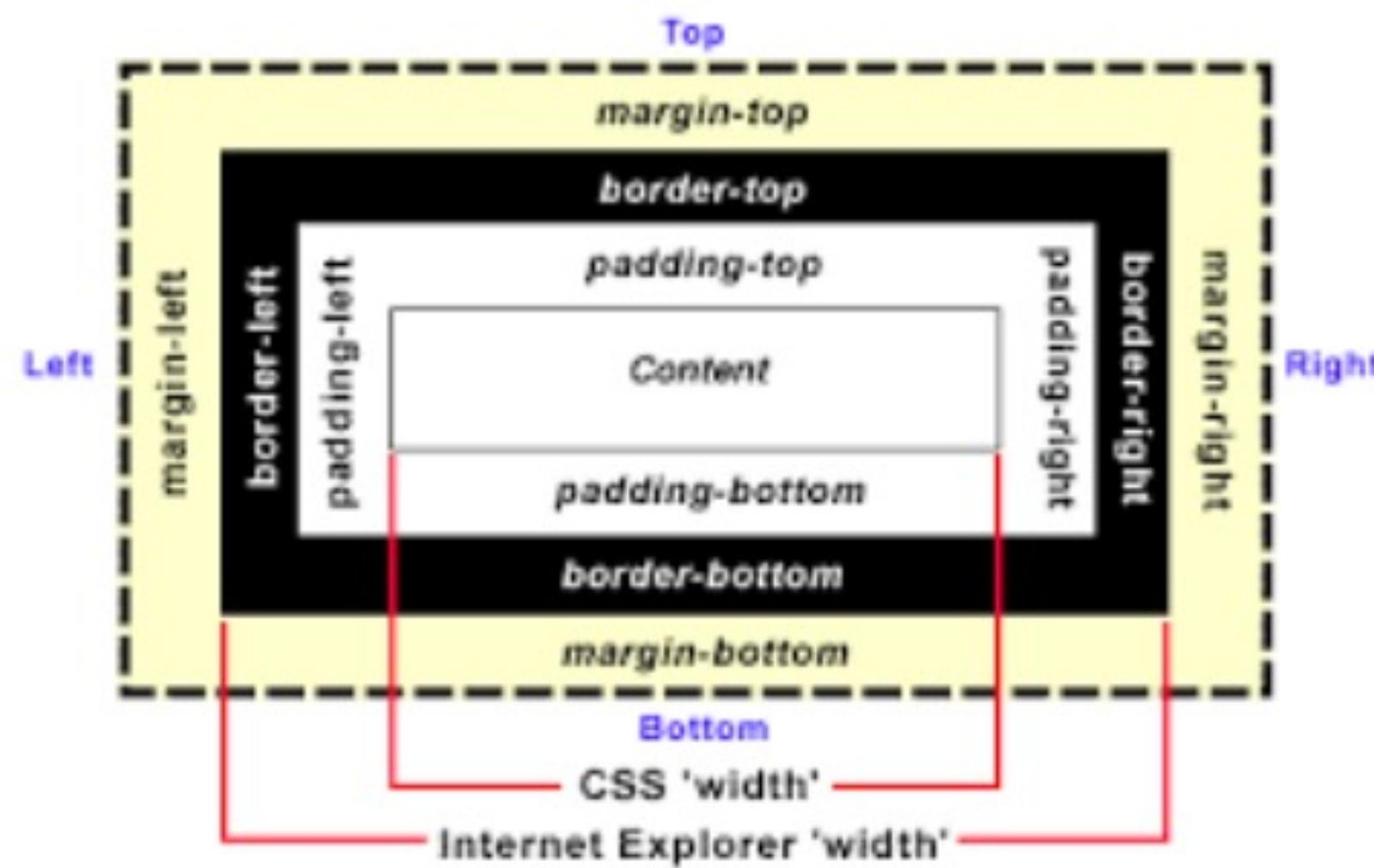


# Box Model Fundamentals



content · padding · border ·  
margin · variations · fonts ·  
dimensions

# Agenda

- Box Model
  - Box Model: Content, Padding, Border & Margin
  - Background images
  - Border Styles, Width, Colour



## Welcome to the App Bundle Store

This store brings you *great app bundles* week after week. We select the best power user apps from a broad range of suppliers and combine them into great deals. These are the highest quality apps from the best publishers, at great prices.

Whether you are interested in gaming or graphics design, software development or media production - we have the bundle for you. Each [app bundle](#) is designed to compliment the others, delivering you an exciting take on a scene.

Our guarantee: at the store, we're committed to providing you, with an exceptional quality and reliability. Every application is checked in detail for stability, usability and inter-operability. If you are unhappy with any individual app in a bundle we will refund you the full amount for the complete suite, no questions asked.

See our new [deals](#) page! - Every week we will introduce new exciting bundles at super low prices!

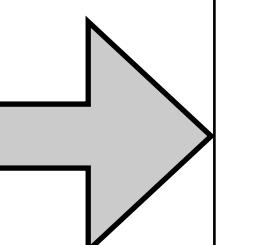
### Favourites

- Hype by Tumult
- Webstorm by Idea
- Sublime, by sublimetext.com
- Desktop Utility by Sweet Productions

To find how to locate our store, visit our [directions](#) page.

## Weekly Deals

### Business Bundle



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### Weekly Deals

#### Business Bundle



Here comes the next bundle for march. This time it's macware who publish a bundle. The so called macware Business Bundle contains 6 apps at a price of only \$29.99 instead of \$199.94. So you can save around 84%.

#### Insanity Deal



With the new \$5 Insanity Deals from Bundlehunt you receive every day a highly reduced app for \$5 only with savings up to 75%. Not a real bundle but, as there are multiple apps for only \$5 each, one new per day, for the days to come.

```
body {  
    font-family: Verdana, Helvetica, Arial, sans-serif;  
    font-size: small;  
    line-height: 1.6em;  
}  
  
h1, h2 {  
    color: #007e7e;  
    border-bottom: 1px solid black;  
}  
  
h1 {  
    font-size: 150%;  
}  
  
h2 {  
    font-size: 130%;  
}  
  
p {  
    color: maroon;  
}
```



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h2 {
    font-size: 130%;
}
```

```
p {
    color: maroon;
}
```

sit our [directions](#) page.



Here comes the next bundle for march. This time it's macware who publish a bundle. The so called

# line-height

- Increasing the line height of your text can improve readability. It also gives you another way to provide contrast between different parts of your page.

