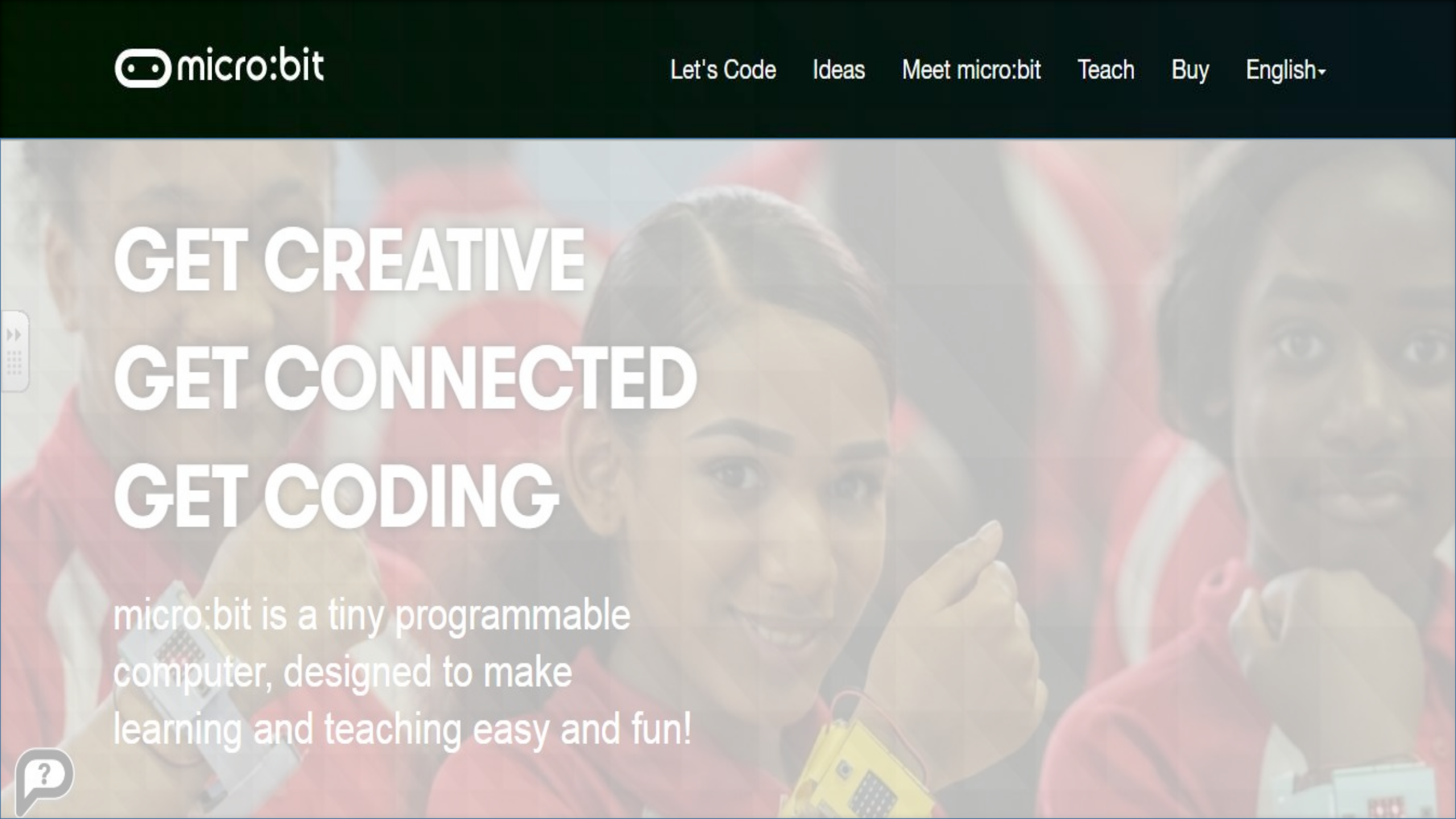
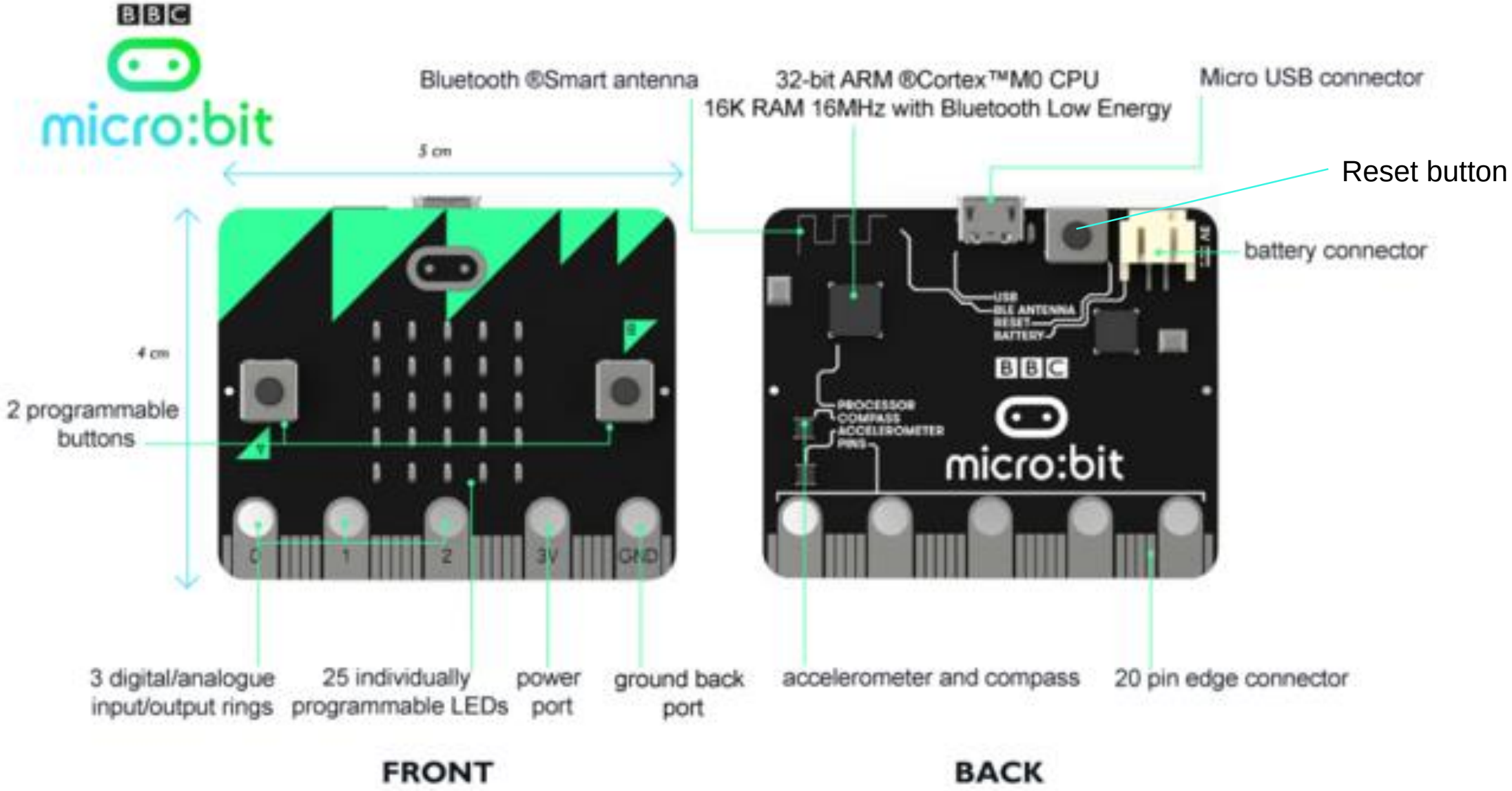

micro:bit
Let's Code
Ideas
Meet micro:bit
Teach
Buy
English
GET CREATIVE
GET CONNECTED
GET CODING
micro:bit is a tiny programmable computer, designed to make learning and teaching easy and fun!

INTRODUCTION

MICRO:BIT COMPONENTS



http://microbit.org/guide/features/

MICRO:BIT

- Using Google Chrome, go to **microbit.org** and click on Let's Code

JavaScript Blocks Editor

The micro:bit's JavaScript Blocks editor makes it easy to program your BBC micro:bit in Blocks and JavaScript.

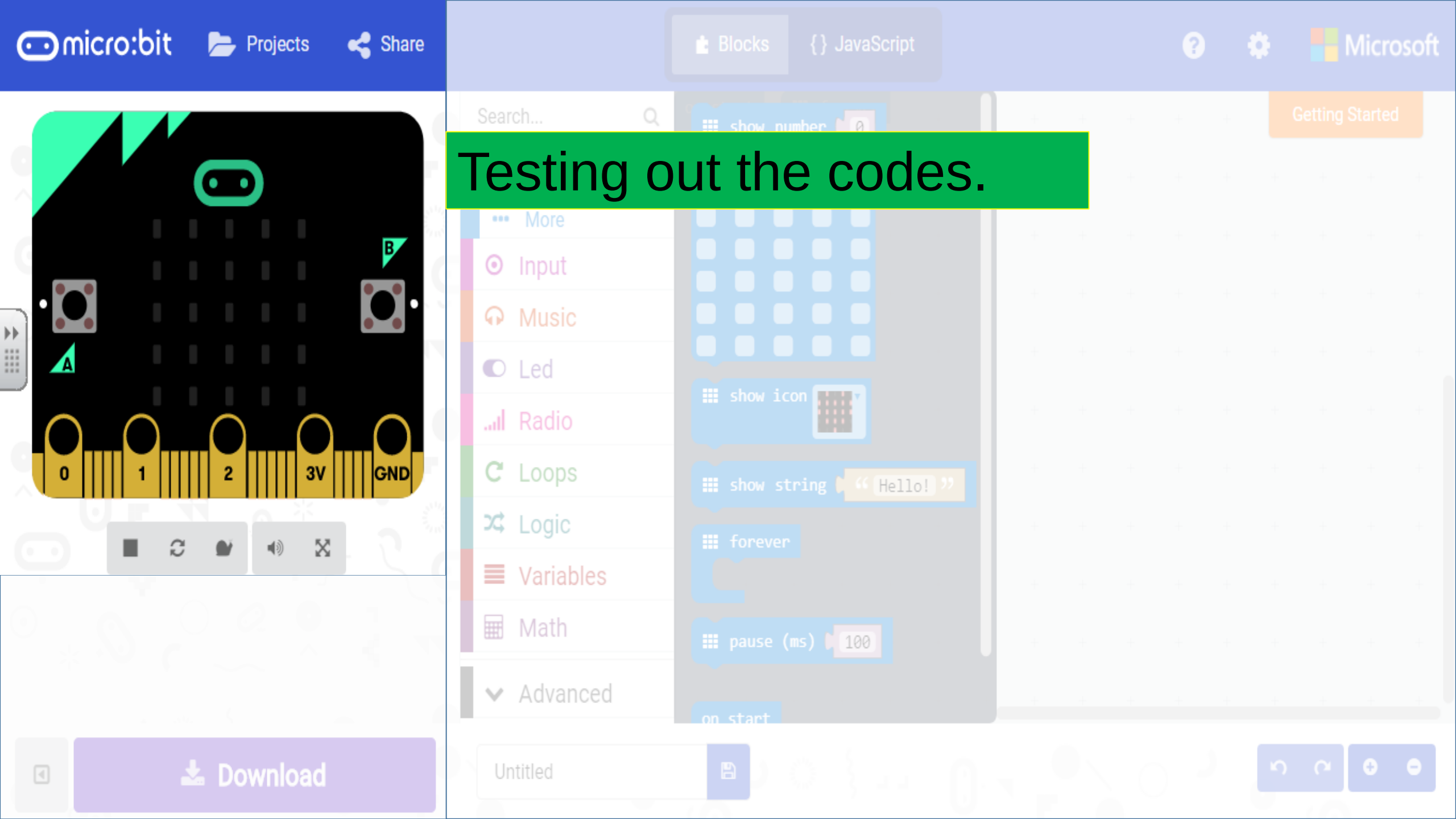
Powered by MakeCode. If you have any issues accessing the editor, check that it isn't blocked in your school. If you need some inspiration then check out these Projects.

