

# CSS

## Terminology

**Property** (red) and **value** (blue)

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

**Declaration** (red)

A single property-value pair

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

**Selector** – shown in red **Declaration block** – shown in blue

Includes ALL of the individual declarations

```
p { font-weight: bold;
    font-family: Arial, sans-serif; }
```

## Ways to include CSS in your document

**External stylesheet** : attach a separate document in the <head> of your HTML.

```
<link href="css/styles.css" rel="stylesheet" />
```

**Internal stylesheet** or **embedded stylesheet** : Include styles in the <style> tag in the <head> of your HTML

```
<style>
  body {
    font-family: Arial, Helvetica, sans-serif;
  }
</style>
```

**Inline styles** : occur in the HTML tag itself

```
1 <p style="color: purple;">I am a purple paragraph!</p>
```

Result

I am a purple paragraph!

## Which should you use?

99.999% of the time: External stylesheet

It is rare that you will need inline or embedded/internal styles, but you should know they are possible.

## CSS Selectors

We will cover four simple ways to include CSS in your document:

- Elements: HTML tags as selectors
- Classes
- IDs
- Descendant selector

# Element selectors

Simply list the HTML tag and how you'd like it styled.

```
body {  
  font-family: Arial, Helvetica, sans-serif;  
}
```

## Class selectors .classname

Create a class and attach it to an HTML tag to make the class appear.

- You may have more than one class per tag.
- You may use a class several times in a document.
- Classes are more specific than HTML elements and will generally override them.

```
1 <style>  
2 .warning {  
3   color: orange;  
4   font-weight: bold;  
5 }  
6 </style>  
7  
8 <p class="warning">This paragraph displays a warning!</p>
```

### Result

**This paragraph displays a warning!**

## ID selectors #idname

Create an ID and attach it to an HTML tag to make the styling appear.

- You may use the ID only once per page.
- Each element may have only one ID.
- IDs are the most specific, overriding styles from elements and classes.
- IDs are not commonly used in CSS these days. They are more commonly used with JavaScript.

```
1 <style>  
2 #danger {  
3   color: red;  
4   font-weight: bold;  
5   text-transform: uppercase;  
6 }  
7 </style>  
8  
9 <p id="danger">This text is uppercase, bold, and red, and you better pay attention because  
you're in danger only once on this web page!</p>
```

### Result

**THIS TEXT IS UPPERCASE, BOLD, AND RED, AND YOU BETTER PAY ATTENTION BECAUSE  
YOU'RE IN DANGER ONLY ONCE ON THIS WEB PAGE!**

## Descendant selectors .classname element {}

This is a combination of one or more classes, IDs, or elements, separated by spaces, to indicate a family relationship.

```
1 <style>  
2 .warning p {  
3   color: violet;  
4 }  
5 </style>  
6  
7 <article class="warning">  
8   <p>All paragraphs in this article will have a color of violet.</p>  
9   <p>This paragraph too! No more classes needed!</p>
```

10

</article>

Result

All paragraphs in this article will have a color of violet.

This paragraph too! No more classes needed!

# Grouping selectors

Make all h4 AND h5 red:

1

<style>

2

h4, h5 { color: green; }

3

</style>

4

5

<h4>I'm Green</h4>

6

<h5>I'm Green Too!</h5>

Result

I'm Green

I'm Green Too!

Make only the h6's in <section> blue:

1

<style>

2

section h6 { color: blue; }

3

</style>

4

5

<section>

6

<h6>I'm blue!! </h6>

7

</section>

8

<h6>I'm NOT blue</h6>

Result

I'm blue!!

I'm NOT blue

Make the h4's and h5's inside <section> pink:

1

<style>

2

section h4, section h5 { color: pink; }

3

</style>

4

5

<section>

6

<h4>I'm pink!! </h4>

7

<h5>I'm pink too</h5>

8

</section>

9

<h4>I'm NOT pink</h4>

Result

I'm pink!!

