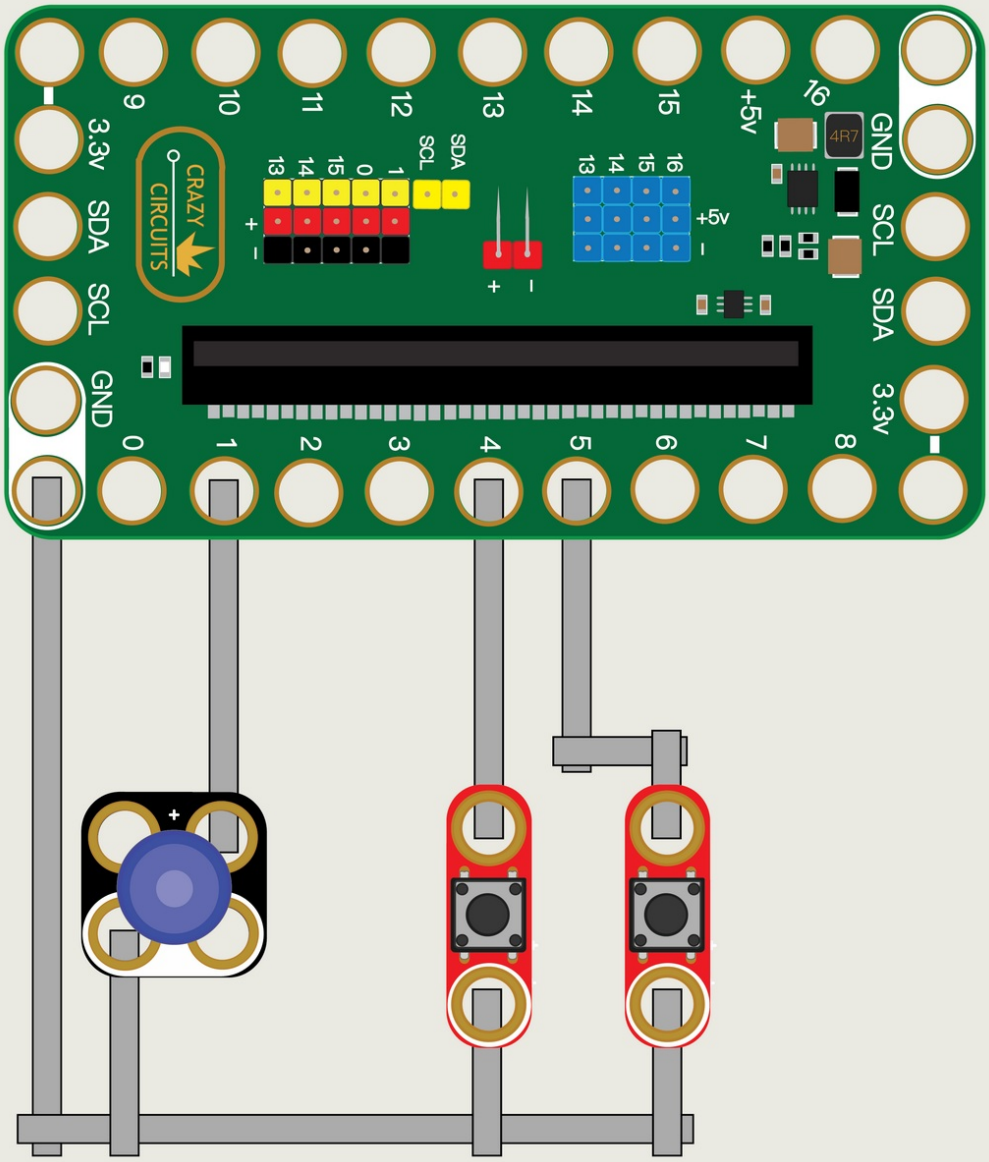
CH5-B - Two Buttons Functions

Connect two pushbuttons to a Bit Board and control an LED with code.

Written By: Pete Prodoehl



INTRODUCTION

Connect two pushbuttons to a Bit Board and control an LED with code.

We'll explore how we can use two pushbuttons as inputs for the micro:bit

TOOLS:

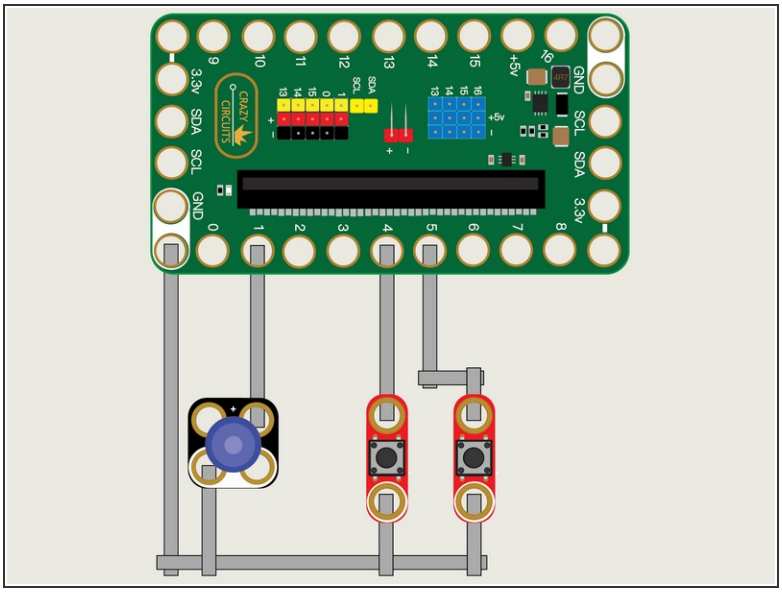
- Computer (1)
- Scissors (1)

