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PUI Section A
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PUI Final Project Write-Up

Part 1:

For my final project in PUI, I designed a dynamic website aimed at providing an immersive experience for budding photographers of all ages who wish to delve into the intricacies of manual photography.

The simulator is introduced with instructional cards that provide straightforward explanations of various features found in traditional cameras, such as aperture, shutter speed, and light meter. Users can then actively manipulate photos in real-time using these features, capturing the image they create. The simulator displays the final photo within a Polaroid-like border for a nostalgic touch. After using this website, users should be able to walk away with a foundational understanding of cameras and how to take a properly exposed picture.

The interactive simulator's intrigue lies in its hands-on approach, making the learning experience not only interesting but deeply engaging. This tool empowers users to delve into fundamental camera controls, seamlessly bridging the gap between theoretical understanding and practical application in real-world photography.

By combining intuitive, visual instructions with a responsive interface that adapts dynamically to users' photo manipulations, the simulator guarantees an interactive and educational journey. This website was designed with a primary focus on users of any age who possess limited prior camera knowledge or understanding of the science of photography, but its entertaining appeal extends to learners of all backgrounds and competencies.

Part 2:

- **“Continue” Button (Cover Page)**
    - Click (Direct Manipulation)
    - Click on the “continue” button to proceed to the next page
- **“Continue” Button (Light Meter Instruction Page)**
    - Click (Direct Manipulation)

    - Click on the “continue” button to proceed to the next page
- **“Continue” Button (Shutter Speed Instruction Page)**
    - Click (Direct Manipulation)
    - Click on the “continue” button to proceed to the next page
- **“Continue” Button (Aperture Instruction Page)**
    - Click (Direct Manipulation)
    - Click on the “continue” button to proceed to the next page
- **Aperture Slider (Camera Simulator Page)**
    - Slide (Direct Manipulation)
    - Slide the Aperture Slider to the left or right to either broaden or tighten the aperture
- **Shutter Speed Slider (Camera Simulator Page)**
    - Slide (Direct Manipulation)
    - Slide the Shutter Speed Slider to the left or right to either increase or decrease the shutter speed
- **“Take the Photo!” Button (Camera Simulator Page)**
    - Click (Direct Manipulation)
    - Click on the “Take the Photo!” button to proceed to the next page
- **“Take another Photo” Button (Polaroid Page)**
    - Click (Direct Manipulation)
    - Click on the “Take another Photo” button to be redirected back to the Camera Simulator Page
- **“Instructions” Button (Polaroid Page)**
    - Click (Direct Manipulation)
    - Click on the “Instruction” button to be redirected back to the Light Meter Instruction Page to re-read the instructions

Part 3:

- Kursor.JS
    - https://lusaxweb.github.io/Kursor/
    - This is a library that changes the appearance of the cursor from an arrow into a dot and a circle. I chose this mouse because it takes up less space on screen and covers less content on the interface I designed
    - I used this library to create a new mouse to use on this website. The new mouse was customizable, but I chose to make a mouse that shows the user exactly what they’re clicking on. This is especially useful when manipulating the interface I designed.

    - It adds a sense of sophistication to my website with a very small change while also increasing its usability. The mouse allows the user to easily distinguish what they are clicking on and/or manipulating.
- Polaroid.js
    - https://github.com/tinoni/polaroid
    - I chose this library because it has the ability to take any image and put it into a template that visually looks like a polaroid. This addition to the website communicates that the photo taken is an actual photo and not just an image on a screen.
    - I used this photo at the end of the simulator after the user takes their photo. Whatever photo that the user takes, it appears in this template to make the photo they “take” look more like a real photo rather than just a jpeg on a screen.
    - Incorporating this library into my website enhances the user experience, providing a heightened sense of immersion. It assists users in grasping that the photo they "captured" in the simulator mirrors how their actual photos would appear if they apply the lessons learned on the simulator to real-life photography.

Part 4:

In previous iterations, my instruction cards primarily relied on extensive blocks of text to explain the functions of each slider in the simulator (the intention was to design for individuals with visual disabilities by allowing accessibility with screen readers).

In my latest high-fidelity Figma prototype, I've taken a more comprehensive approach. I've complemented the instruction copy with visual graphics and symbols, each containing alt text. This enhancement ensures the page's accessibility not only for those with visual impairments but also for individuals with auditory and cognitive disabilities.