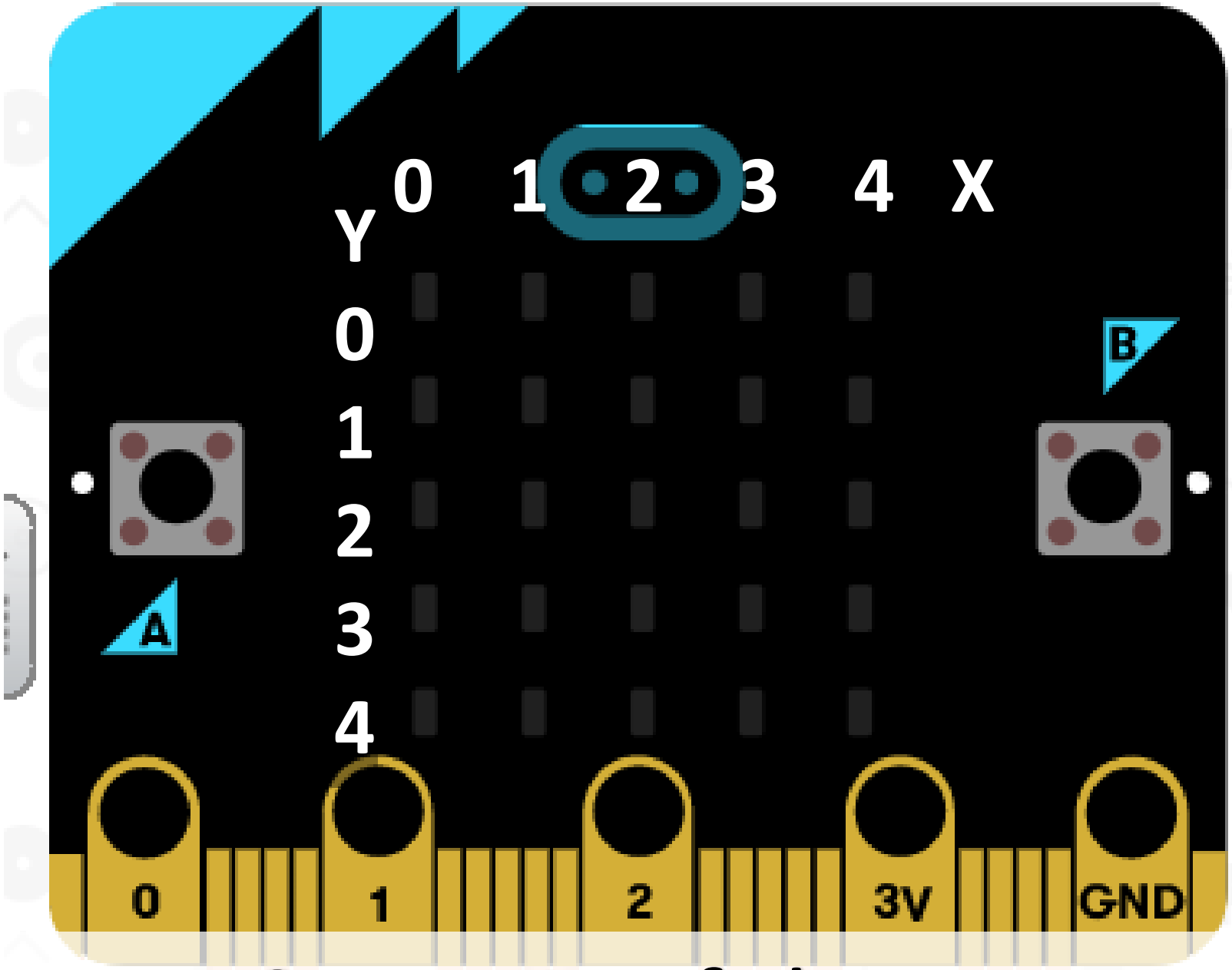
Let's Code

Reference

Lessons

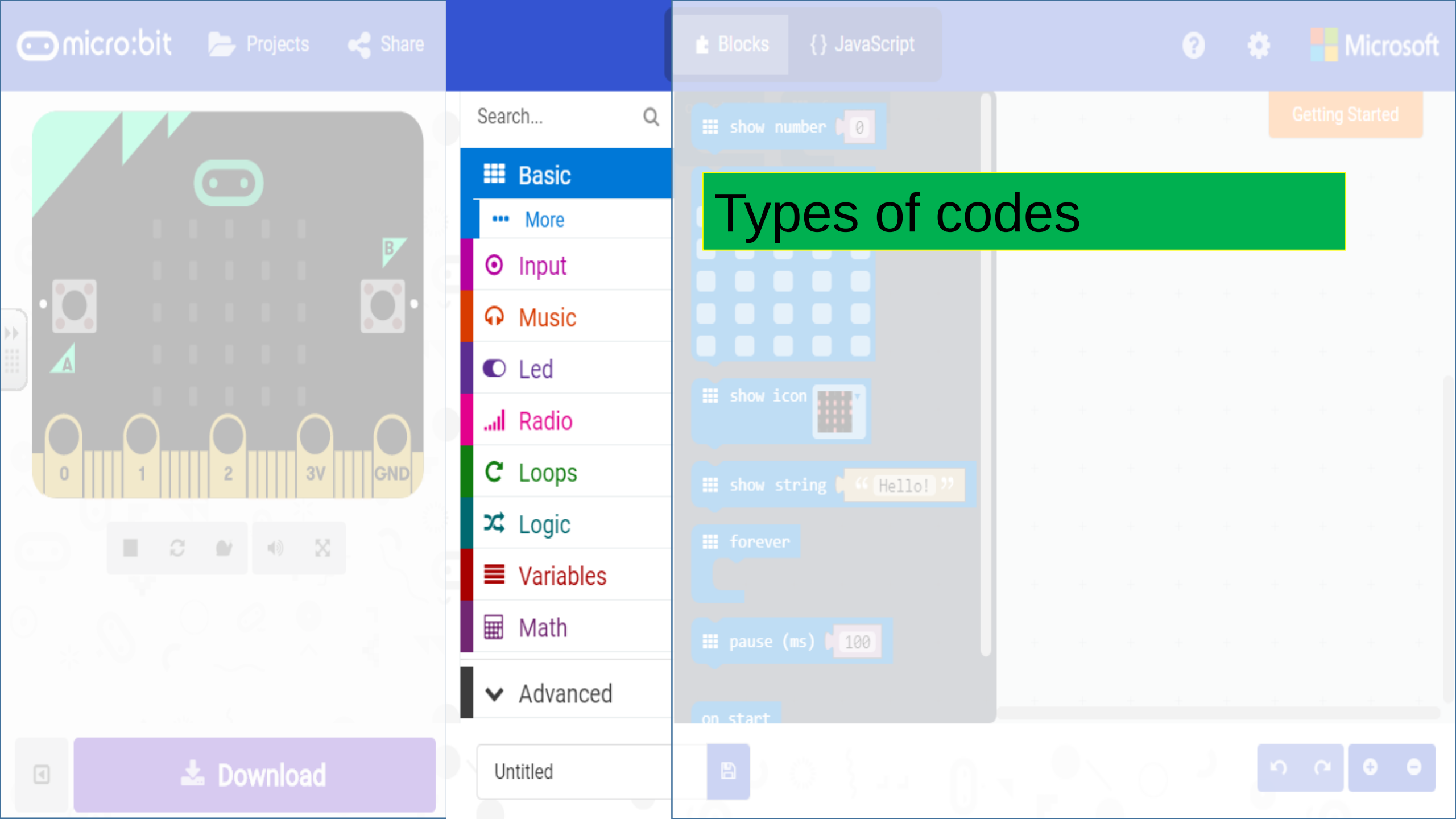
Testing out the codes.

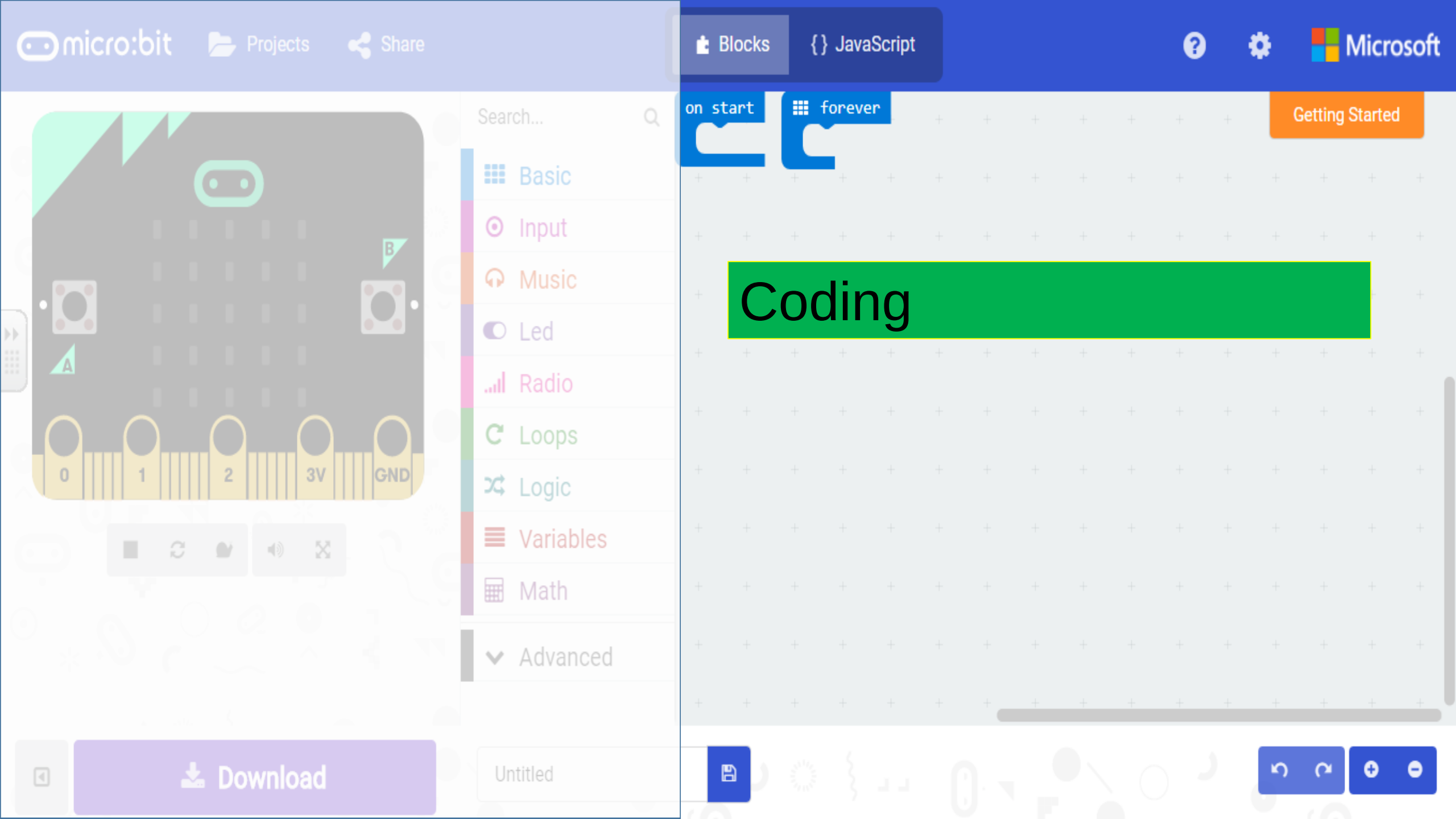




X & Y Axis of the LED Grid

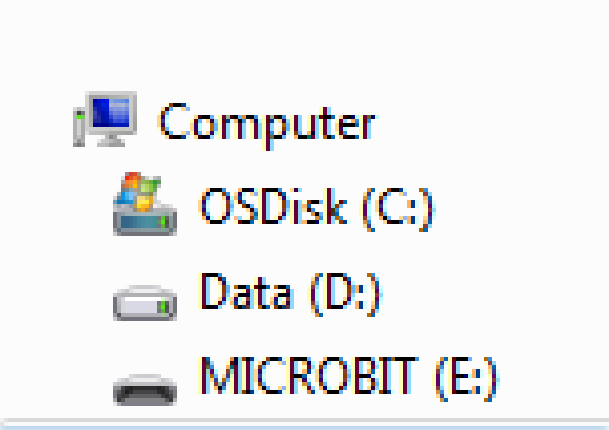
Types of codes

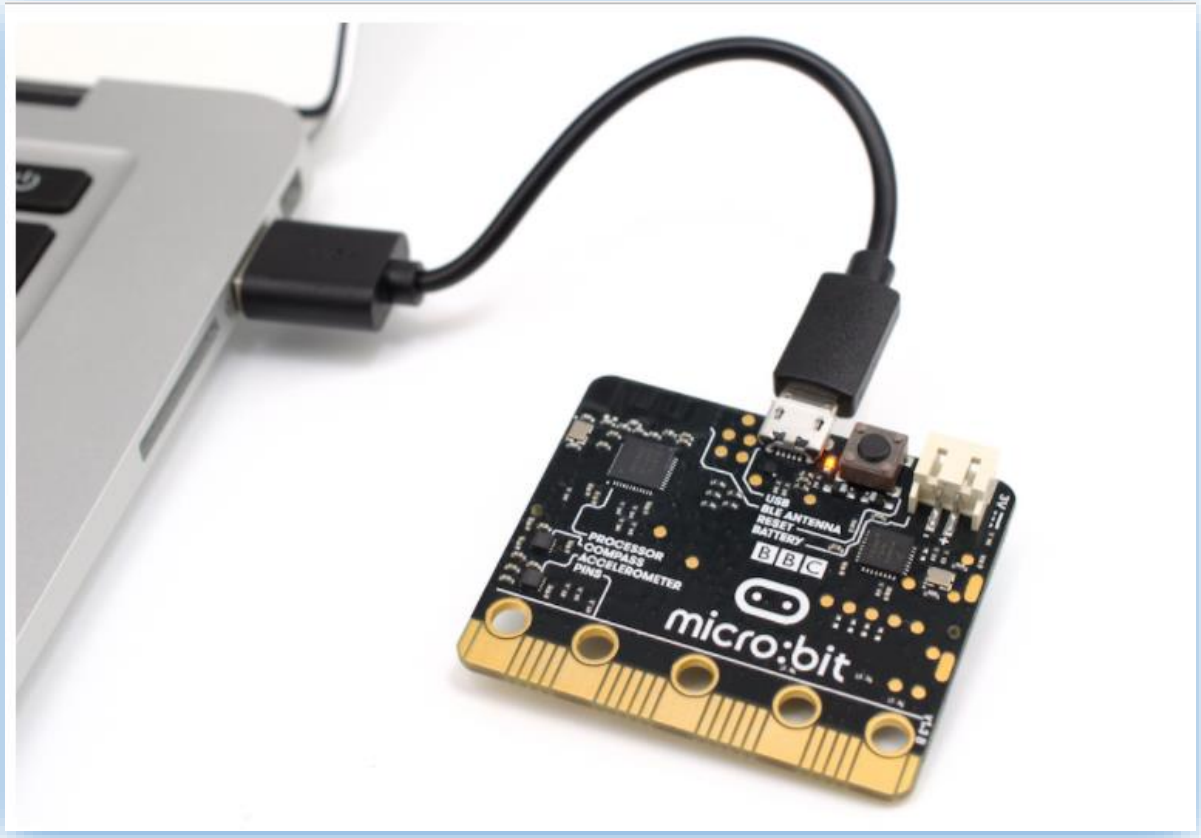



micro:bit
Projects
Share
Blocks
{} JavaScript
Microsoft
on start
forever
Getting Started
Search...
Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
Advanced
Coding
0
1
2
3V
GND
Download
Untitled

