Assignment 8 – Implementing a Web Portfolio/Tool Project
(Final Project Pt. 2)

Assigned: Wed Nov 10, 2021
Due: Fri Dec 3, 2021 11:59 pm ET (note intermediate milestones)

Project Overview

Translate the work you did in Assignment 7 to a fully-functioning, interactive, *accessible* system. You should incorporate the feedback you received from Assignment 7.

NOTE: It is ok to change your plan from Assignment 7 to 8. If you decide to change:
1. You MUST describe in your write-up what you changed and why
2. If you plan on massively changing your plan, be sure to check in with your TA for approval. I want to make sure the scope of your project is not too big (or not too small) so you all have time to finish it by the deadline.

Intermediate Milestones

- Wed Nov 17 / Mon Nov 22 - in lab show and tell of work so far
- Mon Nov 29 / Wed Dec 1 - in lab final show and tell of your project

These dates are tentative and will be communicated in the labs.

Being Informative (PUI:A-D)

This is advice for students creating a web site for their final project.

1. Make clear the purpose of your website. Show your prototype to peers and friends, to reevaluate whether your assumptions of your website being intuitive still hold.

2. Make sure the website is self-contained, and include most of the useful information you would expect your target audience need to know. Just laying out terms without explanations or external resources are clearly not informative. Make good use of the empty space your left out in your prototype.

3. Try to avoid presenting different kinds of information all at once. Use proper prompts and visual elements to guide users while exploring your website.

Being Interactive (PUI:A-D)

This is more advice for students creating a web site for their final project.

1. The basics: choose color, iconography, typography, and layout effectively. For more, see https://material.io/design/.

2. Make clickables interactive, and use states to communicate status of interactive elements. Bad examples using "CLICK ME" texts instead of properly designed buttons, or implicit clickables that would require users to guess.

3. Use adequate amounts of texts for accompanying pictures.

Other Advice for People Doing Portfolios (PUI:A-D)

1. People who do hiring see lots of portfolios. Make it very clear up front what skills you have and what you are interested in (e.g. software engineer position, UX researcher, etc), to make it easier for them to evaluate.

2. Also, think about what makes your portfolio memorable and stand out, again since hiring managers will see lots of portfolios. Look up portfolios of recent alumni, to get ideas. It's ok to copy general ideas like layout, color scheme, presentation, and navigation, but not actual code.

3. For group projects you highlight on your portfolio, make it clear what parts you did.

Final Project Goals (PUI:A-D)

- Design an interesting tool or set of user interactions that will be an illustrative and impressive addition to your web portfolio. You will be required to do **at least** one of the following things (Note: We will cover some of these in lab):
  - Use a new JS library (e.g., react, p5, d3)
  - Use a web API
  - Use animations
  - etc.
- Accessible Design
  - Make your web page accessible
  - Evaluate the accessibility of your webpage. You can use [WAVE - Web Accessibility Evaluation Tool](#) for that. To check accessibility during development while your page is not online yet, we recommend use the Firefox or Chrome extensions, as listed on the same website.
- Responsive Design (i.e., should work for multiple interfaces such as different sized web browsers such as on mobile devices)
  - Note: As we discussed in lab, you can use Bootstrap to help you with this (you are NOT required to though).
  - Resources: https://getbootstrap.com/docs/3.3/css/#overview
- Showcase your work to other people. We will have a showcase where you will present your site to other people in the class (more info will come soon on this!)

Final Project Goals (PUI:E advanced)

- Do whatever cool thing you said you would do for HW7
- Make your design accessible by implementing *at least* the web accessibility standards.
- You will also showcase your work in the last lab for the semester

Deliverables for PUI:A-D *(75 pts total)*

All deliverables will be submitted to GitHub.

