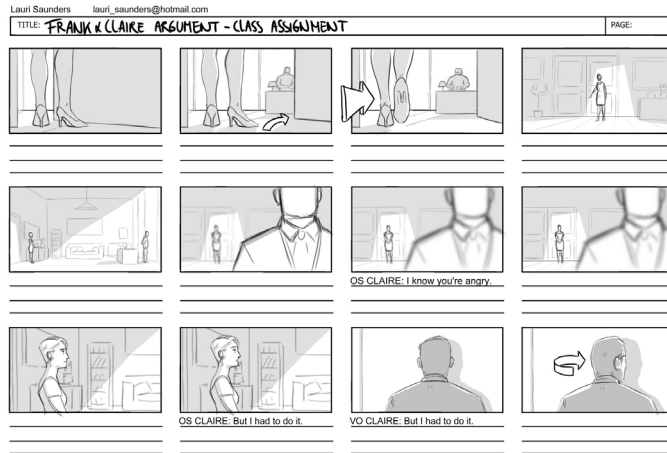
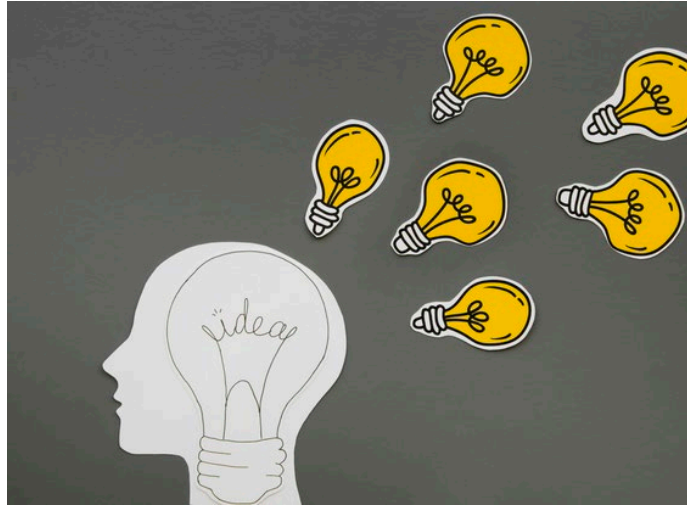




Communication Box

Independent Project (DJ52031)