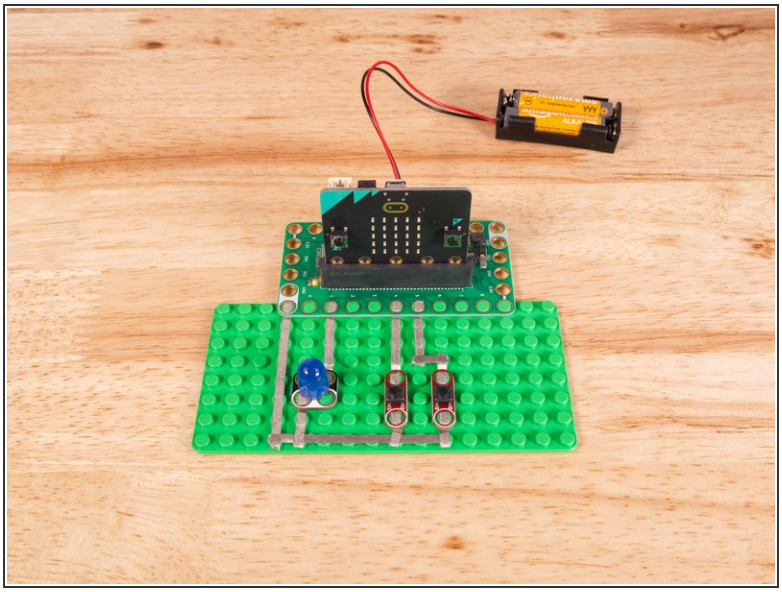
PARTS:

- Crazy Circuits Bit Board (1)
- micro:bit (1)
- Maker Tape (1)
  1/8" Wide
- Standard Pushbutton Chip (2)
- Crazy Circuits LED Chip (1)

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Step 1 — Connect the Buttons (and LED)



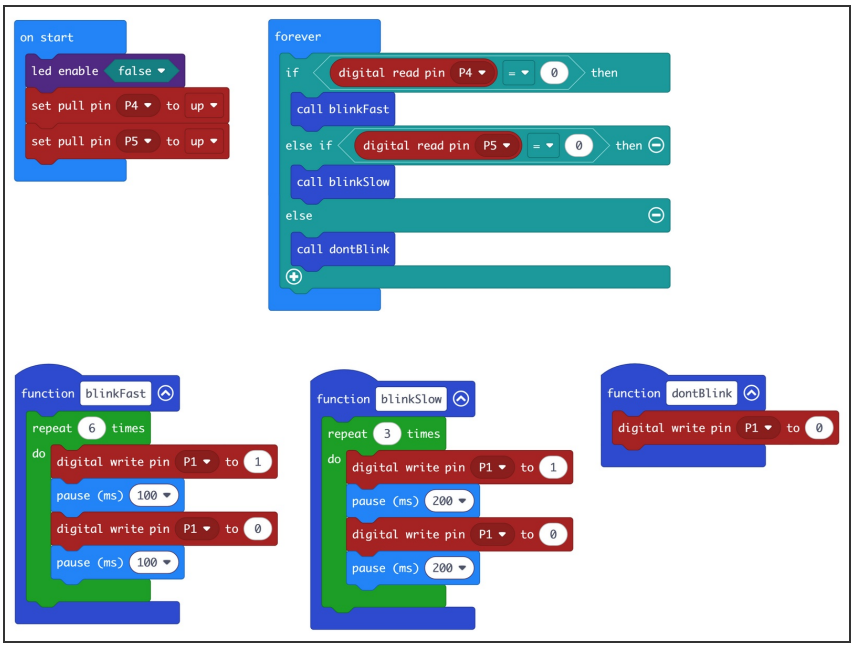


- We'll use **Maker Tape** to connect the two Buttons and the LED to the Bit Board on a LEGO baseplate.
- We'll connect our **LED** to **Pin 1** and one of our **Buttons** to **Pin 4** and the other to **Pin 5**.
- And of course we'll connect the **Ground** (GND) sides of each component to **Ground** on the Bit Board.

You'll notice the **Ground** on the Bit Board (as well as the LED and other Crazy Circuits components we'll use) is color coded **White**.

