



Is It Too Warm for Kat
To Go Outside?

1. Statement of Problem

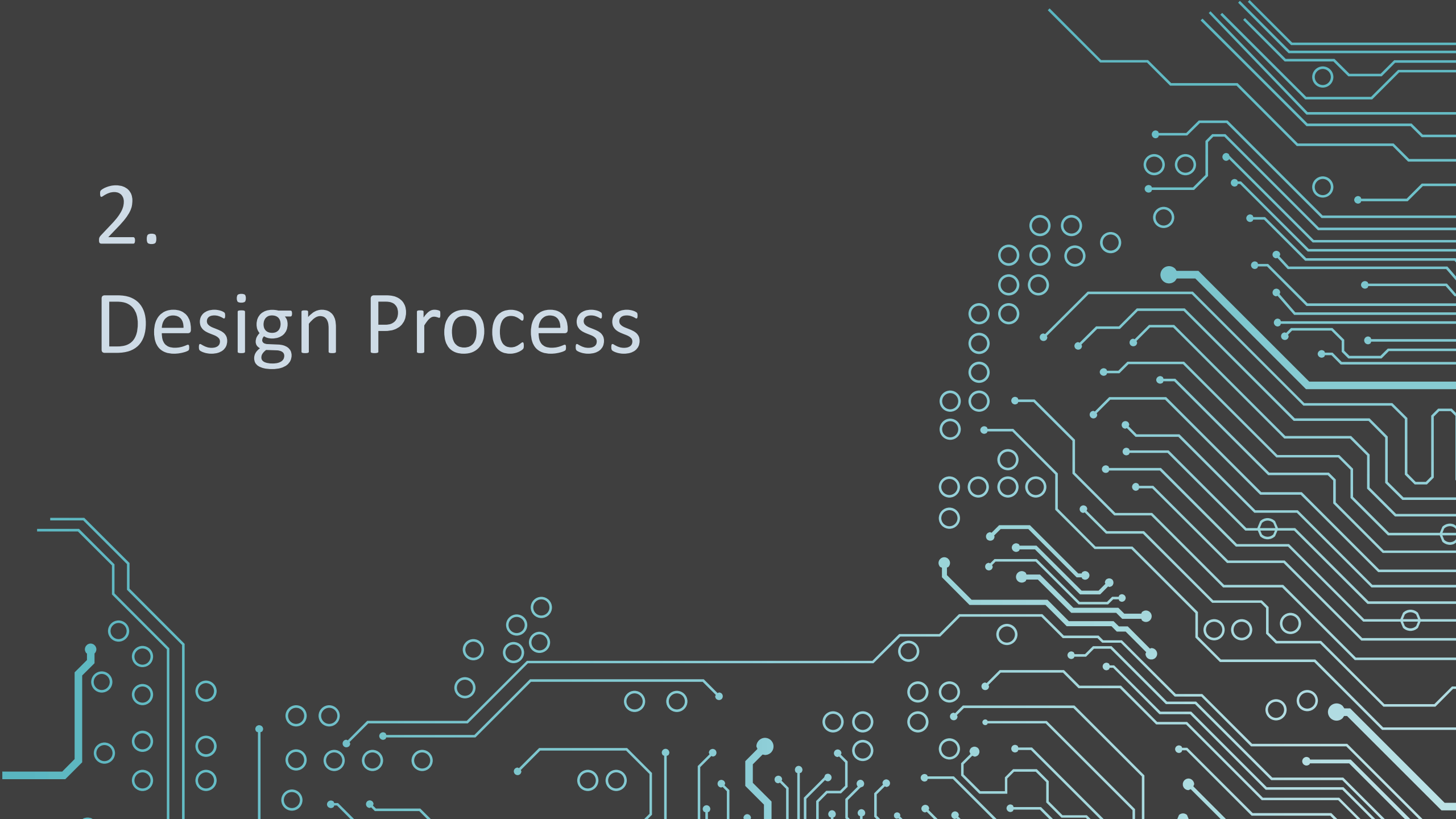
The background of the slide is a dark gray color. Overlaid on this background is a complex, abstract pattern of light blue lines and circles, resembling a circuit board or a network diagram. The lines are of varying thickness and form a dense, interconnected web, particularly concentrated on the right side of the slide. Small circles, some solid and some hollow, are scattered throughout the pattern, often at the intersections of lines. The overall effect is a high-tech, digital aesthetic.