I'm pink too

I'm NOT pink

For easier reading, you may wish to write selectors on separate lines:

```
section h4,
section h5 {
  color: pink;
}
```

Note that this is NOT the same as the above selector. This says "make all h4's in sections have a black background, and make ALL h5's have a black background."

```
section h4,
h5 {
  background-color: black;
}
```

# Common CSS properties and values

## font-family

Establishes the font family/families. Standard choices include:

- **sans-serif**: Arial, Helvetica, Trebuchet MS, Verdana
- **serif**: Times, Times New Roman, Georgia
- **monospace**: Courier

```
1 <style>
2 p.example-family { font-family: Courier; }
3 </style>
4
5 <p class="example-family">The quick brown fox jumps over the lazy dog.</p>
```

**Result**

The quick brown fox jumps over the lazy dog.

## font-size

Default browser size is 16px = 1em = 1 rem

```
1 <style>
2 p.example-fontsize { font-size: 1rem; }
3 </style>
4
5 <p class="example-fontsize">The quick brown fox jumps over the lazy dog.</p>
```

**Result**

The quick brown fox jumps over the lazy dog.

## font-style

Should the font be italic or normal?

```
1 <style>
2 p.example-fontstyle { font-style: italic; }
3 </style>
4
5 <p class="example-fontstyle">The quick brown fox jumps over the lazy dog.</p>
```

**Result**

*The quick brown fox jumps over the lazy dog.*

## font-weight

Should the font be bold or normal?

```
1 <style>
2 p.example-fontweight { font-weight: bold; }
3 </style>
4
5 <p class="example-fontweight">The quick brown fox jumps over the lazy dog.</p>
```

**Result**

**The quick brown fox jumps over the lazy dog.**

## font

Shorthand for multiple font properties.

```
1 <style>
```

```
2 p.example-fontshorthand { font: italic bold 1rem/1.3rem  Arial, Helvetica, sans-serif; }
3 </style>
4
5 <p class="example-fontshorthand">Font is Arial/Helvetica/sans-serif, italic, and bold, and
  1rem in size, with 1.3rem line spacing.</p>
```

**Result**  
*Font is Arial/Helvetica/sans-serif, italic, and bold, and 1rem in size, with 1.3rem line spacing.*

## line-height

Distance between lines.

```
1 <style>
2 p.example-lineheight { line-height: 1.3rem; }
3 </style>
4
5 <p class="example-lineheight">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed
  do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
  nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>
```

**Result**  
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

## color

Text color.

```
1 <style>
2 p.example-color {
3   color: #d74f25;
4 }
5 </style>
6
7 <p class="example-color">The quick brown fox jumps over the lazy dog.</p>
```

**Result**  
The quick brown fox jumps over the lazy dog.

## background

- background-color
- background-image
- background-position
- background-repeat

Dealing with background images and colors. background property is shorthand for all of the other properties.

By default, background images repeat.

background-color: lightblue; sets the background to lightblue.

```
1 <style>
2 p.example-background1 {
3   background-color: lightblue;
4 }
5 </style>
6
7 <p class="example-background1">The quick brown fox jumps over the lazy dog.</p>
```

**Result**  
The quick brown fox jumps over the lazy dog.

While background: lightblue url(image.jpg) no-repeat left top; means a background color of light blue, background image of image.jpg, display it once at the left top corner, no repeat of the image.

```
1 <style>
2 p.example-background2 {
3     background: lightblue url(http://placepuppy.net/300/300) no-repeat left top;
4     height: 300px;
5 }
6 </style>
7
8 <p class="example-background2">The quick brown fox jumps over the lazy dog.</p>
```

Result

The quick brown fox jumps over the lazy dog.

Image will display over the color. You may specify a color in case the image doesn't display.

text-decoration

Turns off the underline in links.

Values include none, underline.

```
1 <style>
2 a.padding {
3     padding: initial;
4 }
5 a.example-textdecoration {
6     text-decoration: none;
7 }
8 </style>
9
10 <p>The quick brown <a class="example-textdecoration padding"
    href="https://www.youtube.com/watch?v=jofNR_WkoCE">fox jumps</a> over the <a class="padding"
    href="https://giphy.com/gifs/cheezburger-dog-dogs-FdWU4Ht05vTGw">lazy dog</a>.</p>
```

Result

The quick brown fox jumps over the lazy dog.

