

# Intro to Web Development

cmxn3on  
Upstatement

# About me!

1. Northeastern Class of 2018
2. Scout Alumna
3. NU Women in Tech Alumna

# About me!



Northeastern

1. Northeastern Class of 2018
2. Scout Alumna
3. NU Women in Tech Alumna

# About me!



Northeastern



1. Northeastern Class of 2018
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# About me!

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3. NU Women in Tech Alumna



Northeastern

SCOUT

NUWIT

# Where I've worked

# Where I've worked

1. MullenLowe - Creative Technologist\*
2. Starry Internet\*
3. Apple Music\*



\* co-op

# Where I've worked



1. MullenLowe\*
2. Starry Internet - Software Engineer\*
3. Apple Music\*

\* co-op

# Where I've worked



1. MullenLowe\*
2. Starry Internet\*
3. Apple Music - UI Engineer\*

\* co-op

# Where I work now

## Upstatement

Upstatement is a design and engineering studio located in downtown Boston.

We help our clients transform and grow their digital products, including websites, apps, and more.



# Day to day Engineering @ Upstatement

Actually writing code is probably only 50%  
of my day 

Writing code  
Reviewing code  
Pair programming  
Sprint reviews  
Sprint planning  
Design reviews  
Internal meetings  
Client meetings  
Check-in calls  
Talking with engineers  
... designers  
... producers  
... clients  
... stakeholders

# Languages & Frameworks

## Engineering @ Upstatement

HTML  
CSS  
JavaScript  
TypeScript  
jQuery  
GraphQL  
React  
Gatsby  
Vue  
Nuxt  
Wordpress  
Craft  
NativeScript  
...

At Upstatement, we're tech agnostic — this means that we're not invested in any one framework or tool. We use what's best for each individual project.

# Languages & Frameworks

## Engineering @ Upstatement

At Upstatement, we're tech agnostic — this means that we're not invested in any one framework or tool. We use what's best for each individual project.

HTML  
CSS  
JavaScript

TypeScript

jQuery

GraphQL

React

Gatsby

Vue

Nuxt

Wordpress

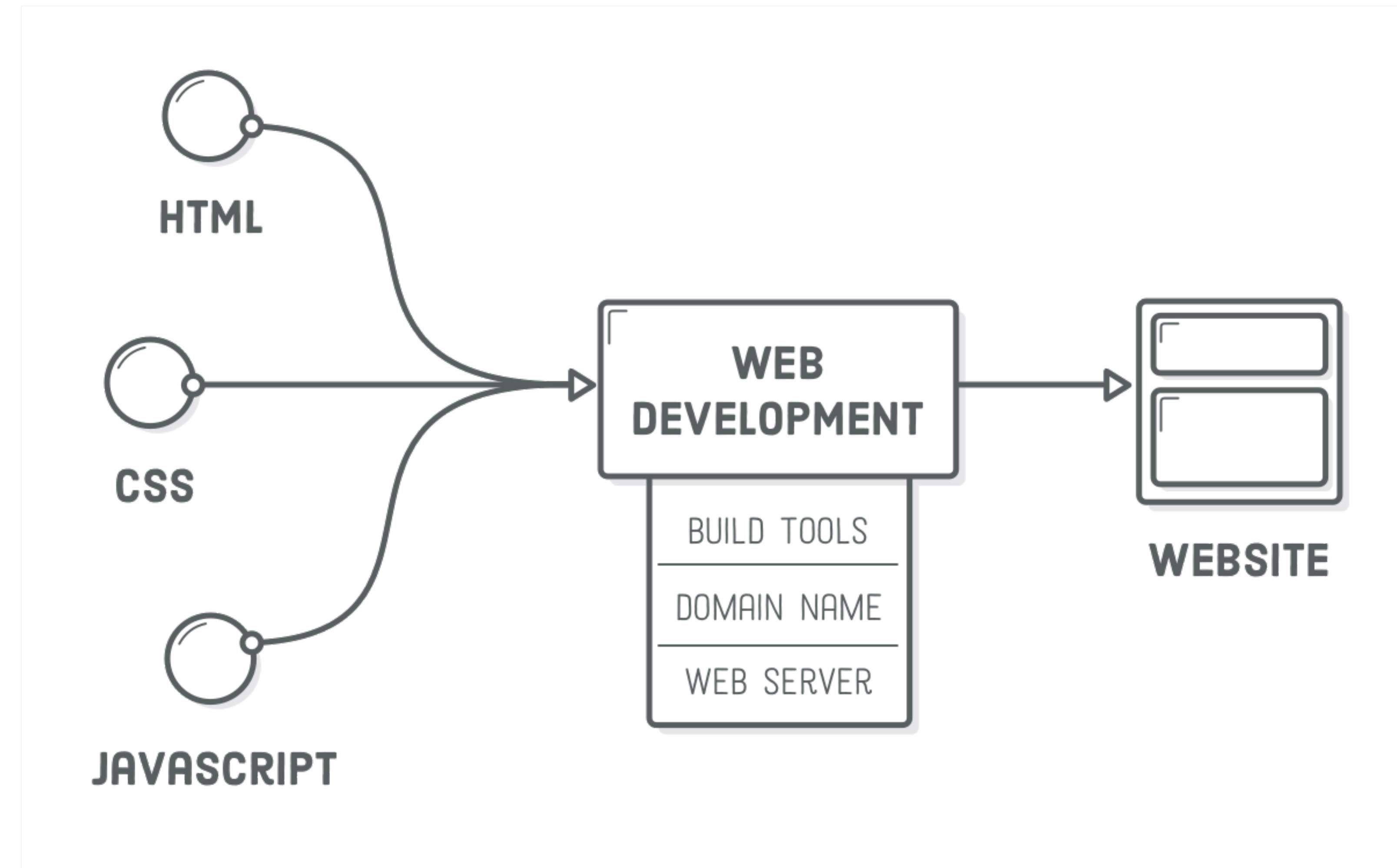
Craft

NativeScript

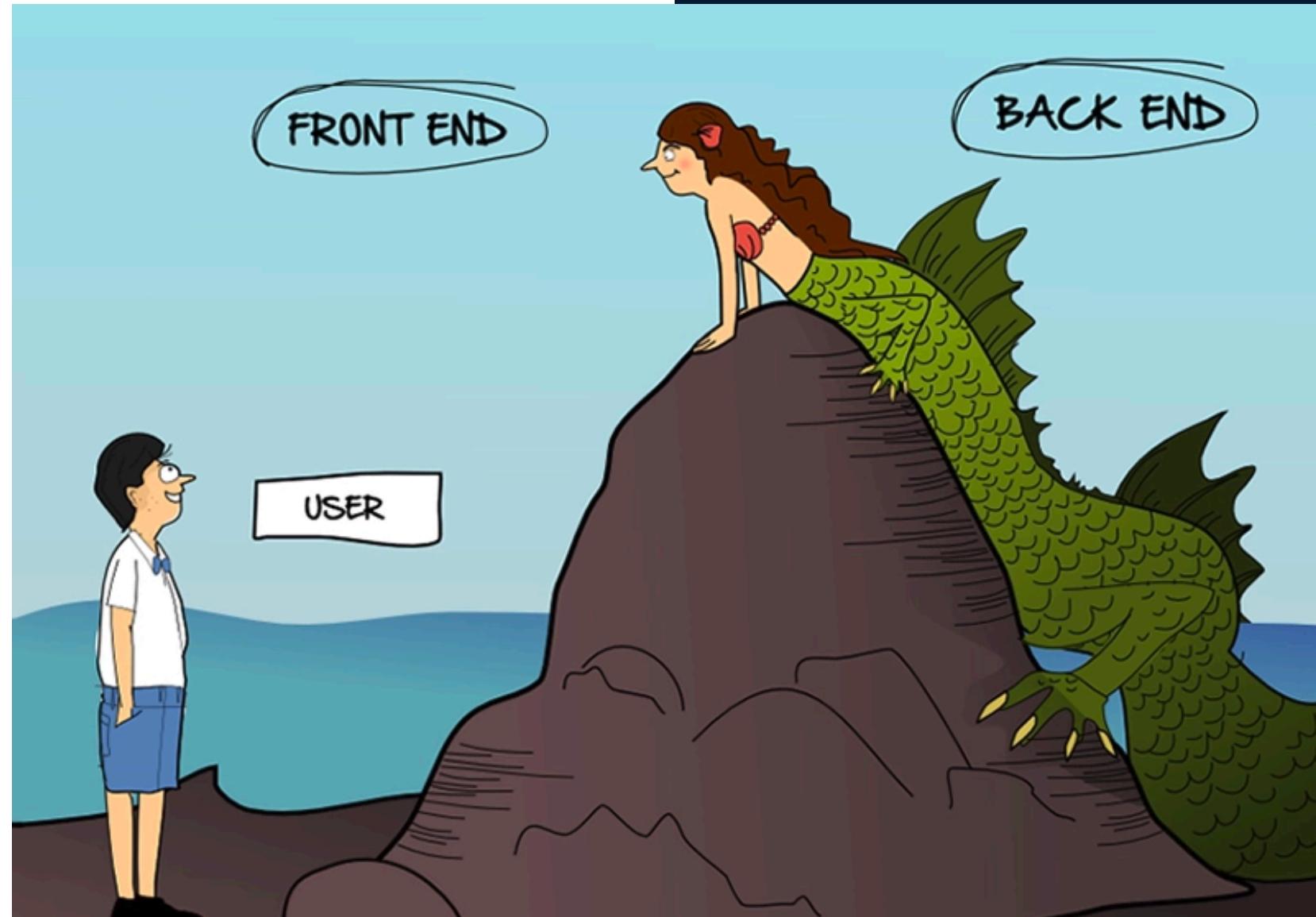
...

