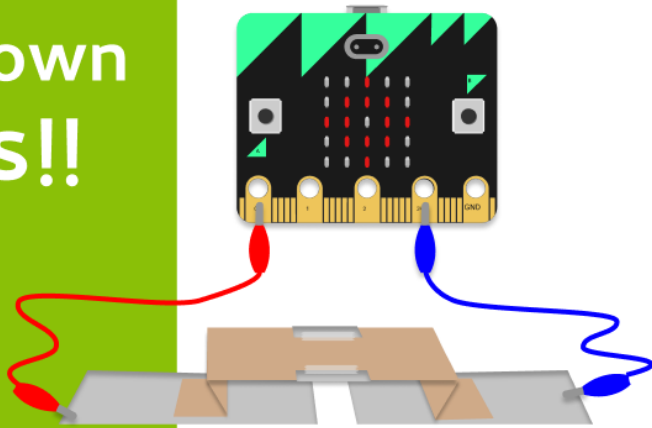


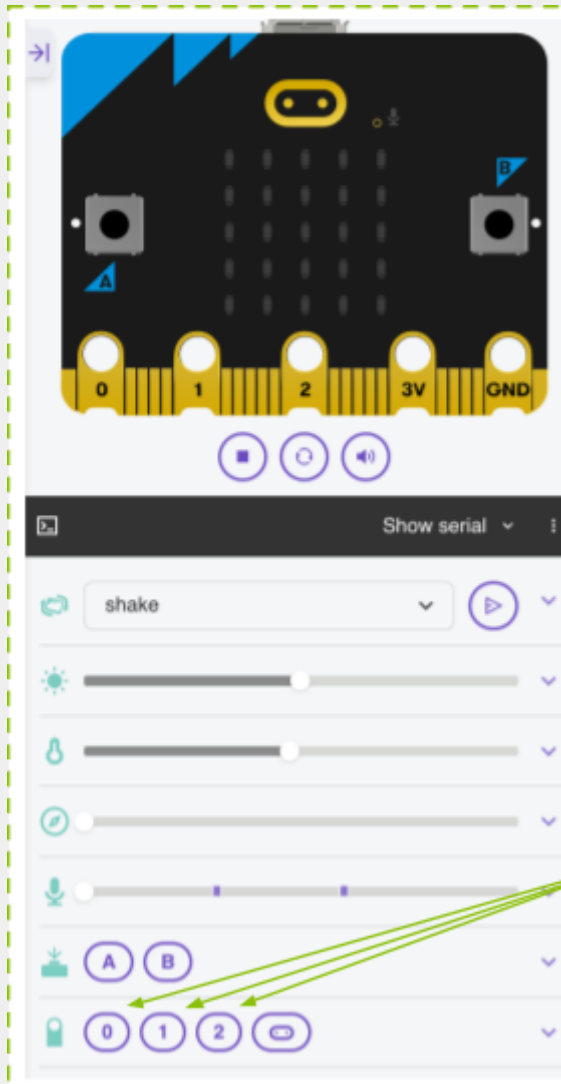
# Extension

## Make your own buttons!!

By using the pins on the microbit we can attach up to 3 of our own button creations!



### Task 1.0: Getting ready for pins



These 3 buttons will simulate circuits on pins 0, 1, 2 until you are ready to test them for real!

## Task 1.1: Get the pins ready

**We need to start by resetting the pins so they are ready to read**

1. On a new line, after the `import` statements, prepare pin 0 for reading input with the code `pin0.read_digital()`
2. Repeat for pin 1 (and pin 2 if you want an extra button!)

## Task 1.2: Goodbye microbit buttons, hello my buttons!

**We'll edit our code to use handmade buttons instead of microbit buttons.**

*You can copy this later to use both the microbit and handmade buttons.*

1. Go to the line where you check if `button_a` is pressed.
2. We want to check if there is current in the circuit on pin0 (instead of checking if the button is pressed). **Replace** `button_a.is_pressed()` with `pin0.read_digital()`
3. Repeat by replacing **Replace** `button_b.is_pressed()` with `pin1.read_digital()`
4. Run your code and test it out using the first pin button!

## Task 1.3: Build a button!

1. Pick up a **Build a Button** cheat sheet!
2. Learn how to make a basic button and connect it to your micro:bit to use your code in real life!
3. Come up with your own ideas for making circuits! We've got a lot of different things to craft fun buttons like rubber bands, popsicle sticks and more!

## ★ Bonus 1.4: Want more actions?! ★

### ★ Use a third pin! ★

Create another action and a button on pin 2

### ★ Use the micro:bit buttons again! ★

With 2 buttons and 3 pins, you could have up to 5 actions!

*Add back in your original micro:bit button code, but make some changes.*

*Make sure you have different action names and pictures for each button/pin.*

## ☑ CHECKPOINT ☑

### If you can tick all of these off you have finished this Extension

- Have buttons/contraptions that complete circuits for your game
- Your game completes actions based on buttons connected to pins