Within the simulator itself, I improved communication and consistency by incorporating the same symbols used in the instruction slides to describe the state the slider is in.

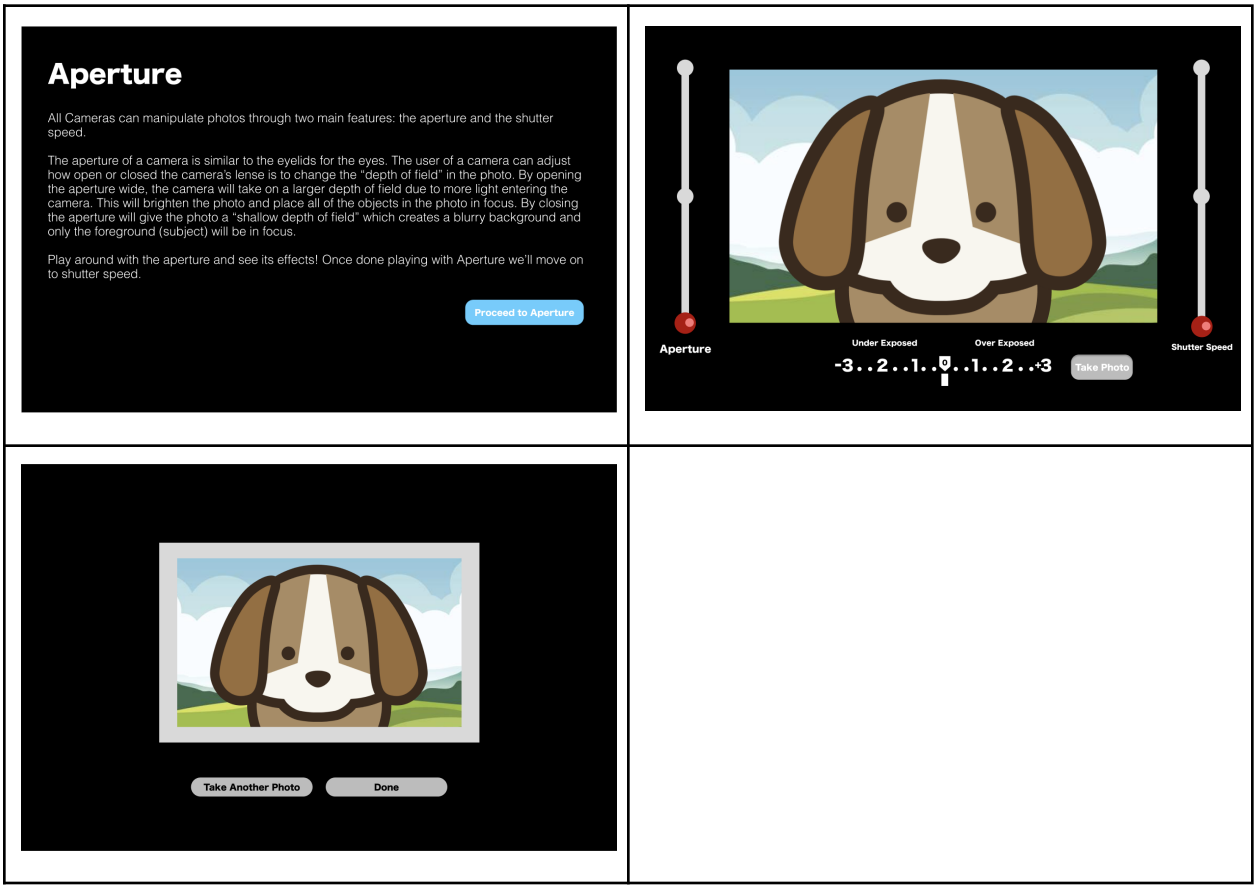
To prioritize autonomy on the final polaroid display page, I added a button to return to the simulator page (allowing users to capture another photo) and a button to revisit instructions (for users who wish to review how a camera functions again)

Part 5:

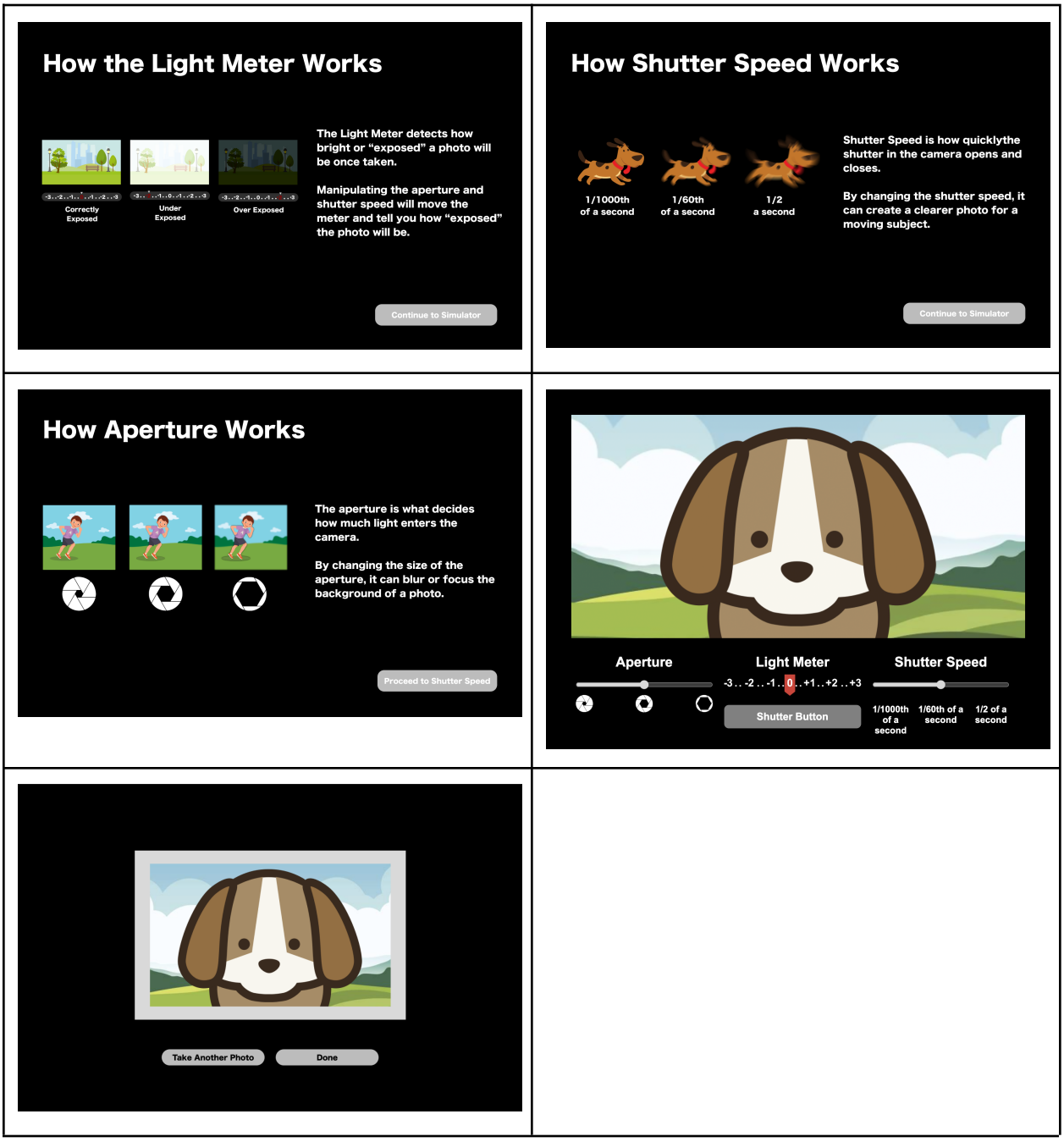
I think the hardest thing I encountered with this project was Javascript. In general, JavaScript is definitely the hardest of the three languages we learned in this class for me to write in. I had a general idea of how the simulator would work (if, else if) but implementing the feature that grabs the current img when the “take photo button” is pressed proved to be more of a challenge. I ended up coming up with the solution of storing it locally so it could be transferred between different web pages.