```
body {  
    font-size: small;  
    font-family: Verdana, Helvetica, Arial, sans-serif;  
    line-height: 1.6em;  
}
```

Here we're changing the space between each line to 1.6em, in other words, 1.6 times the font size.

- Fonts can be measured in absolute or relative terms:
- Absolute:
  - px - Pixels, absolute, screen oriented
  - pt - Points, absolute, print oriented
- Relative
  - em – 1em = the size of the elements “current” font
  - rem – 1 rem = the size of the
  - vw – 100 vw = the full width of the viewport
  - % - 100% = the size of the elements “current” font

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



# Head First Lounge

## Welcome to the Head First Lounge

The Head First Lounge is, no doubt, the biggest trendsetter in Webville. Stop in to sample the eclectic offering of elixirs, teas, and coffees, or, stay a bit longer and enjoy the multicultural culinary menu that combines a harmony of taste, texture, and color with the best in fresh and healthy ingredients.

During your stay at the lounge, you'll enjoy a smooth mixture of ambient and mystic sounds, filling the lounge and adding an extra dimension to your dining experience. The decor surrounds you with the relaxing sentiments of sights from eras past. And, don't forget, the lounge offers free wireless access to the Internet, so bring your laptop.

But that's not all; at night, join us in the backroom as our resident DJ spins a choice selection of trance and drum&bass beats across our spacious tiki-themed dance floor. Or just hang out in one of our comfy white vinyl booths at the dance bar. You can have your elixirs delivered from the main lounge right to the dance floor. If you've had enough of the beat, just head back to the lounge area to relax. And, no matter where you find yourself in the lounge, you'll always be connected with our wireless Internet access.

Now that you've experienced the lounge *virtually*, isn't it time to check us out *for real*? We're located right in the heart of Webville, and we've created some [detailed directions](#) to get you here in record time. No reservations necessary; come and join us anytime.

### 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 chai kick for a caffeinated ta

```
body {  
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    line-height: 1.6em;  
}
```



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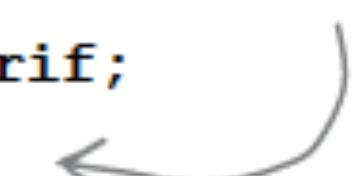


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The ultimate healthy drink, this elixir combines herbal botanicals, minerals, and vitamins with a

going all day

Here we're changing the space between each line to 1.6em, in other words, 1.6 times the font size.



# Relative vs Absolute

## Relative Dimensions

- Use relative units when you want your design to be flexible and adapt to different screen sizes.
- Ideal for responsive layouts where elements should scale proportionally.
- Helpful for accessibility, allowing text and other elements to scale based on user preferences.

## Absolute Dimensions:

- Use absolute units when you need precise control over the size of an element.
- Suitable for elements with fixed sizes, such as images or containers with specific layout requirements.
- Useful for print stylesheets where physical dimensions may be more relevant.

# Relative vs Absolute

Typically, a combination of both relative and absolute is used and really does depend on the content that is to be displayed.

There is rarely a very simple answer.



# Relative vs Absolute

Relative dimensions are typically used in the realm of responsive designs.....

Responsive web design (RWD) or responsive design is an approach to web design that aims to make web pages render well on a variety of devices and window or screen sizes from minimum to maximum display size to ensure usability and satisfaction

```
<!DOCTYPE html>
<html>
<head>
```

```
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" type="text/css" href="fonts.css">
    <title>Font Playground</title>
</head>
<body>
    <p>Hello, I have no font size set</p>
    <p class="forty">Hello, I am 40px <span class="halfem"> and I am .5em</span></p>
    <p class="forty">Hello, I am 40px <span class="onerem"> and I am .5rem</span></p>
    <p class="twenty">Hello, I am 20px <span> and I am 50 percent</span></p>
    <p class="oneem">Hello, I am 1em</p>
    <p class="halfem">Hello, I am .5 em</p>
    <p class="onerem">Hello, I am 1rem</p>
    <p class = "halfrem">Hello, I am .5 rem</p>
</body>
</html>
```

