



FRONT-END FOUNDATIONS



In this course

- Making a web page with HTML and CSS
- Writing HTML text tags and CSS selectors
- Laying out a web page with multiple sections
- Working with images on a web page
- Customizing fonts and building HTML forms



LEVEL 1

HTML



A Quick Story of the Web

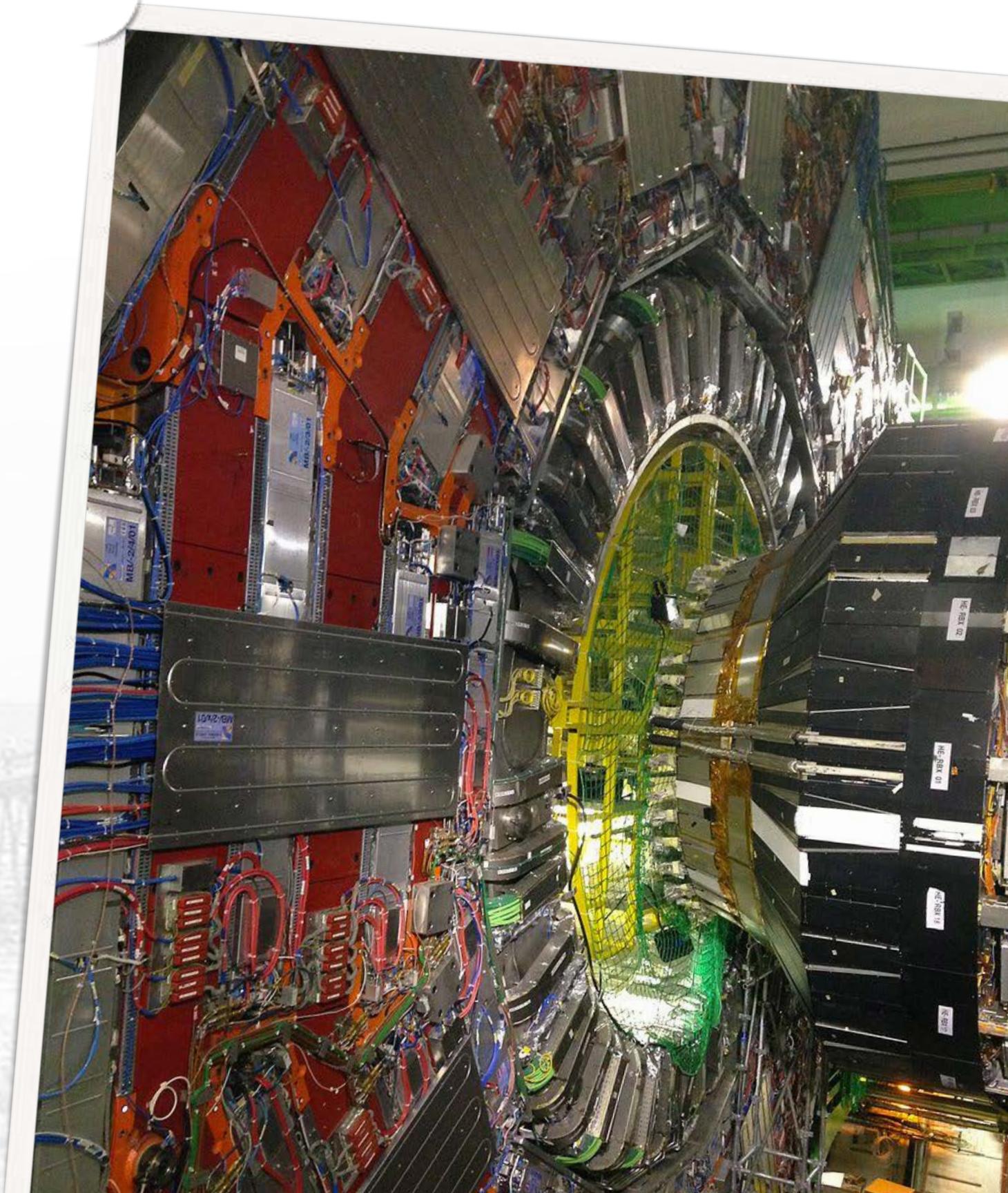


Tim Berners-Lee

CERN

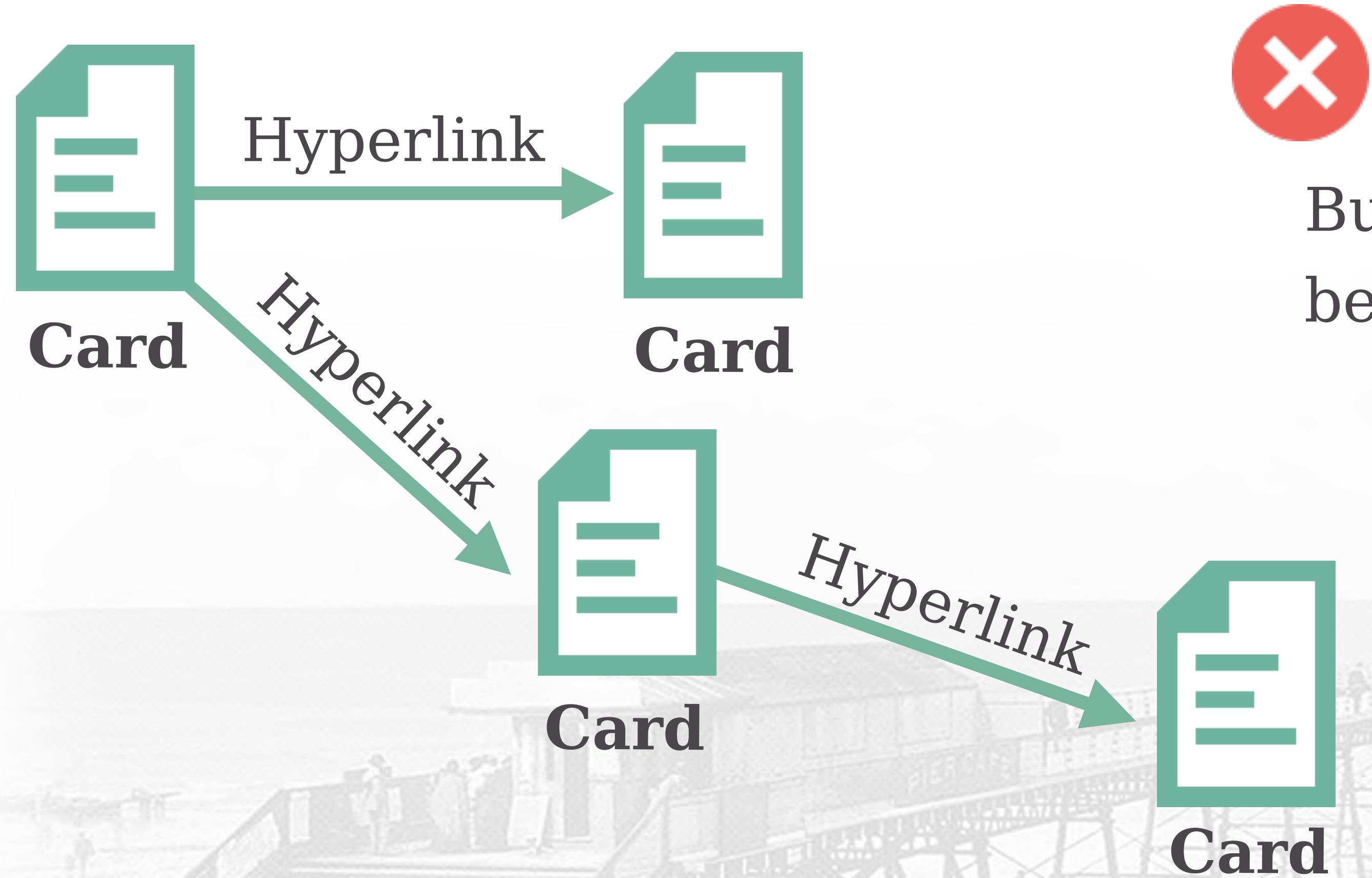
You know, the same people who run
the Large Hadron particle
accelerator.

In 1980, Tim worked for CERN, where he proposed a better way for researchers there to share and read documents.



ENQUIRE

So in 1984, he built something called ENQUIRE for CERN, which was made up of Cards (Documents) and Hyperlinks (which connected the Documents).



But Tim realized he could do better.



The World Wide Web

With Robert Cailliau, Tim Berners-Lee wrote a proposal in 1990 for the creation of the **World Wide Web**.

When it started, the WWW was a way for scientists around the world to create and share their own webpages.



**The World Wide Web's
First Logo**



The language of a webpage is HTML

HTML allows you to take a plain text document created in any simple text editor...

Learn By Doing

No setup. No hassle. Just Learning.

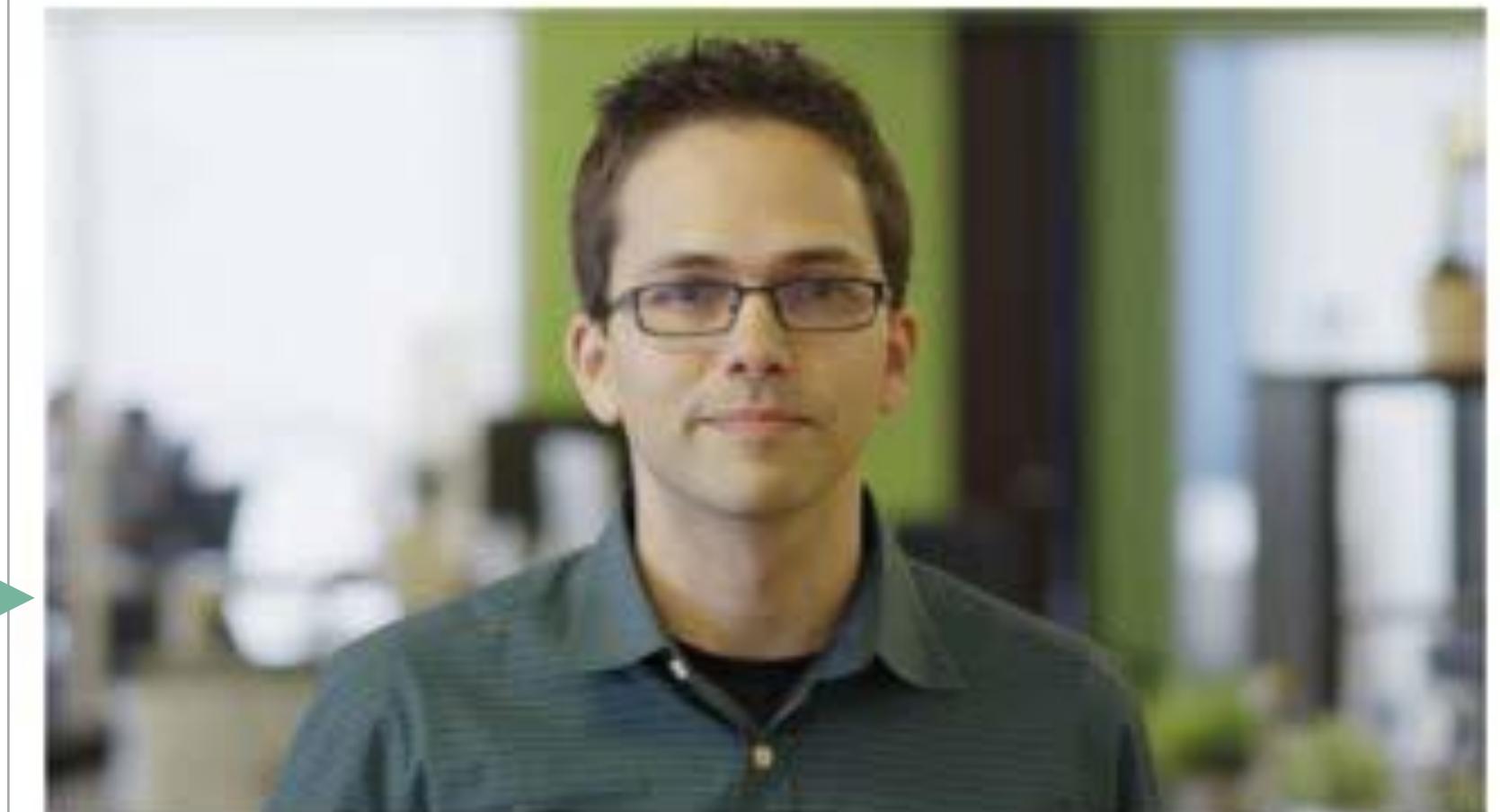
Code School teaches web technologies in the comfort of your browser with video lessons, coding challenges, and screencasts.

.. and organize it into lists, link to other webpages, include images, and more.



Learn By Doing

No setup. No hassle. Just learning.



Code School teaches web technologies in the comfort of your browser with video lessons, coding challenges, and screencasts.

[View Our Courses](#)

Learn:

- [Git](#)
- [Backbone.js](#)
- [Sass](#)
- [Rails](#)
- [jQuery](#)

But what does HTML mean?

HTML stands for HyperText Markup Language

Hypertext

Overcoming the constraints of written text. *Interactive.*

Markup Language

A way to literally "Mark Up" a document to specify attributes, like different font sizes, lists, links to other webpages, and images.



HTML is written in text files

Just like most programming languages, we type a bunch of HTML into a file (aka. document) so we can send it around.



index.html



Name of the file

File extension

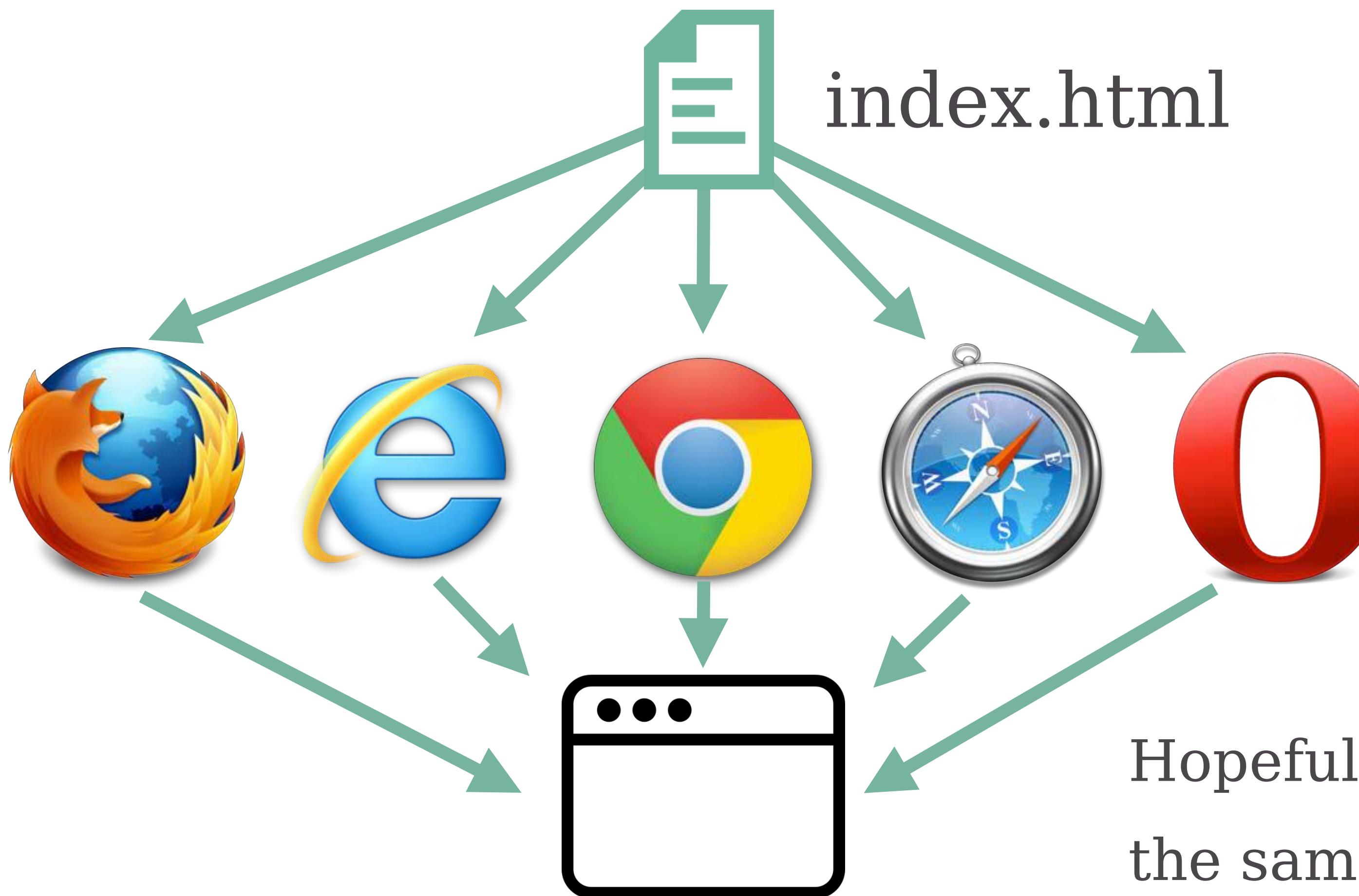
(tells the browser the file contains HTML)



To display an HTML file we need a browser

Web Browsers are basically "HTML Readers."

They understand how to read HTML and display it for you.



Hopefully they all display
the same thing (that's the idea).



A guide to the slides

In this course, we're going to show you HTML, CSS
and what those look like in the browser.

Look for these symbols to help you figure out what you're looking at:

HTML

HTML code

CSS

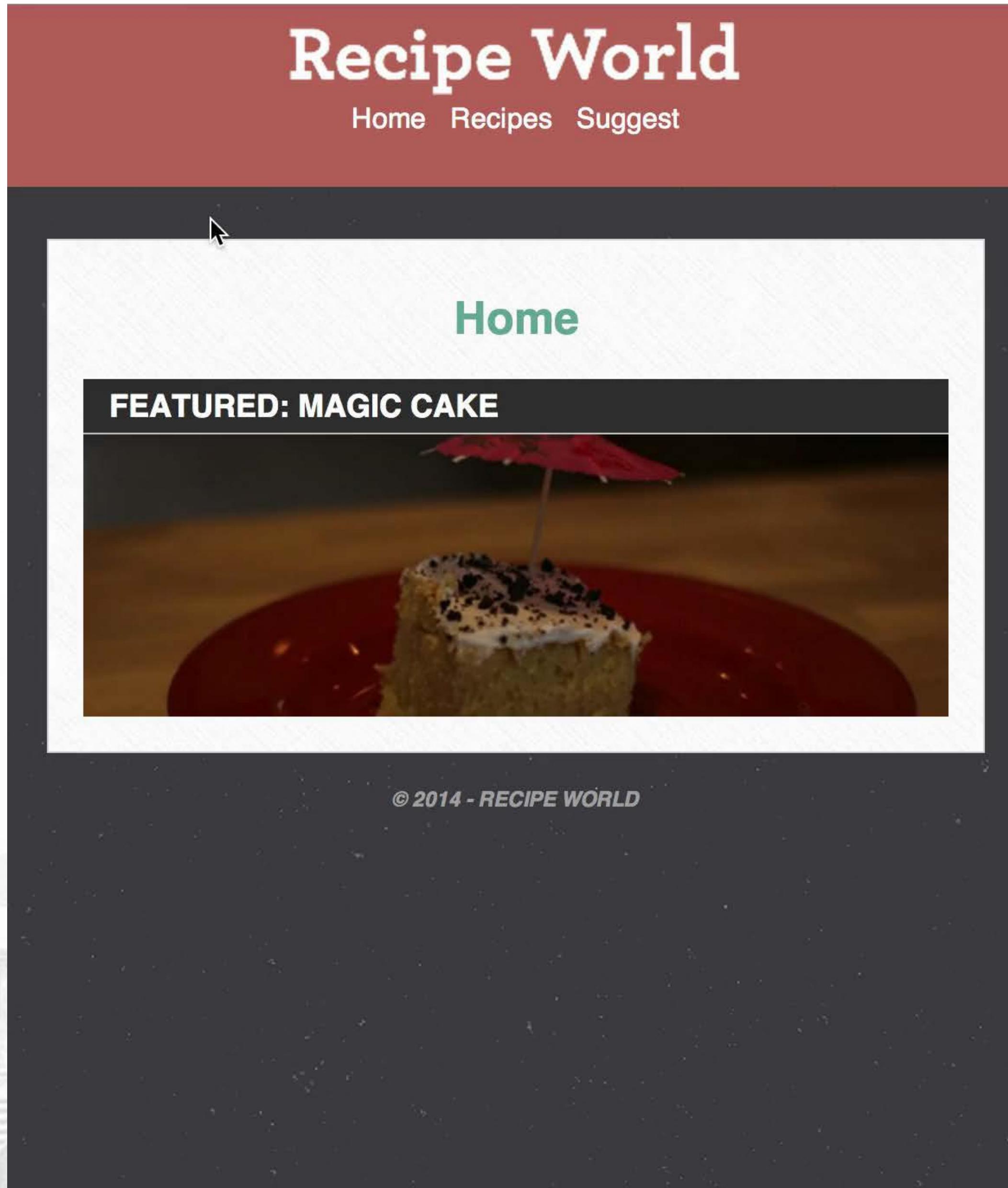
CSS code



What it looks like displayed in the browser



Building Recipe World



First things first: get some content!!

Before you start making a web page, you've got to figure out what content it is going to show.

We'll start with a single recipe with these sections.

Page Title:

Recipe World

Recipe Name:

Magic Cake

Section Name:

Ingredients

Section Name:

Directions



Writing HTML

Most of the time, you'll put your content in between **HTML tags**, which have corresponding opening and closing versions.



Recipe World



Use heading tags to define your content hierarchy

Higher heading numbers mean the content that appears between the headings is less important than lower numbers.

HTML

```
<h1>Recipe World</h1> ← More important  
<h2>Magic Cake</h2>  
<h3>Ingredients</h3>  
<h3>Directions</h3> ← Less important
```

Generally speaking:

The **page title/company name** goes in the **<h1>**

The **page main subject** goes in the **<h2>**

<h3> through **<h6>** are used to organize other divisions of page content



Recipe World

Magic Cake

Ingredients

Directions



Use paragraph tags for non-heading text

< p > is called the paragraph tag.

HTML

```
<h1>Recipe World</h1>
<h2>Magic Cake</h2>
<p>Magic Cake is one of the tastiest...</p>
<h3>Ingredients</h3>
...
...
```



This paragraph
describes Magic
cake

Add paragraph content (where necessary) in between heading tags.

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.



Use an unordered list to display a list of things

 stands for unordered list.

Each list item needs to also be put inside of an tag.

unordered list

```
<h3>Ingredients</h3>
<ul>
  <li>2 eggs</li>
  <li>1 pound of sugar</li>
  <li>3 sticks of butter</li>
</ul>
```

list items

HTML

This list of ingredients doesn't need to be in a specific order

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter



Nesting tags

HTML tags don't have to always just contain text, they can contain other HTML tags.

HTML

```
<p>Magic Cake is one of...
<h3>Ingredients</h3>
<ul>
  <li>2 eggs</li>
  <li>1 pound of sugar</li>
  <li>3 sticks of butter</li>
</ul>
<h3>Directions</h3>
...
when you indent, it's easy to see that 3
<li> tags are nested inside of a <ul> tag
```

parent →

children

A tag that contains other tags is called the **parent**.

The tags contained in a parent tag are called **children**.



Not indenting child tags makes HTML hard to read



HTML

```
<h1>Recipe World</h1>
<h2>Magic Cake</h2>
<p>Magic Cake is one of...
<h3>Ingredients</h3>
<ul><li>2 eggs</li><li>1 pound of
sugar</li><li>3 sticks of butter</li>
</ul>
<h3>Directions</h3>
...

```

This is valid
HTML, but it's
really hard to
read



Use an ordered list to show list items in a certain order

If the content in your list does refer to steps to be followed, use an ordered list.

HTML

ordered list

list items

```
<h3>Ingredients</h3>
<ul>...
<h3>Directions</h3>
<ol>
  <li>Mix eggs, sugar, and butter in
      a large bowl.</li>
  <li>Spread into a non-stick dish</li>
  <li>Bake at 350
  <li>Let sit at room temperature for 20 minutes</li>
  <li>Eat and enjoy!</li>
</ol>
```

these steps need to be followed in order or the cake will be ruined

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



Wrapping everything in the body

Any content that appears on a web page should be in between a <body> tag.

the parent of all visible content

HTML

```
<body>
  <h1>Recipe World</h1>
  <h2>Magic Cake</h2>
  <p>Magic Cake is one of...</p>
  <h3>Ingredients</h3>
  <ul>...</ul>
  <h3>Directions</h3>
  <ol>...</ol>
</body>
```

<body> doesn't display anything, but helps keep the page content organized.

Recipe World

Magic Cake

Magic Cake is one of the tastiest cakes the world have tried it and lived to tell about it, and these a

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



Adding a head tag

Non-visible stuff goes in the <head> tag.

HTML

```
<head>
</head> ← we'll discuss what goes in the
<body>    <head> later when we need it
          <h1>Recipe World</h1>
          ...
</body>
```

You'll eventually use the head tag to load other useful scripts, like CSS and JavaScript.



Make everything a child of a single parent tag

All of your HTML goes inside of the <html> tag.

HTML

```
<html>
  <head>
  </head>
  <body>
    <h1>Recipe World</h1>
    ...
  </body>
</html>
```



Notice that we're indenting again so it's
easy to see the parent/child relationship



Setting the DOCTYPE to html

The DOCTYPE sets the HTML version.

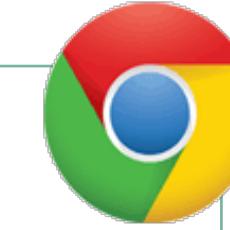
HTML

```
<!DOCTYPE html>
<html>
  <head>
  </head>
  <body>
    <h1>Recipe World</h1>
    ...
  </body>
</html>
```

The browser can make better decisions about how to display your page when it knows which version of HTML you're using.