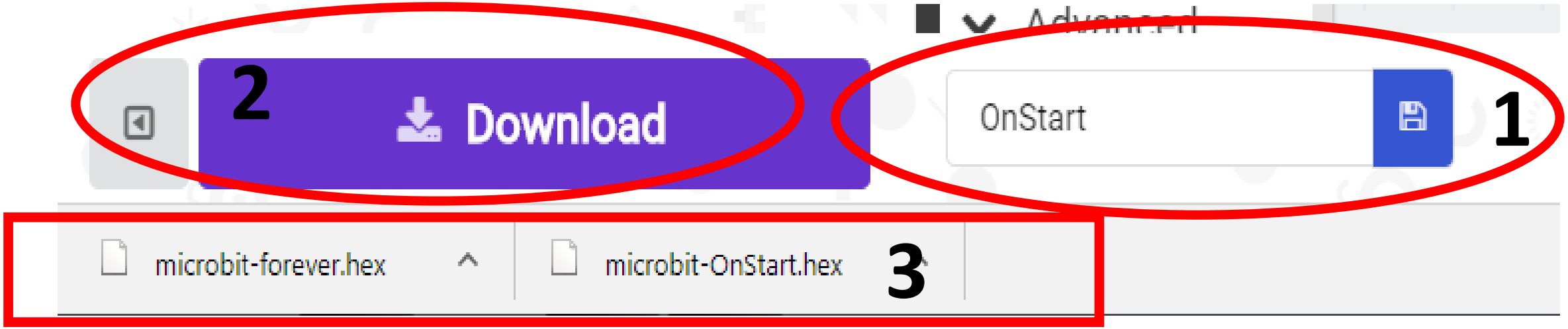
MICRO:BIT DOWNLOAD

1. Connect your Micro:bit to your laptop using the USB cable.
2. You can see Microbit as a new drive in the Window explorer.



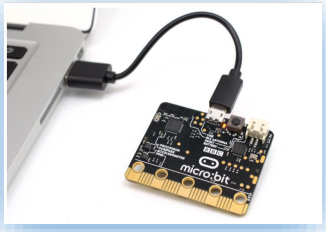


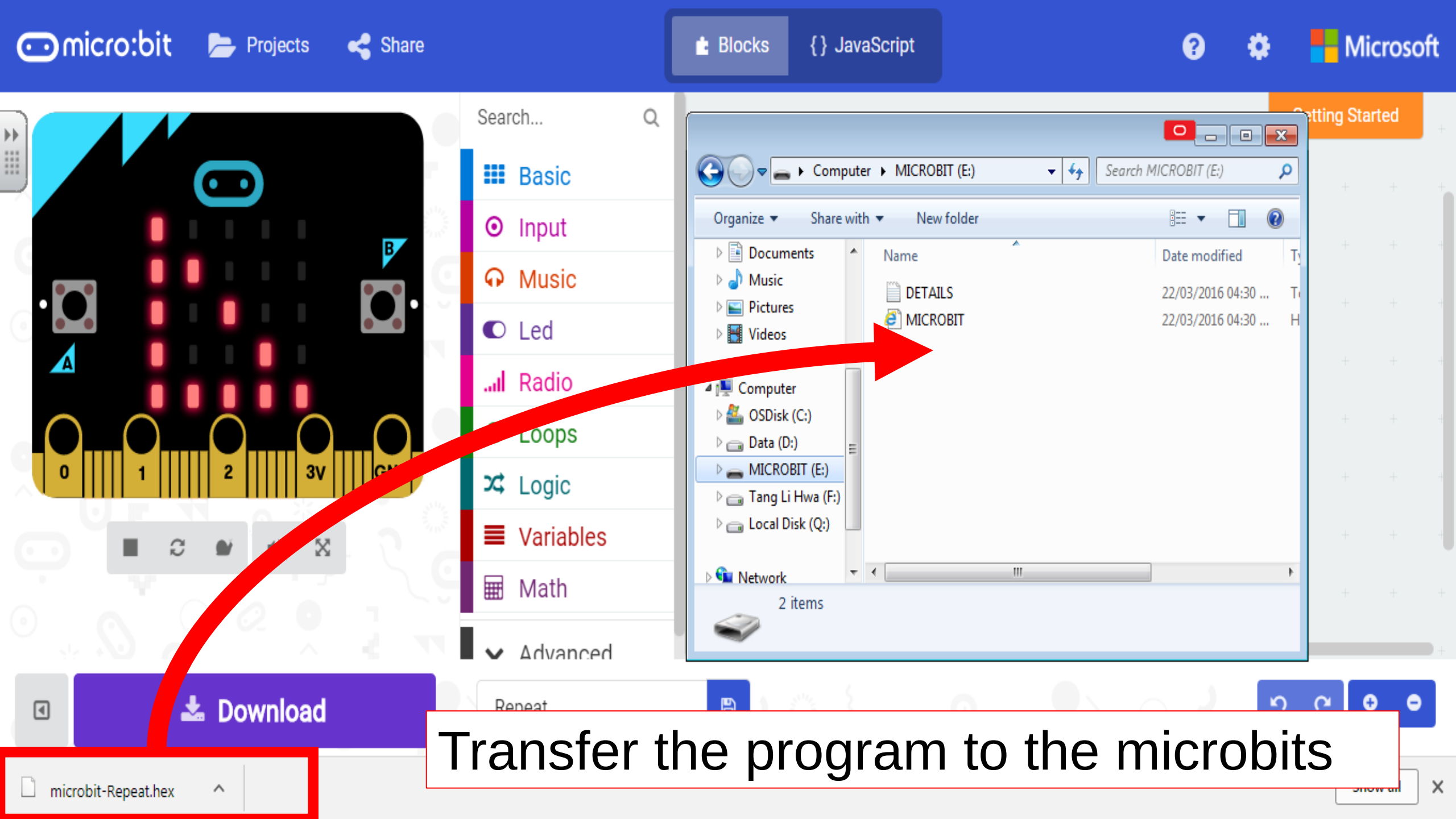
MICRO:BIT DOWNLOAD



Steps:

1. Rename your program
2. Click on ‘Download’
3. Your file is being download

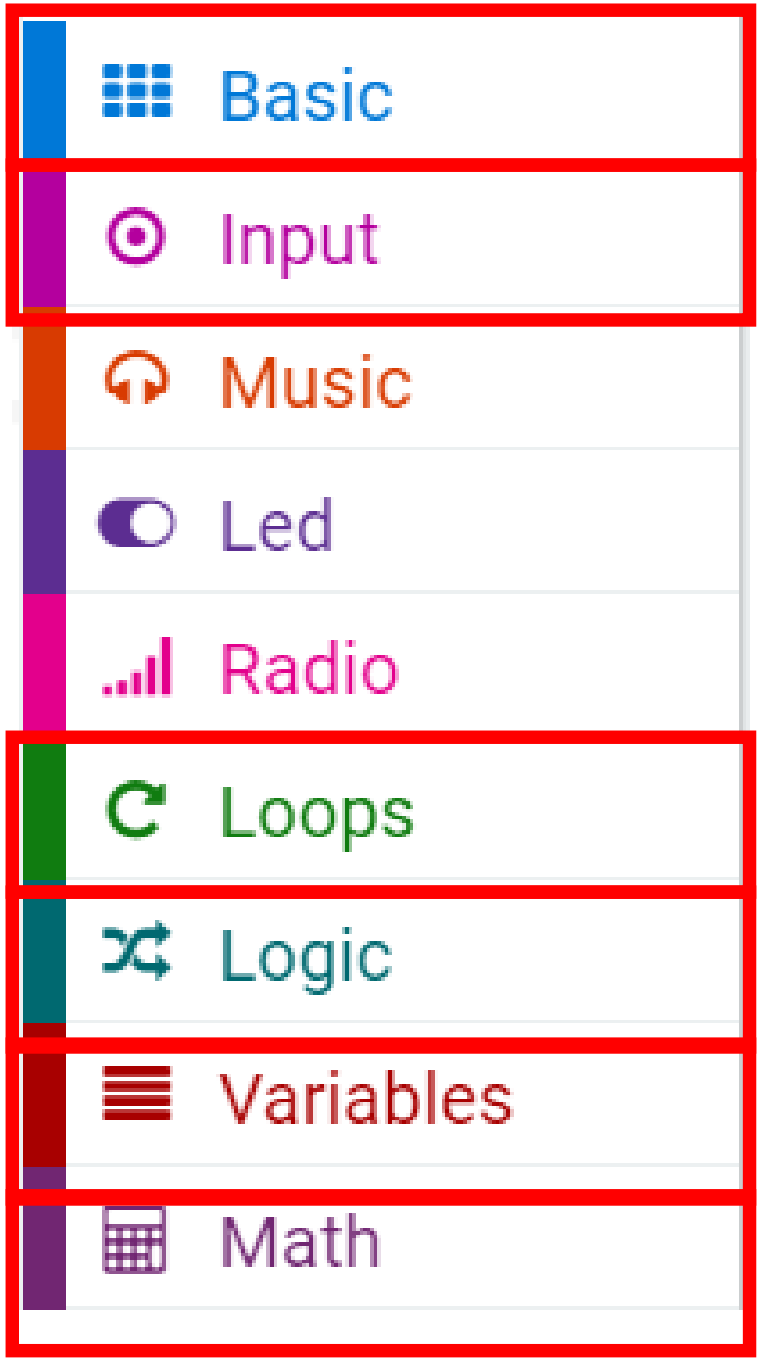




Transfer the program to the microbits

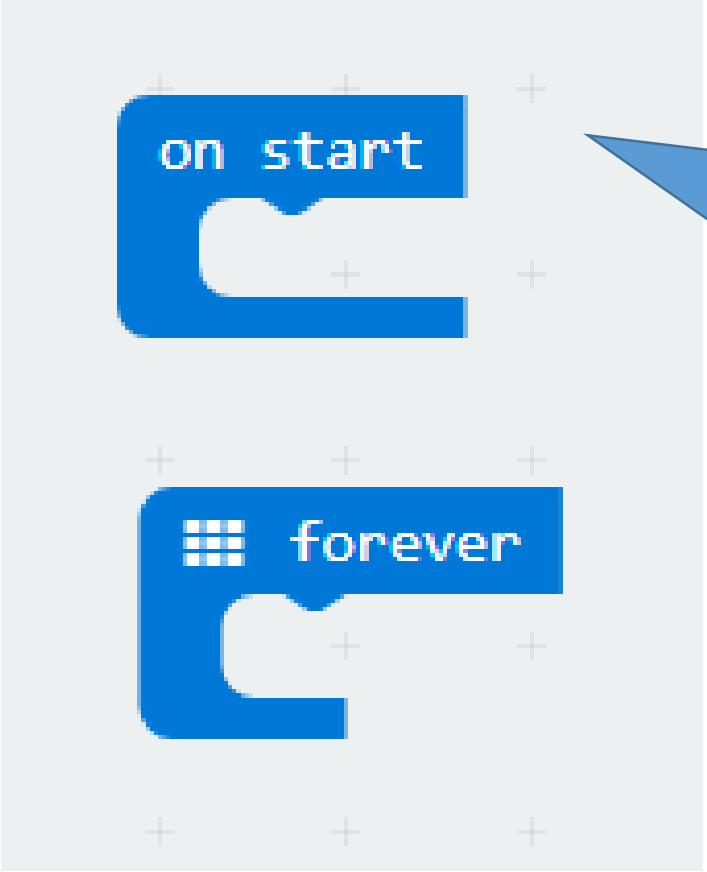
BLOCKS OF CODES

MICRO:BIT



MICRO:BIT

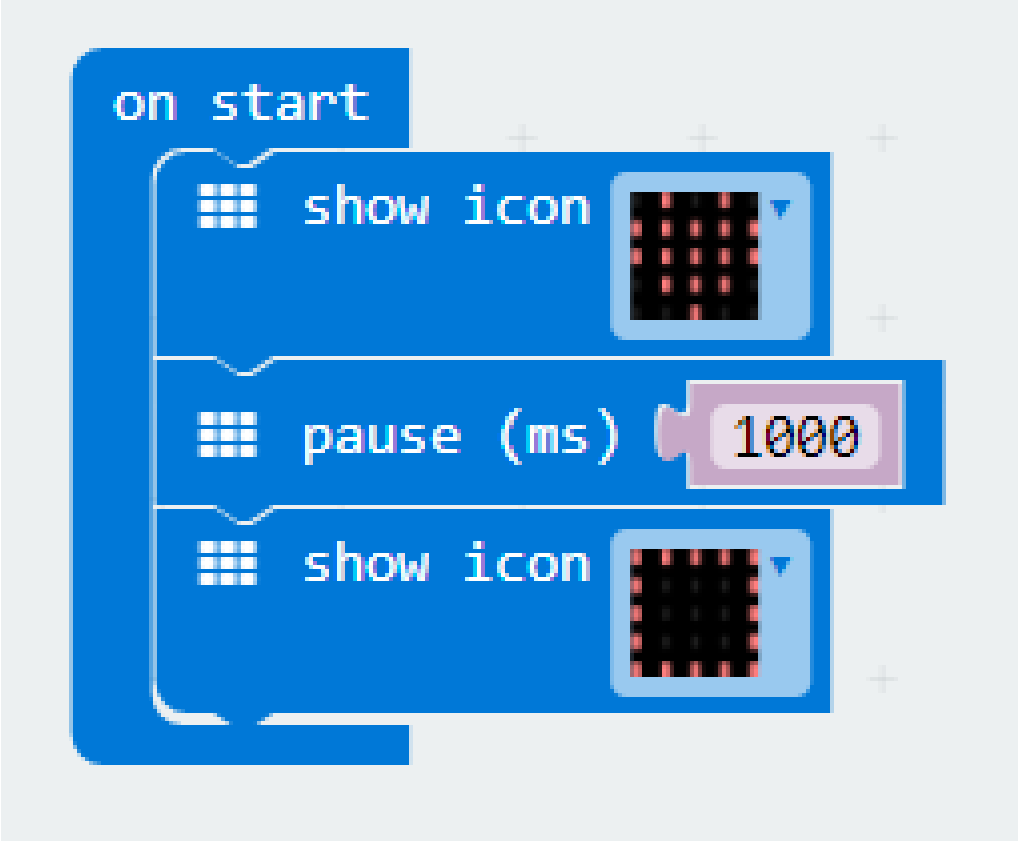
BASIC

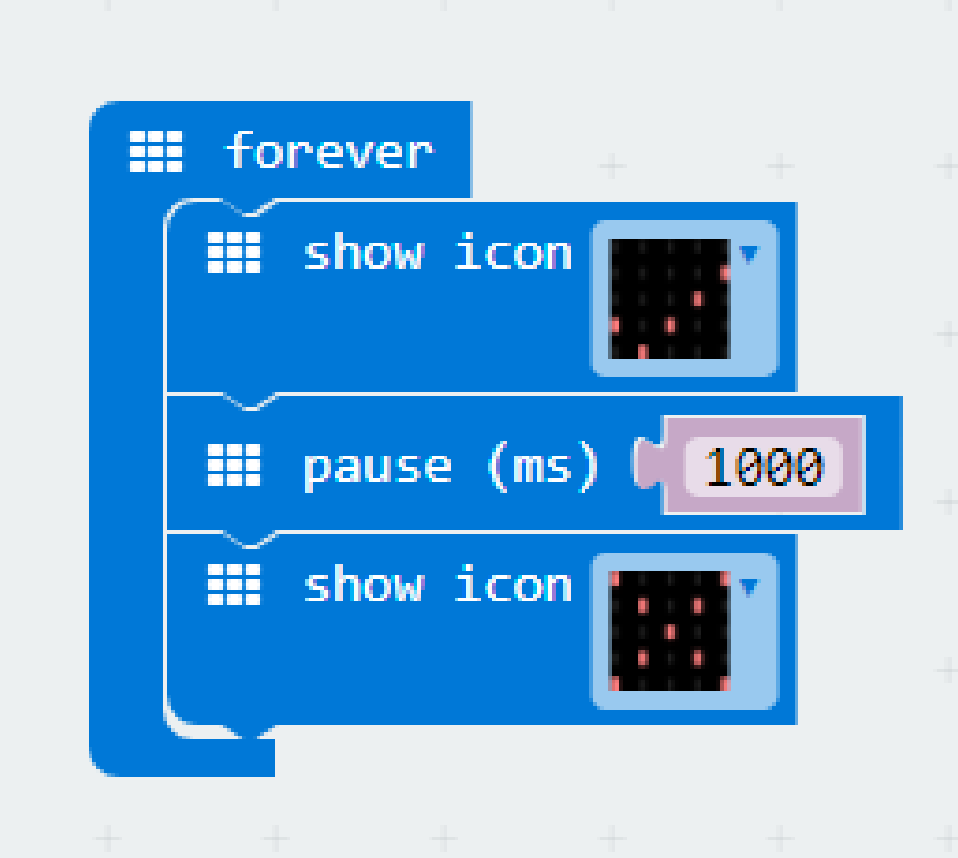


What do you think these two codes do?

MICRO:BIT

BASIC





MICRO:BIT

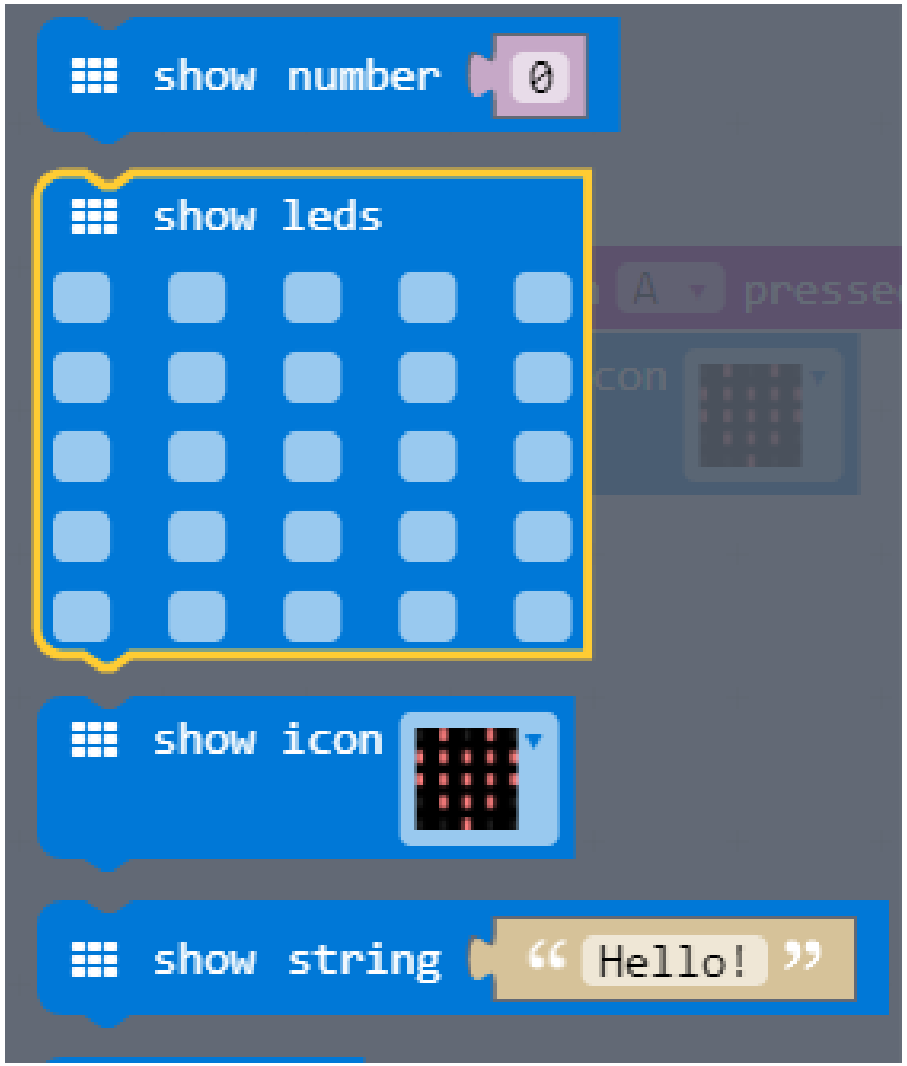
BASIC

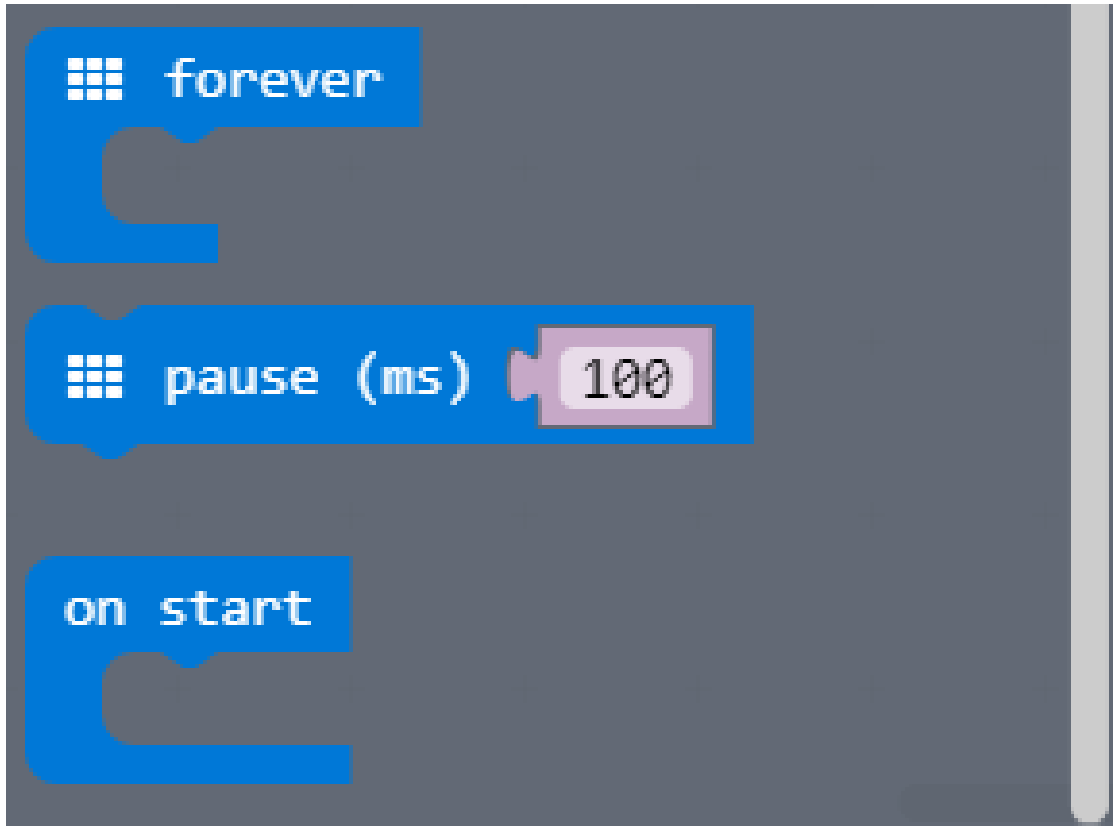
Whenever the program starts, do the following

Whenever the program starts, FOREVER do the following
(LOOP)