```
html {
    font-size: 10px;
}

.halfem {
    font-size: 0.5em;
}

.forty{
    font-size: 40px;
}

.twenty{
    font-size: 20px;
}

.oneem{
    font-size: 1em;
}

.onerem{
    font-size: 1rem;
}

.halfrem{
    font-size: 0.5rem;
}

.fiftypercent {
    font-size: 50%;
}

.tenvw {
    font-size: 10vw;
}
```

Hello, I am 40px and I am .5em

Hello, I am 40px and I am .5rem

Hello, I am 20px and I am 50 percent

Hello, I am 1em

Hello, I am .5 em

Hello, I am 1rem

Hello, I am .5 rem

Hello, I am 40 vw

# Are % and em the same?

- A lot of the time % and em behave the same

body { font-size: 100%; }	body { font-size: 120%; }
font-size: 1em	The quick brown fox
font-size: 12pt	The quick brown fox
font-size: 16px	The quick brown fox
font-size: 100%	The quick brown fox
	<b>The quick brown</b>

© KyleSchaeffer.com

- When the client's browser text size is set to "medium," there is no difference between ems and percent.
- When the setting is altered, however, the difference is quite large.
- On the "Smallest" setting, ems are much smaller than percent, and when on the "Largest" setting, it's quite the opposite, with ems displaying much larger than percent.  
While some could argue that the em units are scaling as they are truly intended
- In practical application, the em text scales too abruptly, with the smallest text becoming hardly legible on some client machines.

<https://kyleschaeffer.com/css-font-size-em-vs-px-vs-pt-vs-percent>

body = 1em	Text-Size: "Smallest"	Text-Size: "Largest"
font-size: 1em	The quick brown fox jumps over the lazy dog.	<b>The quick</b>
