

Web Engineering Lab



Lab 04 Introduction to CSS

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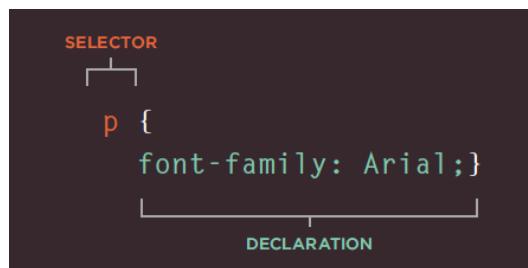
Introduction

CSS allows you to create rules that specify how the content of an element should appear. For example, you can specify that the background of the page is cream, all paragraphs should appear in gray using the Arial typeface, or that all level one headings should be in a blue, italic, Times typeface.

Using CSS, you could add a border around any of the boxes, specify its width and height, or add a background color. You could also control text inside a box — for example, its color, size, and the typeface used.

CSS Rule

A CSS rule contains two parts: a selector and a declaration.



This rule indicates that all `<p>` elements should be shown in the Arial typeface. Selectors indicate which element the rule applies to. The same rule can apply to more than one element if you separate the element names with commas. Declarations indicate how the elements referred to in the selector should be styled.

CSS Declaration

CSS declarations sit inside curly brackets and each is made up of two parts: a property and a value, separated by a colon. You can specify several properties in one declaration, each separated by a semi-colon.



This rule indicates that all `<h1>`, `<h2>` and `<h3>` elements should be shown in the Arial typeface, in a yellow color. Properties indicate the aspects of the element you want to change.

For example, color, font, width, height and border. Values specify the settings you want to use for the chosen properties. For example, if you want to specify a color property then the value is the color you want the text in these elements to be.

Example

This example uses two documents: the HTML file (example.html) and a separate CSS file (example.css). The fifth line of HTML uses the <link> element to indicate where the CSS file is located.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Introducing CSS</title>
5      <link href="css/example.css" type="text/css" rel="stylesheet" />
6  </head>
7  <body>
8      <h1>From Garden to Plate</h1>
9      <p>A <i>potager</i> is a French term for an
10     ornamental vegetable or kitchen garden ... </p>
11
12     <h2>What to Plant</h2>
13     <p>Plants are chosen as much for their functionality
14     as for their color and form ... </p>
15
16 </body>
</html>
```

```
1  body {
2      font-family: Arial, Verdana, sans-serif;
3  h1, h2 {
4      color: #ee3e80;
5  p {
6      color: #665544;
```

From Garden to Plate

A *potager* is a French term for an ornamental vegetable or kitchen garden ...

What to Plant

Plants are chosen as much for their functionality as for their color and form ...

Using External CSS

The `<link>` element can be used in an HTML document to tell the browser where to find the CSS file used to style the page. It is an empty element (meaning it does not need a closing tag), and it lives inside the `<head>` element.

It should use three attributes:

- **href:** This specifies the path to the CSS file (which is often placed in a folder called `css` or `styles`).
- **type:** This attribute specifies the type of document being linked to. The value should be `text/css`.
- **rel:** This specifies the relationship between the HTML page and the file it is linked to. The value should be `stylesheet` when linking to a CSS file.

Using Internal CSS

You can also include CSS rules within an HTML page by placing them inside a `<style>` element, which usually sits inside the `<head>` element of the page.

The `<style>` element should use the `type` attribute to indicate that the styles are specified in CSS. The value should be `text/css`.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Using Internal CSS</title>
5      <style type="text/css">
6          body {
7              font-family: arial;
8              background-color: rgb(185,179,175);}
9          h1 {
10             color: rgb(255,255,255);}
11     </style>
12 </head>
13
14 <body>
15     <h1>Potatoes</h1>
16     <p>There are dozens of different potato
17         varieties. They are usually described as
18         early, second early and maincrop.</p>
19 </body>
20 </html>
```

Potatoes

There are dozens of different potato varieties. They are usually described as early, second early and maincrop.

CSS Selector

There are many different types of CSS selector that allow you to target rules to specific elements in an HTML document. CSS selectors are case sensitive, so they must match element names and attribute values exactly. The following table introduces the most commonly used CSS selectors.

| SELECTOR | MEANING | EXAMPLE |
|---------------------------|---|--|
| UNIVERSAL SELECTOR | Applies to all elements in the document | <code>* {}</code> Targets all elements on the page |
| TYPE SELECTOR | Matches element names | <code>h1, h2, h3 {}</code> Targets the <code><h1></code> , <code><h2></code> and <code><h3></code> elements |
| CLASS SELECTOR | Matches an element whose <code>class</code> attribute has a value that matches the one specified after the period (or full stop) symbol | <code>.note {}</code> Targets any element whose <code>class</code> attribute has a value of <code>note</code> <code>p.note {}</code> Targets only <code><p></code> elements whose <code>class</code> attribute has a value of <code>note</code> |
| ID SELECTOR | Matches an element whose <code>id</code> attribute has a value that matches the one specified after the pound or hash symbol | <code>#introduction {}</code> Targets the element whose <code>id</code> attribute has a value of <code>introduction</code> |
| CHILD SELECTOR | Matches an element that is a direct child of another | <code>li>a {}</code> Targets any <code><a></code> elements that are children of an <code></code> element (but not other <code><a></code> elements in the page) |
| DESCENDANT SELECTOR | Matches an element that is a descendent of another specified element (not just a direct child of that element) | <code>p a {}</code> Targets any <code><a></code> elements that sit inside a <code><p></code> element, even if there are other elements nested between them |
| ADJACENT SIBLING SELECTOR | Matches an element that is the next sibling of another | <code>h1+p {}</code> Targets the first <code><p></code> element after any <code><h1></code> element (but not other <code><p></code> elements) |
| GENERAL SIBLING SELECTOR | Matches an element that is a sibling of another, although it does not have to be the directly preceding element | <code>h1~p {}</code> If you had two <code><p></code> elements that are siblings of an <code><h1></code> element, this rule would apply to both |

How Css Rules Cascade

If there are two or more rules that apply to the same element, it is important to understand which will take precedence.

