

# CSS

## Lab 1

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## 1 Online References

### 1.1 Basic references

<https://www.tutorialrepublic.com/css-tutorial/>

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

### 1.2 Advanced references

<https://web.dev/learn/css/>

<https://css-tricks.com>

### 1.3 Official reference

<https://developer.mozilla.org/en-US/docs/Web/CSS/Reference>

## 2 CSS Syntax

<https://www.tutorialrepublic.com/css-tutorial/css-syntax.php>

All topics: Understanding CSS Syntax, Writing comments in CSS, Case Sensitivity in CSS

## 3 Different ways of styling HTML with CSS

<https://www.tutorialrepublic.com/css-tutorial/css-get-started.php>

All topics: Including CSS in HTML Documents, Inline Styles, Embedded Style Sheets, External Style Sheets

The `labcode` folder has a file `demo-css.html` which demonstrates all 3 approaches of accessing CSS style rules from a HTML documents.

Note: As is the case with `href` attribute for `<a>` tag, the path to the CSS style sheet is relative to the current location of the HTML document and may be stored in a subfolder for e.g.

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

Note: The most common approach for adding CSS is through an external style sheet via the `<link>` tag

In most of the online tutorials that we will be seeing later, the demo is done via embedded style rules between the `<style>` tags. You can practice converting it to an external style sheet form by copying and pasting the relevant style rules into the external CSS file that you have created.

When working with a separate style sheet, you can keep them both the HTML document and style sheet open next to each other in VS Code using separate editor panes next to each other (or on top of each other if you wish)

[https://code.visualstudio.com/docs/getstarted/userinterface#\\_side-by-side-editing](https://code.visualstudio.com/docs/getstarted/userinterface#_side-by-side-editing)

## 4 CSS Selectors

### 4.1 Basic selectors

Universal, Element, Id, Class

<https://www.tutorialrepublic.com/css-tutorial/css-selectors.php>

Specific topics: Universal Selector, Element Type Selectors, Id Selectors, Class Selectors

<https://code.tutsplus.com/tutorials/the-30-css-selectors-you-must-memorize--net-16048>

Topic 1 - 4: See demo

### 4.2 Combinator selectors

<https://www.tutorialrepublic.com/css-tutorial/css-selectors.php>

Topic: Descendant Selectors, Child Selectors, Adjacent Sibling Selectors, General Sibling Selectors,

<https://code.tutsplus.com/tutorials/the-30-css-selectors-you-must-memorize--net-16048>

Topic 5 - 8: Do Demo

### 4.3 Grouping selectors

<https://www.tutorialrepublic.com/css-tutorial/css-selectors.php>

Topic: Grouping Selectors

<https://www.thoughtco.com/grouping-multiple-css-selectors-3467065>

## 5 CSS Color

<https://www.tutorialrepublic.com/css-tutorial/css-color.php>

All topics except the last: Setting Color Property, Color Values, Color Keywords, HEX Color Values, RGB Color Values

[https://www.w3schools.com/css/css\\_colors.asp](https://www.w3schools.com/css/css_colors.asp)

There are sites which display the hex, RGB, HSL codes for all ranges of colors to help you in choosing the right color:

<https://htmlcolorcodes.com/color-picker/>

You can also upload images that you have downloaded from the web to identify the specific color code for a color in the image:

<https://imagecolorpicker.com/>

## 6 CSS Background

<https://www.tutorialrepublic.com/css-tutorial/css-background.php>

All topics: background-color, background-image, background-repeat, background-attachment, background-position, background short hand property

Note: Notice that you cannot download the image file that is used as background image, unlike a normal image placed using the <img> tag. To perform this example in your browser, use any image that you have downloaded from a previous lab or download a random image from the web in common format (jpg, gif, png, etc).

## 7 CSS Units

[https://www.w3schools.com/css/css\\_units.asp](https://www.w3schools.com/css/css_units.asp)

Note: Units must be specified for all lengths, except for the special case when it is 0, in which case the unit can be omitted. You cannot have whitespace between the number and the unit

<https://www.freecodecamp.org/news/css-unit-guide/>

More detailed guide and explanation

<https://css-tricks.com/the-lengths-of-css/>

## 8 CSS Fonts

<https://www.tutorialrepublic.com/css-tutorial/css-fonts.php>

All topics: font-family, font-style, font-weight, font-size, font-variant.

Web safe fonts

<https://blog.hubspot.com/website/web-safe-html-css-fonts>

### 8.1 Google Fonts

Google Fonts is widely used and popular source of alternatives fonts to the ones mentioned above.

<https://fonts.google.com/>

<https://linuxhint.com/google-fonts-html/>

## 9 Inspecting styles in the browser DOM

In the earlier HTML lab, we have already seen how to inspect certain parts of the browser DOM using the Chrome Developer tools. We will now repeat the same exercise but now focusing on working with CSS as well. Make sure you have completed the section in CSS Lab 2 on the Box Model first.