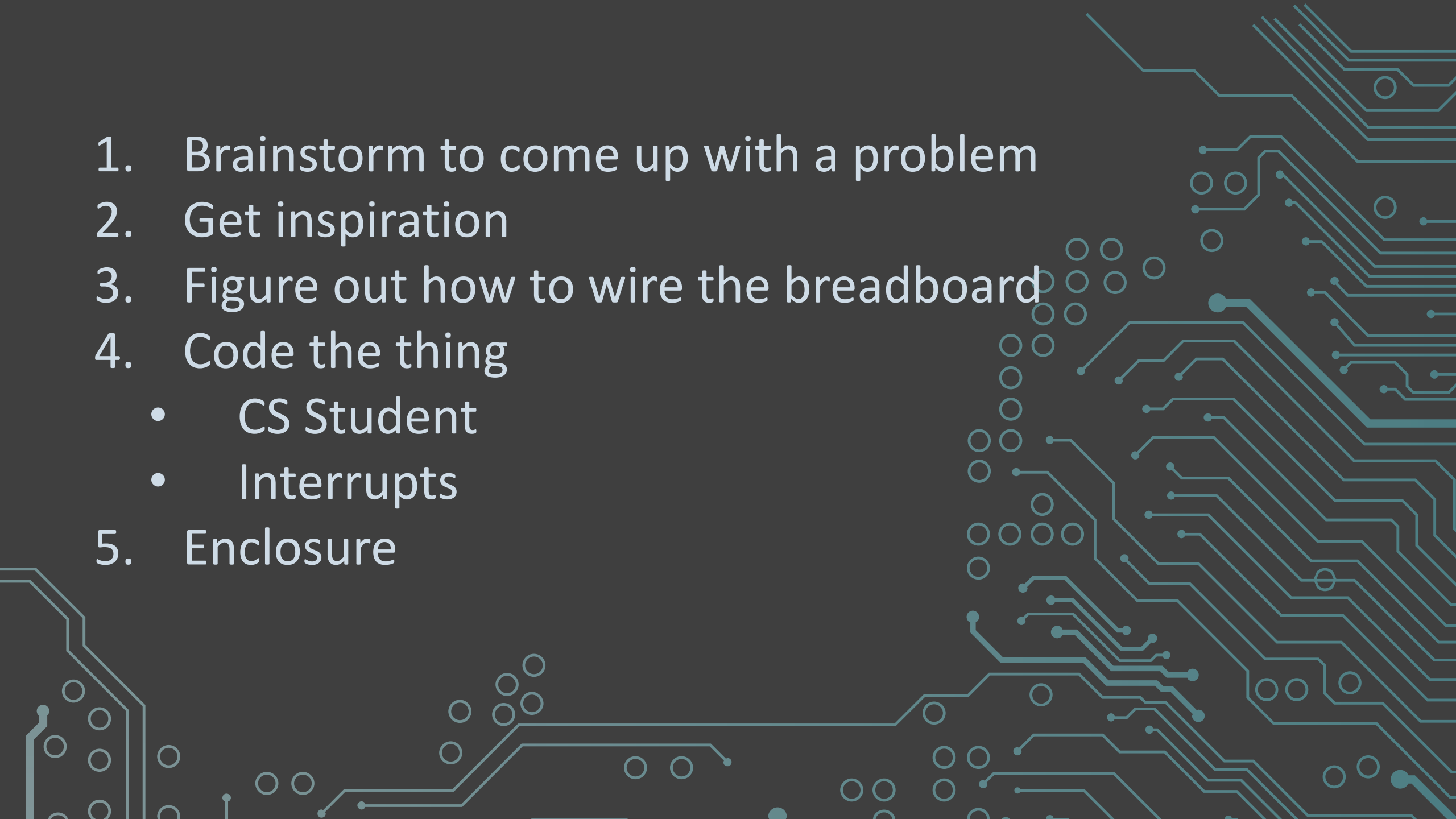
I don't really like when it's hot outside

- ☒ It's very much a personal problem
- ☐ Most people put up with it
- ☐ I'm required to go outside to water my garden and weed

How do I let myself know it's too hot to go outside?