# **Foundations of Web Development**

**HTML + CSS + JavaScript**



# Front End

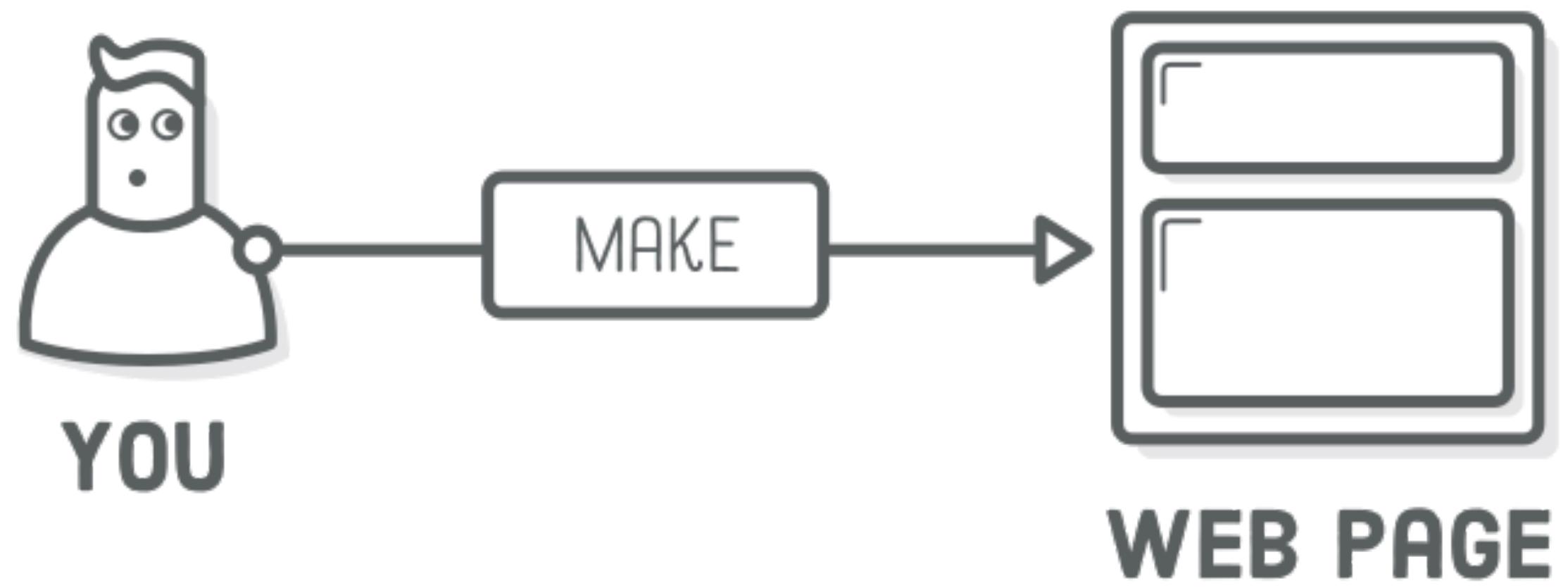


# Back End

- Refers to what is loaded by the user's browser
- Deals with the visuals — making it look good and easy to use
- Deals with user interface (UI) and user experience (UX)
- Great for those interested in design

- Deals with behind the scenes functionality of the site
- Configuring servers and databases to power site
- More involved programming logic & data handling
- Great for those more interested in the logical side of programming or working with data

# Today's goal!



# **Let's get started!**

## What happens when a webpage loads?

1. Website makes a request to a server
2. Your browser downloads code from the server
3. Your browser builds the page
4. You see the page!



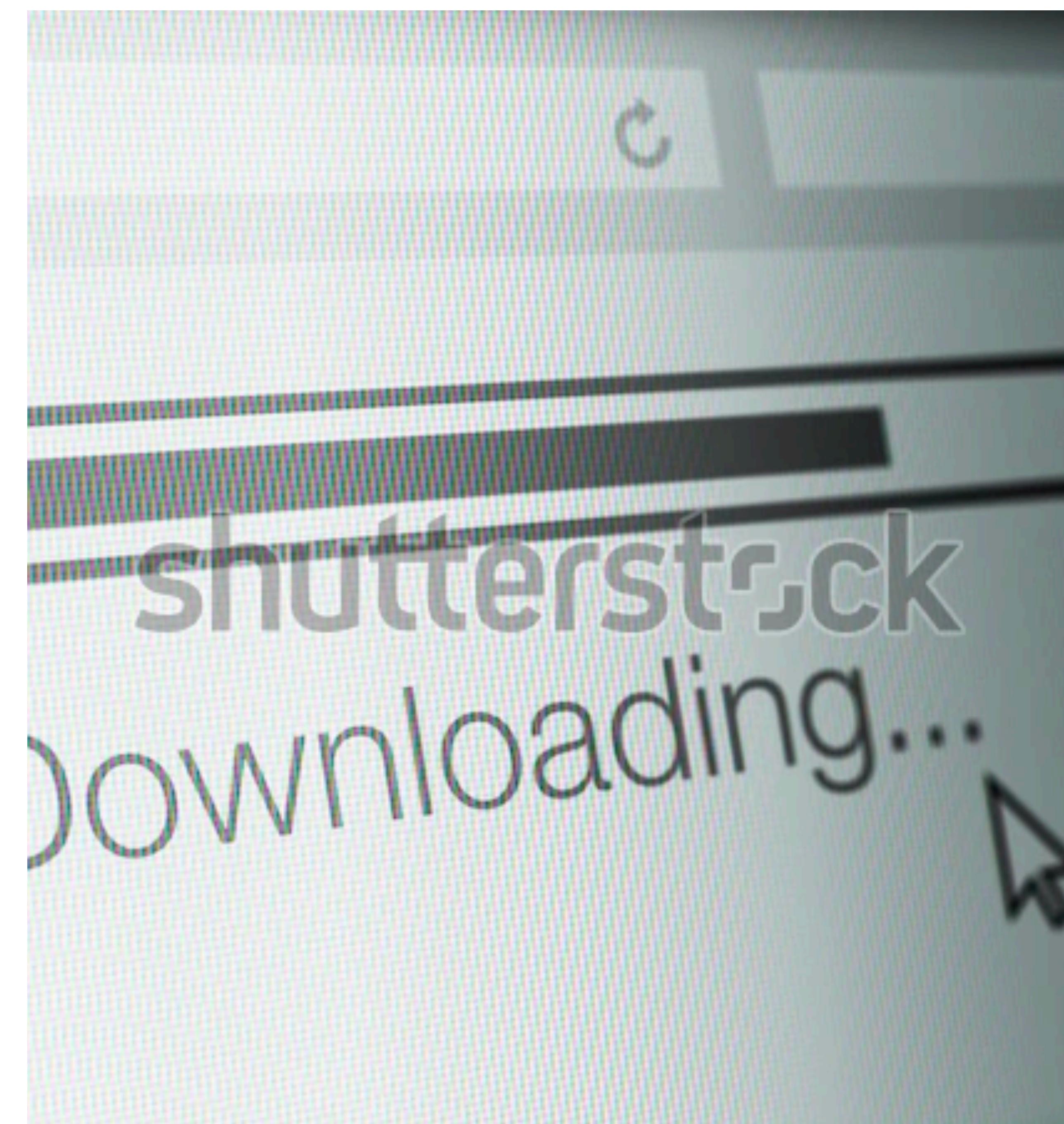
# What happens when a webpage loads?

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[www.shutterstock.com](http://www.shutterstock.com) · 603263660

# HTML

Foundation

# CSS

Aesthetics

# JavaScript

Bells & Whistles

# HTML



Emma Wedekind 🎀  
@EmmaWedekind



HTML: Why does my cat only have 3 legs?

CSS: Why is my cat purple?

JS: Why is my cat walking sideways?