font-size: 100%	The quick brown fox jumps over the lazy dog.	<b>The quick br</b>

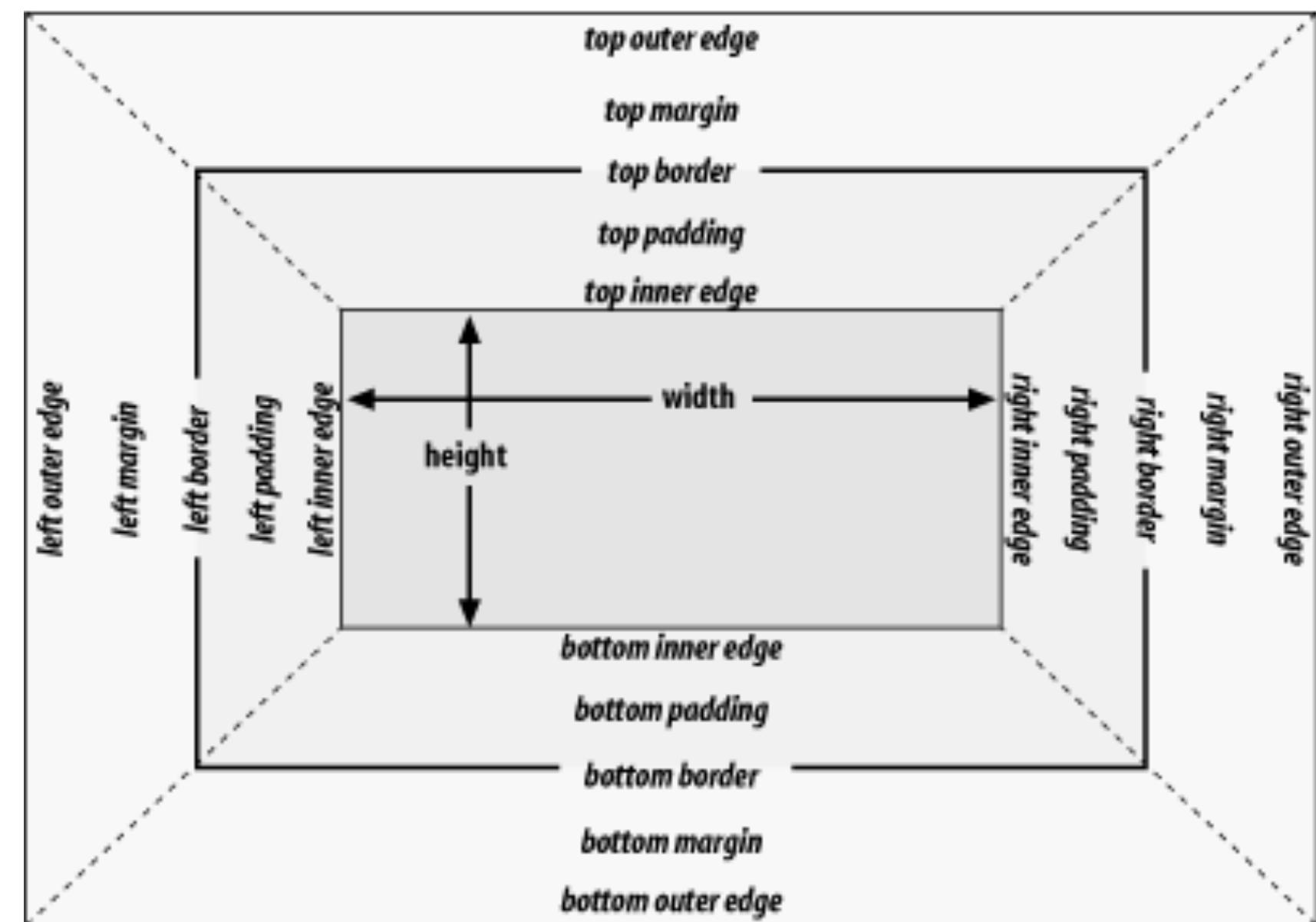
© KyleSchaeffer.com

Let confusion sink in.....

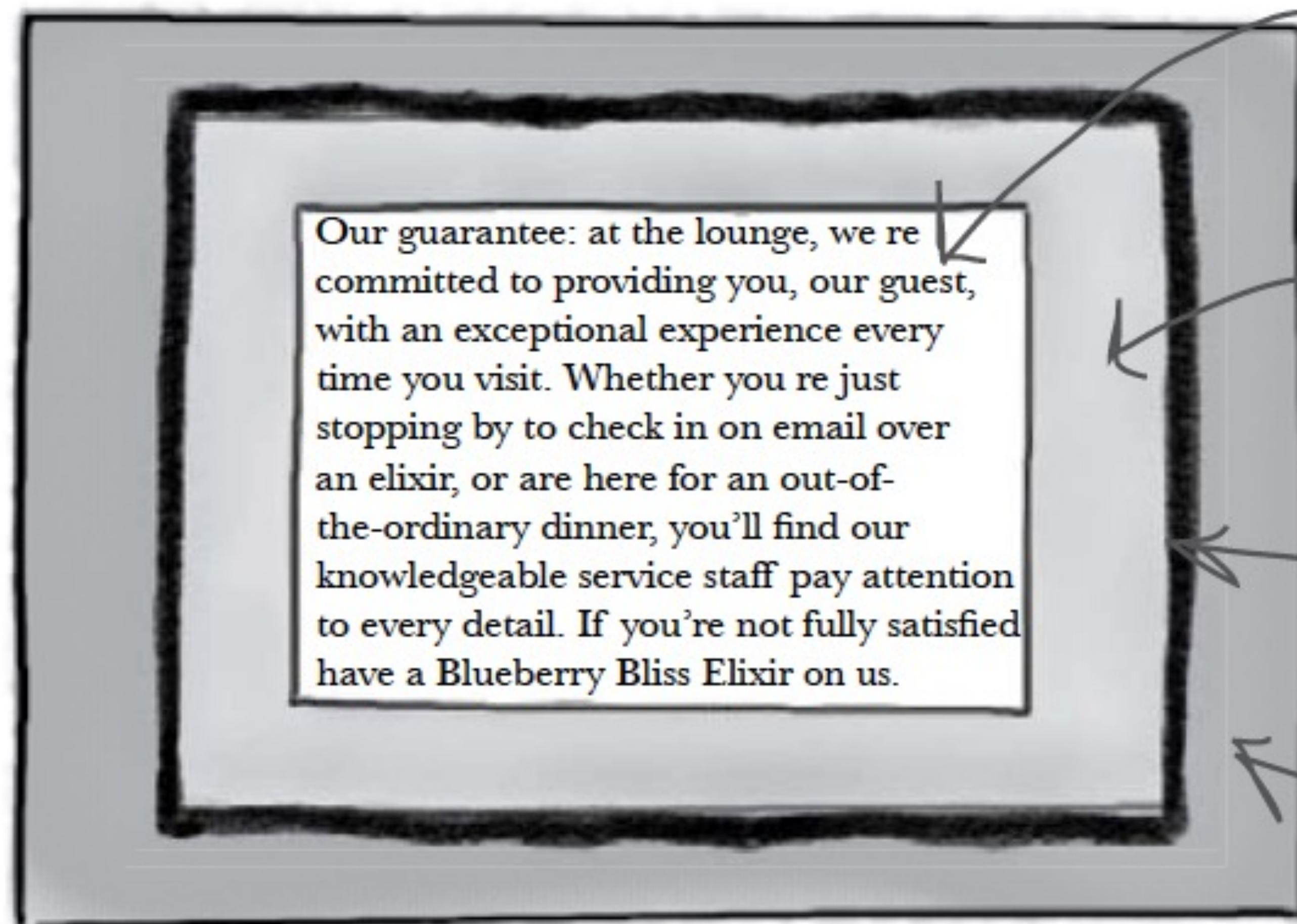
# CSS Box Model

- So far, your CSS has focussed on changing simple properties of elements, like size and color. For effective layout control, you have got to move on to the box model.
- The **box model** is how CSS sees elements.
- CSS treats every single element as if it were represented by a box.
- All elements are treated as boxes: paragraphs, headings, block quotes, lists, list items, and so on. Even inline elements like `<em>` and links are treated by CSS as boxes

- Boxes consist of:
  - Content
  - Padding
  - Border
  - Margin



From the perspective of CSS, every element is a box.



Every box is made up of a content area along with optional padding, border, and margins.

The content area, which holds the content (text or an image, for instance).

The content area is surrounded by optional transparent padding.

An optional border can be placed around the padding.

And finally, an optional transparent margin surrounds everything.

# Content Area

- Every element starts with some content, like text or an image, and this content is placed inside a box that is just big enough to contain it.
- The content area has no whitespace between the content and the edge of the box

We've drawn an edge around the content area just so you know how big it is. But in a browser there is never a visible edge around the content area.

The content area holds the element's content. It's typically just big enough to hold the content.

