

1 Lab 02 - CSS (Cascading Style Sheets)

Objectives

1. Stylize an HTML page using CSS.
2. Understand the syntax of CSS.
3. Write CSS rules for classes and specific HTML elements.

Labs Overview

The primary goal for each of the labs is to provide you with an opportunity to practice the content discussed throughout the lectures.

There are *CHECK POINT* areas throughout each set of instructions. These are places where it might be a good idea to check in with the lab TA before progressing if there are things that were unclear to you.

You do not need to check in with the TA for each checkpoint, and may progress through the whole lab at your own speed. You will need to get checked off by the TA after you have completed the lab before leaving, or you may not get any credit for the lab.

1.1 Part 01 - Create Files

1. Download the file named **lab2_starter.html** into a folder named **lab2**.
2. Open the file named **lab2_starter.html** in the programming focused text editor.
3. Open the file named **lab2_starter.html** in a web browser (e.g., Safari, Firefox, Microsoft Edge).

1.1.1 Check Point 01

Note: If you are having trouble with your code, make sure to get help from a lab TA or a lab peer.

A few common troubles include: downloading multiple versions of **lab2_starter.html**, opening a version in the programming focused text editor and another version in a web browser.

1.2 Part 02 - Adding Styles

1. Add the link to the CSS file named **style.css** in the file named **lab2_starter.html**.
2. Create a file named **style.css** within a folder named **lab2**. The **style.css** file must be saved into the same directory as your **lab2_starter.html** (i.e., the folder named **lab2** in the folder named **csc130**).
3. Create a CSS rule that sets the background color of the BODY of the HTML to black. You can do this by setting color to black (or by using the hex code #000000 or by rgba(0,0,0,1)).
4. Create a set of rules for the h1 and p tags' font color. Make the headings yellow and the paragraphs white.
5. Create a set of rules for the other elements. Add rules to make all the content visible by selecting colors that contrasts with the background.

```
1 <html>
2   <head>
3     <link href="style.css" type="text/css" rel="stylesheet">
4   </head>
5
6   <body>
7   </body>
8 </html>
```

Code 1: CSS Stylesheet Link

1.2.1 Check Point 02

Note: If you are having trouble with your code, make sure to get help from a lab TA or a lab peer.

A few common troubles include: spelling mistakes, incorrect rule syntax, not saving the files, not refreshing the browser, incorrectly linking the stylesheet.

Documentation is an important part of programming! Do not be afraid to search documentation!

Documentation Resource: <https://developer.mozilla.org/en-US/>

1.3 Part 03 - Classes

1. Explore the file named **lab2_starter.html**.

You will notice that there are HTML elements with the **class** attribute.

```
1 <html>
2   <head>
3     <link href="style.css" type="text/css" rel="stylesheet">
4   </head>
5
6   <body>
7     <main>
8       <div class="content"></div>
9     </main>
10  </body>
11 </html>
```

Code 2: CSS Class Attribute

The class attribute lets us style everything within the targeted HTML element (i.e., everything within the DIV element with the class attribute called “content”).

The file named **lab2_starter.html** contains three classes:

- content: the class for all of the main web page content
- caption: the class for image (and maybe also table) captions
- reference: the class for references

We might want to style all three of the above classes differently, but also have different parts across our web page, or web pages to be consistent (so all of our captions look the same, and all of our references look the same, etc).

Remember: To create a rule for a class we use the dot notation.

For example, to create a style rule for all HTML elements labeled with a class called “important”, we would write the following:

```
1 .important {
2   color: red;
3   font-weight: bold;
4   font-size: 50px;
5   text-transform: uppercase;
6 }
```

Code 3: CSS Class Important

This would make everything with the class called “important” in upper-case, large, bold, red font.

2. Add padding to the content class (this will indent it from the edges).
3. Change the font size and color of the reference class elements.

1.3.1 Check Point 03

Note: If you are having trouble with your code, make sure to get help from a lab TA or a lab peer.

A few common troubles include: spelling mistakes, incorrect rule syntax, not saving the files, not refreshing the browser, incorrectly linking the stylesheet.

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1.4 Part 04 - IDs

1. Explore the file named **lab2_starter.html**.

You will notice that there are HTML elements with the **id** attribute.

```
1 <html>
2   <head>
3     <link href="style.css" type="text/css" rel="stylesheet">
4   </head>
5
6   <body>
7     <main>
8       <div id="ecs-image"></div>
9       <div>
10        <p id="welcome">Hello</p>
11      </div>
12    </main>
13  </body>f
14 </html>
```

Code 4: CSS ID Attribute

The ID attribute lets us style specific elements. We use a single ID attribute per web page (i.e., an ID attribute called **ecs-image** will only be used once per web page).

Remember: To create a rule for an ID we use the **#** notation.

For example, in the HTML file we want a particular section of the document to display an image of the ECS building.

2. Add a CSS ID rule for our ID called **#ecs-image**.

```
1 #ecs-image {
2   background-image: url(
3     "https://www.uvic.ca/assets2012/images/photos/main/campus-info-maps-maps/main-blg-ecs.jpg"
4   );
5   background-repeat: no-repeat;
6   height: 250px;
7 }
```

Code 5: CSS ID ECS-IMAGE

The code snippet 5 creates a CSS rule that sets the background image of our DIV element.

3. Add a CSS class rule for our class called **caption**.

```
1 .caption {
2   position: relative; top: 200px;
3 }
```

Code 6: CSS Class Caption

The code snippet 6 sets the caption element to be positioned relative to the top of the DIV, and in particular 200px from the top.

4. Add a CSS rule for our header 2 (i.e., h2) elements.

```
1 h2 {
2     border-bottom: 1px solid; border-top: 1px solid;
3     padding: 8px;
4     color: rgba(255, 255, 255, 0.5);
5     font-weight: 100;
6     width: 60%;
7 }
```

Code 7: CSS Class Caption

The code snippet 7 styles all h2 elements on the web page.

Remember: To create a rule for an HTML element we use the HTML element (i.e., we do not use dot or # notation).

1.4.1 Check Point 04

Note: If you are having trouble with your code, make sure to get help from a lab TA or a lab peer.

A few common troubles include: spelling mistakes, incorrect rule syntax, not saving the files, not refreshing the browser, incorrectly linking the stylesheet.

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1.5 Part 05 - Final Exploration

1. Duplicate the file named **lab2_starter.html** as a file named **project.html** (or start with a blank file) within a folder named **lab2**.
2. Create a simple web page about your project idea.

The following questions from the textbook (chapter 01) can help guide the presented content on your web page.

- What is the project idea?
- Is this a traditional web app, or AR, or both?
- What is the hypothesis for your idea?

1.5.1 Check Point 05

Note: If you are having trouble with your code, make sure to get help from a lab TA or a lab peer.

1.6 Lab 02 - Final Check Point

1. Send a message (private or public) to the lab TA.
2. Walk through your code and your web page.

Note: You will need to show your work during lab time to receive credit.

Remember: If you are wanting full marks you will need to complete the bonus material *AND* participate meaningfully in the lab (e.g., help others, ask questions).

1.7 Lab 02 - Bonus Material

- Add a Transform Function to the website.
- Add additional classes to the HTML elements.
- *AND/OR* Add additional HTML elements and add attributes **class** and **id**.
- *AND/OR* Explain the importance of CSS rule structure (i.e., is the position within the CSS file important).

Relevant Documentation Resources:

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