Extension: DIY Buttons

So far we have been using the Micro:Bit's buttons, but what if we want to have more buttons, not just 2!?

Using some of the pins at the bottom of the Microbit (pin 0, pin 1 and pin 2), we can have 3 extra "buttons". Let's add our own!

Goal: Create your own buttons to have extra moves!

Task 1.1: A new action!

To add a new action to our game we will have to do a few things:

1. Add a new action to the list of `actions` at the start of our program.

2. Add a new `if` statement to check if the chosen action is our new action (you can copy one of the `button_a` or `button_b` `if` statements)

3. Pick a new image that will tell the player to do the new action (like an up or down arrow).

4. Add an `if` statement to check whether the player has done the right action - we'll learn how to do this in the next task.

Task 1.2: Read Digital

Now that we have our new action, we need to check when the action is done.

1. Before the `while` loop, add `pin0.read_digital().` This gets the pin ready.

2. Back to your action if statement, add an `if` statement to check if the `pin0` button is pressed (has power) using `pin0.read_digital()`.

3. Use an alligator clip lead to test your code - connect one end of the wire to the `3v pin` and then touch the other end to `pin0` when you are meant to press this new button!

Task 1.3: More interesting buttons

You have 3 pins to use as buttons, that means 3 extra actions!
Come up with some cool and creative new actions and try them out! Here are some ideas for inspiration: a classic push button (like the ones already on the microbit - but bigger! A twisty button where you have to spin something, a pull button, a flip button, a shake button.

☑ CHECKPOINT ☑

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

☐ You have added a new action to the list of actions at the start of your code

☐ When that new action is picked a new image appears on the display

☐ When the new action is picked and you do the right action, a happy face appears and you get a point added to the score

☐ You have made a new button that uses the pins to tell whether you have done the right action