4:05 AM · Jul 24, 2019 · Twitter for iPhone

Foundation

# CSS

Aesthetics

# JavaScript

Bells & Whistles



# HTML

Framing & Construction

# CSS

Painting & Decoration

# JavaScript

Electricity & Plumbing



# HTML

Framing & Construction

# CSS

Painting & Decoration

# JavaScript

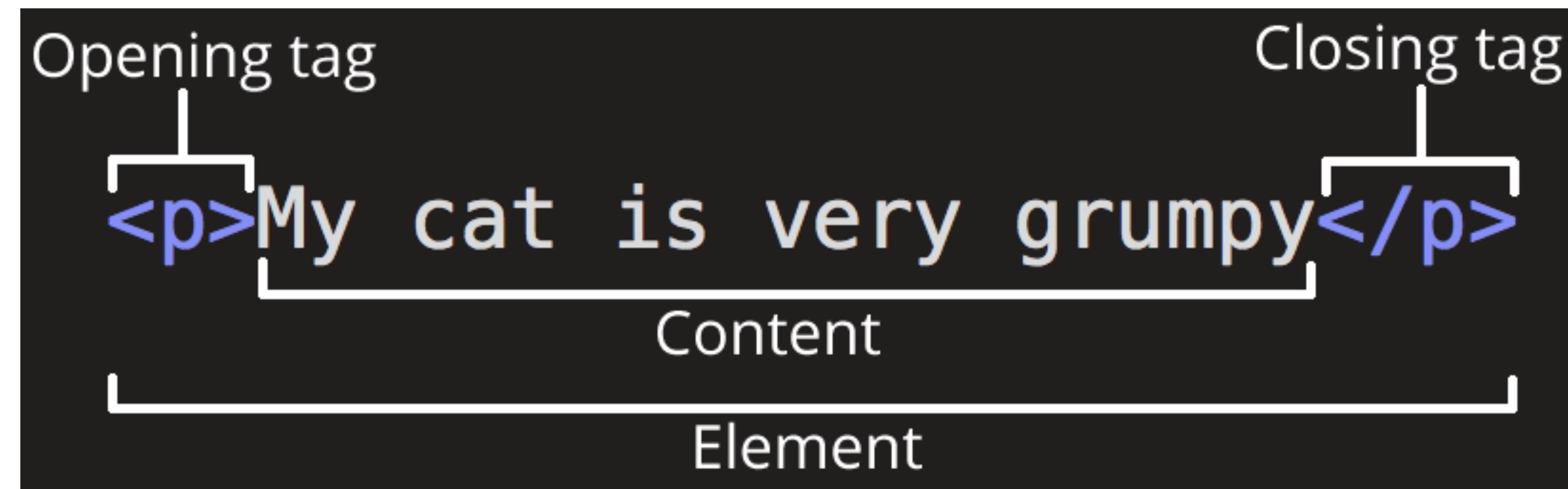
Electricity & Plumbing

# HTML

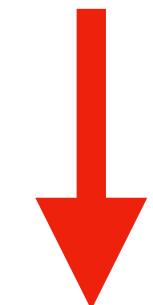
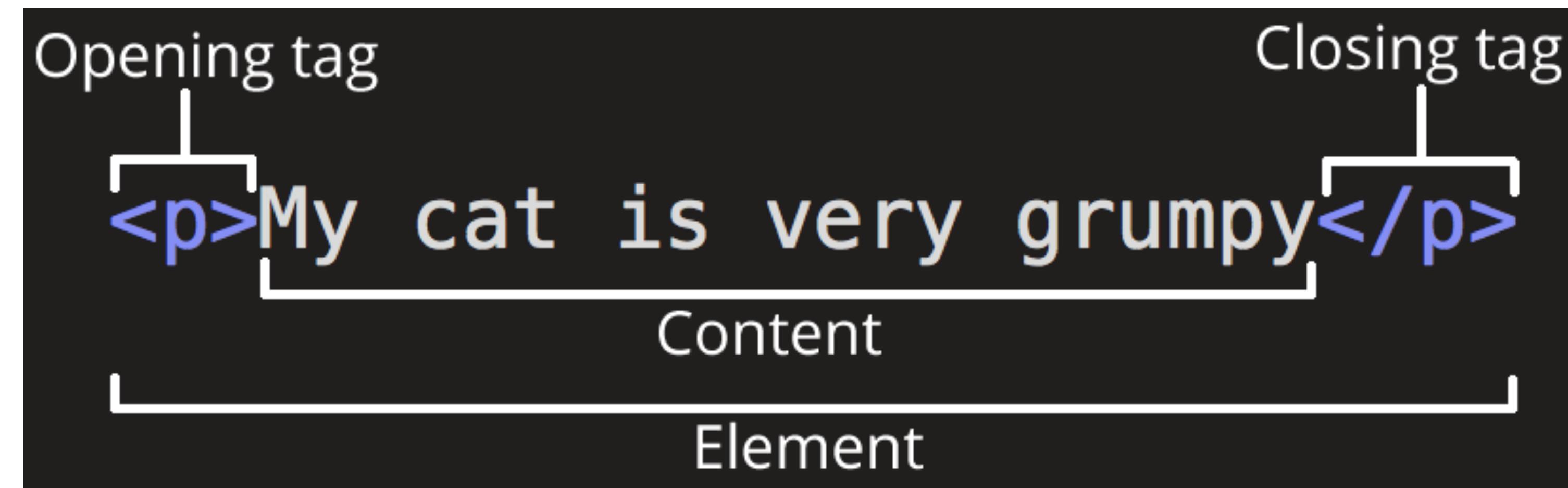
Hypertext Markup Language



HTML Elements are just opening and closing tags



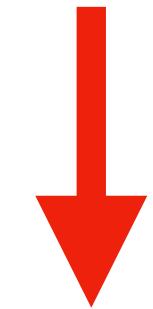
HTML Elements are just opening and closing tags



My cat is very grumpy

## Attributes let us group HTML elements

```
Attribute  
<p class="editor-note">My cat is very grumpy</p>
```



My cat is very grumpy

# Heading Tags (h1, h2, h3, h4, h5, h6)



```
<h1>My main title</h1>
```

```
<h2>My top level heading</h2>
```

```
<h3>My subheading</h3>
```

```
<h4>My sub-subheading</h4>
```

**My main title**

**My top level heading**

**My subheading**

**My sub-subheading**

# Paragraphs (<p>), Sections (<section>), Spans (<span>)



```
<section>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit</p>

  <span>Spans</span>
  <span>display</span>
  <span>inline</span>
  <span>by</span>
  <span>default</span>

  <p>
    <span>I'm a span inside a paragraph!</span>
  <p>
</section>
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit  
 Spans display inline by default  
 I'm a span inside a paragraph!

# Lists (<ol>, <ul>) & List Items (<li>)



```
<h2>Ordered List</h2>
<ol>
  <li>thing 1</li>
  <li>thing 2</li>
  <li>thing 3</li>
</ol>

<h2>Unordered List</h2>
<ul>
  <li>technologists</li>
  <li>thinkers</li>
  <li>builders</li>
</ul>
```

## Ordered List

- 1. thing 1
- 2. thing 2
- 3. thing 3

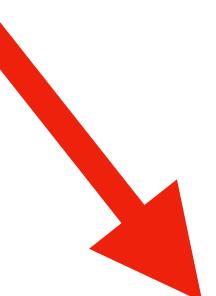
## Unordered List

- technologists
- thinkers
- builders

## Links () & Images ()

```
● ● ●  
Google Something  

```



[Google Something](#)

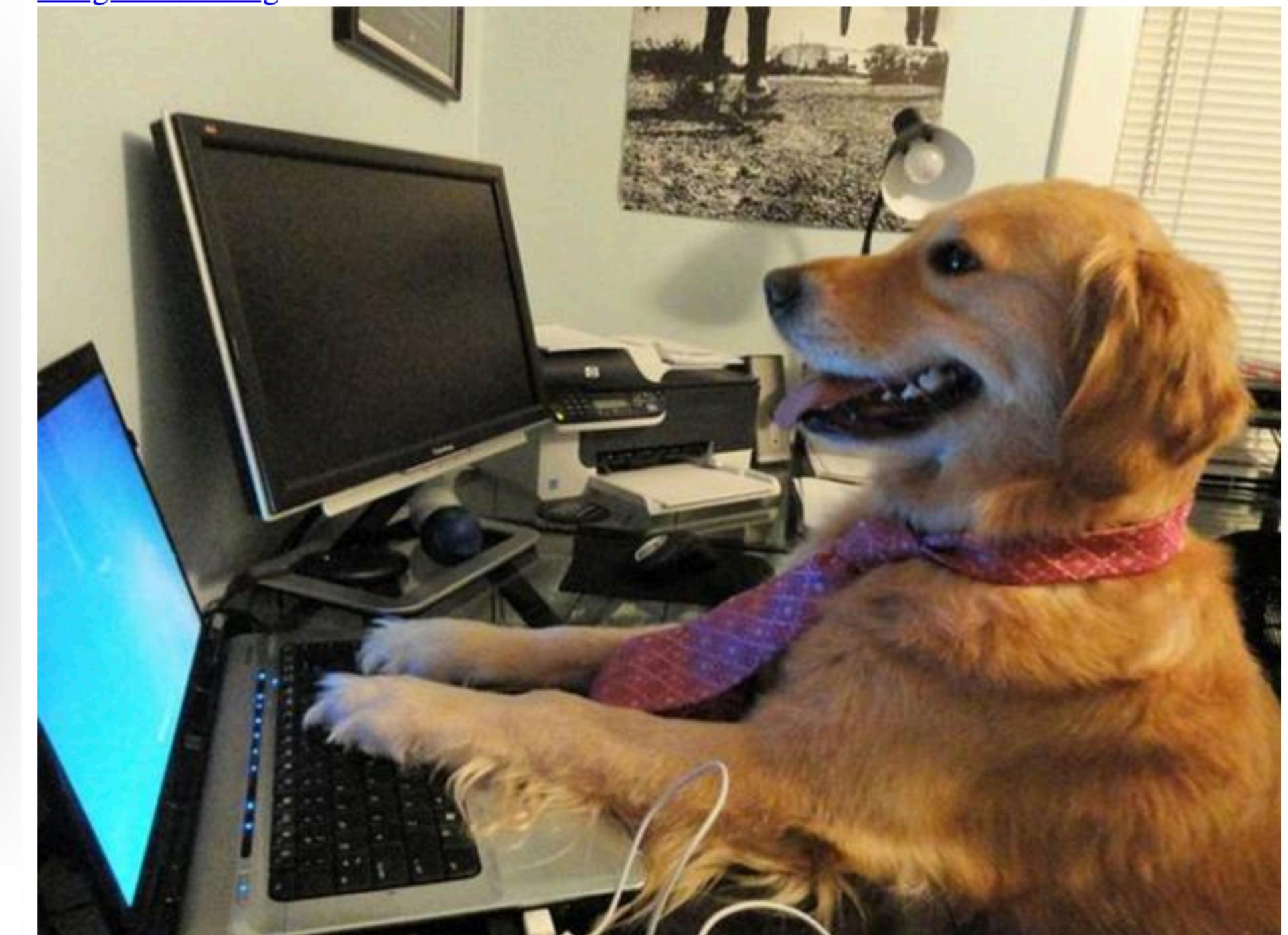


# Divs

The `<div>` tag defines a division or a section in an HTML document