Linxuan Yang 24/08/2022



Content

1. Background
2. Stats and Findings
3. Example
4. Inspirations & Sketches
5. Prototyping & Details
6. Usage Scenarios

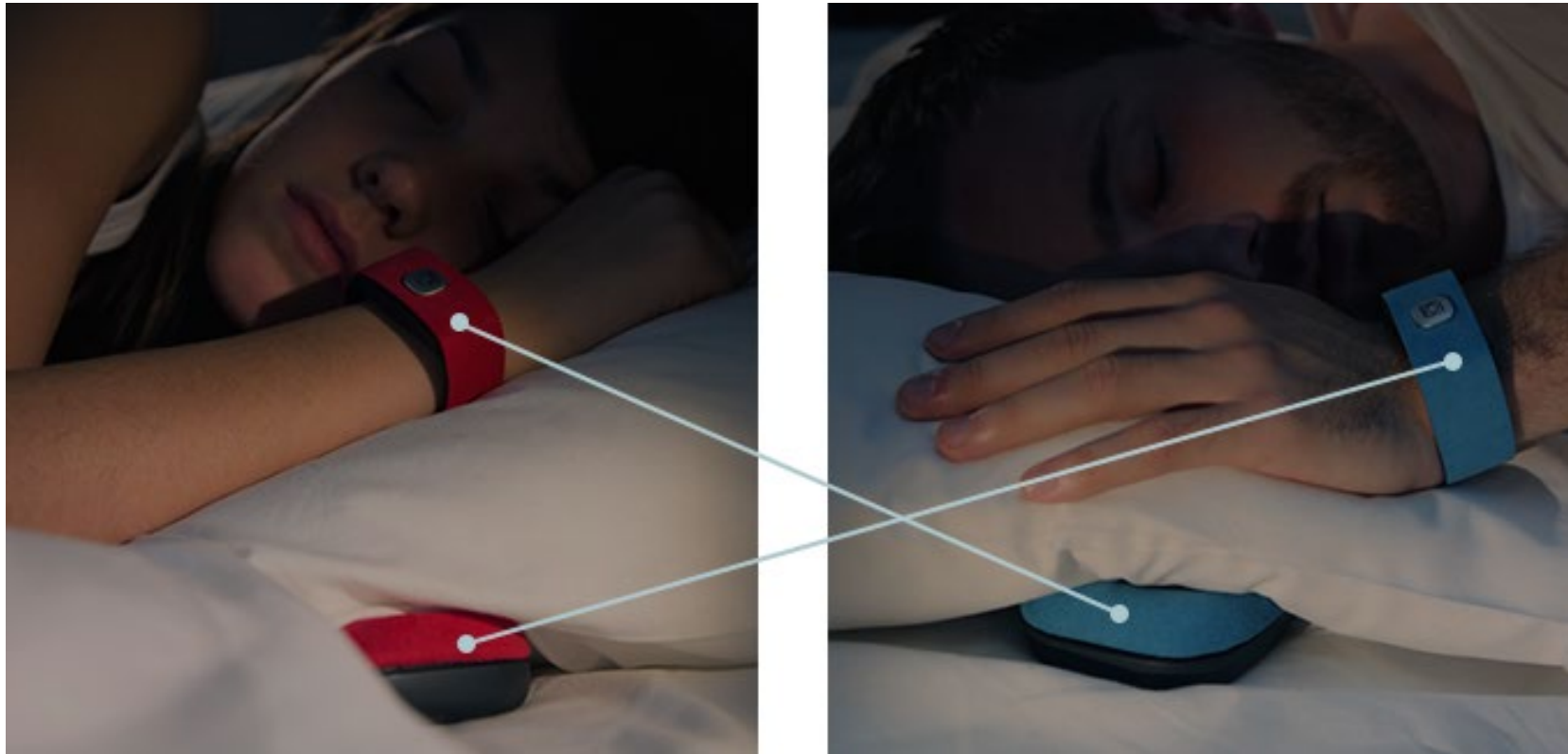
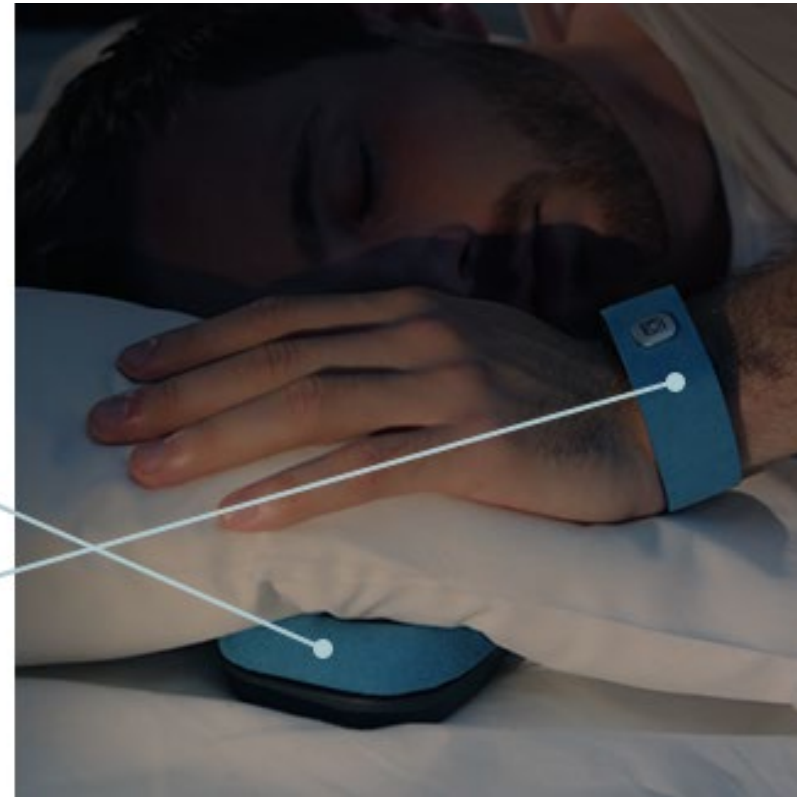
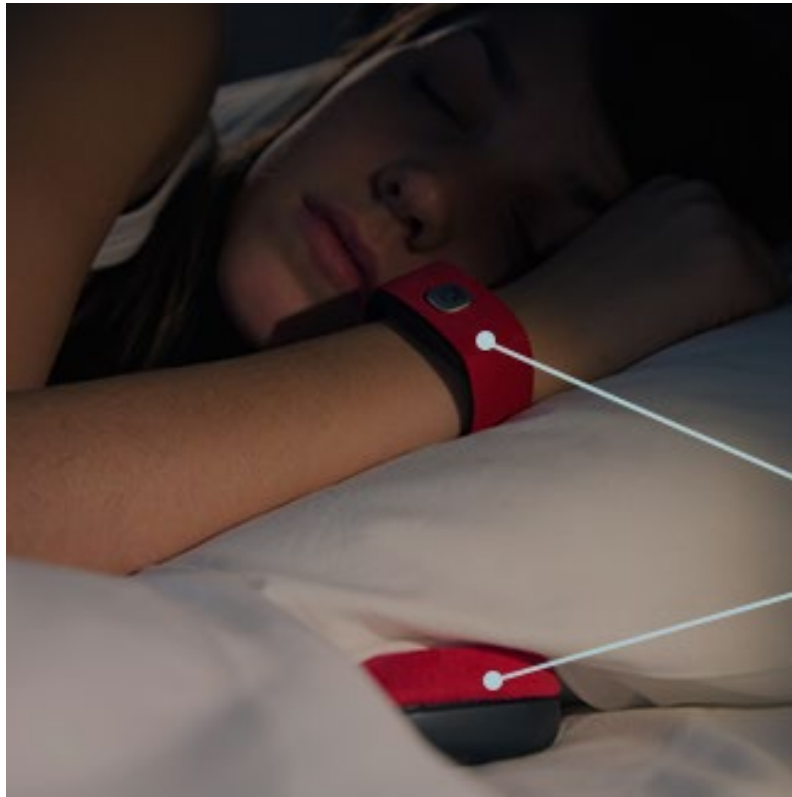
Background



