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CSC 443: Web Programming

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CSS for Styling (continued)

```
<link href="filename"  
type="text/css" rel="stylesheet"/>
```

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Linking to sections of a web page

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```
<p>Visit <a href="http://www.textpad.com/download/index.html#downloads">
textpad.com</a> to get the TextPad editor.</p>
<p><a href="#mission">View our Mission Statement</a></p>
```

HTML

Visit [textpad.com](http://www.textpad.com) to get the TextPad editor.

[View our Mission Statement](#)

output

- ❑ Link target can include an ID at the end, preceded by a #
- ❑ Browser will load that page and scroll to element with given ID

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HTML id attribute

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```
<p>Coding Horror! Coding Horror!</p>
<p id="mission">Our mission is to combine programming and
<q>human</q> factors with geekiness!</p>
```

HTML

Coding Horror! Coding Horror!

Our mission is to combine programming and “human” factors with geekiness!

output

- ❑ A unique ID for an element on a page
- ❑ Each ID must be unique; can only be used once in the page

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Interjection: Coding Horror

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CODING HORROR
programming and human factors

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25 Aug 2016

Can Software Make You Less Racist?

I don't think we computer geeks appreciate how profoundly the rise of the smartphone, and Facebook, has changed the Internet audience. It's something that really only happened in **the last five years**, as smartphones and data plans dropped radically in price and became accessible – and addictive – to huge segments of the population.

People may have regularly *used* computers in 2007, sure, but that is a very different thing than having your computer in your pocket, 24/7, with you every step of every day, fully integrated into your life. As Jerry Seinfeld noted in 2014:



CSS ID selectors

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```
#mission {  
font-style: italic;  
font-family: "Garamond", "Century Gothic", serif;  
}
```

CSS

Coding Horror! Coding Horror!

Our mission is to combine programming and “human” factors with geekiness!
output

- Applies style only to the paragraph that has the ID of mission

CSS ID selectors

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```
<p>Coding Horror! Coding Horror!</p>  
<p id="mission">Our mission is to combine programming and  
<q>human</q> factors with geekiness!</p>
```

HTML

Coding Horror! Coding Horror!

Our mission is to combine programming and “human” factors with geekiness!
output

- Applies style only to the paragraph that has the ID of mission

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CSS ID selectors

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Coding Horror! Coding Horror!

See our special deal on Droids!

Today only!



Coding Horror! Coding Horror!

See our special deal on Droids!

Today only!

output

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HTML class attribute

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```
<p class="shout">Coding Horror! Coding Horror!</p>
<p class="special">See our special deal on Droids!</p>
<p class="special">Today only!</p>
```

HTML

Coding Horror! Coding Horror!

See our special deal on Droids!

Today only!

output

- A way to group some elements and give a style to only that group
- Unlike an id, a class can be reused as much as you like on the page
 - ▣ "I don't want ALL paragraphs to be yellow, just these three..."

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CSS class selectors

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```
.special {
background-color: yellow;
font-weight: bold;
}
p.shout {
color: red;
font-family: cursive;
}
```

CSS

Coding Horror! Coding Horror!

See our special deal on Droids!

Today only!

output

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CSS class selectors

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```
<p class="shout">Coding Horror! Coding Horror!</p>
<p class="special">See our special deal on Droids!</p>

<p class="special shout">Today only!</p>
```

HTML

Coding Horror! Coding Horror!

See our special deal on Droids!

Today only!

output

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CSS ID selectors

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```
a:link { color: #FF0000; } /* unvisited link */
a:visited { color: #00FF00; } /* visited link */
a:hover { color: #FF00FF; } /* mouse over link */
```

CSS

Buy Early Buy Often!

output

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CSS ID selectors

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class	description	Example
:active	an activated or selected element	a:active { background-color: yellow;}
:focus	an element that has the keyboard focus	input[type=text]:focus { width: 250px;} ... Search: <input type="text" name="search">
:hover	an element that has the mouse over it	a:hover { color: Red; }
:link	a link that has not been visited	a:link { color: green; }
:visited	a link that has already been visited	a:visited { color: blue;}
:first-letter	the first letter of text inside an element	p:first-letter { color: green;}
:first-line	the first line of text inside an element	p:first-line {background-color: yellow;}
:first-child	an element that is the first one to appear inside another	p:first-child i { background: yellow;}