The recipe page so far



Recipe World

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!





FRONT-END FOUNDATIONS



Adding links to our recipe site



Recipe World

- [Home](#)
- [Recipes](#)
- [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.



Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

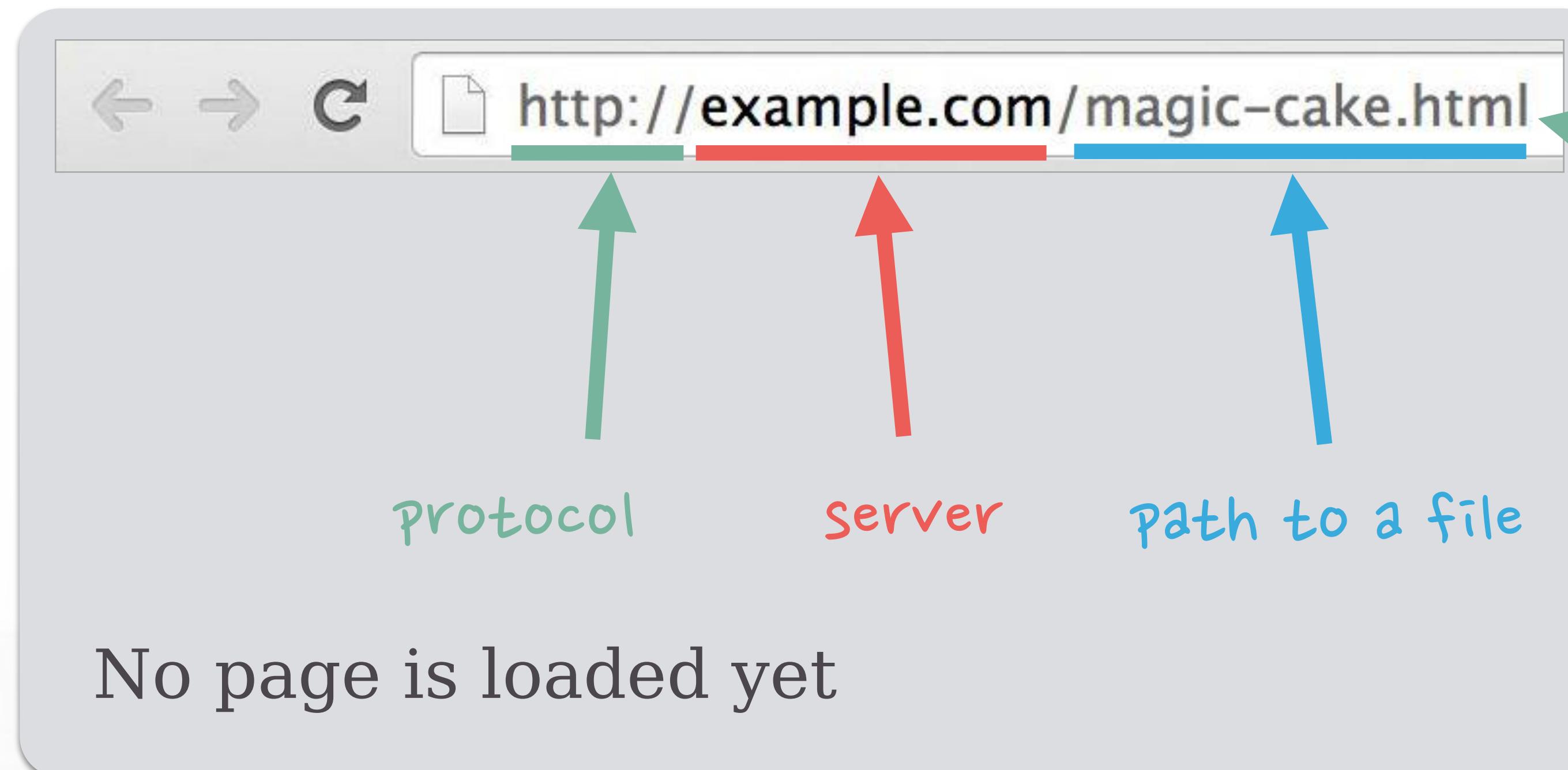


What happens when you type a URL in the Browser

1

Enter a URL into the browser's address bar.

Browser



The URL contains a **protocol**, **server** and a **file** that is being requested.

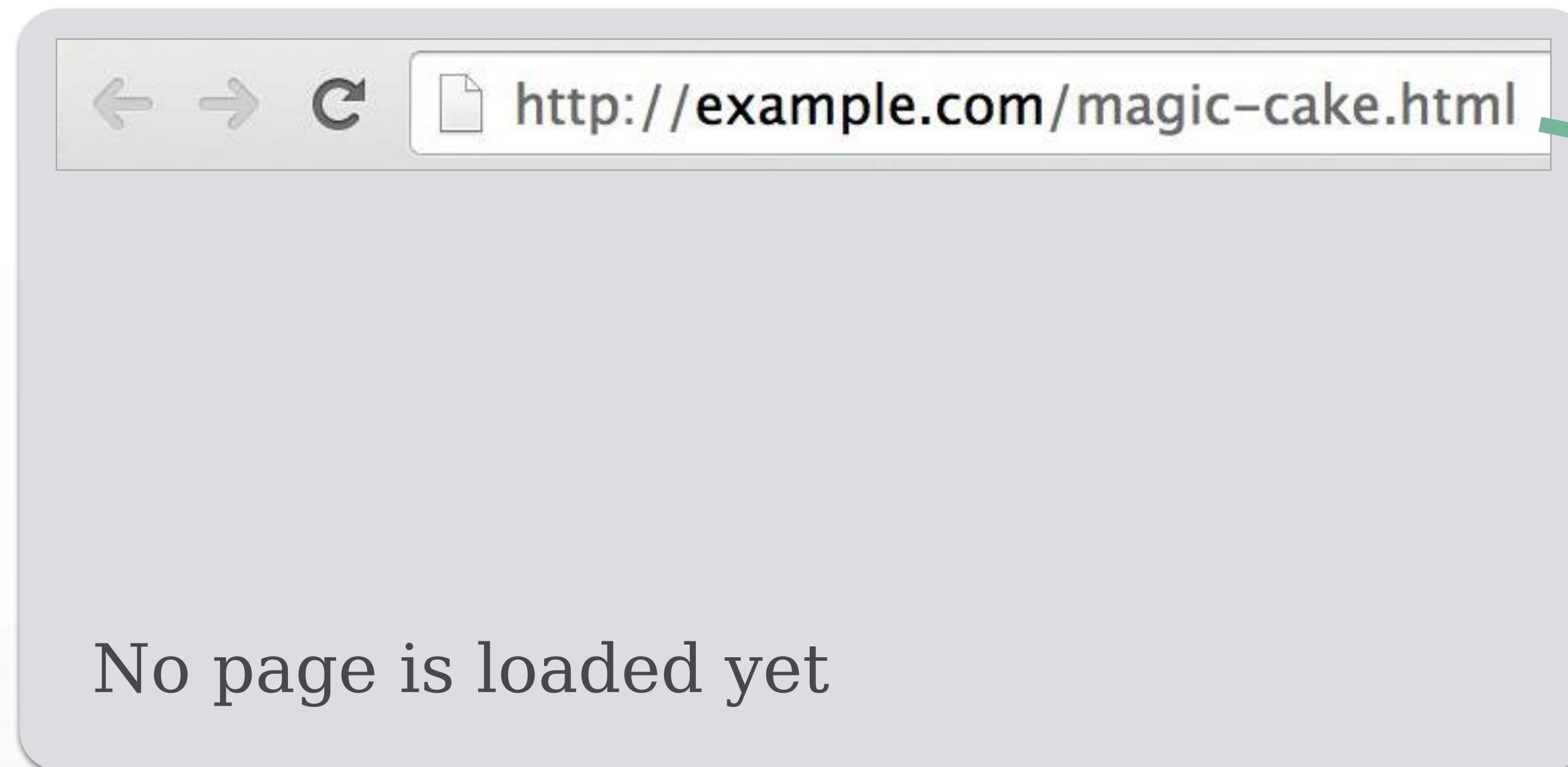


What happens when you type a URL in the Browser

2

A request is sent to the server, and the server looks for the file that's being requested.

Browser



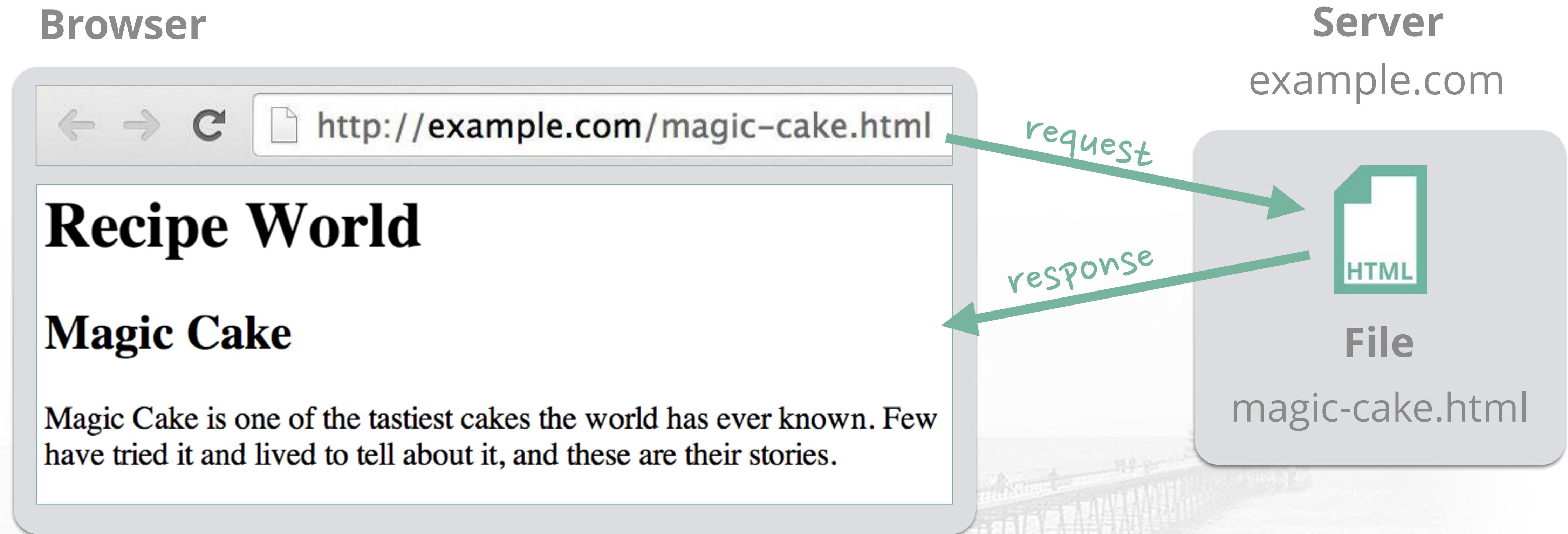
Server

example.com



What happens when you type a URL in the Browser

- The server returns the file to the browser and the browser displays it.



What happens when you click a link in the Browser

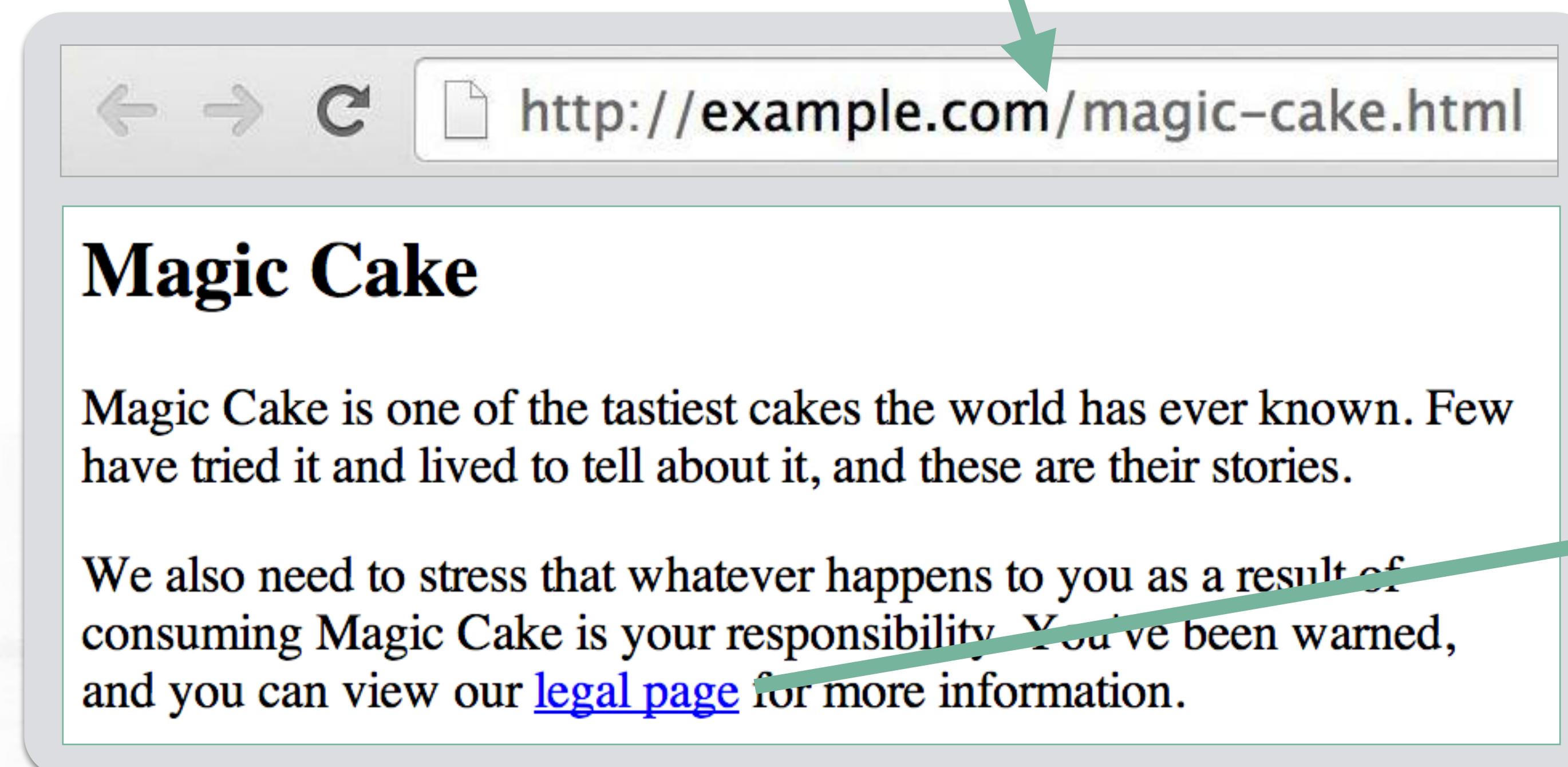
Clicking a link is like typing a URL in the address bar, only the URL is already pre-entered in HTML as part of link.

1

Click the link on the page, and a request for the file in that link is sent to the server.

Browser

current page containing the link



Server
example.com



File

magic-cake.html



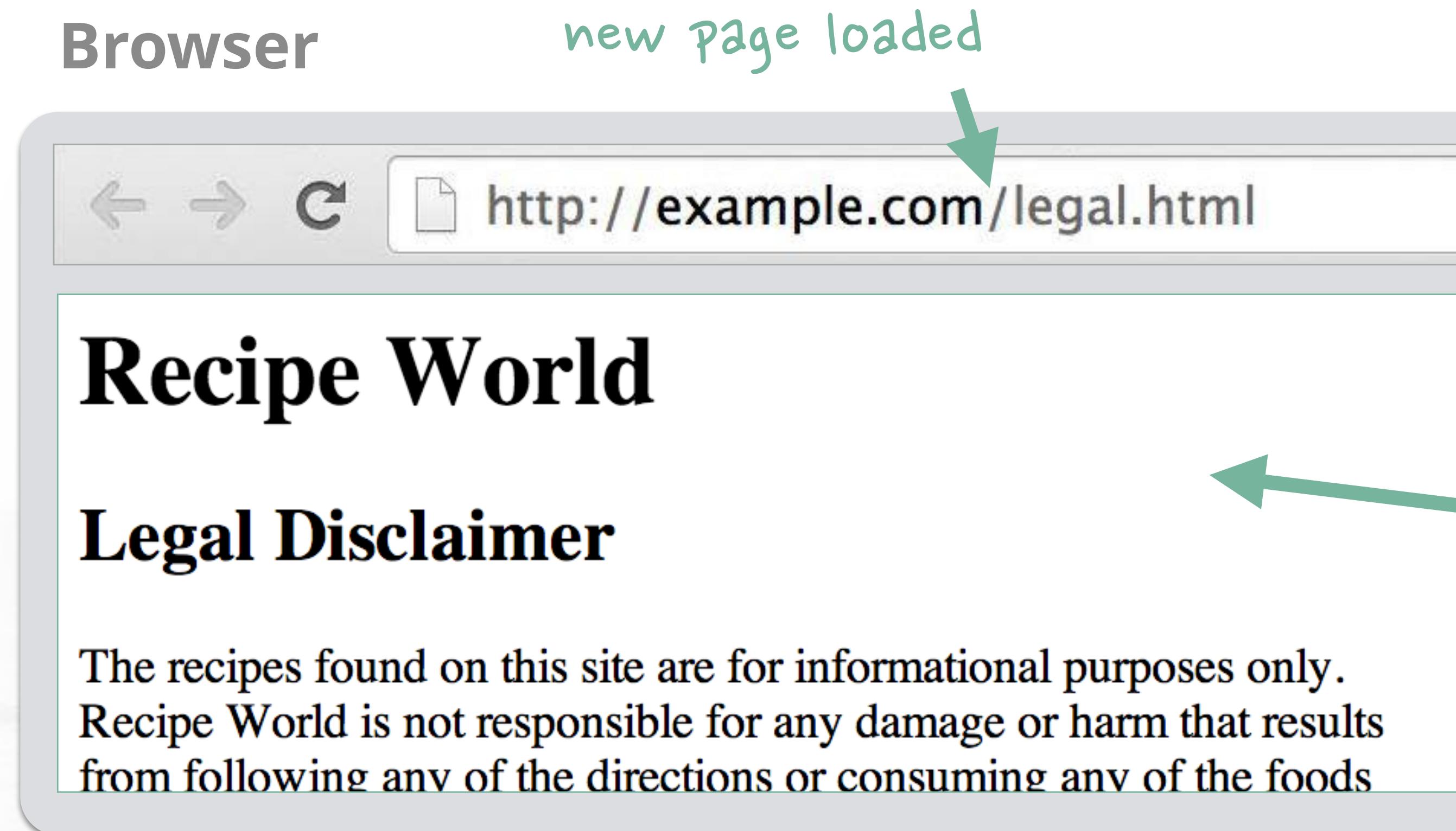
File

legal.html

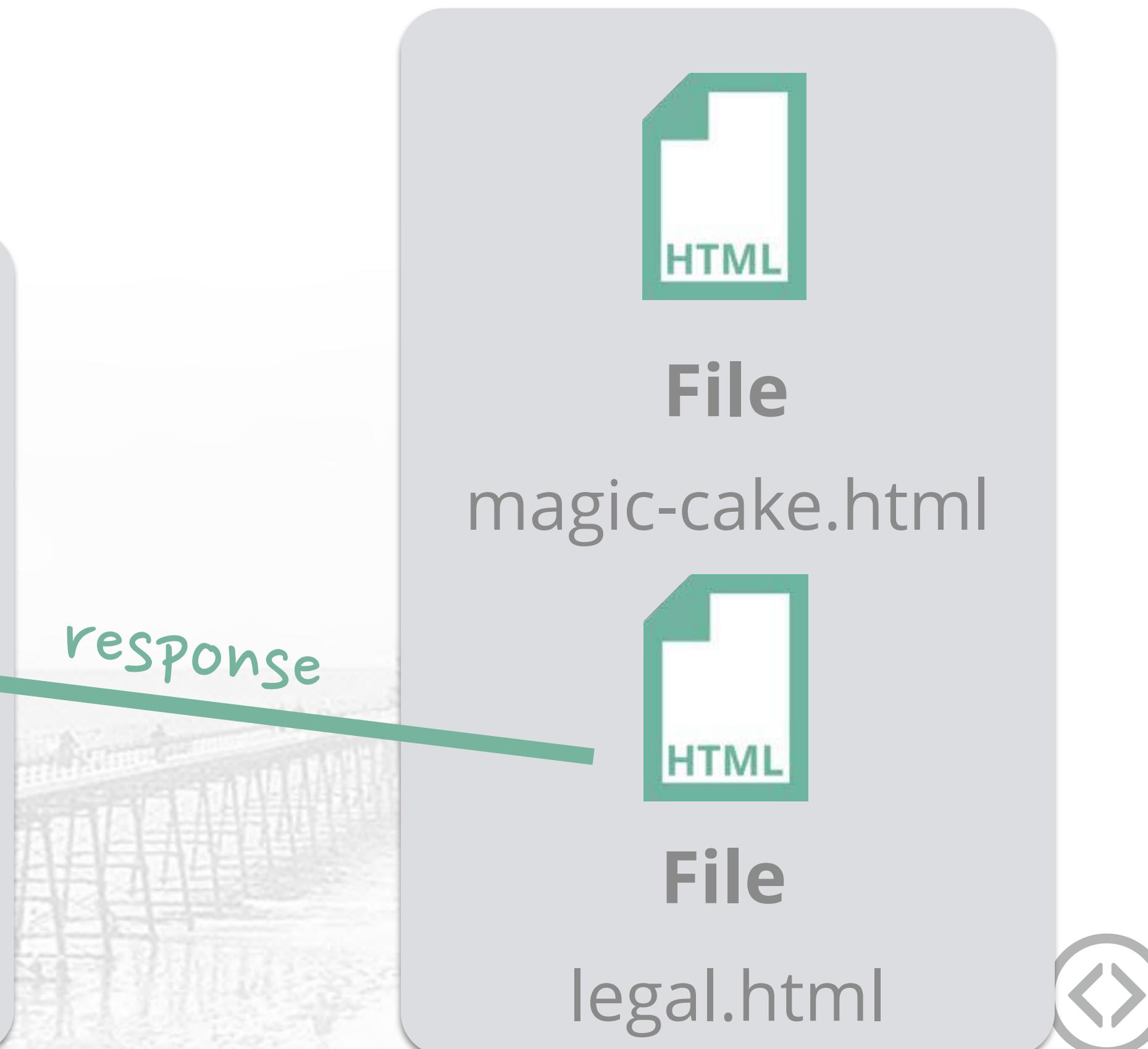
request

What happens when you click a link in the Browser

- 2 The server returns the file to the browser and the browser replaces the current page with the new file.



Server
example.com



How to make a link

Anything that appears between the opening and closing **a** tags is the part that will be a clickable link on the web page.

HTML

```
<p>...can view our <a>legal page</a> for more...</p>
```

a is short for **anchor**.

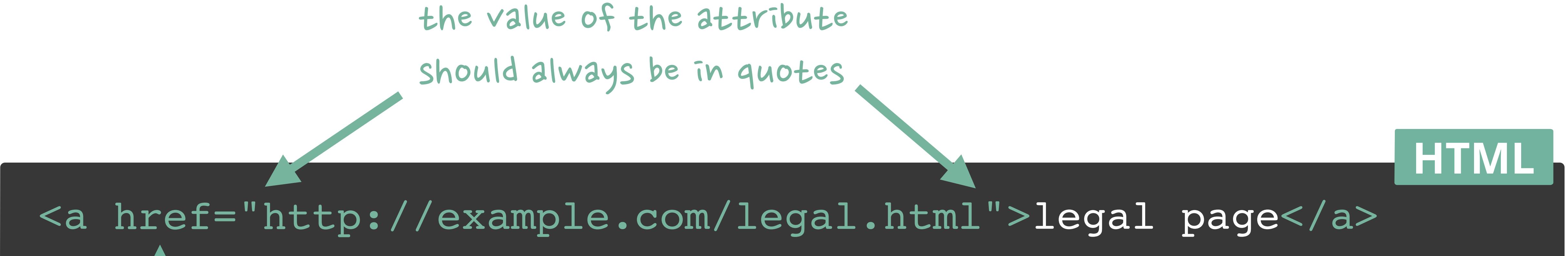
link text

ew our legal page for m



How to make a link

The **href** attribute sets what page should open when the link is clicked.



HTML attribute

HTML **attributes** let you add additional features or information to a tag beyond just the tag name and text content.



How to make a link

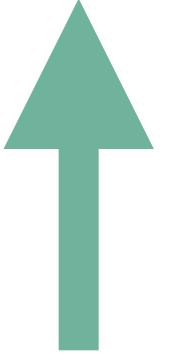
The **target** attribute sets where the page you set in the href should open when the link is clicked.

HTML

```
<a href="http://..." target="_blank"
```

HTML attribute

if you don't add the target attribute, the default is _self



_blank means *open this page in a new tab/window.*

_self means *replace the currently open page in this tab/window.*



Demo of a link opening in a new tab

The screenshot shows a web browser window with a dark blue header bar. The title bar displays "magic-cake.html" and the address bar shows "http://example.com/magic-cake.html". A small icon of a person wearing a hat and sunglasses is visible in the top right corner of the header. The main content area is titled "Recipe World" in large, bold, black font. Below it is a navigation menu with three items: "Home", "Recipes", and "Suggest", each preceded by a bullet point and underlined text. The "Suggest" item has a blue underline, indicating it is the active or currently being pointed-to link. The text "Magic Cake" is displayed in bold black font. A paragraph follows: "Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories." Another paragraph states: "We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information." The word "legal page" is underlined in blue. Below this is a section titled "Ingredients" with a bulleted list: "2 eggs", "1 pound sugar", and "3 sticks of butter". At the bottom is a section titled "Directions". A cursor arrow is visible on the right side of the content area, pointing upwards towards the "Suggest" link.