Stats



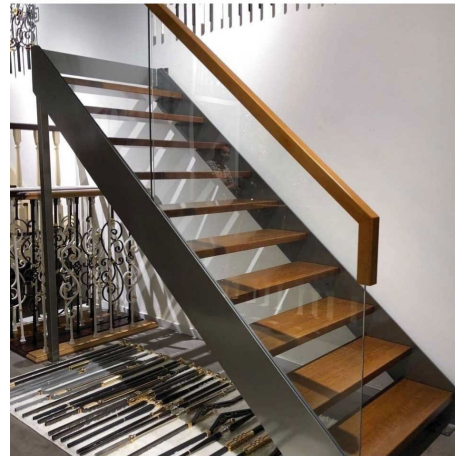
Example



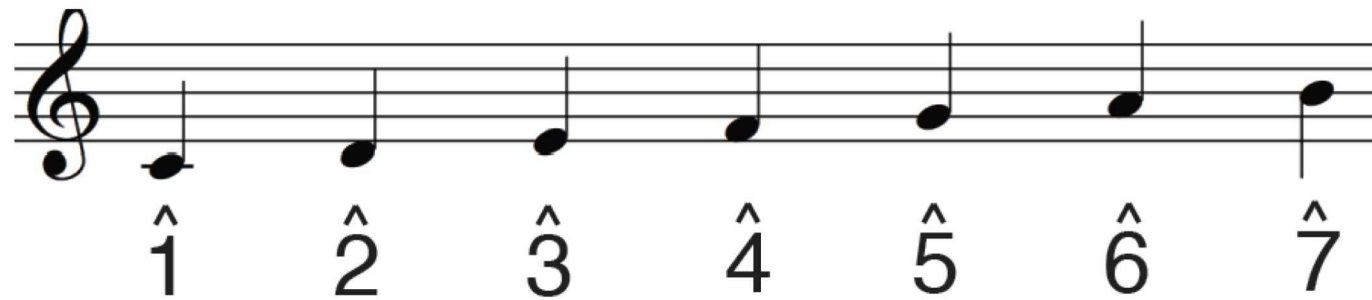
Findings



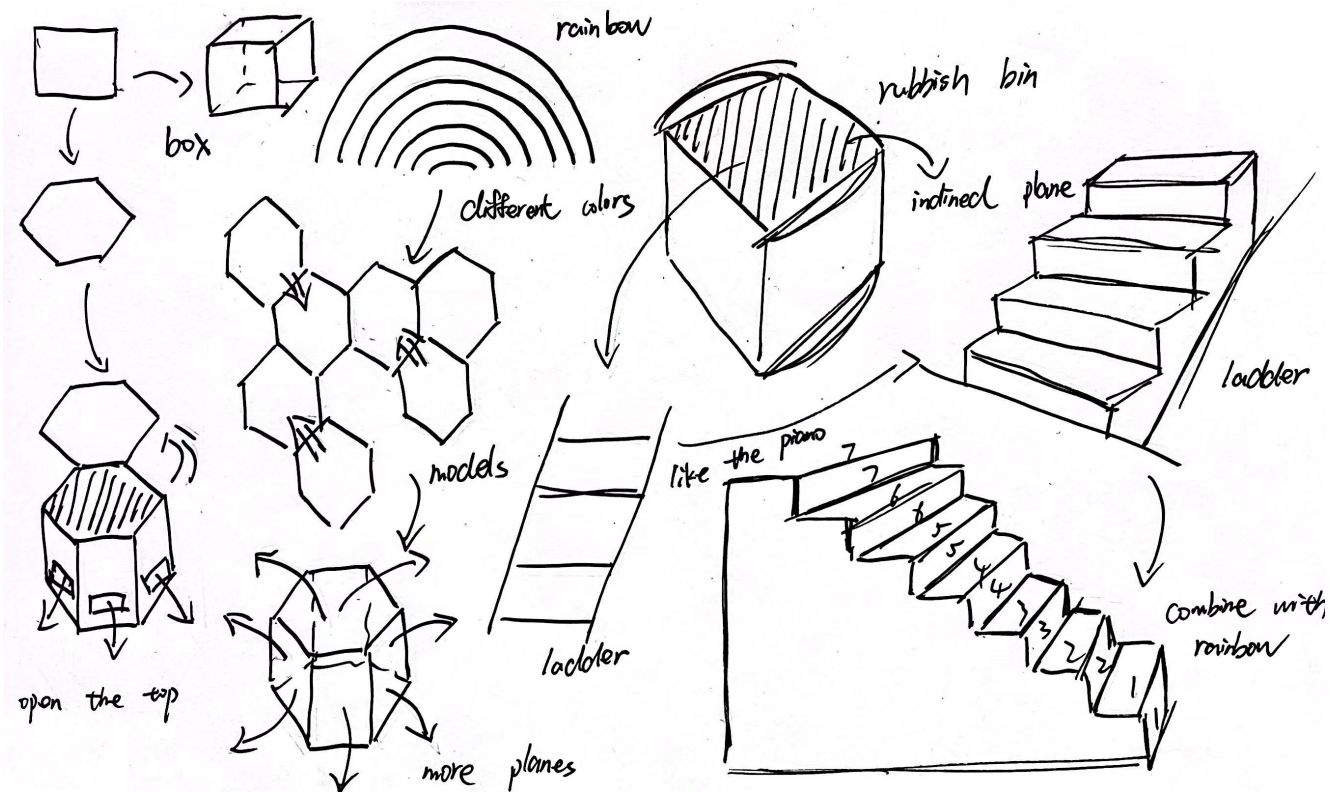
