Cap 10

div and span

Div

You know, we'd love it if
you could make the elixir specials
a little more attractive on the
Web page. Could you make it look
just like our handout menu?



Div

Here's the handout menu with the elixir specials. Wow, the design is a lot different than the rest of the page: it's thin, the text is centered, there are red headings, an aquamarine border around the whole thing, and even some cocktail graphics at the top.

Weekly Elixir Specials



Lemon Breeze

The ultimate healthy drink, this elicir combines herbal betanicals, minerals, and vitamins with a twist of lemon into a smooth citrus wonder that will keep your immune system going all day and all night.



Chai Chiller

Not your traditional chai, this elixir mixes maté with chai spices and adds an extra chocolate kick for a caffeinated taste sensation on ice.



Black Brain Brew

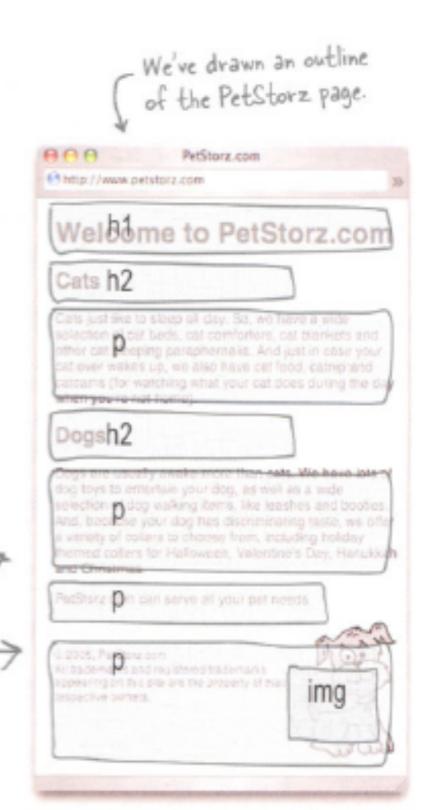
Want to boost your memory? Try our Black Brain Brew elixir, made with black colong tee and just a touch of expresso. Your brain will thank you for the boost.

Join us any evening for these and all our wonderful elixirs.

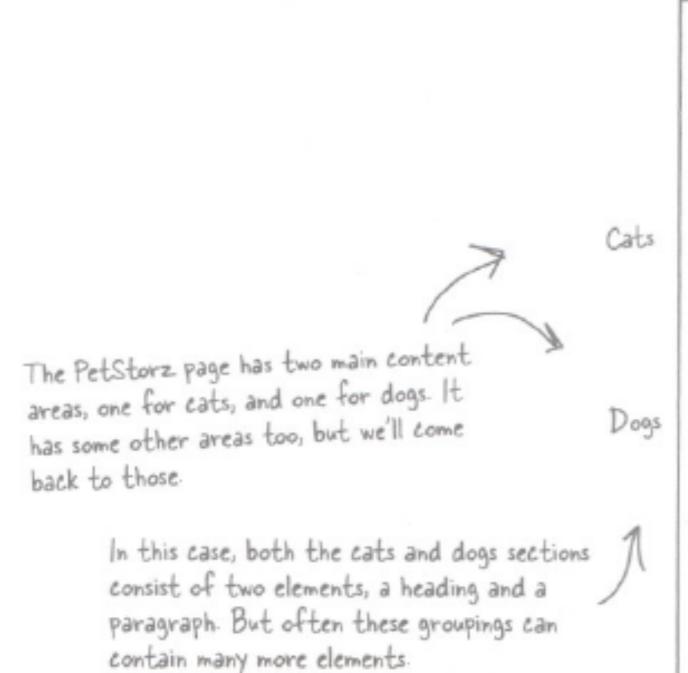
How we can divide a page into logical section

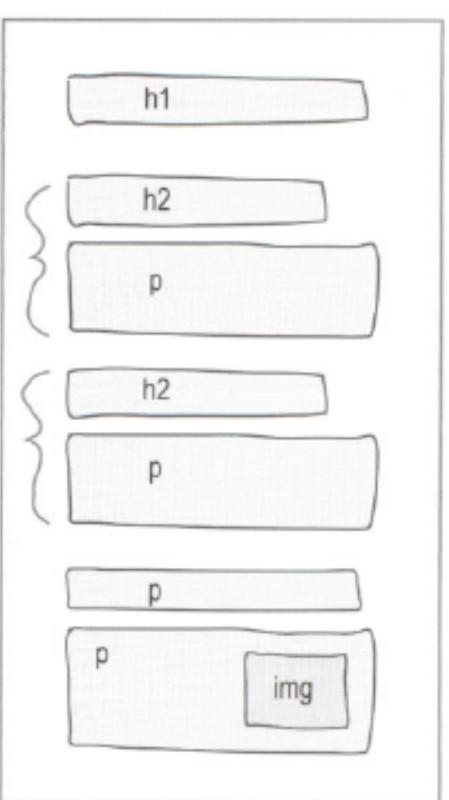
This is a pretty normal looking page: lots of headings, paragraphs, and an image in there.

But by just focussing on the structure of the page, you can't really tell a whole lot about the page. What elements make up the header? Is there a footer on the page? What are the content areas?

