

Lab 01 - Build a Website

CS 1301 - Intro to Computing - Fall 2020

Important

- Due Date: **Tuesday, September 22nd, 11:59 PM.**
- This is an individual assignment. High-level collaboration is encouraged, **but your submission must be uniquely yours.**
- Resources:
 - TA Helpdesk
 - Email TA's or use class Piazza
- **This assignment is meant to be a self-guided exploration of web development. TAs will not be providing in-depth support when making your site.**

Purpose

In this lab, you will be creating a webpage about **any** school appropriate topic that you want. It could be about you, your hobbies, an organization you participate in, or something entirely fictional! Creating websites is a part of **web development**, a field of computer science related to creating content and applications for the Internet. We will start this exploration with HTML and CSS, the two fundamental languages for creating websites. The purpose of this lab is for you to create and style a basic webpage using HTML and CSS.

This assignment is very different from your typical homeworks, so please read the entire document before you begin.

Starter Files

To start this lab, download the `Lab01.zip` file from Canvas. Extract the files by right clicking the `.zip` and clicking "Extract All" (for Windows) or double-click the file on Mac. Once you extract the files, you should see the following file structure:

```
Lab01
├── demo.html
├── style.css
└── images
    └── paint.jpg
```

Use these files as a reference for your lab, and feel free to add more `html` and `css` files. When adding `html` and `css` files, place them in the same level as `demo.html`. Make sure that all images you add from your computer are inside the `images` folder shown above. **All files related to your lab must be in this Lab01 folder.**

At any time, you can open an `.html` file in a web browser such as Safari or Chrome by double-clicking the file, or dragging the file into the browser.

Getting Started

For this lab, you will be using a third-party text editor of your choice to write the HTML and CSS yourself. Python and IDLE **will not** be used in this assignment. Here are some text editors that you might want to use:

- [Visual Studio Code](#)
- [Atom](#)

HTML is a language that specifies the content of a web page. CSS is a language specifies how that content is styled and presented to the viewer (the colors, fonts, positioning, etc). HTML files end with the `.html` file extension, and CSS files end with the `.css` extension. A CSS file is "linked" to an HTML file with a special HTML tag in the header. You will need at least two `.html` files and one `.css` file by the time you are finished. Before you get started, you may want to review some of these links that cover the basics of HTML and CSS:

- [w3schools](#)
- [HTML Guide](#)
- [CSS Guide](#)

Assignment

Your website will need to meet the following criteria in order to receive full credit:

- **lab01.html :**
 - Must contain at least 2 (or more) images. Additional images can be spread out across your pages however you wish
 - Must contain a list(`` or `` , either is fine)
 - Must contain an HTML table containing some type of information, that is at least 3 x 3 in size (**not including row and column headers**)
 - Must contain the following types of links:
 - A clickable text link
 - A link to your other `.html` file
 - A clickable image link (i.e. nesting an image tag inside an `<a>` hyperlink tag)
- **other html files:**
 - For a later lab assignment, you will be assigned a data analysis project, so for now, your other `.html` page will be about data
 - This `.html` file can be named anything
 - Needs to be linked from `lab01.html`
 - Include any image or infographic related to a dataset or topic that you find interesting
 - Include a paragraph describing this infographic/image and why you think it's interesting. This paragraph should be inside a `<p>` tag
- **style.css :**
 - Styling of the page background and default text (colors, fonts, background images, anything)
 - Styling of at least 2 text elements such as `<p>` , `<h1>` , `` , or ``
 - Styling of links (`<a>` tags)
 - Style **visited**, **active**, and **hovered** links
 - Style one element using an **ID**, and another element using a **class**.
 - It is important to note that all HTML files you make can use the same `.css` file for styling

These requirements are the minimum. Feel free to add anything else to your webpage. **Be creative!** The rubric for this assignment is on the last page of this PDF.

Adding Images

To add images to your website, you have two options. You can either add an image from the Internet with a link, or you can add an image from your computer. Below is an explanation for both methods:

- **From the Internet:** To add an image from the Internet, you simply need to find a link to the image, and then use that link as the `src` of the `img` tag:

```

```

Alternatively, you can also download an image from the Internet to your computer, and then you can follow the instructions below.

- **From your Computer:** To add an image that is on your computer, copy the image into the `images` folder in your Lab01 folder. Then, link the image so that the `src` of the image is the new path of the image:

```

```

If you incorrectly link an image from your computer by providing an invalid URL or path, your grader will not be able to see the image. **All images from your computer must be inside the `images` folder of Lab01.**

Extra Credit

You may receive up to **25 bonus points** on this lab for going above and beyond what is required. These bonus points will be awarded at the discretion of the TAs. Some possible ways to earn these points include, but are not limited to:

- Include non-trivial JavaScript functionalities and interactive elements to your website. Some ideas include **alert boxes**, **dropdown lists**, **menus**, and **buttons**.
- Go above and beyond on your page design with more advanced CSS topics like `css-grid`, `flexbox`, or your own effects.
- **Overall creativity!**

Submission Rules

You may **not** use any kind of HTML generators or website builders such as Wix, Weebly, Squarespace, Webflow, etc, to make your site. You must use a text editor (such as VSCode, Atom, etc). We also **do not allow** the use of any frontend frameworks/libraries such as React, Vue, Angular, Bootstrap etc.

Lastly, all code written in this assignment must be written by you. While we encourage the use of Google to reference HTML and CSS properties, any **large sections** of code taken from another source are not permitted. **Submissions violating any of these rules will receive a 0.**

Submission Process

Lab01 will be **submitted through Canvas, not Gradescope**. You will need to submit all files used in Lab01 (all images, HTML and CSS files). To do this, compress the entire Lab01 folder that you are working in into a `.zip` file. Follow the instructions below:

1. Select all the files inside of the Lab01 folder, and then right-click.
 - On Windows, click **Send To > Compressed (zip) folder**
 - On Mac, click **Compress {X} items**
2. This will create a zip folder on your computer. Rename the zip folder so that it has the following name:

```
{your first name}-{your last name}.zip
```

3. Upload this `.zip` file to Canvas under the Lab01 assignment. **There is no GradeScope submission.** To double check that you did this correctly, please download your submission, unzip/uncompress it, and open your `lab01.html` in your browser to ensure everything works and looks correct.

Please put all images that you used in your website in this Lab01 folder. Otherwise, your grader will not be able to see images that you included.

Grading Rubric

lab01.html	Points	other html page	Points
lab01.html exists	5	other html exists	5
your name	5	linked from lab01.html	2
first image	5	infographic/data tag	4
second image	5	data paragraph <p> tag	4
link (text)	5	Total	15
link (image)	5		
link (other.html)	5		
list or 	5		
table (at least 3x3)	5		
Total	45		

style.css	Points
style.css exists	5
background styling	5
default text styling	4
text element 1 styling	5
text element 2 styling	5
link styling (visited, active, and hover state)	6
element 1 formatting with ID selector	5
element 2 formatting with class selector	5
Total	40

Final Total (with extra credit): 125/100 points