Inspirations



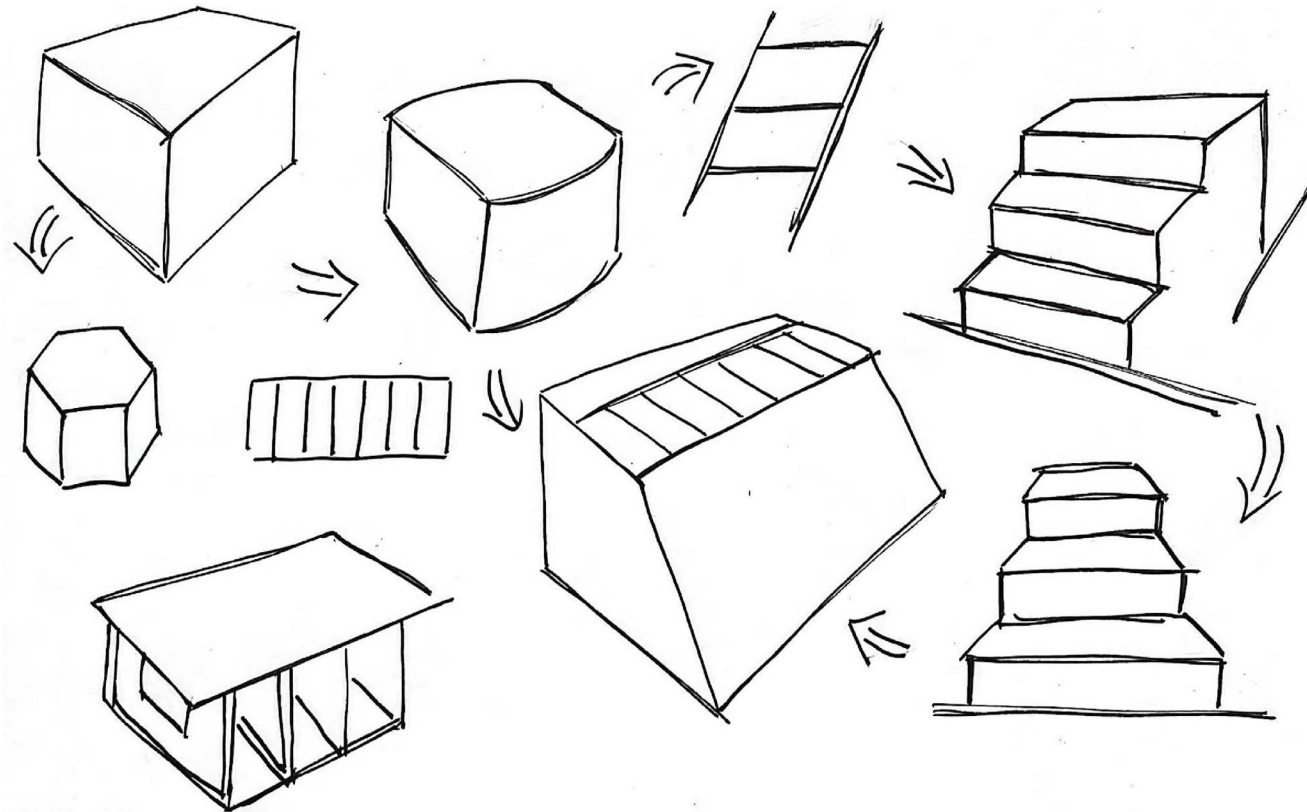
Inspirations



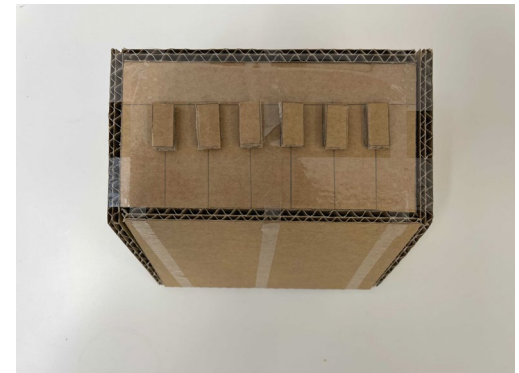
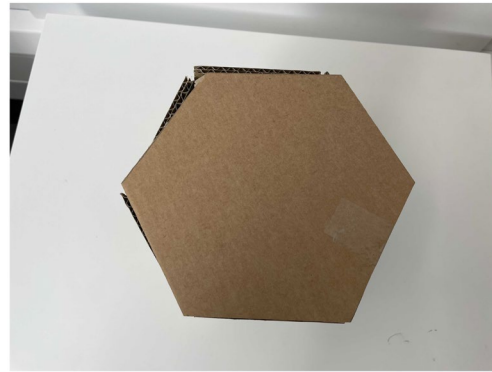