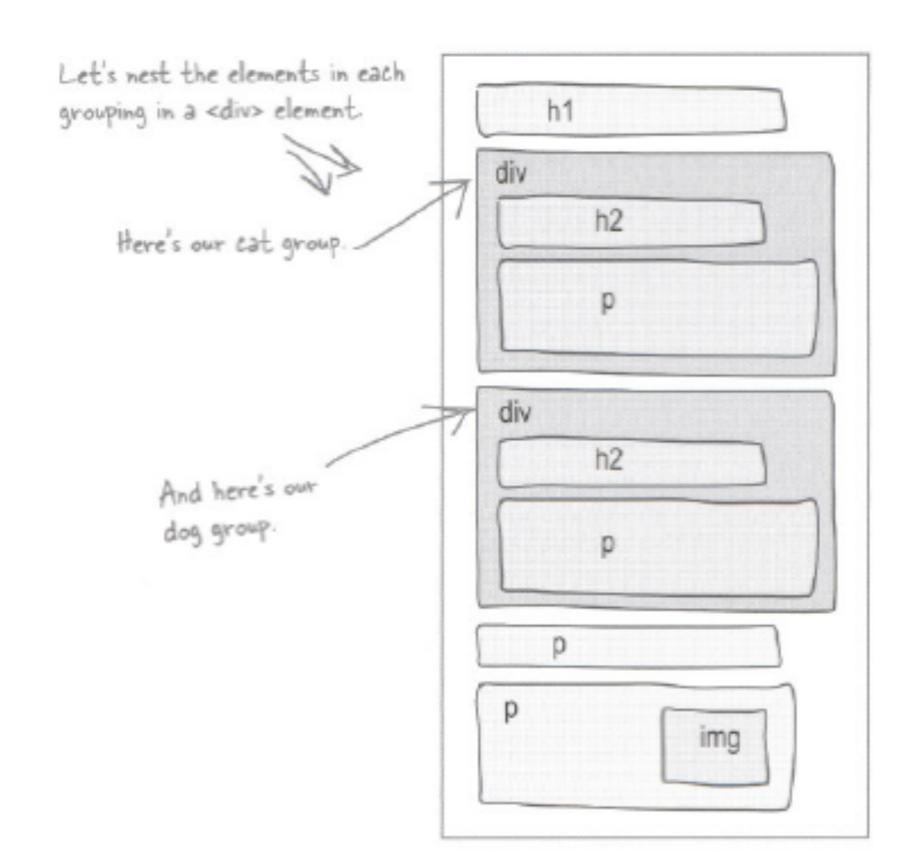


Identify your logical sections

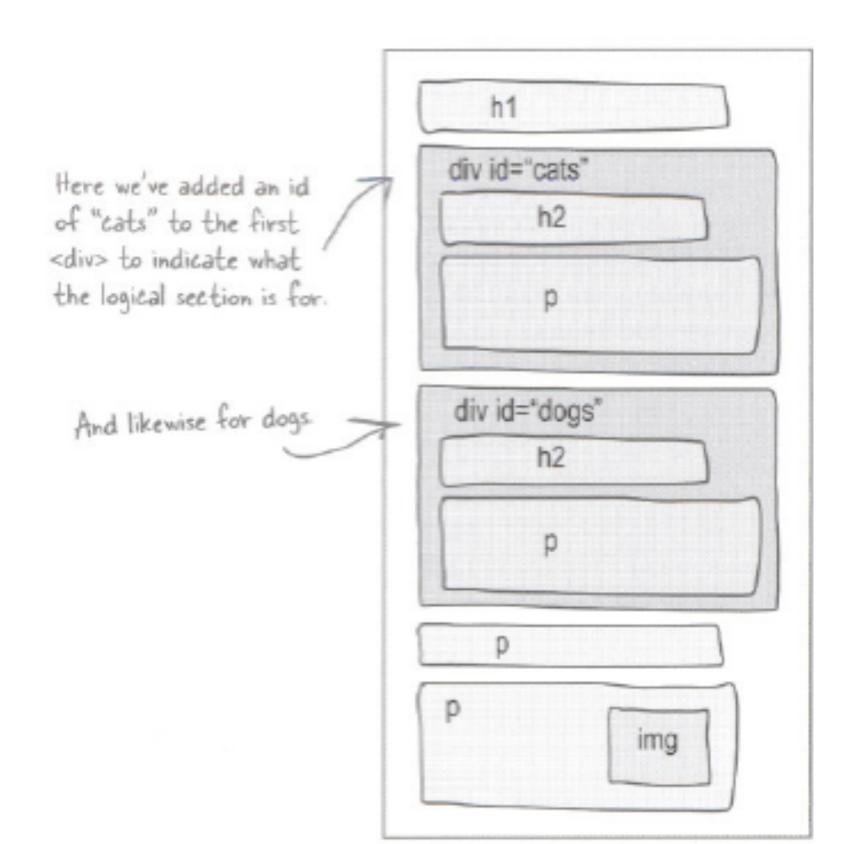




Using <div>s to mark sections



Labelling the <div>s

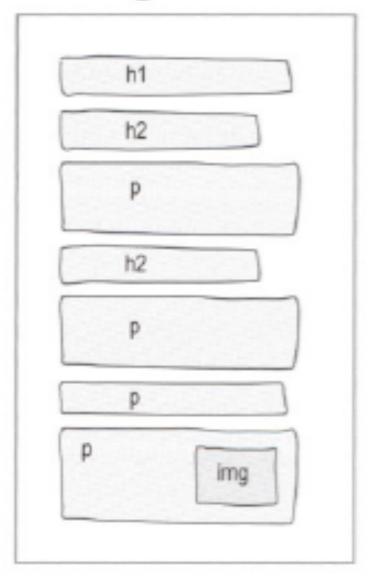




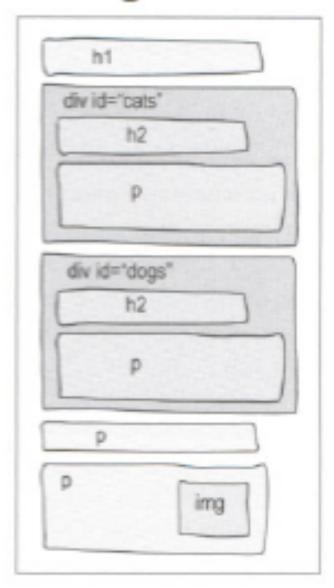
On a referral from the Starbuzz CEO, you've been asked to come in and consult on style changes to PetStorz main page. How quickly would you understand the PetStorz Web page if you were shown Page One?

What about Page Two?

Page One



Page Two



Adding some style

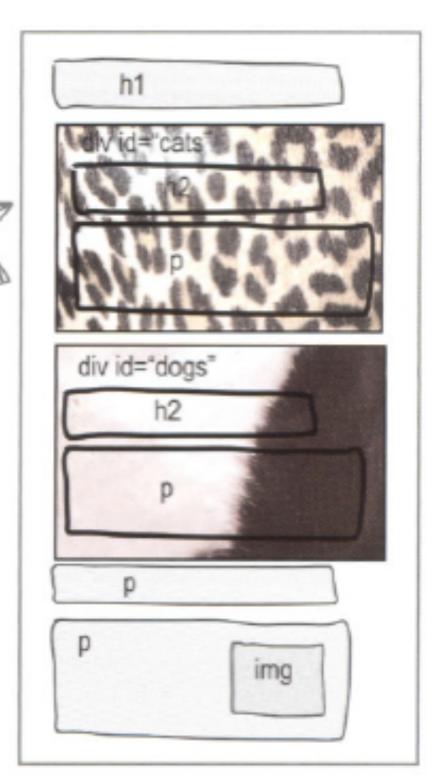
Now the <div>s have a little style.

By setting the background on the <div>, it is also shows through the elements contained in the <div>.

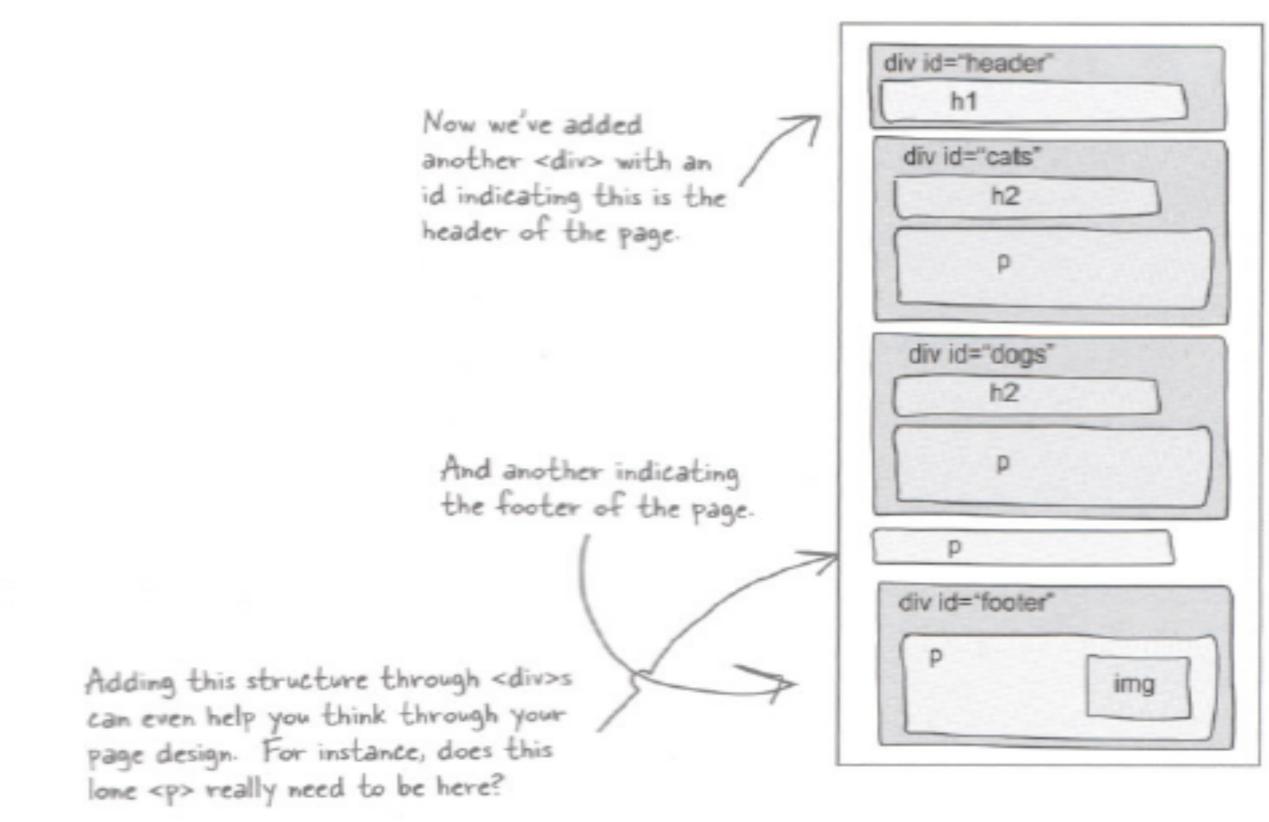
Here we have two rules, one for each <div>. Each <div> is selected by an id selector. The elements in the <div> will also inherit some properties from the <div>, just as any child element does (like font-size, color, etc).

#cats {
 background-image: url(leopard.jpg);
}
#dogs {
 background-image: url(mutt.jpg);
}

Each rule sets the background-image property. For cats we have a leopard image, and for dogs we have a mutt image.



