

PLAYBOT4ALL: TECHNOLOGICAL TOYS FOR ALL

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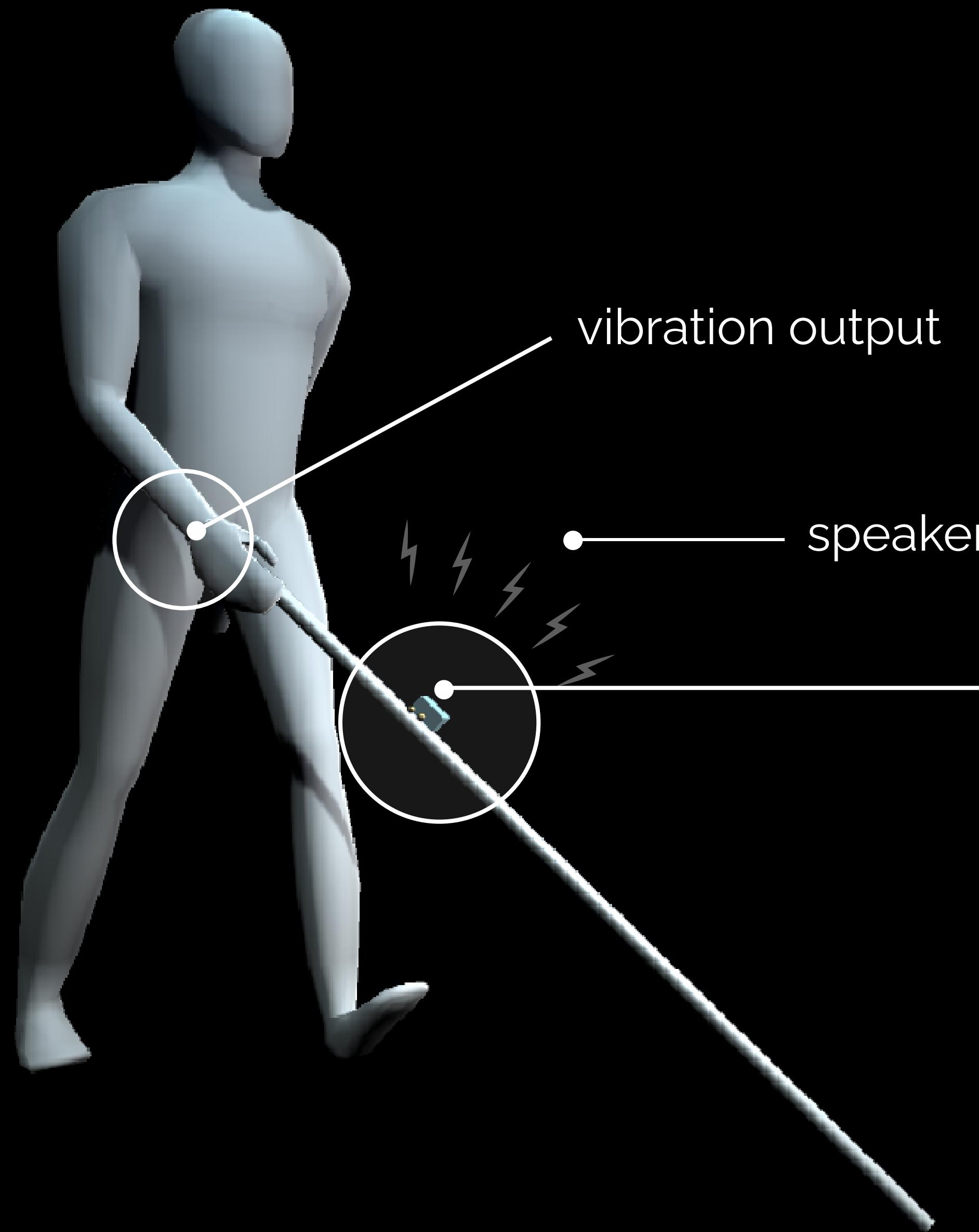
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OUR PROPOSAL