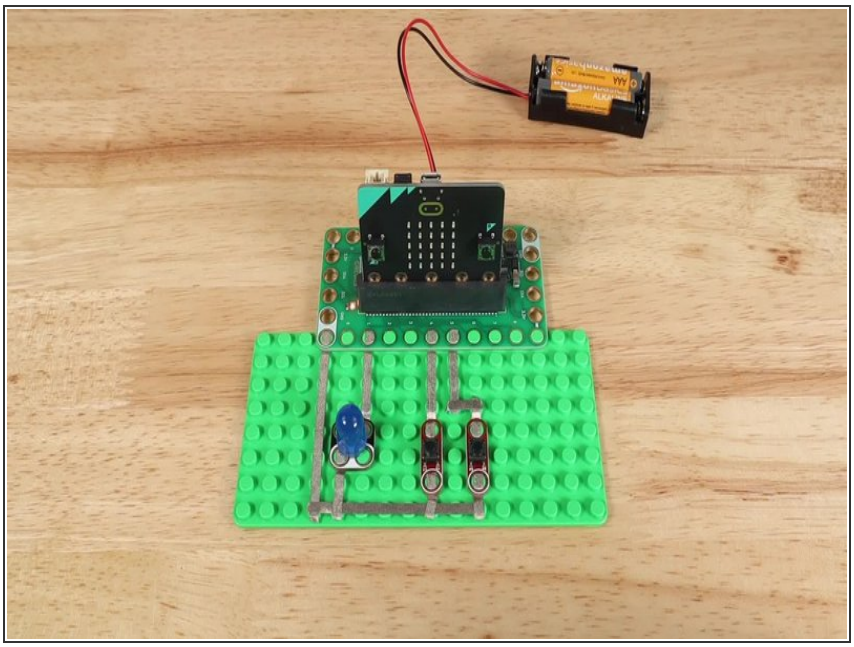
While the LED has **Polarity** our **Button** does not. If you connect it the other way around *it will still work fine*. Not all components have **Polarity**.

Step 2 — Load the Code



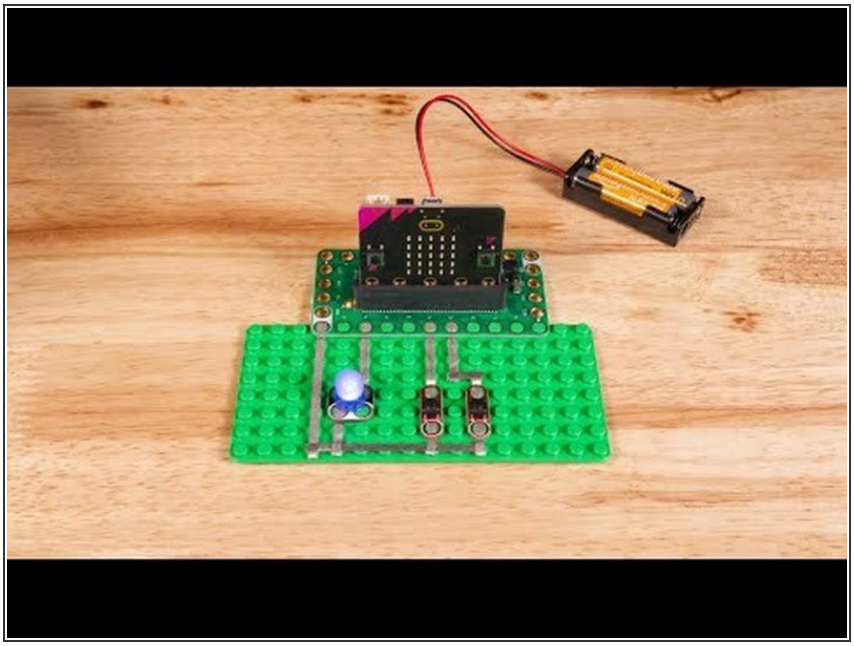
- If you've never used a micro:bit before you'll want to check out this guide: [Bit Board V2 Setup and Use]
- We're going to load the following code for our **Two Buttons Functions** program: [https://makecode.microbit.org/_gJgf7Fi7w...]
- This code will blink the LED 6 times if you press the left button and 3 times if you press the right button.
- This time we are using **functions** to control how many times the LED will blink. A function allows you to make your code *modular*, and as we'll see in future guides, can be quite powerful and help you organize your code.
- For each button we've got a different function, one named **blinkFast** and one named **blinkSlow**, and it's easy to call the function when a button is pressed.
- We've added a third function named **dontBlink** that will be called when neither button is being pressed.

Step 3 — Test it Out!



- Once the code is loaded it should start running immediately.
- ⓘ You can power the micro:bit via the USB cable you used to load the code or you can use a battery pack plugged into the Bit Board.
- The LED should turn on and blink either 6 times or 3 times depending on which button you press.

Step 4 — Follow Along



- Follow along with our recorded Live Stream!
- ⓘ You can watch the full video of us walking through this project, along with explaining and exploring the code: https://www.youtube.com/live/_QU-qXrxYr4...