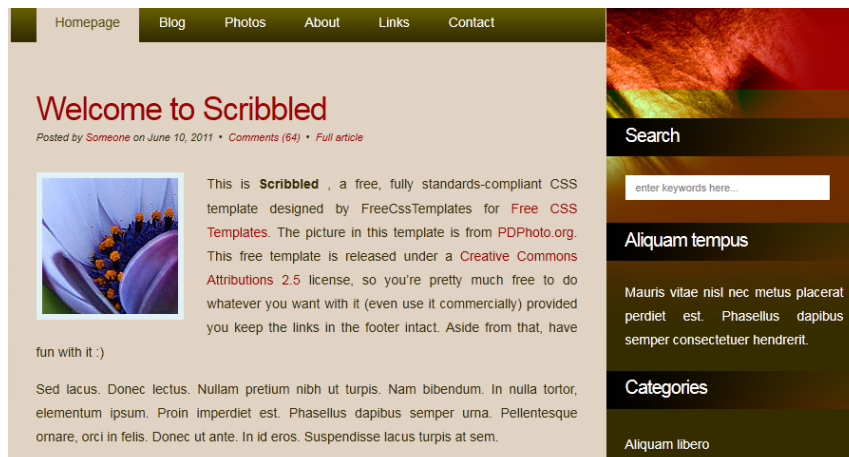
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Styling Page Sections

Why do we need page sections?

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- Style individual elements, groups of elements, sections of text or of the page
- Create complex page layouts



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Sections of a page <div>

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```
<div class="shout">
<h2>Coding Horror! Coding Horror!</h2>
<p class="special">See our special deal on Droids!</p>
<p>We'll beat any advertised price!</p>
</div>
```

HTML

Coding Horror! Coding Horror!

See our special deal on Droids!

We'll beat any advertised price!

output

- Tag used to indicate a logical section or area of a page
- Has no appearance by default, but you can apply styles to it

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Inline Sections

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```
<h2>Coding Horror! Coding Horror!</h2>
<p>See our <span class="special">spectacular</span> deal
on Droids!</p>
<p>We'll beat <span class="shout"> any advertised
price</span>!</p>
```

HTML

Coding Horror! Coding Horror!

See our **spectacular** deal on Droids!

We'll beat **any advertised price!**

output

- has no onscreen appearance, but you can apply a style or ID to it, which will be applied to the text inside the span

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CSS context selectors

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```
selector1 selector2 {
  properties
}
```

CSS

- applies the given properties to selector2 only if it is inside a selector1 on the page

```
selector1 > selector2 {
  properties
}
```

CSS

- applies the given properties to selector2 only if it is *directly* inside a selector1 on the page

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Context selector example

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```
<p>Eat at <strong>Greasy's Burger</strong>...</p>
<ul>
<li>The <strong>greasiest</strong> burgers in town!</li>
<li>Yummy and greasy at the same time!</li>
</ul>
```

HTML

```
li strong { text-decoration: underline; }
```

CSS

Eat at **Greasy's Burger**...

- The greasiest burgers in town!
- Yummy and greasy at the same time!

output

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More complex example

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```
<div id="ad">
<p>Eat at <strong>Greasy's Burger</strong>...</p>
<ul>
<li class="important">The <strong>greasiest</strong>
burgers in town!</li>
<li>Yummy and <strong>greasy at the same time
</strong>!</li>
</ul>
</div>
```

HTML