Absolute vs. Relative paths

Absolute paths ask for a file from a specific server

HTML

```
<a href="http://example.com/legal.html">legal page</a>
```



absolute always includes the protocol and server

Relative paths ask for a file with no server specified.

HTML

```
<a href="legal.html">legal page</a>
```



relative never includes the protocol and server

Since no server name is included, the browser assumes you mean the same server that your page is on.



Links using relative paths

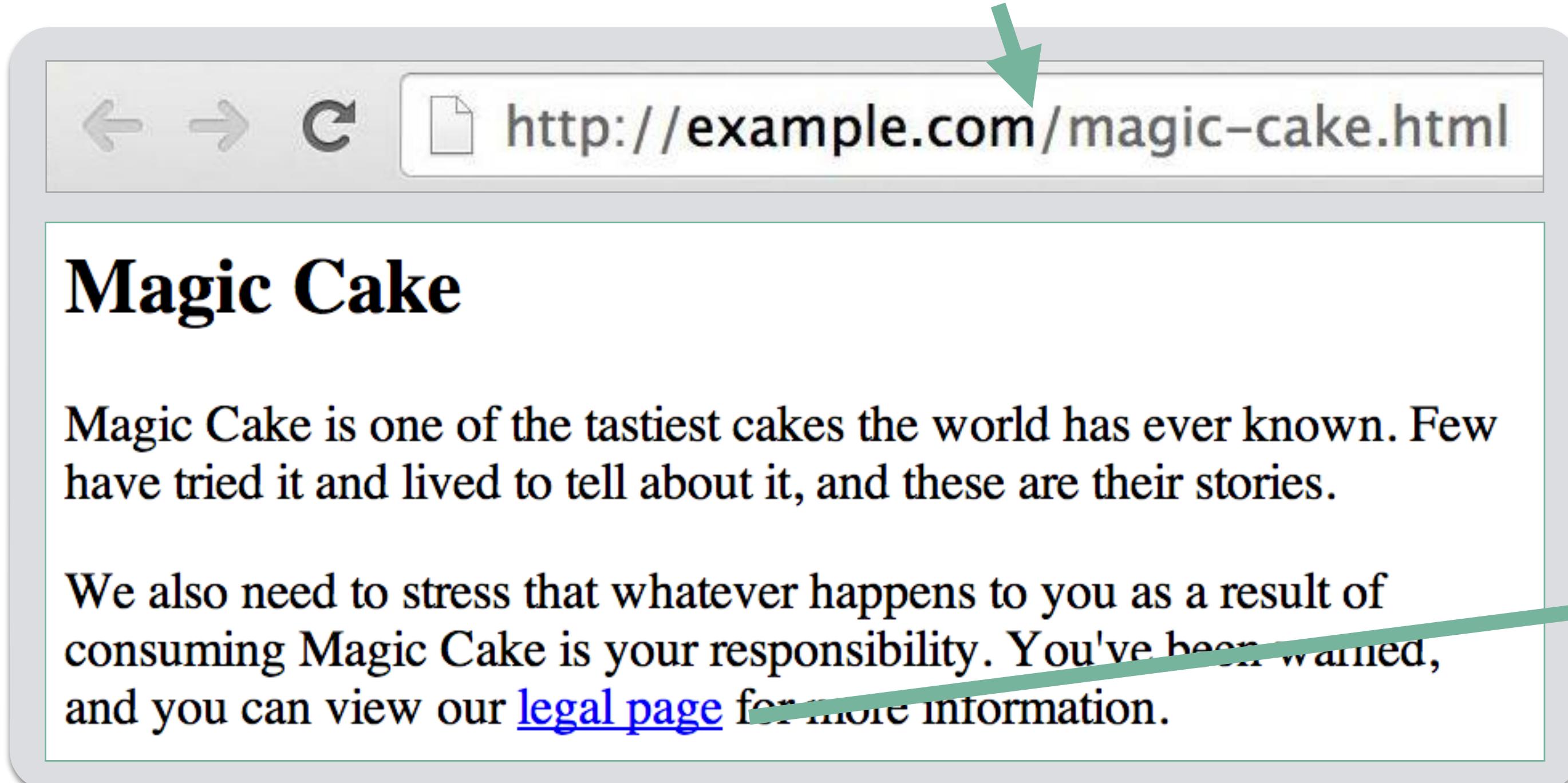
If no protocol/server is included, the browser assumes the protocol and server are the same as the page you're requesting from.

```
<a href="legal.html">legal page</a>
```

HTML

Browser

current page containing the link



Server
example.com



File

magic-cake.html



File

legal.html

relative link

legal.html

assumed server
is example.com

Figuring out the site navigation

Recipe World server files



All of our HTML files are currently in our main site folder on the server.

These are the three main pages that should go in our site navigation.



Adding site navigation with relative links

Relative links should almost always be used when linking to pages that are located on the same site.

add this block of HTML to all pages

HTML

```
<body>
  <h1>Recipe World</h1>
  <ul>
    <li><a href="home.html">Home</a></li>
    <li><a href="recipes.html">Recipes</a></li>
    <li><a href="suggest.html">Suggest</a></li>
  </ul>
  <h2>Magic Cake</h2>
  ...
</body>
```



The Magic Cake recipe page with site navigation



Recipe World

- [Home](#)
- [Recipes](#)
- [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.



Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



Creating a link to another web site

First, find and copy the URL to the other site

The screenshot shows a web browser window with a dark blue header bar. The title bar says "magic-cake.html". The address bar contains the URL "http://example.com/magic-cake.html". The main content area of the browser displays a web page titled "Recipe World".
Navigation:

- [Home](#)
- [Recipes](#)
- [Suggest](#)

Magic Cake:

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients:

- 2 eggs
- 1 pound [sugar](#)
- 3 sticks of butter

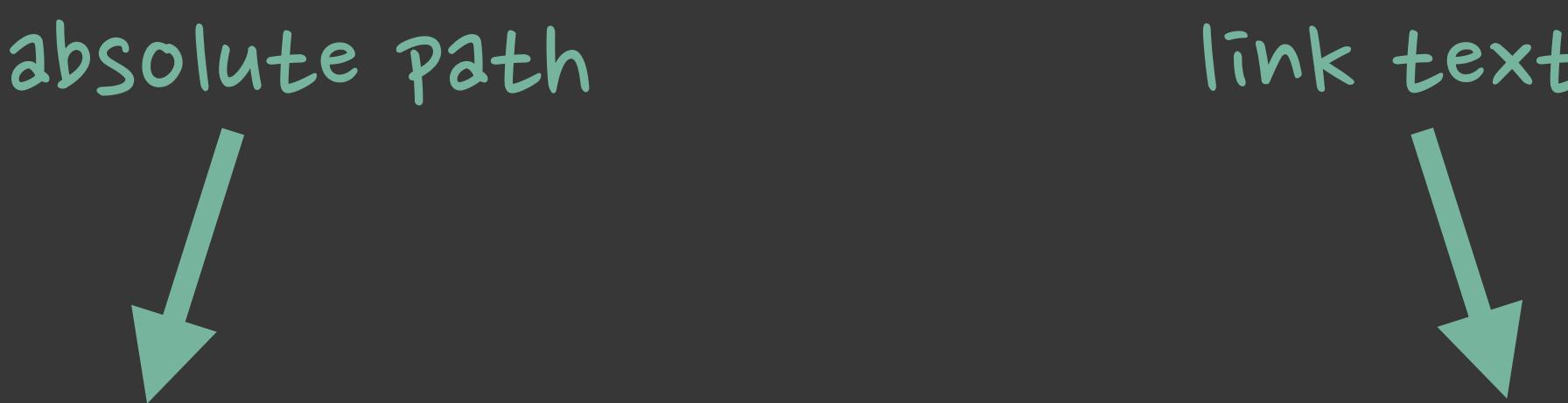


Creating a link to another web site

Absolute links need to always be used when linking to pages that are located on another site/server.

HTML

```
<h3>Ingredients</h3>
<ul>
  <li>2 eggs</li>
  <li>1 pound of
    <a href="http://www.amazon.com/Domino-...">sugar</a>
  </li>
  <li>3 sticks of butter</li>
</ul>
```





FRONT-END FOUNDATIONS



LEVEL 2

CSS



The early days of style on the web

When the Web was brand new, there was no separation between HTML and the **presentation** of that HTML.



HTML X

```
<H3 COLOR=RED><CENTER>Ingredients</CENTER></H3>
```

caps-lock got stuck a lot back then too

HTML shouldn't determine how something **looks**,
it should just determine how content is structured.



Separating content from presentation

Thankfully, the authors of the web realized that, and created a way to make rules for how tags should look and put them in a separate place from the HTML.

HTML

```
<h3>Ingredients</h3>
```

CSS

*Make the **h3** tag green*

*Make the **h3** a bigger font*

*Make the **h3** have a border at the bottom*

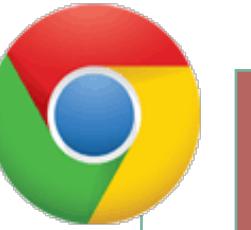


Cascading Style Sheets

CSS is code that changes the **appearance** of HTML.

HTML without CSS

Recipe World



- [Home](#)
- [Recipes](#)
- [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of

HTML with CSS

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

Ingredients

- 2 eggs
- 1 pound sugar



Writing your first selector

Tags are selected by creating something called a **selector**.

HTML

```
<p>Magic Cake is one of the tastiest...</p>
```

the simplest selector is the **type selector**, and
is just the tag name without <> brackets.

CSS

```
p {  
  text-decoration: underline;  
}
```

this is one of many properties
that can be applied to selectors

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

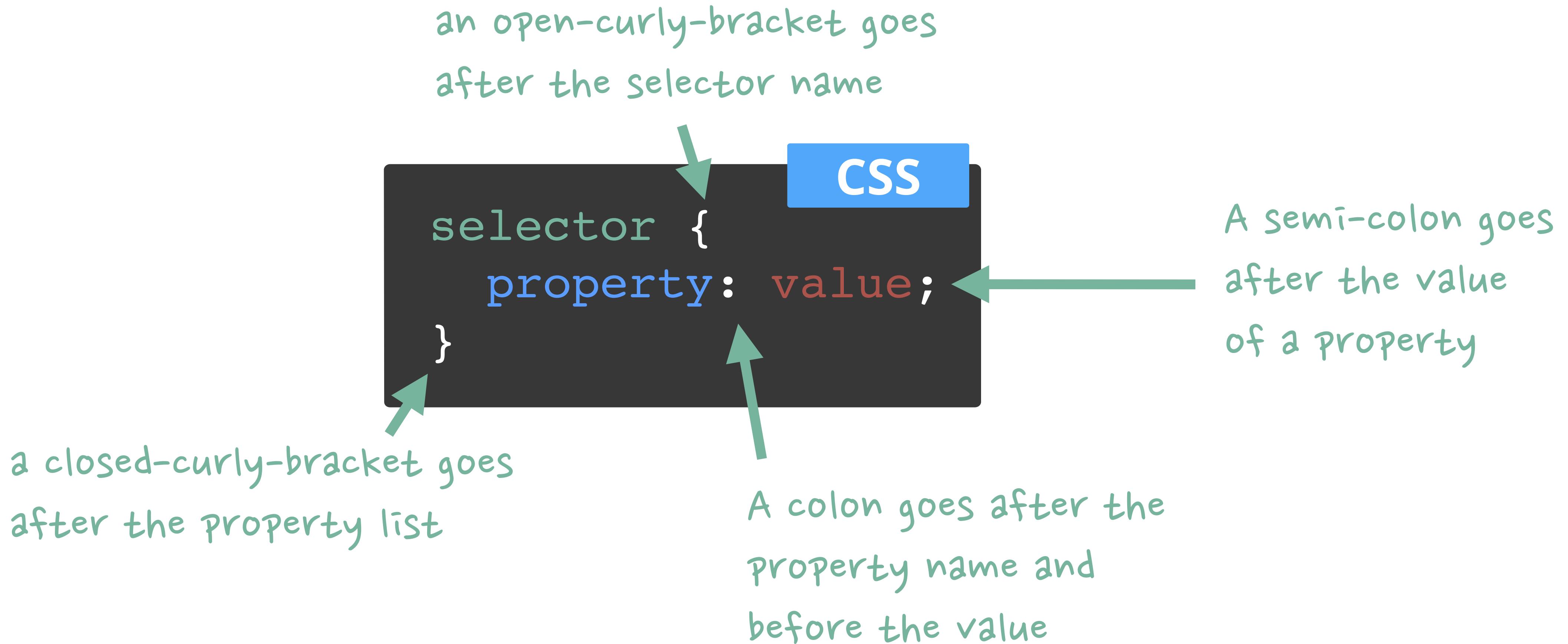


each property can usually be set
to one of a few different values



The syntax of a selector

Selectors have a very specific syntax that needs to be followed or the CSS won't work.



Using multiple properties in one selector

A single selector can change multiple properties.

HTML

```
<p>Magic Cake is one of the tastiest...</p>
```

CSS

```
p {  
    text-decoration: underline;  
    color: red;  
}
```

multiple properties applied to a
single selector

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.



Selecting multiple tags with one selector

Selectors will select all matching tags on the page and apply properties.

HTML

```
<h3>Ingredients</h3>
<ul>
  <li>2 eggs</li>
  <li>1 pound of sugar</li>
  <li>3 sticks of butter</li>
</ul>
```

CSS

```
li {
  font-size: 24px;
}
```

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

bigger font size now
for all `` tags

Directions

1. Mix eggs, sugar, and butter in a large bowl
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



Selecting only tags that are children of another tag

A **descendent selector** can be used to select tags only if they are children of another tag.

```
<h3>Ingredients</h3>
<ul>
  <li>2 eggs</li>
  <li>1 pound of sugar</li>
  <li>3 sticks of butter</li>
</ul>
```

HTML

select only li tags that are children of ul tags

```
ul li {
  font-size: 24px;
}
```

CSS

Ingredients

- 2 eggs
 - 1 pound sugar
 - 3 sticks of butter
- only the list items are bigger now

Directions

1. Mix eggs, sugar, and butter in a large bowl
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



TIP: read the selector list from right-to-left. The left-most selector is the parent, with children following to the right.



Selecting tags based on actions and conditions

A **pseudo-selector** is a modifier that can be added to a selector to select a tag only when a certain condition has occurred.

CSS

```
a {  
    text-decoration: none;  
}
```

removes the underline from all links on a page

```
a:hover {  
    text-decoration: underline;  
    color: darkred;  
}
```

adds an underline and changes the color of all
links on a page ONLY when the mouse is over
the link

Recipe World

- Home
- Recipes
- Suggest



Using pseudo-selectors to narrow selection criteria

The **:first-child** pseudo-selector can be applied to narrow the amount of child tags selected

HTML

```
<h3>Directions</h3>  
<ol>  
  <li>Mix eggs, sugar...</li>  
  <li>Spread into a...</li>  
  <li>Bake at 350...</li>  
</ol>
```

select only the first li tag



CSS

```
ol li:first-child {  
  color: red;  
}
```

Directions

1. Mix eggs, sugar, and butter in a large bowl
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



Where do we put all this stuff?

One place you can put CSS is in a **style** tag that's a child of the **head** tag.

HTML

```
<html>
  <head>
    <style type="text/css">
      a {
        color: red;
      }
    </style>
  </head>
  <body>
    ...
  </body>
</html>
```

The `type` attribute lets the browser know that CSS is coming

Your CSS selectors can be written in between the **style** opening and closing tags.





FRONT-END FOUNDATIONS



Hexadecimal colors

A popular way to choose colors in CSS is to use hexadecimal numbers.

CSS

```
p {  
  color: red;  
  color: #FF0000;  
  
  color: black;  
  color: #000000;  
  
  color: yellow;  
  color: #FFFF00;  
}
```

Here's three keyword colors
and their hexadecimal
equivalents.

red

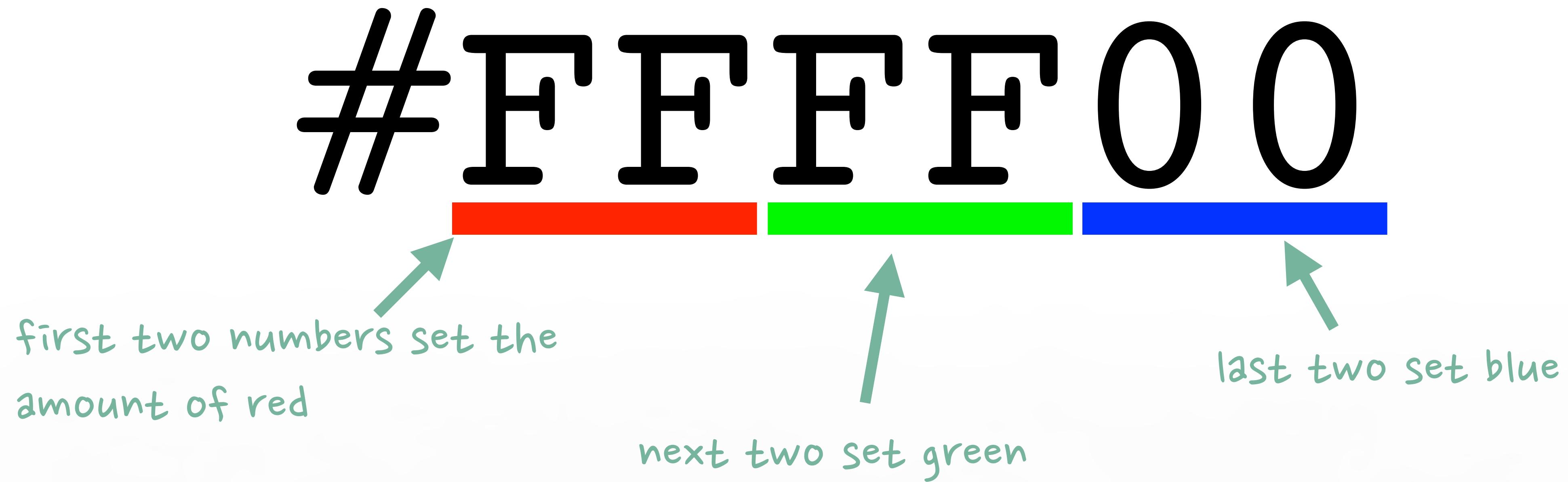
black

yellow



Hexadecimal colors

Each hex color is actually three different parts.



Hexadecimal colors - Minimum and Maximum

Color values for red, green, and blue run from **0** - 255 decimal,
or **00** - FF hexadecimal.

#**FFFF00**

This color is maximum red, maximum green, and no blue.

That's equivalent to the color **Yellow**



Breaking down decimal numbers

Decimal numbers run from 0-9.

76

(decimal)

multiply the left by 10

$$(7 \times 10)$$

multiply the right by 1

$$(6 \times 1)$$

Add them together, and you get 76 decimal



Breaking down hexadecimal numbers

Since we're so used to reading decimal numbers, sometimes it makes sense to convert hexadecimal to decimal.

76

(hexadecimal)

multiply the left by 16

(7 x 16)

multiply the right by 1

(6 x 1)

Add them together, and you get **118** decimal



Breaking down hexadecimal numbers

Since we're so used to reading decimal numbers, sometimes it makes sense to convert hexadecimal to decimal.

FF

(hexadecimal)



multiply the left by 16

(F x 16)

multiply the right by 1

(F x 1)

?

?

?

?

How do we multiply by a letter?!\$#!\$?



Understanding letter-based hexadecimal numbers

Hexadecimal numbers run from 0-15, but use letters for numbers above 9.

$$A = 10$$

$$B = 11$$

$$C = 12$$

$$D = 13$$

$$E = 14$$

$$F = \underline{15}$$

FF



multiply the left by 16

$$(\underline{15} \times 16)$$



multiply the right by 1

$$(\underline{15} \times 1)$$

Add them together, and you get $240 + 15$, or **255** decimal



Calculating the color from hexadecimal numbers

#7403AB



Red: $(7 \times 16) + (4 \times 1) = 116$

Green: $(0 \times 16) + (3 \times 1) = 3$

Blue: $(10 \times 16) + (11 \times 1) = 171$

This color is some red, almost no green, and more blue than red.

That's a color that looks **Purple**



Calculating the color from hexadecimal numbers

#FF00B3



Red: $(15 \times 16) + (15 \times 1) = 255$

Green: $(0 \times 16) + (0 \times 1) = 0$

Blue: $(11 \times 16) + (3 \times 1) = 179$

This color is lots of red, no green, and a little less blue than red.

That's a color that looks **Hot Pink**



Colors on the web

By using hexadecimal numbers to set colors, we get 256 possible combinations for each of the three color channels.

or...

$$256 \times 256 \times 256 = 16,777,216$$





FRONT-END FOUNDATIONS



Our page after changing some styles with CSS

Questions

How does our page know how much vertical and horizontal space to put between tags?

How can we control that spacing?

why this much space?

Answer

The box model

Recipe World

- [Home](#)
- [Recipes](#)
- [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known about it, and these are their stories.

We also need to stress that whatever happens to you as a result of this cake is entirely your own responsibility. You've been warned, and you can view our [legal disclaimer](#).

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter



The Box

Every tag shown in the body is contained in an invisible rectangle that we'll call **the box**.

HTML

```
<p>Magic Cake is one of...</p>
<p>We also need to stress...</p>
```

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

These two paragraph tags are shown as two boxes stacked on top of each other.

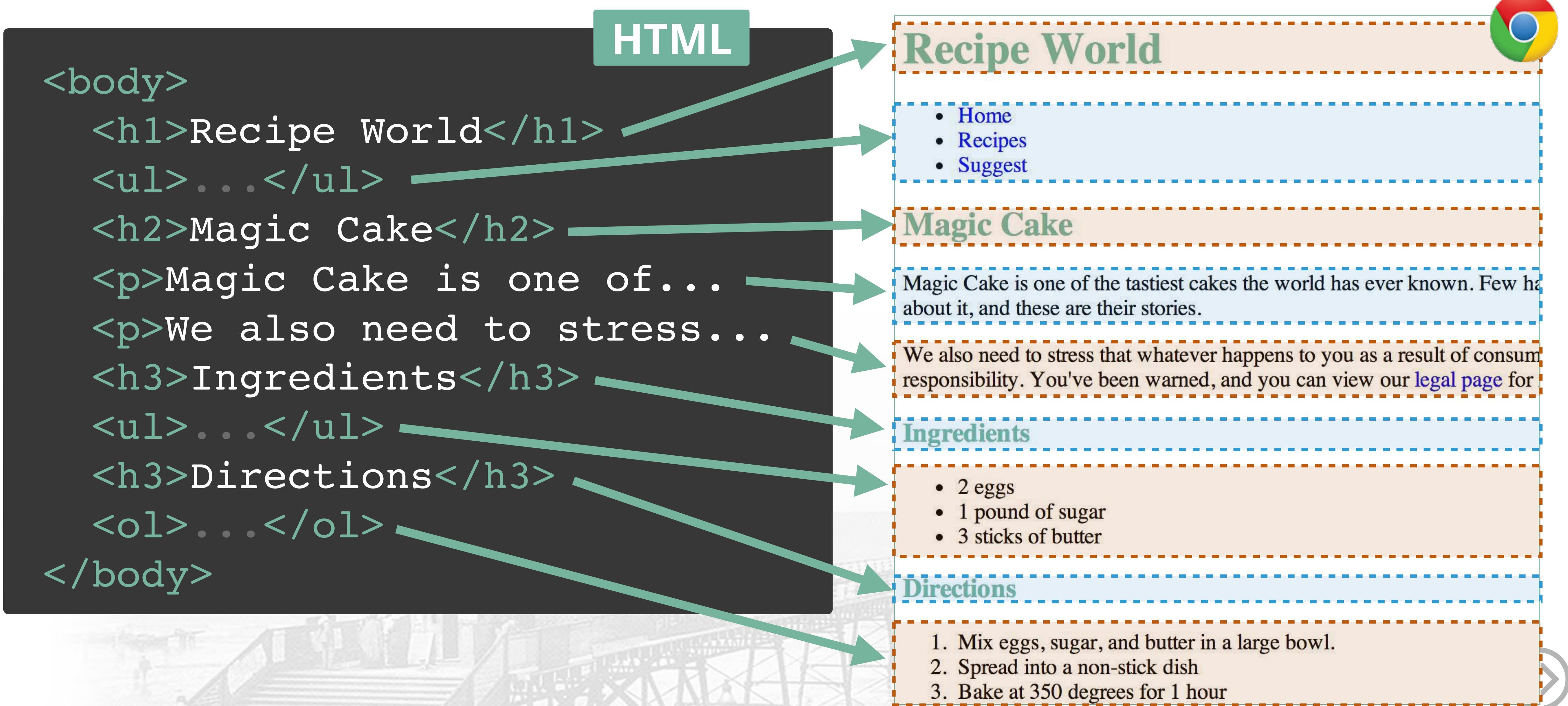


content
boxes



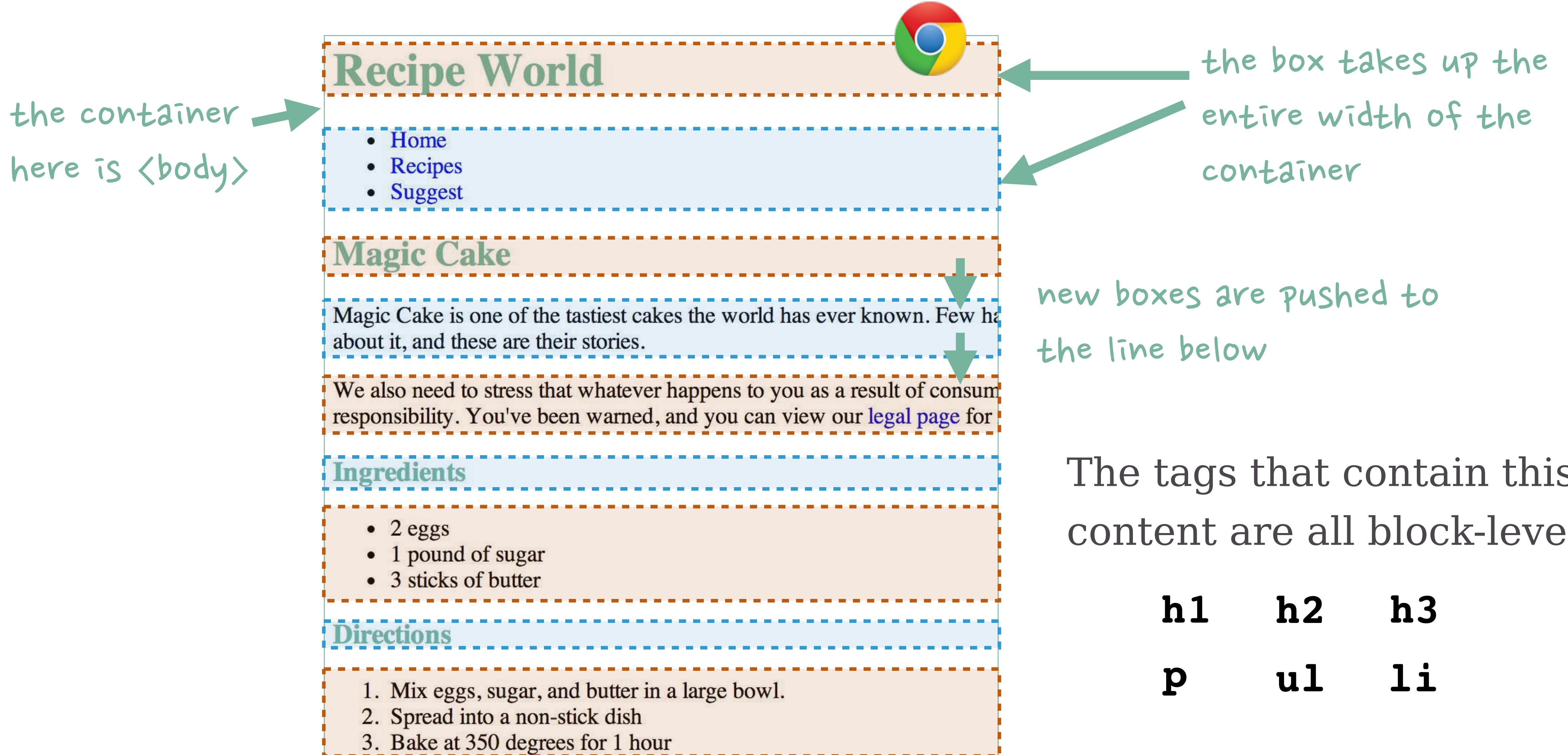
The boxes on our page

Here are the boxes for the current version of the magic-cake.html page.