MICRO:BIT

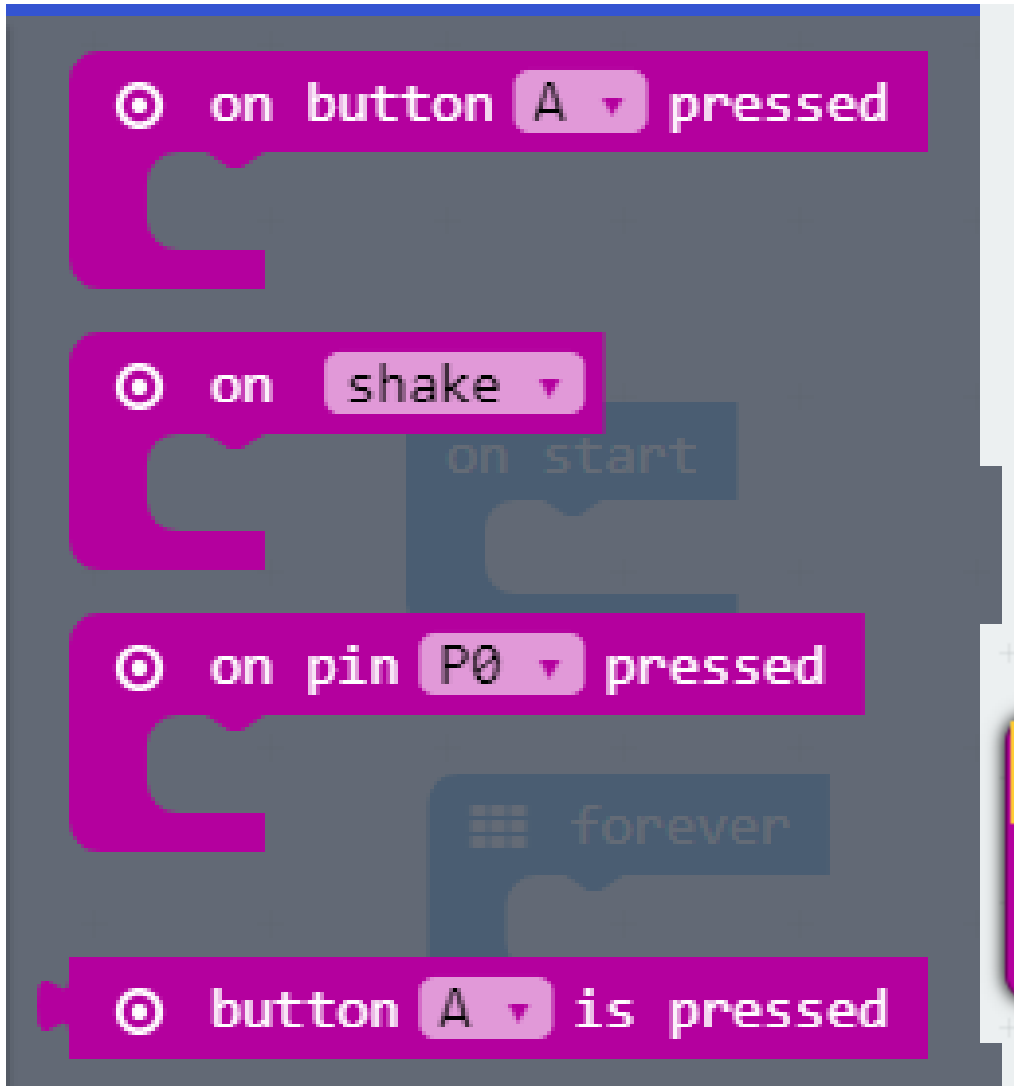
BASIC

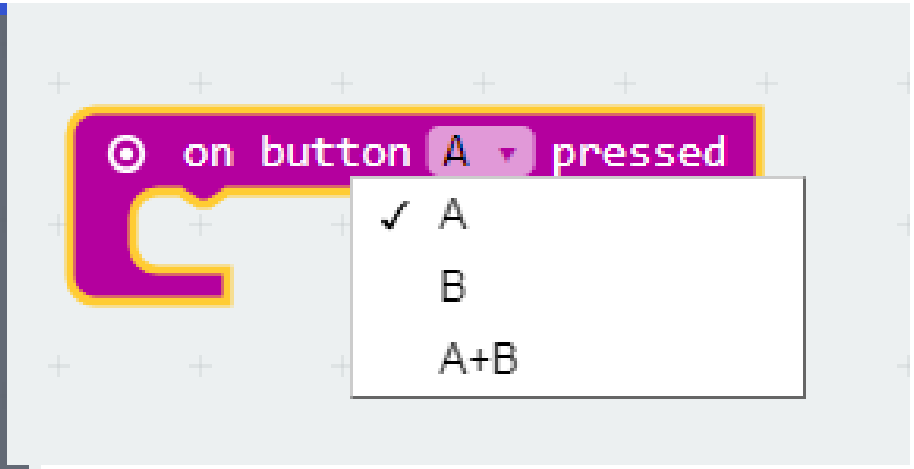


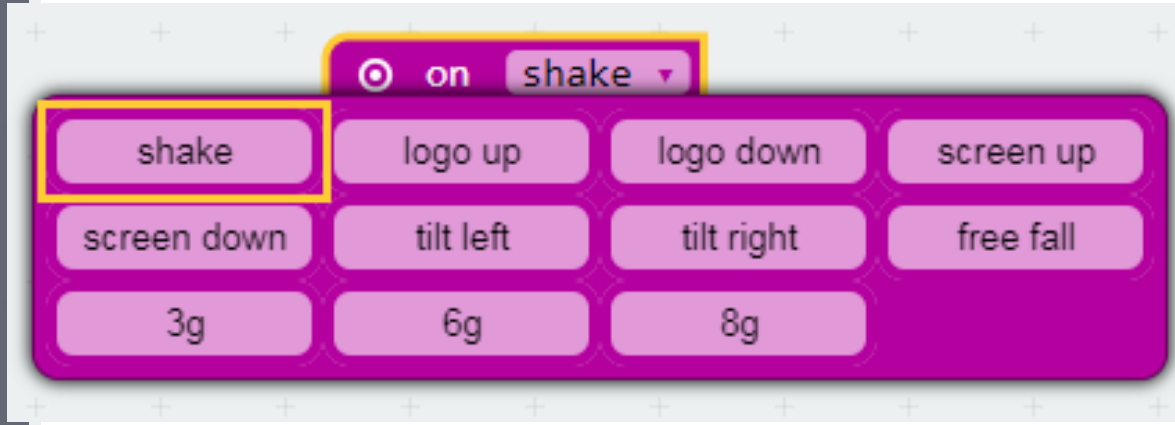


MICRO:BIT

INPUT



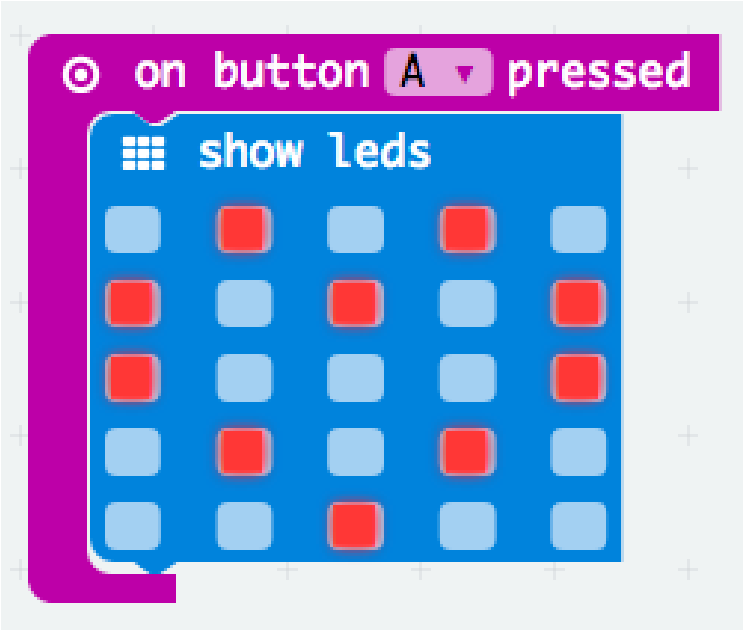


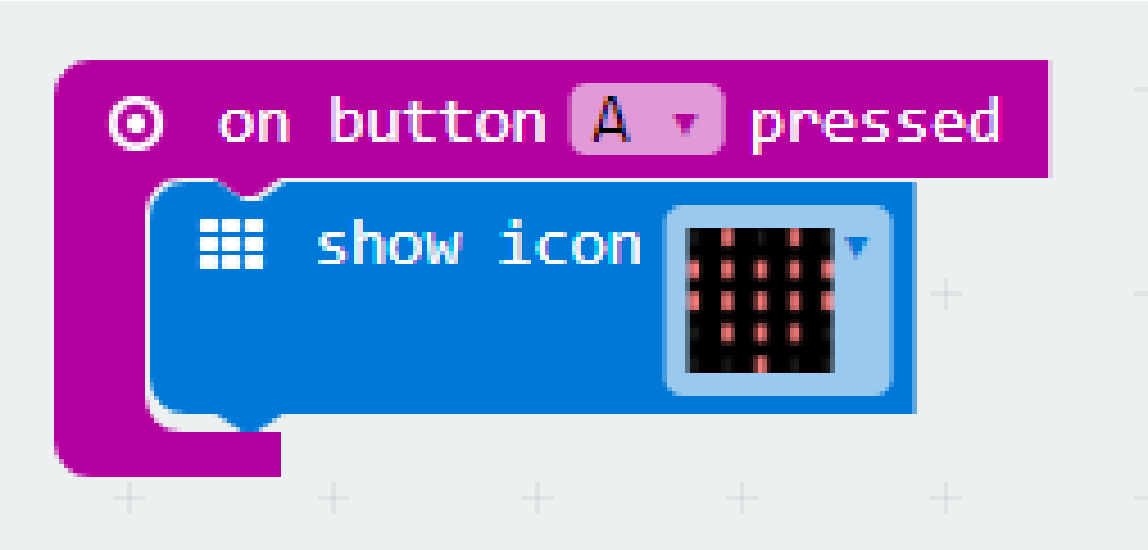


MICRO:BIT

BASIC + INPUT

- Program your micro:bit to display an image when a button is pressed





MICRO:BIT https:\\microbit.org

(CHALLENGES) 10MINS

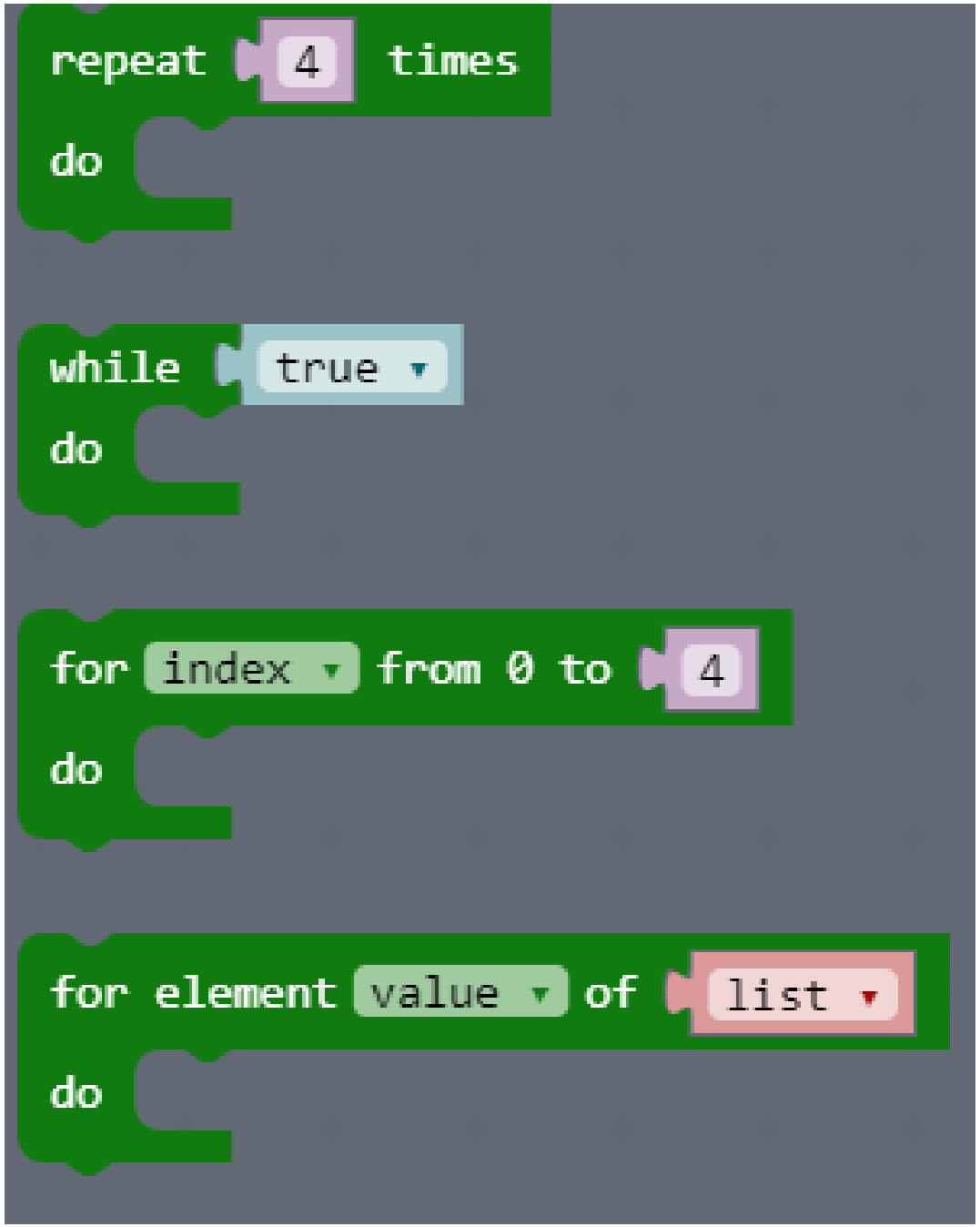
- Make your micro:bit display a image when button A is pressed
- Make your micro:bit display a different image when button B is pressed

Bonus

- Make your micro:bit display a string of words when buttons A and B are pressed
- Make your micro:bit display a number when you shake it
- Try to include other commands such as pauses and clearing the screen