```
#ad li.important strong { text-decoration: underline; }
```

CSS

Eat at **Greasy's Burger**...

- The greasiest burgers in town!
- Yummy and **greasy at the same time!**

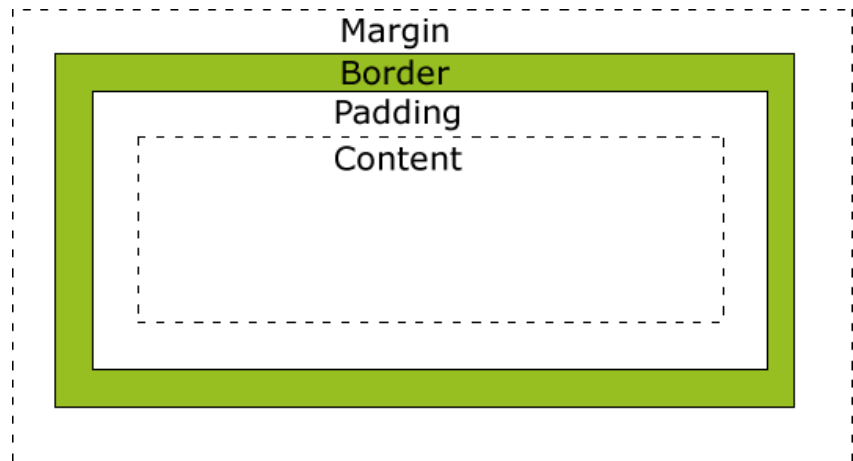
output

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The CSS Box Model

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- Every element composed of:
 - ▣ **Content** - The content of the box, where text and images appear
 - ▣ **Padding** - Clears an area around the content. The padding is transparent
 - ▣ **Border** - A border that goes around the padding and content
 - ▣ **Margin** - Clears an area outside the border. The margin is transparent

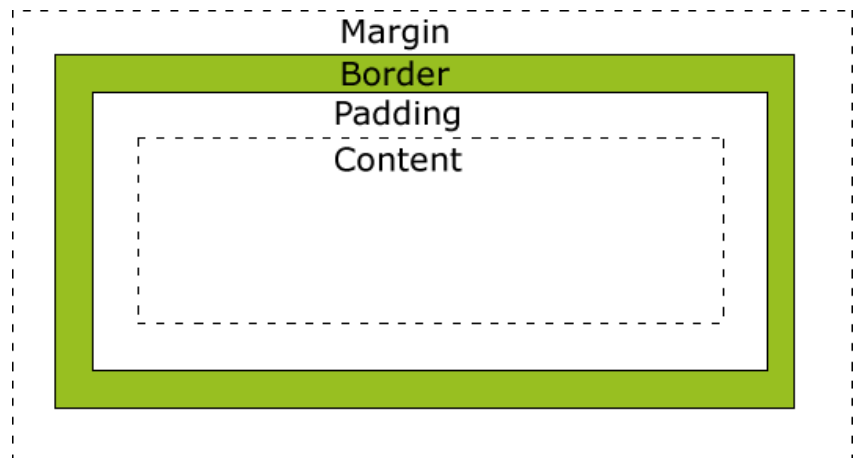


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The CSS Box Model (cont.)

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- The total width of an element should be calculated like this:
 - ▣ $\text{Total element width} = \text{width} + \text{left padding} + \text{right padding} + \text{left border} + \text{right border} + \text{left margin} + \text{right margin}$
- The total height of an element should be calculated like this:
 - ▣ $\text{Total element height} = \text{height} + \text{top padding} + \text{bottom padding} + \text{top border} + \text{bottom border} + \text{top margin} + \text{bottom margin}$



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The CSS Box Model (cont.)

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```
<style>
div {
    background-color: lightgrey;
    width: 300px;
    border: 25px solid green;
    padding: 25px;
    margin: 25px;
}
</style>
```

Example

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The CSS Box Model (cont.)

