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PUI – Assignment 8

Write-Up

Website Link: https://danafrostig.github.io/assign8/index.html
Repository Link: https://github.com/danafrostig/danafrostig.github.io/tree/master/assign8

Part 1: Website Description

For my final project, I created GuitarGuide – an easy to use educational and interactive website for anyone interested in learning about the history of the guitar and wanting to learn how to play some basic chords. Growing up, I played both electric and classical guitar, and when I first became interested in the instrument, I didn't just want to learn how to play, but I also wanted to learn more about the history of the instrument and how it evolved over time. The current websites that have information on the history of the guitar are pretty boring; they mainly contain a wall of black text on a plain white background and a few images. For the GuitarGuide history page, I wanted to provide the most succinct glimpses into the extensive history of the instrument. Also, most webpages with instructions on how to play guitar chords end up just displaying a list of the chords and how to play them. For GuitarGuide, I wanted the user to be able to see how to play the chord on an actual guitar, as well as be able to hear the chord as they learned how to play to it. Most of all, I wanted GuitarGuide to be intuitive and fun to use. Being able to hear the sounds of the guitar strings being strummed on the home page and the different chords on the 'Learn to Play' page changes the experience of learning from visual to visual and auditory, elevating the experience to another level. When I asked my peers to test my website for me (usability testing), I found that they had a lot of fun with being able to play songs by interacting with the different chords on the Learn to Play page and strumming the guitar on the home page.

Part 2: Interactions

- All Pages: Navigation bar
  - Navigate between the three pages by using the navigation bar in the top right corner of the page.
  - Reproduce the interaction: click on any of the three links in the top right corner of the page. The Home link takes you to the home page, the History link takes you to the history page, and the 'Learn to Play' link takes you to the interactive tutorial page.
- Home Page: enable sound
  - Some browsers, like Safari and Google Chrome, block any audio from playing on webpages without a user interaction enabling the sound to play first. To be able to hear the other interactions on the homepage, you need to first enable sound on the page and test that it works.

    - Reproduce the interaction: Click on the ‘enable sound’ button on the homepage to enable other interactions. The enable sound button will also play a sound of a guitar string being plucked to let the user know that audio has been enabled.
- Home Page: Strum the guitar strings
    - For the guitar strings on the home page (under the text), the user can strum the guitar strings and hear the notes produced from each string as they hover over the strings with their mouse.
    - Reproduce the interaction: Hover your mouse over the strings under the text on the home page. You should see the strings vibrate and hear the sounds from the strings. You can hover over each string individually or move your mouse over all of them (up and down) to hear and see the interaction – similar to strumming real guitar strings.
- History Page:
    - Learn about the history of the guitar through a responsive timeline.
    - Reproduce the interaction: scroll down on the history page to read about the history of the guitar through the years. When the size of the screen shrinks (e.g. you or the user makes the window smaller), you will see that all sections of the timeline snap to one side.
- ‘Learn to Play!’ Page: Picking chords to learn how to play
    - The user can pick a chord from a list of nine chords (each presented as a button with the chord name on it). Clicking on a chord selects the chord you want to learn how to play: an image showing where to press your fingers on the guitar and what strings to strum appears on the left, and you can hear the sound of that guitar chord.
    - Reproduce the interaction: Click on a chord option from the 9 chord buttons. You can click on the buttons sequentially to hear and see how the different chords are played and sound to get a feel for how they would be sound if they were played together in a song.

Part 3: External Tools

- Bootstrap Library
    - I chose to use the bootstrap library as a framework to help me make my website responsive. Also, there is a bootstrap template that I thought perfectly fit with how I wanted my website to look like that I was able to implement with my content.
    - I used bootstrap by using a CDN (Content Delivery Network) link in my html pages to load the library with my project. I included the necessary html tags such as viewport meta and linked the JQuery and Poppins plugins that are required for running bootstrap.
    - Bootstrap helps make my website responsive, which allows it to work and look consistent across different screen sizes and devices.

- Animations
    - I used several animations on different sections of my website because they helped bring a natural feel to certain elements of my website (like the guitar strings on my homepage, for example). Also, they helped direct the user's attention towards the elements they were interacting with.
    - On my homepage, I used a shake-left CSS animation from Animista (animista.net) to make it look like the guitar strings on the page were being strummed as the user hovers their mouse over each string. I also used the 'Tada' animation from Animate.css (daneden.github.io/animate.css/) to animate the buttons on my 'Learn to Play' page. I used CDN links in my html to use the animate.css library and animejs library for the animations to work, and I added the CSS code for the animations to my CSS stylesheet.
    - The animations elevate the level of interactivity on my website by being responsive to user inputs. On the homepage, having the guitar strings move as the user hovers over them adds to the natural feel of strumming a guitar. On the 'Learn to Play' page, having the buttons bounce as the user hovers over them gives the website a fun responsive feel and helps emphasize that the buttons are interactive and clickable.

Part 4: Iterations

For the 'Learn to Play' page, I'm pretty happy with how close I was able to get the final webpage to look like the one designed in my prototype. However, for the Home page and the History page, I made a couple of changes due to several challenges I encountered during implementation (see part 5 of the write-up). I decided to separate the greeting and the history information into two separate pages (home page and history page) so that there wasn't too much going on one page. I also added the strummable guitar strings to my homepage to add another element of interactivity to the webpage.

Part 5: Challenges

I encountered several problems when trying to model my webpage to look like my original prototype that I submitted for assignment 7, including difficulties with having certain elements be in a fixed in position on the page and having the webpage be responsive. I tried to first implement a scrolling webpage using parallax scrolling, with the image of the guitar fixed on the page and having content scroll behind it to be revealed through the hole in the guitar when the user was on a certain position on the webpage, however, I struggled with having my implementation of the scrolling webpage and the fixed object being responsive. Also, when I added the p5 library to my code, the css on my webpage shifted slightly, and it took me a while of commenting out certain parts of my code to find what was causing the issue. Eventually, using the inspect element feature in Chrome, I found the source of the misalignment and was able to fix the code.