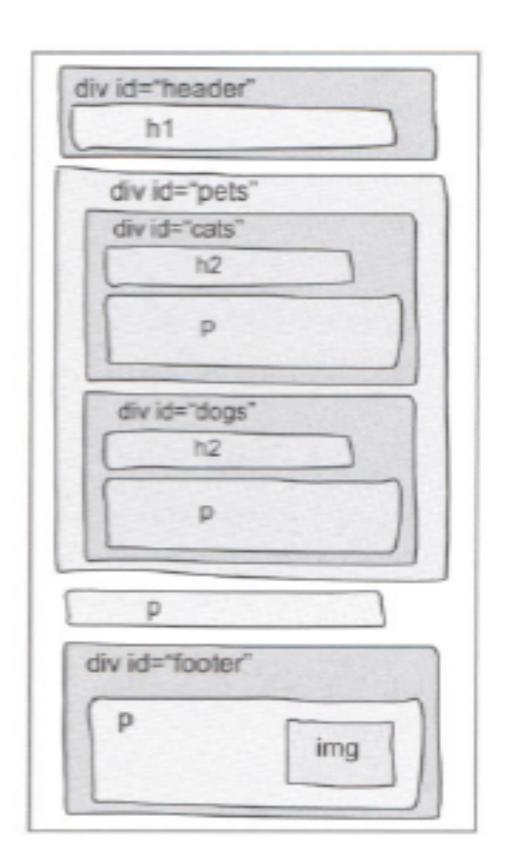
Exposing even more structure



Adding structure on structure

1

Now we've marked up this XHTML so that we know there is a logical section in the page with "pets" content in it. Further, that "pets" section has two logical subsections, one for "cats" and one for "dogs".



Div in the Elixir

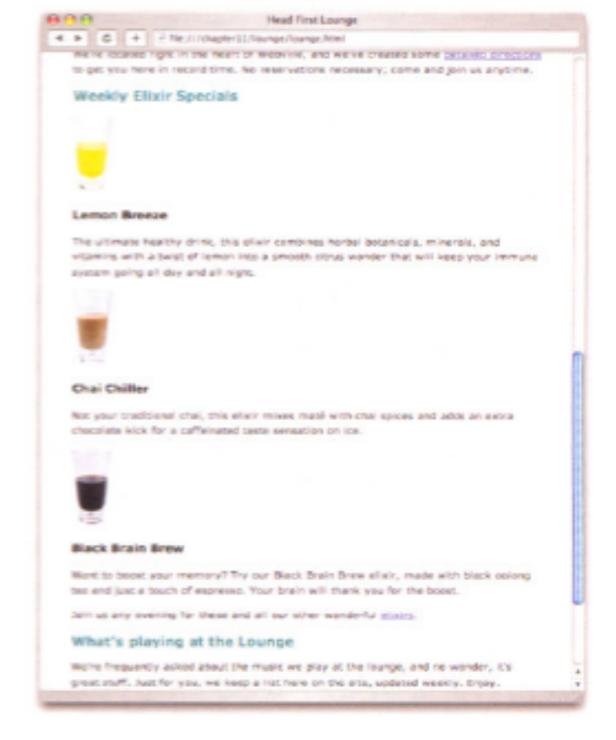
```
Here's the opening tag, and
                                          we've given it an id of
<div id="elixirs">
                                         "elixirs" to identify it
    <h2>Weekly Elixir Specials</h2>
    >
        <img src="images/yellow.gif" alt="Lemon Breeze Elixir" />
    <h3>Lemon Breeze</h3>
    >
        The ultimate healthy drink, this elixir combines
        herbal botanicals, minerals, and vitamins with
        a twist of lemon into a smooth citrus wonder
        that will keep your immune system going all
        day and all night.
    >
        <img src="images/chai.gif" alt="Chai Chiller Elixir" />
    <h3>Chai Chiller</h3>
    >
        Not your traditional chai, this elixir mixes maté
        with chai spices and adds an extra chocolate kick for
        a caffeinated taste sensation on ice.
    >
        <img src="images/black.gif" alt="Black Brain Brew Elixir" />
    <h3>Black Brain Brew</h3>
    >
        Want to boost your memory? Try our Black Brain Brew
        elixir, made with black oolong tea and just a touch
        of espresso. Your brain will thank you for the boost.
    >
        Join us any evening for these and all our
        other wonderful
        <a href="beverages/elixir.html"
           title="Head First Lounge Elixirs">elixirs</a>.
                         And, here's the closing tag
</div>
```

Remember we're just showing a snippet of XHTML from the entire file. When you open "lounge.html", you'll see all the markup for the page.

Taking the <div> for the test drive

Hmmm... no change at all!
But that's okay: the <div>
is pure structure, and it
doesn't have any "look" or
default style in the page.

That said, a <div> is just a block element, and you can apply any styles you want to it So, once you know how to style a block element (and you do), you know how to style a <div>.





Remember, the goal here is to restyle the elixir content on the page so it looks like the handout.

Before we took a detour to learn about <div>s, we were trying to figure out how to get a border around the entire set of elixirs. Now that you've got a <div> in "lounge.html", how would you go about adding a border?

Weekly Elixir Specials



Lemon Breeze

The otherwise healthy devia, the ether combined broken bother bot



Chai Chiller

Not your traditional case, then offer relates with with other galders and addly the early offersalest leads for a coffeesalest leads storage on log.



Black Brain Brew

West to broad your seemay? Try our Black Base Retwie but, roads with black colleng less and just a facult of these seems your brain wall those you. for this body.

Join accompanies on the Berne and all four ware shelp doze,

Adding a border

```
#elixirs {

border-width: thin;

border-style: solid;

border-color: #007e7e;

Add this at the elixirs

and adds a thin, s

aquamarine color.
```

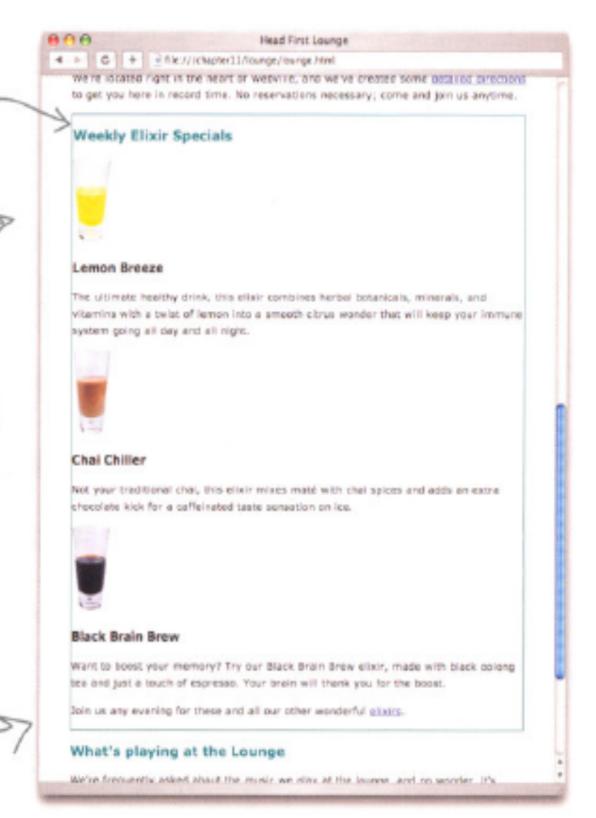
Add this at the end of your CSS file. It selects the clixirs <div> element using its id, and adds a thin, solid border in our favorite aguamarine color.

An over-the-border test drive

Here's the border that you just added to the elixirs <div> element.

You added a visible border to this <div>, but it still has no padding and no margin.
We'll need to add that too.

Notice that the border goes around all the elements inside the <div> element. The <div> is a box like every other element, so, when you add a border, the border goes around the content, which is all the elements in the <div>.



Adding some real style to elixir section

There's a background image at the top.

The main heading and the paragraph text are black, while the drink names are a red color that matches the red in the logo.

The text and images are centered, and there's padding on the sides to add space between the text and the border.

The line-height of the paragraphs looks a lot more like the default line height for the page (before we changed it in the last chapter).

The font family is a sans-serif font, just like the body font, so we don't have to change that. Remember that the <div> element and all the elements nested in it inherit the font family from the body.

The width of the elixirs handout is narrower than the rest of the page.

Weekly Elixir Specials



Lemon Breeze

The ultimate healthy drink, this elixir combines herbal botanicals, minerals, and vitamins with a twist of lemon into a smooth citrus wonder that will keep your immune system going all day and all night.



Chai Chiller

Not your traditional chal, this elixir mixes maté with chai spices and adds an extra chocolate kick for a caffeinated taste sensation on ice.