Block-level tags

The content of **block-level** tags take up the entire width of the **container**.



Inline-level tags

If a tag is not block-level, it's **inline-level**.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.



inline-level tags don't try to take
up more width than they need

HTML

```
<p>...can view our <a href="legal.html">legal page</a>  
for more information</p>
```

Some common inline-level tags

a img

input label



Turning block-level into inline-level

Sometimes, you'll want block-level tags to be inline-level.

Example: list items displaying horizontally instead of vertically

block-level list items

Recipe World



- Home
- Recipes
- Suggest

the default display is block-level

inline-level list items

Recipe World



Home Recipes Suggest

CSS

```
ul li {  
    display: inline;  
}
```



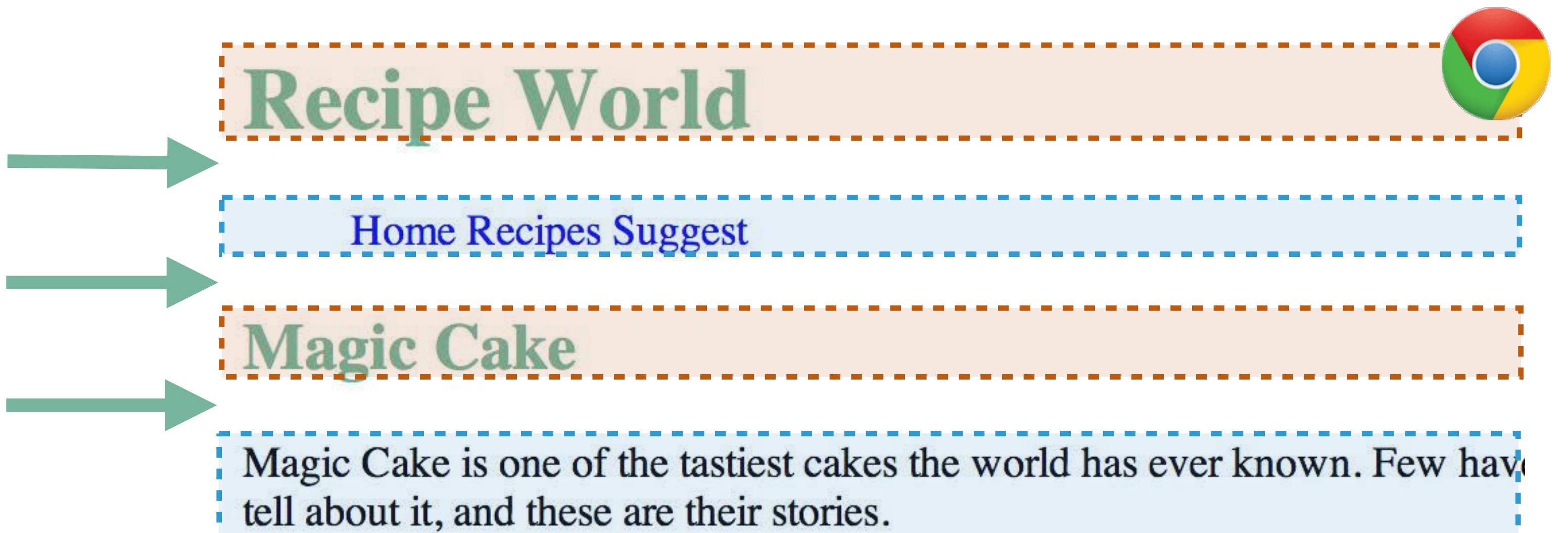
Block-level vertical spacing

What we know

- Each tag's content fits in an invisible box
- Each block-level tag's box takes up an entire line (horizontal space)

Back to our problem

How does the browser
know how much space
goes between the boxes?



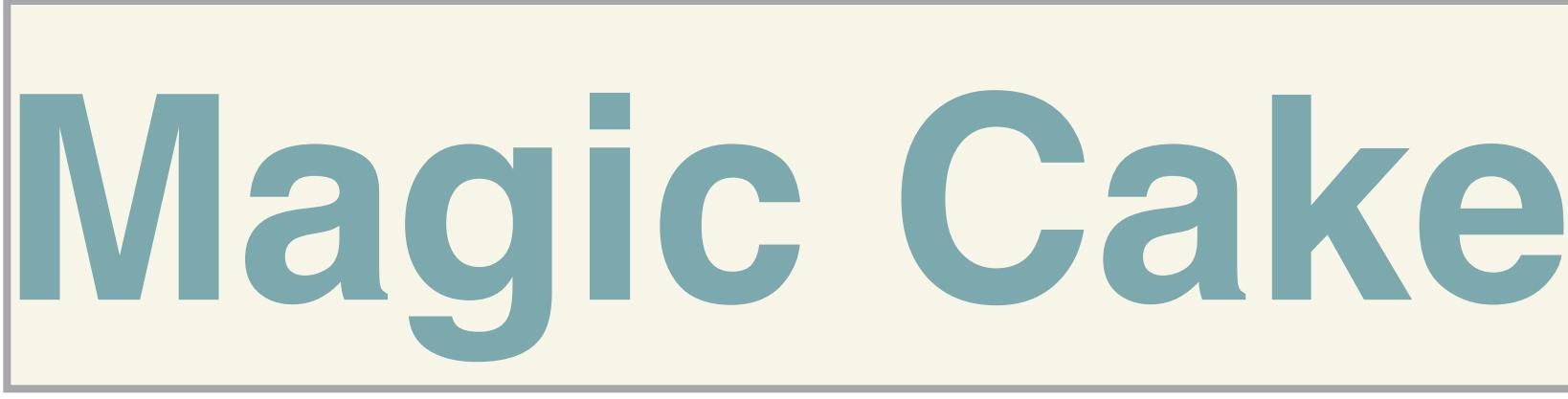
The Box Model

The **box model** is a way to describe the borders and spacing in between the **boxes** of each tag.

- There are 4 parts of the box model:

1. Content area

The **content area** contains your actual content (text, images, etc.)



Magic Cake

The content area will only take up as much vertical space as it needs to display the content inside.



The Box Model

- There are 4 parts of the box model:

2. Padding

Padding is added to the **top**, **right**, **bottom**, or **left** of the content area.

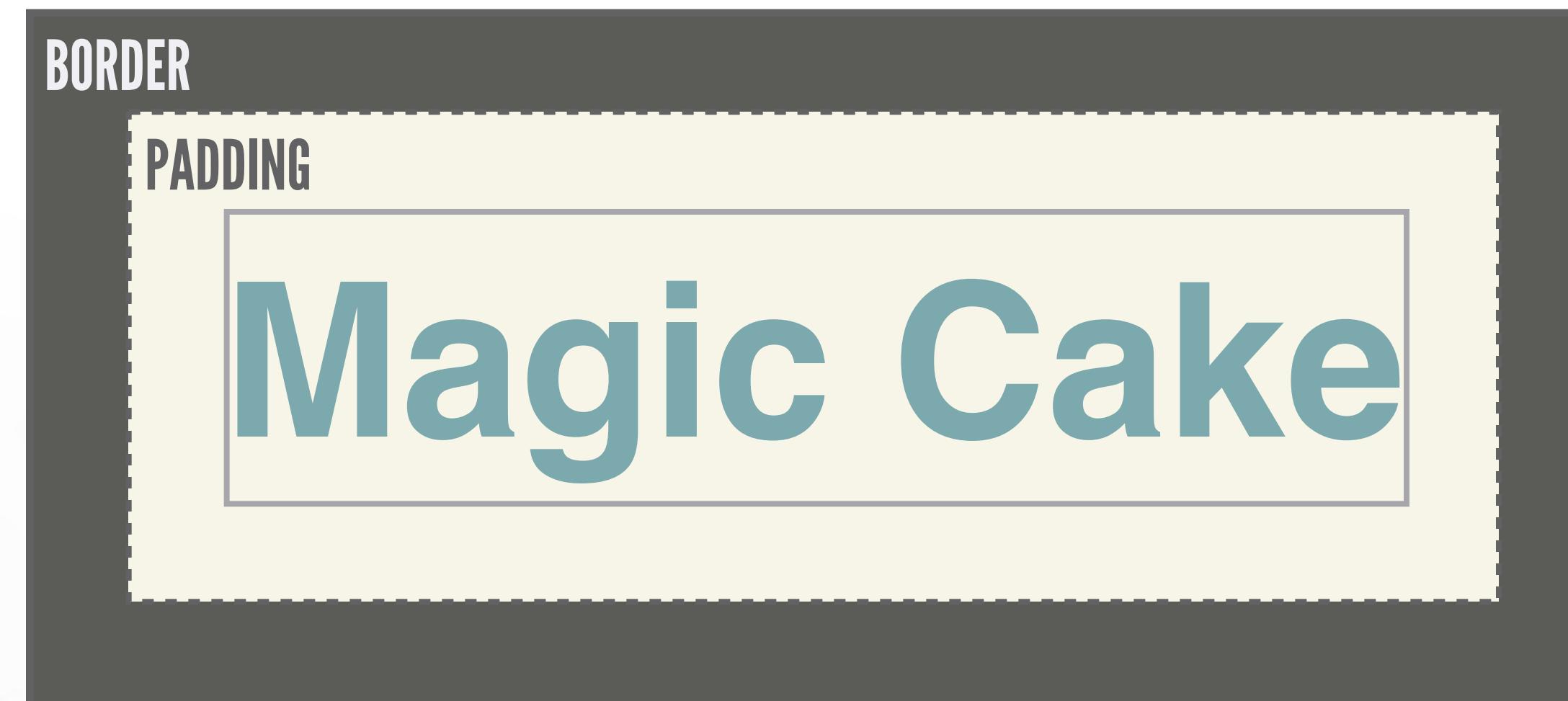


The Box Model

- There are 4 parts of the box model:

3. Border

Borders are added around the **top, right, bottom, or left** of the padding



The Box Model

- There are 4 parts of the box model:

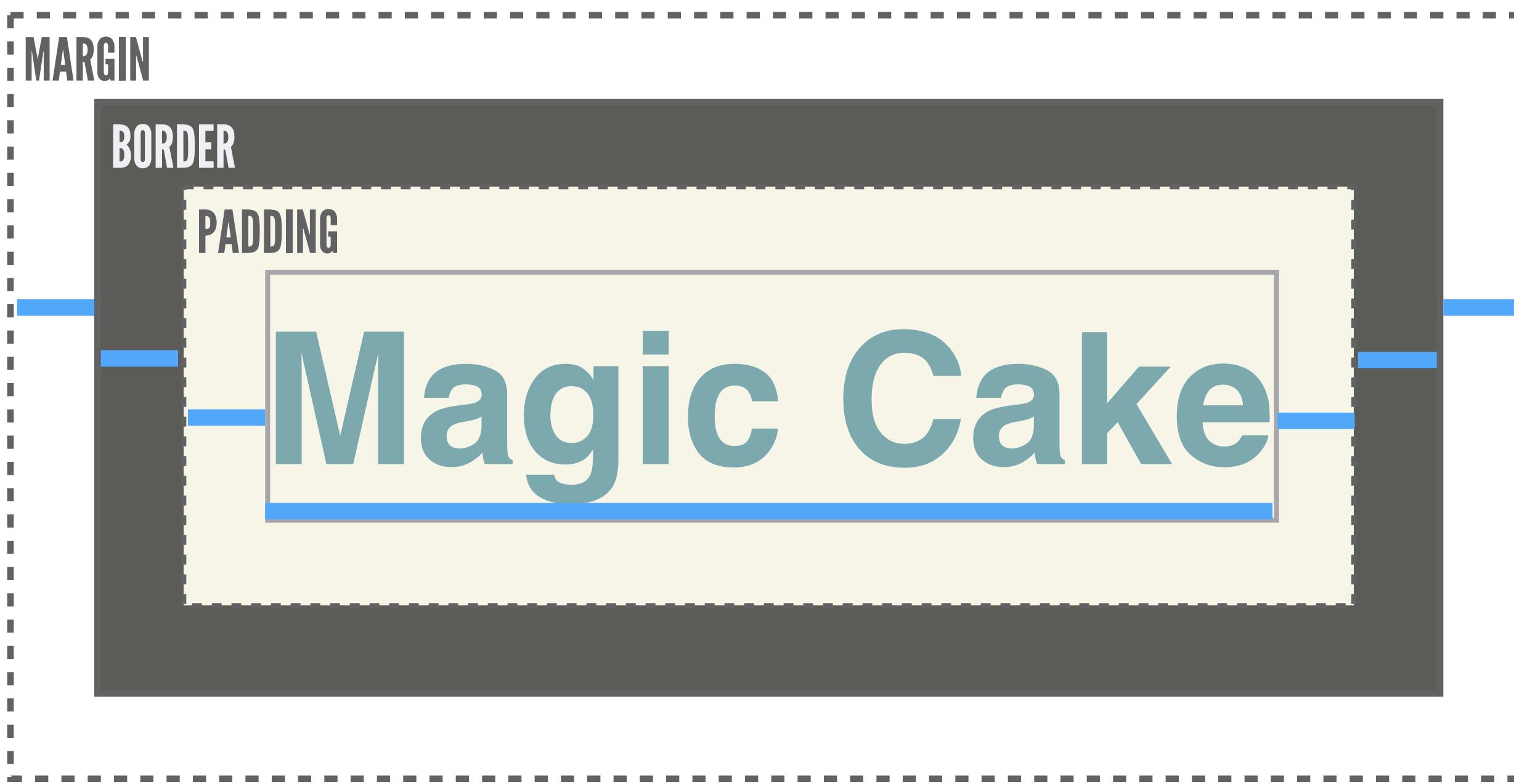
4. Margin

Margins are added to the **top**, **right**, **bottom**, or **left** of the border.



How to calculate the size of the box

The full size of a box after these four properties have been set can be calculated like this:



- + content area width
 - + padding-left + padding-right
 - + border-left + border-right
 - + margin-left + margin-right
- = the full box width

use top, bottom, and
height to calculate
full box height



Applying the box model properties

Apply padding to one side at a time...

CSS

```
h2 {  
  padding-top: 6px;  
  padding-right: 3px;  
  padding-bottom: 0;  
  padding-left: 0;  
}
```

If we want to put some space above and to the right of some text, one option is to adjust the padding.

PADDING

Magic Cake

...or all at once in a clockwise order

CSS

```
h2 {  
  padding: 6px 3px 0 0;  
}  
      top    right   bottom  left
```



Applying the box model properties

You can apply borders all at once and not specify a side.

CSS

```
h2 {  
    border-width: 6px;  
    border-style: solid;  
    border-color: black;  
}
```

BORDER

PADDING

Magic Cake

Creating borders has a shortcut version, too.

CSS

```
h2 {  
    border: 6px solid black;  
}
```

width

style

color



Applying the box model properties

You can also just pick one side and just add a border there.

CSS

```
h2 {  
    border-bottom: 6px solid black;  
}  
width style color
```

PADDING

Magic Cake

BORDER



Applying the box model properties

Add margins the same way you add padding...

CSS

```
h2 {  
    margin-top: 6px;  
    margin-right: 0;  
    margin-bottom: 6px;  
    margin-left: 0;  
}
```



...or use the same shortcut syntax as padding.

CSS

```
h2 {  
    margin: 6px 0 6px 0;  
}
```

top right bottom left



When should you use padding?

Padding is used to control the size of a box *without* adjusting the size of the content inside the box.

```
CSS  
h2 {  
  padding: 0 0 0 0;  
}
```

```
CSS  
h2 {  
  padding: 10px 0 10px 0;  
}
```

A screenshot of a web browser window. The title bar says "Home Recipes Suggest". Below it, there is a heading "Magic Cake" and some descriptive text: "Magic Cake is one of the tastiest cakes tell about it, and these are their stories.". The browser's address bar and other interface elements are visible at the top.

A screenshot of a web browser window, identical to the one above, but with padding applied to the heading. The heading "Magic Cake" now has a larger vertical space above and below it. The browser's address bar and other interface elements are visible at the top.



When should you use margin?

Margin is used to control the space between boxes.

CSS

```
h2 {  
    margin: 20px 0 20px 0;  
}
```

CSS

```
h2 {  
    margin: 4px 0 4px 0;  
}
```

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes tell about it, and these are their stories.

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes tell about it, and these are their stories.



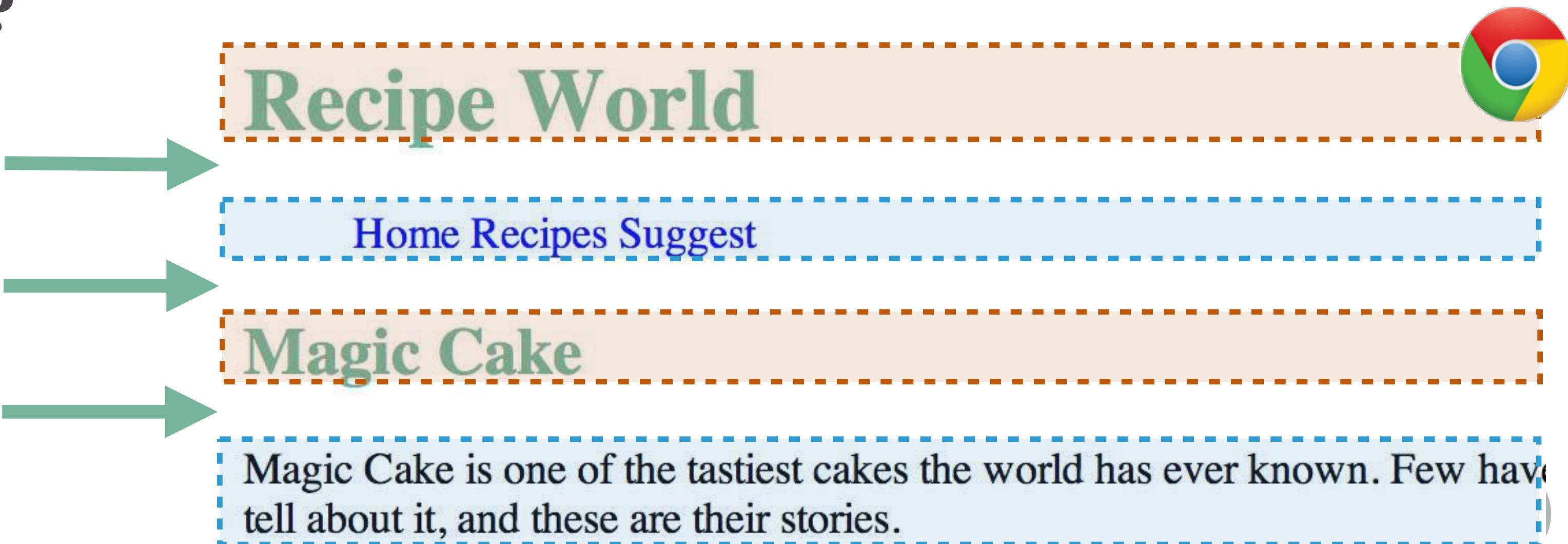
Summary of our new box model knowledge

What we now know:

- Each tag's content fits in an invisible box
- Each block-level tag's box takes up an entire line
- Padding can be used to adjust spacing within a container
- Margin can be used to adjust spacing between containers

Why is there spacing here?

We didn't set any margins or padding?!@!#?#



Default browser styles

Browsers actually have a default stylesheet for when no custom styles are set.

Default box styles left on

Recipe World

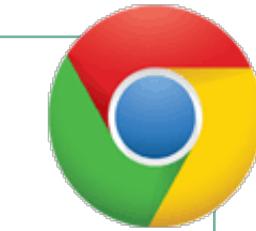
[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few of these are their stories.

We also need to stress that whatever happens to you as a result of consuming this cake, it's your own responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients



Default box styles turned off

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few of these are their stories.

We also need to stress that whatever happens to you as a result of consuming this cake, it's your own responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter

Directions

Mix eggs, sugar, and butter in a large bowl.

Spread into a non-stick dish

Bake at 350 degrees for 1 hour

Let sit at room temperature for 20 minutes

Eat and enjoy!



Resetting default browser styles

Add this to the very top of your CSS file to reset default styles.

include each tag that's in your
HTML for that page

CSS

```
html, body, h1, h2,  
h3, p, ol, ul, li, a {  
    padding: 0;  
    border: 0;  
    margin: 0;  
}
```

Now, all of the default box properties are reset, and we need to set the box model properties ourselves.

Default box styles turned off

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known about it, and these are their stories.

We also need to stress that whatever happens to you as a result is your responsibility. You've been warned, and you can view our [legal](#)

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter

Directions

Mix eggs, sugar, and butter in a large bowl.

Spread into a non-stick dish

Bake at 350 degrees for 1 hour

Let sit at room temperature for 20 minutes

Eat and enjoy!



A Box Model process - Start with the body

The order that you apply the box model properties is personal preference, but here's one approach:

Start from the highest parent element

This is often <body>

```
CSS  
body {  
    padding: 20px 20px 20px 20px;  
}
```

This padding has the effect of pushing all of the children away from the edges of the <body>.

this padding is applied to every side of the body



Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. It's a special cake that's been around for centuries. There are many stories about it, and these are their stories.

We also need to stress that whatever happens to you as a result of eating this cake, it's your responsibility. You've been warned, and you can view our [legal information](#).