Ergonomic

Strong

Light and handy

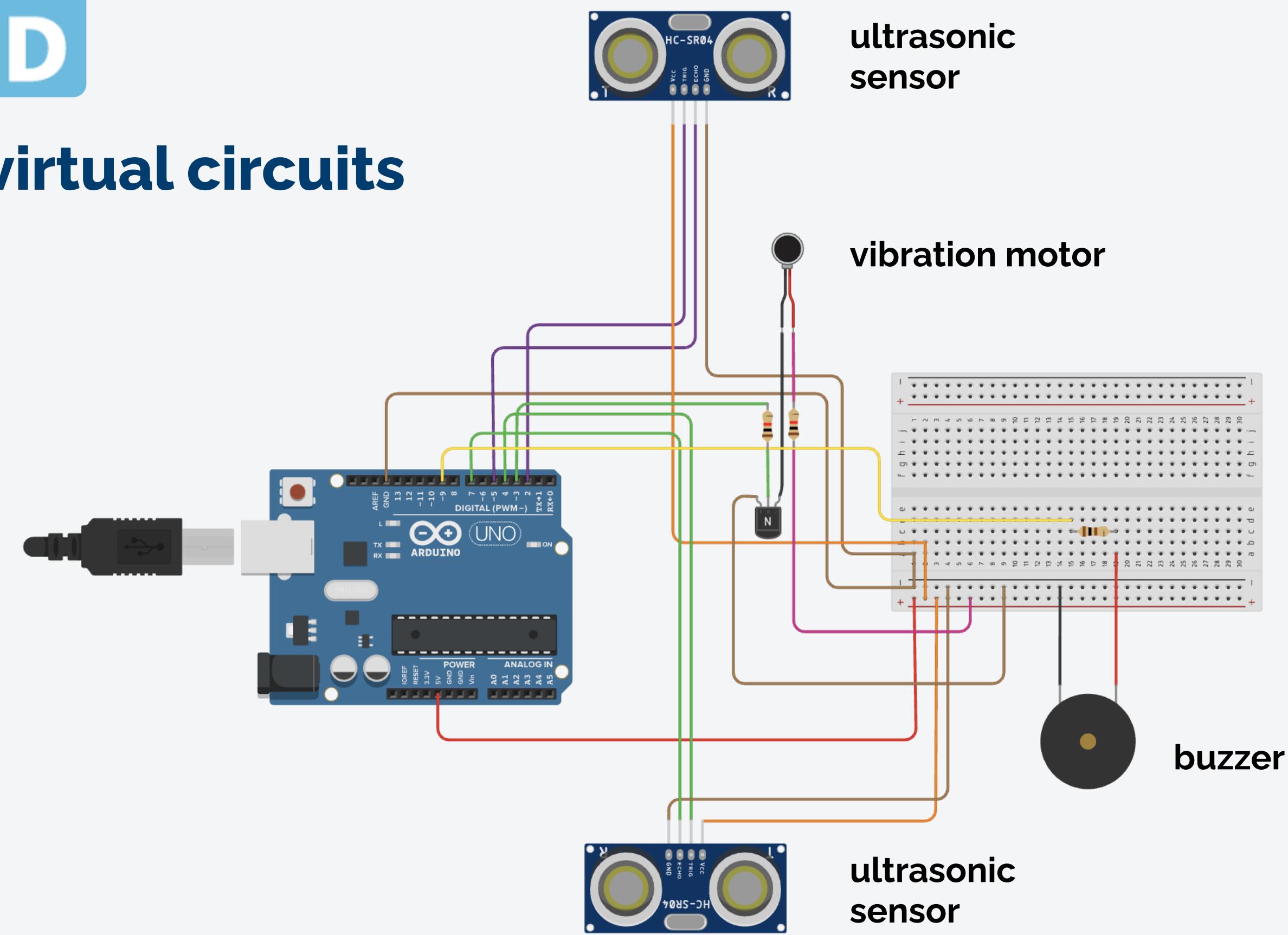


OUR PROGRESS

Step 1



testing virtual circuits



```
Text
1 // defines pins numbers
2 const int trigPin = 2;
3 const int echoPin = 5;
4 const int trigPindown = 4;
5 const int echoPindown = 7;
6 const int buzzer = 9;
7 int motorPin = 3;
8
9 //bool sound = true;
10
11 // defines variables
12 long duration;
13 int distance;
14 long durationdown;
15 int distancedown;
16 void setup() {
17   pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
18   pinMode(echoPin, INPUT);
19   pinMode(trigPindown, OUTPUT);
20   pinMode(echoPindown, INPUT);
21   pinMode(motorPin, OUTPUT);
22   pinMode(buzzer, OUTPUT);
23   // Sets the echoPin as an Input
24   Serial.begin(9600); // Starts the serial communication