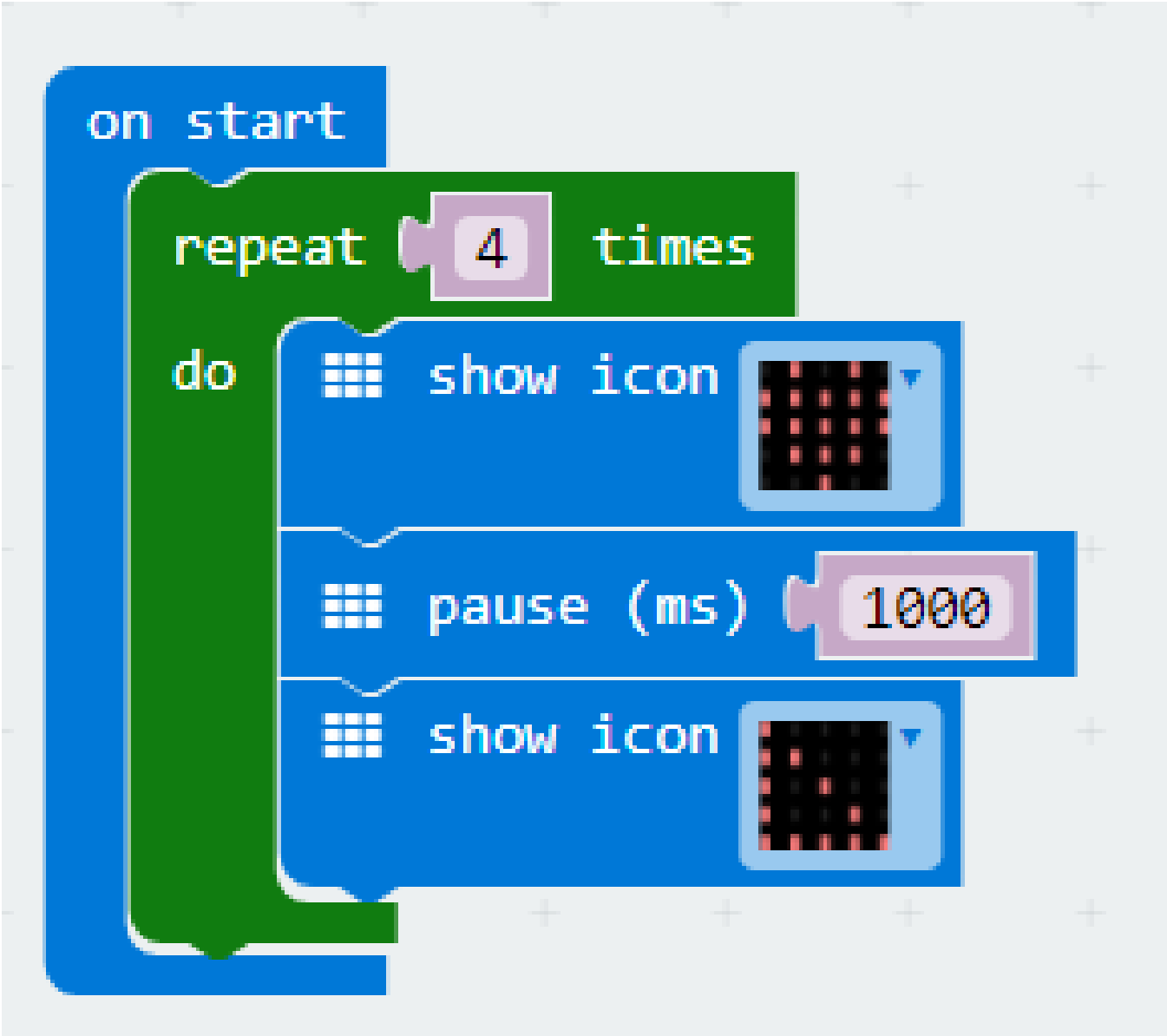
MICRO:BIT

LOOPS



MICRO:BIT

LOOPS



MICRO:BIT

(CHALLENGES) 10MINS

- Make your micro:bit display a smiley face and then a sad face 3 times each.
- Include a pause after a smiley face and a sad face.

Bonus

- Clearing the screen when button A is pressed.

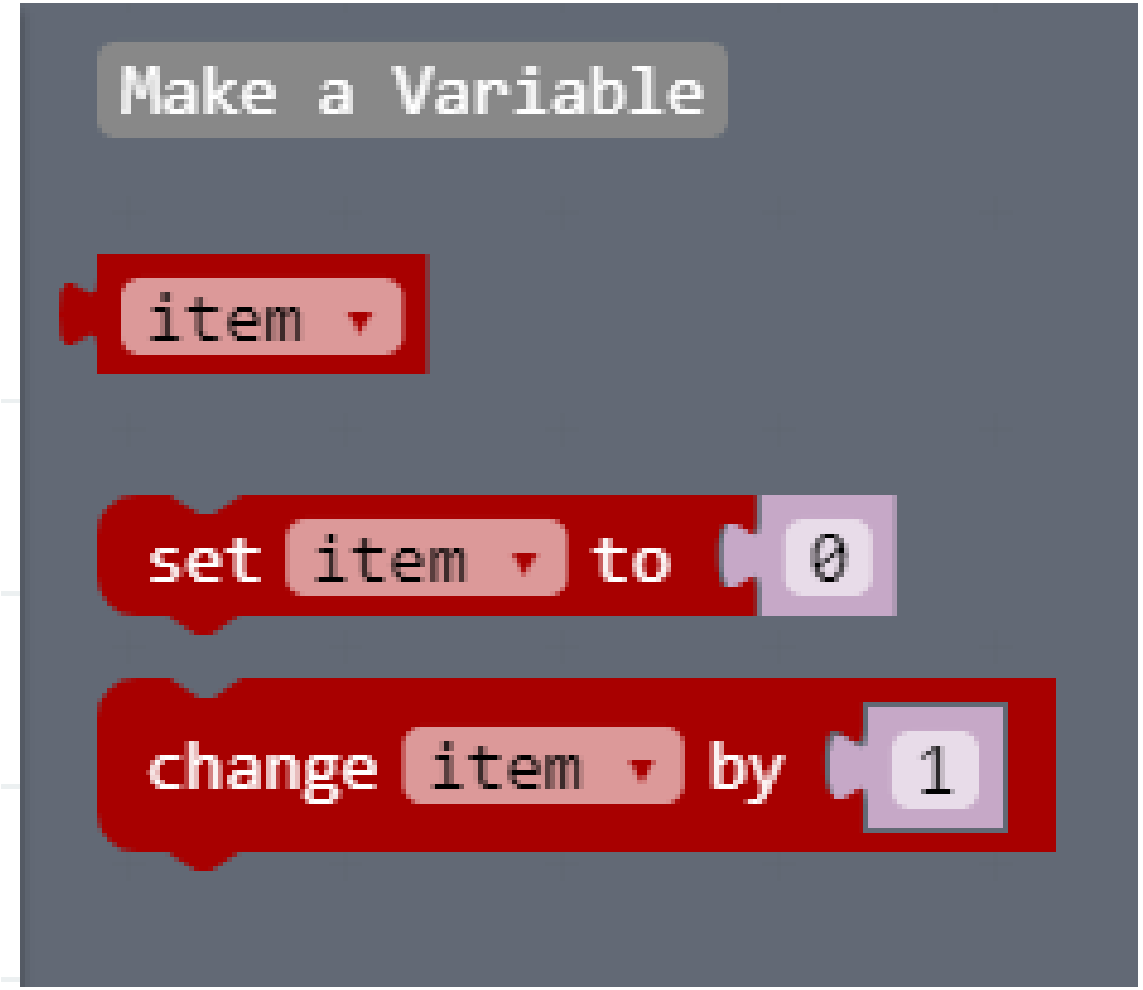
MICRO:BIT

VARIABLE

- used to store information (containers that hold information)
- This information can then be used throughout your program.
- Label it with a descriptive name, so our programs can be understood more clearly