Black Brain Brew

Want to boost your memory?
Try our Black Brain Brew
elixir, made with black
oolong tea and just a touch of
espresso. Your brain will
thank you for the boost.

Join us any evening for these and all our other wonderful elixirs.

This link is aquamarine

Working on Elixir width

```
#elixirs {

border-width: thin;

border-style: solid;

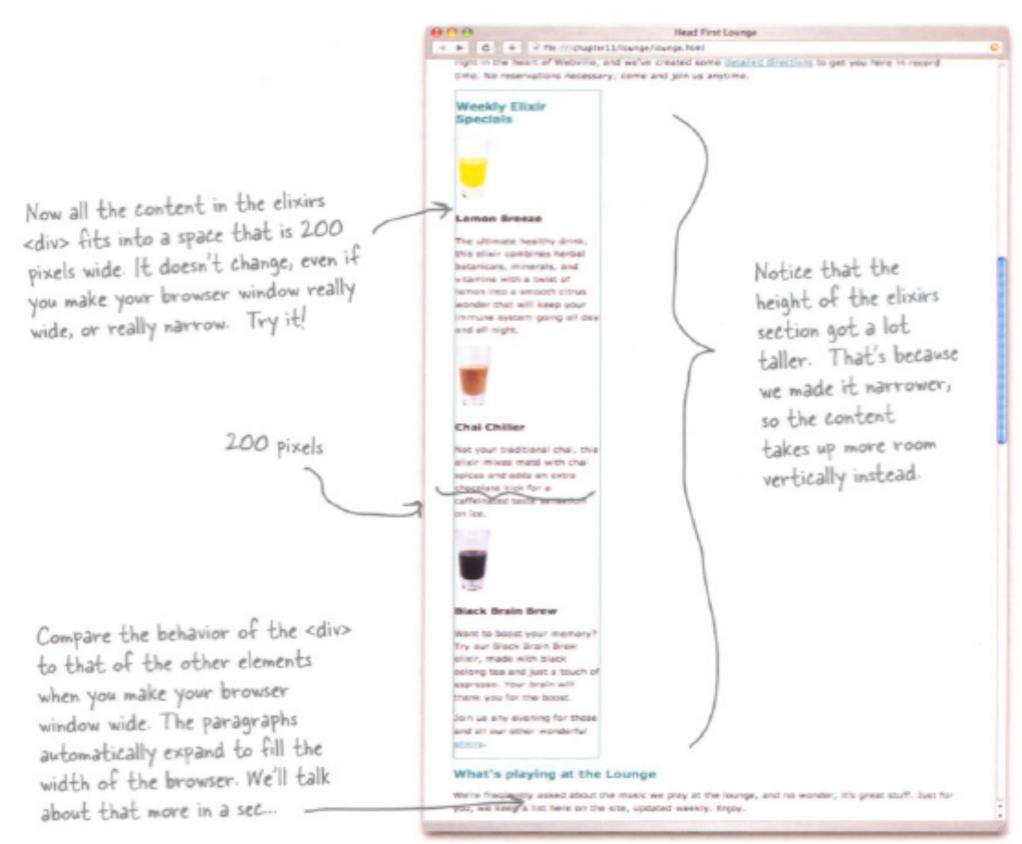
border-color: #007e7e;

width: 200px;
}

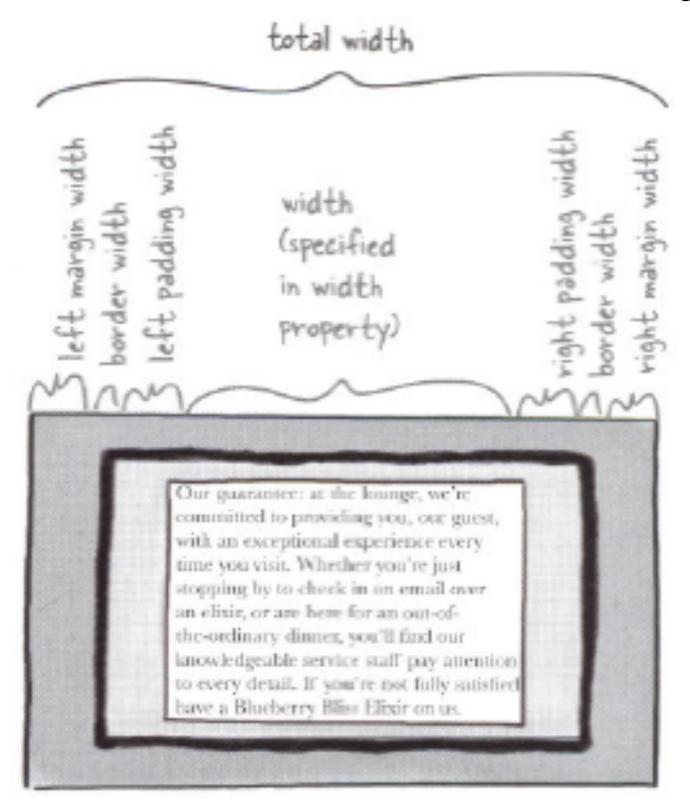
The width property lets you specify the width of the element's content area. Here we're specifying that the content width be 200 pixels.
```

We're setting this on the elixirs <div>. So the content in the elixirs <div> will be 200 pixels wide, and the browser's layout rules will work to fit all the elements nested in the <div> within that width.

Test driving the width



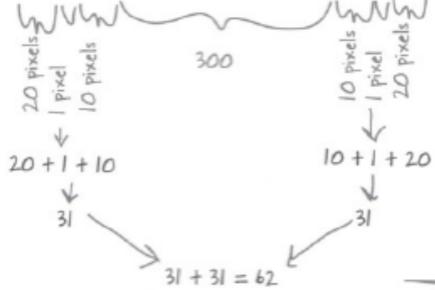
The width property specifies the width for the content area only



(1) The content area is 300 pixels.



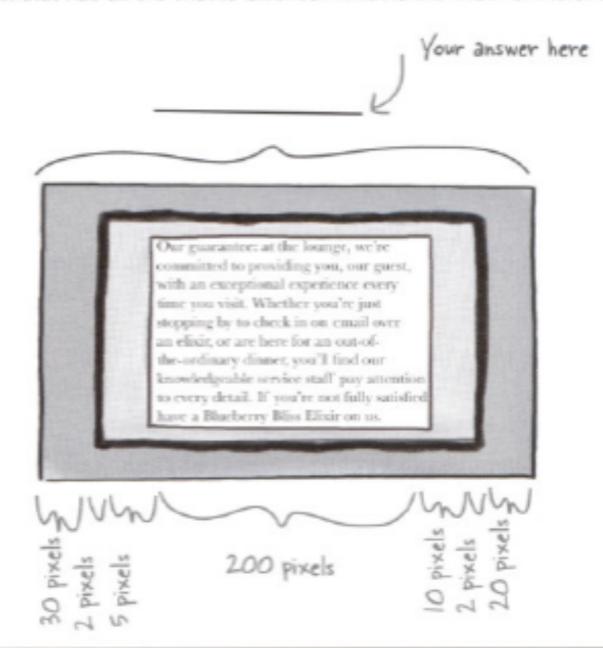
(2) Figure out how much is taken up by the margins, padding, and border.



(3) It looks like 62 pixels are taken up, so add that to the content area's width of 300 pixels, and we have 300 + 62 = 362 pixels for the entire box.

Sharpen your pencil

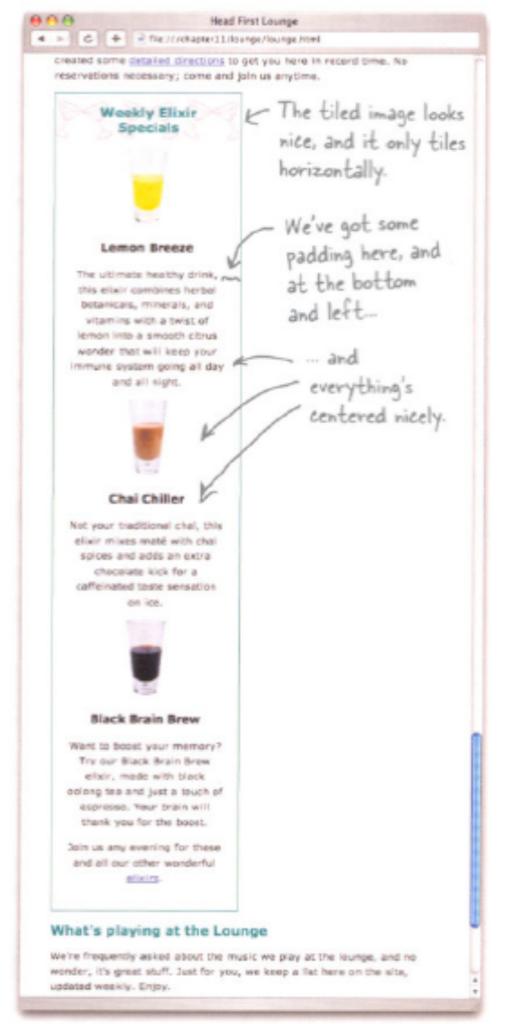
Here's a box that has all the widths labelled. What is the width of the entire box?

