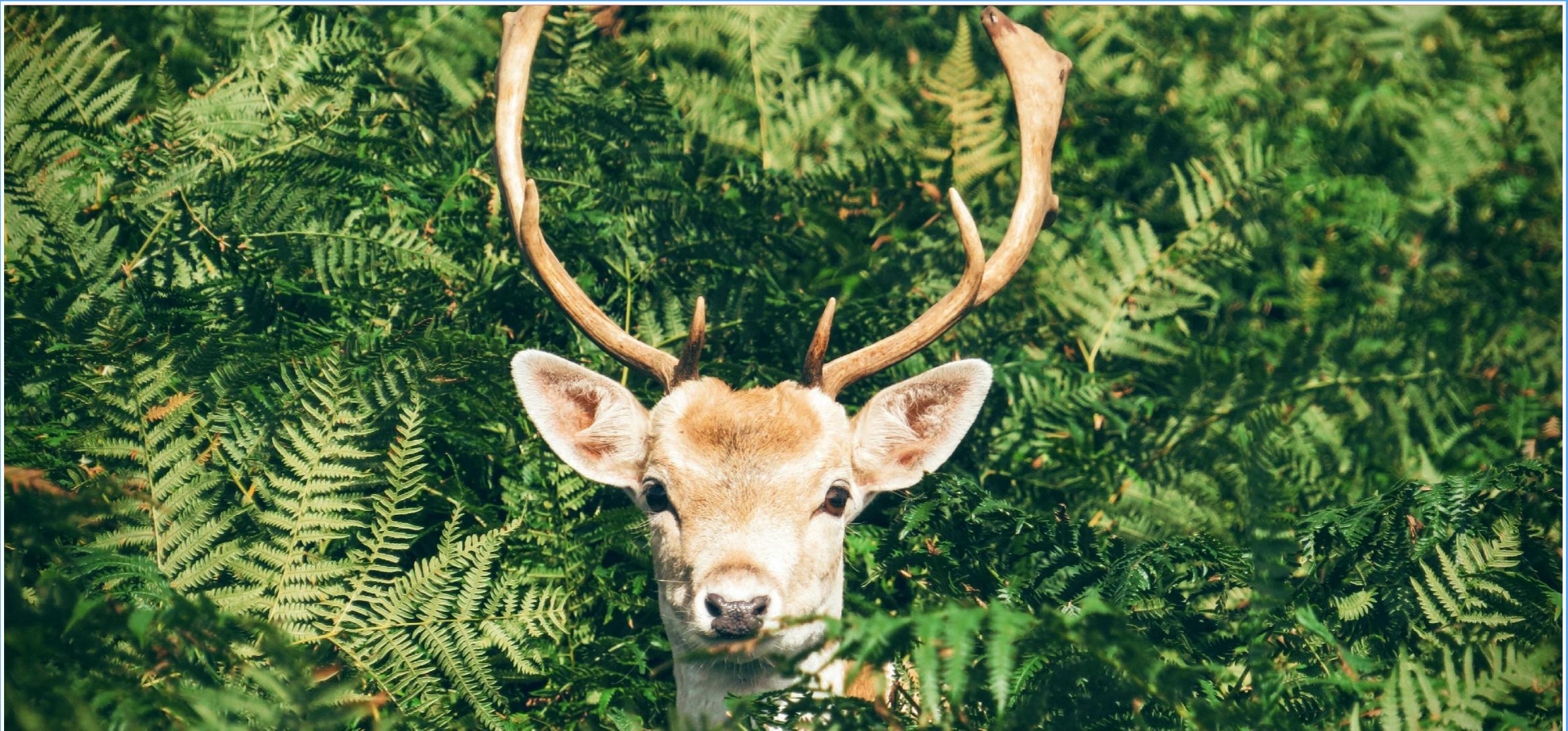
Background

```
background-image: url('deer.jpg');  
background-size: contain;  
background-position: center center;
```



Background

```
background-image: url('deer.jpg');  
background-size: cover;  
background-position: center center;
```