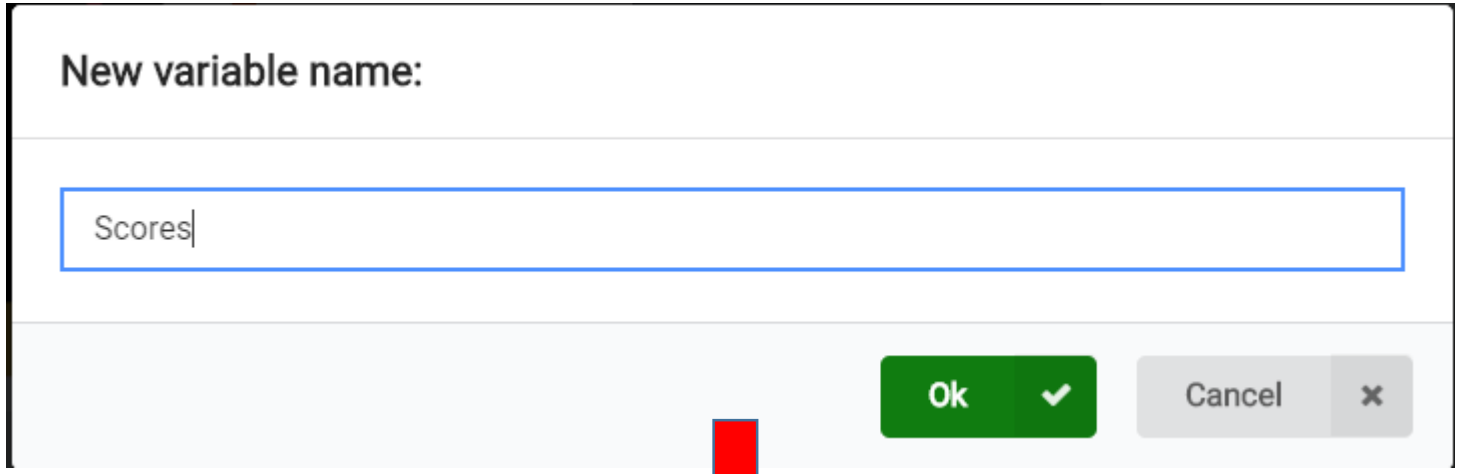
MICRO:BIT

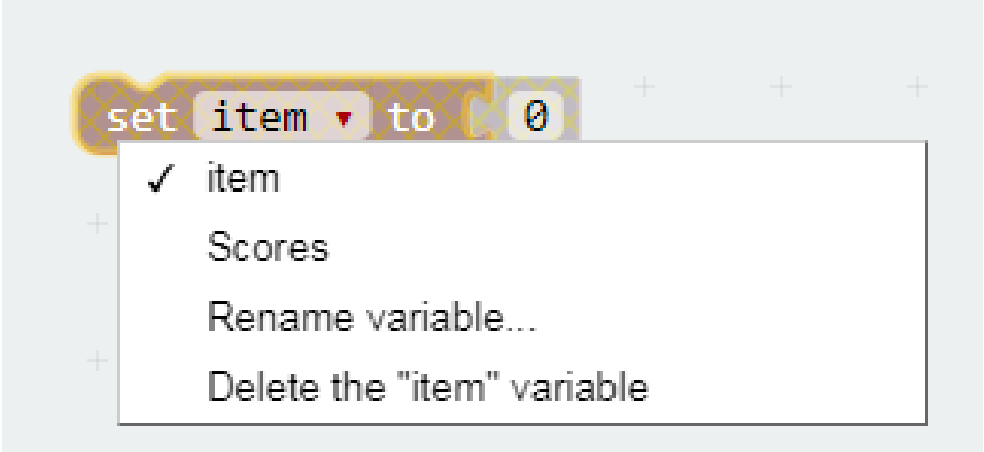
VARIABLE



MICRO:BIT

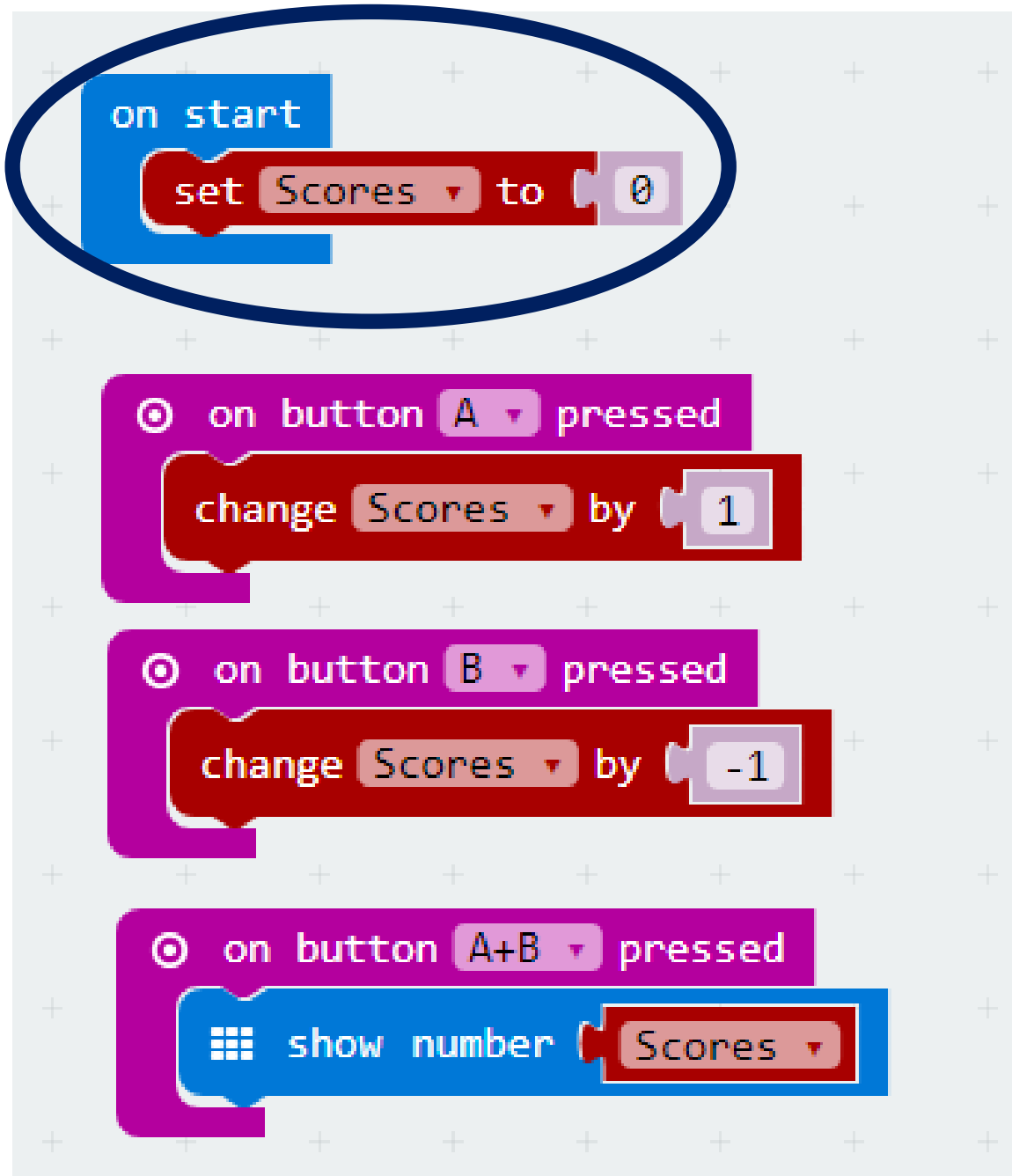
VARIABLE





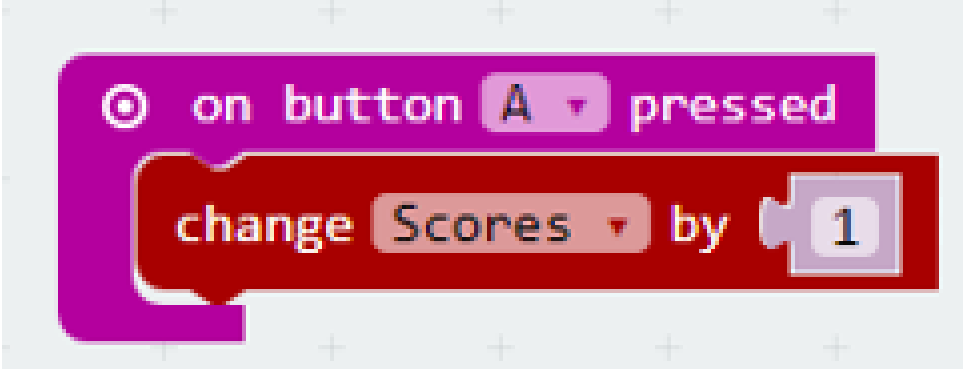
MICRO:BIT

VARIABLE



MICRO:BIT

VARIABLE

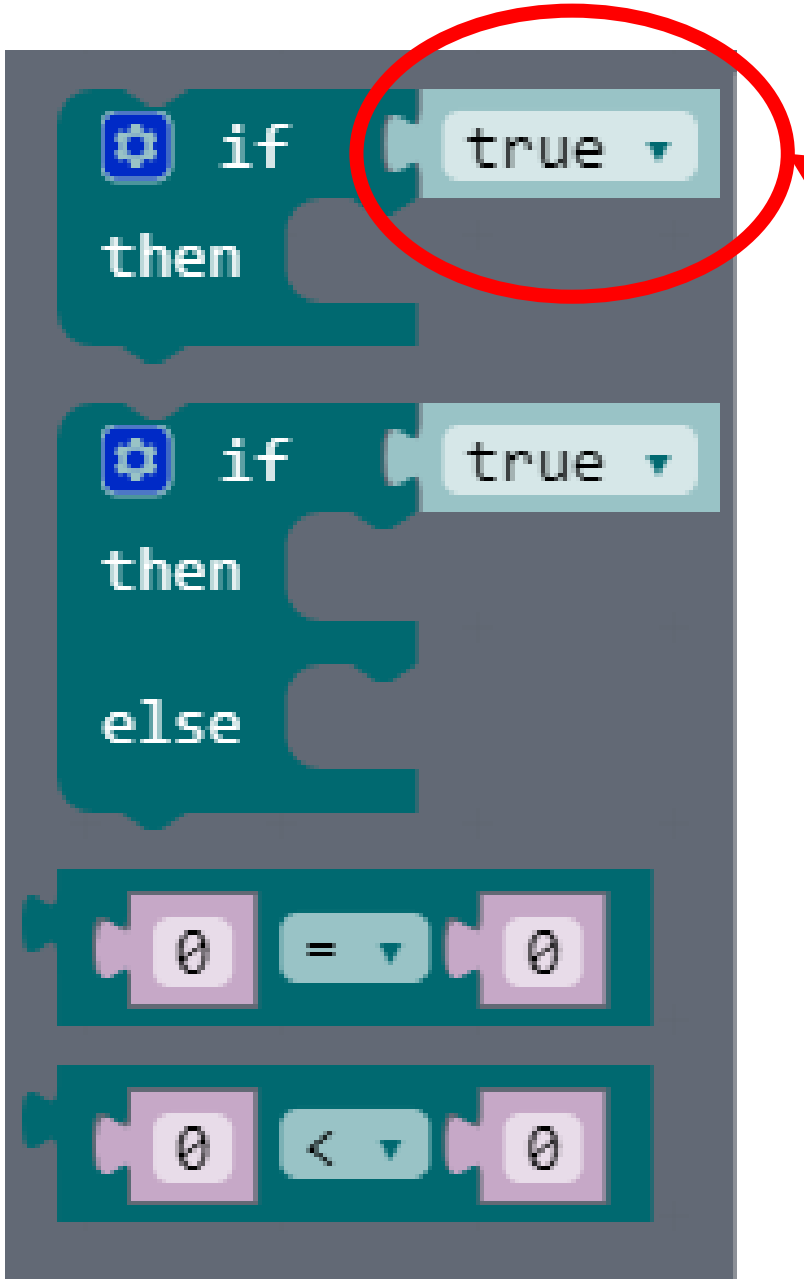


Change Scores by 1 (Add 1)
Eg: Scores is 5. After Button A is pressed, Scores now is 6.

Change Scores by -1 (Subtract 1)
Eg: Scores is 5. After Button B is pressed, Scores now is 4.

MICRO:BIT

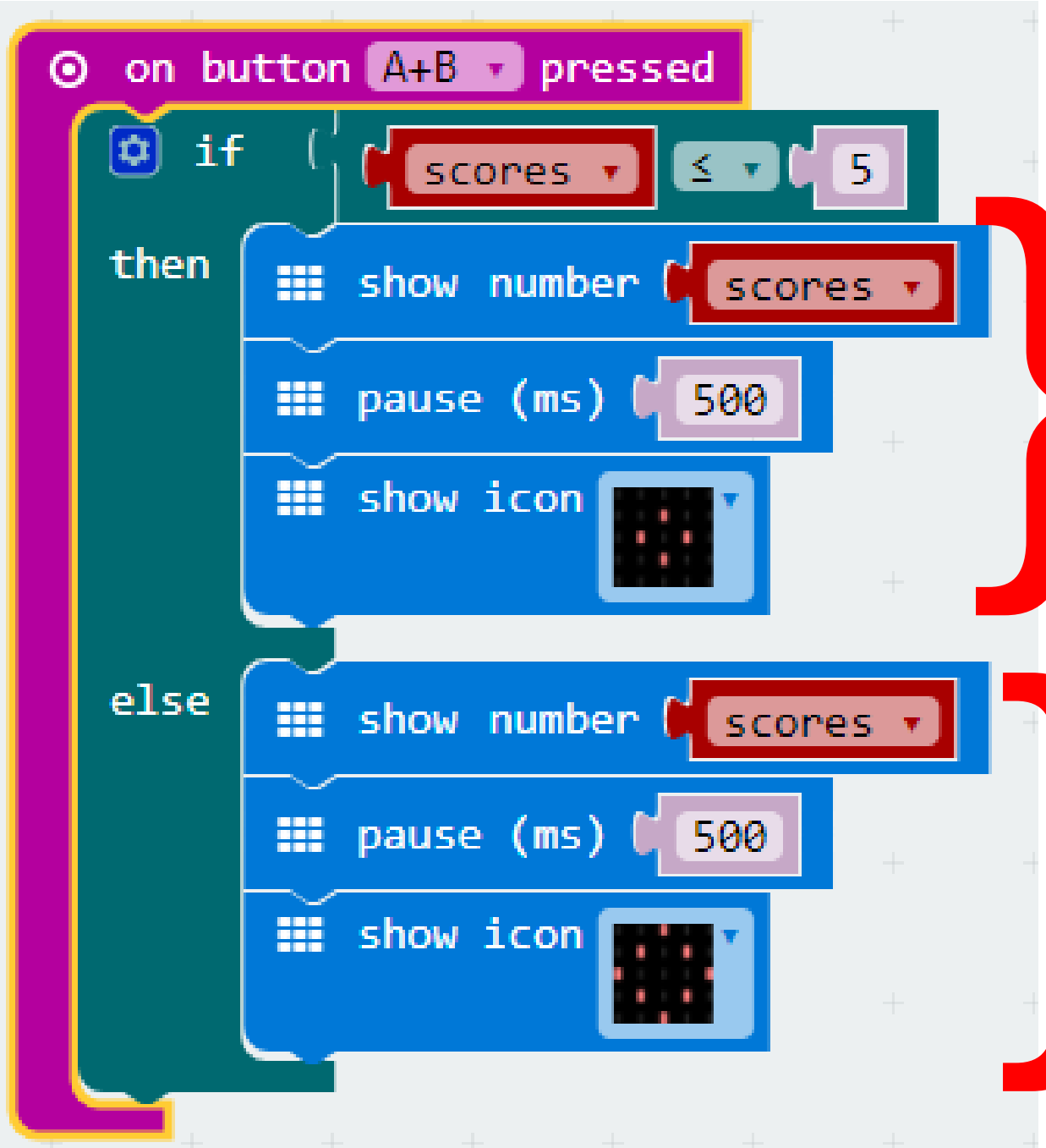
LOGICS



Fill in the condition(s)

MICRO:BIT

LOGICS



These will be done if the scores is smaller or equal to 5.

These will be done if the scores greater than 5.

MICRO:BIT

(CHALLENGES) 10MINS

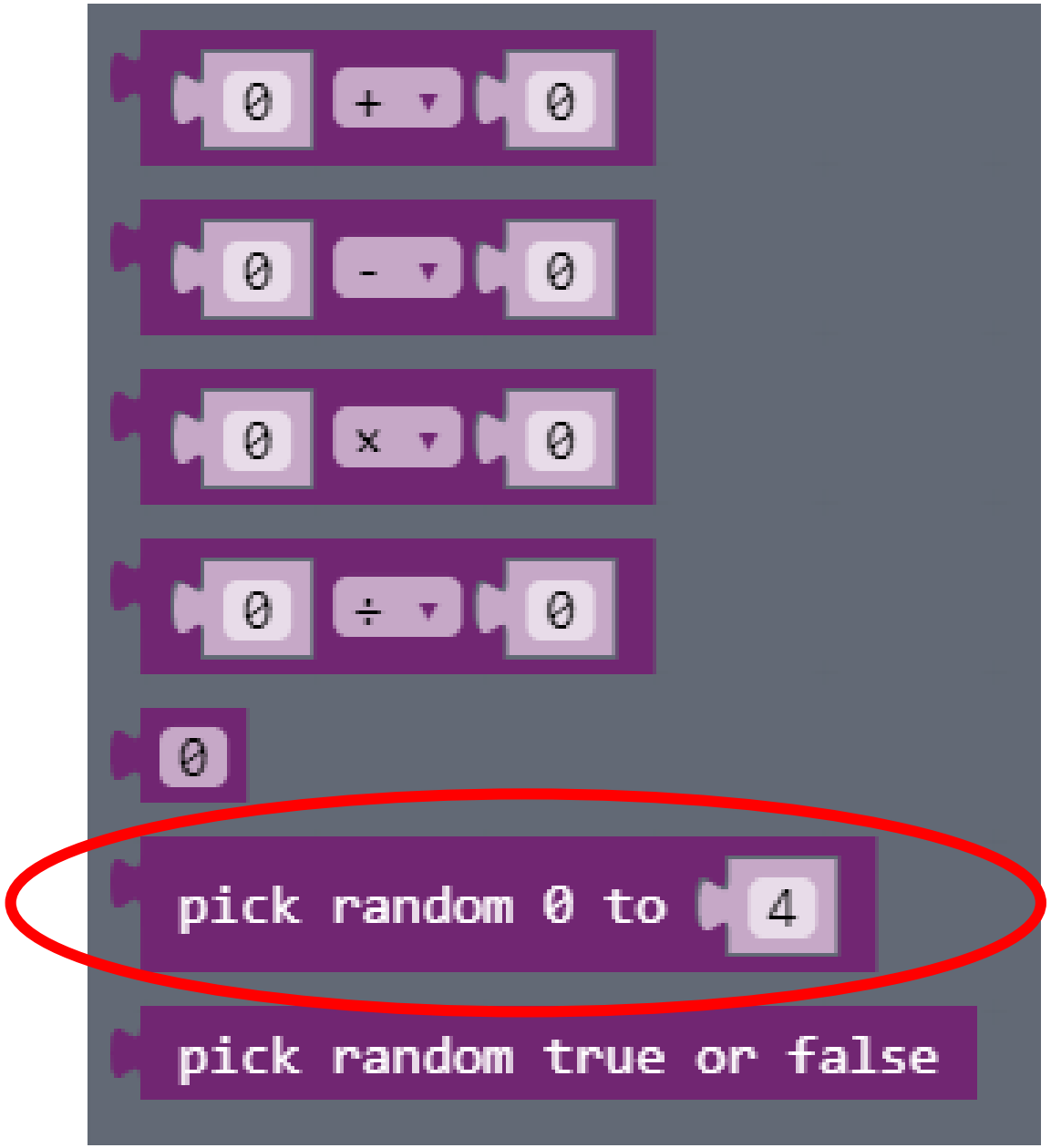
- Create the game (Addition and Subtraction)
- Set ‘Scores’ to 10 on start.
- Add 5 when Button A is pressed.
- Subtract 5 when Button B is pressed.
- Display ‘Scores’ if the ‘Scores’ is greater than 5 when Button A and B is pressed

