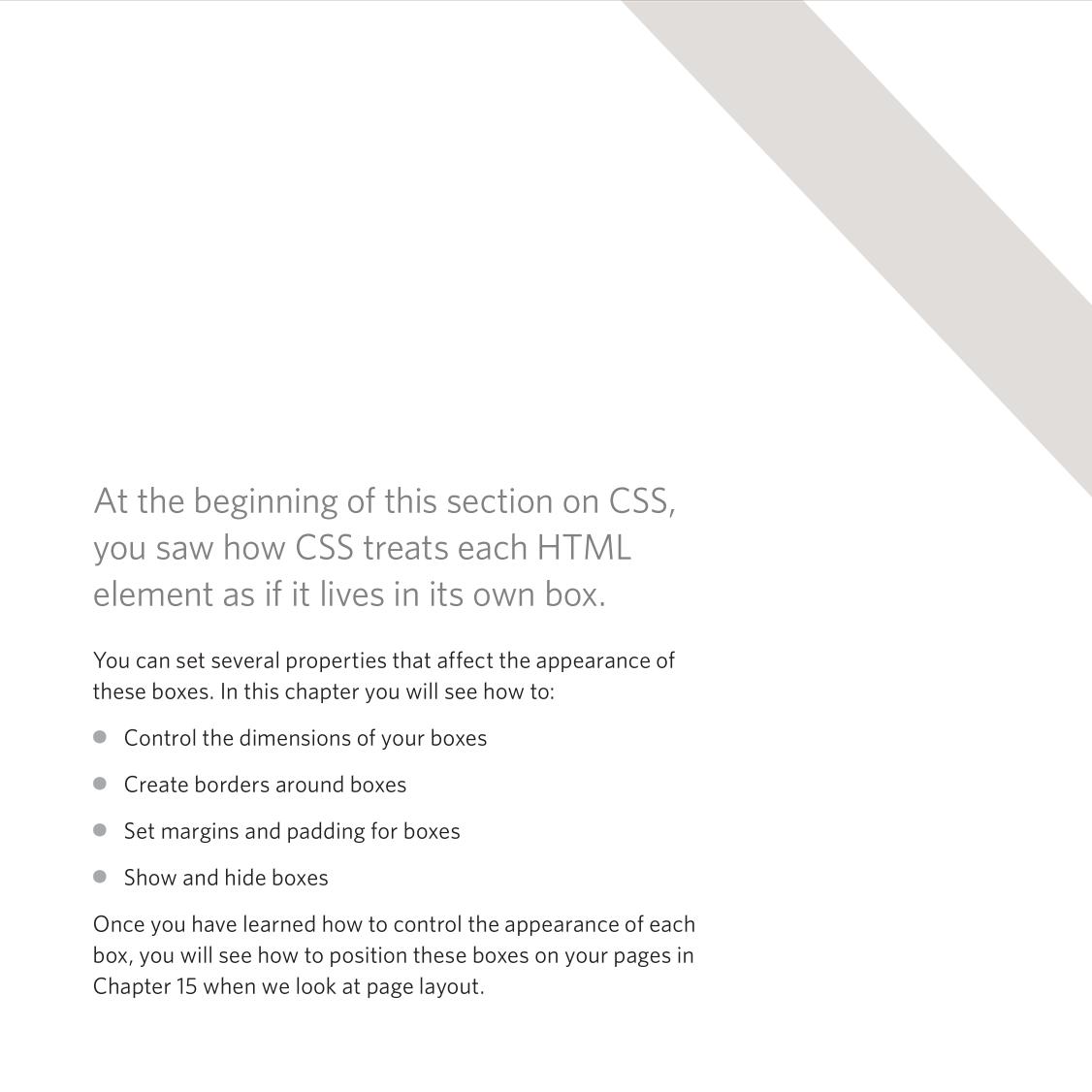


13

BOXES

- ▶ Controlling size of boxes
- ▶ Box model for borders, margin and padding
- ▶ Displaying and hiding boxes



At the beginning of this section on CSS, you saw how CSS treats each HTML element as if it lives in its own box.

You can set several properties that affect the appearance of these boxes. In this chapter you will see how to:

- Control the dimensions of your boxes
- Create borders around boxes
- Set margins and padding for boxes
- Show and hide boxes

Once you have learned how to control the appearance of each box, you will see how to position these boxes on your pages in Chapter 15 when we look at page layout.



BOX DIMENSIONS

width, height

By default a box is sized just big enough to hold its contents. To set your own dimensions for a box you can use the `height` and `width` properties.

The most popular ways to specify the size of a box are to use pixels, percentages, or ems. Traditionally, pixels have been the most popular method because they allow designers to accurately control their size.

When you use percentages, the size of the box is relative to the size of the browser window or, if the box is encased within another box, it is a percentage of the size of the containing box.

When you use ems, the size of the box is based on the size of text within it. Designers have recently started to use percentages and ems more for measurements as they try to create designs that are flexible across devices which have different-sized screens.