Sketches (Previous Idea)



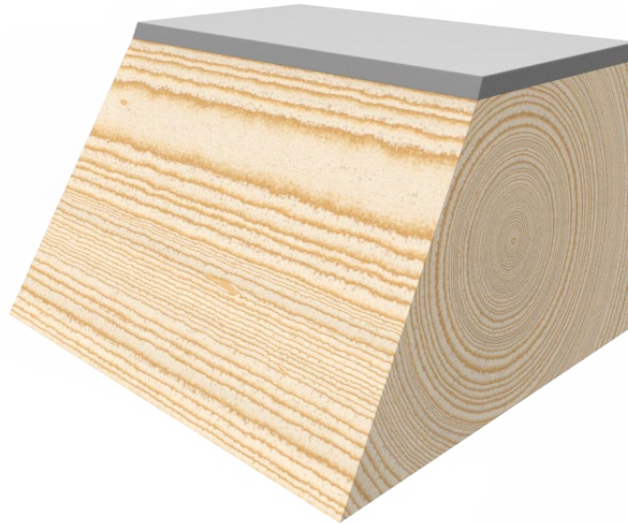
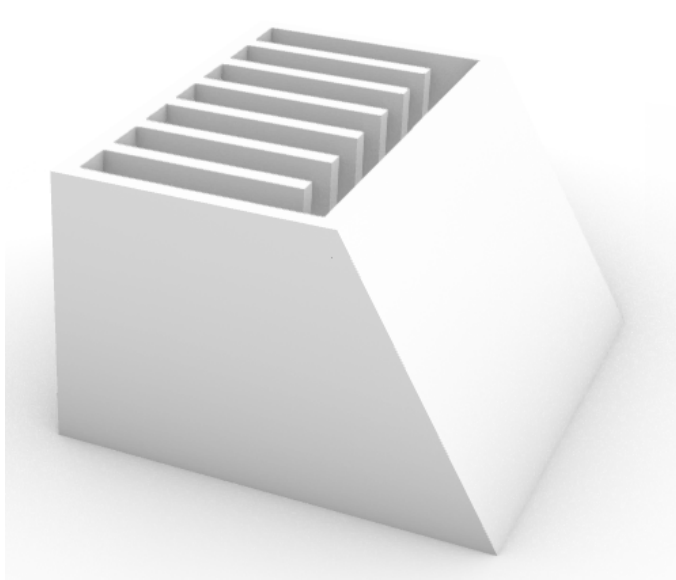
Sketches (Final Idea)