- If the two selectors are identical, the latter of the two will take precedence.
- If one selector is more specific than the others, the more specific rule will take precedence over more general ones. In the example:
 - h1 is more specific than *
 - p b is more specific than p
 - p#intro is more specific than p
- You can add !important after any property value to indicate that it should be considered more important than other rules that apply to the same element.

Example

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>CSS Selectors</title>
5   <link href="css_selectors.css" type="text/css" rel="stylesheet" />
6 </head>
7 <body>
8 <h1>
9   Potatoes
10 </h1>
11 <p id="intro">
12   There are dozens of different potato varieties.
13 </p>
14 <p>
15   They are usually described as early, second early
16   and maincrop potatoes.</p>
17 </body>
18 </html>
19 
```



```
1 * {
2   font-family: Arial, Verdana, sans-serif;}
3 
4 h1 {
5   font-family: "Courier New", monospace;}
6 
7 i {
8   color: green;}
9 
10 i {
11   color: red;}
12 
13 b {
14   color: pink;}
15 
16 p b {
17   color: blue !important;}
18 
19 p b {
20   color: violet;}
21 
22 p#intro {
23   font-size: 100%;}
24 
25 p {
26   font-size: 75%;}
```

Potatoes

There are *dozens* of different **potato** varieties.

They are usually described as early, second early and maincrop potatoes.

Inheritance

If you specify the font-family or color properties on the <body> element, they will apply to most child elements. This is because the value of the font-family property is inherited by child elements. You can compare this with the background-color or border properties; they are not inherited by child elements. If these were inherited by all child elements then the page could look quite messy. You can force a lot of properties to inherit values from their parent elements by using inherit for the value of the properties.

Example

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>CSS Selectors</title>
5      <link href="css_selectors.css" type="text/css" rel="stylesheet" />
6  </head>
7  <body>
8  <div class="page">
9      <h1>
10         Potatoes
11     </h1>
12     <p>
13         There are dozens of different potato varieties.
14     </p>
15     <p>
16         They are usually described as early, second early and maincrop potatoes.
17     </p>
18  </div>
19  </body>
20 </html>
21
```

```
1  body
2  {
3      font-family: Arial, Verdana, sans-serif;
4      color: #665544;
5      padding: 10px;
6  }
7
8  .page
9  {
10     border: 1px solid #665544;
11     background-color: #efefef;
12     padding: inherit;
13 }
```

Potatoes

There are dozens of different potato varieties.

They are usually described as early, second early and maincrop potatoes.

Colors

Color not only brings your site to life, but also helps convey the mood and evokes reactions.

The color property allows you to specify the color of text inside an element. You can specify any color in CSS in one of three ways:

- **rgb values** : These express colors in terms of how much red, green and blue are used to make it up. **For example:** `rgb(100,100,90)`
- **hex codes:** These are six-digit codes that represent the amount of red, green and blue in a color, preceded by a pound or hash # sign. **For example:** `#ee3e80`
- **color names:** There are 147 predefined color names that are recognized by browsers.

For example: DarkCyan

```
1  /* color name */
2  h1 {
3      color: DarkCyan;
4  }
5
6  /* hex code */
7  h2 {
8      color: #ee3e80;
9  }
10
11 /* rgb value */
12 p {
13     color: rgb(100,100,90);
14 }
```

RESULT

Marine Biology

The Composition of Seawater

Almost anything can be found in seawater. This includes dissolved materials from Earth's crust as well as materials released from organisms. The most important components of seawater that influence life forms are salinity, temperature, dissolved gases (mostly oxygen and carbon dioxide), nutrients, and pH. These elements vary in their composition as well as in their influence on marine life.

Note: CSS3 has also introduced another way to specify colors called HSLA.