```
● ● ●  
<div>  
  <a href="https://google.com">Google Something</a>  
</div>  
  
<div>  
    
</div>
```

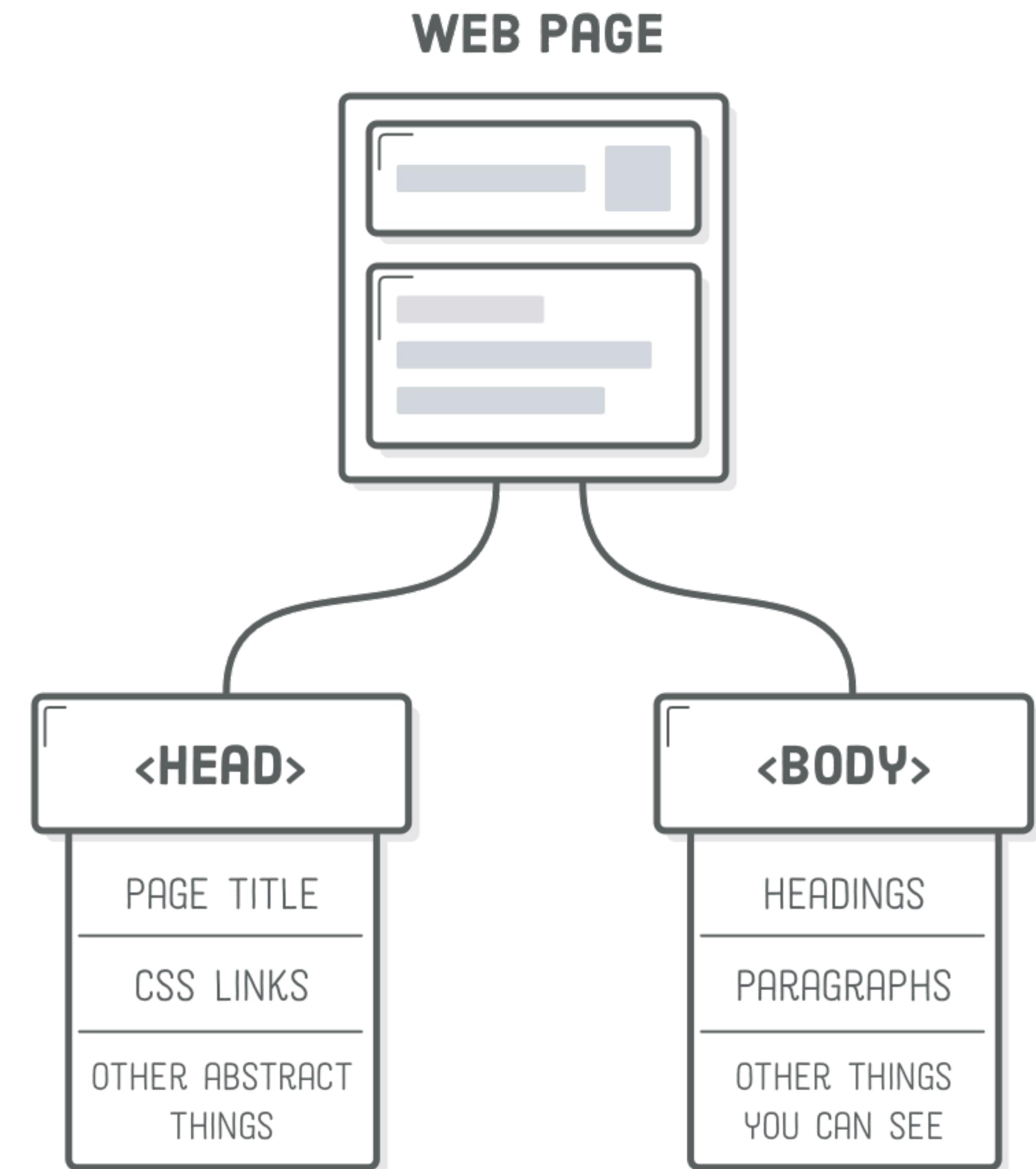
[Google Something](#)



# Structure of a web page

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <!-- Metadata goes here -->
  </head>
  <body>
    <!-- Content goes here -->
  </body>
</html>
```



# A simple `index.html` file

Header section

The main content of the site!

Footer things

```
● ● ●

<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>

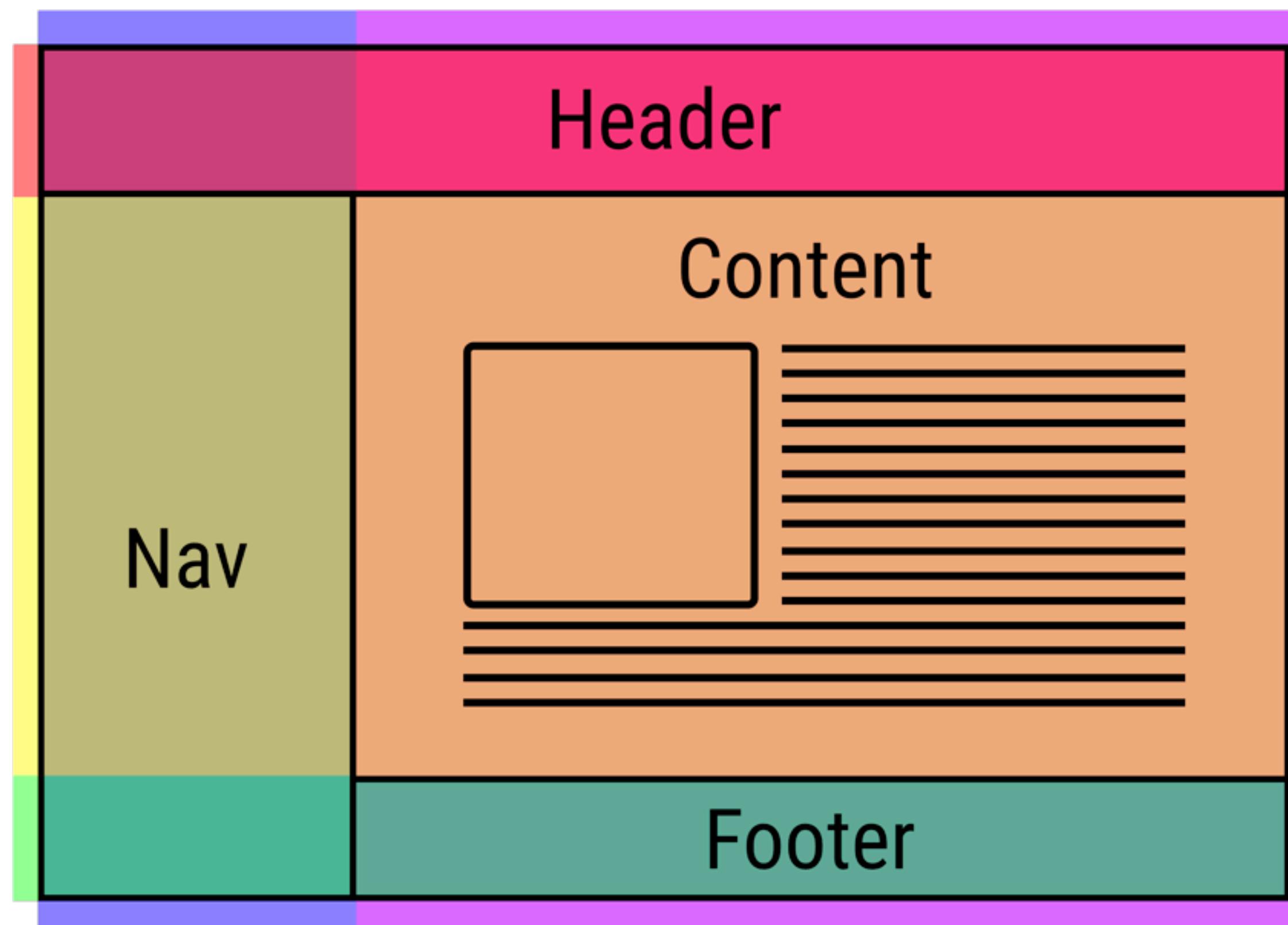
  <body>
    <!-- Put your HTML elements in here -->

    <header>
      Header section
    </header>

    <main>
      <p>The main content of your site!</p>
    </main>

    <footer>
      Footer things
    </footer>
  </body>
</html>
```

# Laying out a webpage



# Every element in HTML is a rectangular box



Most of the HTML elements on your page can be thought of as boxes sitting on top of each other. You can use CSS to set their size, color, position, etc.





01. About    02. Experience    03. Work    04. Contact

Resume

Hi, my name is

# Brittany Chiang.

## I build things for the web.

I'm a software engineer based in Boston, MA specializing in building (and occasionally designing) exceptional, high-quality websites and applications.



Get In Touch

brittany.chiang@gmail.com



.