Background

shorthand values

```
background: #999999 url('deer.jpg') center center no-repeat scroll;
```

background-image

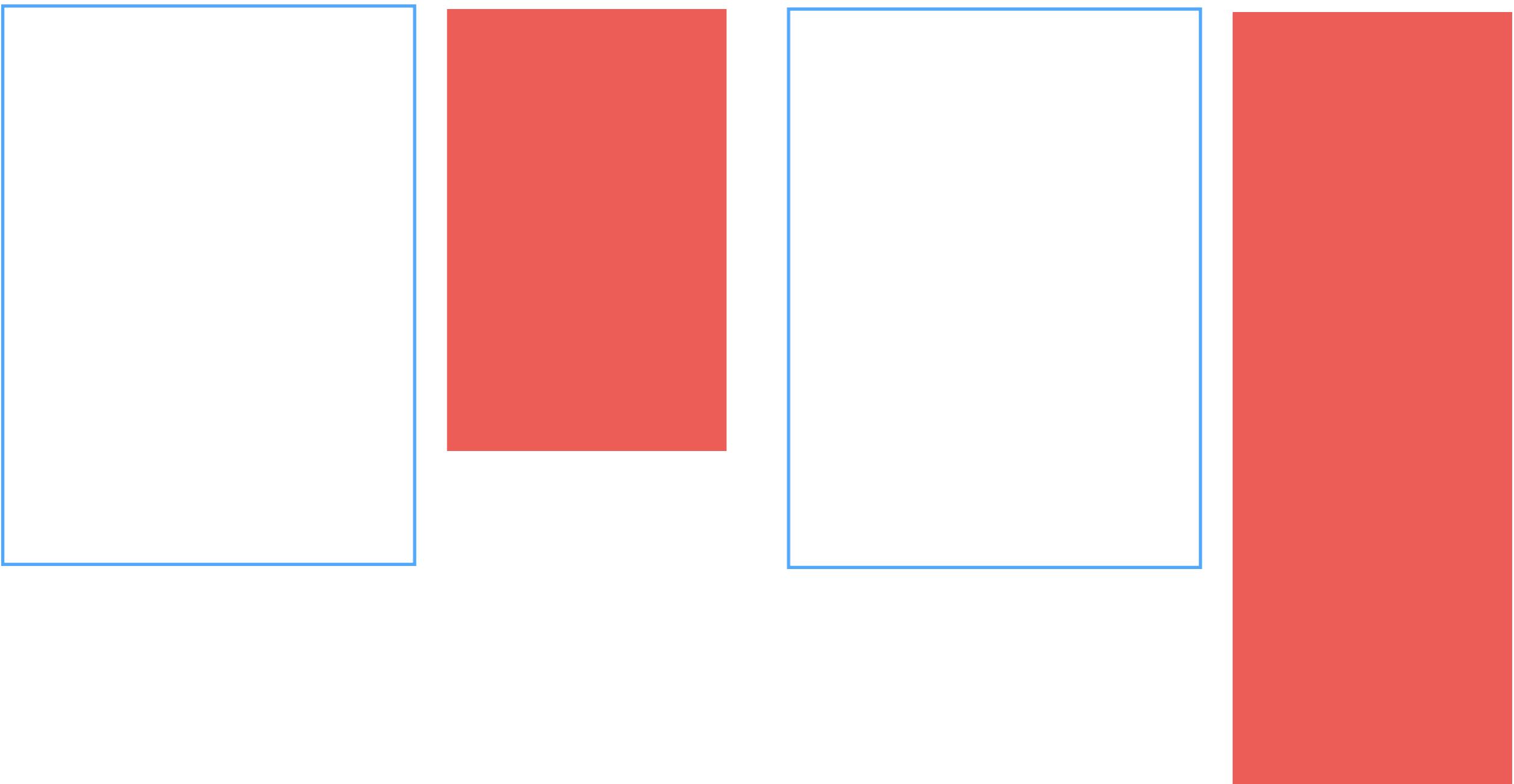
background-color

background-position
(can be % or px, too)