25 }
26 void loop() {
27   // Clears the trigPin
28   digitalWrite(trigPin, LOW);
29   delayMicroseconds(2);
30   // Sets the trigPin on HIGH state for 10 micro seconds
31   digitalWrite(trigPin, HIGH);
32   delayMicroseconds(100);
33   digitalWrite(trigPin, LOW);
34   // Reads the echoPin, returns the sound wave travel time in microseconds
35   duration = pulseIn(echoPin, HIGH);
36   // Calculating the distance
37   distance = duration * 0.034 / 2;
38   // Prints the distance on the Serial Monitor
39
40   // Clears the trigPin
41   digitalWrite(trigPindown, LOW);
42   delayMicroseconds(2);
43   // Sets the trigPin on HIGH state for 10 micro seconds
44   digitalWrite(trigPindown, HIGH);

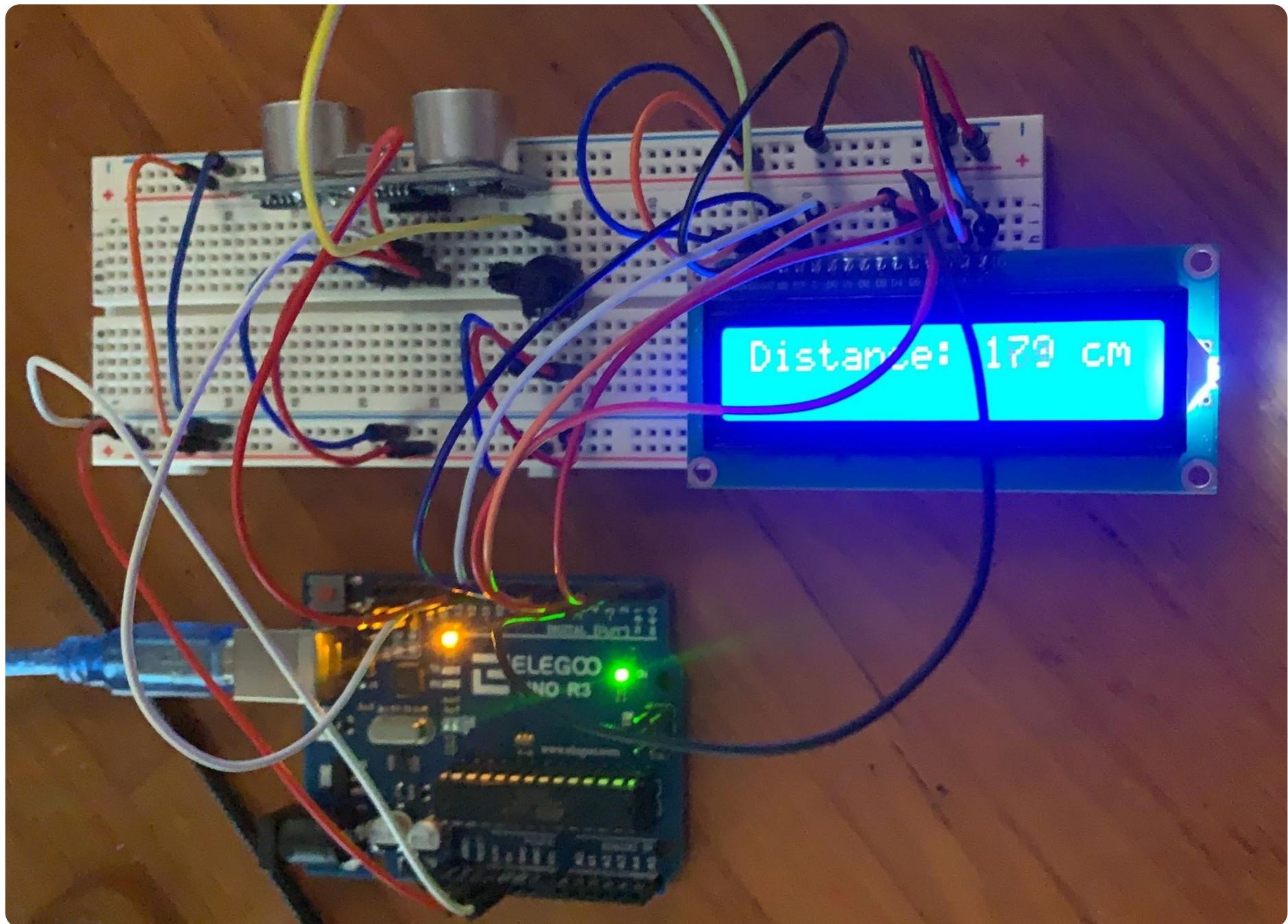
```

