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HW8 Write-Up

GitHub repo: https://github.com/tvnn1231/PUI/tree/master/Homework_8

Link to live site: https://tvnn1231.github.io/PUI/Homework_8/landing.html

Part 1:

My website is an informational tool that teaches visitors about the benefits of renewable energy. After learning about the dangers of the continued use of fossil fuels, the visitor is invited to learn about three sources of renewable energy: solar, wind, and water. Upon choosing a renewable energy source to learn about, the shapes that make up an image of a lightbulb on the screen will rearrange to form an image of that energy source, and once the visitor is done reading facts about it, those pieces will rearrange back into the lightbulb and let them choose another energy source to learn about. Not only does this provide an interesting animation, but it is also meant to symbolize that the energy and electricity that is represented by the lightbulb can be made from each of these renewable sources of energy—the electricity is simply the sun, wind, and water in a different form.

Once the visitor has chosen an energy source and the pieces have rearranged to make the new image, they will be able to read a quick overview of that energy source and some of the pieces will begin to pulse to indicate they are clickable. If the user clicks on that piece, a modal will pop up with fun facts about the source, including how power is harnessed from it, its capabilities, and its benefits.

My target audience is those who are unaware of the extent to which global warming is a threat or who do not know how beneficial renewable sources of energy can be. My goal is not to scare them but to inform them in an engaging way that renewable energy is an extremely capable and beneficial replacement for fossil fuels, and there is hope in the fight against climate change.

Part 2:

- On the landing page, click on the "What can help?" button to go to the home page.
- Click on the back button at the top left of the home page if you want to go back to the landing page.
- On the home page, click on the lightbulb.
- After the lightbulb moves and the three energy source options appear, click on the back button at the top left if you want to go back to the home page.
- If not, choose a renewable energy source to learn more about by clicking on "SUN," "WIND," or "WATER".
- After the pieces rearrange, hover over any shape that is pulsing and click on it to read a fact.
- Click on the X in the modal or anywhere outside of the modal to close it.
- Click the back button at the bottom left of the energy source page to have the shapes rearrange back into a lightbulb and display the three energy source options again.

Part 3:

- Bootstrap
    - I chose this library because it's a very popular library that makes responsiveness and styling easier. It also has good documentation, so learning and using it was relatively easy.
    - I used it to make a lot of the text elements on my site responsive and to make implementing modals much easier.

    - The main thing it adds to my website is a very clean, responsive modal element that gives the facts about each energy source its due attention.
- GSAP
    - I chose this JavaScript animation library because I needed something to help me animate the SVGs, and I had heard good things about this library from friends.
    - I used it to animate the shapes from the lightbulb to the various energy source images and back to the lightbulb. I also used it for some simpler animations, such as fading in (increasing opacity) and moving elements (changing the x and y).
    - It adds to my website all of the animation that makes it engaging and interesting.

Part 4:

One thing that I changed from my HW7 mockup was I removed the lines below each of the names of the energy sources; they were meant to be continuations of the cables that extend from the lightbulb above, but I realized that was unclear and they were therefore unnecessary, in addition to looking awkward when resizing the browser window. I also changed the indication that pieces were clickable from a glow around the piece to a pulse in order to add an element of animation that would draw more attention to those pieces. My last big iteration was changing how the fun facts were displayed, from being a small amount of text that would show up next to the piece when hovering over it to a modal that pops up when clicking on the piece. I did this to give myself more space for text and to put more emphasis on the information.

Part 5:

One challenge that I experienced was working with the SVGs, especially since they play such a big role in my website. I had never used them in coding before, so figuring out how to export them to use in my HTML, animate them, change their CSS properties, and position and size them correctly was quite challenging. Another challenge was making my site responsive across different desktop sizes, especially because the SVGs were such a new and unknown element to me. I had a very difficult time getting the SVG and text elements to look mostly right at all screen widths, especially because the page looked different depending on if I resized it in developer tools or if I resized the browser itself; I ultimately decided to do what looked right when I resized the browser window.

Sources

Energy.gov. U.S. Department of Energy, https://www.energy.gov/.

"Geometric lightbulb icon vector image." *VectorStock*, https://www.vectorstock.com/royalty-free-vector/geometric-lightbulb-icon-vector-21101196. *(used this to model my lightbulb after*)

Infinite Energy. "What is the Difference Between Solar Panels and Photovoltaic Cells?" *Infinite Energy*, Infinite Energy, https://www.infiniteenergy.com.au/what-is-the-difference-between-a-solar-panel-and-a-photovoltaic-cell/#:~:text=As%20you%20can%20see%2C%20photovoltaic,makes%20up%20a%20solar%20system.

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