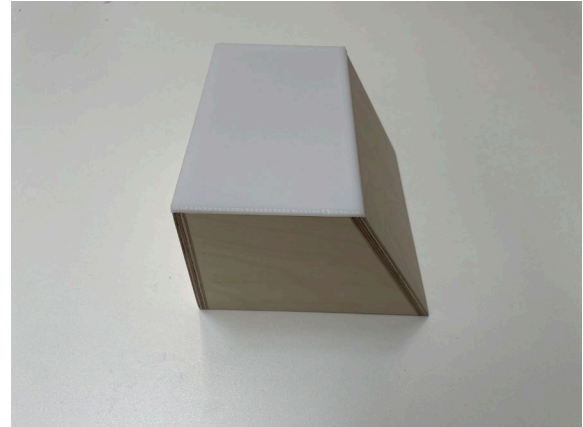
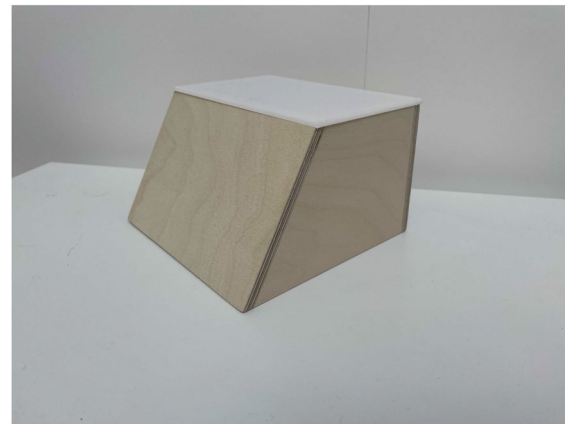
Prototyping (Simple Model)



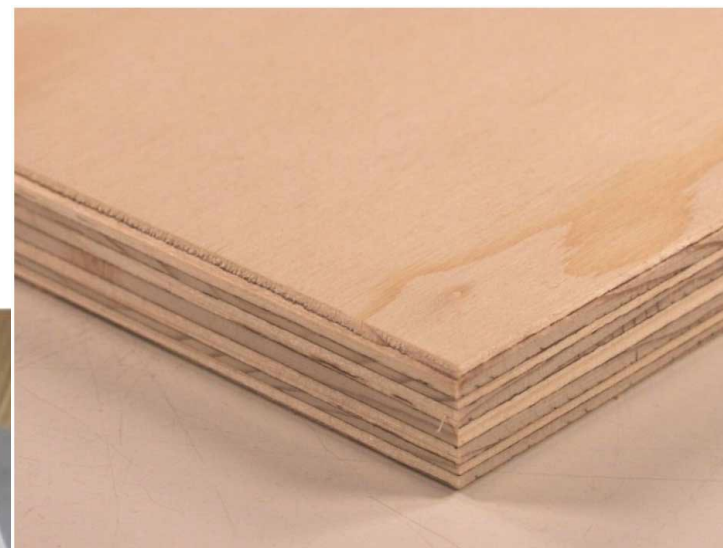
Prototyping (Rhino Model & Render)