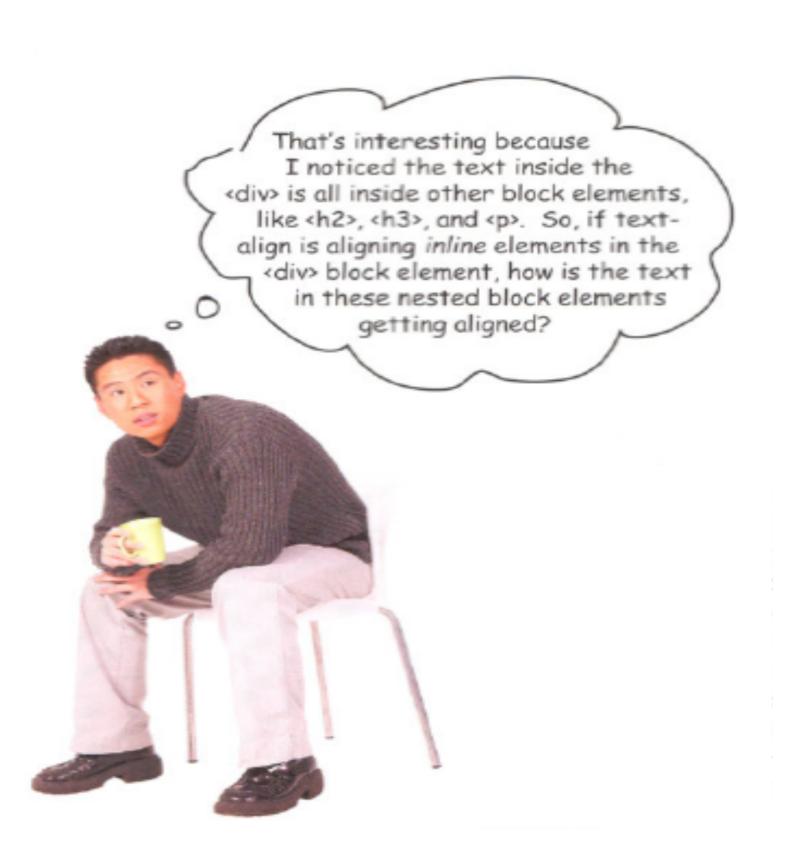


Adding the basic style to elixirs

Remember we're going to apply all this style to The default padding on a «div» is O pixels, so the elixirs <div> so that it only affects the <div> we're going to add some padding to provide a bit and the elements it contains, not the entire page. of space for the content. Notice that we're not adding any padding at the top because there's already plenty of room there thanks to the default margin on the <h2> heading (look back at #elixirs { the last test drive and you'll see there's plenty of border-width: thin: room above the <h2>). But we do need it on the border-style: solid: border-color: #007e7e; right, bottom, and left. width: 200px; We're adding some margin on the left to indent 20px; padding-right: padding-bottom: 20px; the elixirs from the rest of the page a bit. padding-left: 20px; This is going to come in handy later ... margin-left: 20px; Use text-align on block elements to align the text they contain. Here we're text-align: center; A going to center-align the text. url(images/cocktail.gif); background-image: background-repeat: repeat-x; And finally we're specifying an image to use in the background, in this case the cocktail image. We're setting the background-repeat property to repeat-x, which will tile the image only in the horizontal direction.

Test driving the new style





Sharpen your pencil

So now that you understand widths, what's the total width of the elixirs box? To start with, we know the content area is 200 pixels. We've also set some left and right padding that affects the width, as well as a border that's set to "thin". Just assume a thin border is 1 pixel thick, like it is on most browsers. And what about margins? We set a left margin value, but no right margin value, so the right margin is 0 pixels by default.

Here are all the properties that relate to width. Your job is to figure out the total width of the elixirs <div>.

border-width: thin;

width: 200px;

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

margin-left: 20px;



Weekly Elixir Specials



Lemon Breeze

The utilinate healthy drink, this elser combines herber bocaricals, minorals, and vitames with a terist of lemon into a smooth citrus wonder that will keep your immune system going at day and all night.



Chai Chiller

Not your traditional chai, this clipir mixes meté with chai spices and adds an extra chocolate kick for a calfemated trade sonsation on ice.

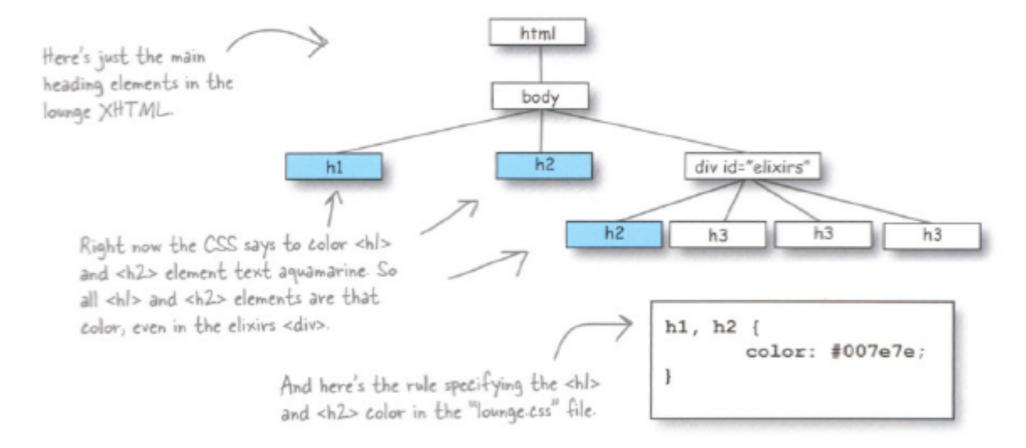


Black Brain Brew

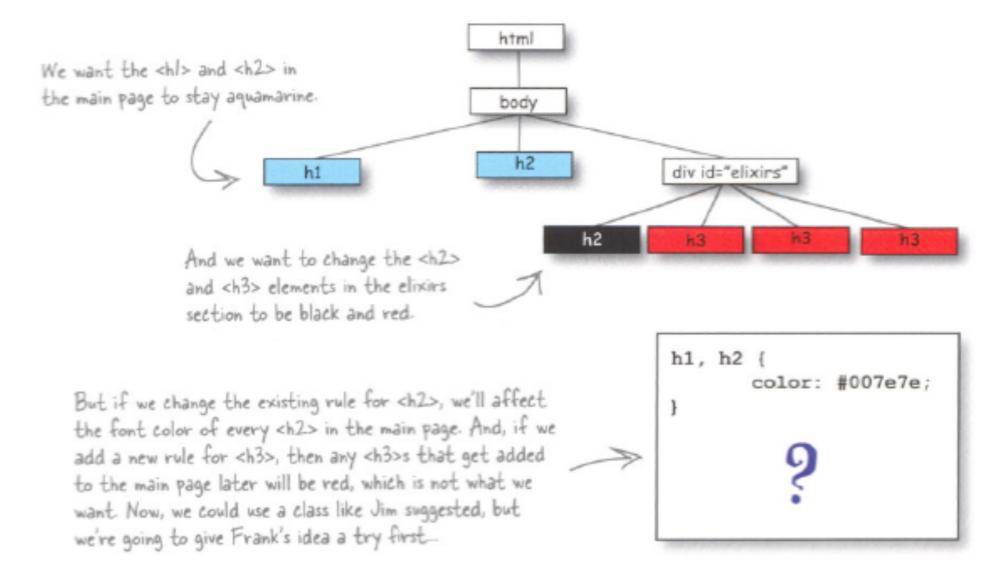
Want to boost your memory? Try our Black Brain Brew else, made with black colong ten and Just a touch of espresso. Your brain will thank your for the boost.

John us any evening for these and at our wonderful etixins.