background-repeat

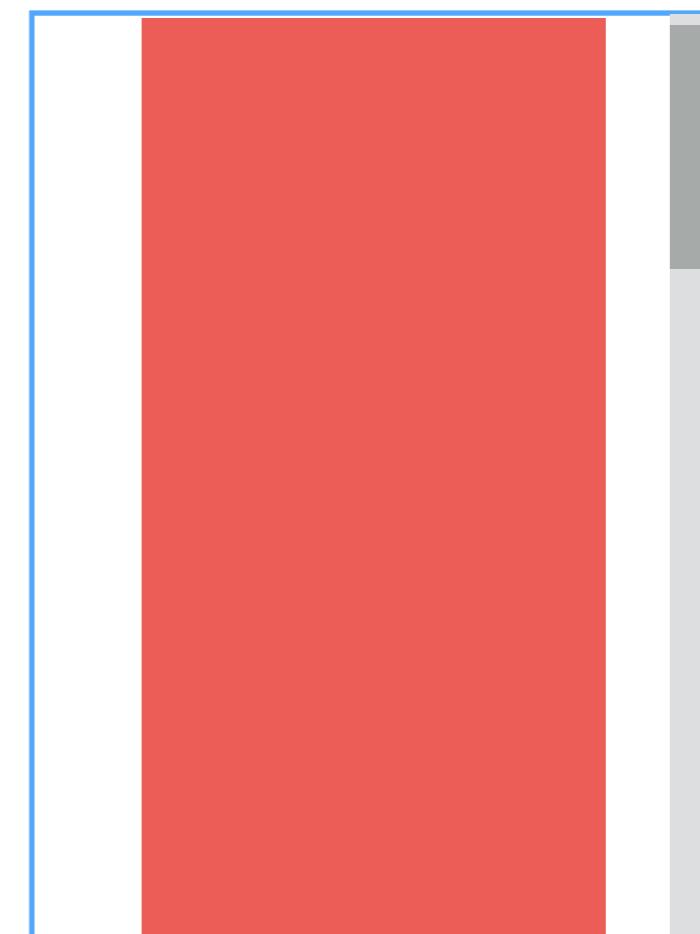
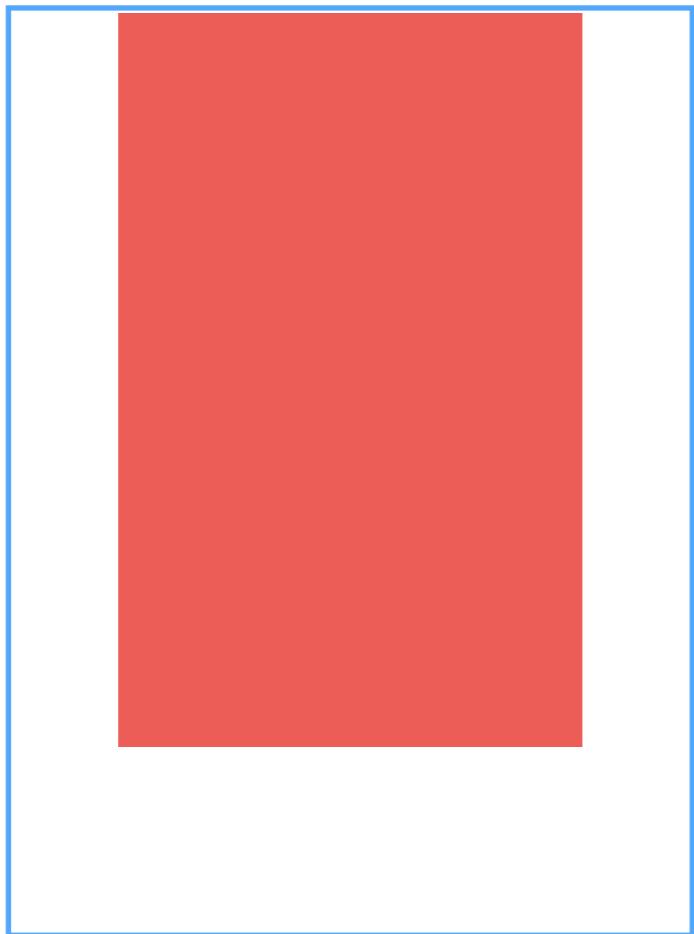
background-attachment