Our guarantee: at the lounge, we're committed to providing you, our guest, with an exceptional experience every time you visit. Whether you're just stopping by to check in on email over an elixir, or are here for an out-of-the-ordinary dinner, you'll find our knowledgeable service staff pay attention to every detail. If you're not fully satisfied have a Blueberry Bliss Elixir on us.

# Padding

- Any box can have a layer of padding around the content area.
- Padding is optional, so you don't have to have it, but you can use padding to create visual whitespace between the content and the border of the box.
- The padding is transparent and has no color or decoration of its own.

The browser adds optional padding around the content area.

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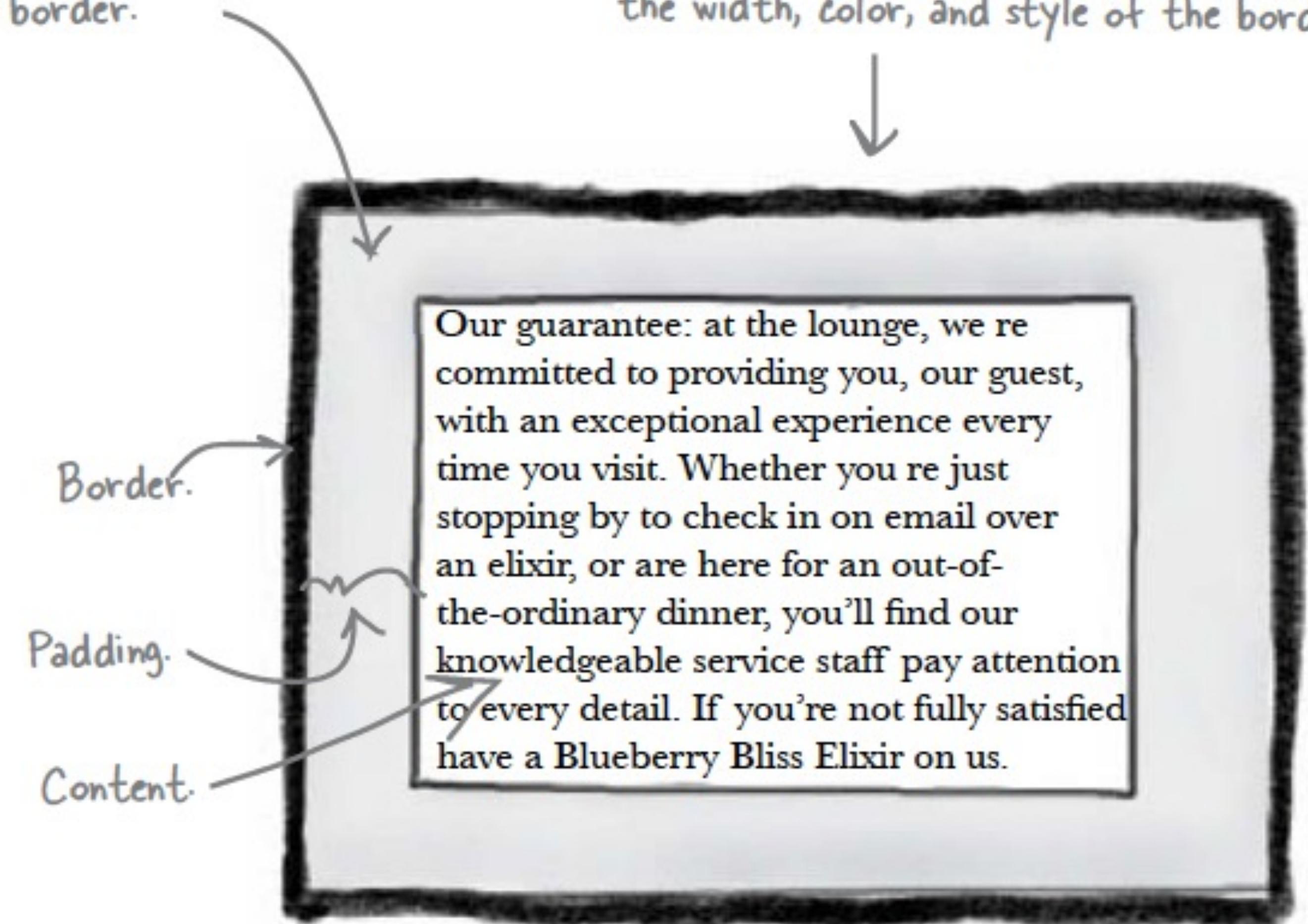
Using CSS, you're going to be able to control the width of the padding around the entire content area, or even control the padding on any one side (top, right, bottom, or left).

# Border

- Elements can have an optional border around them
- The border surrounds the padding and because it takes the form of a line around the content, borders provide visual separation between content and other elements on the same page
- Borders can be various widths, colors and styles

Notice that the padding separates the content area from the border.

Using CSS, you're going to be able to control the width, color, and style of the border.

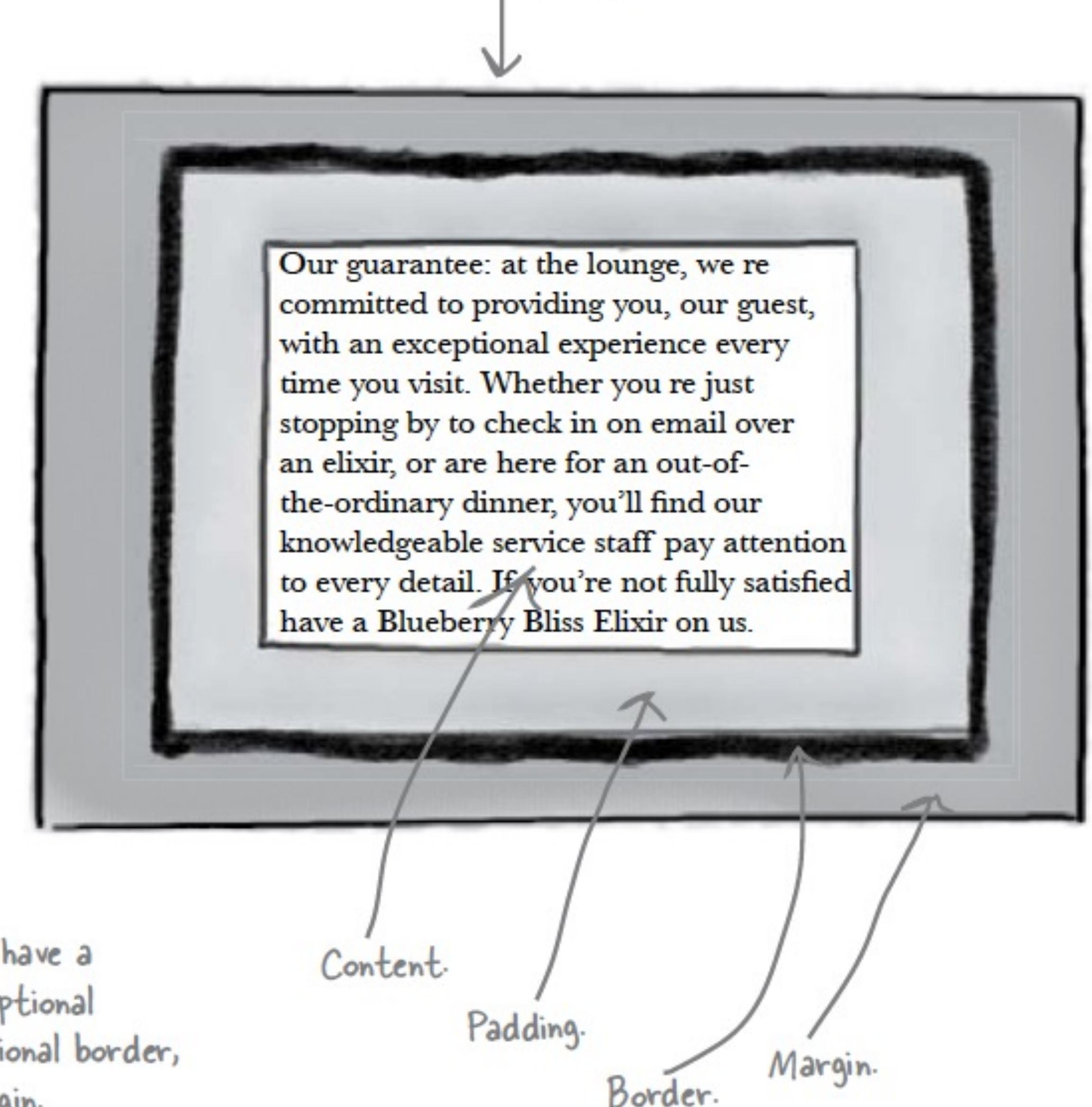


# Margin

- The margin is also optional and surrounds the border.