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



A Box Model process - Next, look at headings

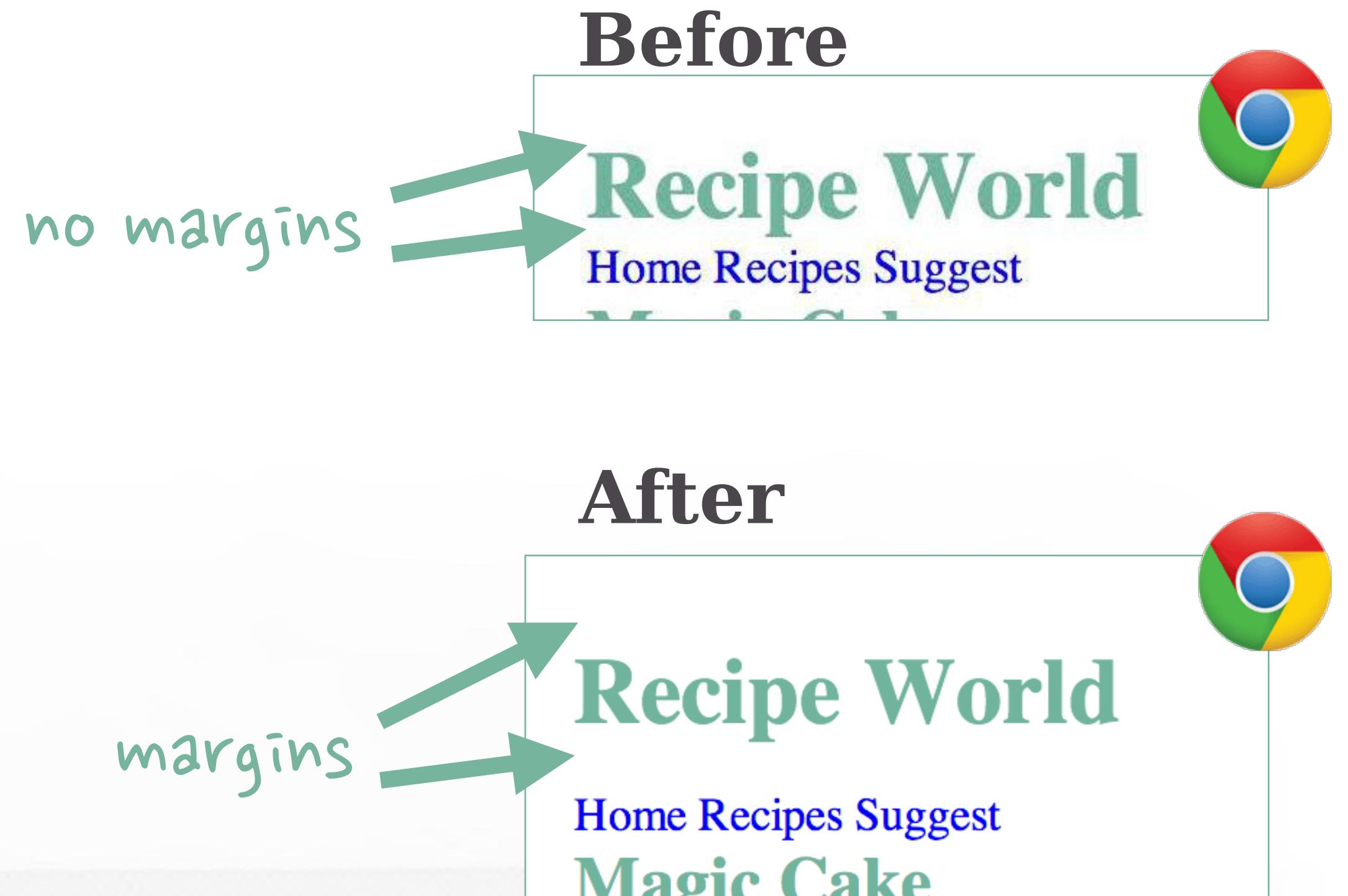
Next, focus on the heading tags

<h1>

CSS

```
h1 {  
    margin: 10px 0 15px 0;  
}
```

Use margin to put vertical space between tags.



A Box Model process - Next, look at headings

Next, focus on the heading tags

<h2>

CSS

```
h2 {  
    margin: 10px 0 20px 0;  
}
```

Before

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has to tell about it, and these are their stories.
We also need to stress that whatever happens to you

no margins

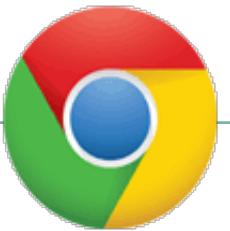
After

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has to tell about it, and these are their stories.

margins



A Box Model process - Next, look at headings

Next, focus on the heading tags

<h3>

CSS

```
h3 {  
  margin: 15px 0 15px 0;  
}
```

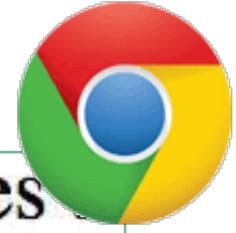
no margins

Before

Magic Cake is one of the tastiest cakes to tell about it, and these are their stories. We also need to stress that whatever happens, your responsibility. You've been warned, and here's some information.

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter



After

Magic Cake is one of the tastiest cakes to tell about it, and these are their stories. We also need to stress that whatever happens, your responsibility. You've been warned, and here's some information.



margins

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter



A Box Model process - borders

After your margins are in place, think about where borders might be necessary.

CSS

```
h3 {  
  margin: 15px 0 15px 0;  
  border-bottom: 1px solid #CCCCCC;  
}
```

this bottom border visually
separates the sections

We also need to stress that whatever happens, it's your responsibility. You've been warned, and you have information.

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter

Directions



A Box Model process - padding

Use padding to put more space between the content and border.

CSS

```
h3 {  
  margin: 15px 0 15px 0;  
  border-bottom: 1px solid #CCCCCC;  
  padding-bottom: 3px;  
}
```

Before



After



now we've got a little
more space between
the content and border

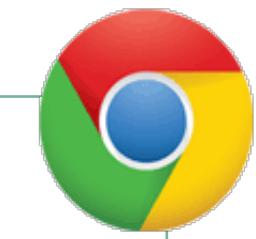


A Box Model process - padding

Padding is also used to adjust list and list item indentation.

Before

Ingredients



2 eggs 1 pound of sugar 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

After

Ingredients

→ 2 eggs 1 pound of sugar 3 sticks of butter

Directions

- 1. Mix eggs, sugar, and butter in a large bowl.
- 2. Spread into a non-stick dish
- 3. Bake at 350 degrees for 1 hour
- 4. Let sit at room temperature for 20 minutes
- 5. Eat and enjoy!



A Box Model process - padding

Padding is also used to adjust list and list item indentation.

After

Ingredients

- 2 eggs 1 pound of sugar 3 sticks of butter

Directions

- 1. Mix eggs, sugar, and butter in a large bowl.
- 2. Spread into a non-stick dish
- 3. Bake at 350 degrees for 1 hour
- 4. Let sit at room temperature for 20 minutes
- 5. Eat and enjoy!



CSS

```
ul {  
    padding: 0 0 0 50px;  
}  
  
ol {  
    padding: 0 0 0 50px;  
}
```

left padding



Result after adjusting box model properties

Here's where our page stands right now:



The screenshot shows a web browser window with a light gray background. In the top right corner, there is a circular icon representing a browser, divided into four quadrants with red, green, blue, and yellow colors. The main content area is a white box with a thin green border. At the top left of this box, the text "Recipe World" is displayed in a large, bold, dark green font. Below it, there is a horizontal menu bar with three items: "Home" (blue), "Recipes" (dark green), and "Suggest" (blue). Underneath the menu, the title "Magic Cake" is shown in a large, bold, dark green font. The text "Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and live" is displayed in black. Below this, the text "We also need to stress that whatever happens to you as a result of consuming Magic Cake is" is displayed in black. At the bottom of this text block, there is a link "view our legal page for more information." in blue. Below the main title, there is a section titled "Ingredients" in a dark green font. Under "Ingredients", the text "2 eggs 1 pound of sugar 3 sticks of butter" is listed in black. Below "Ingredients", there is a section titled "Directions" in a dark green font. Under "Directions", a numbered list of five steps is provided: 1. Mix eggs, sugar, and butter in a large bowl. 2. Spread into a non-stick dish 3. Bake at 350 degrees for 1 hour 4. Let sit at room temperature for 20 minutes 5. Eat and enjoy!





FRONT-END FOUNDATIONS



Fixing page style problems

PROBLEM

The **** padding is being applied to the navigation and ingredients.

We need a way to add padding to **one** **** but not the other.

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and live. We also need to stress that whatever happens to you as a result of consuming Magic Cake is view our [legal page](#) for more information.

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!



Using classes to differentiate between tags

Add a **class** attribute to an HTML tag so that you can access it directly in CSS...

HTML

```
<ul class="nav"><li>...</li></ul>
```

... then access this class in CSS by putting a period in front of the class name.

CSS

```
.nav {  
  padding-left: 0;  
}
```

padding-left is gone from the nav

padding-left remains on the ingredients

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever seen. We also need to stress that whatever happens to you as you view our [legal page](#) for more information.

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter



Using classes in descendant selectors

Classes can be used interchangeably with tags, so the way descendant selectors work doesn't change.

HTML

```
<ul class="nav">
  <li><a href="home.html">Home</a></li>
  <li><a href="recipes.html">Recipes</a></li>
  <li><a href="suggest.html">Suggest</a></li>
</ul>
```

CSS

```
.nav a {
  color: #0000af;
  text-decoration: none;
}
```

This selector says *find all **a** tags that are children of **any tag** with a **class of “nav”***, and set the color to blue and turn off the underline.



Using classes to differentiate between tags

Problem: We don't want the ingredients list to display inline

our current rule for list items

CSS

```
ul li {  
    display: inline;  
}
```

should be the default block-level, not inline

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever seen.
We also need to stress that whatever happens to you as you view our [legal page](#) for more information.

Ingredients

2 eggs 1 pound of sugar 3 sticks of butter



Using classes to differentiate between tags

Classes can be used interchangeably with tags, so the way descendant selectors work doesn't change.

CSS

```
ul li {  
    display: inline;  
}  
  
.nav li {  
    display: inline;  
}
```

displaying as a
block-level tag
again (the
default)

still →
displayed
inline

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever seen.
We also need to stress that whatever happens to you after you've eaten it, please view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions



Writing class and type selectors in the right order

When you're just using type selectors, the order doesn't really matter.

When you start combining them with class selectors - the order matters.

 CSS

```
.nav {  
  padding-left: 0;  
}  
  
ul {  
  padding: 0 0 0 50px;  
}
```

padding-left!!!



Padding for **.nav** before **ul** rule
padding-left: 0;

Padding for **.nav** after **ul** rule
padding-left: 50px;

This **ul** padding overrides the **.nav** padding because it comes after the **.nav** in the stylesheet.



Writing class and type selectors in the right order

Generally speaking, first declare the broadest rules with type selectors, and then get more specific with class selectors.

A dark grey rectangular box containing CSS code. In the top right corner is a blue button-like shape with the word "CSS" in white. In the top left corner is a green circle with a white checkmark. A green curved arrow points from the checkmark towards the "ul" selector. Inside the box, the CSS code is:

```
ul {           broader  
    padding: 0 0 0 50px;  
}  
  
.nav {         more specific  
    padding-left: 0;  
}
```

Padding for **.nav**
before **.nav** rule
padding-left: 50px;

Padding after **.nav** rule
padding-left: 0;

flip them so the
ul comes first,
and then the .nav

This way, the broader rules **cascade** down and become defaults,
and more specific rules can change the defaults.



Creating a page that lists all recipes

Our recipes.html page will have a list of links to individual recipe pages.

recipes.html

```
<html>
  <head>
  </head>
  <body>
    <h1>Recipe World</h1>
    <ul class="nav">
      <li><a href="home.html">Home</a></li>
      <li><a href="recipes.html">Recipes</a></li>
      <li><a href="suggest.html">Suggest</a></li>
    </ul>
    <h2>Recipes</h2>
  </body>
</html>
```

HTML

right now, this page just has
the main site navigation and an
h2 describing the page content



Creating the list of recipes

The list of recipes can be an unordered list where each list item contains a few other block-level tags and a link to the individual recipe page.

recipes.html

HTML

```
<h2>Recipes</h2>
<ul>
  <li>
    <h3><a href="magic-cake.html">Magic Cake</a></h3>
    <p>This is a dangerously delicious cake.</p>
  </li>
  <li>...</li> ← copy this general structure for each recipe
  <li>...</li>
  <li>...</li>
</ul>
```



The recipes page has a problem

Problem:

None of our styles are in recipes.html because we put our CSS in the **<head>** of magic-cake.html.

Solution:

We need to put our CSS in a separate file and link that file to each of our HTML pages.

Recipe World

- [Home](#)
- [Recipes](#)
- [Suggest](#)

Recipes

- **Magic Cake**

This is a dangerously delicious cake.

- **Tacosaurus Mex**

It's always taco night somewhere!

- **Florida Omelette**

Omelette you in on a little secret - this is one tasty egg.

- **Mystery-Wich**

It's a sandwich. That's all we can really say right now.



all of our CSS
rules are missing



Move the CSS into a single file

Here we've created a single file called main.css so we have one place to put all of our CSS.

magic-cake.html

```
<html>
  <head>
    <style type="text/css">
      a {
        color: red;
      }
      all other styles
    </style>
  </head>
  ...
</html>
```

HTML

main.css

CSS

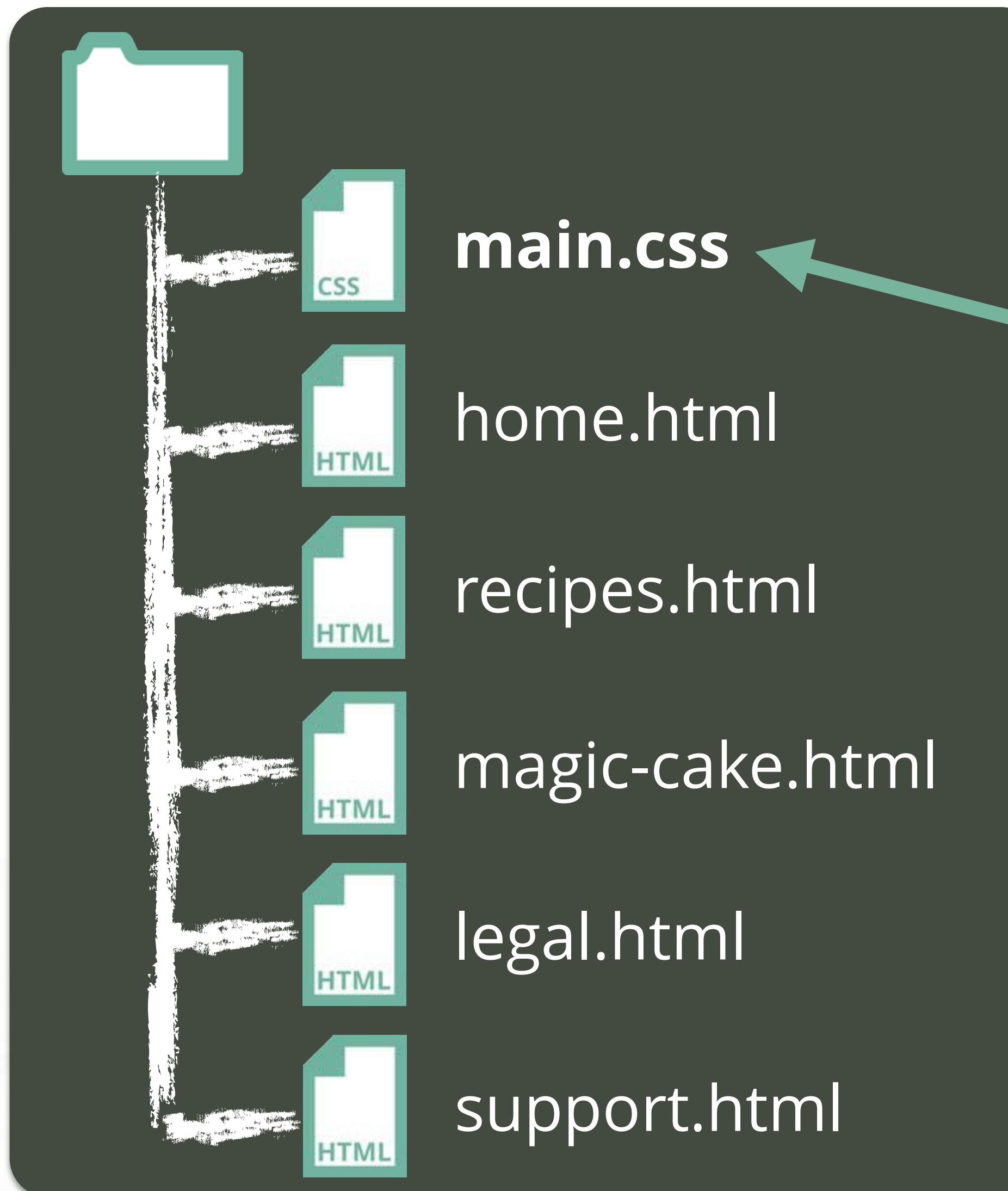


Move all of the selectors and rules into the CSS file, but **not** the HTML `<style>` tag.



Visualizing our site files

Recipe World server files



main.css will hold all of our CSS and be linked in the `<head>` of every page.

A screenshot of a code editor window titled "main.css". In the top right corner, there is a blue button labeled "CSS". The code inside the editor is:

```
a {  
  color: red;  
}  
all other styles
```



Where do you write CSS?

While CSS can be written inside of a `<style>` tag in an HTML file, most of the time it's written in a separate file and connected to the HTML file with a `link` tag.

recipes.html

```
<html>    HTML  
    <head>  
        <link>  
    </head>  
    <body>  
        ...  
    </body>  
</html>
```

The link tag should be a child of the head tag

The link tag is an **empty** tag,
meaning it is written with only an
opening tag and has no closing tag.



Where do you write CSS?

Since the tag is empty, the way you use it is by setting different **attributes**.

recipes.html

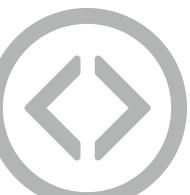
```
<html>
  <head>
    <link type="text/css">
  </head>
  <body>
    ...
  </body>
</html>
```

HTML



this is called a **MIME type**

The **type** attribute set to **text/css** lets the browser know we're going to be loading a CSS file.



Where do you write CSS?

Since the tag is empty, the way you use it is by setting different **attributes**.

recipes.html

```
<html>
  <head>
    <link type="text/css" rel="stylesheet">
  </head>
  <body>
    ...
  </body>
</html>
```

HTML

The **rel** attribute is short for **relationship**.

Setting **rel** to **stylesheet** tells the HTML that it should use the linked file to determine page styles.



Where do you write CSS?

Since the tag is empty, the way you use it is by setting different **attributes**.

recipes.html

```
<html>
  <head>
    <link type="text/css" rel="stylesheet" href="main.css">
  </head>
  <body>
    ...
  </body>
</html>
```

HTML



this is a relative path, so we know here that main.css should be in the same folder as our HTML files

The **href** attribute works just like it does with the **<a>** tag.



Before-and-after linking the CSS file

Now recipes.html is using the general styles we've already created

Before linking main.css

Recipe World

- Home
- Recipes
- Suggest

Recipes

- **Magic Cake**

This is a dangerously delicious cake.

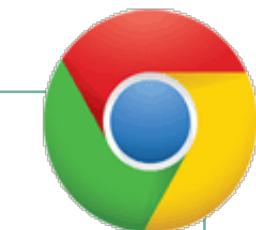
- **Tacosaurus Mex**

It's always taco night somewhere!

- **Florida Omelette**

Omelette you in on a little secret - this is one tasty egg.

- **Mystery-Wich**



After linking main.css

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Recipes

- **Magic Cake**

This is a dangerously delicious cake.

- **Tacosaurus Mex**

It's always taco night somewhere!

- **Florida Omelette**

Omelette you in on a little secret - this is one tasty egg.

- **Mystery-Wich**



Dealing with similar styles on multiple pages

Often using the exact same styles on all pages doesn't look right

recipes.html

HTML

```
<h2>Recipes</h2>
<ul>
  <li>
    <h3><a href="magic-cake...>
      <p>This is a dangerously...
    </li>
    <li>...</li>
    <li>...</li>
    <li>...</li>
  </ul>
```

Recipe World

Home Recipes Suggest

Recipes

- **Magic Cake**

This is a dangerously delicious cake.

- **Tacosaurus Mex**

It's always taco night somewhere!

- **Florida Omelette**

Omelette you in on a little secret - this is one tasty egg.

- **Mystery-Wich**

It's a sandwich. That's all we can really say right now.

The **ul**, **ul li**, **h3**, and **p** styles are cascading down from our broader selectors.



A proposal for changing the recipes page styles

no list-style-type
for the

border around the

left padding between
the li border and
content area

Recipes

- [**Magic Cake**](#)
This is a dangerously delicious cake.
- [**Tacosaurus Mex**](#)
It's always taco night somewhere!
- [**Florida Omelette**](#)
Omelette you in on a little secret - this is one tasty egg.
- [**Mystery-wich**](#)
It's a sandwich. That's all we can really say.

no border under the h3

our green heading color
used for the <a> tag



Dealing with similar styles on multiple pages

First, we'll give the recipes.html a unique class.

recipes.html

HTML

```
<h2>Recipes</h2>
<ul class="recipes">
  <li>
    <h3><a href="magic-cake.html">Magic Cake</a></h3>
    <p>This is a dangerously delicious cake.</p>
  </li>
  <li>...</li>
  <li>...</li>
  <li>...</li>
</ul>
```



Dealing with similar styles on multiple pages

Then, write some more specific CSS for `.recipes` and any children.

existing ul styles

CSS

```
ul {  
    padding: 0 0 0 50px;  
}
```

remember, `.recipes` is a specific ``

CSS

```
.recipes {  
    list-style-type: none;  
    padding: 0;  
}  
  
            ←  
            resets all sides to 0
```

Recipes

Magic Cake

This is a dangerously delicious cake.

Tacosaurus Mex

It's always taco night somewhere!

Florida Omelette

Omelette you in on a little secret - this is one tasty egg.

Mystery-Wich

It's a sandwich. That's all we can really say right now.



Dealing with similar styles on multiple pages

Then, write some more specific CSS for `.recipes` and any children.

existing `ul li` styles

CSS

```
ul li {  
}  
}
```

the `.recipes `'s will inherit the margins
and add a new border and padding-left

CSS

```
.recipes li {  
    border: 1px solid #b56663;  
    padding-left: 15px;  
}
```

Recipes

Magic Cake

This is a dangerously delicious cake.

Tacosaurus Mex

It's always taco night somewhere!

Florida Omelette

Omelette you in on a little secret - this is one tasty egg.

Mystery-Wich

It's a sandwich. That's all we can really say right now.



Dealing with similar styles on multiple pages

Then, write some more specific CSS for `.recipes` and any children.

existing h3 styles

```
h3 {  
    margin: 15px 0 15px 0;  
    border-bottom: 1px solid #cccccc;  
    padding-bottom: 3px;  
}
```

CSS

the `.recipes h3` will inherit all of the h3 properties, but remove the bottom border

```
.recipes h3 {  
    border-bottom: 0;  
}
```

CSS

Recipes

Magic Cake

This is a dangerously delicious cake.

Tacosaurus Mex

It's always taco night somewhere!

Florida Omelette

Omelette you in on a little secret - this is one tasty egg.

Mystery-Wich

It's a sandwich. That's all we can really say right now.



Dealing with similar styles on multiple pages

Then, write some more specific CSS for `.recipes` and any children.

We don't currently have a general CSS rule for `a`, so we can just add our specific version.

CSS

```
.recipes a {  
    color: #7facaa;  
    text-decoration: none;  
}
```

Recipes

Magic Cake

This is a dangerously delicious cake.

Tacosaurus Mex

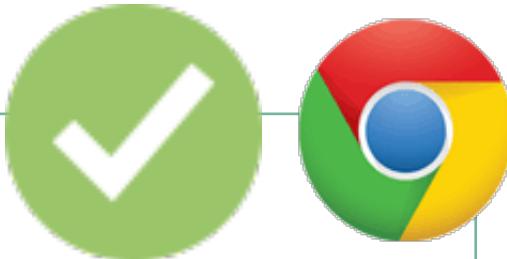
It's always taco night somewhere!

Florida Omelette

Omelette you in on a little secret - this is one tasty egg.

Mystery-Wich

It's a sandwich. That's all we can really say right now.





FRONT-END FOUNDATIONS



Organizing the page layout

In our current layout, we've got a clear separation between the header and main content.



header

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever seen. We also need to stress that whatever happens to you as a result of this recipe, please don't blame us. Instead, view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a 9x13 inch baking dish.

main

content



The div tag

div is short for **division**, and it's a block-level tag that's a generic way to group related content into sections on a page.

HTML

```
<body>
  <div>    header
    <h1>Recipe World</h1>
    <ul class="nav">...
  </div>
  <div>    main content
    <h2>Magic Cake</h2>
    ...
  </div>
</body>
```



Use classes to describe what divs contain

A common way to differentiate between <div> tags is to add a class.

HTML

```
<body>
  <div class="header">
    <h1>Recipe World</h1>
    <ul class="nav">...
  </div>
  <div class="main-content">
    <h2>Magic Cake</h2>
    ...
  </div>
</body>
```

let's build this style

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and live. We also need to stress that whatever happens to you as a result of consuming Magic Cake i view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.



Classes will let us style each <div> differently



Use classes to describe what divs contain

A common way to differentiate between <div> tags is to add a class.

let the divs handle padding
now and not the body

HTML

```
<body>
  <div class="header">
    <h1>Recipe World</h1>
    <ul class="nav">...
  </div>
  <div class="main-content">
    <h2>Magic Cake</h2>
    ...
  </div>
</body>
```

CSS

```
body {
  padding: 0 0 0 0;
}
.header {
  padding: 10px 10px 10px 10px;
}
.main-content {
  padding: 20px 20px 20px 20px;
  border: 1px solid #dddddd;
  margin: 30px 0 0 0;
}
```

Giving the header a separate style

Let's make our header styles look different so we can easily see that the **header** is different from the **main-content**.

CSS

```
.header {  
    padding: 10px 10px 10px 10px;  
    background-color: #b56663;  
}  
.header a {  
    color: #ffffff;  
}  
h1 {  
    color: #ffffff;  
}
```

Recipe World

[Home](#) [Recipes](#) [Suggest](#)

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and live to tell the tale. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your own fault. Please view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.



Adjusting the size of divs

The width and height of any tag's content area can be changed in CSS.

So far, we've just wanted our tags to take up 100% of the available width, but let's make our **main-content** div a fixed size.

CSS

```
.main-content {  
    width: 500px;  
    padding: 20px;  
    border: 1px solid #dddddd;  
    margin: 30px 0 0 0;  
}
```

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish



only 500px wide now!



Centering content

There's two main ways to center things, but the CSS you write depends on what you're centering.

If: you want to center an entire block-level tag

And: it is fixed-width

Then: set the left and right margins to auto

```
CSS  
.main-content {  
    width: 500px;  
    padding: 20px;  
    border: 1px solid #dddddd;  
    margin: 30px auto 0 auto;  
}
```

The screenshot shows a web browser window with a red header bar containing the text "Recipe World", "Home", "Recipes", and "Suggest". Below the header is a white content area. In the top right corner of the content area, there is a green arrow pointing down towards the text "Magic Cake". To the right of the arrow, the word "centered!" is written in green. The content area contains a section titled "Magic Cake" with a paragraph of text and a bulleted list of ingredients. Below that is a section titled "Directions" with a numbered list of steps. The background of the content area features a faint image of a bridge.

centered!