Serial Monitor

OUR PROGRESS

Step 2

From the simulation to reality...



Prototyping 1.0



Testing 1.0

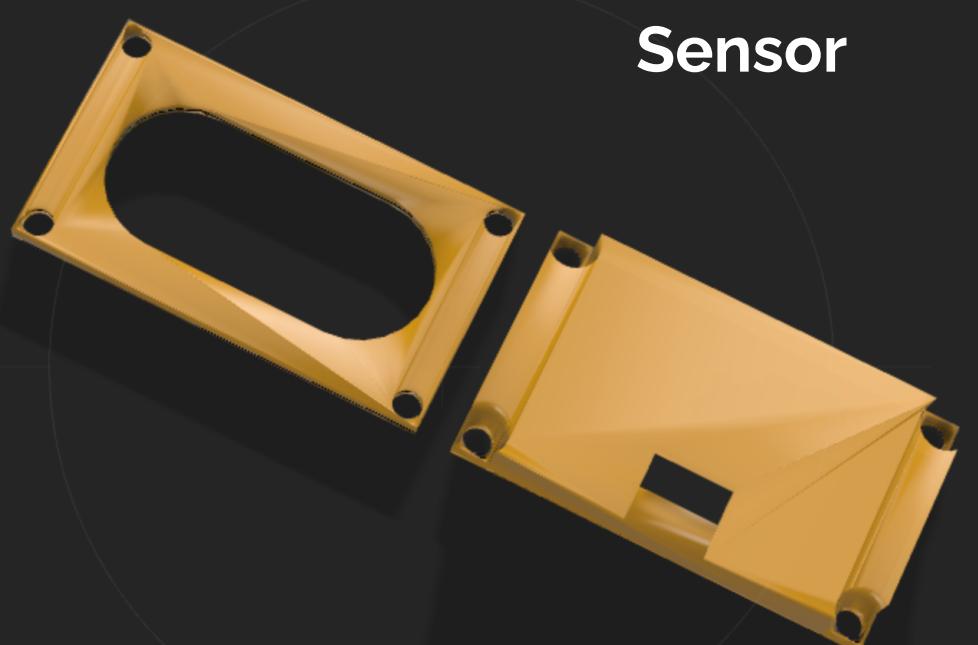
Focus:

- Find the **right distance** for both ultrasonic sensors.
- Define the **buzzer tone** for each case.