In the example on the right, you can see that a containing `<div>` element is used which is 300 pixels wide by 300 pixels high. Inside of this is a paragraph that is 75% of the width and height of the containing element. This means that the size of the paragraph is 225 pixels wide by 225 pixels high.

chapter-13/width-height.html

HTML

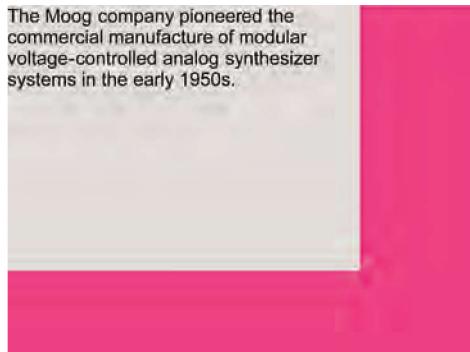
```
<div>
  <p>The Moog company pioneered the commercial
  manufacture of modular voltage-controlled
  analog synthesizer systems in the early
  1950s.</p>
</div>
```

CSS

```
div.box {
  height: 300px;
  width: 300px;
  background-color: #bbbbbaa;}
p {
  height: 75%;
  width: 75%;
  background-color: #0088dd;}
```

RESULT

The Moog company pioneered the commercial manufacture of modular voltage-controlled analog synthesizer systems in the early 1950s.



LIMITING WIDTH

min-width, max-width

HTML

chapter-13/min-width-max-width.html

```
<tr>
  <td></td>
  <td class="description">The Rhodes piano is an
    electro-mechanical piano, invented by Harold
    Rhodes during the fifties and later
    manufactured in a number of models ...</td>
  <td>$1400</td>
</tr>
```

CSS

```
td.description {
  min-width: 450px;
  max-width: 650px;
  text-align: left;
  padding: 5px;
  margin: 0px;}
```

RESULT

Photo	Description	Price
	The Rhodes piano is an electro-mechanical piano, invented by Harold Rhodes during the fifties and later manufactured in a number of models, first in collaboration with Fender and after 1965 by CBS. It employs a piano-like keyboard with hammers that hit small metal tines, amplified by electromagnetic pickups.	\$1400
	The Wurlitzer electric piano is an electro-mechanical piano, created by the Rudolph Wurlitzer Company of Mississippi. The Wurlitzer company itself never called the instrument an "electric piano", instead inventing the phrase "Electronic Piano" and using this as a trademark throughout the production of the instrument. It employs a piano-like keyboard with hammers that hit small metal tines, amplified by electromagnetic pickups.	\$1600
	A Clavinet is an electronically amplified clavichord manufactured by the Hohner company. Each key uses a rubber tip to perform a hammer on a string. Its distinctive bright staccato sound is often compared to that of an electric guitar. Various models were produced over the years, including the models I, II, L, C, D6, and E7.	\$1200

Some page designs expand and shrink to fit the size of the user's screen. In such designs, the `min-width` property specifies the smallest size a box can be displayed at when the browser window is narrow, and the `max-width` property indicates the maximum width a box can stretch to when the browser window is wide.

These are very helpful properties to ensure that the content of pages are legible (especially on the smaller screens of handheld devices). For example, you can use the `max-width` property to ensure that lines of text do not appear too wide within a big browser window and you can use the `min-width` property to make sure that they do not appear too narrow.

You may find it helpful to try this example out in your browser so that you can see what happens when you increase or decrease the size of the browser window.

Please note that these properties were first supported in IE7 and Firefox 2 so they will not work in older versions of these browsers.

LIMITING HEIGHT

min-height, max-height

In the same way that you might want to limit the width of a box on a page, you may also want to limit the height of it. This is achieved using the `min-height` and `max-height` properties.

The example on this page demonstrates these properties in action. It also shows you what happens when the content of the box takes up more space than the size specified for the box.

If the box is not big enough to hold the content, and the content expands outside the box it can look very messy. To control what happens when there is not enough space for the content of a box, you can use the `overflow` property, which is discussed on the next page.

chapter-13/min-height-max-height.html

HTML

```
<h2>Fender Mustang</h2>
<p>The Fender Mustang was introduced in 1964 as the basis of a major redesign of Fender's ...</p>
<h2>Fender Stratocaster</h2>
<p>The Fender Stratocaster or "Strat" is one of the most popular electric guitars of all time ...</p>
<h2>Gibson Les Paul</h2>
<p>The Gibson Les Paul is a solid body electric guitar that was first sold in 1952 ...</p>
```

CSS

```
h2, p {
    width: 400px;
    font-size: 90%;
    line-height: 1.2em;}
h2 {
    color: #0088dd;
    border-bottom: 1px solid #0088dd;}
p {
    min-height: 10px;
    max-height: 30px;}
```

Fender Mustang

RESULT

The Fender Mustang was introduced in 1964 as the basis of a major redesign of Fender's student models then consisting of the Musicmaster and Duo-Sonic. It was originally popular in sixties surf music and attained cult status in the 1990s largely as a result of its use by a number of alternative rock bands. The Fender Stratocaster or "Strat" is one of the most popular electric guitars of all time, and its design has been copied by many guitar makers. It was designed by Leo Fender, George Fullerton and Freddie Tavares in 1954.

The Gibson Les Paul is a solid body electric guitar that was first sold in 1952. The Les Paul was designed by Ted McCarty in collaboration with popular guitarist Les Paul, whom Gibson enlisted to endorse the new model. It is one of the most well-known electric guitar types in the world.

OVERFLOWING CONTENT

overflow

HTML

chapter-13/overflow.html

```
<h2>Fender Stratocaster</h2>
<p class="one">The Fender Stratocaster or "Strat" is one of the most popular electric guitars of all time, and its design has been copied by many guitar makers. It was designed by Leo... </p>
<h2>Gibson Les Paul</h2>
<p class="two">The Gibson Les Paul is a solid body electric guitar that was first sold in 1952. The Les Paul was designed by Ted McCarty... </p>
```

CSS

```
p.one {
  overflow: hidden;}
p.two {
  overflow: scroll;}
```

RESULT

Fender Stratocaster

The Fender Stratocaster or "Strat" is one of the most popular electric guitars of all time, and its design has been copied by many guitar makers.