Link Pseudo-classes

Pseudo-classes: specify styling in these states.

- :link — unvisited link
- :visited — visited state
- :focus — the currently "focused" (selected) element
- :hover — hover your mouse over this
- :active — the time between the link is selected and the time the page loads. (Not used much today.)

If you are using these pseudo-classes, they MUST go in the order listed.

To remember:

Lord Vader Former Handle Anakin

:link, :visited, :active are used almost exclusively on links (the A tag).

The pseudo-classes :focus and :hover are used with links and with any other element on the page.

:focus is especially useful with forms and in accessibility contexts.

```
1 <style>
2 a.example:link {
3     color: #c02d28;
4 }
5 a.example:visited {
6     color: blue;
7 }
8 a.example:focus {
9     border: 3px dotted black;
10 }
11 a.example:hover {
12     color: purple;
13     font-weight: bold;
14 }
15 a.example:active {
16     color: #7c8e88;
17 }
18 </style>
19
20 <p>The quick brown <a class="example" href="https://www.youtube.com/watch?v=jofNR_WkoCE">fox
  jumps</a> over the <a class="example" href="https://giphy.com/gifs/cheezburger-dog-dogs-
  FdWU4Ht05vTGw">lazy dog</a>.</p>
```

Result

The quick brown fox jumps over the lazy dog.

# References

## HTML Elements Reference

<https://developer.mozilla.org/en-US/docs/Web/HTML/Element>

## InternetingIsHard.com

- Hello CSS <https://internetingishard.com/html-and-css/hello-css/>
- CSS Selectors <https://internetingishard.com/html-and-css/css-selectors/>
- Links and Images <https://internetingishard.com/html-and-css/links-and-images/>

## Validating CSS

<http://jigsaw.w3.org/css-validator/>

## Convert pixels to ems and %

<http://www.pxtoem.com/>

## Color palettes, if you need help creating one

<http://color.adobe.com/>

## Colorzilla, for choosing colors from your website

<http://www.colorzilla.com/>

# Exercises

## Waaaa, it "doesn't work"!!!

Remember to use the HTML and CSS validators if things are looking odd in the browser, or if the colors in the editor seem off. That's an indicator that you've made some errors along the way. The HTML validator is great for catching errors pertaining to syntax, tag spelling, tag nesting, and applying the right attributes to a given tag. The CSS validator will find unclosed curly brackets, properties and values that don't exist, and more.

HTML validator: <http://validator.w3.org/>

CSS validator: <http://jigsaw.w3.org/css-validator>

# Style your book chapter

Look at the book chapter that you marked up yesterday.

To this, add some CSS styling. Make use of:

- Colors, background images, styling text
- CSS selectors: elements, classes, ID, descendent selector
- Include styles in an external stylesheet

## Additional CSS practice

If you finish early, and/or you want some more practice, work through the following sections of exercises at W3Schools:

<https://www.w3schools.com/html/exercise.asp>

- HTML Styles, all exercises (inline styles only)
- HTML CSS, all exercises (embedded styles)
- HTML Links, exercise 4
- HTML Images, exercise 2
- HTML Classes, all exercises
- HTML IDs, all exercises

There are additional exercises at this link:

<https://www.w3schools.com/css/exercise.asp>

- CSS Syntax
- CSS How To
- CSS Background
- CSS Text
- CSS Links
- CSS Fonts

## On Your Own

Begin styling the "about" page you made yesterday.

If you still need more to do, make a page about some of your hobbies and activities and style it, or style the hobbies page you made yesterday. Include:

- What is this hobby exactly?
- How does it make you feel?
- Where have you traveled because of your hobby? What other life experiences has your hobby provided, that you might not otherwise experience?
- Photos and/or videos of your hobby in action
- Links to websites describing your hobby, or where hobbyists discuss what they do

If you manage to get as far as creating both web pages, link them together with a navigation bar.

[← HTML](#)

[Layout →](#)