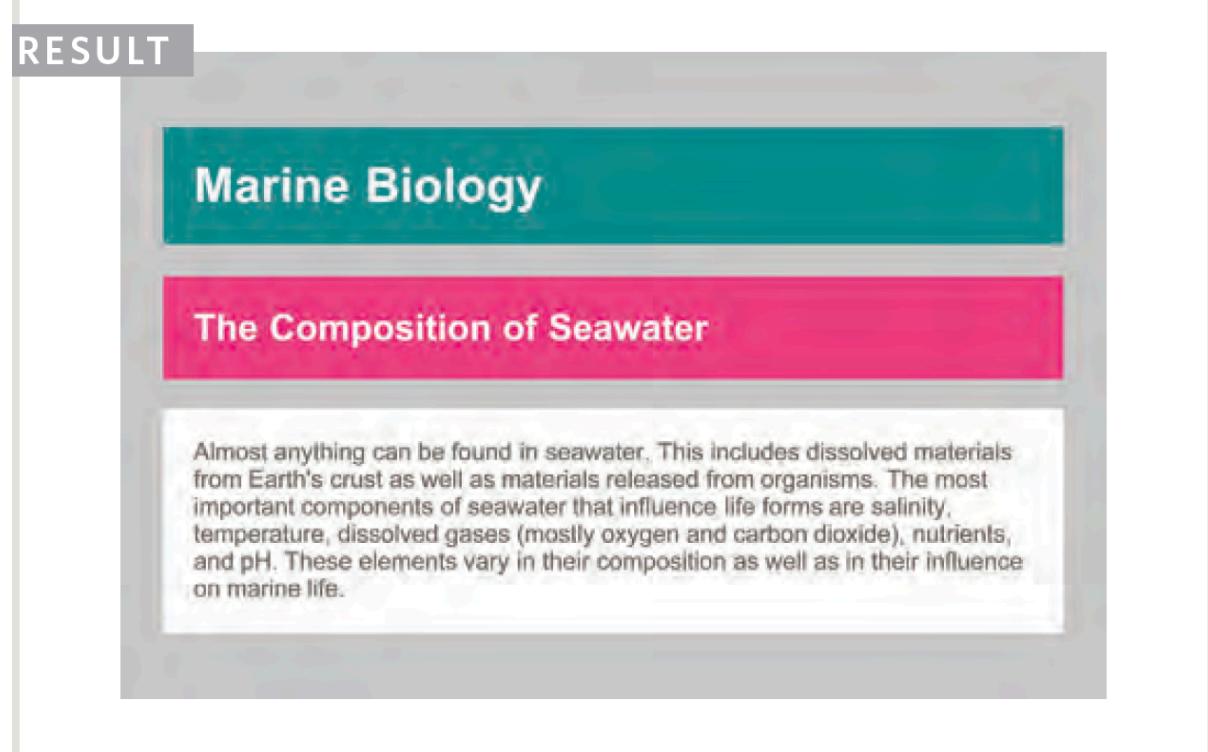
Background Color

CSS treats each HTML element as if it appears in a box, and the `background-color` property sets the color of the background for that box.

You can specify your choice of background color in the same three ways. If you do not specify a background color, then the background is transparent.

```
1 body { background-color: rgb(200,200,200); }
2 h1 { background-color: DarkCyan; }
3 h2 { background-color: #ee3e80; }
4 p { background-color: white; }
5
```

RESULT



Contrast



Text is harder to read when there is low contrast between background and foreground colors. Text is easier to read when there is higher contrast between background and foreground colors. For long spans of text, reducing the contrast a little bit improves readability. A lack of contrast is particularly a problem for those with visual impairments and color blindness.

Note: To check contrast there is a handy online tool at:

www.snook.ca/technical/colour_contrast/colour.html

CSS 3: Opacity

CSS3 introduces the opacity property which allows you to specify the opacity of an element and any of its child elements. The value is a number between 0.0 and 1.0 (so a value of 0.5 is 50% opacity and 0.15 is 15% opacity)

The CSS3 rgba property allows you to specify a color, just like you would with an RGB value, but adds a fourth value to indicate opacity. This value is known as an alpha value and is a number between 0.0 and 1.0 (so a value of 0.5 is 50% opacity and 0.15 is 15% opacity).

The rgba value will only affect the element on which it is applied (not child elements).

Example

```
1  p.one
2  {
3      background-color: rgb(0,0,0);
4      opacity: 0.5;
5  }
6
7  p.two
8  {
9      background-color: rgba(0,0,0,0.5);
10 }
11 |
```

RESULT



CSS 3: HSL Colors

The hsl color property has been introduced in CSS3 as an alternative way to specify colors.

The value of the property starts with the letters hsl, followed by individual values inside parentheses for:

- **hue:** This is expressed as an angle (between 0 and 360 degrees).
- **Saturation:** This is expressed as a percentage.
- **Lightness:** This is expressed as a percentage with 0% being white, 50% being normal, and 100% being black.

The hsla color property allows you to specify color properties using hue, saturation, and lightness as above, and adds a fourth value which represents transparency (just like the rgba property). The a stands for:

- **Alpha:** This is expressed as a number between 0 and 1.0. For example, 0.5 represents 50% transparency, and 0.75 represents 75% transparency.

```
1  body
2  {
3      background-color: hsl(0,0%,78%);
4  }
5
6  p {
7      background-color: hsla(0,100%,100%,0.5);
8  }
```

RESULT

Marine Biology

The Composition of Seawater

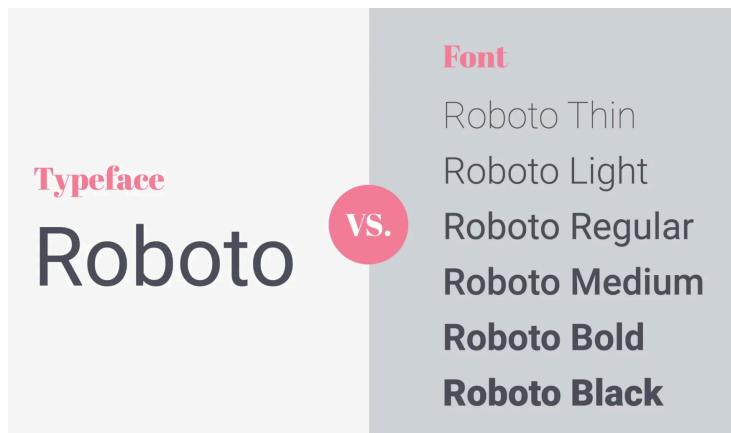
Almost anything can be found in seawater. This includes dissolved materials from Earth's crust as well as materials released from organisms. The most important components of seawater that influence life forms are salinity, temperature, dissolved gases (mostly oxygen and carbon dioxide), nutrients, and pH. These elements vary in their composition as well as in their influence on marine life.