Gibson Les Paul

The Gibson Les Paul is a solid body electric guitar that was first sold in 1952. The Les Paul was designed by

The `overflow` property tells the browser what to do if the content contained within a box is larger than the box itself. It can have one of two values:

hidden

This property simply hides any extra content that does not fit in the box.

scroll

This property adds a scrollbar to the box so that users can scroll to see the missing content.

On the left, you can see two boxes whose contents expand beyond their set dimensions. The first example has the `overflow` property with a value of `hidden`. The second example has the `overflow` property with a value of `scroll`.

The `overflow` property is particularly handy because some browsers allow users to adjust the size of the text to appear as large or as small as they want. If the text is set too large then the page can become an unreadable mess. Hiding the overflow on such boxes helps prevent items overlapping on the page.

BORDER, MARGIN & PADDING

Every box has three available properties that can be adjusted to control its appearance:

1

BORDER

Every box has a border (even if it is not visible or is specified to be 0 pixels wide). The border separates the edge of one box from another.

2

MARGIN

Margins sit outside the edge of the border. You can set the width of a margin to create a gap between the borders of two adjacent boxes.

3

PADDING

Padding is the space between the border of a box and any content contained within it. Adding padding can increase the readability of its contents.

If you specify a width for a box, then the borders, margin, and padding are added to its width and height.



WHITE SPACE & VERTICAL MARGIN

**WITH
MARGIN & PADDING**

Moog

Moog synthesisers were created by Dr. Robert Moog under the company name Moog Music. Popular models include the Moog Modular, Minimoog, Micromoog, Moog Rogue, and Moog Source.

ARP

ARP Instruments Inc. was set up by Alan Peralman, and was the main competitor for Moog during the 1970's. Popular models include the Arp 2600 and the ARP Odyssey.

Sequential Circuits

Sequential Circuits Inc was founded by Dave Smith, and the company was pivotal in the creation of MIDI. Famous models include the Prophet 5, Prophet 600, and Pro-One.

**WITHOUT
MARGIN & PADDING**

Moog

Moog synthesisers were created by Dr. Robert Moog under the company name Moog Music. Popular models include the Moog Modular, Minimoog, Micromoog, Moog Rogue, and Moog Source.

ARP

ARP Instruments Inc. was set up by Alan Peralman, and was the main competitor for Moog during the 1970's. Popular models include the Arp 2600 and the ARP Odyssey.

Sequential Circuits

Sequential Circuits Inc was founded by Dave Smith, and the company was pivotal in the creation of MIDI. Famous models include the Prophet 5, Prophet 600, and Pro-One.

Designers refer to the space between items on a page as **white space**. Imagine you had a border around a box. You would not want the text to touch this border or it would become harder to read.

Or, imagine you had two boxes sitting side by side (each with a black border). You would not necessarily want the boxes to touch edges as this would make the line look twice as thick on the facing sides.

The padding and margin properties are very helpful in adding space between various items on the page.

If the bottom margin of any box touches the top margin of another, the browser will render it differently than you might expect. It will only show the larger of the two margins. If both margins are the same size, it will only show one.

BORDER WIDTH

border-width

The border-width property is used to control the width of a border. The value of this property can either be given in pixels or using one of the following values:

thin
medium
thick

(You cannot use percentages with this property.)

You can control the individual size of borders using four separate properties:

border-top-width
border-right-width
border-bottom-width
border-left-width

You can also specify different widths for the four border values in one property, like so:

border-width: 2px 1px 1px 2px;

The values here appear in clockwise order: top, right, bottom, left.

chapter-13/border-width.html

HTML

```
<p class="one">Hohner's "Clavinet" is essentially an electric clavichord.</p>
<p class="two">Hohner's "Clavinet" is essentially an electric clavichord.</p>
<p class="three">Hohner's "Clavinet" is essentially an electric clavichord.</p>
```

CSS

```
p.one {
  border-width: 2px;
}
p.two {
  border-width: thick;
}
p.three {
  border-width: 1px 4px 12px 4px;}
```

RESULT

Hohner's "Clavinet" is essentially an electric clavichord.

Hohner's "Clavinet" is essentially an electric clavichord.

Hohner's "Clavinet" is essentially an electric clavichord.

BORDER STYLE

border-style

HTML

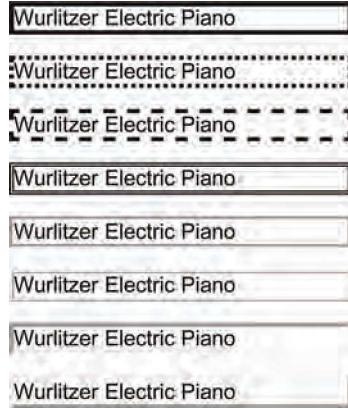
chapter-13/border-style.html

```
<p class="one">Wurlitzer Electric Piano</p>
<p class="two">Wurlitzer Electric Piano</p>
<p class="three">Wurlitzer Electric Piano</p>
<p class="four">Wurlitzer Electric Piano</p>
<p class="five">Wurlitzer Electric Piano</p>
<p class="six">Wurlitzer Electric Piano</p>
<p class="seven">Wurlitzer Electric Piano</p>
<p class="eight">Wurlitzer Electric Piano</p>
```