01. About    02. Experience    03. Work    04. Contact    [Resume](#)

Hi, my name is

# Brittany Chiang.

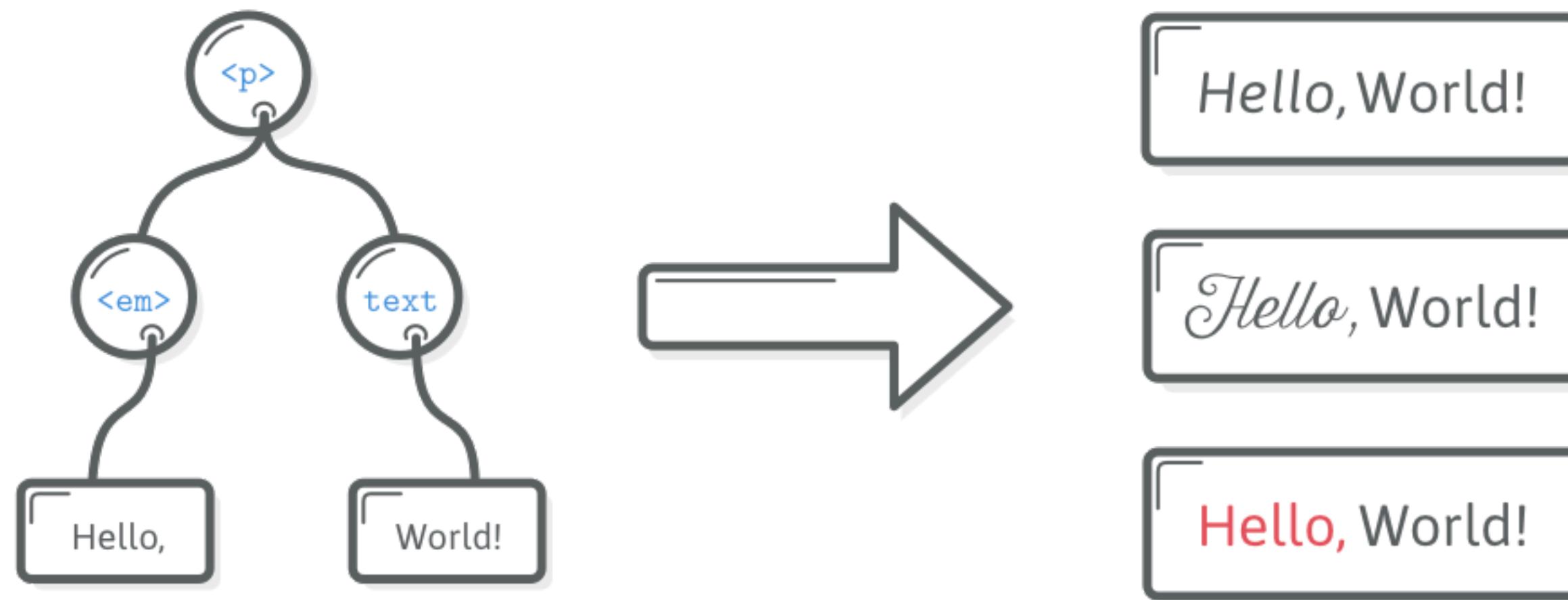
## I build things for the web.

I'm a software engineer based in Boston, MA specializing in building (and occasionally designing) exceptional, high-quality websites and applications.

[Get In Touch](#)



[brittany.chiang@gmail.com](mailto:brittany.chiang@gmail.com)



**HTML**  
(STRUCTURE)

**CSS**  
(PRESENTATION)

# CSS

Cascading Style Sheets



**Stylesheet = File containing CSS**

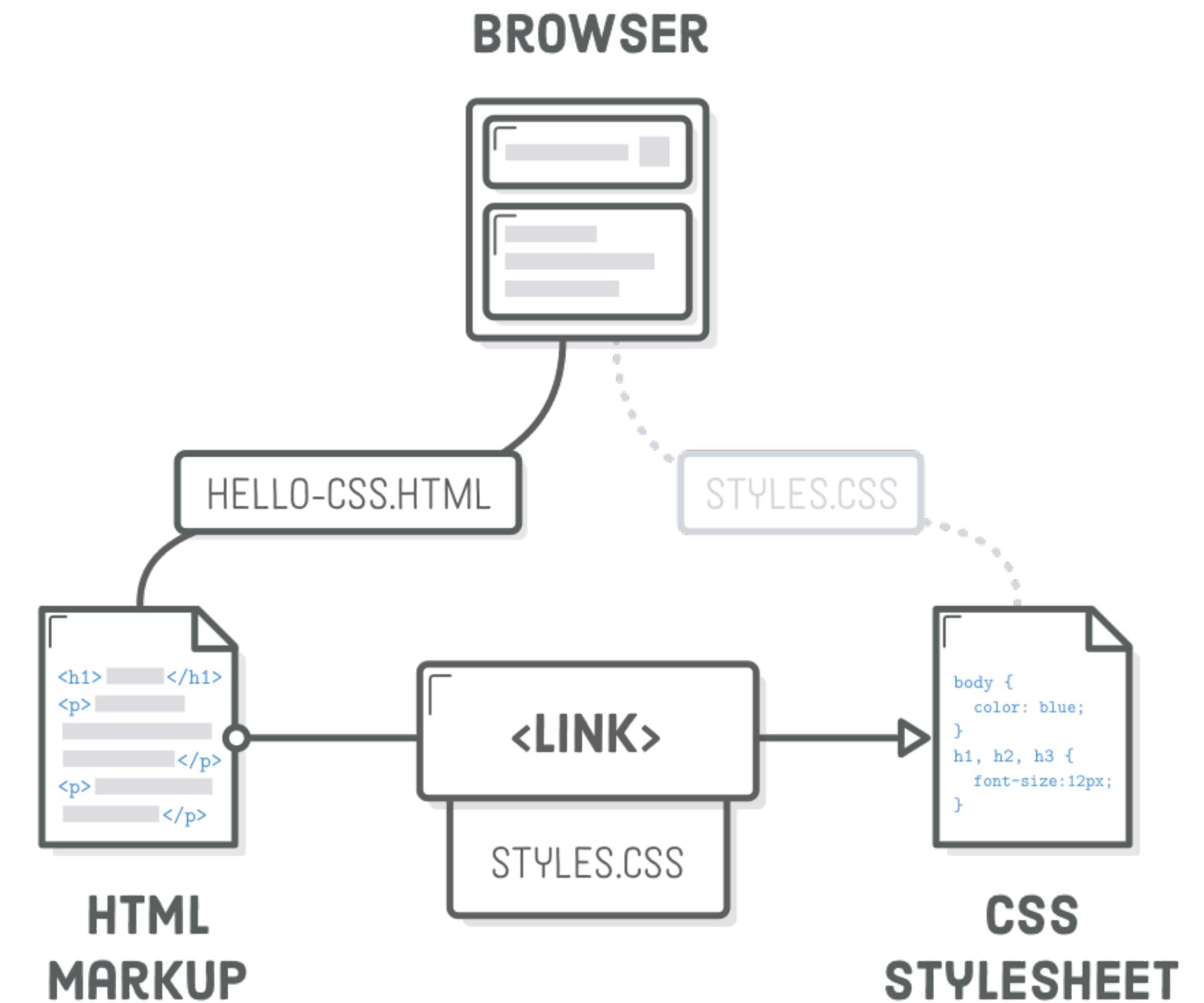
**Stylesheet = File containing CSS**

**style.css**

# Linking a CSS Stylesheet to your HTML document



```
<head>
  <meta charset='UTF-8' />
  <title>Hello, CSS</title>
  <link rel='stylesheet' href='styles.css' />
</head>
```



## HTML (index.html)

```
● ● ●  
<p>I'm a paragraph</p>
```

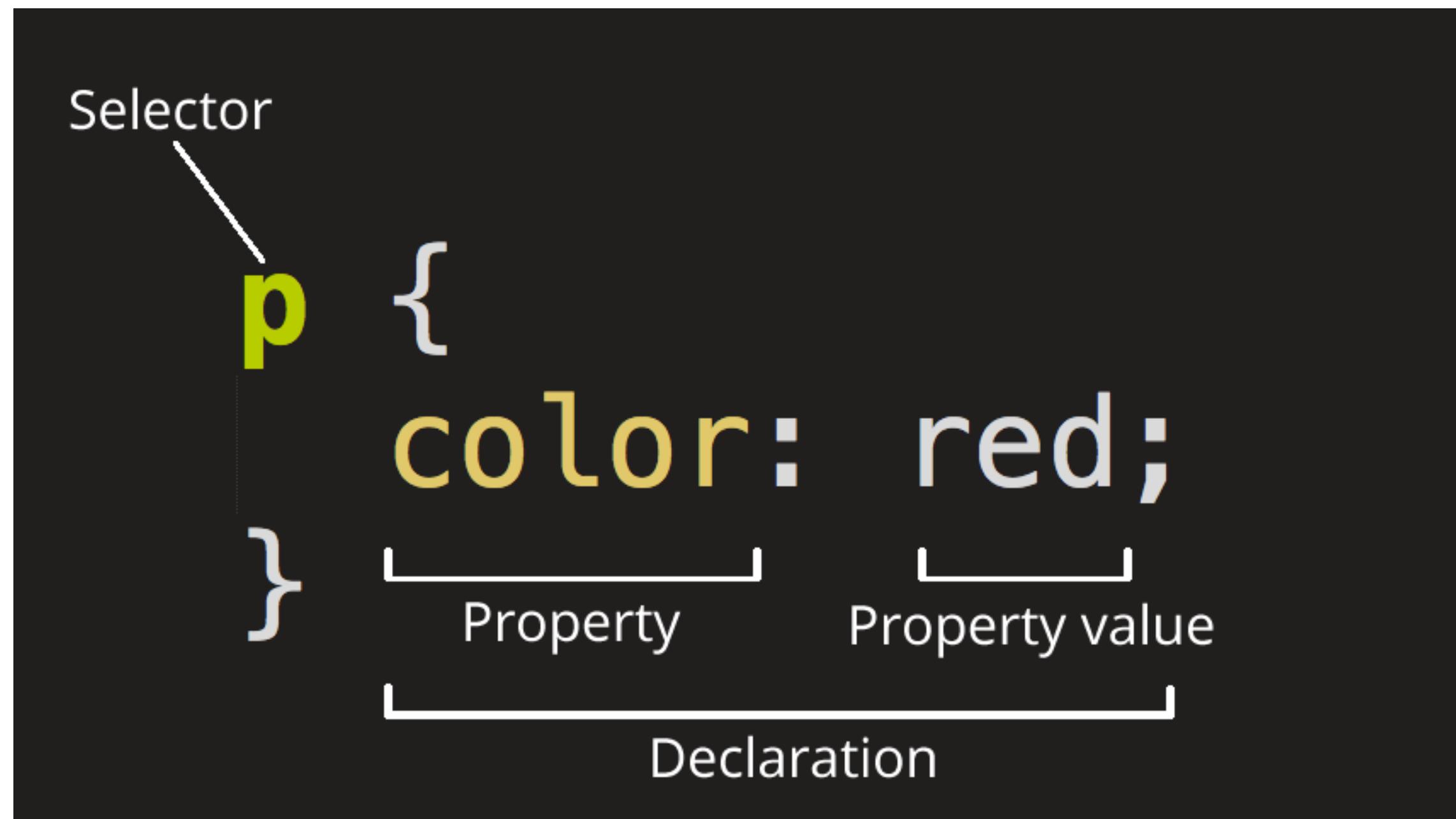
## Result (in the browser)