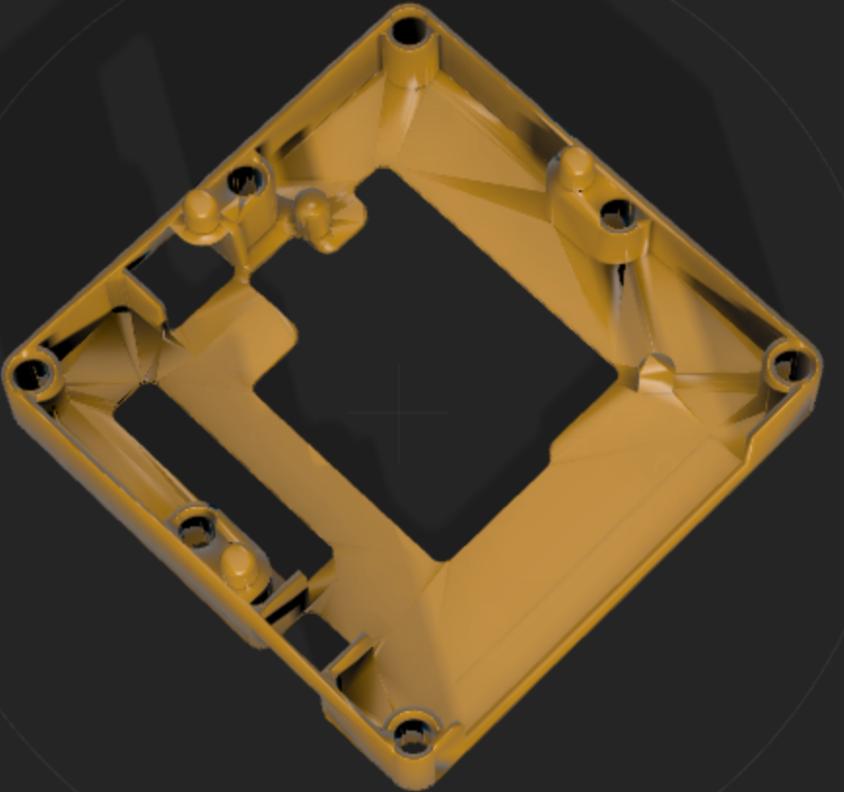
OUR PROGRESS

Step 3

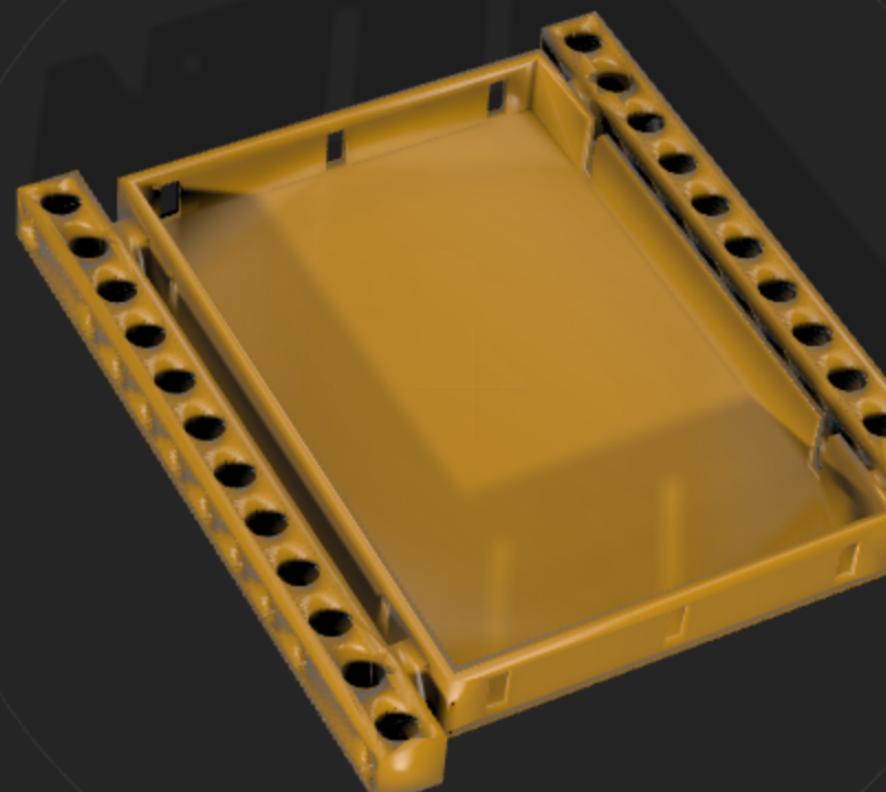
3D PRINTING



Ultrasonic
Sensor



Arduino UNO



Breadboard+ Battery
(over the arduino)

