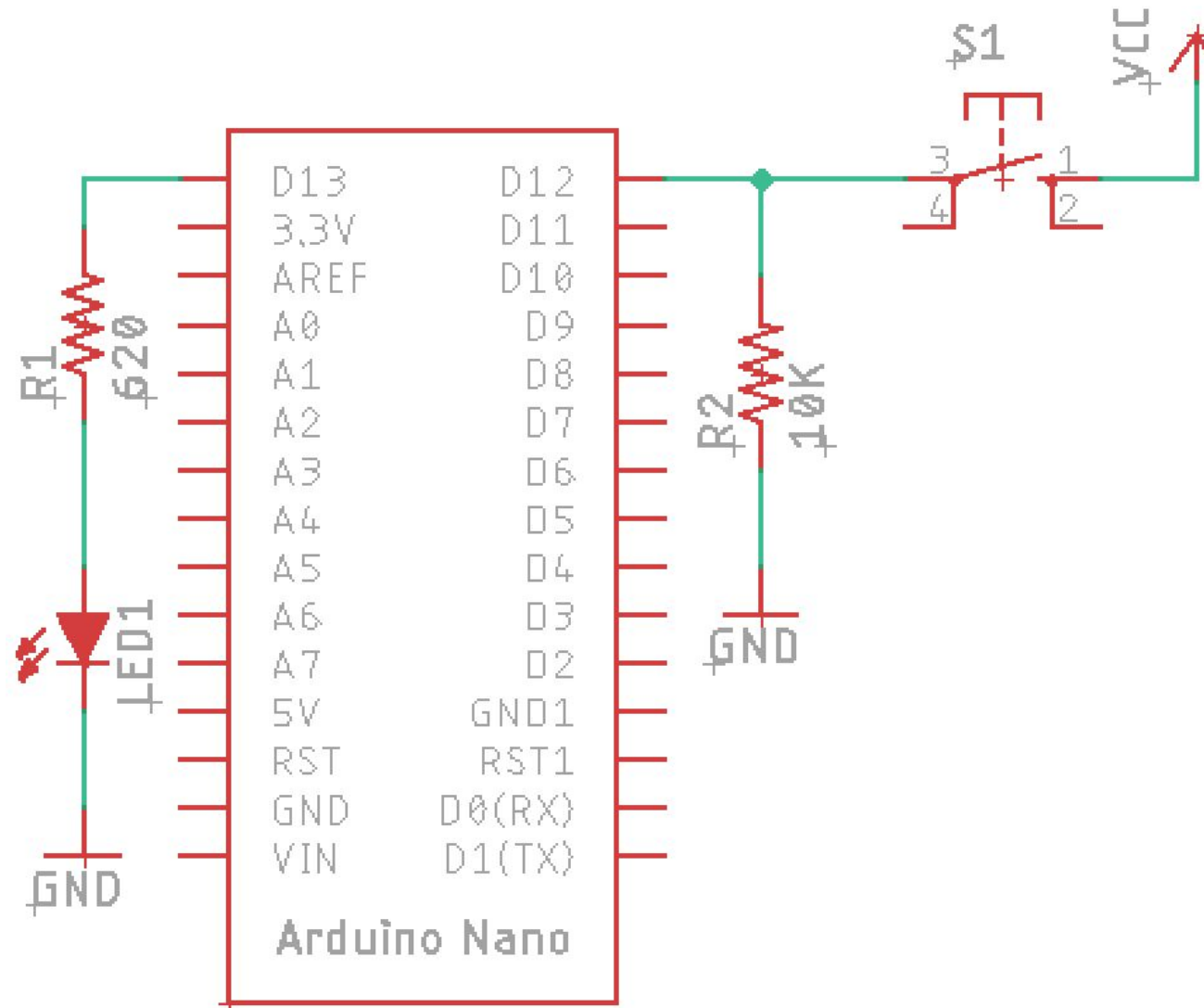


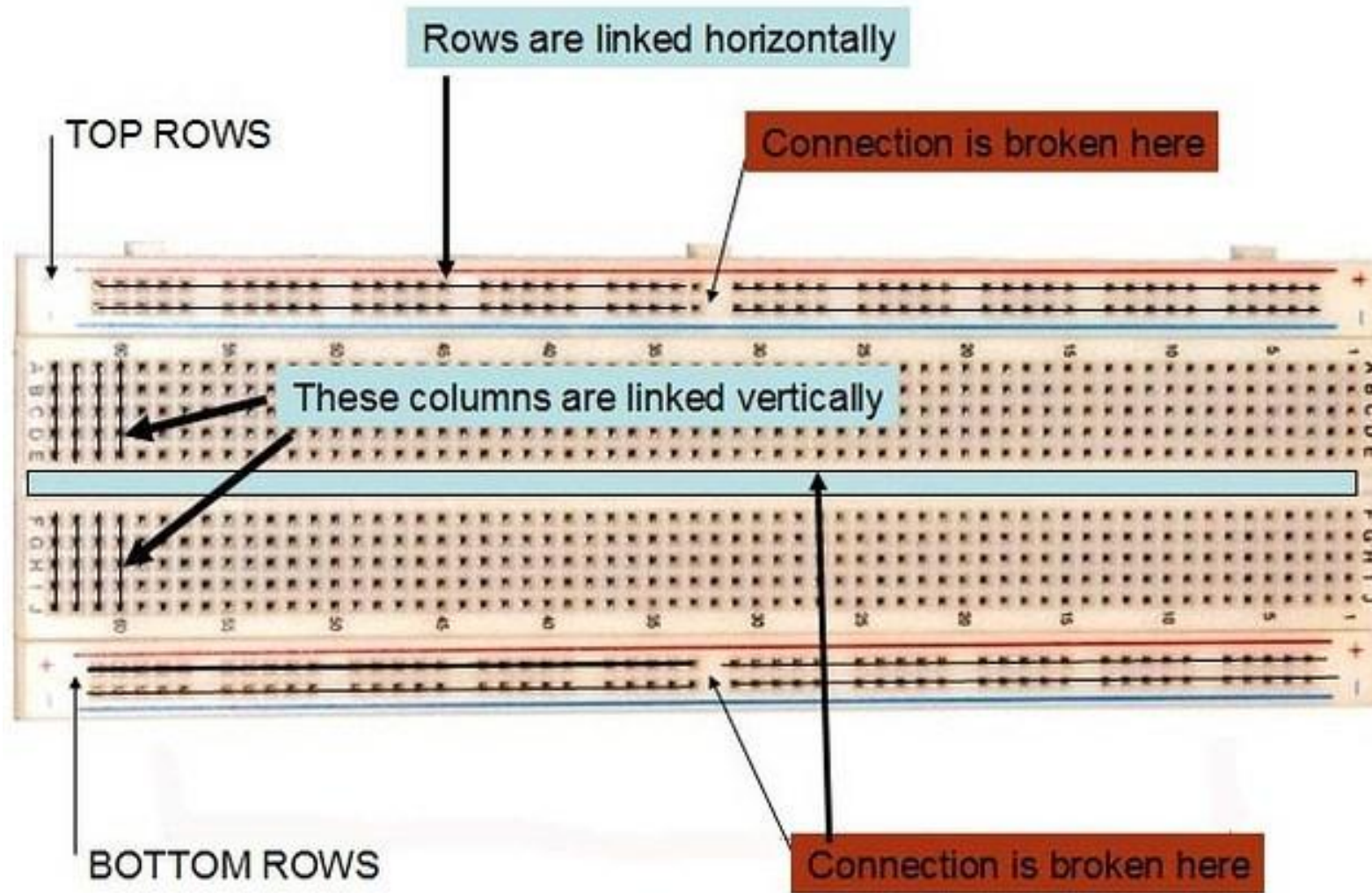
# HyTech Racing Arduino/GitHub Presentation

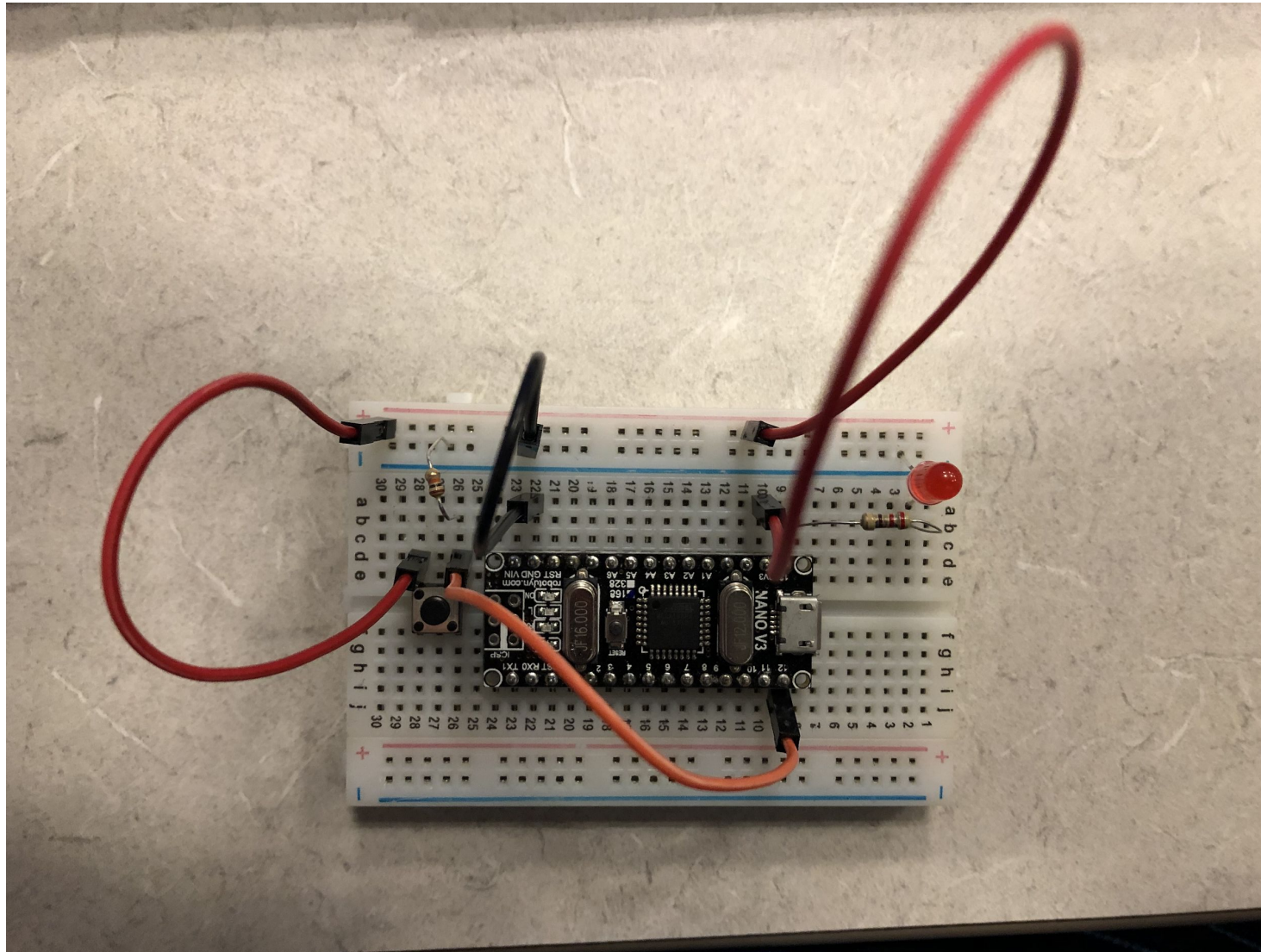
2019-2020

- Fill out this survey here: <https://tinyurl.com/2020SoftwareExperience>











```
1  /*
2   Blink
3   Turns on an LED on for one second, then off for one second, repeatedly.
4
5   This example code is in the public domain.
6   */
7
8   // Pin 13 has an LED connected on most Arduino boards.