Overflow



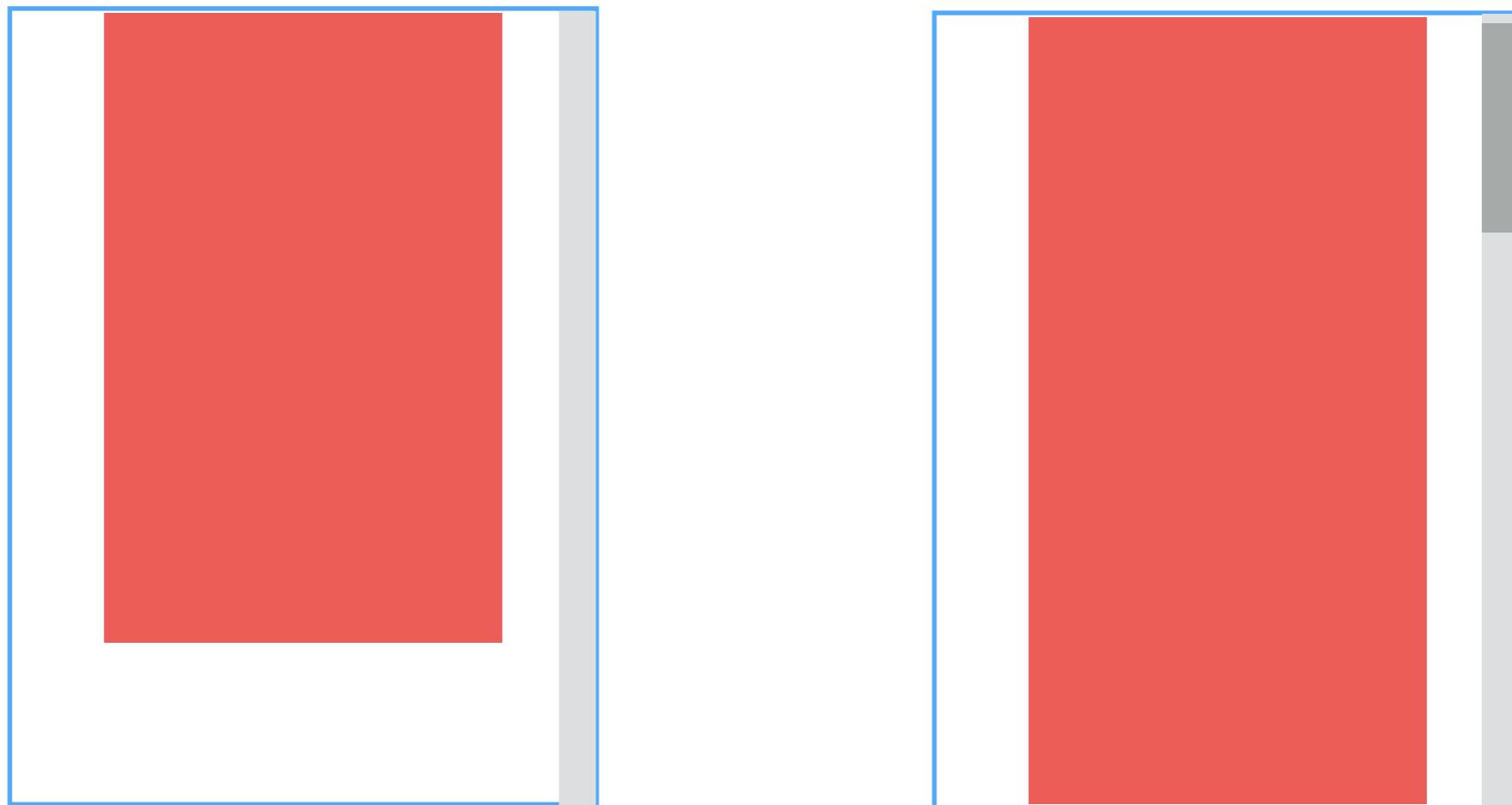
Overflow

overflow: auto;