Text

The properties that allow you to control the appearance of text can be split into two groups: Those that directly affect the font and its appearance (including the typeface, whether it is regular, bold or italic, and the size of the text). Those that would have the same effect on text no matter what font you were using (including the color of text and the spacing between words and letters)

Font vs Typeface

The main difference between these two terms is that a typeface (or type family) is the name of a specific collection of related fonts. In comparison, font refers to a particular weight, width, and style within that typeface. To put it in simple terms, each variation of a typeface is a font.



Typeface Terminology

| SERIF | SANS-SERIF | MONOSPACE |
|---|---|---|
| Serif fonts have extra details on the ends of the main strokes of the letters. These details are known as serifs. | Sans-serif fonts have straight ends to letters, and therefore have a much cleaner design. | Every letter in a monospace (or fixed-width) font is the same width. (Non-monospace fonts have different widths.) |
| The diagram shows three lowercase letters 'i' and 'm' side-by-side. The first 'i' is from a serif font, featuring small vertical strokes at the top of the stem. The second 'i' is from a sans-serif font, having a simple vertical stem. The third 'i' is from a monospace font, also having a simple vertical stem. Below the letters, there is explanatory text for each category. | The diagram shows three lowercase letters 'i' and 'm' side-by-side. The first 'i' is from a serif font, featuring small vertical strokes at the top of the stem. The second 'i' is from a sans-serif font, having a simple vertical stem. The third 'i' is from a monospace font, also having a simple vertical stem. Below the letters, there is explanatory text for each category. | The diagram shows three lowercase letters 'i' and 'm' side-by-side. The first 'i' is from a serif font, featuring small vertical strokes at the top of the stem. The second 'i' is from a sans-serif font, having a simple vertical stem. The third 'i' is from a monospace font, also having a simple vertical stem. Below the letters, there is explanatory text for each category. |

Specifying Typefaces

The font-family property allows you to specify the typeface that should be used for any text inside the element(s) to which a CSS rule applies. The value of this property is the name of the typeface you want to use. The people who are visiting your site need the typeface you have specified installed on their computer in order for it to be displayed.

You can specify a list of fonts separated by commas so that, if the user does not have your first choice of typeface installed, the browser can try to use an alternative font from the list. If a font name is made up of more than one word, it should be put in double quotes.

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Font Family</title>
5      <style type="text/css">    body {
6          font-family: Georgia, Times, serif;
7          h1, h2 {
8              font-family: Arial, Verdana, sans-serif;
9          }
10         .credits {
11             font-family: "Courier New", Courier,
12             monospace;
13         }
14     </style>
15 </head>
16 <body>
17 <h1>
18     Briards
19 </h1>
20 <p class="credits">
21     by Ivy Duckett
22 </p>
23 <p class="intro">
24     The briard, or berger de brie, is a large breed of dog
25     traditionally used as a herder and guardian of sheep...
26 </p>
27 </body>
28 </html>
```

Briards

by Ivy Duckett

The [briard](#), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep...

Size of Type

The font-size property enables you to specify a size for the font. There are several ways to specify the size of a font. The most common are:

- Pixels are commonly used because they allow web designers very precise control over how much space their text takes up. The number of pixels is followed by the letters px.
- The default size of text in browsers is 16px. So a size of 75% would be the equivalent of 12px, and 200% would be 32px.
- An em is equivalent to the width of a letter m.

```
1  body
2  {
3      font-family: Arial, Verdana, sans-serif;
4      font-size: 12px;
5  }
6
7  h1 { font-size: 200%; }
8  h2 { font-size: 1.3em; }
```

More Font Choice

The font-weight property allows you to create bold text. There are two values that this property commonly takes:

- Normal, bold

If you want to create italic text, you can use the font-style property. There are three values this property can take:

- Normal, italic, oblique

The text-transform property is used to change the case of text giving it one of the following values:

- Uppercase, lowercase, capitalize

The text-decoration property allows you to specify the following values:

- None, underline, overline, line-through, blink

The text-align property allows you to control the alignment of text. The property can take one of four values:

- Left, right, center, justify

Responding to Users

There are three pseudo-classes that allow you to change the appearance of elements when a user is interacting with them.

`:hover, :active, :focus`

:hover

This is applied when a user hovers over an element with a pointing device such as a mouse.

This has commonly been used to change the appearance of links and buttons when a user places their cursor over them. It is worth noting that such events do not work on devices that use touch screens (such as the iPad) because the screen is not able to tell when someone is hovering their finger over an element.

:active

This is applied when an element is being activated by a user; for example, when a button is being pressed or a link being clicked. Sometimes this is used to make a button or link feel more like it is being pressed by changing the style or position of the element slightly.

:focus

This is applied when an element has focus. Any element that you can interact with, such as a link you can click on or any form control can have focus.

Example