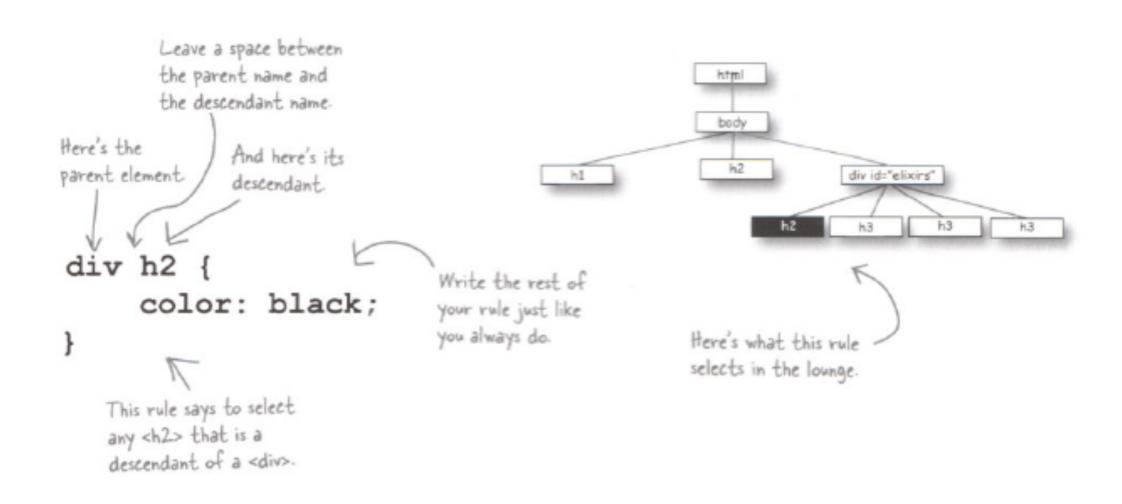
What we have now



What we want



What we need is the way to select descendants

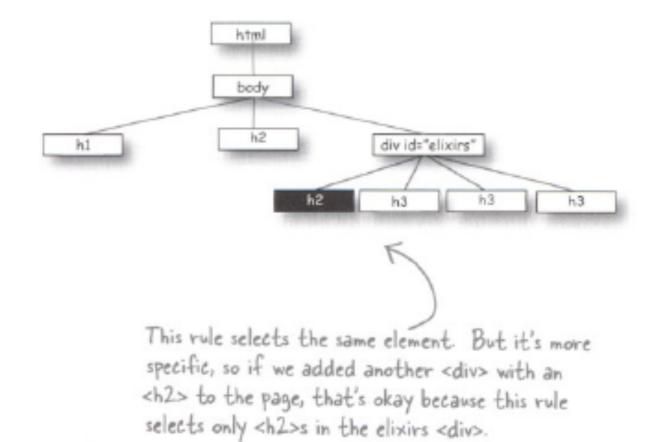


What we need is the way to select descendants

```
Now the parent
element is the
element with And here's its
the id elixirs. descendant.

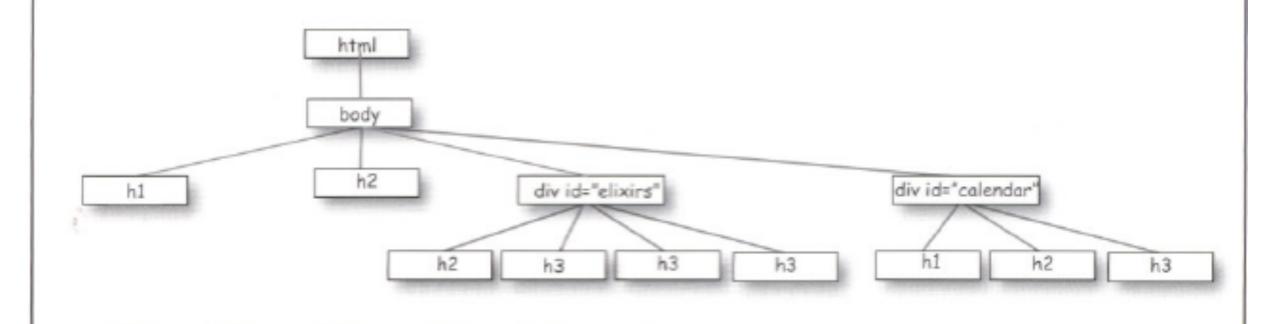
#elixirs h2 {
    color: black;
}

This rule says to select any <h2> that is a
    descendant of an element with the id "elixirs".
```



Sharpen your pencil

Your turn. Write the selector that selects only <h3> elements inside the elixirs <div>.
In your rule, set the color property to #d12c47. Also label the elements in the graph below that are selected.



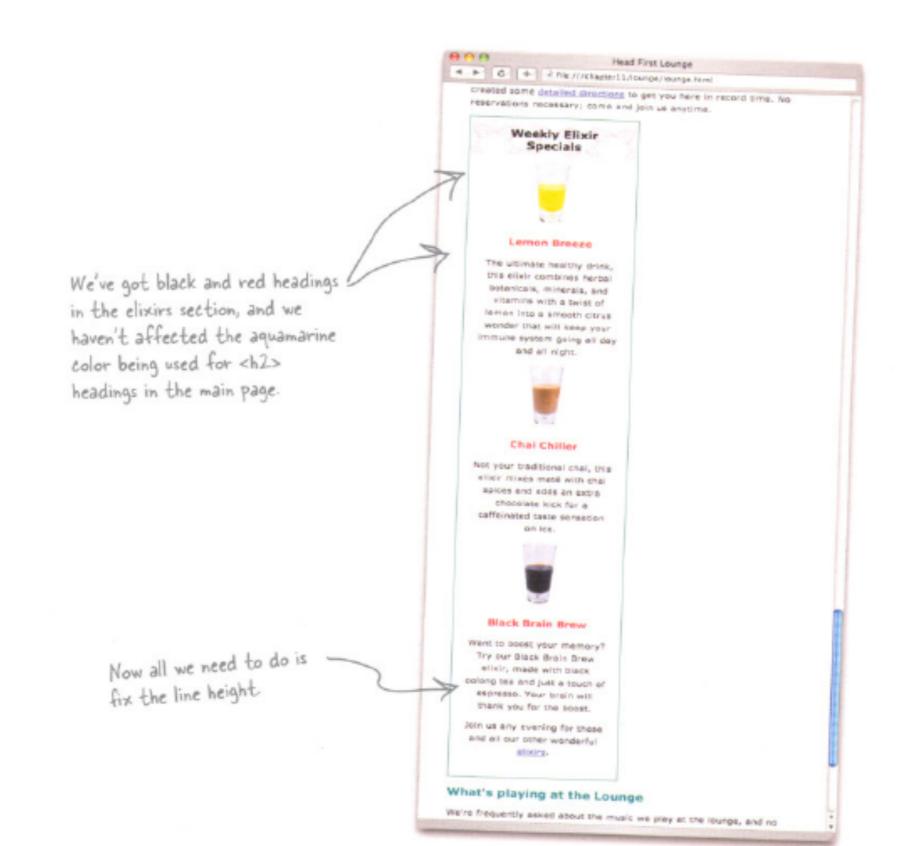
Changing the color of elixirs headers

```
#elixirs h2 {
    color: black;
}

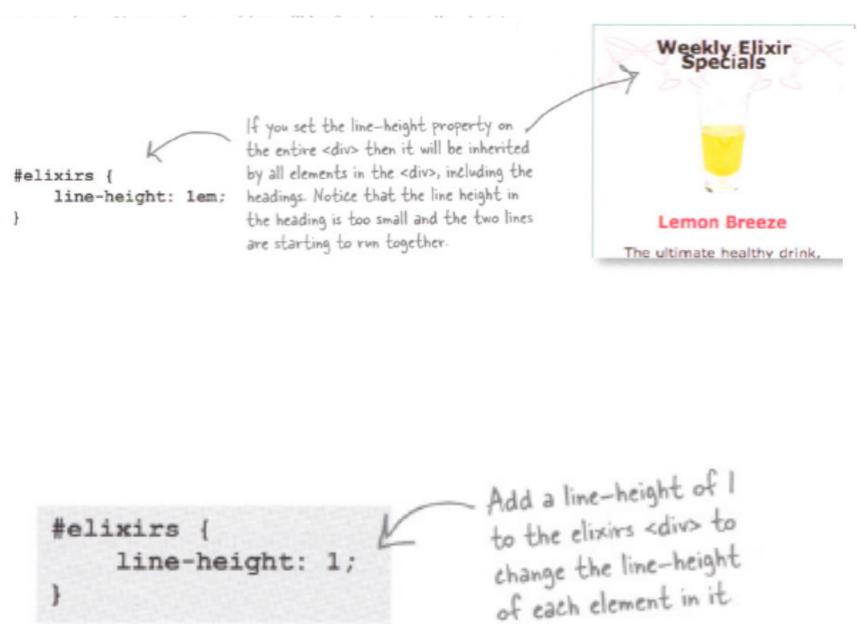
#elixirs h3 {
    color: #d12c47;
}
```

Here we're using the descendant selectors to target just the <h2> and <h3> elements in the elixirs <div>. We're setting <h2> to black, and <h3> to a red color, using a hex code.