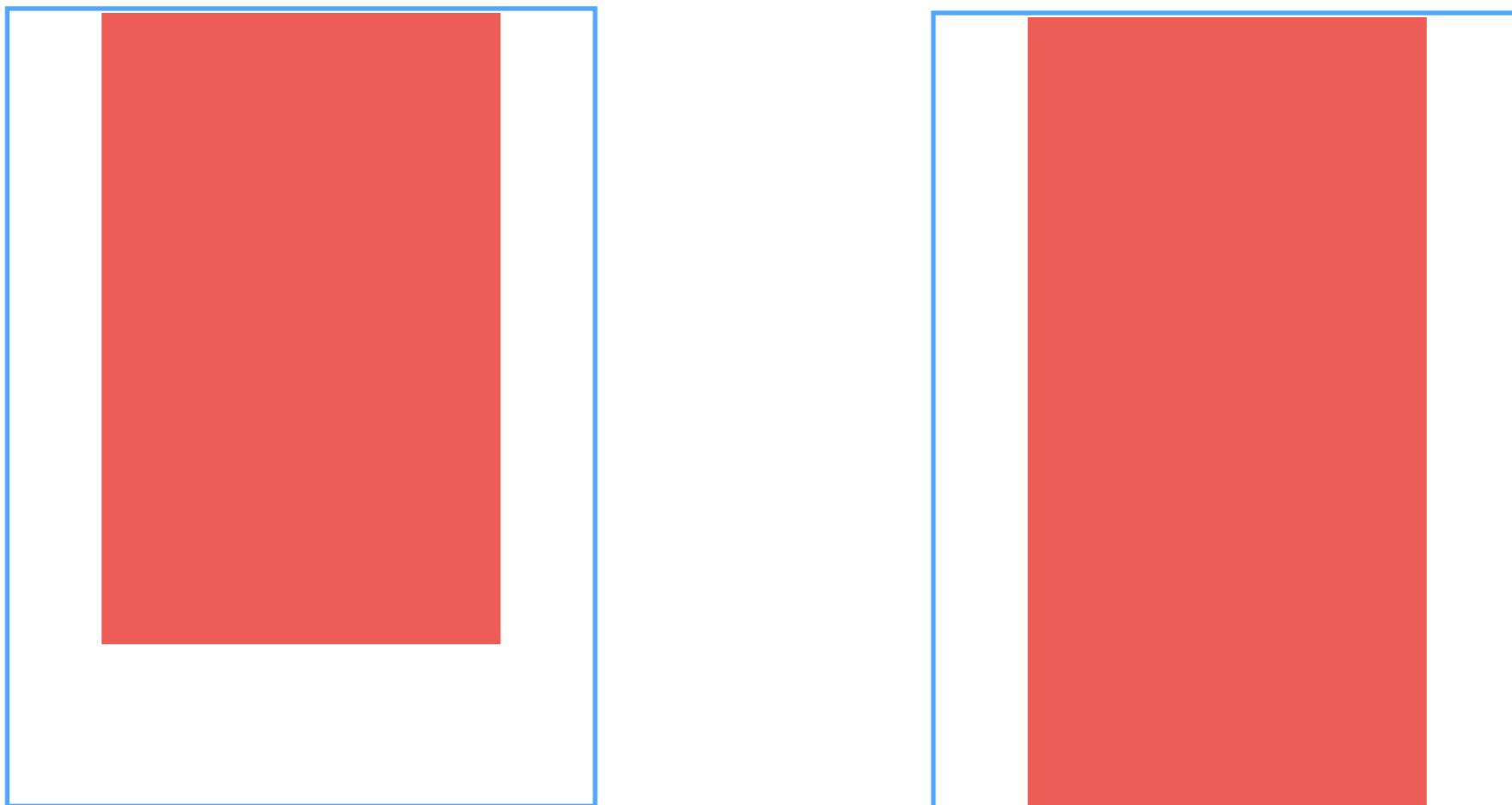
Overflow

overflow: scroll;



Overflow

overflow: hidden;



Font

essential properties

- color
- font-family
- font-size
- font-weight
- line-height

Font

`font-family: 'Helvetica Neue', Helvetica, Arial, sans-serif;`



*Generic(system) font
can also be:
serif
monospace
cursive
fantasy*

Font

sizes

font-size: 14px;
font-size: 14pt;

*Print only
1 in = 72pt*

font-size: xx-small;
font-size: x-small;
font-size: small;
font-size: medium;
font-size: large;
font-size: x-large;
font-size: xx-large;

Absolute

font-size: smaller; font-size: 1em;
font-size: larger; font-size: 100%;