2. Design Process



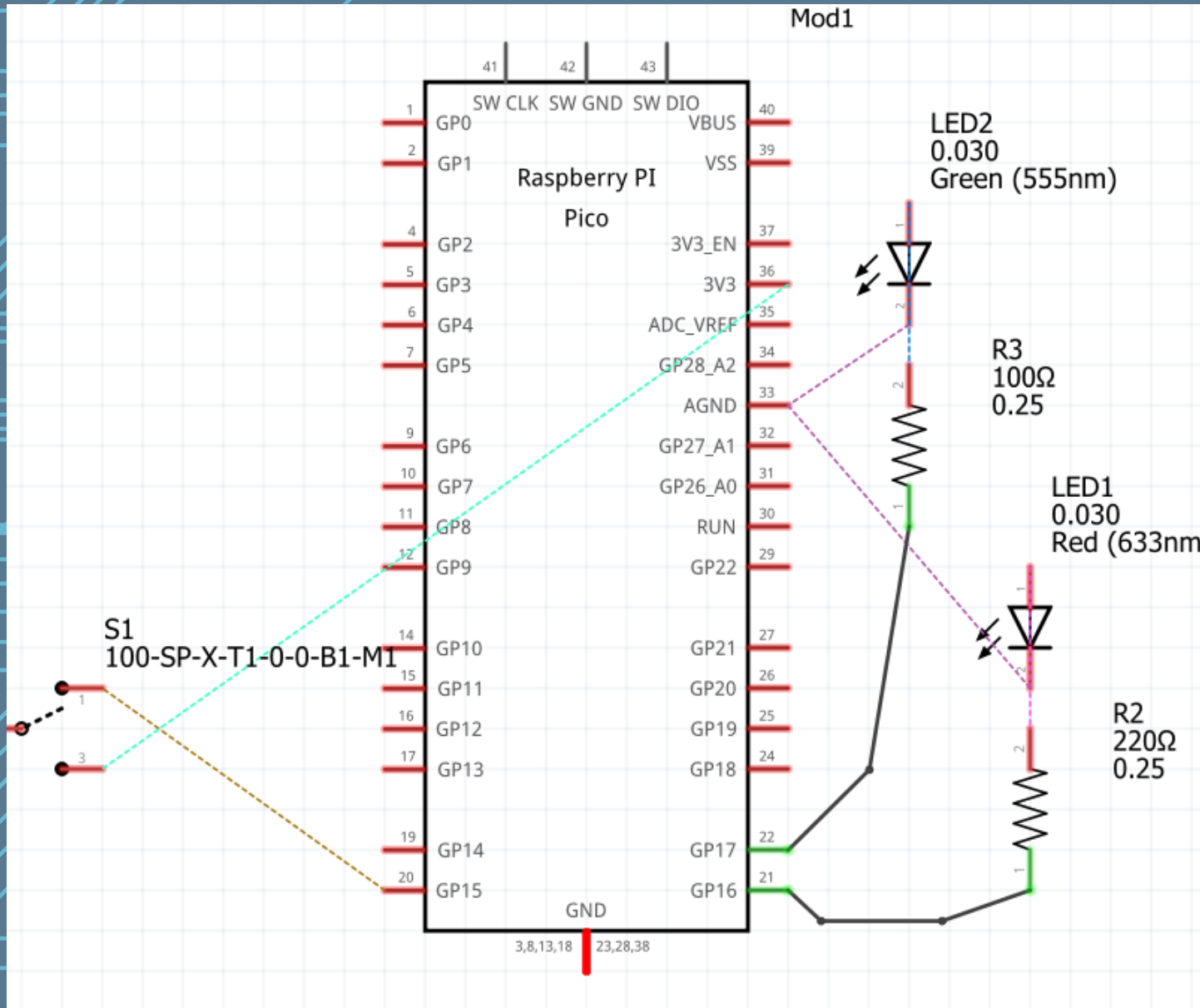
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- The background of the slide is a dark gray color with a light blue circuit board pattern. The pattern consists of various lines, circles, and dots, resembling a printed circuit board (PCB) layout. The lines are of different thicknesses and are arranged in a complex, interconnected manner. The circles and dots are also of different sizes and are scattered throughout the background, some appearing as isolated points and others as part of larger clusters or patterns.
1. Brainstorm to come up with a problem
 2. Get inspiration
 3. Figure out how to wire the breadboard
 4. Code the thing
 - CS Student
 - Interrupts
 5. Enclosure

The background of the slide is a dark gray color. It features a complex, light blue circuit board pattern that flows from the right side towards the left. The pattern consists of numerous thin lines, some of which are thicker and more prominent, forming a dense network of paths. Scattered throughout this network are many small circles, some of which are solid light blue, while others are hollow. The overall effect is a high-tech, digital aesthetic.