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

Centering with margin auto

CSS

```
margin: 30px auto 0 auto;
```

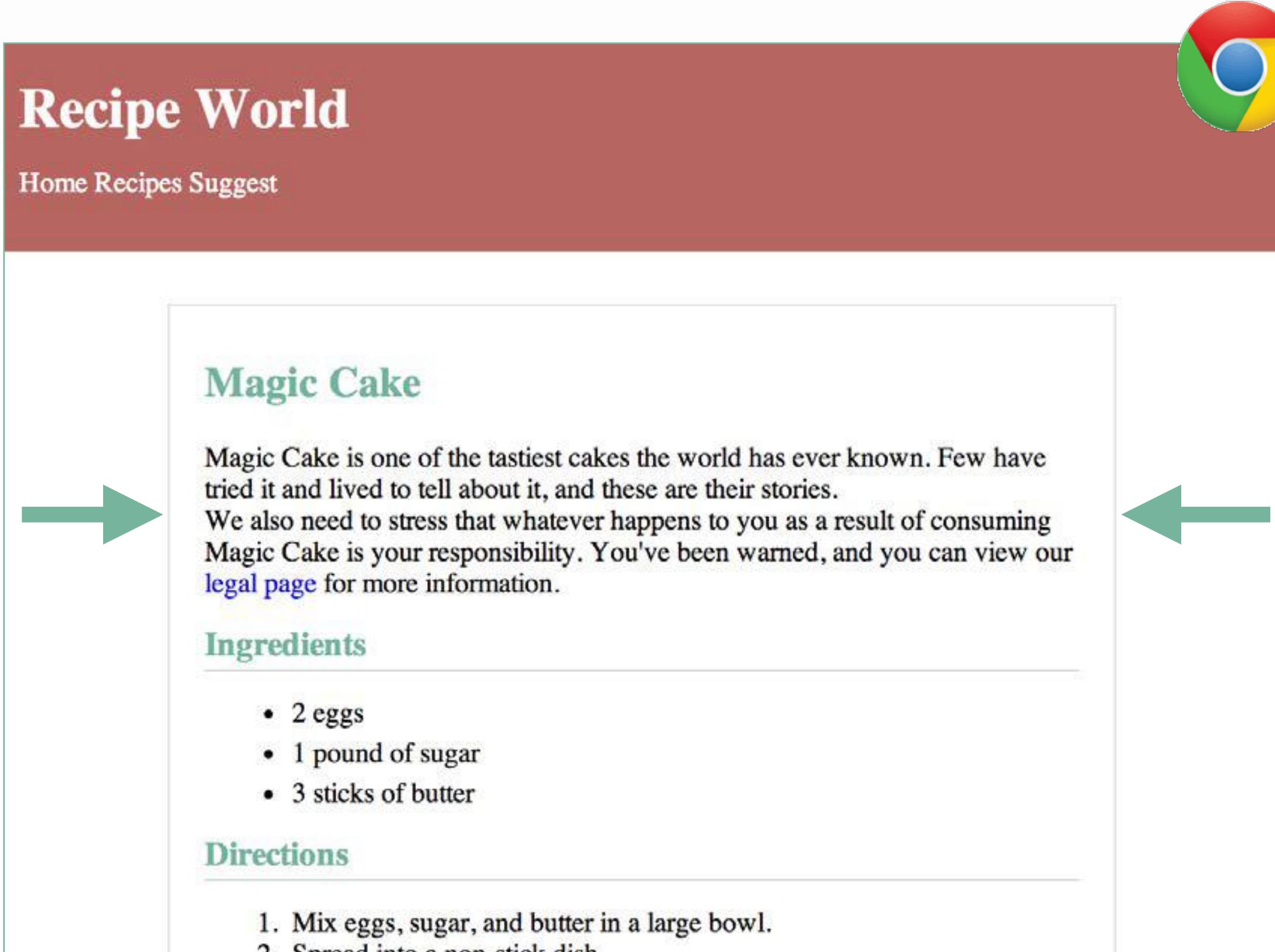


right



left

auto here means *take as much space as you can.*



The screenshot shows a web browser window with a red header bar containing the text "Recipe World", "Home", "Recipes", and "Suggest". In the top right corner of the header is the Google Chrome logo. Below the header is a white content area. On the left side of this area, there is a green arrow pointing right. In the center, the title "Magic Cake" is displayed in green. Below the title is a paragraph of text. To the right of the text, there is a green arrow pointing left. At the bottom of the content area, there are two sections: "Ingredients" and "Directions", each with a horizontal line underneath it. The "Ingredients" section contains a bulleted list: "• 2 eggs", "• 1 pound of sugar", and "• 3 sticks of butter". The "Directions" section contains two numbered steps: "1. Mix eggs, sugar, and butter in a large bowl." and "2. Spread into a non-stick dish."



Centering content

There's two main ways to center things, but the CSS you write depends on what you're centering.

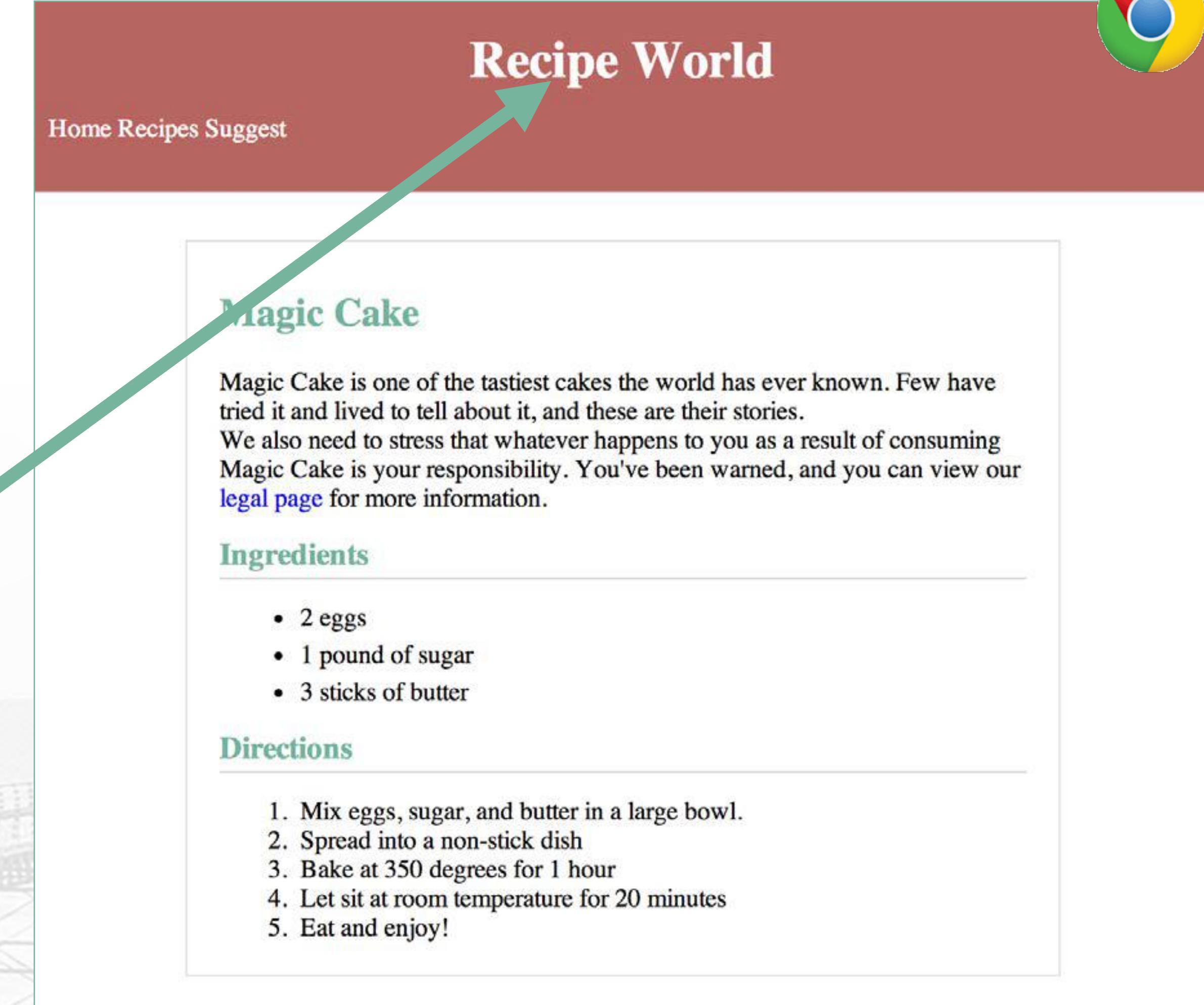
If: you want to center children
inside a block-level tag

Then: set the **text-align** of the
children to **center**

```
h1 {  
    color: #ffffff;  
    margin: 0 0 15px 0;  
    text-align: center;  
}
```

CSS

centered!



Home Recipes Suggest

Recipe World

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

Centering content

There's two main ways to center things, but the CSS you write depends on what you're centering.

CSS

```
.nav {  
padding-left: 0;  
margin: 5px 0 20px 0;  
text-align: center; }  
  
h2 {  
margin: 10px 0 20px 0;  
text-align: center; }
```

centered!

Recipe World

Home Recipes Suggest



Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound of sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

A note about fixed widths

If you've been reading about or making websites, you might be wondering why we're using fixed widths instead of relative widths.

Fixed widths are great for learning how page layout works, and after this course, you can continue on to our **Journey Into Mobile** course where you'll learn how to convert your fixed widths to relative ones!





FRONT-END FOUNDATIONS



LEVEL 4 IMAGES



The three types of webpage images

Most images on webpages fall into one of these three categories

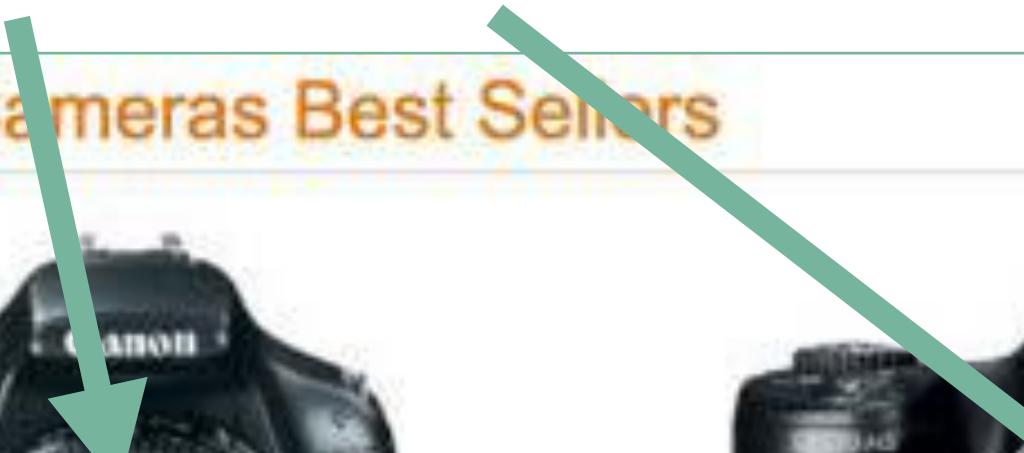
- Content Images
- Layout Images
- User Interface Images



Content images

Content images are any images that are just as necessary to the page as all of the text.

Digital Cameras Best Sellers



Canon EOS Rebel T3 12.2 MP CMOS...
★★★★☆ (758)
\$449.00 \$299.00

Canon PowerShot SX510 HS 12.1 MP CMOS...
★★★★☆ (319)
\$249.00 \$199.00

▶ [See all best sellers in Digital Cameras](#)



Layout images

These are in the background, and are not necessary to understand the content of the page.



User Interface images

These assist with the interface of the webpage, but are not required to understand the content of the page.



Creating content images

Content images are created in HTML with the **** tag.

```
<img>
```



 is an **empty tag**.

```
<img></img>
```



remember, that means it just
has an opening tag (no closing)



Creating content images

Content images are created in HTML with the `` tag.

`magic-cake.html`

HTML

```

```

relative path

Recipe World server files



main site folder

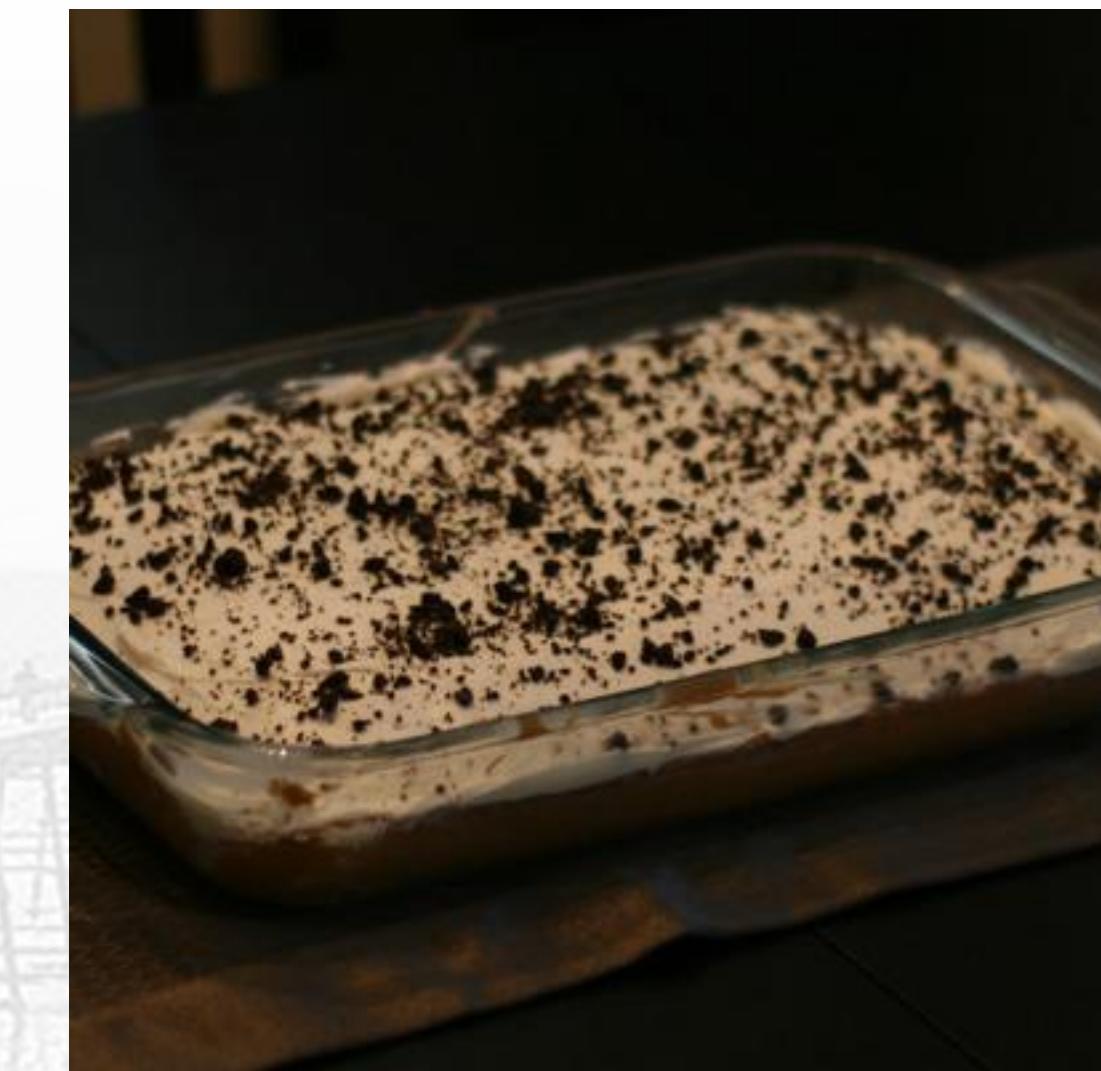


magic-cake.html



cake.png

Instead of open/close tags, add an **src attribute** to set which image is used.



Putting images in their own folder

It makes sense to organize your images so they aren't in the main site folder.

magic-cake.html

HTML

```

```

Recipe World server files



main site folder



magic-cake.html

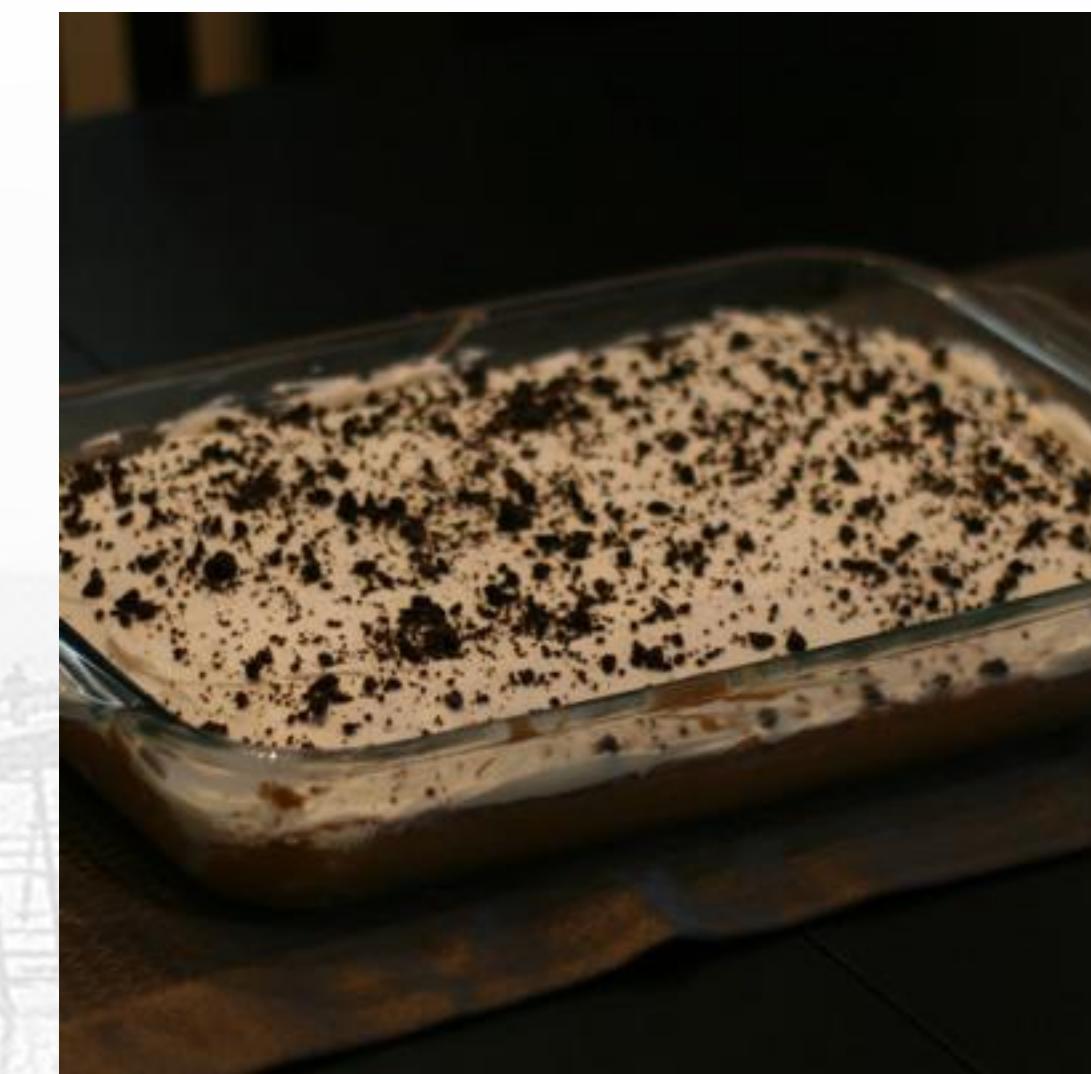


images



cake.png

now all of your
images can go in
the images folder



How images are loaded

Recipe World server files



Browser requests magic-cake.html

The magic-cake HTML is loaded in the browser

```

```

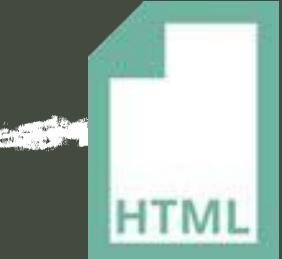
Browser finds this html

Browser requests images/cake.png

cake.png contents are returned and displayed



main site folder



magic-cake.html



images



cake.png



Adding alt attributes to content images

The alt attribute should contain text that describes the image or the purpose of the image.

magic-cake.html

HTML

```

```

Why?? Accessibility

Not everyone who views your page will be able to view the images.

Screen readers rely on alt tags to describe images to visitors that might not be able to view images.



Laying out content images

`` is an inline-level tag, but they are often put inside block-level tags.

This is similar to `<a>` tags, which almost always appear as children of block-level tags.

`magic-cake.html`

HTML

```
<h3>Your Photos</h3>
<ul class="photos">
  <li></li>
  <li></li>
  <li></li>
</ul>
```

`` is a block-level tag



Laying out content images

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

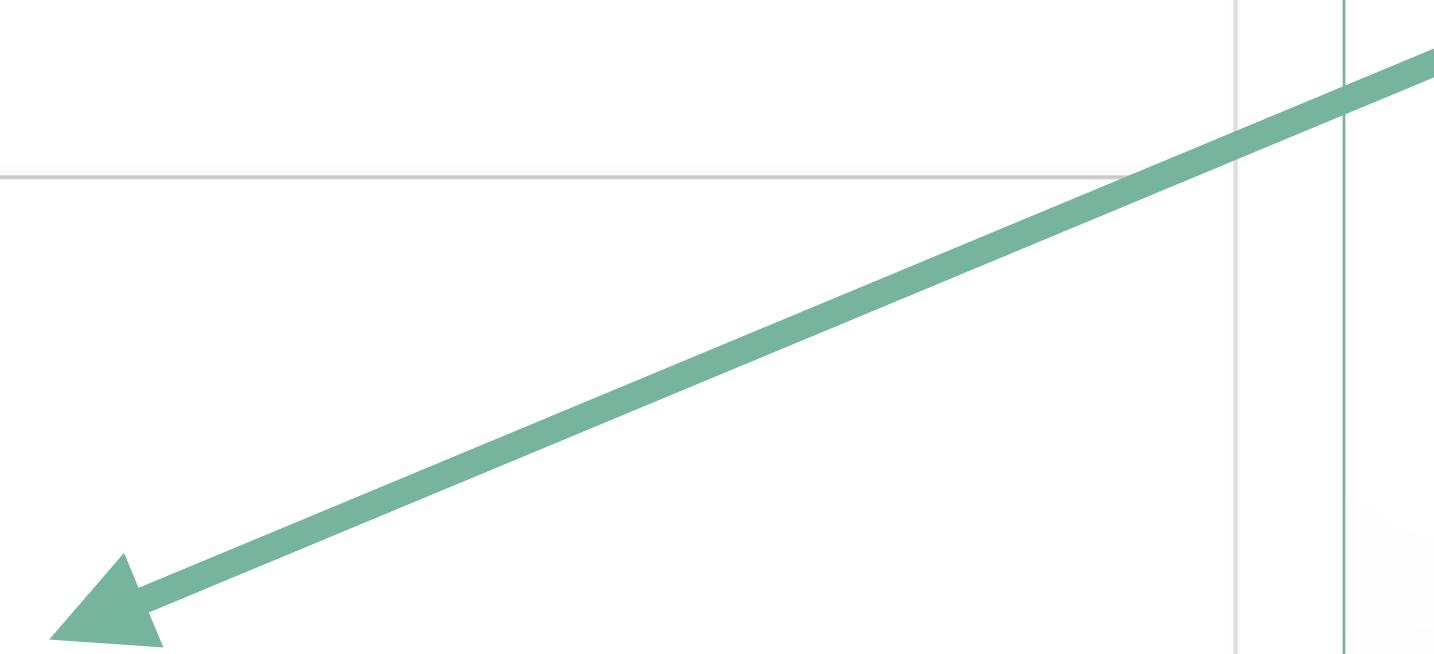
Your Photos



-



-



Problem

We want these photos to display side-by-side, like this

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

Your Photos



Laying out content images

magic-cake.html

HTML

```
<h3>Your Photos</h3>
<ul class="photos">
  <li><img...>
</ul>
```



CSS

```
.photos {
  list-style-type: none;
  padding: 0;
}
.photos li {
  display: inline;
  padding-left: 11px;
}
```

remove bullets
and padding

make the images show
horizontally with a
little space in between

Directions

1. Mix eggs, sugar, and butter in a large bowl.
2. Spread into a non-stick dish
3. Bake at 350 degrees for 1 hour
4. Let sit at room temperature for 20 minutes
5. Eat and enjoy!

