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ART385

LED Complexity

Tues, March 17

Re-state the Assignment

Play with the LED's on the arduino and try to do something you think is cool with code. Use the

inputs to trigger an event. Adding LDR to it would be pretty sweet as well.

Hand-drawn sketches

https://drive.google.com/open?id=1mmjdaT9rpDb7tsmR7xgex4V7rQafyrxQ

Reflections

After working on the LDR in class, the next step of working with RGB LEDs immediately

caught my attention. Perhaps it was this innate gamer affinity with anything RGB (keyboards,

mice, headphones, cherry mx keyboard trinkets, etc), that I jumped right into doing the wiring

for it. Working with RGB wiring before when I built my PC last year, seeing the 4 pin

connectors allowed me to faintly understand that 3 of them controlled the colours and the fourth

one controlled ground. Unfortunately, coding the darn thing was way too much of a hassle.

Jumping further in the ESP32 tutorial, I was able to learn more about ledcWrite and how it is

controlled via duty cycles. It made sense, as it is reminiscent of the LDR tutorial in making an

LED "fade". Too bad larger concepts like resolution and frequency didn't make a lick of sense

save for the knowledge of frequency being at 5000 and resolution being in the range of 0-255, but let's be honest here, I only know that because it was recommended in the tutorial! Overall, I managed to get the RGB to work and create a program that cycled through the colour spectrum the same way my computer did. Overall, I'm proud of it and I hope to be able to create a larger one. I wonder if daisy-chaining is safe with an ESP32…?