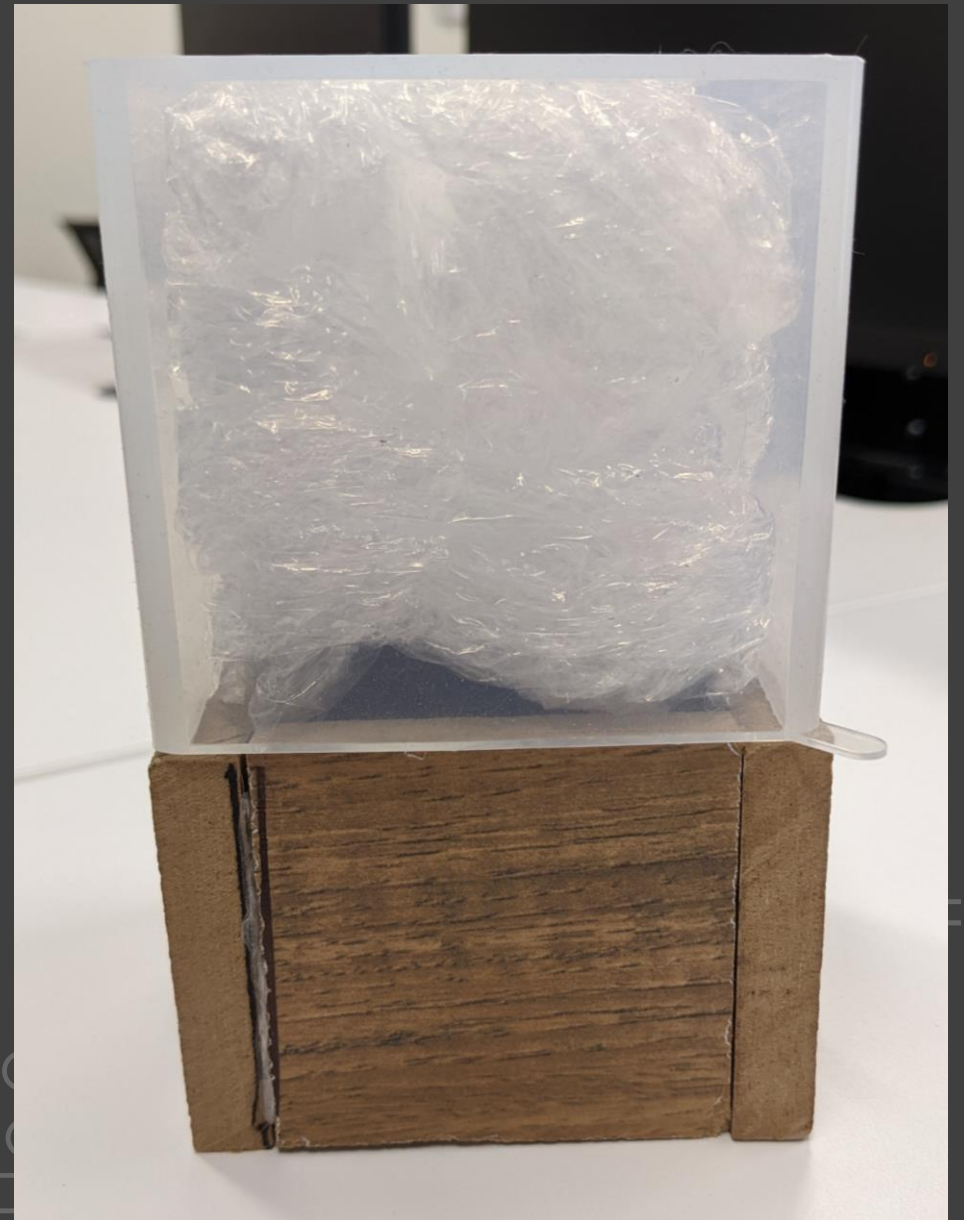