```
<!DOCTYPE html>
<html>
<head>
    <title>Text</title>
    <style type="text/css">
body {
    padding: 20px;
    h1, h2, h3, a {
        font-weight: normal;
        color: #0088dd;
        margin: 0px;
    }
    h1 {
        font-family: Georgia, Times, serif;
        font-size: 250%;
        text-shadow: 2px 2px 3px #666666;
    }
}
```

```
padding-bottom: 10px;}
```

```
h2 {
```

```
font-family: "Gill Sans", Arial, sans-serif;
```

```
font-size: 90%;
```

```
text-transform: uppercase;
```

```
letter-spacing: 0.2em;}
```

```
h3 {
```

```
font-size: 150%;}
```

```
p {
```

```
font-family: Arial, Verdana, sans-serif;
```

```
line-height: 1.4em;
```

```
color: #665544;}
```

```
p.intro:first-line {
```

```
font-weight: bold;}
```

```
.credits {
```

```
font-style: italic;
```

```
text-align: right;}
```

```
a {
```

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

```
a:hover {
```

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

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>
```

Briards

```
</h1>
```

```
<h2>
```

A Heart wrapped in fur

```
</h2>
```

```
<p class="intro">
```

The [briard](http://en.wikipedia.org/wiki/Briard), or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

```
</p>
```

<h3>

Breed History

</h3>

<p>

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

</p>

<p class="credits">

by Ivy Duckett

</p>

</body>

</html>

Briards

A HEART WRAPPED IN FUR

The **briard**, or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.

Breed History

The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.

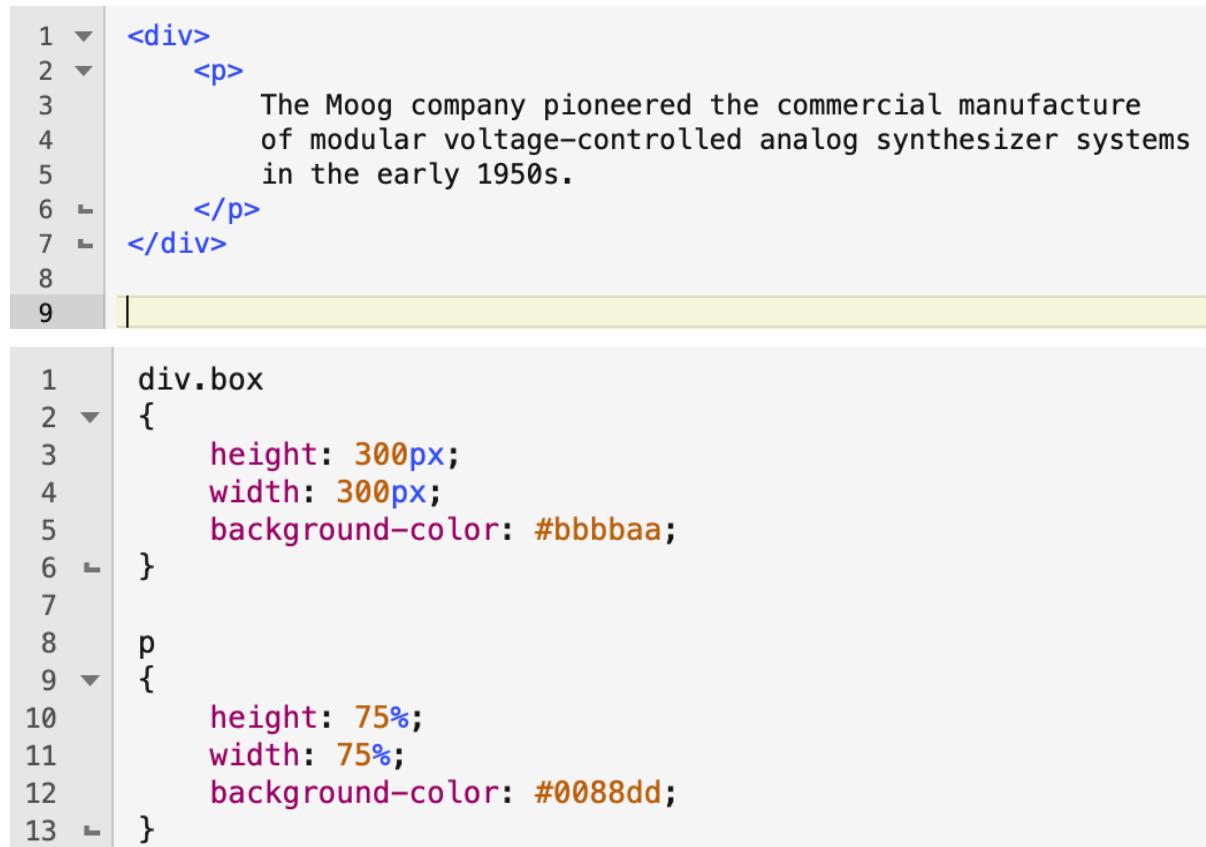
by Ivy Duckett

Boxes

CSS treats each HTML element as if it lives in its own box.

Box Dimension

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.



The screenshot shows a code editor with two panes. The top pane contains HTML code:

```
1 <div>
2   <p>
3     The Moog company pioneered the commercial manufacture
4       of modular voltage-controlled analog synthesizer systems
5         in the early 1950s.
6   </p>
7 </div>
```

The bottom pane contains CSS code:

```
1 div.box
2 {
3   height: 300px;
4   width: 300px;
5   background-color: #bbbbbaa;
6 }
7
8 p
9 {
10   height: 75%;
11   width: 75%;
12   background-color: #0088dd;
13 }
```

Note: Create HTML document and see the results.