CSS

```
p.one {border-style: solid;}
p.two {border-style: dotted;}
p.three {border-style: dashed;}
p.four {border-style: double;}
p.five {border-style: groove;}
p.six {border-style: ridge;}
p.seven {border-style: inset;}
p.eight {border-style: outset;}
```

RESULT



You can control the style of a border using the `border-style` property. This property can take the following values:

solid a single solid line

dotted a series of square dots (if your border is 2px wide, then the dots are 2px squared with a 2px gap between each dot)

dashed a series of short lines

double two solid lines (the value of the `border-width` property creates the sum of the two lines)

groove appears to be carved into the page

ridge appears to stick out from the page

inset appears embedded into the page

outset looks like it is coming out of the screen

hidden / none no border is shown

You can individually change the styles of different borders using:
`border-top-style`
`border-left-style`
`border-right-style`
`border-bottom-style`

BORDER COLOR

border-color

You can specify the color of a border using either RGB values, hex codes or CSS color names (as you saw on pages 251-252).

It is possible to individually control the colors of the borders on different sides of a box using:

```
border-top-color  
border-right-color  
border-bottom-color  
border-left-color
```

It is also possible to use a shorthand to control all four border colors in the one property:

```
border-color: darkcyan  
deppink darkcyan  
deppink;
```

The values here appear in clockwise order: top, right, bottom, left.

You could also use HSL values to specify the color as shown on pages 255-256. However, these were only introduced in CSS3 and will not work in older browsers.

chapter-13/border-color.html

HTML

```
<p class="one">The ARP Odyssey was introduced in  
1972.</p>  
<p class="two">The ARP Odyssey was introduced in  
1972.</p>
```

CSS

```
p.one {  
    border-color: #0088dd;}  
p.two {  
    border-color: #bbbbbaa #111111 #ee3e80 #0088dd;}
```

RESULT

The ARP Odyssey was
introduced in 1972.

The ARP Odyssey was
introduced in 1972.

SHORTHAND border

HTML

chapter-13/border-shorthand.html

```
<p>Here is a simple chord sequence played on a  
Hammond organ through a Leslie speaker.</p>
```

The border property allows you to specify the width, style and color of a border in one property (and the values should be coded in that specific order).

CSS

```
p {  
    width: 250px;  
    border: 3px dotted #0088dd;}
```

RESULT

Here is a simple chord sequence
played on a Hammond organ
through a Leslie speaker.

PADDING

padding

The padding property allows you to specify how much space should appear between the content of an element and its border.

The value of this property is most often specified in pixels (although it is also possible to use percentages or ems). If a percentage is used, the padding is a percentage of the browser window (or of the containing box if it is inside another box).

Please note: If a width is specified for a box, padding is added onto the width of the box.

As you can see, the second paragraph here is much easier to read because there is a space between the text and the border of the box. The box is also wider because it has padding.

You can specify different values for each side of a box using:

`padding-top
padding-right
padding-bottom
padding-left`

Or you can use a shorthand (where the values are in clockwise order: top, right, bottom, left):

`padding: 10px 5px 3px 1px;`

chapter-13/padding.html

HTML

```
<p>Analog synths produce a wave sound, whereas the  
sounds stored on a digital synth have been  
sampled and then turned into numbers.</p>  
<p class="example">Analog synths produce a wave  
sound, whereas the sounds stored on a digital  
synth have been sampled and then ... </p>
```

CSS

```
p {  
width: 275px;  
border: 2px solid #0088dd;}  
.example {  
padding: 10px;}
```

RESULT

Analog synths produce a wave sound,
whereas the sounds stored on a digital
synth have been sampled and then
turned into numbers.

Analog synths produce a wave sound,
whereas the sounds stored on a digital
synth have been sampled and then
turned into numbers.

MARGIN

margin

HTML

chapter-13/margin.html

```
<p>Analog synthesizers are often said to have a  
"warmer" sound than their digital counterparts.  
</p>  
<p class="example">Analog synthesizers are often  
said to have a "warmer" sound than their digital  
counterparts.</p>
```

CSS

```
p {  
    width: 200px;  
    border: 2px solid #0088dd;  
    padding: 10px;}  
p.example {  
    margin: 20px;}
```

RESULT

Analog synthesizers are
often said to have a
"warmer" sound than their
digital counterparts.

Analog synthesizers are
often said to have a
"warmer" sound than their
digital counterparts.

The value of the `margin` property is not inherited by child elements in the same way that the `color` value of the `font-family` property is, so you need to specify the `margin` for every element that needs to use it.

Up until Internet Explorer 6, the width of the box would include the padding and margins. You can see more about this on page 316.

The `margin` property controls the gap between boxes. Its value is commonly given in pixels, although you may also use percentages or ems.

If one box sits on top of another, margins are collapsed, which means the larger of the two margins will be used and the smaller will be disregarded.

Please note: If the width of a box is specified then the margin is added to the width of the box.

You can specify values for each side of a box using:

`margin-top`
`margin-right`
`margin-bottom`
`margin-left`

You can also use the shorthand (where the values are in clockwise order: top, right, bottom, left):

`margin: 1px 2px 3px 4px;`

Sometimes you might see the following, which means that the left and right margins should be 10 pixels and the top and bottom margins should be 20 pixels:
`margin: 10px 20px;`

(This same shorthand shown above can also be applied to padding.)