- The margin gives you a way to add space between your element and other elements on the same page.
- If two boxes are next to each other, the margins act as the space in between them.
- Like padding, margins are transparent and have no color or decoration of their own.

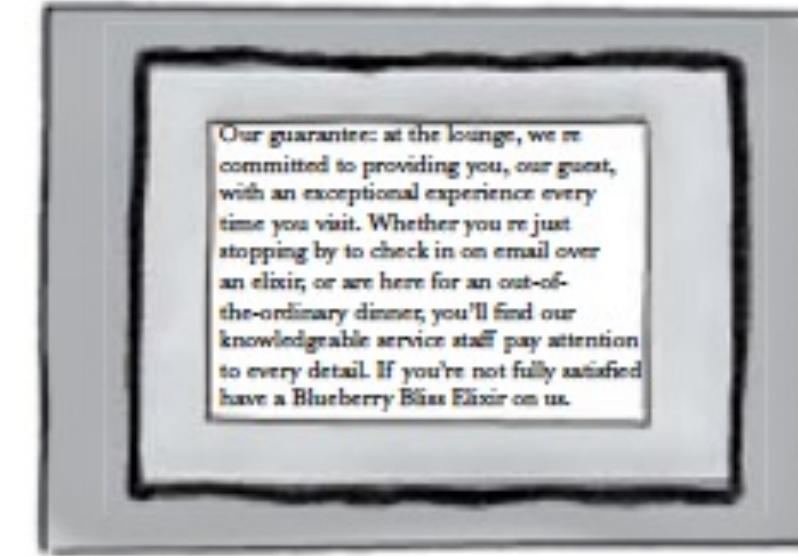
This is the entire element. We have a content area, surrounded by optional padding, surrounded by an optional border, surrounded by an optional margin.

Using CSS, you're going to be able to control the width of the entire margin, or of any particular side (top, right, bottom, or left).



# Variations: Boxes

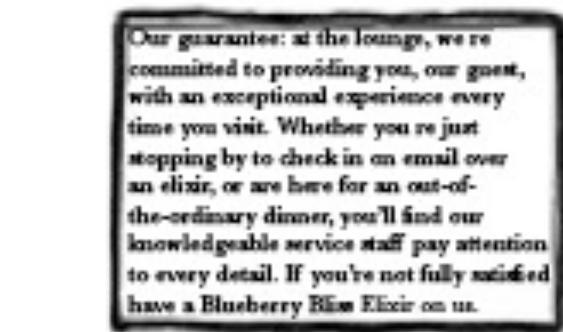
- The box model may look simple with just the content, some padding, a border, and margins.
- But when you combine these all together there are endless ways you can determine the layout of an element with its internal spacing (padding) and the spacing around it (margins).



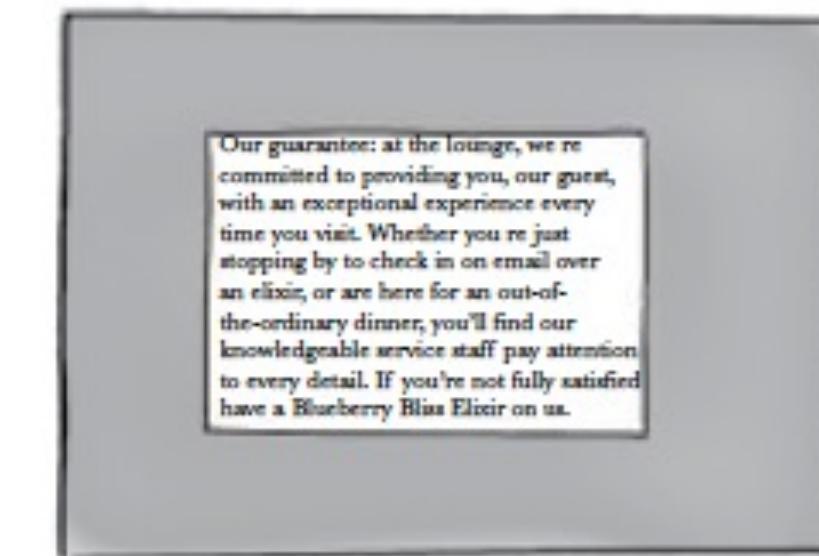
You can style a box to have padding, a border, and a margin.



Or, just padding and a border.



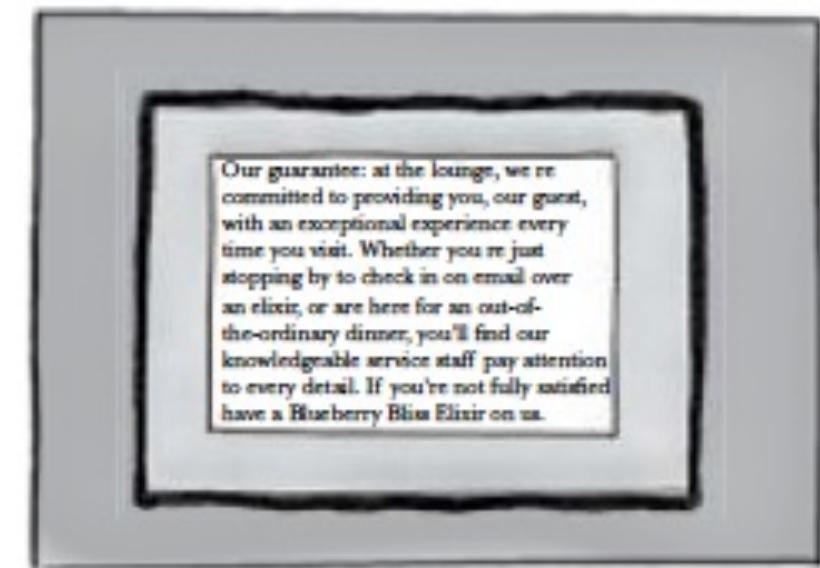
Or just a border.



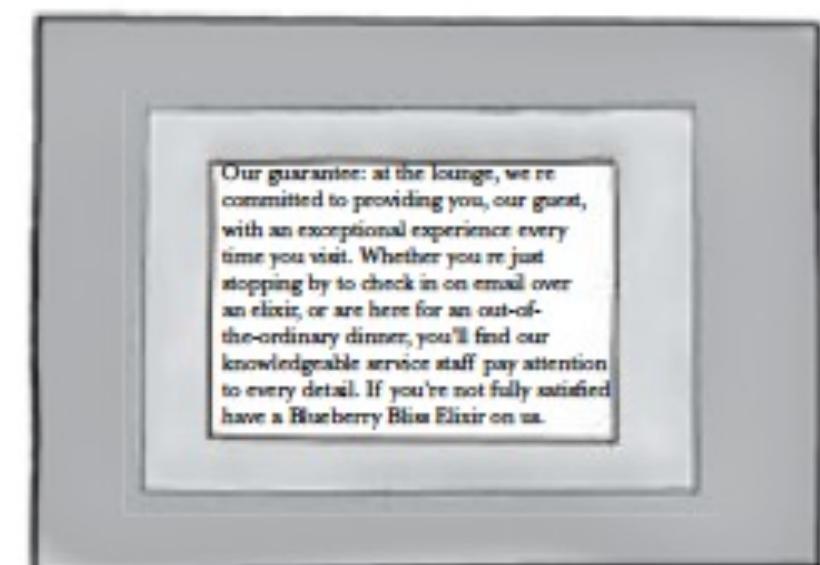
Or a margin with no border and no padding.

# Variations: Borders

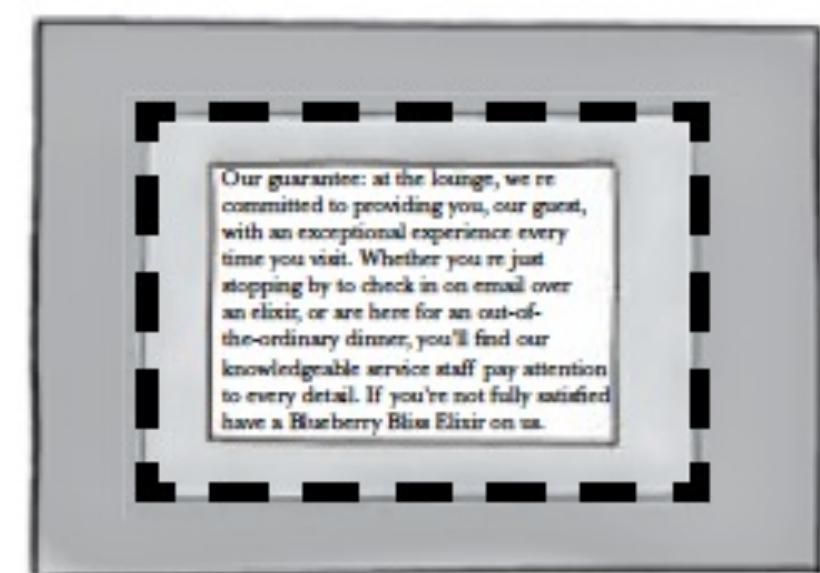
You can have solid borders, thick or thin.



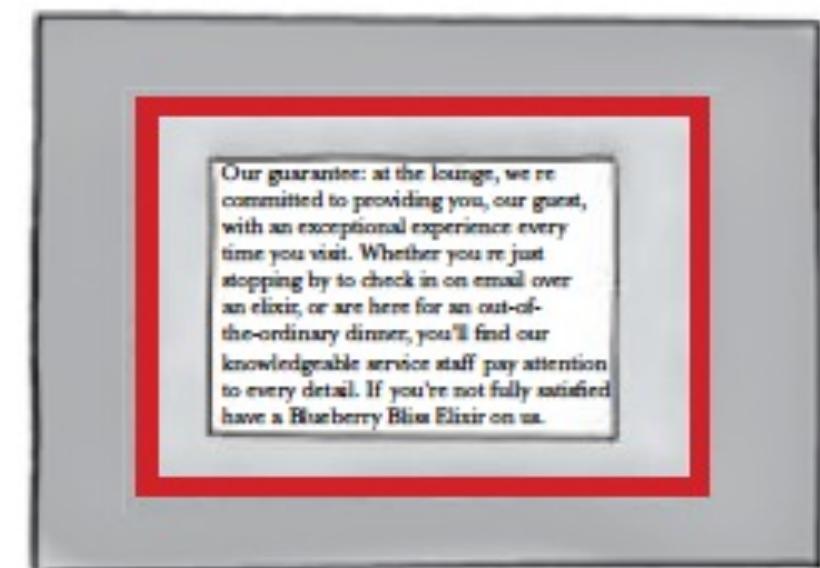
Or no border at all.



Or choose from eight different styles of borders, like dashed.



Or even color your borders.



# Variations: Padding & Margins



With CSS you can control padding on any side of the content area. Here we've got a lot of left and right padding.