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. You may also want to limit the height of it. This is achieved using the min-height and max-height properties.

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.

Border, Margin & Padding

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



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

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

```
<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>
```

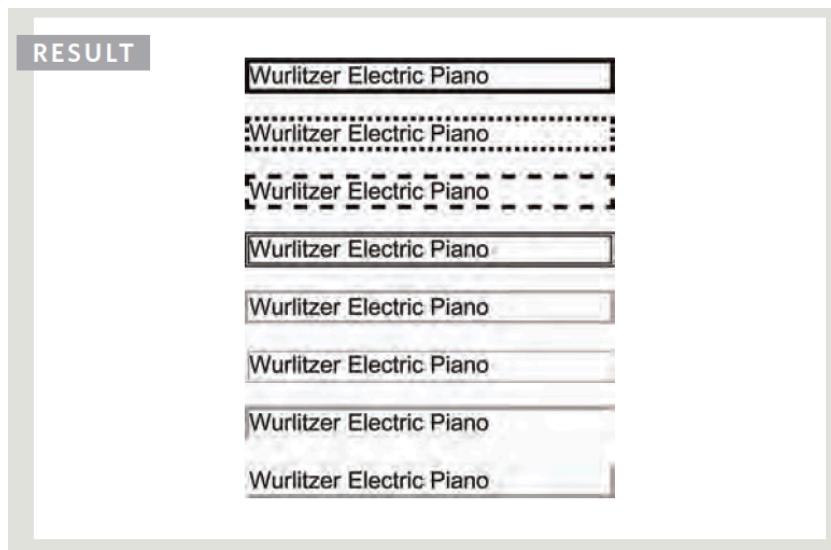
CSS

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

Border Style

You can control the style of a border using the border-style property. This property can take the values as shown in the following example:

```
9   p.one {border-style: solid;}  
10  p.two {border-style: dotted;}  
11  p.three {border-style: dashed;}  
12  p.four {border-style: double;}  
13  p.five {border-style: groove;}  
14  p.six {border-style: ridge;}  
15  p.seven {border-style: inset;}  
16  p.eight {border-style: outset;}
```



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

- padding-top, padding-right, padding-bottom & padding-left

Margin

The margin property controls the gap between boxes. Its value is commonly given in pixels.

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

- margin-top, margin-right, margin-bottom, margin-left

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.

Example:

```
1 <body>
2   <p>
3     Analog synthesizers are often said to have a "warmer" sound than their digital counterparts.
4   </p>
5   <p class="example">
6     Analog synthesizers are often said to have a "warmer" sound than their digital counterparts.
7   </p>
8 </body>
9
```

```
1  body { text-align: center; }
2
3  p
4  {
5      width: 300px;
6      padding: 50px;
7      border: 20px solid #0088dd;
8  }
9
10 p.example
11 {
12     margin: 10px auto 10px auto;
13     text-align: left;
14 }
15
```

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.

Change Inline/block

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.

CSS 3

CSS3 has introduced the ability to create image borders and rounded borders.

- border-image
- box-shadow
- border-radius

Lists, Tables and Forms

There are several CSS properties that were created to work with specific types of HTML elements, such as lists, tables, and forms.

Bullet Point Styles

The list-style-type property allows you to control the shape or style of a bullet point (also known as a marker). It can be used on rules that apply to the ``, ``, and `` elements.

Unordered Lists: For an unordered list you can use the following values:

- disc
- circle
- square

Ordered Lists: For an ordered (numbered) list you can use the following values:

- decimal: 1 2 3
- decimal-leading-zero: 01 02 03
- lower-alpha: a b c
- upper-alpha: A B C
- lower-roman: i. ii. iii.
- upper-roman: I II III



Images For Bullets

You can specify an image to act as a bullet point using the list-style-image property. The value starts with the letters url and is followed by a pair of parentheses. Inside the parentheses, the path to the image is given inside double quotes.

This property can be used on rules that apply to the `` and `` elements.

CSS

```
ul {  
    list-style-image: url("images/star.png");}  
li {  
    margin: 10px 0px 0px 0px;}
```

RESULT

Index of Translated Poems

Arthur Rimbaud

- ❖ Ophelia
- ❖ To Music
- ❖ A Dream for Winter
- ❖ Vowels
- ❖ The Drunken Boat

Table Properties

You have already met several properties that are commonly used with tables. Here we will put them together in a single example using the following:

- **width** to set the width of the table
- **padding** to set the space between the border of each table cell and its content
- **text-transform** to convert the content of the table headers to uppercase
- **letter-spacing**, **font-size** to add additional styling to the content of the table headers
- **border-top**, **border-bottom** to set borders above and below the table headers
- **text-align** to align the writing to the left of some table cells and to the right of the others
- **background-color** to change the background color of the alternating table rows
- **:hover** to highlight a table row when a user's mouse goes over it

```

<h1>First Edition Auctions</h1>
<table>
  <tr>
    <th>Author</th>
    <th>Title</th>
    <th class="money">Reserve Price</th>
    <th class="money">Current Bid</th>
  </tr>
  <tr>
    <td>E.E. Cummings</td>
    <td>Tulips & Chimneys</td>
    <td class="money">$2,000.00</td>
    <td class="money">$2,642.50</td>
  </tr>
  <tr class="even">
    <td>Charles d'Orleans</td>
    <td>Poemes</td>
    <td class="money"></td>
    <td class="money">$5,866.00</td>
  </tr>
  <tr>
    <td>T.S. Eliot</td>
    <td>Poems 1909 - 1925</td>
    <td class="money">$1,250.00</td>
    <td class="money">$8,499.35</td>
  </tr>
  <tr class="even">
    <td>Sylvia Plath</td>
    <td>The Colossus</td>
    <td class="money"></td>
    <td class="money">$1031.72</td>
  </tr>
</table>