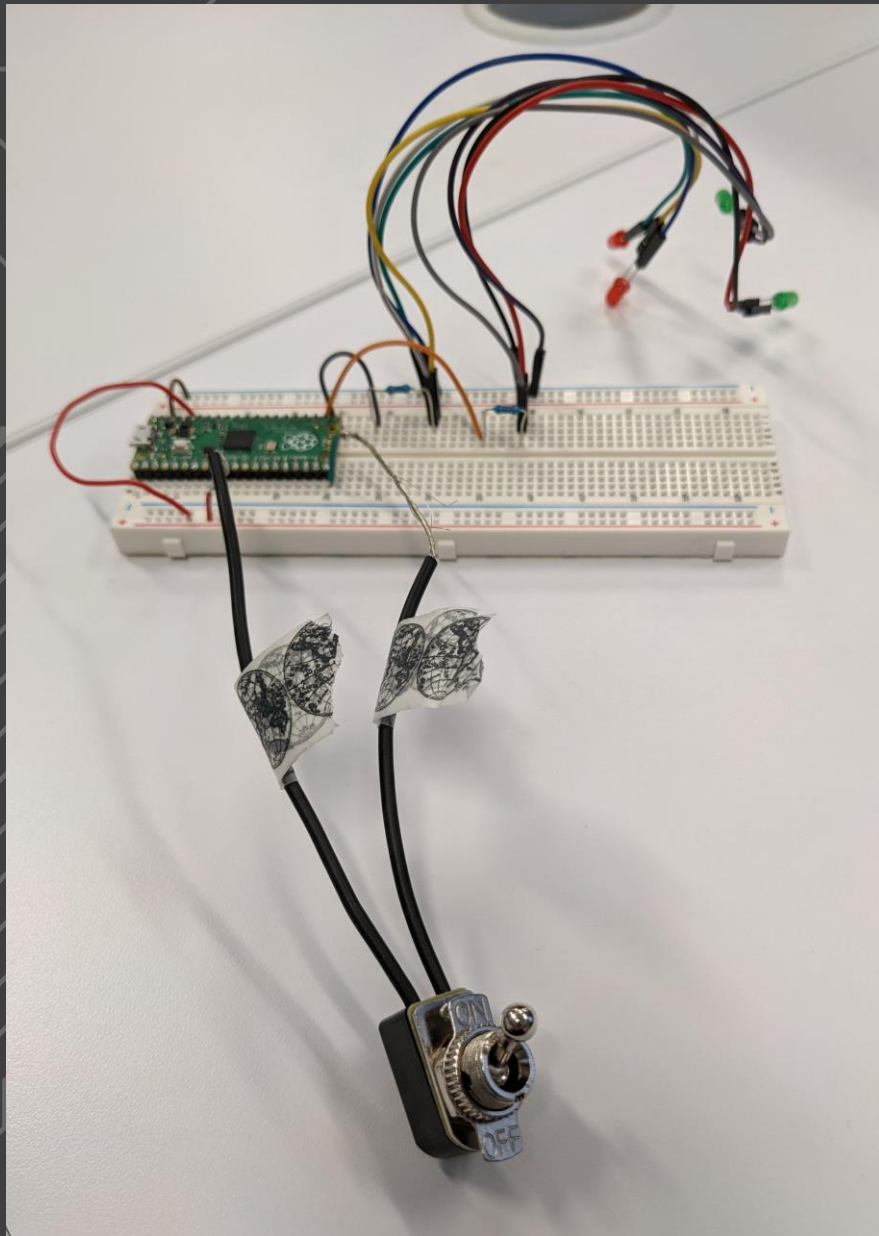
3.

