Reflection Challenge 2 – Megan van Gerwen

For this interactive demo, I wanted to use my Arduino. I like working with Arduino and think it is something I will be using a lot as a designer. I want to use it for creating low fidelity prototypes and to do tests. I already learned a lot about Arduino in CBL Project 2, so I wanted to learn more and use something new for this challenge. That is why I wanted to use a rotator, which I had not worked with yet. I looked into the differences between the potentiometer and the rotary encoder. Since I wanted to use it for switching the color of the LED, I used the potentiometer that can only rotate about 270 degrees.

In the process of creating this demo, I really went step by step. First I made the Arduino circuit and code for the LED, because I already knew how to do that. Then I finished the Arduino circuit with the potentiometer (figure 1) and started coding for the potentiometer. Then I started on the Processing part of the demo. I first collected the data from the Arduino and used that for a background color. Then I created a mouse tracker and worked on showing the path of the mouse. After that, I was ready to look into hovering functions. I created two shapes to hover over. Then I made the color of the mouse change with the color of the shape and gave the shape an outline to confirm that the mouse is hovering over the shape. And at last I created a closing button for which I also used a hovering function.

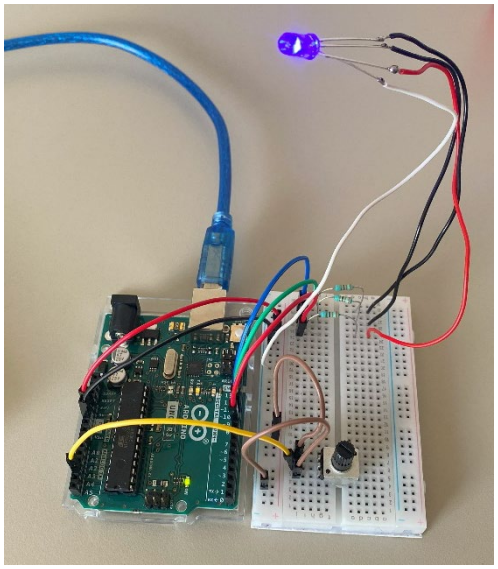

Figure 1: Arduino

I used the value of the potentiometer for changing the color of the background in processing. I used an LED which changes together with the color of the background when turning the potentiometer.

I learned how to get data from Arduino into processing, so it can be used in an image/demo. This can be a very useful tool for me as a designer. It can be used for making games or making interactive systems, which I got more interested in since I got to explore the functions of Arduino. I enjoy coding and the trial and error that comes along with it.

I learned how to create hovering functions and how to use it to give visual feedback. I also learned how to track the mouse and visualise it. I learned that you can use arrays to save the last location of the mouse and how to display the path of the mouse. For this, I applied knowledge I gained from the mouse clicking exercise (figure 2) .

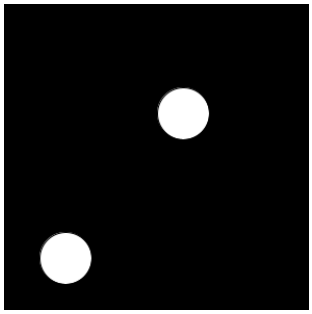

Figure 2: display mouse click

Since I wanted to make this demo full screen, I also had to look into how to close the program. I wanted to make a button to close the screen. Again I figured out that the location of the mouse should be checked and that it should be the same as the location of the button. Then I had to use a function to check if the mouse was pressed while the mouse was in the right location. I used knowledge from the interactive grid exercise (figure 3).

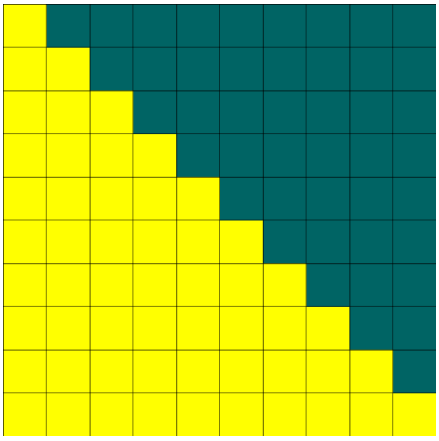

Figure 3: interactive grid

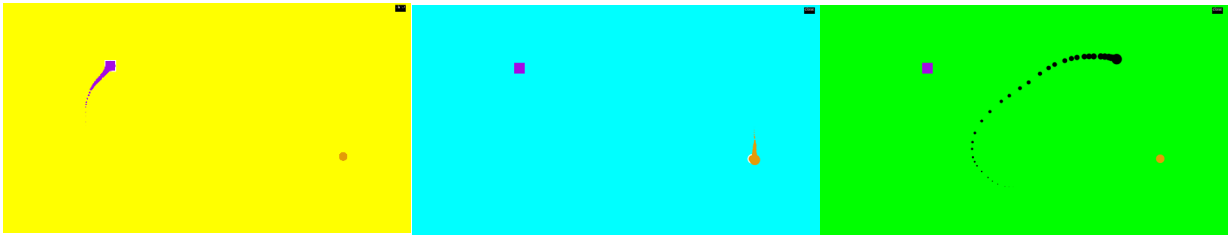

Figure 2: final processing output