<https://developer.chrome.com/docs/devtools/dom/>

<https://developer.chrome.com/docs/devtools/css/>

You can work directly with the examples detailed above at the Chrome Developer site as well as open the HTML for completed project that is available at: `labcode\book promotion project\final`

- a) Use the Inspect icon from the Elements panel to hover over the various elements in the view to see the corresponding CSS properties that are being applied to it. You can change the property values in the Styles section of the Element panel
- b) Add a CSS inline style rule directly to any element via the `element.style { }` entry in the Style section in the Elements panel.
- c) Add a `class` value directly to any element via the `.cls` section so that any existing style rule targeting that class will now affect that element.
- d) Add a pseudostate related to user interaction (for e.g. focusing, hovering, etc) to an element that would normally be applied using CSS pseudoclasses.
- e) Change the dimensions of an element based on the CSS Box model (margin, border, padding)

There are also a variety of additional CSS issues that you can check out with DevTools

<https://developer.chrome.com/docs/devtools/css/issues/>

One of the more common issues is determining which CSS property value will actually apply to given element when you have conflicting CSS rules that can be applied to a single element. This is actually based on the [CSS Cascade rules](#) and is a very common scenario in complex webpages.

<https://web.dev/learn/css/the-cascade/#using-devtools-to-find-out-why-some-css-is-not-applying>

## 10 CSS Text

<https://www.tutorialrepublic.com/css-tutorial/css-text.php>

All topics: color, text-align, text-decoration, text-transform, text-indent, line-height, letter-spacing, word-spacing

Additional material:

[https://www.w3schools.com/css/css\\_text.asp](https://www.w3schools.com/css/css_text.asp)

Aligning text vertically center

<https://www.tutorialrepublic.com/faq/how-to-align-text-vertically-center-in-a-div-using-css.php>

## 11 CSS Links

<https://www.tutorialrepublic.com/css-tutorial/css-links.php>

All Topics: a:active, a:hover, a:link, a:visited

Additional examples

[https://www.w3schools.com/css/css\\_link.asp](https://www.w3schools.com/css/css_link.asp)

## 12 CSS Lists

<https://www.tutorialrepublic.com/css-tutorial/css-lists.php>

All topics: list-style-type, list-style-position, list-style-image, list-style

Additional examples:

[https://www.w3schools.com/css/css\\_list.asp](https://www.w3schools.com/css/css_list.asp)

## 13 CSS Buttons

Buttons can be styled using all the previous properties we have seen so far

[https://www.w3schools.com/css/css3\\_buttons.asp](https://www.w3schools.com/css/css3_buttons.asp)

Sample CSS for a variety of buttons:

<https://fdossena.com/?p=html5cool/buttons/i.frag>

<https://getcssscan.com/css-buttons-examples>

## 14 CSS Forms

Forms are styled using many of the properties we have seen so far. We will need to use attribute selectors to target specific form elements (`input[type=text]`, `input[type=password]`, etc)

[https://www.w3schools.com/css/css\\_form.asp](https://www.w3schools.com/css/css_form.asp)

## 15 CSS Images

Images are styled using all the properties we have seen so far

[https://www.w3schools.com/css/css3\\_images.asp](https://www.w3schools.com/css/css3_images.asp)

[https://www.w3schools.com/css/css\\_image\\_gallery.asp](https://www.w3schools.com/css/css_image_gallery.asp)

Resizing images to fit within a container via object-fit

[https://www.w3schools.com/css/css3\\_object-fit.asp](https://www.w3schools.com/css/css3_object-fit.asp)

<https://www.smashingmagazine.com/2021/10/object-fit-background-size-css/>

## 16 CSS Tables

<https://www.tutorialrepublic.com/css-tutorial/css-tables.php>

Topics: border, border-collapse, border-spacing, table-layout, vertical-align, empty-cells, caption-side,

Additional examples:

[https://www.w3schools.com/css/css\\_table.asp](https://www.w3schools.com/css/css_table.asp)

## 17 CSS Validation

<https://www.tutorialrepublic.com/css-tutorial/css-validation.php>

## 18 CSS Cascade, inheritance and specificity

<https://wattenberger.com/blog/css-cascade>

<https://web.dev/learn/css/the-cascade/>

### 18.1 Rules specificity

<https://www.freecodecamp.org/news/what-is-css-specificity/>

<https://css-tricks.com/specifics-on-css-specificity/>

[https://www.w3schools.com/css/css\\_howto.asp](https://www.w3schools.com/css/css_howto.asp)

Topic: Multiple style sheets until the end

### 18.2 Inheritance

<https://web.dev/learn/css/inheritance/>

<https://blog.logrocket.com/css-inheritance-inherit-initial-unset-and-revert/>