```

CSS

```

body {
  font-family: Arial, Verdana, sans-serif;
  color: #111111;
}
table {
  width: 600px;
}
th, td {
  padding: 7px 10px 10px 10px;
}
th {
  text-transform: uppercase;
  letter-spacing: 0.1em;
  font-size: 90%;
  border-bottom: 2px solid #111111;
  border-top: 1px solid #999;
  text-align: left;
}
tr.even {
  background-color: #efefef;
}
tr:hover {
  background-color: #c3e6e5;
}
.money {
  text-align: right;
}

```

First Edition Auctions

| AUTHOR | TITLE | RESERVE PRICE | CURRENT BID |
|-------------------|-------------------|---------------|-------------|
| E.E. Cummings | Tulips & Chimneys | \$2,000.00 | \$2,642.50 |
| Charles d'Orleans | Poemes | | \$5,866.00 |
| T.S. Eliot | Poems 1909 - 1925 | \$1,250.00 | \$8,499.35 |
| Sylvia Plath | The Colossus | | \$1031.72 |

Gaps Between Cells

The border-spacing property allows you to control the distance between adjacent cells. By default, browsers often leave a small gap between each table cell, so if you want to increase or decrease this space then the border-spacing property allows you to control the gap. The value of this property is usually specified in pixels.

Collapse: Borders are collapsed into a single border where possible. (border-spacing will be ignored and cells pushed together, and empty-cells properties will be ignored.)

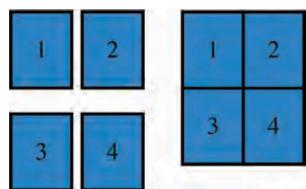
separate: Borders are detached from each other. (border-spacing and empty-cells will be obeyed.)

```
<table class="one">
  <tr>
    <td>1</td>
    <td>2</td>
  </tr>
  <tr>
    <td>3</td>
    <td>4</td>
  </tr>
</table>
```

CSS

```
td {
  background-color: #0088dd;
  padding: 15px;
  border: 2px solid #000000;}
table.one {
  border-spacing: 5px 15px;}
table.two {
  border-collapse: collapse;}
```

RESULT



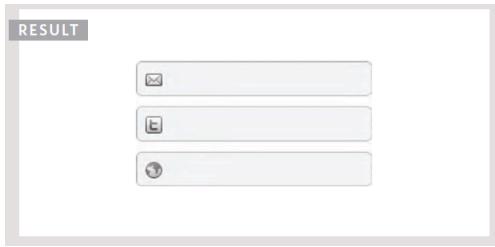
Styling Forms

CSS is commonly used to control the appearance of form elements. This is both to make them more attractive and to make them more consistent across different browsers. It is most common to style:

- Text inputs and text areas
- Submit buttons
- Labels on forms, to get the form controls to align nicely

Styling Text inputs

```
input {
  font-size: 120%;
  color: #5a5854;
  background-color: #f2f2f2;
  border: 1px solid #bdbdbd;
  border-radius: 5px;
  padding: 5px 5px 5px 30px;
  background-repeat: no-repeat;
  background-position: 8px 9px;
  display: block;
  margin-bottom: 10px;}
input:focus {
  background-color: #ffffff;
  border: 1px solid #b1e1e4;}
input#email {
  background-image: url("images/email.png");}
input#twitter {
  background-image: url("images/twitter.png");}
input#web {
  background-image: url("images/web.png");}
```



Styling Submit Buttons

```
input#submit {  
    color: #444444;  
    text-shadow: 0px 1px 1px #ffffff;  
    border-bottom: 2px solid #b2b2b2;  
    background-color: #b9e4e3;  
    background: -webkit-gradient(linear, left top,  
        left bottom, from(#beeaee9), to(#a8cfce));  
    background:  
        -moz-linear-gradient(top, #beeaee9, #a8cfce);  
    background:  
        -o-linear-gradient(top, #beeaee9, #a8cfce);  
    background:  
        -ms-linear-gradient(top, #beeaee9, #a8cfce);}  
  
input#submit:hover {  
    color: #333333;  
    border: 1px solid #a4a4a4;  
    border-top: 2px solid #b2b2b2;  
    background-color: #a0dbc4;  
    background: -webkit-gradient(linear, left top,  
        left bottom, from(#a8cfce), to(#beeaee9));  
    background:  
        -moz-linear-gradient(top, #a8cfce, #beeaee9);  
    background:  
        -o-linear-gradient(top, #a8cfce, #beeaee9);  
    background:  
        -ms-linear-gradient(top, #a8cfce, #beeaee9);}
```

Register

Styling Fieldsets & Legend

```
fieldset {  
    width: 350px;  
    border: 1px solid #dcdcdc;  
    border-radius: 10px;  
    padding: 20px;  
    text-align: right;}  
  
legend {  
    background-color: #eefefef;  
    border: 1px solid #dcdcdc;  
    border-radius: 10px;  
    padding: 10px 20px;  
    text-align: left;  
    text-transform: uppercase;}
```