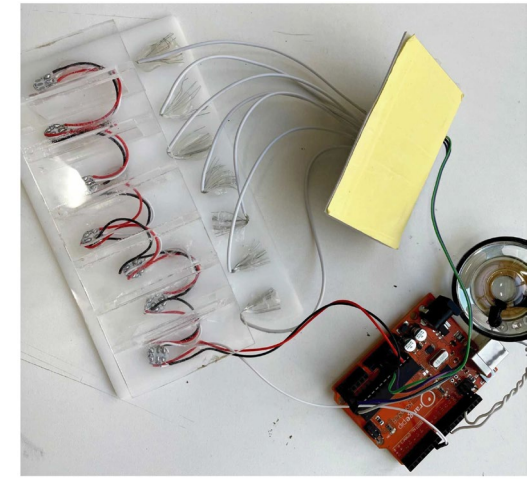
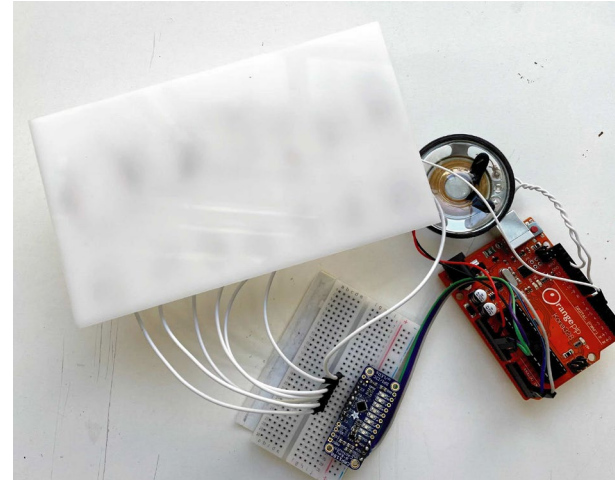
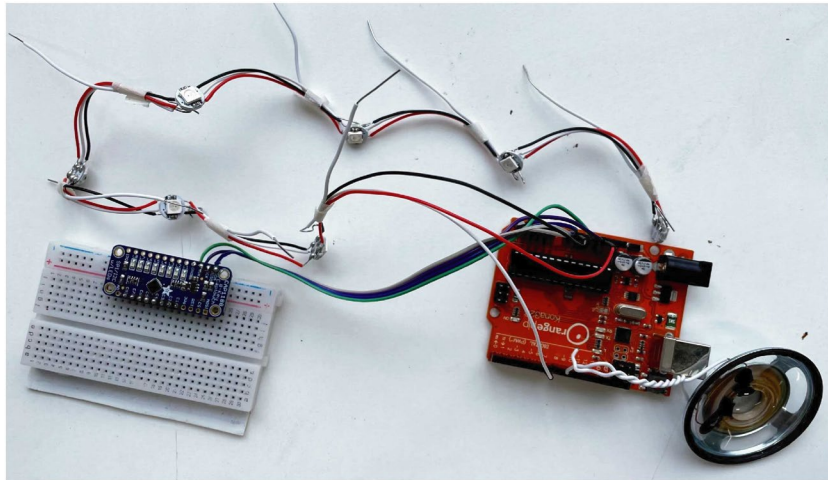
Prototyping (Physical Product)



Details & Materials



Details & Materials (Combinations)