CENTERING CONTENT

If you want to center a box on the page (or center it inside the element that it sits in), you can set the `left-margin` and `right-margin` to `auto`.

In order to center a box on the page, you need to set a `width` for the box (otherwise it will take up the full width of the page).

Once you have specified the width of the box, setting the left and right margins to `auto` will make the browser put an equal gap on each side of the box. This centers the box on the page (or within the element that the box sits inside).

In order for this to work in older browsers (particularly IE6), the element that the box sits inside should have a `text-align` property with its value set to center.

The `text-align` property is inherited by child elements. You therefore also need to specify the `text-align` property on the centered box if you do not want the text inside it to be centered.

chapter-13/centering-content.html

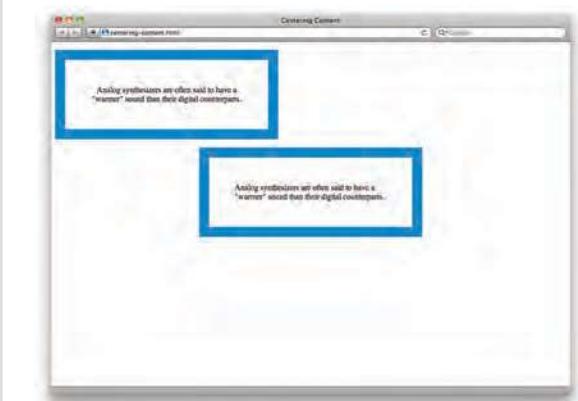
HTML

```
<body>
  <p>Analog synthesizers are often said to have a
     "warmer" sound than their digital
     counterparts.</p>
  <p class="example">Analog synthesizers are often
     said to have a "warmer" sound than their
     digital counterparts.</p>
</body>
```

CSS

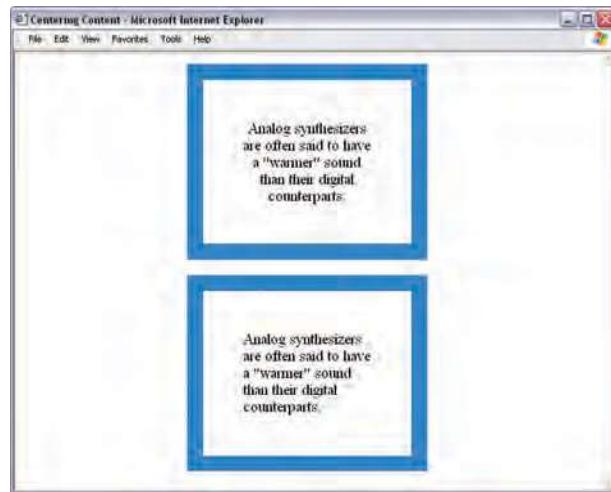
```
body {
  text-align: center;}
p {
  width: 300px;
  padding: 50px;
  border: 20px solid #0088dd;}
p.example {
  margin: 10px auto 10px auto;
  text-align: left;}
```

RESULT

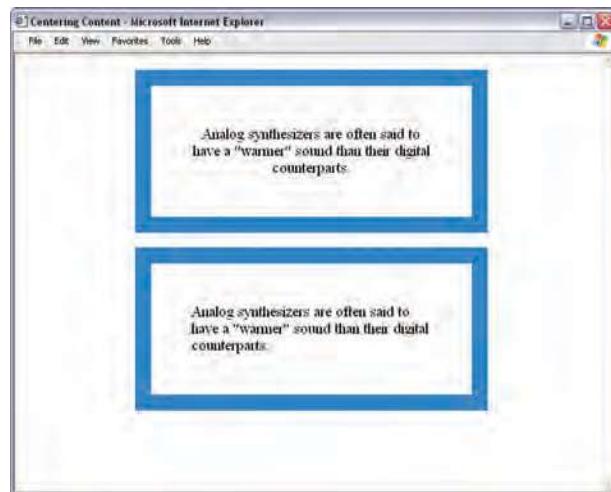


IE6 BOX MODEL

RESULT IN IE6 WITHOUT DOCTYPE



RESULT IN IE6 WITH DOCTYPE



When you specify the width of a box, any padding or margin should be added to the width of it. Internet Explorer 6, however, has a quirk whereby it includes the padding and margins in the width of the box.

The way around this is to ensure that you provide a DOCTYPE declaration for the HTML page. (DOCTYPE declarations were covered on page 181.) You can use either the HTML5, HTML 4 strict, or HTML 4 transitional DOCTYPE declarations to ensure that IE6 follows the correct box model.

To demonstrate this, you can see the example from the left hand page shown in IE6, first without a DOCTYPE declaration and then again with the HTML5 DOCTYPE declaration.

CHANGE INLINE/BLOCK display

The `display` property allows you to turn an inline element into a block-level element or vice versa, and can also be used to hide an element from the page.

The values this property can take are:

inline

This causes a block-level element to act like an inline element.

block

This causes an inline element to act like a block-level element.

inline-block

This causes a block-level element to flow like an inline element, while retaining other features of a block-level element.

none

This hides an element from the page. In this case, the element acts as though it is not on the page at all (although a user could still see the content of the box if they used the **view source** option in their browser).

If you use this property, it is important to note that inline boxes are **not** supposed to create block-level elements.

chapter-13/display.html

HTML

```
<ul>
  <li>Home</li>
  <li>Products</li>
  <li class="coming-soon">Services</li>
  <li>About</li>
  <li>Contact</li>
</ul>
```

CSS

```
li {
  display: inline;
  margin-right: 10px;}
li.coming-soon {
  display: none;}
```

RESULT

Home Products About Contact

In this example you can see a list. Each item in the list is usually treated as a block-level element, but the rule for the `` elements indicates that they should be treated as inline elements, which means they will sit alongside each other rather than appearing on new lines.