9   // Pin 11 has the LED on Teensy 2.0
10  // Pin 6  has the LED on Teensy++ 2.0
11  // Pin 13 has the LED on Teensy 3.0
12  // give it a name:
13  int led = 13;
14
15  // the setup routine runs once when you press reset:
16  void setup() {
17    // initialize the digital pin as an output.
18    pinMode(led, OUTPUT);
19  }
20
21  // the loop routine runs over and over again forever:
22  void loop() {
23    digitalWrite(led, HIGH); // turn the LED on (HIGH is the voltage level)
24    delay(1000);             // wait for a second
25    digitalWrite(led, LOW);  // turn the LED off by making the voltage LOW
26    delay(1000);             // wait for a second
27  }
```

```
1  /*
2   DigitalReadSerial
3
4   Reads a digital input on pin 2, prints the result to the Serial Monitor
5
6   This example code is in the public domain.
7
8   http://www.arduino.cc/en/Tutorial/DigitalReadSerial
9  */
10
11 // digital pin 2 has a pushbutton attached to it. Give it a name:
12 int pushButton = 12;
13
14 // the setup routine runs once when you press reset:
15 void setup() {
16   // initialize serial communication at 9600 bits per second:
17   Serial.begin(9600);
18   // make the pushbutton's pin an input:
19   pinMode(pushButton, INPUT);
20 }
21
22 // the loop routine runs over and over again forever:
23 void loop() {
24   // read the input pin:
25   int buttonState = digitalRead(pushButton);
26   // print out the state of the button:
27   Serial.println(buttonState);
28   delay(1);          // delay in between reads for stability
29 }
```

```
1  /*
2   * Code that demonstrates how to create a sticky pushbutton to control a LED.
3   */
4
5  /*
6   * Arduino Pin Definitions
7   */
8  #define LED 13
9  #define BUTTON 12
10
11 /*
12  * Variable Definitions
13  */
14 int buttonState = LOW; // Way to store button state
15 int lastbuttonState = LOW; // Way to store previous button state from loop to loop
16
17 int ledState = LOW; // Way to store previous LED state from loop to loop
18
19 long lastDebounceTime = 0; // The last time the button was pressed
20 long debounceDelay = 25; // The time delay to block button bouncing
21
22 /*
23  * Pin Setup
24  */
25 void setup(){
26     pinMode(LED, OUTPUT);
```

```
27     pinMode (BUTTON, INPUT);
28     digitalWrite(LED, ledState);
29 }
30
31 /*
32  * Main Loop
33  */
34 void loop() {
35     int buttonReading = digitalRead(BUTTON); // Reads button input
36     if (buttonReading != lastbuttonState) {
37         lastDebounceTime = millis(); // Gets current time
38     }
39
40     if ((millis() - lastDebounceTime) > debounceDelay) { // Waits until delay has passed
41         if (buttonReading != buttonState) { // Checks if the state still matches
42             buttonState = buttonReading;
43
44             if (buttonState == HIGH) { // Checks button was pushed
45                 ledState = !ledState; // Switches LED state
46             }
47         }
48     }
49
50     digitalWrite(LED, ledState); // Writes state change to the LED
51     lastbuttonState = buttonReading; // Stores button state for next loop
52 }
```



## Training Schedule

Date	Time	Location	Theme
Thursday 9/12	6:30pm-8:15pm	Invention Studio	Soldering
Sunday 9/15	4:00pm - 6:00pm	SCC (Shop) AP Classroom	Car Circuitry, EAGLE, and Safety