Design Result

Circuit Schematic

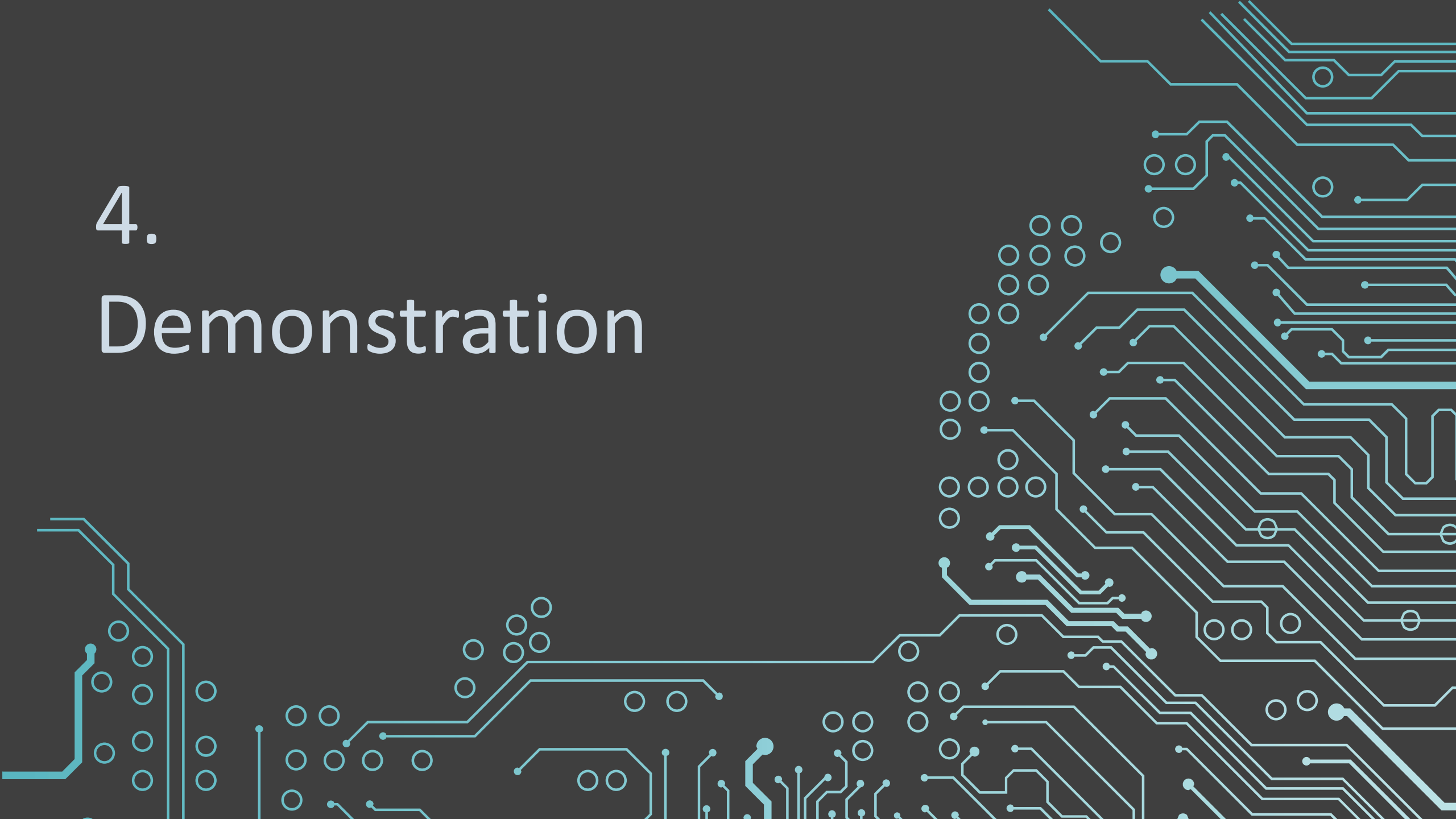


Done with fritzing
software



4.

Demonstration





“

*“Ah Summer, what power
you have to make us suffer
and like it.”*

- Russel Baker

5. Challenges



Design Challenges and Accomplishments

- Wasn't sure how I was going about an interrupt
- Once I figured out that the circuit was independent of from the code, and vice-versa, it fell in place.
- Toggle switch debouncing
- LED PWM fading from red to green
 - Figured that changing duty cycles between red and green would take too much time
 - Didn't figure out how to use RGB LED
- MicroPython is really powerful!
- Learned that I wanted to turn the project into a weather station

A decorative background featuring a complex circuit board pattern in light blue lines on a dark gray background. The pattern includes various traces, pads, and circular components, primarily concentrated on the left side and bottom of the image.

Thanks!

Any questions?

Credits

Special thanks to all people who made and shared these
awesome resources for free:

- Presentation template designed by powerpointify.com
- Photographs by unsplash.com