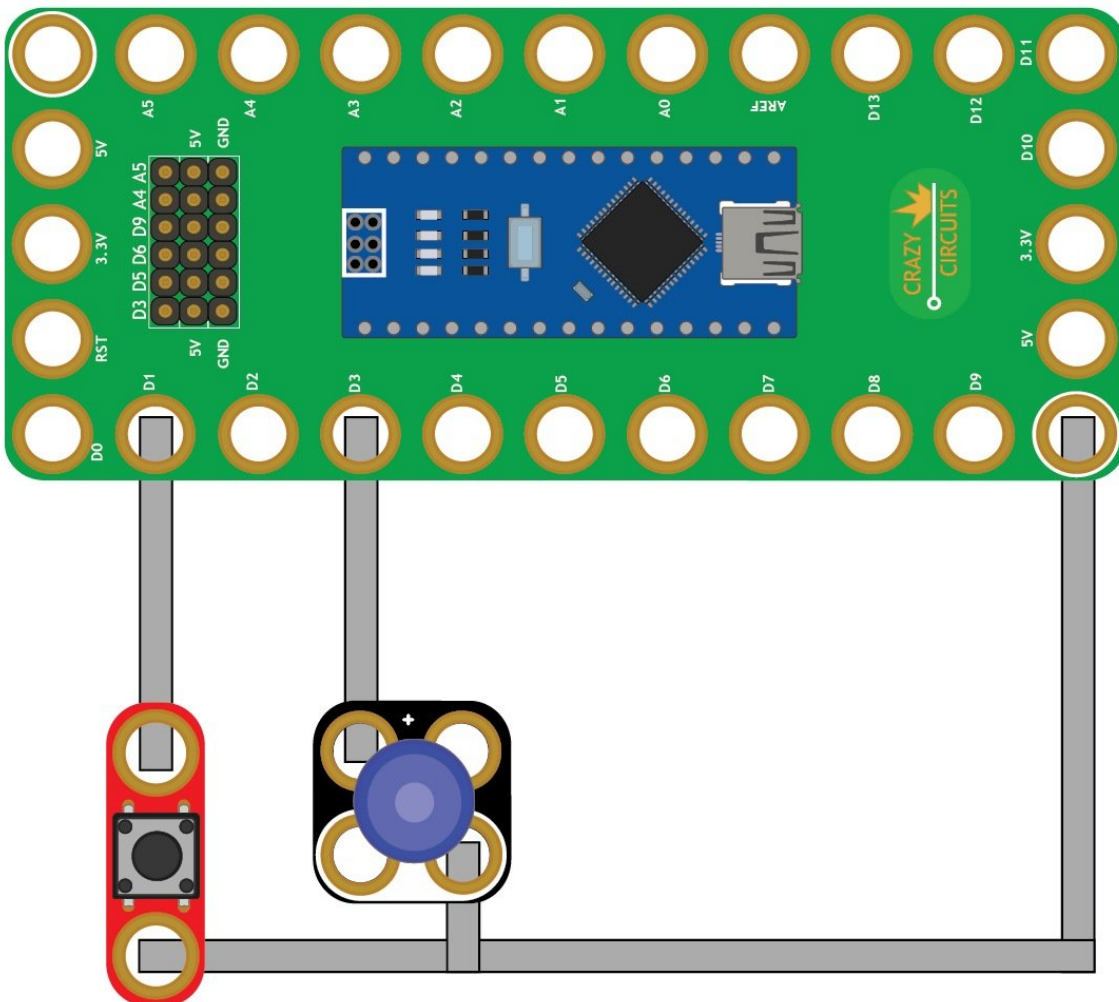




## 04 - Pushbutton with Dimmed LED

Use our Programming 101 kit to control an LED with a pushbutton.

Written By: Pete Prodoehl



# INTRODUCTION

Use our Robotics Board to control an LED with a pushbutton.



## TOOLS:

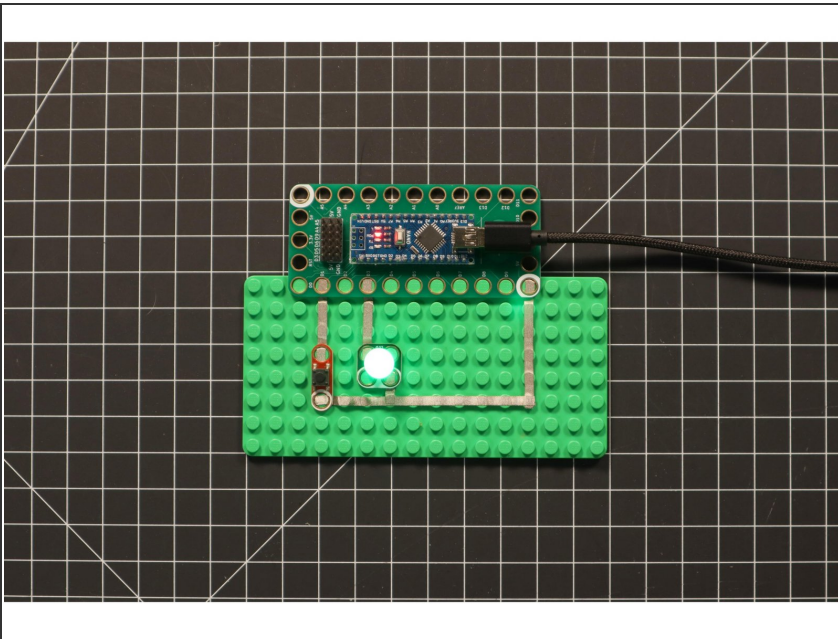
- [Scissors](#) (1)
- [Computer](#) (1)



## PARTS:

- [Crazy Circuits Robotics Board](#) (1)
- [Standard Pushbutton Chip](#) (1)
- [Crazy Circuits LED Chip](#) (1)
- [Maker Tape 1/8th inch](#) (1)

## Step 1 — Build the Circuit



- Build the circuit as shown in the diagram using the components specified.

## Step 2 — Upload the Code

```
1/*  
2 * Pushbutton with Dimmed LED.ino  
3 *  
4 * https://www.browndoggadgets.com/  
5 *  
6 */  
7  
8  
9  
10// set variable name for a digital input pin  
11int ButtonPin = 1;  
12  
13// set variable name for a digital output pin with Pulse Width Modulation  
14// pins 3, 5, 6, 9, 10, 11 support PWM  
15int LEDpin = 3;  
16  
17  
18// the setup runs once at the beginning of the sketch  
19void setup() {  
20  
21  // the ButtonPin is set to function as an input with a special built-in pull-up resistor  
22  pinMode(ButtonPin, INPUT_PULLUP);  
23  
24  // the LEDpin is set to function as an output  
25  pinMode(LEDpin, OUTPUT);  
26  
27}  
28  
29// the loop runs forever after the setup is complete  
30void loop() {  
31  
32  // check if the button is pressed  
33  if (digitalRead(ButtonPin) == LOW) {  
34    // set the output pin to a value between 0 and 255  
35    // 255 should be full brightness  
36    analogWrite(LEDpin, 255);  
37  }  
38  // this happens if the button is not pressed  
39  else {  
40    // set the output pin to a value between 0 and 255  
41    // 128 should be half brightness  
42    analogWrite(LEDpin, 128);  
43  }  
44  
45  
46}
```

- Upload the Arduino sketch to the Robotics Board.
- You can find the code here:  
<https://github.com/BrownDogGadgets/Progr...>