I'm a paragraph

## CSS (style.css)

```
● ● ●  
  
p {  
  color: red;  
  font-size: 50px;  
  font-family: 'Roboto', sans-serif;  
}
```

“Select all the paragraph elements and turn the text within them red”



# Common CSS Properties

## color

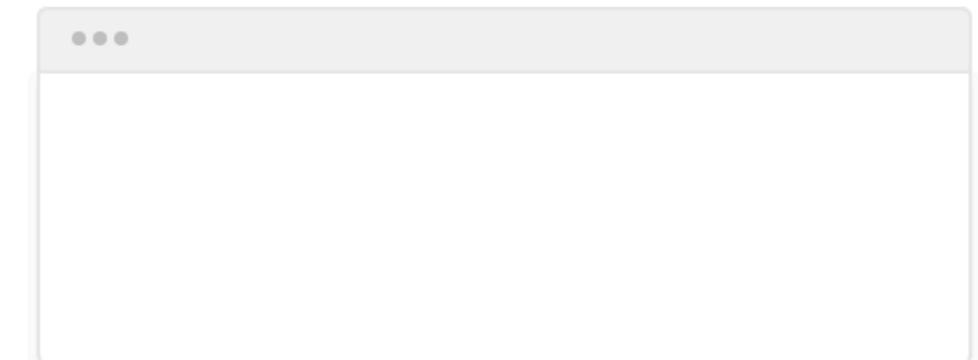
### # color

In collection: [Typography](#) [Permalink](#) [Share](#) [Can I use](#) [MDN](#)

Defines the color of the **text**.

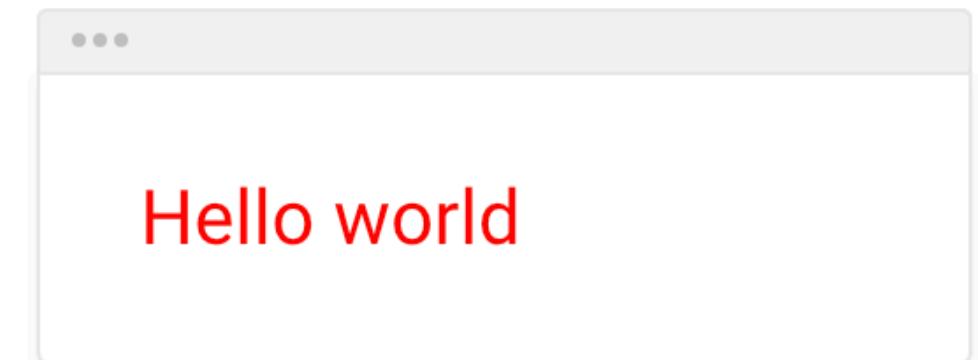
```
color: transparent;
```

Applies a **transparent** color to the text. The text will still take up the space it should.



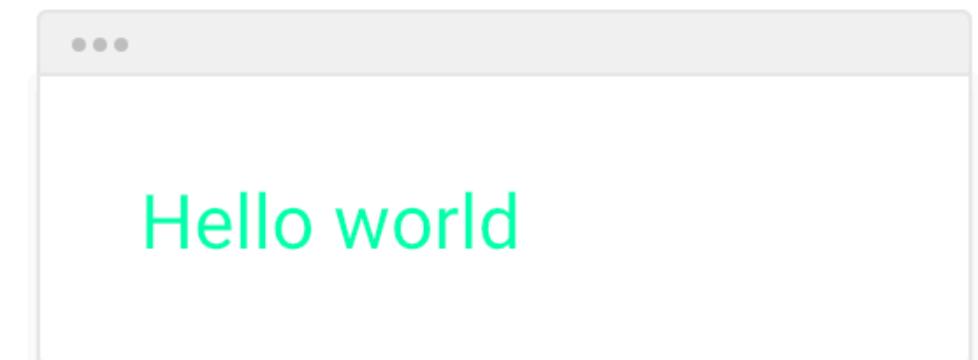
```
color: red;
```

You can use one of the [140+ color names](#).



```
color: #05ffb0;
```

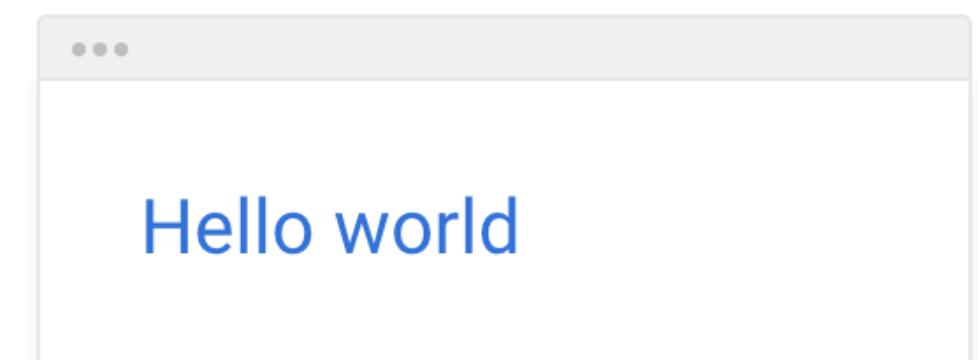
You can use **hexadecimal** color codes.



```
color: rgb(50, 115, 220);
```

You can use **rgb()** color codes:

- the first value is for `red`
- the second value is for `green`
- the third value is for `blue`



Each of them can have a value between **0** and **255**.

# Common CSS Properties

## background-color

### # background-color

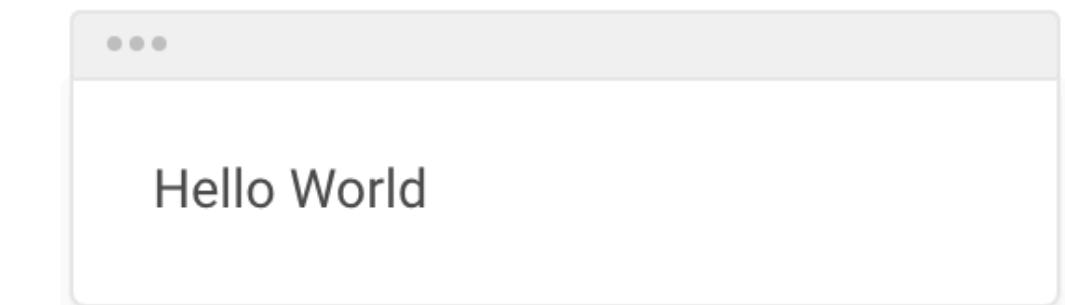
In collection: [Backgrounds](#) [Permalink](#) [Share](#) [MDN](#)

Defines the color of the element's background.

```
background-color: transparent;
```

default

By default, the background color is **transparent**, basically meaning that there is **no** background color.



```
background-color: red;
```

You can use one of the [140+ color names](#).



```
background-color: #05ffb0;
```

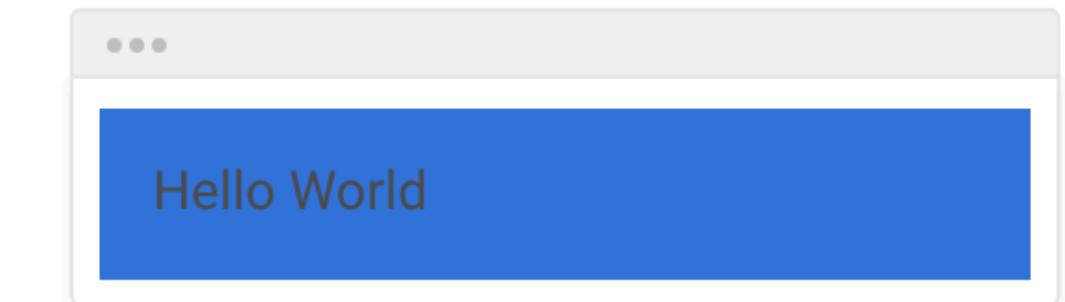
You can use **hexadecimal** color codes.



```
background-color: rgb(50, 115, 220);
```

You can use **rgb()** color codes:

- the first value is for `red`
- the second value is for `green`
- the third value is for `blue`



Each of them can have a value between **0** and **255**.