1. **Website for your Portfolio or Informational Tool (subtotal 53 pts)**

      a. (15 pts) All HTML/CSS/JavaScript/Asset files on GitHub. Note: You need to have at least a new JS library, web API, animation etc. for this HW.

      b. (4 pts) Host your webapp on GitHub, as shown below

2. (4 pts) Please organize your CSS/JS/images/other files under an *Assets* folder. You should have a folder for each of them within *Assets* as well.

      a. If you have many HTML pages, you should organize them in folders as well (outside Assets). For example, for those of you who chose Option 1, each of your "projects" you will display should be a different folder. For Option 2 people, each of the "concepts" you want to teach ideally would be a separate folder if the concepts are not sharing much content with each other.

      b. These points apply to those people who are not using an MVC framework. If you use MVC, it is fine to follow the structure it imposes.

3. (10 pts) Interactions should work as described without error (you will do the description in the write-up below)

4. (5 pts) Website should be responsive: work for multiple (i.e. >1) screen sizes

5. (5 pts) Website should be accessible (no errors, valid alt-text after using the [WAVE tool](#)) Paste screenshots of the "Summary", "Details", and "Structure" section into the writeup, showing *no errors*. Caution: "Null or empty alternative text" is listed under "Features". Please make sure that you *have proper alt-text for all applicable elements*.

6. (5 pts) Your code should be well-organized, indented and well-commented. I will be stricter with grading of this part.

7. (5 pts) Pages should render without errors in the browser

      a. Be sure to check that all of your links (to assets, libraries, imgs, etc.) are properly working! The Console will be your best friend for this HW!

      b. Test on other computers, and/or browser incognito mode.

8. **Write-Up (subtotal 22 pts)**
   The goal of your write-up is to clearly convey the work you did on this project (i.e., make it VERY clear to your TAs how to evaluate your work). The following will also be useful to you when you showcase it. **In your write-up, please clearly mark each part (i.e. Part 1, Part 2 and so on).**

      a. (5 pts) **Part 1:** In 300 words (only!) describe your website (We will stop reading at 300 words, so please be concise). Include the following:

          i. What is the purpose of your website?

          ii. What information do you convey with your website?

          iii. How is it interesting and engaging?

       iv.   Who is the target audience?

  b. **(4 pts) Part 2:** Use a bulleted list to describe how a user would interact with your website. For each item in your list, say
       i.   the interaction type you implemented
       ii.   how I should reproduce it (i.e. click on X on page Y, or scroll on page X, etc.)

  c. **(4 pts) Part 3:** Describe what external tool you used (JavaScript library, Web API, animations, or other). Following the bulleted list format below, reply to each of the prompts. (I will stop reading at the 4th sentence, so please be concise)
       i.   Name of tool
       ii.   Why you chose to use it? (2-4 sentences max)
       iii.   How you used it? (2-4 sentences max)
       iv.   What it adds to your website? (2-4 sentences max)

  d. **(2 pts) Part 4:** Describe how you iterated on your HW7 mockups, if at all, including any changes you made to your original design while you were implementing your website. (2-4 sentences max)

  e. **(2 pts) Part 5:** What challenges did you experience in implementing your website? (2-4 sentences max)

  f. **(5 pts)** Grammar, presentation, style

Submission
- Submit your write-up on GitHub
- Host your page on GitHub
  - Use [Project Pages](#) if you are already hosting another website under your account.
  - Settings > GitHub Pages > Select "master" as source. If you get an error opening the website, wait a few minutes because it can take a while to appear (or try making a dummy push to your repository).
- Submit your web app link on Canvas

Deliverables for PUI:E *(75 pts total)*
All deliverables will be submitted to GitHub.
- For your software, add it to Github, along with a short description and a video of your work (YouTube link is ok).
- For your write-up, follow the guidelines for PUI above, replacing "website" with whatever software artifact you created.
- Submit your write-up, software, and short video on Github, and also submit a web link to your project on Canvas.

★ Bonus (for all labs A-E) *(5 pts total)*

Check for *screen reader accessibility*
- To check if your website is accessible to a screen reader user you can download a screen reader extension for chrome called ChromeVox, Chromevox Screen Reader Extension
- Use this video tutorial to learn how to use ChromeVox and make your website Screen reader accessible.
- Make a video showing you navigating through your website using a screen reader:
  - Select 3 tasks (e.g., navigating to page X, reading the summary of project X, etc)
  - For each task, state the task as text in your video
  - Then, show how you execute that task using a screen reader