A quick test drive



Fixing line height



```
there are the font sizes
of the elements. We set
body to "small", so that's
inherited by elixirs.

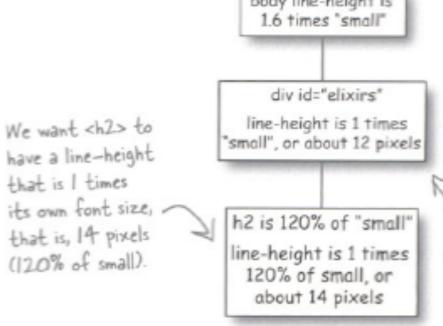
The line-height of
<h2> is set to I times
the font size of
elixirs, which is "small",
or about 12 pixels.

body size is "small"

div id="elixirs"
size is "small"

h2 is 120% of "small"

body line-height is
```



The font-size of the p element is "small" (p inherits its font-size from the elixirs <div>) so it will have a line-height of 12 pixels, which is what we want.

It's time to take little shortcut

padding-top: 0px; That's a lot of typing just to specify four numbers. padding-right: 20px; padding-bottom: 30px; padding-left: 10px; Here's the old school way of And here's the new and improved specifying your padding. way to write them as a shorthand. padding-top: 0px; padding-right: 20px; padding: 0px 20px 30px 10px; padding-bottom: 30px; padding-left: 10px; margin-top: 0px; margin-right: 20px; margin: Opx 20px 30px 10px; margin-bottom: 30px;

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

Just like padding, you can use

a shorthand to specify all your

margin values with one property.

margin-left:

10px;

padding-left: 20px;

If all your padding values are the same, then you can write it like this.

This says that the padding should be 20 pixels on every side of the box

padding: 20px;
every si

Shortcut...

top and bottom margin-top: : xq0

20px; margin-right:

margin-bottom: (xq0 20px; - right and left margin-left:

are the same.

If the top and bottom, as well as the right and left margins are the same, then you can use a shorthand.

margin: 0px 20px;

border-width:

thin; border-style: solid;

border-color:

#007e7e;

Rewrite border

properties as one

property. These can be in any order you like.

border: thin solid #007e7e;

border: solid thin;

border: solid thin #007e7e; border: #007e7e solid;

border: #007e7e solid thin: border: solid:

background-color: white;

background-image: url(images/cocktail.gif);

background-repeat: repeat-x;

Like border, values can go in any order in this shorthand. There are also a few other values you can specify in the shorthand, like background-position.

background: white url(images/cocktail.gif) repeat-x;

These are all perfectly valid border shorthands



Shortcut...

Here are the properties that go into the font shorthand. Ordering matters here unless we say otherwise ...

font size.

Finally you need to add your font families You only need to specify one font, You must specify but alternatives are highly encouraged.

font: font-style font-variant font-weight font-size/line-height font-family

These values are all optional. You can specify any combination of them, but they need to come before font-size.

The line-height is optional. If you want to specify one, just put a / right after the font-size and add your line height.

Use commas between your font family names.

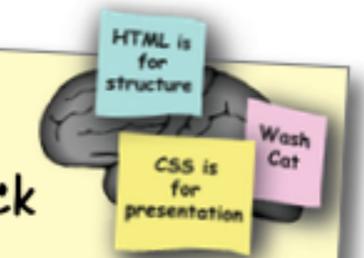
font-size: small; « Helvetica, Arial, sans-serif; font-family: Verdana, line-height: 1.6em;

> We're not using any of these, but that's okay, they're all optional.

font: font-style font-variant font-weight font-size/line-height font-family

font: small/1.6em Verdana, Helvetica, Arial, sans-serif;

And here's the shorthand version. Wow, that's quite a shorthand, huh? You're going to be able to double your time at the slopes (or on the beach) now.



Make It Stick



To remember the ordering of the padding and margin shorthand values, think of a clock labeled with top, right, bottom, and left. Then, always go in a clockwise direction: top to right to bottom to left.

margin: 0px 20px 30px 10px;

I saw the nice job you did on the elixirs. Can you give us a hand with the music recommendations on the site? We don't need much, just some simple styling.



The lounge's resident DJ.

What's playing at the Lounge

We're frequently asked about the music we play at the lounge, and no wonder, it's great stuff. Just for you, we keep a list here on the site, updated weekly. Enjoy-

- Buddha Bar, Claude Challe
- When It Falls, Zero 7
- Earth 7, L.T.J. Bukem
- Le Roi Est Mort, Vive Le Roi!, Enigma
- Music for Airports, Brian Eno

All the CD titles are in an italic font style. are in bold.

And all the artists



What do you think is the best way to style the CD and artists in the "What's playing at the Lounge" section?

Adding s in three easy way

- You're going to nest the CDs and artists in separate elements.
- You're going to add one to the "cd" class and the other to the "artist" class.
- You're going to create a rule to style the "cd" class with italic, and the "artist" class with bold.

Step one and two: add the s

Do the same for the artist. Nest it

Step three: style the s

```
We're going to add a rule for each of
   the new classes, cd and artist.
                                      For CDs we'll make
                                      the font style italic.
.cd
         font-style: italic;
                                        And for artists we'll
.artist {
                                        set the font-weight
         font-weight: bold;
                                        to bold.
```

→ File:///chapter11/lounge/lounge.html

| Column | C Black Brain Brew Want to boost your memory? Try our Black Brain Brew elixir, made with black oplining tea and just a touch of espresso. Your brain will thank you for the boost. Join us any evening for these and all our other wonderful elixirs. What's playing at the Lounge We're frequently asked about the music we play at the lounge, and no wonder, it's great stuff. Just for you, we keep a list here on the site, updated weekly. Enjoy. Buddha Bar, Claude Challe · When It Falls, Zero 7 . Earth 7, L.T.J. Bukem · Le Roi Est Mort, Vive Le Roi!, Enigma · Music for Airports, Brian Eno © 2005, Head First Lounge All trademarks and registered trademarks appearing on this site are the property of their respective owners.

Head First Lounge

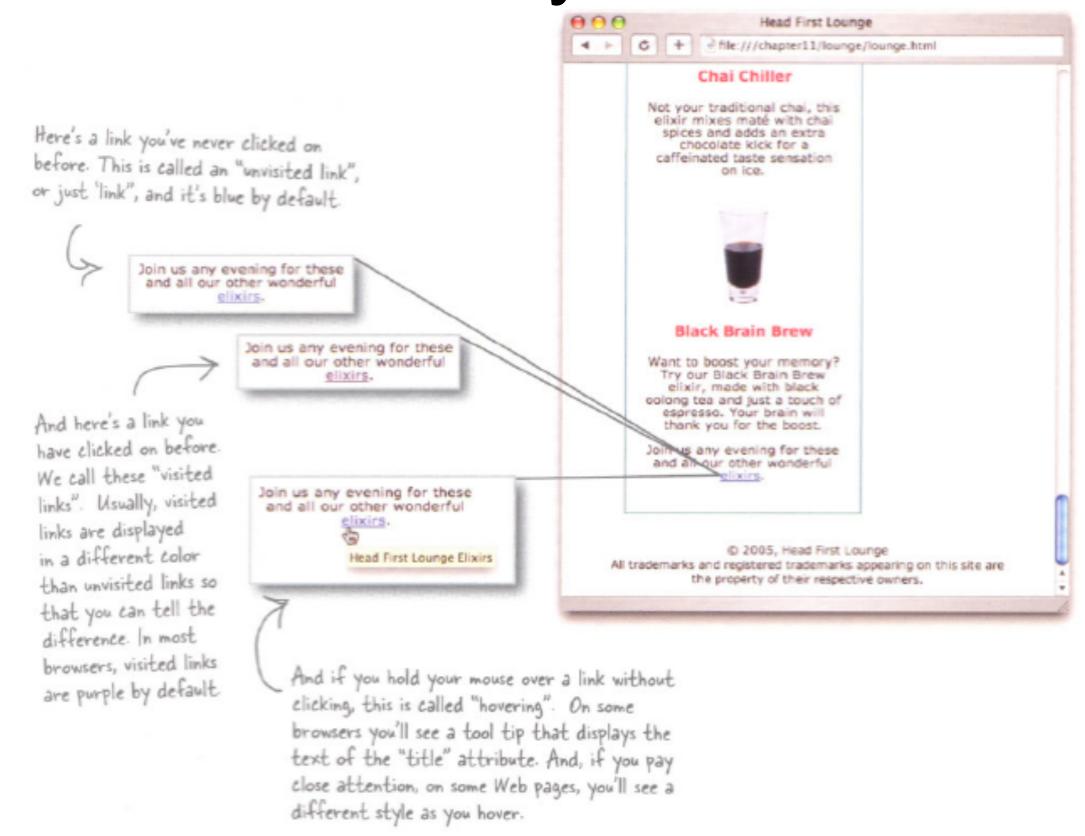
Now the first music recommendation has the correct styling.