This technique is often used to create navigation for a site, and in this example a margin has been added to the right of each of the items to separate them out. The rule that applies to the `` element whose `class` is `coming-soon` has been hidden as if it were not in the page at all.

HIDING BOXES

visibility

HTML

chapter-13/visibility.html

```
<ul>
  <li>Home</li>
  <li>Products</li>
  <li class="coming-soon">Services</li>
  <li>About</li>
  <li>Contact</li>
</ul>
```

CSS

```
li {
  display: inline;
  margin-right: 10px;}
li.coming-soon {
  visibility: hidden;}
```

RESULT

Home Products About Contact

The **visibility** property allows you to hide boxes from users but it leaves a space where the element would have been.

This property can take two values:

hidden

This hides the element.

visible

This shows the element.

If the **visibility** of an element is set to **hidden**, a blank space will appear in its place.

If you do not want a blank space to appear, then you should use the **display** property with a value of **none** instead (as covered on the previous page).

Please note that anyone can view the contents of any elements whose **visibility** property has been set to **hidden** by viewing the source in their browser.

CSS3: BORDER IMAGES

border-image

The border-image property applies an image to the border of any box. It takes a background image and slices it into nine pieces.

Here is the image. I have added marks where it is sliced in the example, taking 18 pixels from each corner to place an entire circle in each corner. The corner slices are always placed in the four corners of the box, but we have a choice whether the sides are stretched or repeated.



This property requires three pieces of information:

- 1: The URL of the image
- 2: Where to slice the image
- 3: What to do with the straight edges; the possible values are:
`stretch` stretches the image
`repeat` repeats the image
`round` like repeat but if the tiles do not fit exactly, scales the tile image so they will

The box must also have a border width for the image to be shown.

The `-moz-border-image` and `-webkit-border-image` properties are not in the CSS specification but help earlier versions of Chrome, Firefox, and Safari display this effect.

chapter-13/border-image.html

HTML

```
<p class="one"></p>
<p class="two"></p>
<p class="three"></p>
```

```
p.one {
  -moz-border-image: url("images/dots.gif")
    11 11 11 11 stretch;
  -webkit-border-image: url("images/dots.gif")
    11 11 11 11 stretch;
  border-image: url("images/dots.gif")
    11 11 11 11 stretch;}
p.two {
  -moz-border-image: url("images/dots.gif")
    11 11 11 11 round;
  -webkit-border-image: url("images/dots.gif")
    11 11 11 11 round;
  border-image: url("images/dots.gif")
    11 11 11 11 round;}
```

RESULT



CSS3: BOX SHADOWS

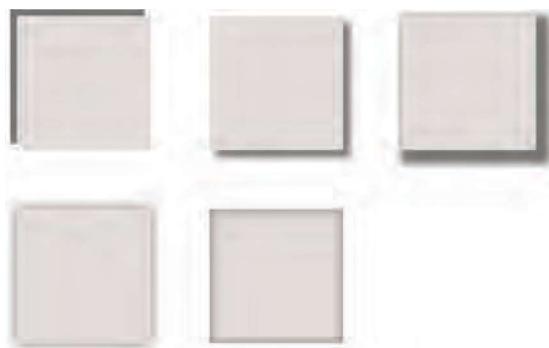
box-shadow

CSS

chapter-13/box-shadow.html

```
p.one {  
  -moz-box-shadow: -5px -5px #777777;  
  -webkit-box-shadow: -5px -5px #777777;  
  box-shadow: -5px -5px #777777;}  
  
p.two {  
  -moz-box-shadow: 5px 5px 5px #777777;  
  -webkit-box-shadow: 5px 5px 5px #777777;  
  box-shadow: 5px 5px 5px #777777;}  
  
p.three {  
  -moz-box-shadow: 5px 5px 5px 5px #777777;  
  -webkit-box-shadow: 5px 5px 5px 5px #777777;  
  box-shadow: 5px 5px 5px 5px #777777;}  
  
p.four {  
  -moz-box-shadow: 0 0 10px #777777;  
  -webkit-box-shadow: 0 0 10px #777777;  
  box-shadow: 0 0 10px #777777;}  
  
p.five {  
  -moz-box-shadow: inset 0 0 10px #777777;  
  -webkit-box-shadow: inset 0 0 10px #777777;  
  box-shadow: inset 0 0 10px #777777;}
```

RESULT



The `box-shadow` property allows you to add a drop shadow around a box. It works just like the `text-shadow` property that you met on page 288. It must use at least the first of these two values as well as a color:

HORIZONTAL OFFSET

Negative values position the shadow to the left of the box.

VERTICAL OFFSET

Negative values position the shadow to the top of the box.

BLUR DISTANCE

If omitted, the shadow is a solid line like a border.

SPREAD OF SHADOW

If used, a positive value will cause the shadow to expand in all directions, and a negative value will make it contract.

The `inset` keyword can also be used before these values to create an inner-shadow.

Chrome, Firefox, and Safari were quick to support this property using the `-moz-box-shadow` and `-webkit-box-shadow` properties. These are not in the CSS specification but using them can help this style to work in these browsers.