# Common CSS Properties

## font-size

### # font-size

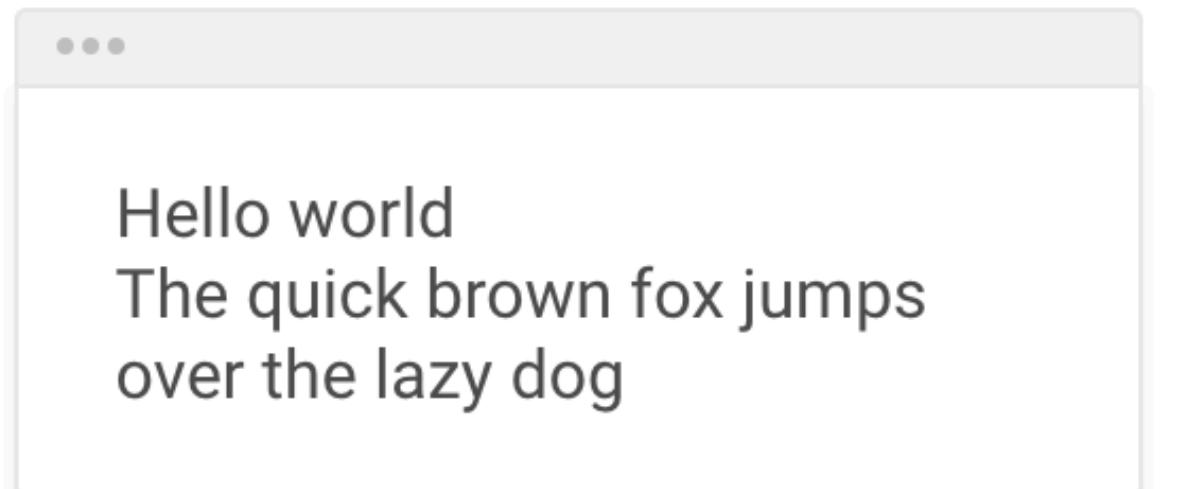
In collection: [Typography](#) [Permalink](#) [Share](#) [MDN](#)

Defines the size of the text.

`font-size: medium;`

`default`

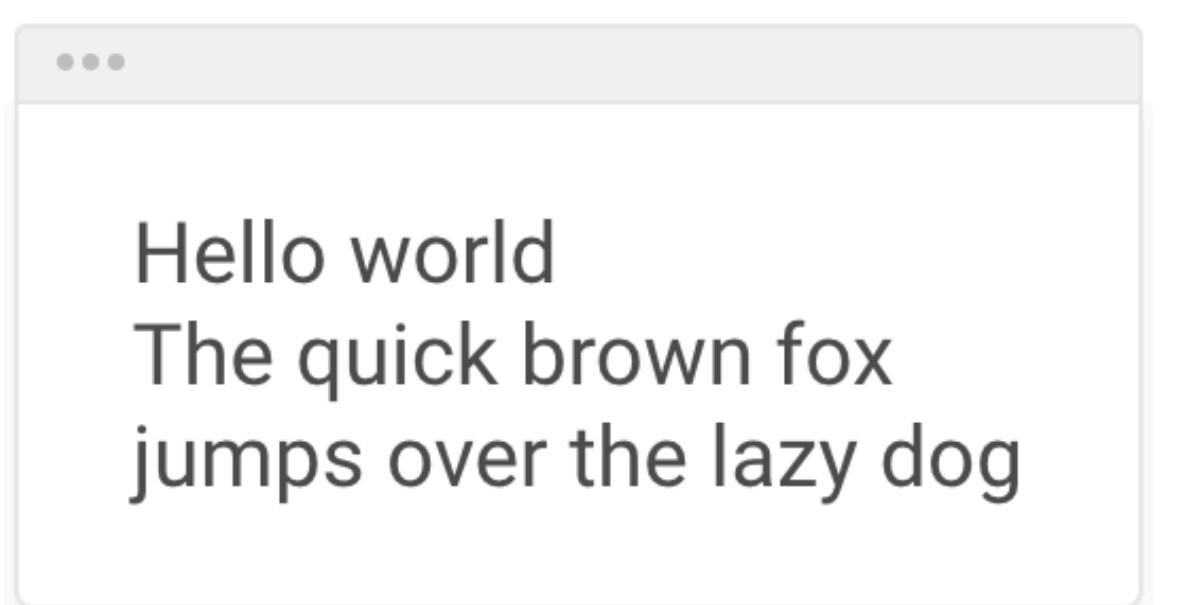
The text will use the browser's default **medium** size.



Hello world  
The quick brown fox jumps  
over the lazy dog

`font-size: 20px;`

You can use **pixel** values.



Hello world  
The quick brown fox  
jumps over the lazy dog

# Common CSS Properties

## border

### # border

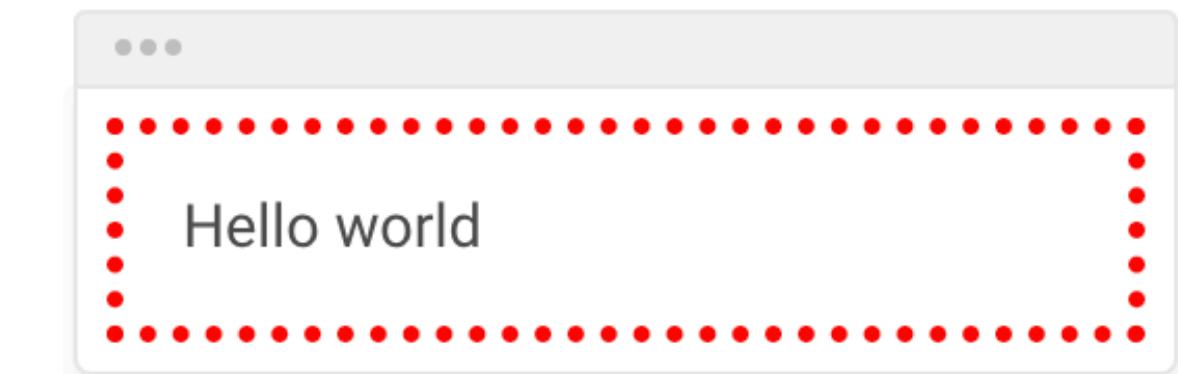
[Permalink](#) [Share](#) [MDN](#)

Shorthand property for [border-width](#) [border-style](#) and [border-color](#).

```
border: 4px dotted red;
```

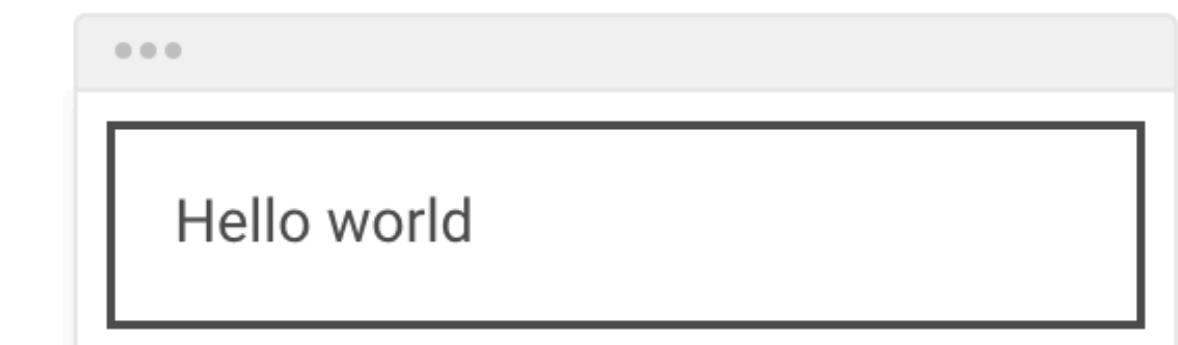
The **order** is important:

- width
- style
- color



```
border: 2px solid;
```

Only the *color* is **optional**. If you omit it, the color applied will be the color of the **text**.



# Common CSS Properties

## width

### # width

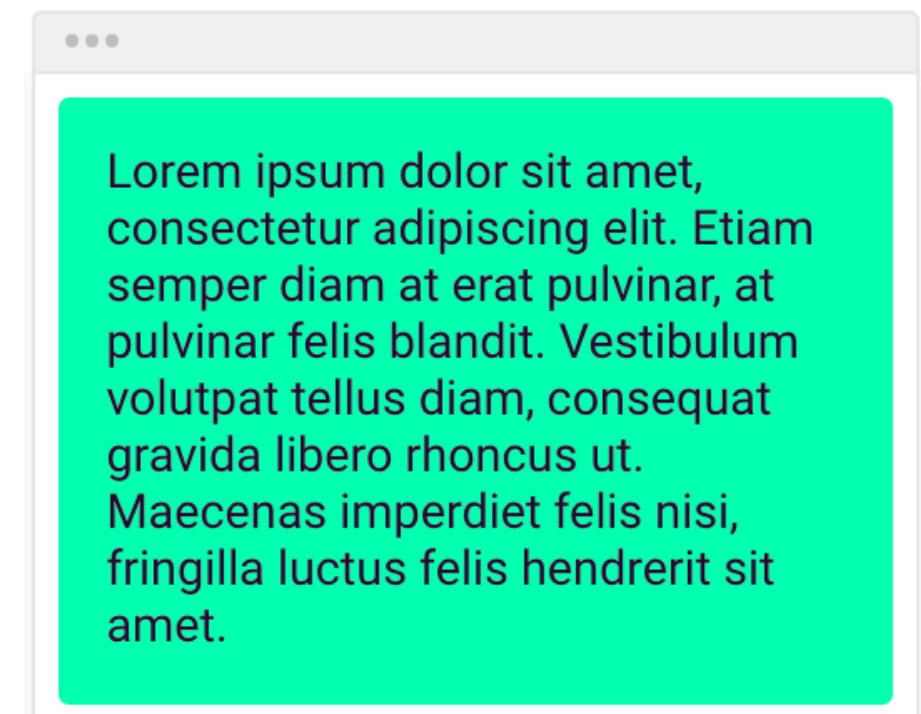
In collection: [Box-Model](#) [Permalink](#) [Share](#) [MDN](#)