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```
<head>
<style>
div {
    background-color: lightgrey;
    width: 300px;
    border: 25px solid green;
    padding: 25px;
    margin: 25px;
}
</style>
</head>
<body>

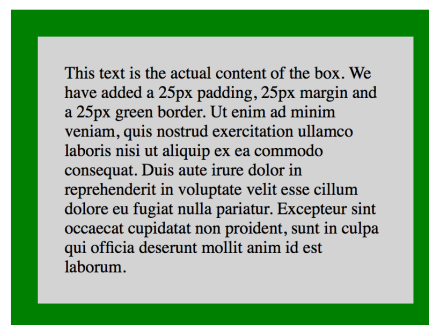
<h2>Demonstrating the Box Model</h2>

<p>The CSS box model is essentially a box that wraps around every HTML
element. It consists of: borders, padding, margins, and the actual
content.</p>

<div>This text is the actual content of the box. We have added a 25px
padding, 25px margin and a 25px green border. Ut enim ad minim veniam,
quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo
consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat
non proident, sunt in culpa qui officia deserunt mollit anim id est
laborum.</div>
```

Demonstrating the Box Model

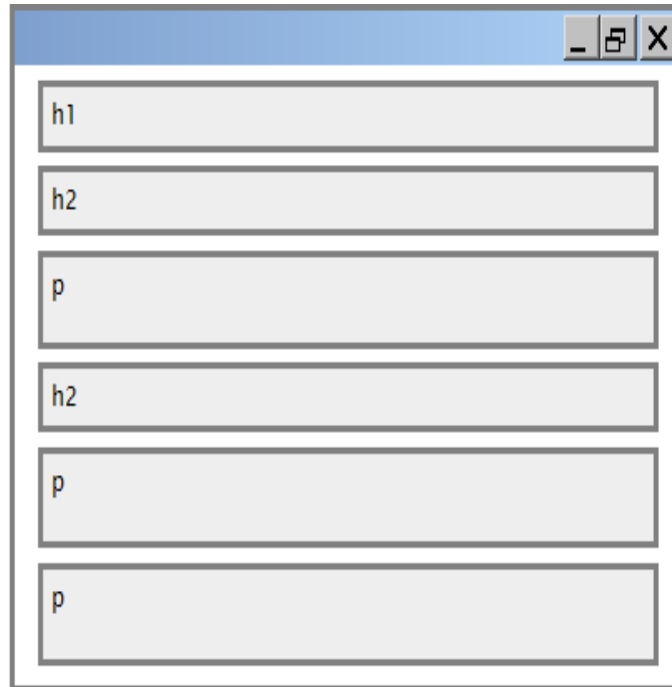
The CSS box model is essentially a box that wraps around every HTML element. It consists of: borders, padding, margins, and the actual content.



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Document Flow – block elements

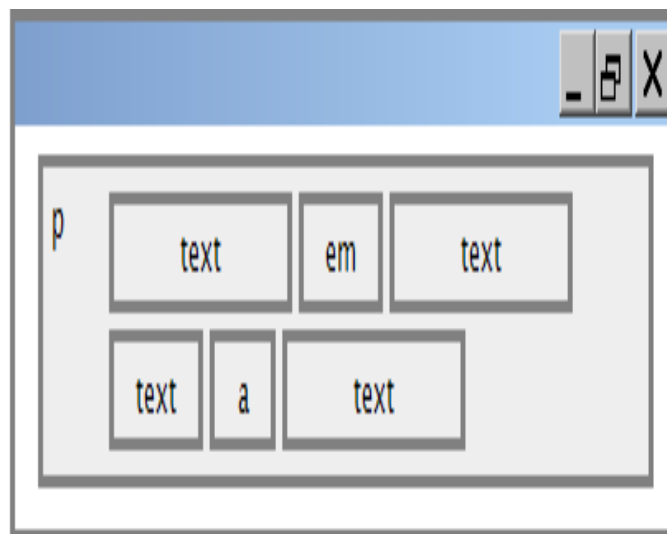
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Document flow - inline elements

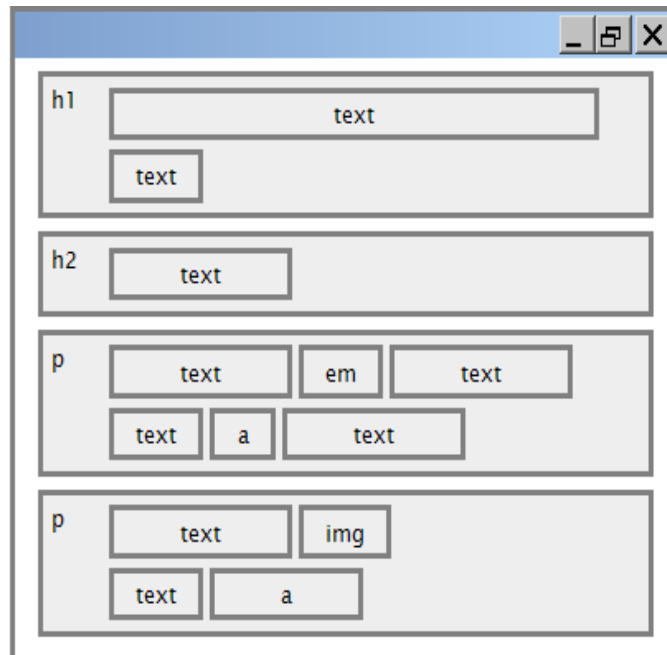
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Document flow - a larger example

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CSS properties for borders

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```
h2 { border: 5px solid red; }
```

