Lauren Marone
ART385
Project 2: Real World Input & Output

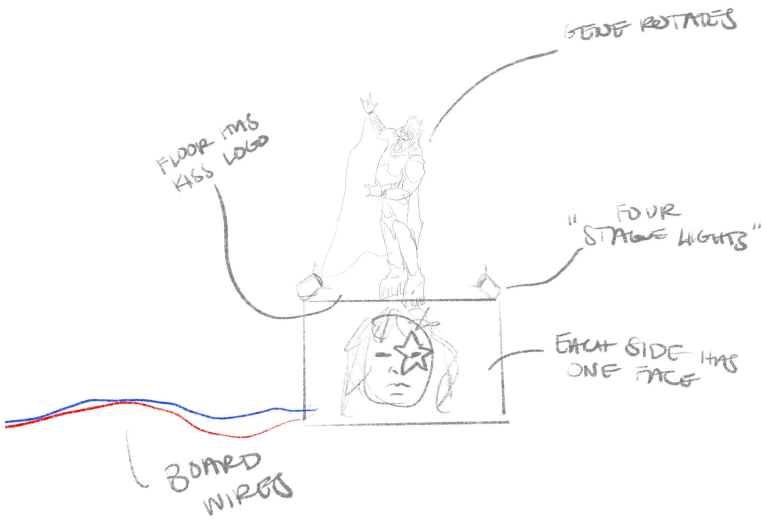
"KISS - BOX"

04/06/20

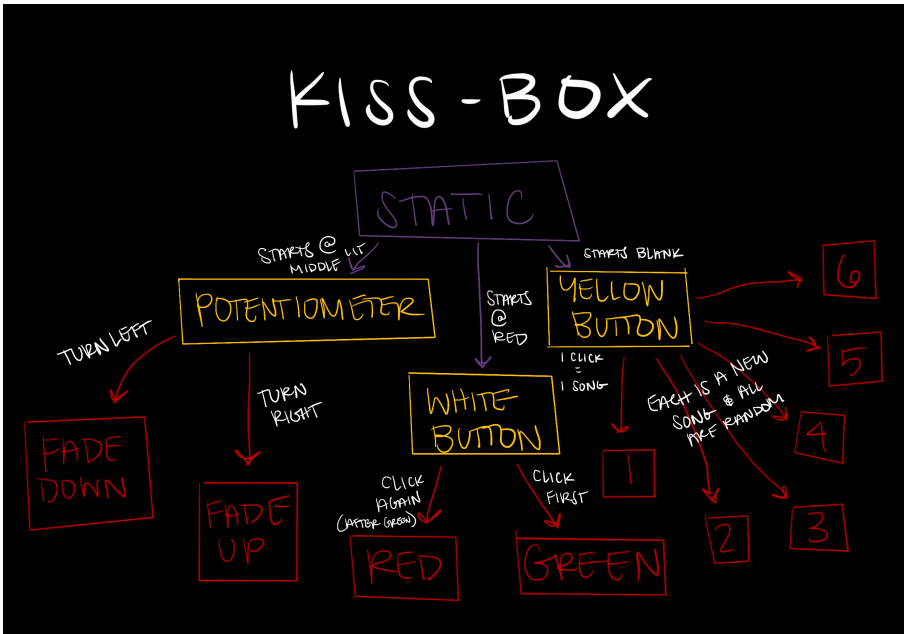
AUDIENCE

The audience for this project are fans of the rock band, "KISS".

HAND-DRAWN SKETCH



INTERACTION DIAGRAM



SOFTWARE DESIGN

This project includes the basics of Arduino including functionality with LED lights and buttons. I have three "Inputs": the potentiometer, a white button, and a yellow button, and three "Outputs": a red LED, a green LED, and a yellow LED, for this project. The premise was to create a music box that only featured the music of KISS the 70s/80s rock band. It would have many different interactive features for the user to press, twist, and click to make it their own. The first feature is the "music volume". Since I wasn't actually able to manipulate sound in my code, an LED light took its place. When you turn the potentiometer one direction, the yellow LED gets dimmer (signifying the music volume getting quieter) and when you turn it the other direction the LED gets brighter (signifying the volume getting louder). Though any true KISS fan wouldn't dare turn the volume any lower than MAX, I thought this would still be a nice feature just in case they blow their ear drums. The second feature on my box is the ability to play and pause the music. Again, since I could not actually use the sound, I used more LED's. This time, if the user presses the white button on the bread board, the RGB LED light will turn green to show that the music is turned to on. If the user presses the white button again, the light will turn red letting the user know that the music is paused. The third and final part to this design is to be able to randomly select one of KISS' hit songs. If the user clicks the yellow button, a random KISS song will be played. Again, I could not use real songs, however, I did not use an LED for this one. Instead, the random song that is supposed to be playing will display on the Arduino Serial Print popup box. If the user keeps pressing the button, a new, random song will be selected over and over again. In order to accomplish all this, I used for loops, if/else loops, random(), digitalRead(), random(), a counter, and an array[].

REFLECTIONS

This project was definitely a source of stress for me in the classes before I started on it. Once I got going (and over the hurdle of the "I'm going to fail this class"emotional state), the workflow came easily. That is to say this project was not easy, but at one point this just clicked for me and it seemed to be less frustrating to assemble and try! I had a major lightbulb moment, for sure. It was so satisfying to see all of my hard work finally pay off, as I have been feeling extremely down because I was so behind and could not understand anything. Though this coding and setup is not super advanced, it's something I am very proud of and will show off to my family any chance I get.