CSS3: ROUNDED CORNERS

border-radius

CSS3 introduces the ability to create rounded corners on any box, using a property called `border-radius`. The value indicates the size of the radius in pixels.

Older browsers that do not support this property will show a box with right-angled corners.

The `-moz-border-radius` and `-webkit-border-radius` properties are not in the CSS specification. However, they are used in some versions of Chrome, Firefox, and Safari to offer early support for this style (and therefore can be used to achieve this effect in more browsers).

You can specify individual values for each corner of a box using:

```
border-top-right-radius  
border-bottom-right-radius  
border-bottom-left-radius  
border-top-left-radius
```

You can also use a shorthand of these four properties (in clockwise order: top, right, bottom, left). For example:

```
border-radius: 5px, 10px,  
5px, 10px;
```

chapter-13/border-radius.html

HTML

```
<p>Pet Sounds featured a number of unconventional  
instruments such as bicycle bells, buzzing  
organs, harpsichords, flutes, Electro-Theremin,  
dog whistles, trains, Hawaiian-sounding string  
instruments, Coca-Cola cans and barking dogs.</p>
```

CSS

```
p {  
border: 5px solid #cccccc;  
padding: 20px;  
width: 275px;  
text-align: center;  
border-radius: 10px;  
-moz-border-radius: 10px;  
-webkit-border-radius: 10px;}
```

RESULT

Pet Sounds featured a number of unconventional instruments such as bicycle bells, buzzing organs, harpsichords, flutes, Electro-Theremin, dog whistles, trains, Hawaiian-sounding string instruments, Coca-Cola cans and barking dogs.

CSS3: ELLIPTICAL SHAPES

border-radius

HTML

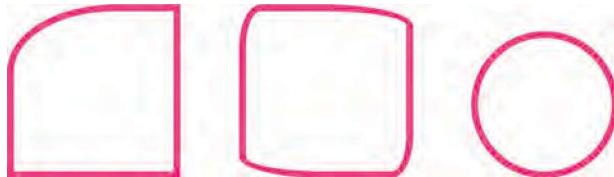
chapter-13/elliptical-shapes.html

```
<p class="one"></p>
<p class="two"></p>
<p class="three"></p>
```

CSS

```
p.one {
  border-top-left-radius: 80px 50px;
  -moz-border-radius-top-left: 80px 50px;
  -webkit-border-radius-top-left: 80px 50px;}
p.two {
  border-radius: 1em 4em 1em 4em / 2em 1em 2em 1em;
  -moz-border-radius: 1em 4em 1em 4em
    / 2em 1em 2em 1em;
  -webkit-border-radius: 1em 4em 1em 4em
    / 2em 1em 2em 1em;}
p.three {
  padding: 0px;
  border-radius: 100px;
  -moz-border-radius: 100px;
  -webkit-border-radius: 100px;}
```

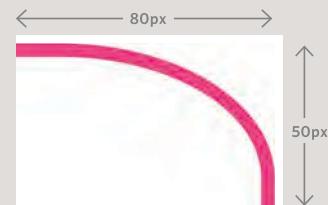
RESULT



To create more complex shapes, you can specify different distances for the horizontal and the vertical parts of the rounded corners.

For example, this will create a radius that is wider than it is tall:

`border-radius: 80px 50px;`

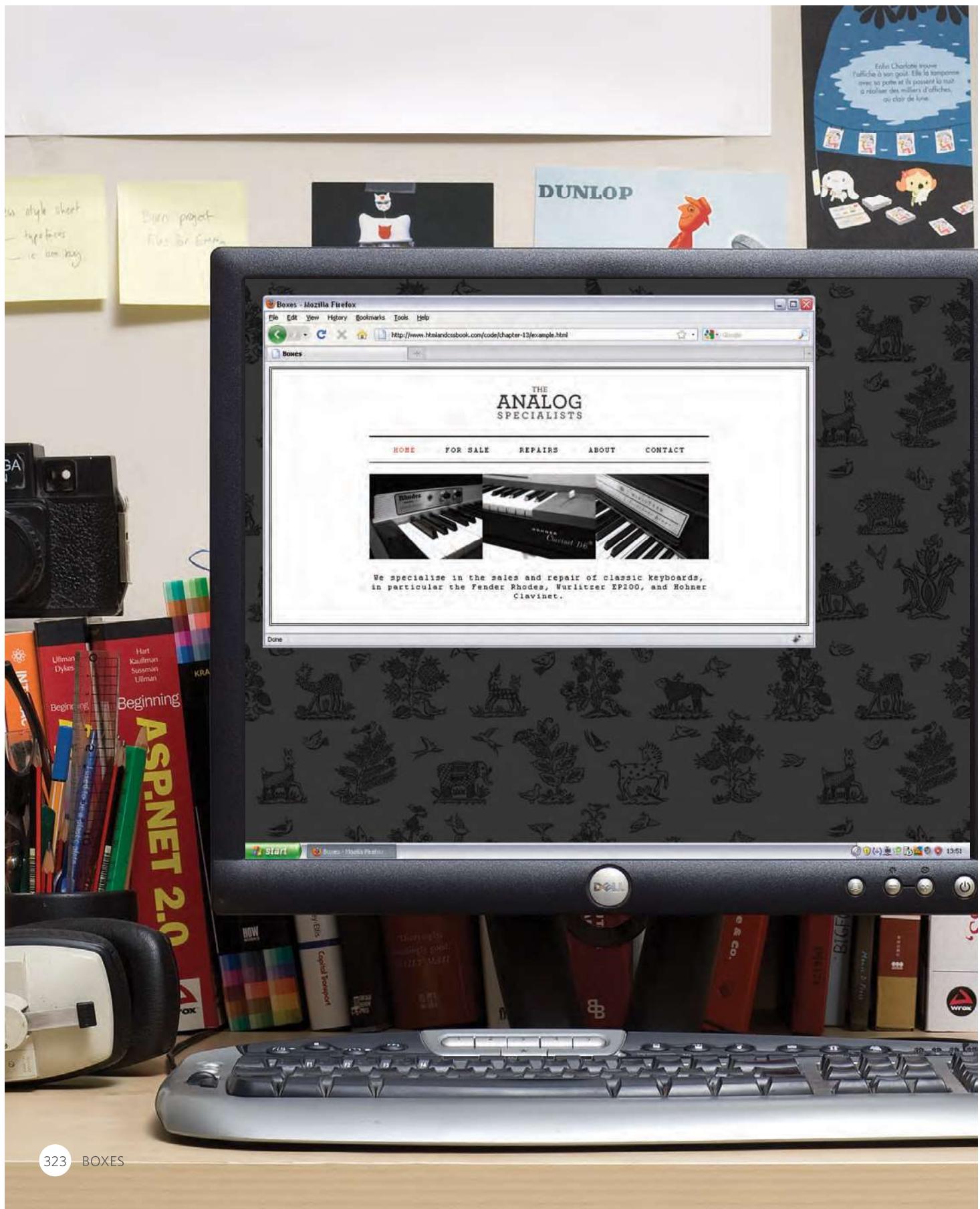


You can target just one corner using the individual properties for that corner:

`border-top-left-radius: 80px 50px;`

There is also a shorthand for targeting all four corners at once; first you specify the four horizontal values, then the four vertical values, as shown in the second shape on the left.

You can even create a circle by taking a square box and making the `border-radius` the same height as the square, as shown in the third shape on the left.



EXAMPLE BOXES

In this example, you can see a simple homepage for a music shop.

The whole page sits inside a `<div>` element with an `id` of `page`. This is centered using the `margin` property, with a value of `auto` for the left and right margins. The logo and other content are centered using this same technique.

The main `<div>` has a double-lined border around it, and the size of this box will expand and contract if the browser window is resized. To prevent the page from becoming too narrow or too wide, the `min-width` and `max-width` properties are used.

The navigation is created using an unordered list. There are borders set to the top and bottom of this list to make it stand out. The `display` property has been applied to each of the items in the list so they behave like inline (rather than block-level) elements. This enables the navigation links to sit next to each other horizontally. The `padding` property has been used to create space between each of the links.

The `width` property for the `` element is set to 570 pixels, and the `width` property for the `<p>` elements beneath them is set to 600 pixels. They actually end up the same width as each other because the `` element also uses padding to create a gap between the border of the box it creates and the links inside of it, and any padding, borders, or margins are added to the width and height of the box.

If we had not included a DOCTYPE declaration at the start of this page, the sizes of the boxes would be different to each other in Internet Explorer 6 because this browser did not implement the box model in the correct way.



EXAMPLE

BOXES

```
<!DOCTYPE html>
<html>
  <head>
    <title>Boxes</title>
    <style type="text/css">
      body {
        font-size: 80%;
        font-family: "Courier New", Courier, monospace;
        letter-spacing: 0.15em;
        background-color: #efefef;}
      #page {
        max-width: 940px;
        min-width: 720px;
        margin: 10px auto 10px auto;
        padding: 20px;
        border: 4px double #000;
        background-color: #ffffff;}
      #logo {
        width: 150px;
        margin: 10px auto 25px auto;}
      ul {
        width: 570px;
        padding: 15px;
        margin: 0px auto 0px auto;
        border-top: 2px solid #000;
        border-bottom: 1px solid #000;
        text-align: center;}
      li {
        display: inline;
        margin: 0px 3px;}
      p {
        text-align: center;
        width: 600px;
        margin: 20px auto 20px auto;
        font-weight: normal;}
```

EXAMPLE BOXES

```
a {  
    color: #000000;  
    text-transform: uppercase;  
    text-decoration: none;  
    padding: 6px 18px 5px 18px;}  
a:hover, a.on {  
    color: #cc3333;  
    background-color: #ffffff;}  
</style>  
</head>  
<body>  
    <div id="page">  
        <div id="logo">  
              
        </div>  
        <ul id="navigation">  
            <li><a href="#" class="on">Home</a></li>  
            <li><a href="#">For Sale</a></li>  
            <li><a href="#">Repairs</a></li>  
            <li><a href="#">About</a></li>  
            <li><a href="#">Contact</a></li>  
        </ul>  
        <p>  
              
        </p>  
        <p>  
            We specialise in the sales and repair of classic keyboards, in particular  
            the Fender Rhodes, Wurlitzer EP200, and Hohner Clavinet.  
        </p>  
    </div>  
</body>  
</html>
```



SUMMARY BOXES

- ▶ CSS treats each HTML element as if it has its own box.
- ▶ You can use CSS to control the dimensions of a box.
- ▶ You can also control the borders, margin and padding for each box with CSS.
- ▶ It is possible to hide elements using the display and visibility properties.
- ▶ Block-level boxes can be made into inline boxes, and inline boxes made into block-level boxes.
- ▶ Legibility can be improved by controlling the width of boxes containing text and the leading.
- ▶ CSS3 has introduced the ability to create image borders and rounded borders.