Details & Materials

```
void setup() {
  Serial.begin(9600);
  Serial.println("CAP1188 test!");

  // Initialize the sensor, if using i2c you can pass in the i2c address
  // if (!cap.begin(0x28)) {
  if (!cap.begin()) {
    Serial.println("CAP1188 not found");
    while (1);
  }
  Serial.println("CAP1188 found!");
  pixels.begin();
}

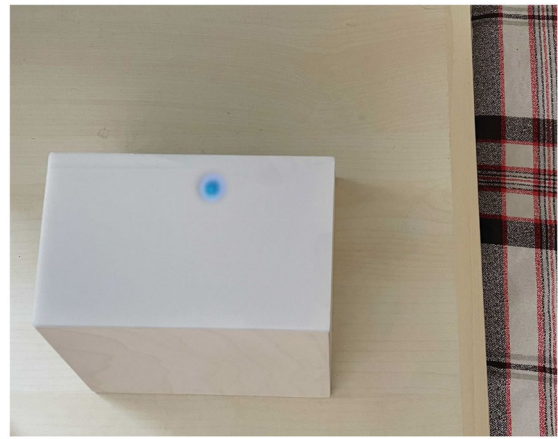
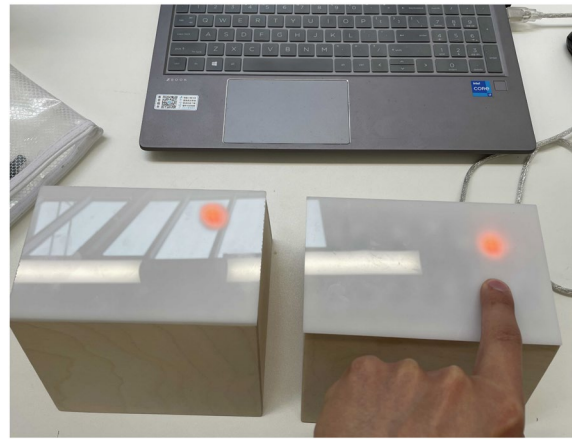
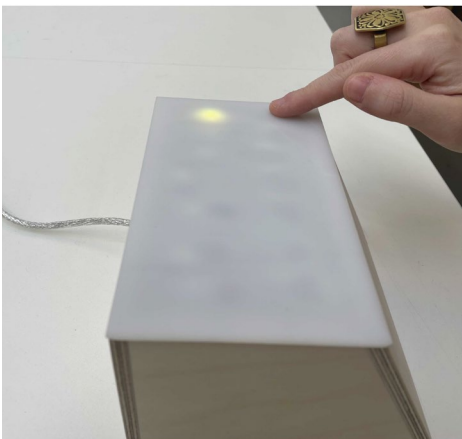
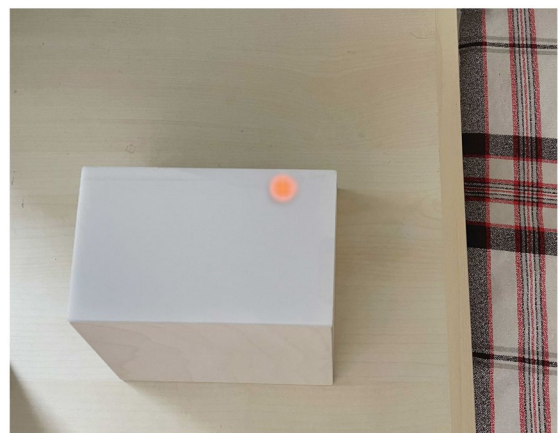
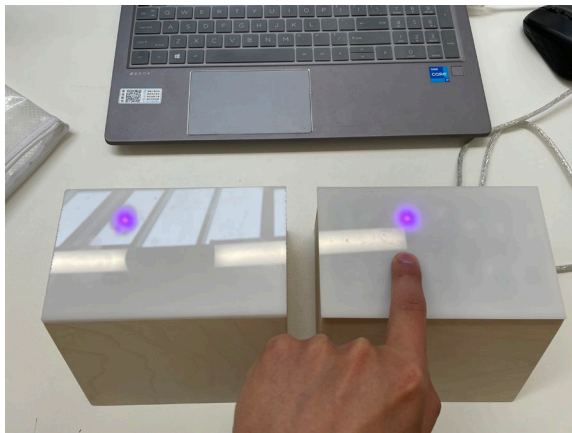
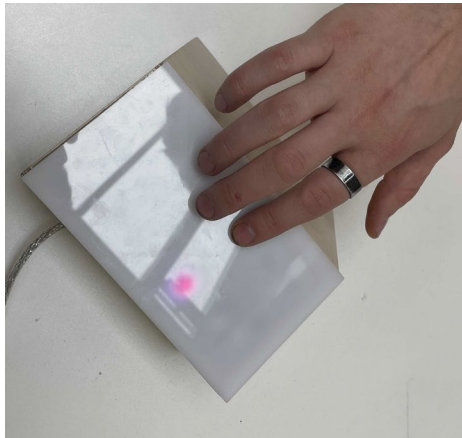
void loop() {
  pixels.clear(); // Set all pixel colors to 'off'

  int touched = cap.touched();
  if (touched == 64) {
    pixels.setPixelColor(0, pixels.Color(50, 100, 0));
    pixels.show(); // Send the updated pixel colors to the hardware.
    tone(9, 988, 100);
  }
  else if (touched == 32) {
    pixels.setPixelColor(1, pixels.Color(100, 50, 0));
    pixels.show(); // Send the updated pixel colors to the hardware.
    tone(9, 880, 100);
  }
  else if (touched == 16) {
    pixels.setPixelColor(2, pixels.Color(0, 100, 100));
    pixels.show(); // Send the updated pixel colors to the hardware.
    tone(9, 784, 100);
  }
}
```

```
else if (touched == 8) {
  pixels.setPixelColor(3, pixels.Color(0, 50, 100));
  pixels.show(); // Send the updated pixel colors to the hardware.
  tone(9, 698, 100);
}
else if (touched == 4) {
  pixels.setPixelColor(4, pixels.Color(50, 0, 150));
  pixels.show(); // Send the updated pixel colors to the hardware.
  tone(9, 659, 100);
}
else if (touched == 2) {
  pixels.setPixelColor(5, pixels.Color(100, 0, 50));
  pixels.show(); // Send the updated pixel colors to the hardware.
  tone(9, 587, 100);
}
else if (touched == 1) {
  pixels.setPixelColor(6, pixels.Color(150, 0, 0));
  pixels.show(); // Send the updated pixel colors to the hardware.
  tone(9, 523, 100);
  delay(1); // delay in between reads for stability
}
else {
  for (int i = 0; i < 7; i++) {
    pixels.setPixelColor(i, pixels.Color(0, 0, 0));
  }

  pixels.show(); // Send the updated pixel colors to the hardware.
}
}
```


Usage scenarios



Usage scenarios





Thanks

Ending...