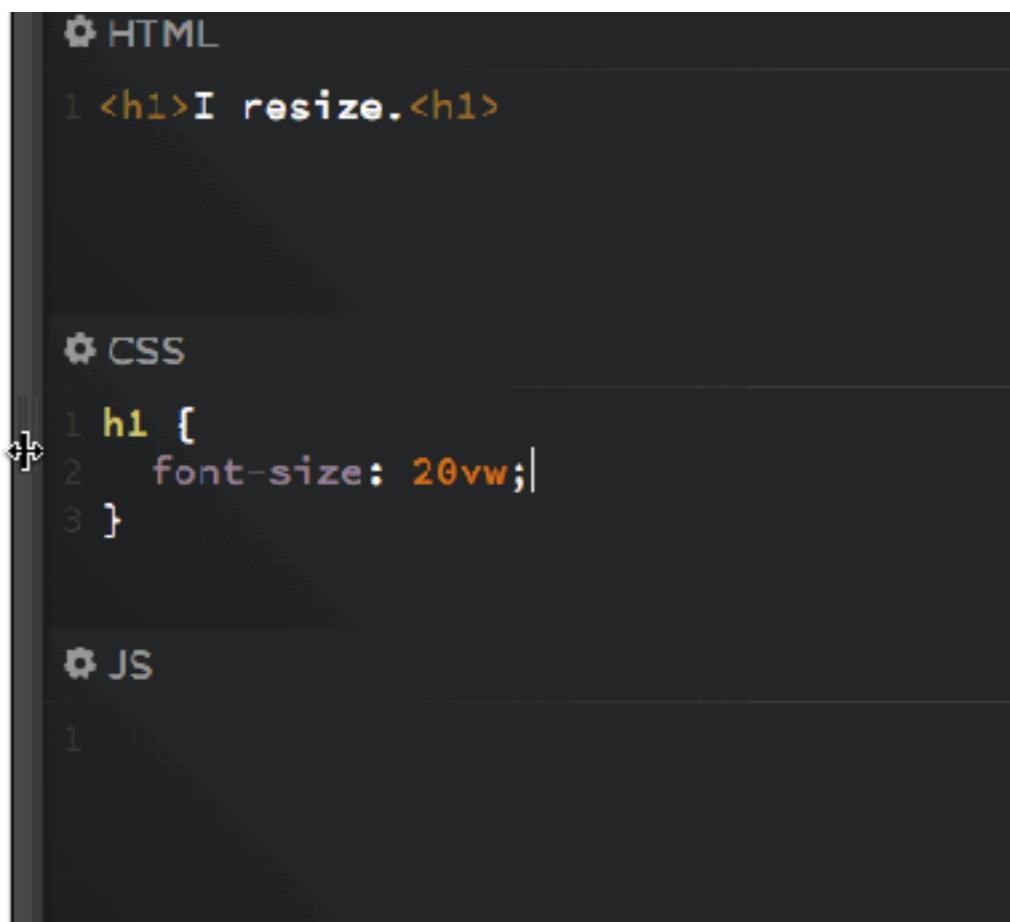
Relative

<http://alistapart.com/article/howtosizetextincss>
<https://css-tricks.com/css-font-size/>

Font

viewport-based sizing (vw, vh, vmin)

I resize.



The screenshot shows a code editor interface with three tabs: HTML, CSS, and JS. The HTML tab contains the code <h1>I resize.</h1>. The CSS tab contains the code

```
1 h1 {  
2   font-size: 20vw;  
3 }
```

. The JS tab is empty, indicated by a single dot.

Example: <https://css-tricks.com/examples/ViewportTypography/>
<https://css-tricks.com/viewport-sized-typography/>

Text

text-align: left;

As Gregor Samsa awoke one morning from uneasy dreams he found himself transformed in his bed into a gigantic insect.

text-align: center;

His numerous legs, which were pitifully thin compared to the rest of his bulk, waved helplessly before his eyes.

text-align: right;

What has happened to me? he thought. It was no dream. His room, a regular human bedroom, only rather too small, lay quiet within its four familiar walls.

text-align: justify;

Above the table on which a collection of cloth samples was unpacked and spread out — Samsa was a traveling salesman — hung the picture which he had recently cut out of an illustrated magazine and put into a pretty gilt frame.

Text

overline;
line-through;
text-decoration: none;
underline;

Underlined Header

If you want to strike out text, use line-through.

This text might blink for you - if you use Explorer, it will not.

and now an overlined header.

This link will not be underlined, as most links are by default. Be careful with removing the text decoration on links since most users depend on the underline to signify a hyperlink.

This text has both underline and overline.

List styles

`list-style-type: disc;`

- Lettuce
- Tomato
- Cucumber
- Olive Oil

`list-style-type: decimal;`

1. About us
2. Projects
3. Team
4. Contact us

`list-style-type: none;`

Flour
Sugar
Butter
Cherry

`list-style-type: upper-alpha;`

- A. By bus
- B. By train
- C. By car
- D. By foot

`list-style-image: url('rain.png');`

-  Morning
-  Afternoon
-  Evening
-  Night

CSS Specificity

1. !important
2. inline
3. id's
4. classes, attributes, pseudo-classes
5. elements/pseudo-elements

Specificity calculator: <http://specificity.keegan.st/>

CSS Specificity



CSS Specificity



CSS Specificity

!important



Resources: books

- **Mozilla Dev Network** (probably the best reference out there): <https://developer.mozilla.org/en-US/docs/Web/CSS>
- **CSS3 for Web Designers** (online/offline book): <https://abookapart.com/products/css3-for-web-designers>
- **HTML Dog** (a collection of tutorials, examples and references): <http://htmldog.com/guides/css/>
- **BEM** (methodology): <https://en.bem.info/methodology/quick-start/>

Thank you!

dmitry@sodainmind.com

(specify “AlphaCamp” in the subject)

instructor: Dmitry Kharchenko