Defines the width of the element.

width: auto;

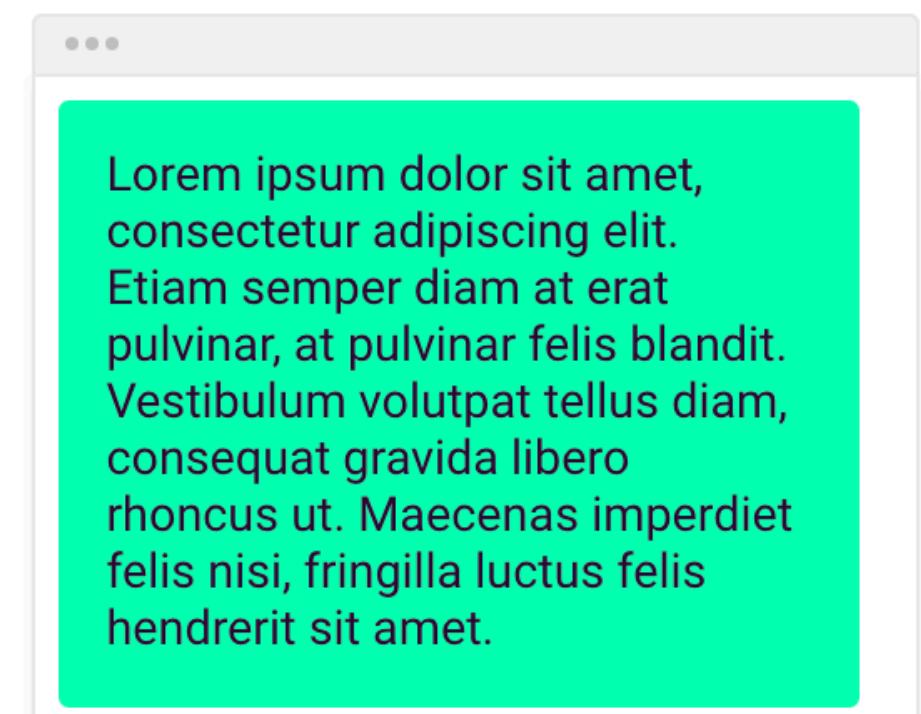
default

The element will **automatically** adjust its width to allow its content to be displayed correctly.



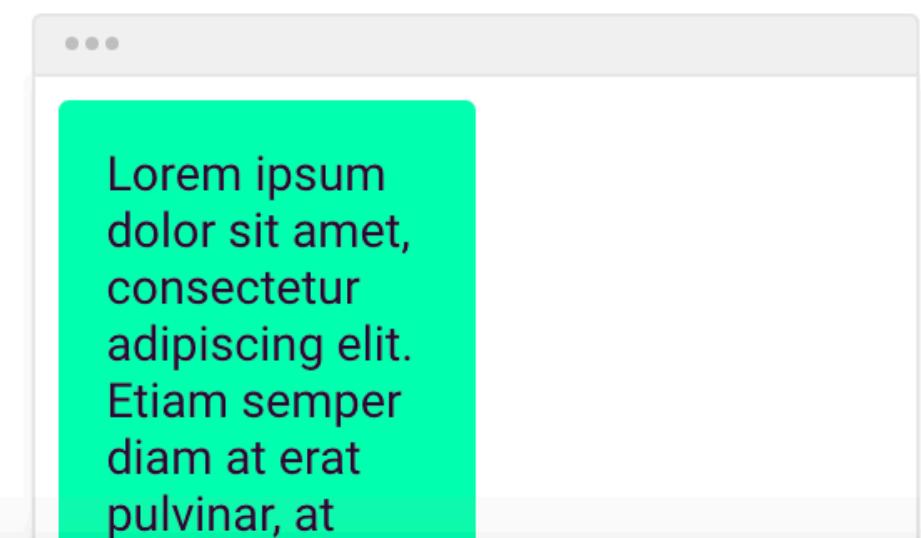
width: 240px;

You can use **numeric values** like **pixels, (r)em, percentages...**



width: 50%;

If you use **percentages**, the value is relative to the container's width.



# Multiple properties & Multiple selectors



```
p {  
  color: red;  
  width: 500px;  
  border: 1px solid black;  
}
```



```
p, li, h1 {  
  color: red;  
}
```

# Multiple properties & Multiple selectors



```
● ● ●  
p {  
  color: red;  
  width: 500px;  
  border: 1px solid black;  
}
```

```
● ● ●  
p, li, h1 {  
  color: red;  
}
```

# Multiple properties & selectors

```
● ● ●  
p {  
  color: red;  
  width: 500px;  
  border: 1px solid black;  
}
```

```
● ● ●  
p, li, h1 {  
  color: red;  
}
```

# Element selectors (div, p, section, h1, etc...)

1. Element
2. ID
3. Class

```
<p>I am a red paragraph</p>
```

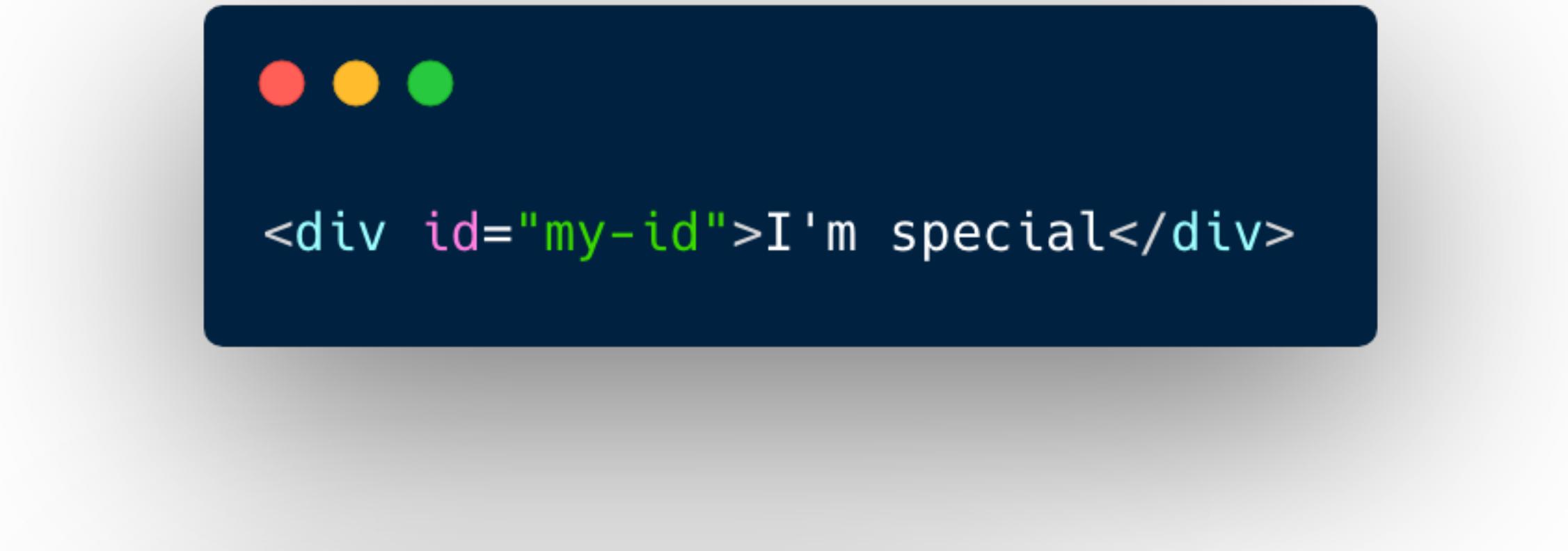
I am a red paragraph

```
/* Selects all HTML element(s) of the specified type. */

p {
    color: red;
}
```

# IDs — target one unique element with a particular ID

1. Element
2. ID
3. Class



I'm special

# Classes - group a bunch of things together

1. Element
2. ID
3. Class

```
● ● ●  
  
<div class="my-class">I'm red</div>  
<div class="my-class">I'm red</div>  
<div>I'm not red</div>  
<div class="my-class">I'm red</div>
```

I'm red  
I'm red  
I'm not red  
I'm red

```
● ● ●  
  
.my-class {  
    color: red;  
}
```

# Demo

<https://codepen.io>

# Your Task

**Make the most fun/unique webpage you can on codepen.io in the next 15 minutes!**

## Requirements

1. At least 3 different HTML elements
2. At least 3 different CSS declarations
3. Submit your pen here:

<https://workshop-submissions.now.sh>

## Helpful links

[htmlreference.io](http://htmlreference.io)

[cssreference.io](http://cssreference.io)

[unsplash.com](http://unsplash.com)

[google.com](http://google.com)

# Q & A

Keep learning! Keep building!

## More Resources

<https://htmlreference.io/>

<https://cssreference.io/>

<https://css-tricks.com/>

<http://www.dontfeartheinternet.com>

<https://internetingishard.com>

<https://www.freecodecamp.org/>

<https://www.codecademy.com>

<https://www.theodinproject.com>

<https://egghead.io>

There is no one tutorial or course that will teach you everything you need to learn — the best thing you can do to learn is to actually build things!

# Thanks!

[brittany.chiang@gmail.com](mailto:brittany.chiang@gmail.com)

[@bchiang7](https://twitter.com/bchiang7)

## Sources

<https://internetingishard.com>

<https://unsplash.com>

<https://internetingishard.com/>

<https://developer.mozilla.org>

<https://htmlreference.io/>

<https://cssreference.io/>

...and many more!