Your Photos



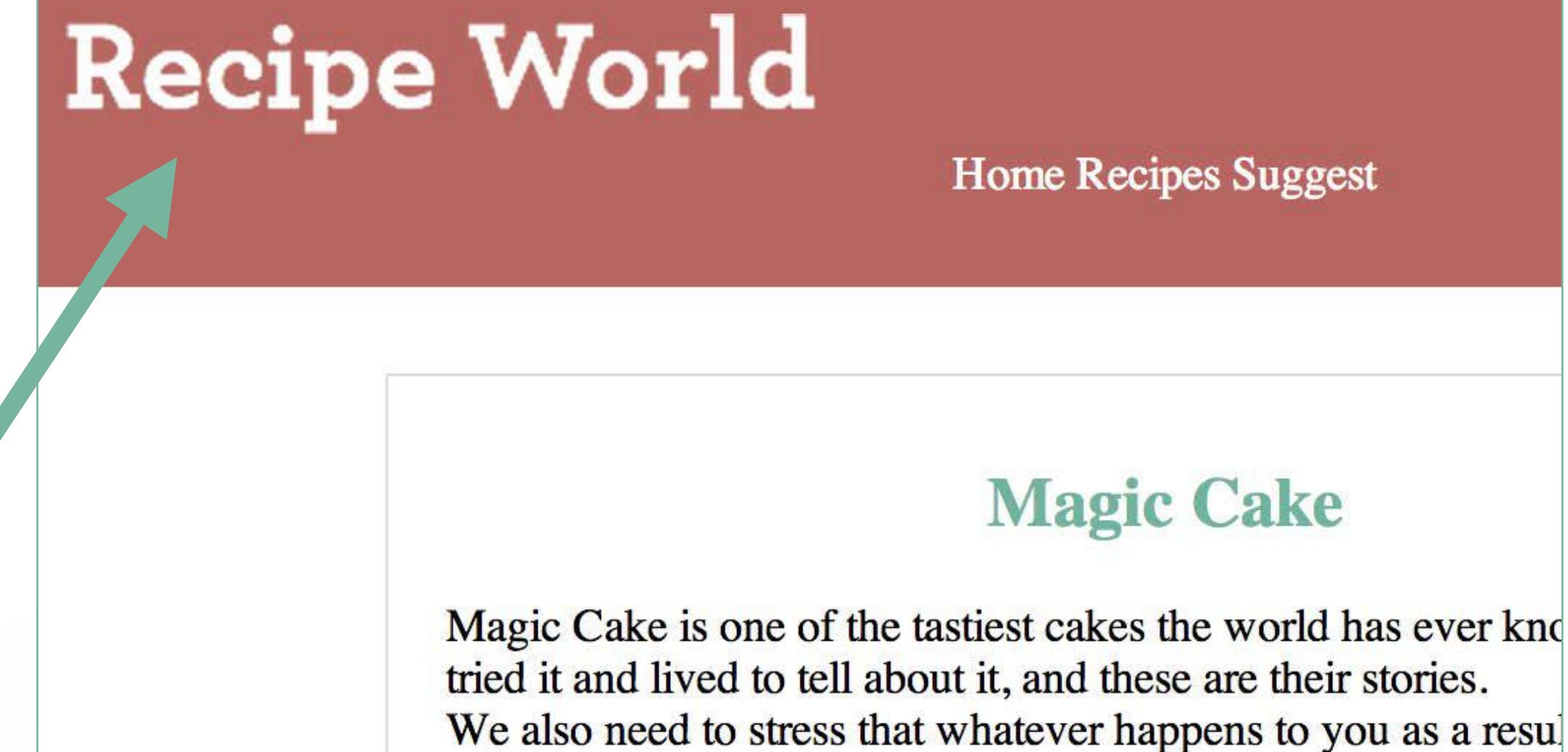
Using an image as a site/logo mark

We can replace the `<h1>` with an `` tag.

`magic-cake.html`

```
<div class="header">
  <h1>Recipe World</h1>
  <ul class="nav">...
```

HTML



```
<div class="header">
  
  <ul class="nav">...
```

HTML

Centering an image inside a block-level tag

 is an inline-level tag so it can't be centered with text-align.

Instead, set just that image to **display: block** and center it with the **margin: auto** approach.

magic-cake.html

```
<div class="header">
  
  <ul class="nav">...
```

HTML

```
.header img {
  display: block;
  margin: 0 auto 0 auto;
}
```

CSS

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have





FRONT-END FOUNDATIONS



Creating layout images

Layout images are created in CSS with the **background** property.

The image shows a website layout. At the top is a red header bar containing the title "Recipe World" in large white font, and "Home Recipes Suggest" in smaller white font below it. The main content area has a white background with a faint watermark of a kitchen scene. The title "Magic Cake" is centered in large green font. Below it is a paragraph of text: "Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information." Underneath this is a section titled "Ingredients" in green font, with a horizontal line underneath. A bulleted list follows: • 2 eggs • 1 pound of sugar • 3 sticks of butter. In the bottom right corner of the slide, there is a small circular icon with a double-headed arrow symbol.

Understanding the background property

There's several different properties that relate to background images.

background-color works just like the color property.

CSS

```
body {  
    background-color: #5f5f5f;  
}
```

TIP

You should always set a background color in case the background image fails to load.

Recipe World

Home Recipes Suggest

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs

Understanding the background property

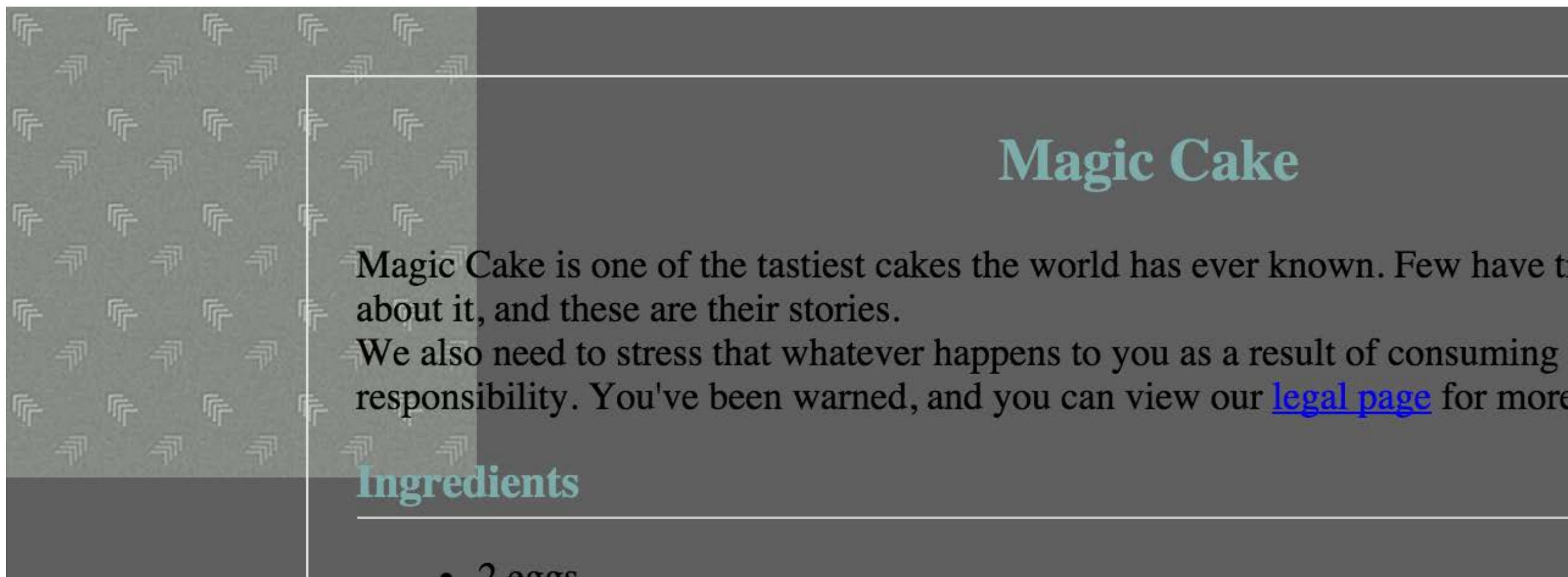
background-image can point to a relative or absolute path.

CSS

```
body {  
    background-color: #5f5f5f;  
    background-image: url( images/gobbler.png );  
}
```

the path has to be inside this url() code

notice that quotes
don't need to be
around the path



Check out subtlepatterns.com
for this and other patterns!



Understanding the background property

background-position can be used to position the image in a container.

CSS

```
body {  
    background-color: #5f5f5f;  
    background-image: url(images/gobbler.png);  
    background-position: top left;  
}
```



the first word can
be **top**, **center**, or
bottom

the second word
can be **left**, **center**,
or **right**



Understanding the background property

background-position can be used to position the image in a container.

CSS

```
body {  
    background-color: #5f5f5f;  
    background-image: url(images/gobbler.png);  
    background-position: center right;  
}
```

this shows the image vertically
centered and pushed to the right

Magic Cake

iest cakes the world has ever known. Few have tried it and lived to tell stories.
whatever happens to you as a result of consuming Magic Cake is your own business, and you can view our [legal page](#) for more information.

butter in a large bowl
sk dish
for 1 hour



Understanding the background property

background-repeat can be used to repeat tiled images.

CSS

```
body {  
    background-color: #5f5f5f;  
    background-image: url(images/gobbler.png);  
    background-position: top left;  
    background-repeat: repeat;  
}
```

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories. We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound sugar



Understanding the background property

background-repeat can be used to repeat tiled images.

CSS

```
body {  
    background-color: #5f5f5f;  
    background-image: url(images/gobbler.png);  
    background-position: top left;  
    background-repeat: repeat-y;  
}
```

Other values

- | | |
|-----------|-------------------------------|
| repeat-x | tile the image horizontally |
| repeat-y | tile the image vertically |
| no-repeat | don't tile or repeat anything |



Understanding the background property

All four of those can be shortened into a single **background** property.

```
body {  
    background-color: #5f5f5f;  
    background-image: url(images/gobbler.png);  
    background-position: top left;  
    background-repeat: repeat;  
}
```

CSS

```
body {  
    background: #5f5f5f url(images/gobbler.png) top left repeat;  
}
```

CSS

color

image

position

repeat



Creating different tiled backgrounds

We can set different backgrounds for different containers.

Here, we're using one repeated background for the body, another for the main-content, and another for the divs on the recipes page.

CSS

```
body {  
  background: #000000 url(images/stardust.png) top left repeat;  
}  
.main-content {  
  background: #ffffff url(images/crossword.png) top left repeat;  
}  
.recipes li {  
  background: #ffffff url(images/li-bg.png) top left repeat;  
}
```

Result of using three different layered backgrounds

The screenshot illustrates a website layout with three distinct background layers:

- body background**: The top layer is a solid reddish-brown color.
- .main-content background**: The middle layer is a dark gray color.
- .recipes li background**: The bottom layer is a white background with a light gray diagonal hatching pattern.

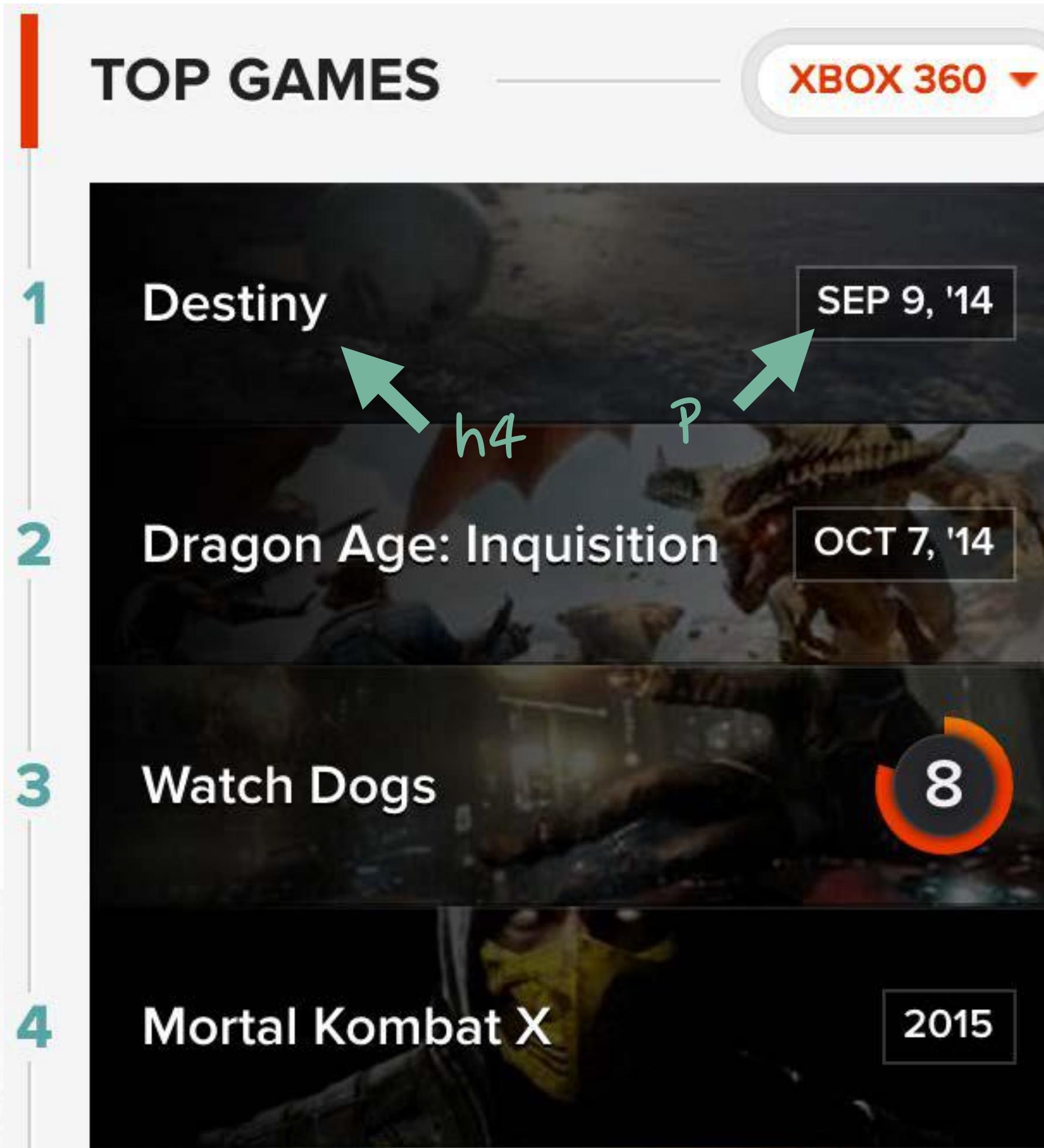
The website title "Recipe World" is centered at the top in large white font. Below it are three navigation links: "Home", "Recipes", and "Suggest". The main content area is titled "Recipes" in large green font. Three recipe cards are listed:

- Magic Cake**: Description: "This is a dangerously delicious cake."
- Tacosaurus Mex**: Description: "It's always taco night somewhere!"
- Florida Omelette**: Description: "Omelette you in on a little secret - this is one tasty egg."

Green arrows point from the labels to their respective background layers. A small circular icon with a double arrow is located in the bottom right corner.

Writing on top of background images

Some sites like to write text over images.



This list on gamespot.com has text for the game name and release date appearing over a background image from each game.



Writing on top of background images

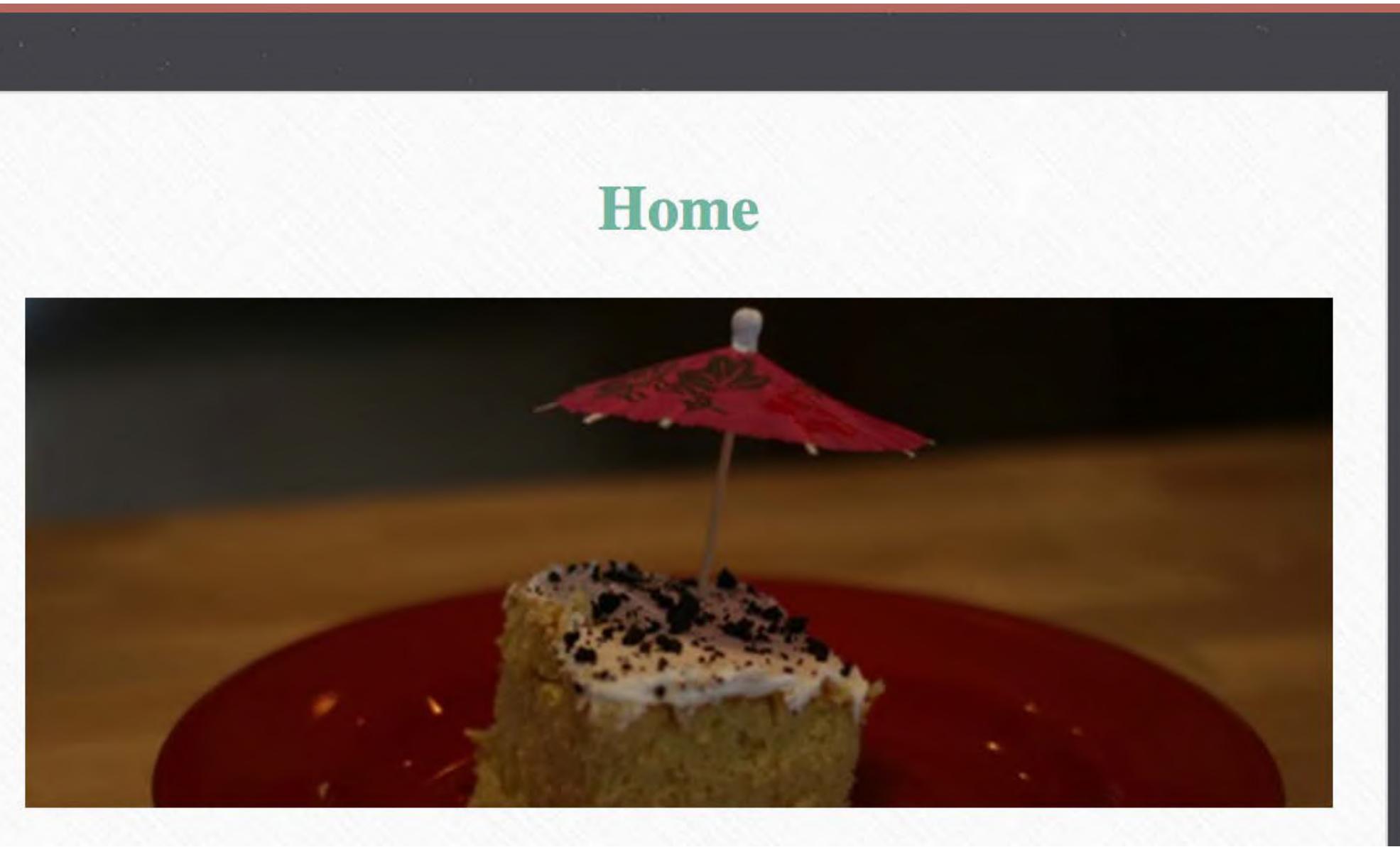
Some sites like to write text over images.

One way to do this is to create an empty **div** container that completely contains a background image, and put text tags inside of it.

home.html

HTML

```
<div class="main-content">
  <h2>Home</h2>
  <div class="featured-image">
  </div>
</div>
```

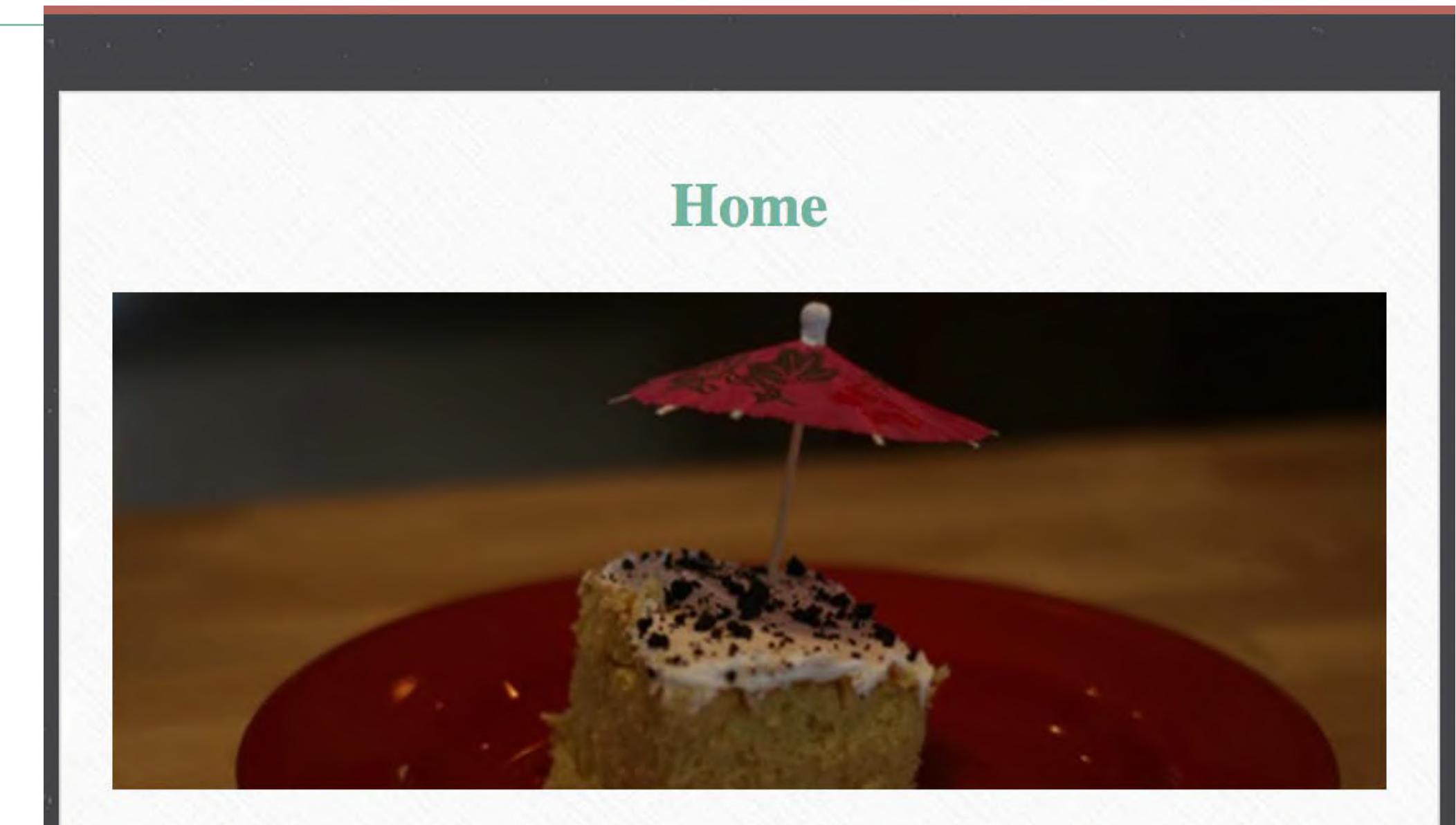


First, add the background image to the container

home.html

```
<div class="main-content">
  <h2>Home</h2>
  <div class="featured-image">
  </div>
</div>
```

HTML



```
.featured-image {
  width: 630px;
  height: 246px;
  background: #ffffff url(images/featured-cake.png)
              top left no-repeat;
}
```

CSS

these should be equal to the
width/height of the image



Then, add a tag that shows text as a child of that container

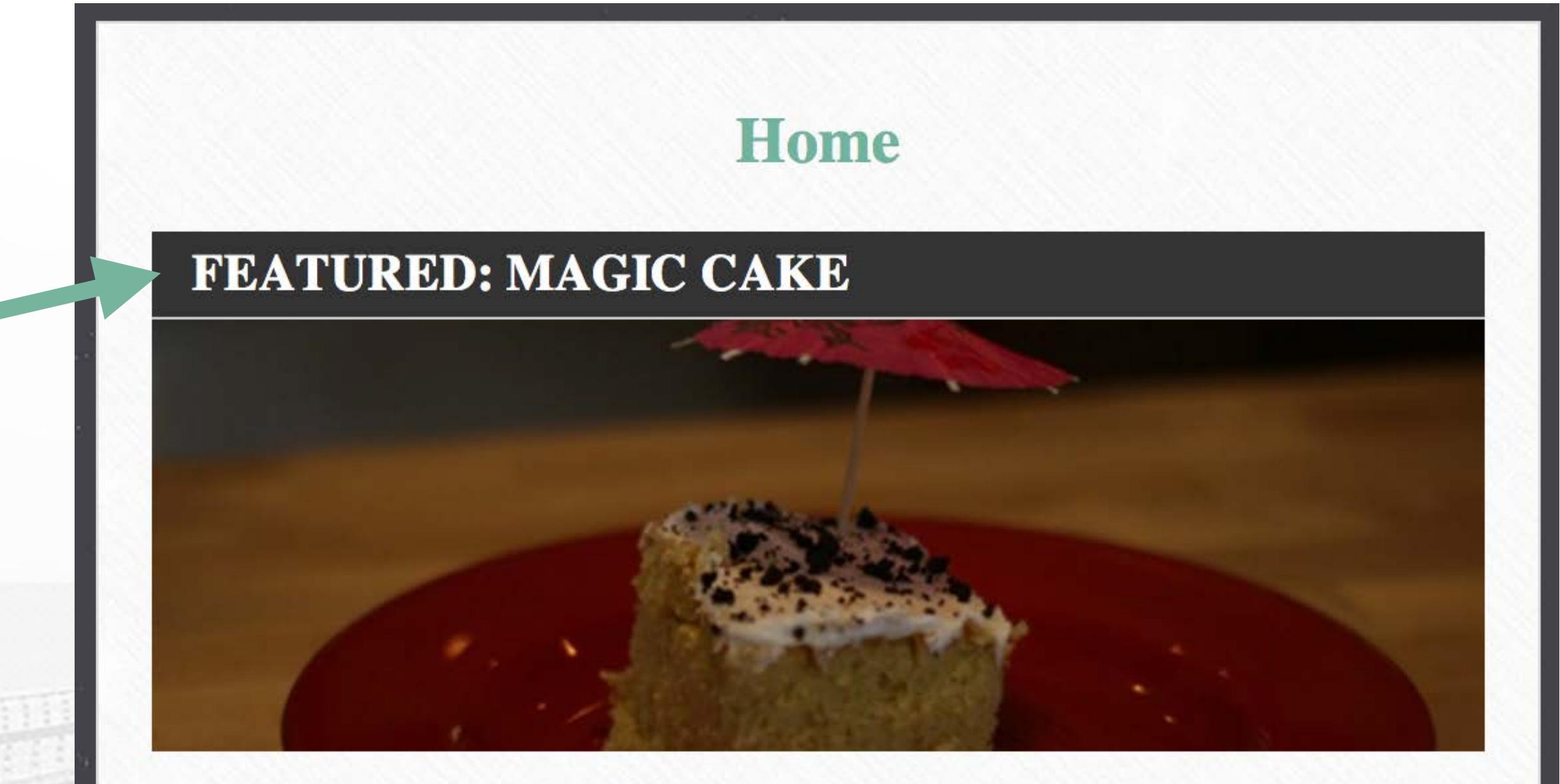
home.html

```
<div class="featured-image">  
  <h3>Featured: Magic Cake</h3>  
</div>
```

HTML

```
.featured-image h3 {  
  margin: 0;  
  background-color: #333333;  
  color: #ffffff;  
  padding: 5px 0 5px 15px;  
  text-transform: uppercase;  
}
```

CSS



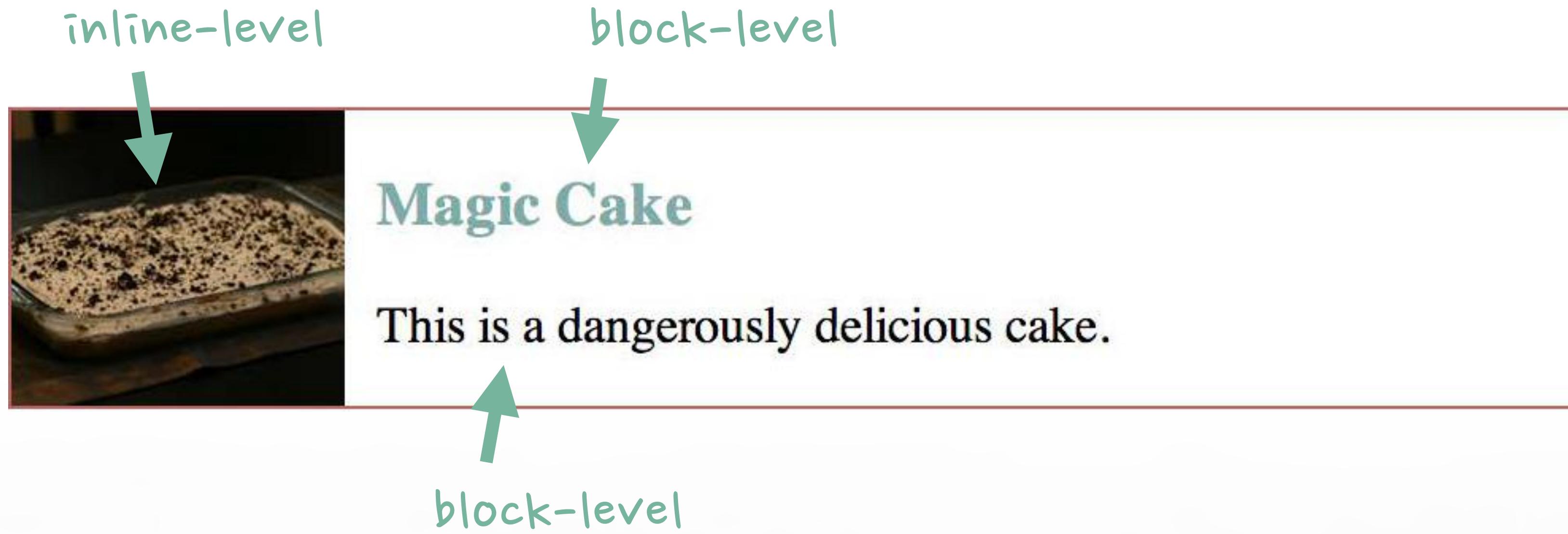


FRONT-END FOUNDATIONS



Displaying an image to the side of block-level tags

We know that tags are either block or inline.