You need to finish the job. Add elements to the rest of the music recommendations and test your page. You'll find the solution in the back of the chapter.

```
<span class="cd">Buddha Bar</span>, <span class="artist">Claude Challe</span>
When It Falls, Zero 7
Earth 7, L.T.J. Bukem
Le Roi Est Mort, Vive Le Roi!, Enigma
Music for Airports, Brian Eno
```

<a>> and style



<a> style

```
Notice we have the element <a>>, followed by a
 ":", followed by the state we want to select
                                   This selector is applied
                                   to links when they are
 a:link {
      color: green;
                                    in an unvisited state.
                                   And this selector is
a:visited
                                   applied to links when
      color: red;
                                   they are visited.
 a:hover {
                                    And this selector
      color: yellow;
                                    is applied when you
                                    hover over a link.
```

Putting pseudo-classes to work

```
Okay, big change here. We're using a descendant selector combined with a pseudo-class. The first selector says to select any unvisited <a>> element that is nested in an element with the id "elixirs". So we're JUST styling the links inside elixirs.
```

```
#elixirs a:link {
    color: #007e7e; For unvisited links, a nice aquamarine...
}

#elixirs a:visited {
    color: #333333;
}

#elixirs a:hover {
    background: #f88396;
    color: #0d5353;
}

Now for the really interesting rule. When the user is hovering over the link, we're changing the background to red. This makes the link look highlighted when you pass the mouse over it. Give it try!
```



Open up your "lounge.css" and rework your a:link, a:visited, and a:hover rules to use the new descendant selector and the new style definitions. Save, reload, and turn the page.

Cascade style sheet



The Author (that's you!)

First, there are all the style sheets you've written for your page.



The Reader (your users)

When the browser needs to determine which style to apply to an element, it uses all these style sheets. Priority is given first to the author's styles (that is, your styles), then to the reader's styles, and then finally to the browser's default styles.

Note that there is a way for a reader to actually override your styles. To do that they put "!important" at the end of a property declaration.



But some browsers also allow users to create their own styles for XHTML elements. If your style sheet doesn't define these styles, the user's style sheet is used instead.



And finally, you already know that the browser itself maintains a set of default styles that are used if you don't define the styles for an element. These are also the styles that are used if you don't have any author or reader style sheets.



The Browser

So, to review, as the page authors, we can use multiple style sheets with our XHTML. And, the user might also supply their own styles, and then the browser has its default styles, too. And on top of all that we might have multiple selectors that apply to the same element. How do we figure out which styles an element gets?



The cascade

Step one:

Gather all your style sheets together.

Step two:

Find all the declarations that match.

Step three:

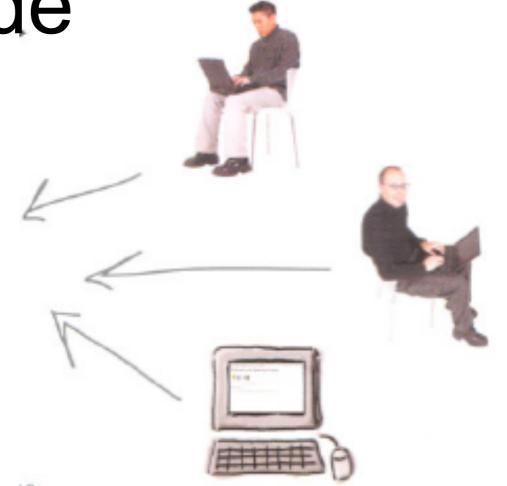
Now take all your matches, and sort them.

Step four:

Now sort all the declarations by how specific they are.

Step five:

Finally, sort any conflicting rules in the order they appear in their individual style sheets.



What's my specifity game

To calculate the specificity you start with a set of three numbers, like this:



In the old days we used four numbers, but that was before XHTML... aren't you glad you're learning this now?

000

And then we just tally up various things from the selector, like this:

Does the selector have any ids? One point each. Does the selector have any classes or pseudo-classes? One point each.

Does the selector have any element names? One point for each.

0 0 0

For instance, the selector "h1" has one element in it, so you get:

Read this as the -> 0 0 1

As another example, the selector "h1.blue" has one element and one class, so you'd get:

Read this as the > 0 1 1

Both "hl" and "hl.blue" have one element, so they both get a "l" in the right most number column.

"hl.blue" also has one class, so it gets a "l" in the middle number column.

4

Neither have ids in their selectors, so they both get a "O" in the left number column

Step one

<hl class="blueberry">Blueberry Bliss Elixir</hl>

Let's take this through all the cascade steps:

Step one:

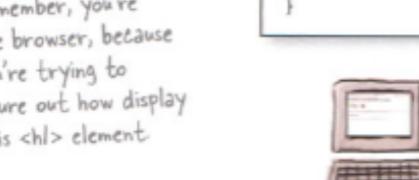
Gather all your style sheets together.

h1 { color: #efefef; h1.blueberry { color: blue;

Usually, you're the author (the person writing the CSS). But right now, you're the browser.



Remember, you're the browser, because you're trying to figure out how display this <hl> element.



h1 {

color: black:

The Browser

body h1 { color: #cccccc; That's you (for now).



The Reader 4

The person using the browser.

Step two

Step two:

Find all the declarations that match.

there are all the rules that could possibly match the <hl> element and that contain the color property.

```
Browser & h1 {
    color: black;
                 color: #efefef;
                 color: blue;
```

Step three

Step three:

Now take all your matches, and sort them by author, reader, browser.

```
Author

h1 {
    color: #efefef;
}

h1.blueberry {
    color: blue;
}

Reader

Browser

h1 {
    color: #cccccc;
}

h1 {
    color: black;
}
```

Step four

Step four:

Now sort the declarations by how specific they are. To do that we need to first calculate each specificity score, and then reorder the rules.

```
hl.blueberry {
h1 {
   color: #efefef;
                                                                       color: blue;
                                               The rule wit
                                                                    h1
h1.blueberry {
   color: blue;
                                                                       color: #efefef;
                                               class moves
                                               to the top
                                               because it has
body h1 {
                                                                    body h1 {
                                               the highest
                                                                       color: #cccccc;
   color: #cccccc;
                                               specificity.
h1 {
                                                                    h1 {
                                                                       color: black;
   color: black;
```

Notice that we only sort within the author, reader, and browser categories. We don't re-sort the entire list, or else the "body hl" rule would move above the "hl" rule set by the author.

Step five

Step five:

Finally, sort any conflicting rules in the order that they appear in their individual style sheets.

We're okay here, because we don't have any conflicting rules at this point. The blueberry, with a score of II, is the clear winner. If there had been two rules with a score of OII, then the rule appearing latest would be the winner.

```
hl.blueberry {
    color: blue;
}

h1 {
    color: #efefef;
}

body h1 {
    color: #cccccc;
}

h1 {
    color: black;
}

Browser
}
```

Homework



This is a special brain power; so special that we're going to let you think about it between chapters. Here's what you need to do:

- Open the file "lounge.html" and locate the elixirs <div>.
- Move the entire elixirs <div> section to top the of the file so it's just below the paragraph that contains the lounge logo.
- Save and reload your page. What changed?
- Open the file "lounge.css".
- 6 Locate the "#elixirs" rule.
- 6 Add this declaration at the bottom of the rule:

float: right;

Save your file, and reload the page in your browser.

What changed? What do you think this declaration does?