Consider the following example:

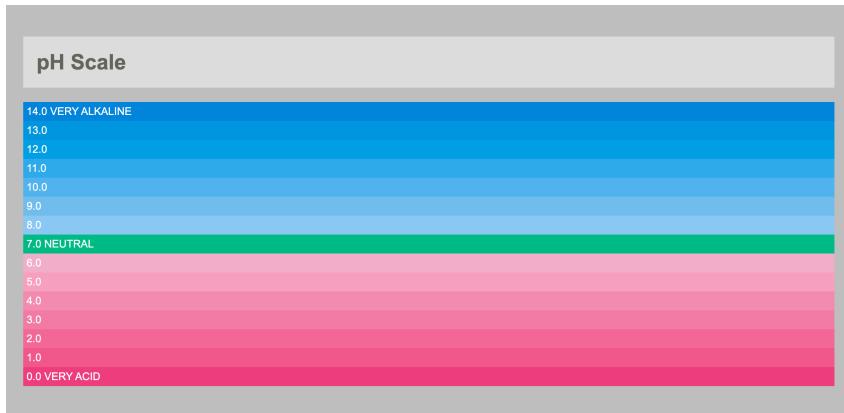
```
<body>  
    <div id="header">  
        <h1>Logo</h1>  
        <div id="nav">  
            <ul>  
                <li><a href="">Home</a></li>  
                <li><a href="">Products</a></li>  
                <li><a href="">Services</a></li>  
                <li><a href="">About</a></li>  
                <li><a href="">Contact</a></li>  
            </ul>  
        </div>  
    </div>  
    <div id="content">  
        <div id="feature">  
            <p>Feature</p>  
        </div>  
        <div class="article column1">  
            <p>Column One</p>  
        </div>  
        <div class="article column2">  
            <p>Column Two</p>  
        </div>  
        <div class="article column3">  
            <p>Column Three</p>  
        </div>  
    </div>  
    <div id="footer">  
        <p>&copy; Copyright 2011</p>  
    </div>  
</body>
```

```
CSS  
  
body {  
    width: 960px;  
    margin: 0 auto;}  
#content {  
    overflow: auto;  
    height: 100%;}  
#nav, #feature, #footer {  
    background-color: #eefefef;  
    padding: 10px;  
    margin: 10px;}  
.column1, .column2, .column3 {  
    background-color: #eefefef;  
    width: 300px;  
    float: left;  
    margin: 10px;}  
li {  
    display: inline;  
    padding: 5px;}
```



Lab Tasks:

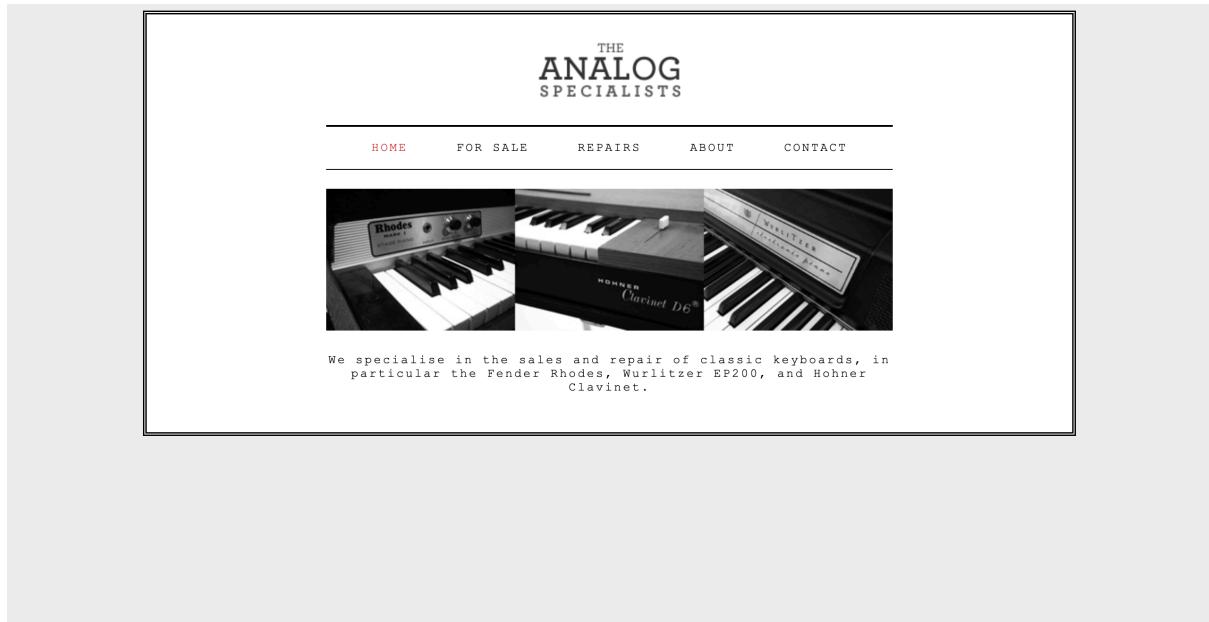
Task 1. Recreate the following PH scale using HTML and CSS.



Task 2. Apply CSS to the HTML content to get the following expected output:

HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>Boxes</title>
</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>
```



Task 3. Apply CSS styles to your web pages (Project) to enhance its visual appearance and improve its user interface.