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2/23/24
CS 125H
Midterm

1) The main function of HTML is to provide content and structure for a page. For example, the introduction of semantic tags such as <nav>, <article>, <aside>, etc. in HTML 5 highlights the semantic purpose of HTML while leaving the how the formatting of the page to CSS.

   For my website, this has made developing it much easier. In the past, my focus was torn between both what was on the site and how it was being displayed. Now I feel like I can focus on the structure and content first, then worry about formatting later. This was especially salient when I was making a navigation bar. This always seemed like such a daunting task, and I have never made one from scratch before, but it feels so much easier now. I just started with an unordered list of what I wanted inside a nav tag, then focused on making the actual navigation later.

2) Accessibly Cloud is used to test websites for compliance with accessibility guidelines and laws such as the ADA. This is not just important for my site, but for all websites as all information on the internet should be available to as many people as possible. Traditionally, those using screen readers or other assistive technology have not been able to access internet content deeply, but that is improving.

   For my site, in its current state, I don't have much content and it is mostly text based. At the same time, I do use multiple colors on my page, so an area where I could have issues with is with contrast, so a tool like Accessibility Cloud could help me detect those issues quickly.

3) An earlier version of my website is hosted at http://www.birdingwithbrandon.com and this is what I used with Accessibility Cloud. As anticipated, I did not have any significant error, but there were potential issues with color contrast. I have 13 potential errors in the category of "elements must meet minimum color contrast ratio thresholds". When reading the details of the error, I saw why it was listed as a potential error. The contrast ratio was not able to be determined with certainty due to the use of a color gradient. I understand the issue and a possible solution is to follow the guidance at https://guides.18f.gov/accessibility/color/#:~:text=Color%20contrast,-Using%20a%20color&text=In%20situations%20where%20the%20color,darkest%20part%20of%20the%20background which suggests comparing the lightest text to the lightest part of the background and the darkest part with the darkest text for all states of the text. I did not find their AI suggestions very helpful. Ultimately, I will limit the gradient to the header, if anywhere at all. I will then test my color contrast ratio with WebAIM https://webaim.org/resources/contrastchecker/. I'm also looking for a VS code extension to do this for me, but I haven't found one yet.

4) The site https://www.duplichecker.com/screen-resolution-simulator.php appears to show what my website looks like with various screen resolutions and on various devices. Due to having adblockers installed, the website looked rather clean. This tool is incredibly important to ensure that a wide variety of audiences can access my website. For example, not everyone has a full-sized computer or laptop and many people access the internet via phones or tablets. This is especially true for people with lower incomes or that have technology that only works on certain devices. Using tools like this is a way to help reduce the digital divide that I teach out in my computer science principles class.

5) I tested my own site https://www.birdingwithbrandon.com and discovered that my site looks fine on higher resolution devices such as newer MacBooks and HD televisions, but the navigation bar does not look good on smaller devices such as phones or Kindle Fire tablets. This happens even though I was using a flexbox, so I will need to do more investigation to determine the issue. Ultimately, I will most likely use a tool that crates mobile friendly versions of websites. I have seen a few of these on Wordpress and Google Sites and they seem to work well.

6) The site http://validator.w3.org is used to validate the markup of web documents. This site is useful since it allows people to check if their website code is written in a way that conforms to web standards. This conformity to standards ensures that the site will be displayed as intended on more devices.

7) I ran https://www.birdingwithbrandon.com through the W3C validator and it did not come back with any issues. This is probably because we validate each assignment before submission. Additionally, I have an extension for VS Code that allows me to validate my code on-the-fly within the editor. This makes it easier to catch errors on individual pages which leads to hopefully avoiding larger, site-wide issues.