CSS

This is a heading.

output

property	description
border	thickness/style/size of border on all 4 sides

- **Thickness:** px, pt, em, or thin, medium, thick
- **Style:** none, hidden, dotted, dashed, double, groove, inset, outset, ridge, solid **color**

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More border properties

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Property	Description
border-color, border-width, border-style	specific properties of border on all 4 sides
border-bottom, border-left, border-right, border-top	all properties of border on a particular side
border-bottom-color, border-bottom-style, border-bottom-width, border-left-color, border-left-style, border-left-width, border-right-color, border-right-style, border-right-width, border-top-color, border-top-style, border-top-width	properties of border on a particular side
Complete list of border properties http://www.w3schools.com/css/css_reference.asp#border	

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Another border example

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```
h2 {  
border-left: thick dotted #CC0088;  
border-bottom-color: rgb(0, 128, 128);  
border-bottom-style: double;  
}
```

CSS

This is a heading.

output

- each side's border properties can be set individually
- if you omit some properties, they receive default

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CSS properties for padding

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property	description
padding	padding on all 4 sides
padding-bottom	padding on bottom side only
padding-left	padding on left side only
padding-right	padding on right side only
padding-top	padding on top side only
Complete list of padding properties http://www.w3schools.com/css/css_reference.asp#padding	

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Padding example 1

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```
p { padding: 20px; border: 3px solid black; }  
h2 { padding: 0px; background-color: yellow; }
```

CSS

This is a first paragraph.

This is a second paragraph.

This is a heading

output

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Padding example 2

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```
p {  
padding-left: 200px; padding-top: 30px;  
background-color: fuchsia;  
}
```

CSS

This is a first paragraph

This is a second paragraph

output

- each side's padding can be set individually
- notice that padding shares the background color of the element

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CSS properties for margins

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property	description
margin	margin on all 4 sides
margin-bottom	margin on bottom side only
margin-left	margin on left side only
margin-right	margin on right side only
margin-top	margin on top side only
<u>Complete list of margin properties</u> http://www.w3schools.com/css/css_reference.asp#margin	

Margin example 1

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```
p {  
  margin: 50px;  
  background-color: fuchsia;  
}
```

CSS

This is a first paragraph

This is a second paragraph

output

- notice that margins are always transparent

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Margin example 2

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```
p {  
  margin-left: 8em;  
  background-color: fuchsia;  
}
```

CSS

This is a first paragraph

This is a second paragraph

output

- each side's margin can be set individually

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CSS properties for dimensions

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```
p { width: 350px; background-color: yellow; }  
h2 { width: 50%; background-color: aqua; }
```

CSS

This paragraph uses the first style above

An h2 heading

output

property	description
width, height	how wide or tall to make this element (block elements only)
max-width, max-height, min-width, min-height	max/min size of this element in given dimension

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Centering a block element: auto margins

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```
p {  
margin-left: auto;  
margin-right: auto;  
width: 750px;  
}
```

CSS

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

output

- works best if `width` is set (otherwise, may occupy entire width of page)
- to center inline elements within a block element, use `text-align: center;`

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Example: Drop-Down Menu

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- How can we do the menus below?