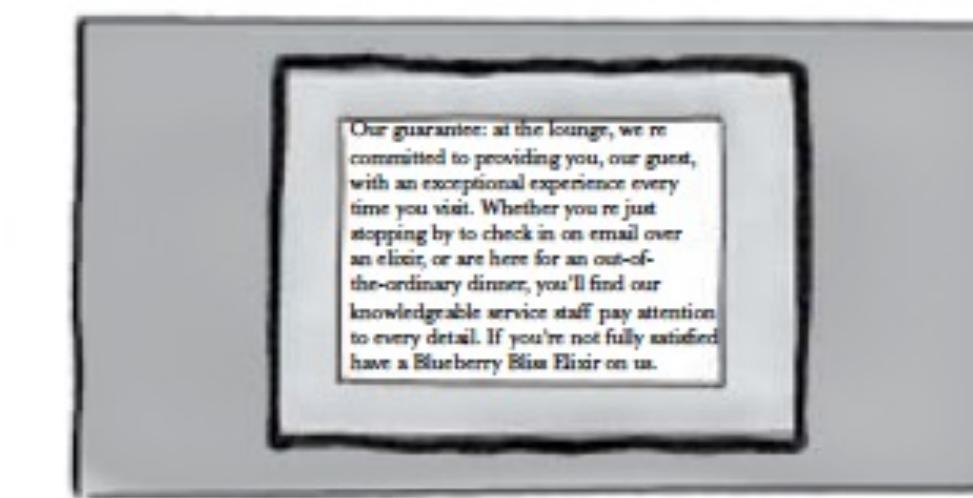
And here a lot of top and bottom padding.



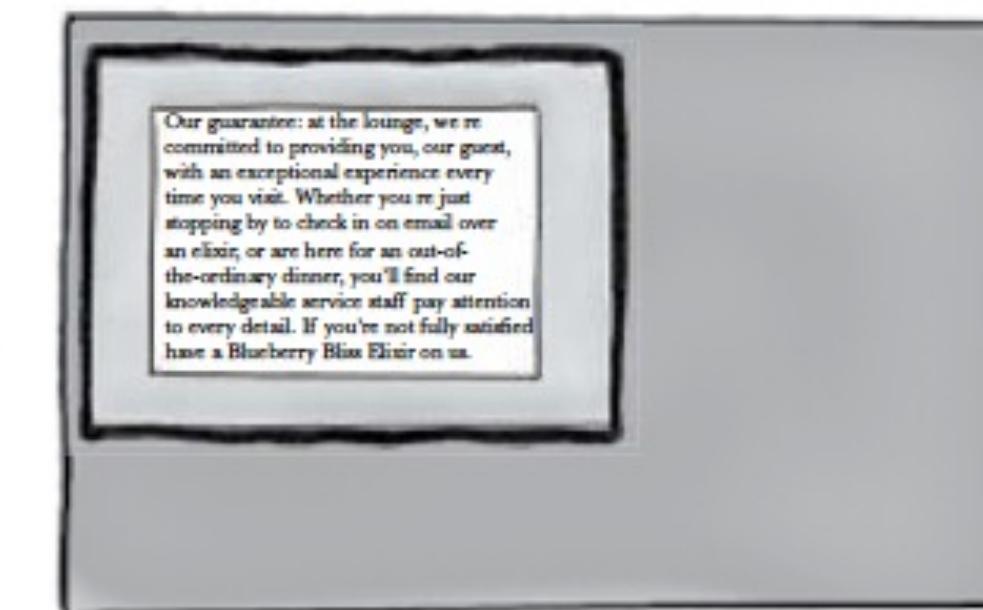
And here the content is offset to the bottom right with padding on the top and left.



You have the same level of control over the margins. Here there's a lot of top and bottom margin.



And here's a lot of left and right margin.

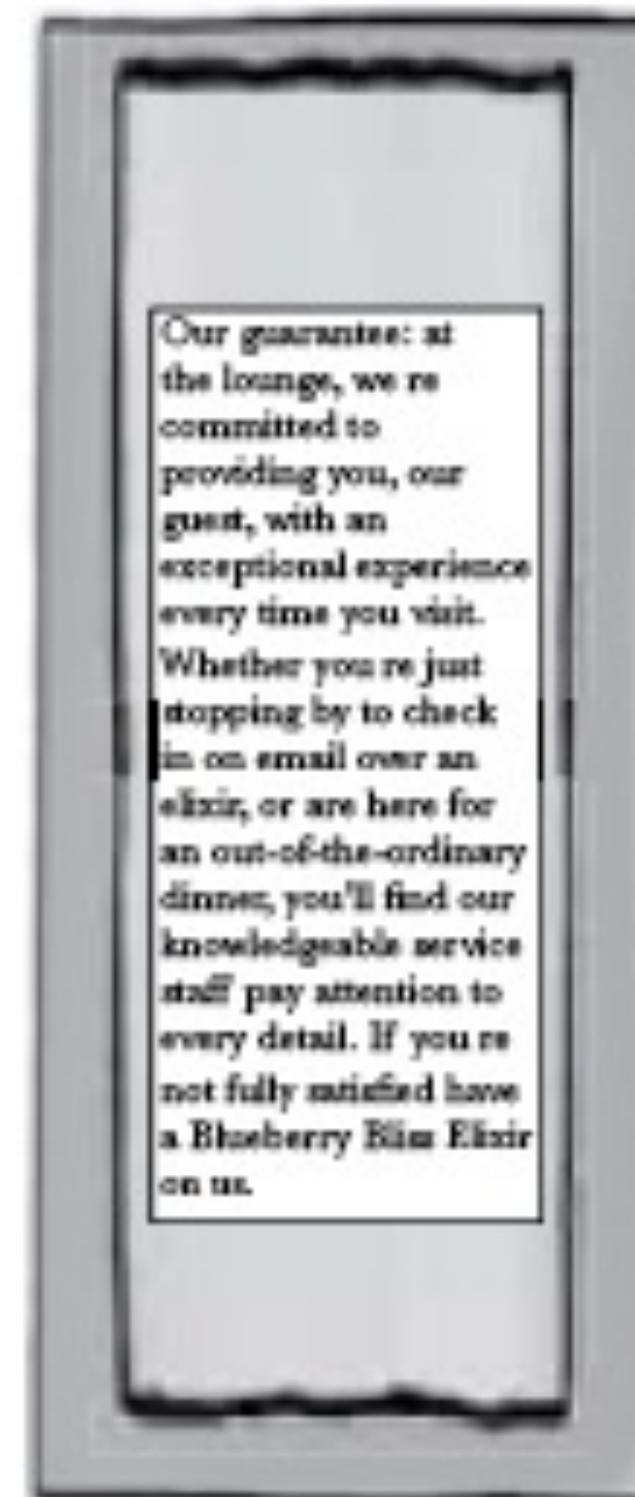
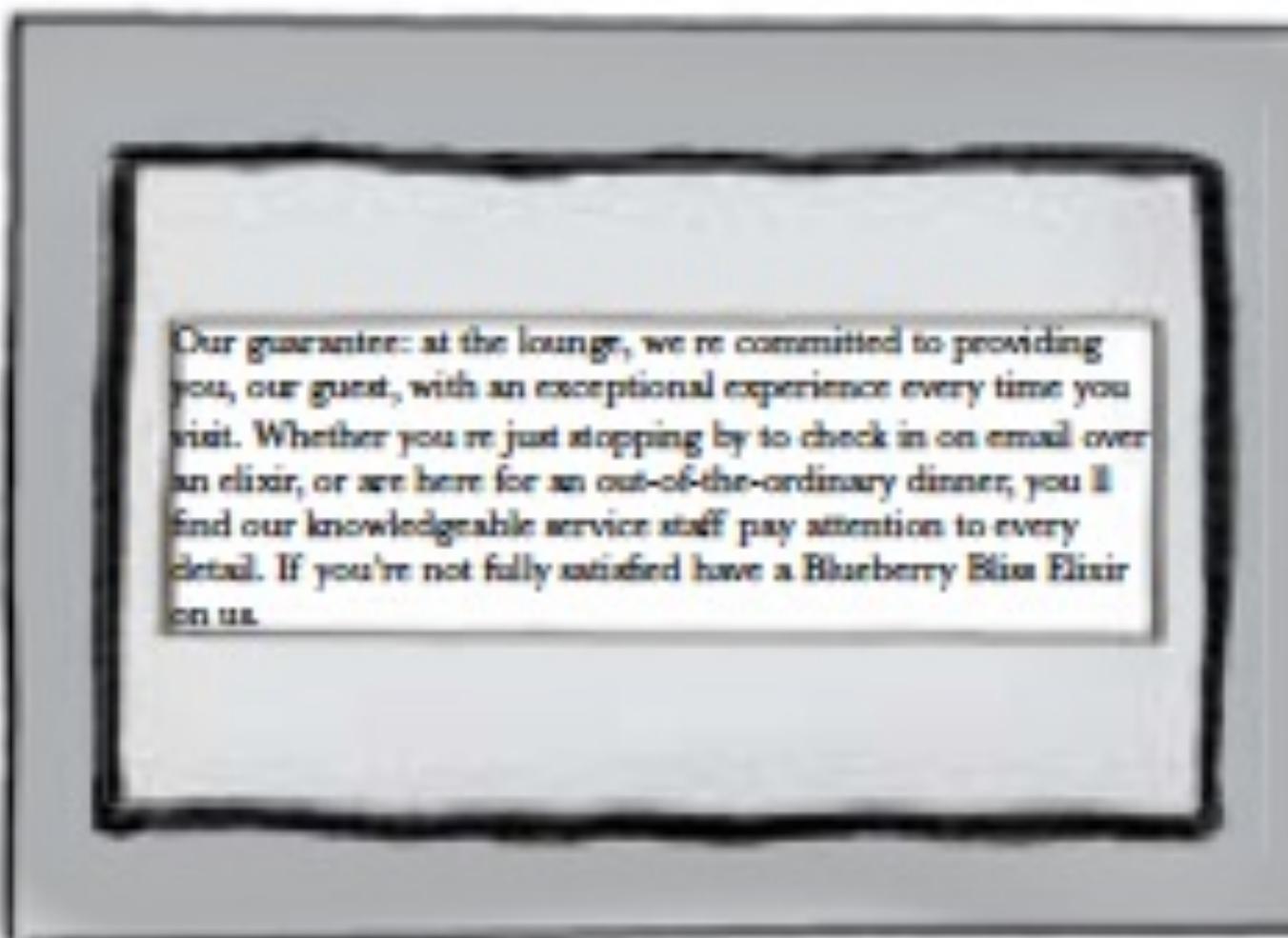


And like padding, you can specify all sides independently to create margins like this.

## Variations: Content

### Content Area

You can even control width and height in a variety of ways. Here, the content area has been made wide.



← And here the content area is tall but thin.

# Border Style

The border-style property controls the visual style of the border. There are eight border styles available, from a solid line to dotted lines to ridges and grooves.

`border-style: groove;`

To specify a border style just use the border-style property and a value of one of the available styles.

The solid style is just what it sounds like, a solid border.

Go with **solid**, the original.

The double style uses two lines.

Go with **double**, Im twice the fun.

A groove style looks like a groove in the page (difficult to see in a book).

Im the border that s got the **groove**.

The outset style looks like an outset that rises from the page.

Go with me, I ve been better since the **outset**.

The dotted style looks like a series of dots.

Once you go **dotted** you ll never go back.