This is an image to left of multiple block-level tags.

How can we make this?



Floating images

You might try setting two divs to inline.

left div set to inline



right div set to inline



Magic Cake

This is a dangerously delicious cake.



Floating images

```
<ul class="recipes">
  <li>
    <div>
      
    </div>
    <div>
      <h3><a href="...">Magic Cake</a></h3>
      <p>...</p>
    </div>
  </li>
</ul>
```

HTML



magic-cake.html

Setting these two divs side-by-side with **display:inline** seems like it would work.

```
.recipes div {
  display: inline;
}
```

CSS



Floating images

Turns out, we can't just flip things to inline and then put block-level tags inside of them.

Time to try something else.

left div set
to inline →



right div set
to inline →

Magic Cake
This is a dangerously delicious cake.



Floating images

Put the `img`, `h3`, and `p` all in one `li` and **float** the `img` left.

`magic-cake.html`

```
<ul class="recipes">
  <li>
    
    <h3><a href="...">Magic Cake</a></h3>
    <p>...</p>
  </li>
</ul>
```

HTML



CSS

```
.recipes img {
  float: left;
}
```

This makes the image take up some of the left space that the **h3** and **p** boxes would normally eat up as block-level tags.



Floating images

Success! We've also added some right padding so the image doesn't touch right up against the text.

CSS

```
.recipes img {  
  float: left;  
  padding-right: 10px;  
}
```



Magic Cake

This is a dangerously delicious cake.

Float is a tricky property that is covered in much greater detail in the CSS Cross Country course!





FRONT-END FOUNDATIONS



LEVEL 5

FONTS AND FORMS



Fonts on the Web

Fonts and font styles can be controlled with CSS.

The screenshot shows a web page with the following elements annotated:

- bold, large** → **Learn By Doing**: A large, bold heading.
- regular, medium** → **No setup. No hassle. Just learning.**: A line of text describing the service.
- regular, normal** → **Code School teaches web technologies in the comfort of your browser with video lessons, coding challenges, and screencasts.**: A descriptive paragraph.
- smaller** → **Learn where to start!**: A link to a section.
- uppercase** → **VIEW OUR COURSES**: A button labeled "VIEW OUR COURSES".
- uppercase** → **LEARN: GIT BACKBONE.JS SASS RAILS JQUERY**: A row of buttons labeled "LEARN:" followed by "GIT", "BACKBONE.JS", "SASS", "RAILS", and "JQUERY".
- uppercase** → **LEARN: GIT BACKBONE.JS SASS RAILS JQUERY**: A second row of buttons labeled "LEARN:" followed by "GIT", "BACKBONE.JS", "SASS", "RAILS", and "JQUERY".



Our current page's fonts

Since we haven't set a font, the browser is just picking a default.

The page features a title 'Magic Cake' in a teal font. Below it is a paragraph of text. A section titled 'Ingredients' lists three items. A section titled 'Directions' contains a numbered list. The entire page is set against a dark background with a faint watermark of a roller coaster track.

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

Directions

- 1 Mix eggs, sugar, and butter in a large bowl.



Changing the font with CSS

The **font-family** property is used to set the ideal font and a few fallback options.

CSS

```
body {  
  font-family: Helvetica, Arial, sans-serif;  
}
```



The ideal font

The browser will
try to load the
ideal font first.



Changing the font with CSS

The fallback fonts are used if the ideal font isn't available.

```
body {  
  font-family: Helvetica, Arial, "Times New Roman", sans-serif;  
}
```

use quotes if fonts are multi-word

CSS

Fallback fonts

Not all fonts are installed in all browsers!!!



Our page after changing the font

Here's magic-cake.html after changing the main font to Helvetica.

The screenshot shows a web page with a dark gray header and footer. The main content area has a white background with a subtle diagonal texture. The title 'Magic Cake' is centered at the top in a large, bold, teal-colored font. Below the title is a paragraph of text in a black sans-serif font. Further down is another paragraph, followed by a section titled 'Ingredients' with a bulleted list of ingredients. At the bottom, there is a section titled 'Directions' with the first step of a recipe.

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

Directions

- 1 Mix eggs, sugar, and butter in a large bowl



Browser defaults - the font edition

Just like with the box model properties, the browser has default font styles - and you should reset these too!!

These weights
and sizes are
the browser
defaults.

Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl.

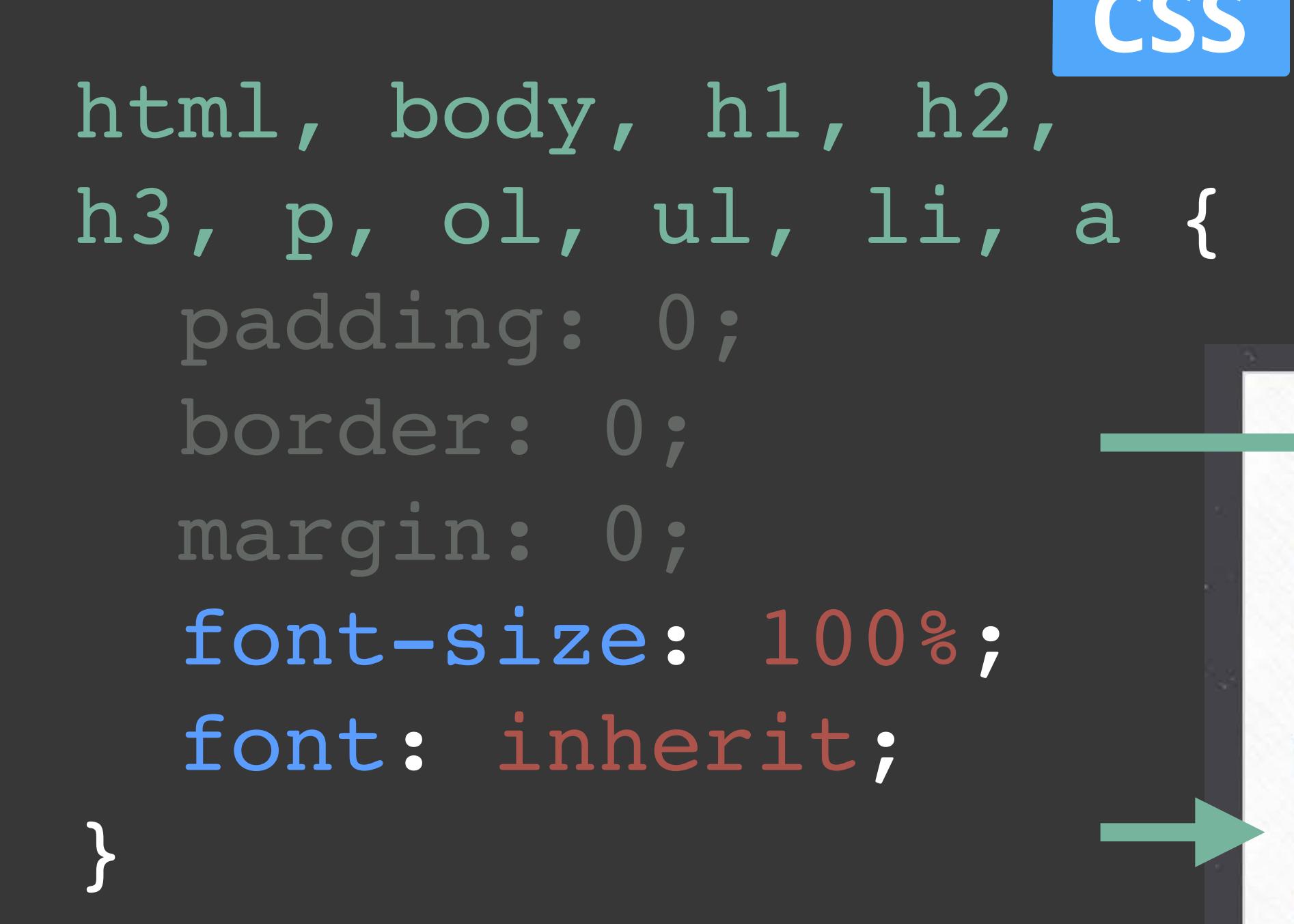


Resetting default browser font styles

Now the font weights and sizes won't follow an arbitrary default.

CSS

```
html, body, h1, h2,  
h3, p, ol, ul, li, a {  
  padding: 0;  
  border: 0;  
  margin: 0;  
  font-size: 100%;  
  font: inherit;  
}
```



Magic Cake

Magic Cake is one of the tastiest cakes the world has ever known. Few have tried it and lived to tell about it, and these are their stories.

We also need to stress that whatever happens to you as a result of consuming Magic Cake is your responsibility. You've been warned, and you can view our [legal page](#) for more information.

Ingredients

- 2 eggs
- 1 pound sugar
- 3 sticks of butter

Directions

1. Mix eggs, sugar, and butter in a large bowl

Changing font sizes

The size can be set with the **font-size** property.

CSS

```
h2 {  
    color: #7facaa;  
    margin: 0 0 20px 0;  
    text-align: center;  
    font-size: 26px;  
}
```



Magic Cake
the tastiest cakes the world has ever known. Fe
nd these are their stories.

Pixels aren't the only size options

percentages

ems

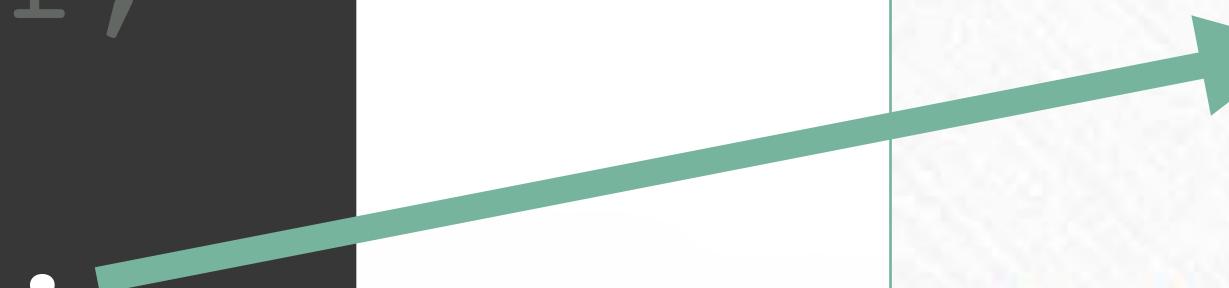


Changing font thickness

The thickness can be set with the **font-weight** property.

CSS

```
h2 {  
    color: #7facaa;  
    margin: 0 0 20px 0;  
    text-align: center;  
    font-size: 26px;  
    font-weight: bold;  
}
```



Magic Cake

tastiest cakes the world has ever known.
these are their stories.

Weight values

normal

lighter

bold

bolder

100, 200... 900



Changing other font properties

Here's a few other font properties:

CSS

```
.footer p {  
    color: #aaaaaa;  
    text-align: center;  
    font-weight: bold;  
    font-size: 12px;  
    font-style: italic;  
    text-transform: uppercase;  
}
```

BEFORE

© 2014 - Recipe World

AFTER

© 2014 - RECIPE WORLD

HTML

```
<div class="footer">  
    <p>&copy; 2014 - Recipe World</p>  
</div>
```

snazzy way to show a copyright symbol



Adjusting the line height

line-height is like margin for each line in a box.

You can adjust the vertical spacing between different text tags by changing the margin.

margin

Margin can't adjust the spacing between lines in a single box.

Magic Cake is one of the tastiest cakes the world has ever lived to tell about it, and these are their stories.

We also need to stress that whatever happens, it is your responsibility. You've been warned, and you have been given all the information.



Adjusting the line height

line-height is like margin for each line in a box.

CSS

```
.main-content p {  
  line-height: 16px;  
}
```

Magic Cake is one of the tastiest cakes
lived to tell about it, and these are their

We also need to stress that whatever
is your responsibility. You've been war-
information.

CSS

```
.main-content p {  
  line-height: 26px;  
}
```

Magic Cake is one of the tastiest cakes
lived to tell about it, and these are their

We also need to stress that whatever
is your responsibility. You've been war-
information.





FRONT-END FOUNDATIONS



Web Forms

Forms are a way for a web page to get input from a user.

The diagram illustrates a 'Sign In' web form with the following components and labels:

- form**: Points to the overall form structure.
- label**: Points to the label "EMAIL OR USERNAME" positioned above the first input field.
- input**: Points to the text input field for entering an email or username.
- submit**: Points to the large teal "SIGN IN" button at the bottom center of the form.

The form also includes:

- "Create Free Account" link in the top right corner.
- "PASSWORD" label and input field below the first one.
- "Forgot Your Password?" link below the password input field.
- "Sign in with:" section at the bottom featuring social media icons for GitHub, Facebook, and Google.

Forms usually contain things like labels, inputs of several different types, text areas, and a submit button.



Recipe World's form

Disclaimer

Making forms actually process user input requires server-side code.

We can still design how the form will look in the browser now.

form

The diagram illustrates a web form titled "Suggest a recipe". It features several input fields and a submission mechanism. At the top right, the title "Suggest a recipe" is displayed above a dashed green border. Inside this border, there are two input fields: "Recipe Name" (a single-line text input) and "Ingredients" (a multi-line text area). Below these, there are two more input fields: "Your Name" (single-line text input) and "Your Email" (single-line text input). A checkbox labeled "Get Newsletter?" is positioned next to the email field. At the bottom left, a button labeled "Submit the recipe" is shown. A horizontal dashed green line runs across the bottom of the form. Several green arrows point from labels to their corresponding form elements: one arrow points from "label" to the "Ingredients" text area; another from "textarea" to the "Ingredients" text area; one from "input" to the "Your Email" text input; and one from "submit" to the "Submit the recipe" button.

Suggest a recipe

Recipe Name

Ingredients

Your Name

Your Email

Get Newsletter?

Submit the recipe

label

textarea

input

submit

The HTML for a simple form

This HTML will produce the form shown below (*but some extra attributes would need to send the form data to the server*).

suggest.html

HTML

```
<form>
  <label>Recipe Name</label>
  <input type="text">
  <input type="submit" value="Click to Submit">
</form>
```

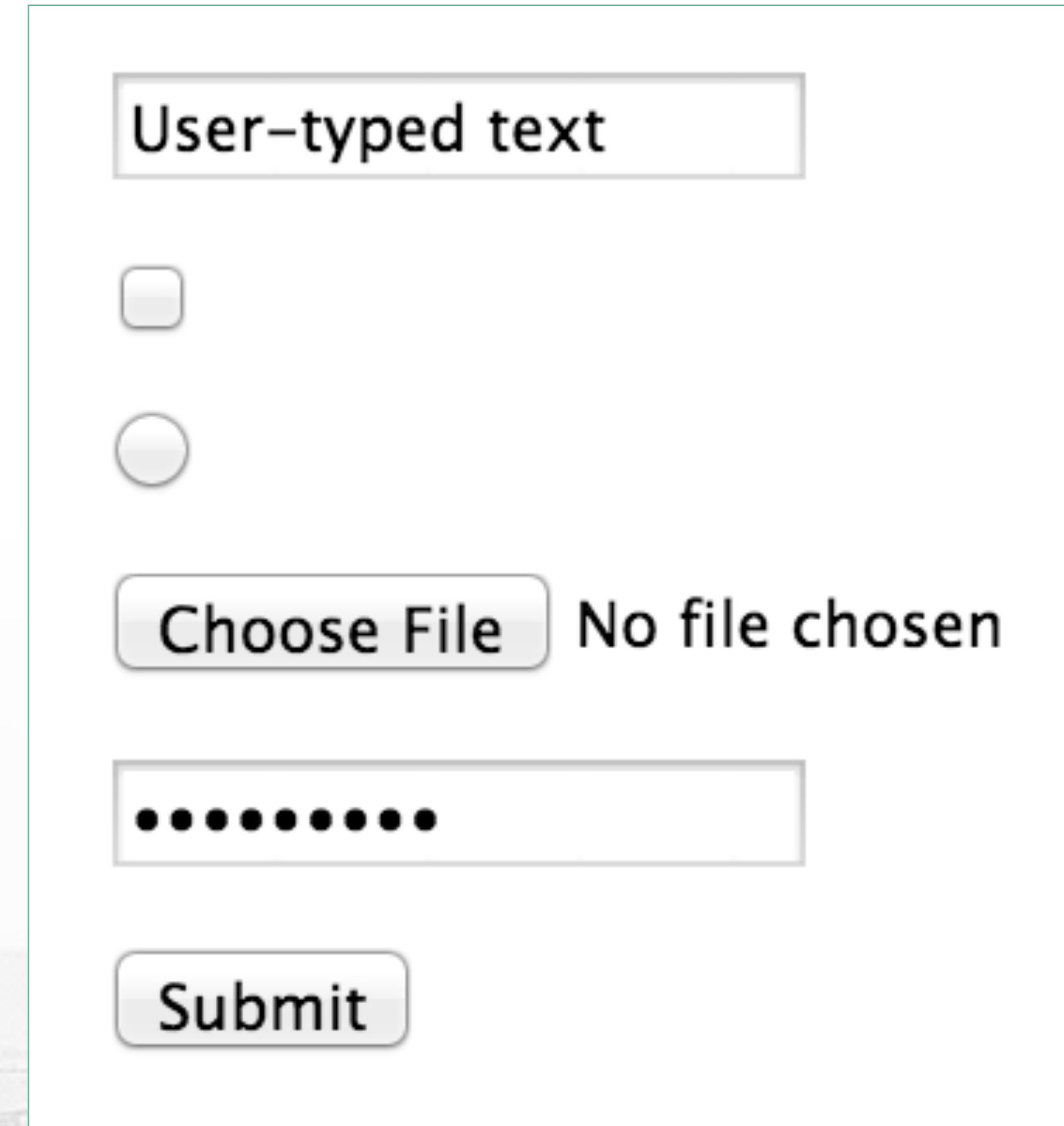
The diagram illustrates the correspondence between the HTML code and the resulting user interface. It features a light gray rectangular box containing a form. Inside the box, the text "Recipe Name" is followed by a text input field, and then a button labeled "Click to Submit". Three green arrows point from the labels "label", "input", and "submit" at the bottom to their respective counterparts in the box above. The "label" arrow points to "Recipe Name", the "input" arrow points to the text input field, and the "submit" arrow points to the "Click to Submit" button.



Common form input types

The **type** attribute sets the kind of input field that will display.

```
<input type="text">  
  
<input type="checkbox">  
  
<input type="radio">  
  
<input type="file">  
  
<input type="password">  
  
<input type="submit">
```



User-typed text

Choose File No file chosen

.....

Submit



The **for** and **id** attributes

The value of the **for** attribute in the label should be the same as the value of the **id** attribute in an input field to associate the label and input.

Each for/id pair has to be unique on the page.

HTML

```
<form>
  <label for="recipe-name">Recipe Name</label>
  <input type="text" id="recipe-name">
  <input type="submit" value="Click to Submit">
</form>
```

Recipe Name

Click to Submit



Using a textarea instead of an input

input tags should be used for short or single-line user input.

The **textarea** tag is used for multi-line user input.

HTML

```
<form>          textareas also don't need to define a type  
    <label for="ingredients">Ingredients</label>  
    <textarea id="ingredients"></textarea>  
    <input type="submit" value="Click to Submit">  
</form>
```

A screenshot of a web browser showing a form. On the left, the word "Ingredients" is displayed in a bold, black font. To its right is a large, empty text area for input. To the right of the text area is a button labeled "Click to Submit".

Unlike inputs, **textareas** need an opening and closing tag.



Styling forms

labels and inputs are inline-level tags, but it usually makes sense to display one on top of the other like block-level instead of side-by-side.

Before

Recipe Name Click to Submit

↓
CSS

```
label, input {  
    display: block;  
}
```

After

Recipe Name

Click to Submit



Styling forms

Once you've got both tags displaying as block-level, you can style them just like you would any other block-level tag.

CSS

```
label, input {  
    display: block;  
}  
  
label {  
    margin-bottom: 10px;  
}  
  
input {  
    width: 500px;  
    margin-bottom: 25px;  
}
```

Recipe Name

Your Name

Your Email

Click to Submit



Styling the submit button separately

Since the submit button is technically an input tag, our input selector properties are affecting the way it is displayed.

Attribute selectors are a way to style a tag based on one of its attributes.

CSS

```
input {  
    width: 500px;  
    margin-bottom: 25px;  
}  
input[type=submit] {  
    width: 120px;  
    font-size: 30px;  
}
```

Before

Your Email

Click to Submit

After

Your Email

Click to Submit



Styling inputs

The container around an input is actually just a border, so you can style it with the **border** property.

CSS

```
input[type=text] {  
  border: 2px solid #7facaa;  
}
```

Recipe Name

Magic Cake

Your Name

Jon Friskics



Styling inputs

To adjust the height of the input, style the text inside.

CSS

```
input[type=text] {  
  border: 2px solid #7facaa;  
  font-size: 24px;  
}
```

Recipe Name

Magic Cake

Your Name

Jon Friskics



Styling inputs

And, since the green line is a border, use padding to put some space between the border and the text.

CSS

```
input[type=text] {  
    border: 2px solid #7facaa;  
    font-size: 24px;  
    padding: 7px;  
}
```

Recipe Name

Magic Cake

Your Name

Jon Friskics



Styling textareas

You can set a width and height for **textareas**, but otherwise the styles behave similar to regular inputs.

CSS

```
textarea {  
    width: 500px;  
    height: 400px;  
    padding: 7px;  
    border: 2px solid #7facaa;  
    margin-bottom: 25px;  
    font-size: 24px;  
}
```

Ingredients



Creating a separate style for a checkbox input

It looks awkward if the newsletter **label** and **input** are on separate lines since the checkbox is so small, so we can use attribute selectors again to make just this input and label display inline.

```
<form>  
  <label for="newsletter">Get Newsletter?</label>  
  <input type="checkbox" id="newsletter">  
  ...  
</form>
```

HTML

Before



```
input[type=checkbox], label[for=newsletter] {  
  display: inline;  
}
```

CSS

After



Suggest a recipe

The final form

Recipe Name

Ingredients

Your Name

Your Email

Get Newsletter?

[Submit the recipe](#)