Appendix:

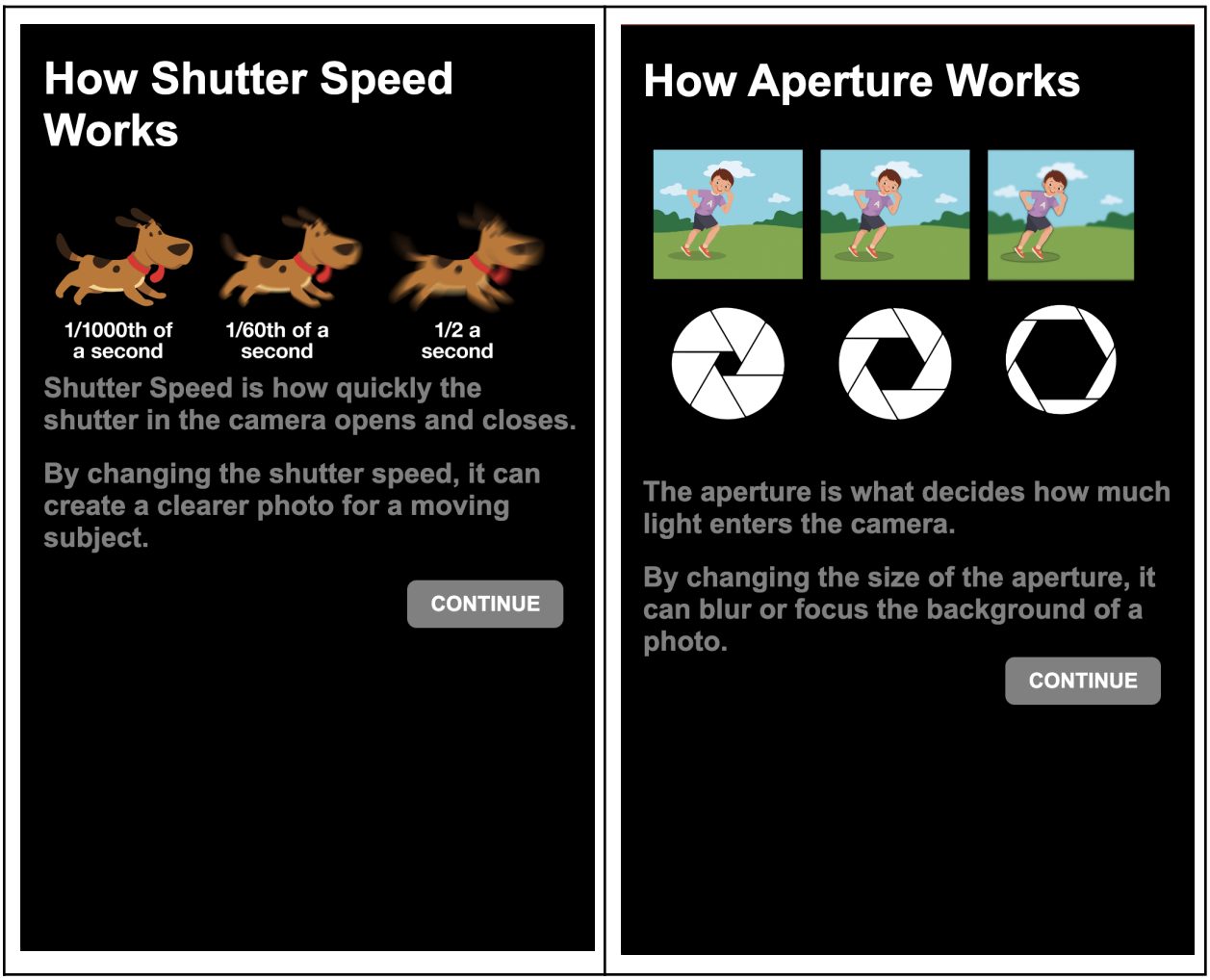
Prototype:



Final Design Web (1541px X 1035px):



Final Design Mobile (430 px X 932 px):



How The Light Meter Works

The Light Meter detects how bright or "exposed" a photo will be once taken.

Manipulating the aperture and shutter speed will move the meter and tell you how "exposed" the photo will be.

CONTINUE

Aperture

Light Meter

-3 .. -2 .. -1 .. 0 .. +1 .. +2 .. +3

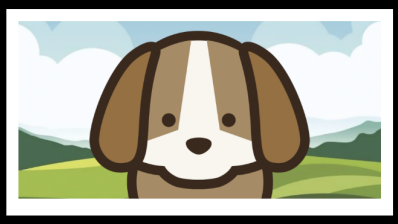
Take The Photo!

Shutter Speed

1/1000th of a second

1/60th of a second

1/2 of a second



Take Another Photo

Instructions