And the dashed style is just a set of dashes round the border.

Ignore dotted, use **dashed**.

Im the only in style: **inset**.

The ridge style looks like a raised ridge on the page.

Im more fun; I ve got **ridges**.

# Border Width

The border-width property controls the width of the border. You can use keywords or pixels to specify the width.

`border-width: thin;`

`border-width: 5px;`

You can specify widths using the keywords thin, medium, or thick, or by the number of pixels.

	1px
	2px
	3px
thin	4px
medium	5px
thick	6px

# Border Color

The border-color property sets the color of the border. This works just like setting font colors; you can use color names, rgb values, or hex codes to specify color.

`border-color: red;`

`border-color: rgb(100%, 0%, 0%);`

`border-color: #ff0000;`

Use border-color to specify the color of a border. You can use any of the common ways to specify color.



# Specifying Border Sides

border-top-color  
border-top-style  
border-top-width

border-right-color  
border-right-style  
border-right-width

border-bottom-color  
border-bottom-style  
border-bottom-width

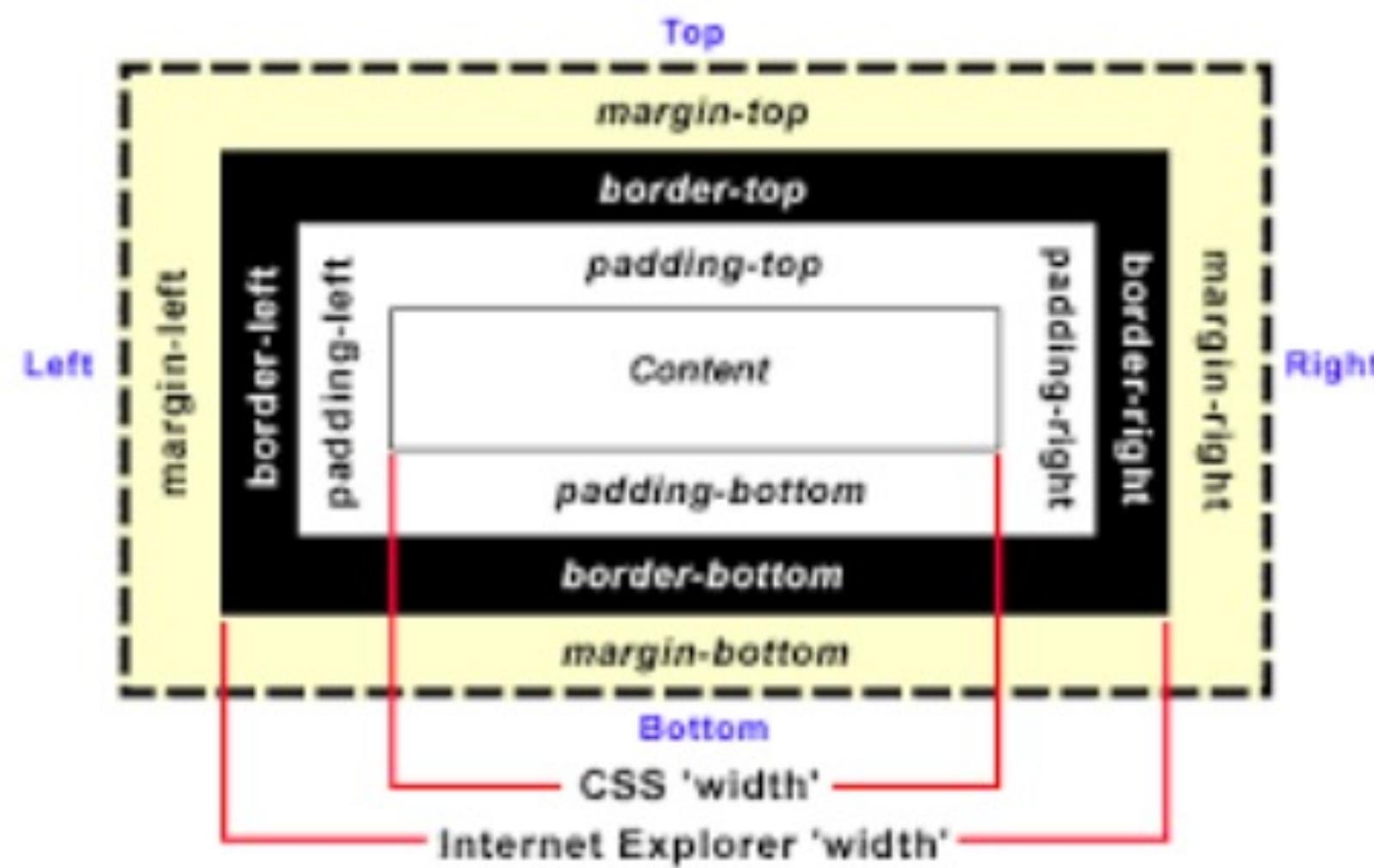
border-left-color  
border-left-style  
border-left-width

Just like margins and padding you can specify border style, width, or color on any side (top, right, bottom, or left):

`border-top-color: black;`  
`border-top-style: dashed;`  
`border-top-width: thick;`

↑  
These properties are for the top border only. You can specify each side of the border independently.

# Box Model Fundamentals



content · padding · border ·  
margin · variations · fonts ·  
dimensions