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Lab 1: Making a website from scratch

Section 1: Introduction

This lab is intended to help you dive into web development. In this lab you will develop a webpage from scratch and add some content to it. This document outlines the steps you should take to get started building a website and the required functionality that must be available in the final submission.

This lab does not include step-by-step instructions for every task. It is expected that if you don't know how to do something that you attempt to find the answer (e.g. by searching your class notes), ask your peers, or come to me for guidance. I've included some helpful links at the end of this document that should be a good starting point for figuring out how to do specific tasks.

Your website should teach me something. It can be about anything as long as there is a coherent theme for the site. It should have interactivity and allow me to navigate around different subjects surrounding your topic. Use as many different types of media as you are comfortable with to help convey your point. Specific requirements can be found in this document in section 3, and grading rubric is available on Canvas.

Section 2: Setup

This unit's lecture went over how to get started using a text editor to write HTML code and open it in a web browser. This section will outline what we went over in that lecture.

1. Download and open a text editor. I suggest Atom, but there are plenty of other ones out there (links at the end of this document). You're welcome to use whatever editor you prefer.
2. Make a new file called index.html and paste the following code into it. This starter html file is also available on Canvas.

```
<!DOCTYPE html>
<html>
  <head>
  </head>
  <body>
    <h1>Hello World!</h1>
  </body>
</html>
```

3. Save the file and open it with your preferred browser.
4. If you need further reference check out the Week 1 Lecture notes.

Section 3: Requirements

Next, build out your website so that it includes three pages that are linked together with hyperlinks. Add meaningful content to those pages, and style the content with CSS.

At a minimum, your website must include the following:

1. At least 3 different pages that are fully functioning
2. A title, paragraph headers, text content
3. At least 2 pictures (1 using a local image, and 1 using a URL pointer). Include alt text for all of your images.
4. Hyperlinks to navigate between pages. Users should never hit a dead end.
5. Include a CSS file. Do not write CSS in the head of the HTML file.
6. Define properties for at least 3 CSS selectors to dictate the styles of headers, paragraphs, images, or some other element
7. Define at least 1 CSS *class* to dictates the style of an element you want to style uniquely
8. Add color and change fonts to beautify the site

Section 4: Bonus Requirements

If HTML and CSS are not new to you (or even if they are) and you want to challenge yourself to go beyond these requirements, by all means please do! Bonus points will be awarded on a case-by-case basis. Some ideas for additional things to include are:

1. Instead of using text hyperlinks to navigate pages, use buttons
2. Design and implement a header bar for your website navigation
3. Embed an iFrame (perhaps containing the Google MyMaps map you've made for the Week 2 Reading Response)

Section 5: Deliverables

To complete this assignment, submit a zipped folder containing:

- All HTML files I need to run your website
- At least one CSS file you created for your website
- Any local images required by your website
- Any other files needed to run the website

If you need a refresher on how to create a zipped folder, search "How to create a zip folder" + your operating system (i.e. Windows or Mac)

Section 6: Helpful links

Text Editors:

- Atom: <https://atom.io/>
- Notepad++: <https://notepad-plus-plus.org/>
- Sublime: <https://www.sublimetext.com/>

Reference documentation:

The internet is full of help, especially for HTML/CSS/JS developing. The hard part is deciphering what is useful for you. StackOverflow is very popular, but it's sometimes complicated for beginners because it uses a message board format and it can be hard to find what you're looking for. I suggest checking W3 Schools and Mozilla Developer Network (MDN) first. Both provide comprehensive reference guides and many helpful tutorials. See the links below:

- W3 Schools HTML: <https://www.w3schools.com/html/default.asp>
- W3 Schools CSS: <https://www.w3schools.com/css/default.asp>
- W3 Schools CSS classes: https://www.w3schools.com/cssref/sel_class.asp
- Mozilla Developer HTML: <https://developer.mozilla.org/en-US/docs/Web/HTML>

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