Bonus

- Make a pedometer using ‘on shake’ block.
- Make your micro:bit display the total number of shakes when button A is pressed.
- Set the number of shakes to 0 when button B is pressed. (reset the scores)

MICRO:BIT

MATH

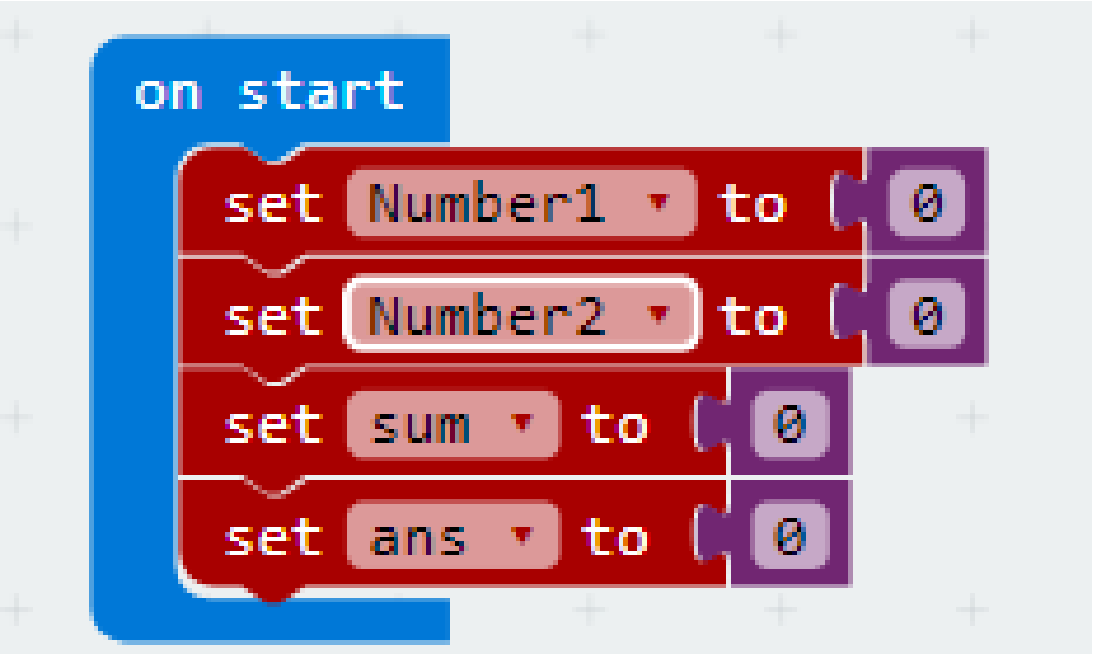


MICRO:BIT

MATH

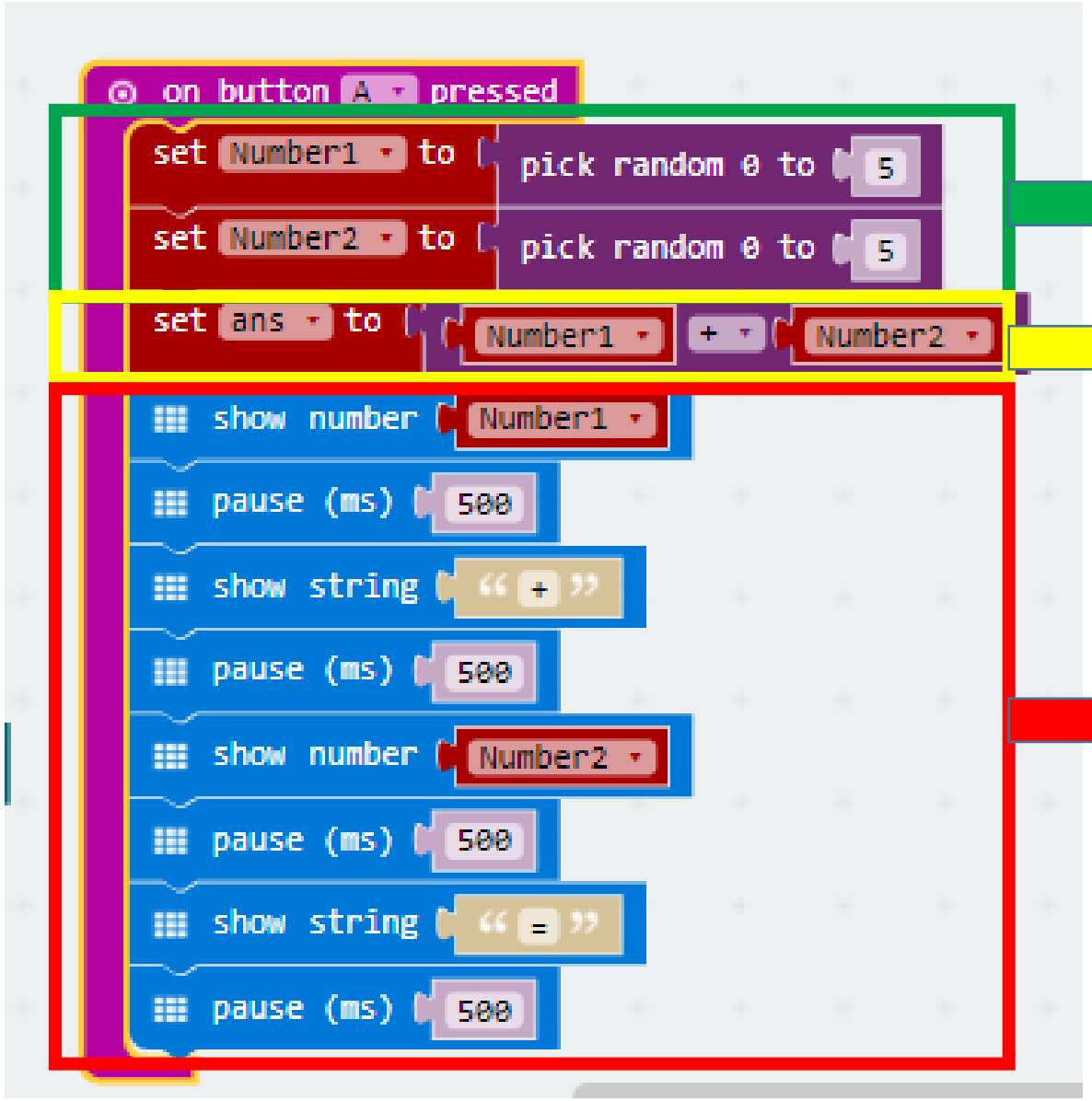
```
on start
  set Number1 to 0
  set Number2 to 0
  set sum to 0
  set ans to 0

on button B pressed
  change sum by 1

on button A+B pressed
  if sum = ans
  then
    show icon
  else
    show icon
    pause (ms) 800
    show number ans

on button A pressed
  set Number1 to pick random 0 to 5
  set Number2 to pick random 0 to 5
  set ans to (Number1 + Number2)
  show number Number1
  pause (ms) 500
  show string "+"
  pause (ms) 500
  show number Number2
  pause (ms) 500
  show string "="
  pause (ms) 500
```

MICRO:BIT



- To initialize the variables needed.
- Number1: First number of the sum
- Number2: Second number of the sum
- Sum: The player’s answer
- Ans: The correct answer

MICRO:BIT

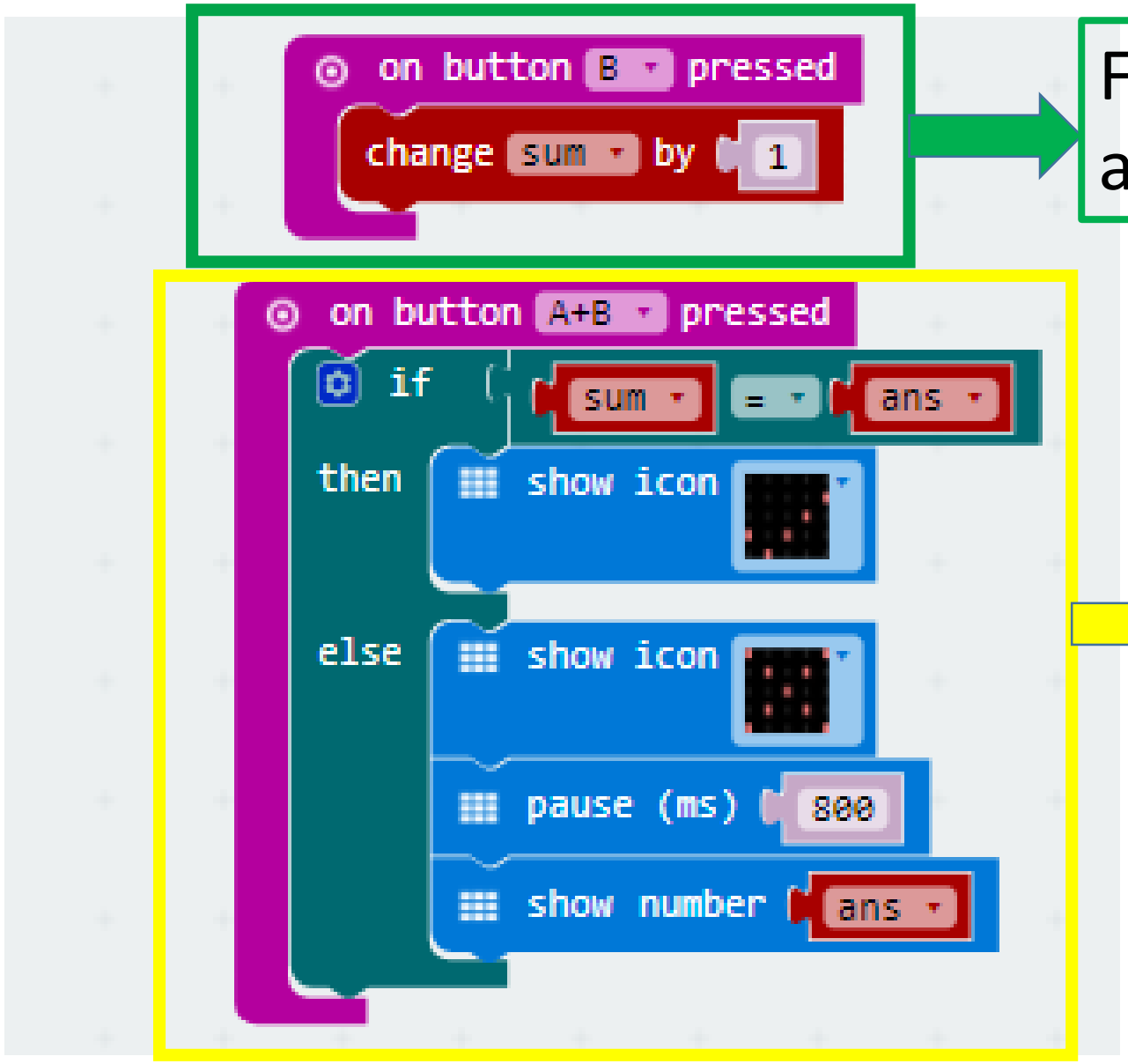


To let the computer give a random number between 0 to 5.

To find out the correct answer.

To display the sum for the player

MICRO:BIT



For the player to key in his/her answer

- To check the player's answer against the correct answer.
- To show the player is he/she had the correct answer.

MICRO:BIT

(CHALLENGES) 10MINS

- Make a game of scissor, paper, stone using ‘on shake’ block.
- Design a picture of scissor, paper and stone .
- Randomly display the scissor, paper or stone picture.
- Make your micro:bit to add up the scores when win (Button A).
- Make your micro:bit display the total number of wins when button B is pressed.
- Make your micro:bit to reset the scores when button A+B is pressed.

What did we achieved?

1. UNDERSTANDING MICRO:BIT
2. DISPLAY IMAGES ON THE MICRO:BIT
3. CREATING A PEDOMETER
4. MAKING A GAME OF SCISSOR, PAPER, STONE

Thank you!