GitHub Pages, HTML & CSS

What is Git?

- Version Control System
  - Tracks changes in your code
  - Allows for easier coordination between people working on a project
- GitHub: web-based hosting service for git
  - Provides a "remote" location for storing your git workspaces
  - Useful if you lose/break your computer, etc.

Using Git

- Installing Git
  - https://github.com/join
  - https://help.github.com/articles/set-up-git/
- Setting up a workspace for today:
  - https://github.com/coderigo17/cscip14300sem1
  - Fork this repo, then clone your new repo to be able to add files locally

GitHub Pages

- GitHub hosting service for your websites
  - Simply push your .html files to your GitHub repo and be sure to include an index.html file
  - Enable GitHub Pages in your GitHub repo's settings

Questions so far?

HTML Quick Review

- HyperText Markup Language
  - Designed for the processing, definition and presentation of text (via a web page, in this case)
  - Uses "tags" for formatting the layout and style within a text file
    - \<head>
    - \<body>
    - \<header>
    - \<h1>
    - \<p>

HTML Quick Review

- <!DOCTYPE html>
  - This is found at the beginning of every HTML file
  - Not a tag, but rather known as a "document type declaration"
    - An instruction to the web browser about what version of HTML the page is written in (currently HTML5)
- https://www.w3schools.com/html/

CSS Quick Review

- Cascading Style Sheets
  - Used in conjunction with HTML to give us more control over the appearance of our websites
  - Can be included in the same file as the HTML or separated into a separate file, thereon known as a "stylesheet"
- Useful CSS features:
  - Changing colors, sizes, margins, padding, etc.
  - Grouping elements by class & distinguishing elements by ID
- https://www.w3schools.com/css/

Questions so far?

What is SASS?

- Syntactically Awesome Style Sheets!
  - A program which provides a syntax known as .scss, which is an extension of .css
  - More syntactic flexibility and precision
  - Variables, nesting, inheritance
- Browsers can't understand .scss files, however, so to use them we need to convert them into .css files first using the sass program

Using SASS

- In the terminal: `sass {filename}.scss {filename}.css`
  - This converts the {filename}.scss file into a {filename}.css file that your browser can understand
- Alternatively: `sass --watch {filename}.scss:{filename}.css`
  - This tells sass to "watch" for any changes to {filename}.scss and automatically update the corresponding {filename}.css file if necessary

What is Bootstrap?

- Free and open-source framework for sharing existing CSS
  - https://getbootstrap.com/docs/4.1/getting-started/introduction/
  - Very important to read through the documentation and play around with the CSS yourself
- Definitely possible to use multiple stylesheets when borrowing CSS from Bootstrap (this way you can override some of Bootstrap's default configurations)
  - Best to avoid naming conflicts, etc.

Questions so far?

Hands-on Activity

- Using SASS and/or Bootstrap, create and style your own website (you may use your Project 0 submission as a starting point, or create a brand-new website, if you wish)
  - Feel free to brainstorm with your neighbors and give each other ideas
  - I will be walking around to help out with any questions that may arise
- When done, we will learn how to deploy our websites to the internet via GitHub Pages

Deploying to GitHub Pages

- First, make sure to save all your files in your local directory
- Then, execute:
  - `git add --all`
  - `git commit -am "updated stylesheets"`
  - `git push`
- Now, visit your GitHub repo on your browser and select "Settings". Scroll down to the "GitHub Pages" heading and click the "None" dropdown, selecting "master". FInally, click "Save"
- You should be presented with a link that will host your website!

Open Source Web Design

- Just as Bootstrap is an open-source framework for sharing CSS, there exist many websites that offer free-to-use HTML templates
  - http://www.oswd.org/
- Let's download one such template and try to understand how it works, such that we may be able to adapt it to our own needs
  - Working with existing material is often the best way to learn new tricks, especially when learning on your own

Final questions?