MakeCode graphical API

A. SuperBit V2

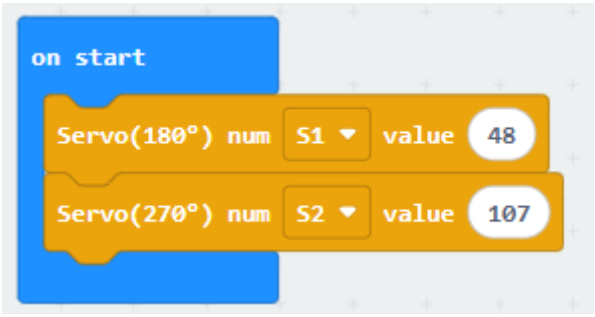
1) 

Function: Set the buzzer on the expansion board to play a certain music

2) 

Function: Set the servo to a certain angle

Parameters:
Number: Corresponding servo interface S1-S8
Angle: Set 0-1 according to the servo angle range 80, 0-270

For example: 

3) 

Function: Set the servo to rotate in a certain direction at a certain speed

Parameters:
Number: Corresponding servo interface S1-S8
Speed: 0-90
Direction: forward, reverse, stop

For example: 

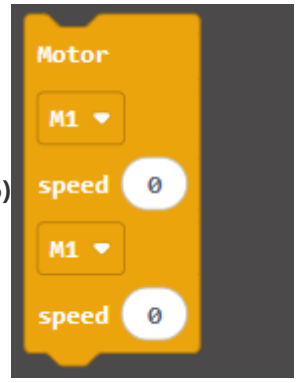
4) 

Function: Set a single motor to rotate at a certain speed

Parameter:
Number: Corresponding motor interface M1-M4
Speed: Set the motor rotation speed -255~255, negative value means reverse

For example:

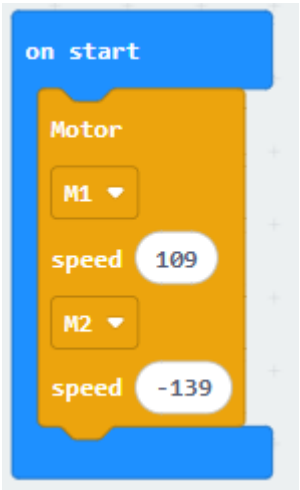
5)



Function: Set two motors to rotate at a certain speed at the same time

Parameters:
Number: Corresponding motor interface M1-M4
Speed: Set the motor rotation speed -255~255, negative value means reverse

For example:



6)

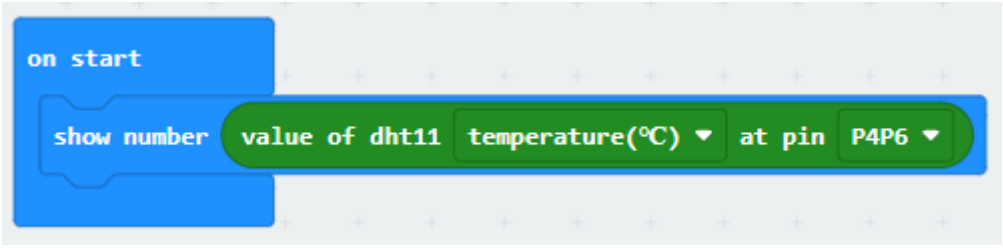
Function: Stop all motors

B. SuperBit V2 Digital Class

1) 

Function: Temperature and humidity values detected by the DHT11 sensor

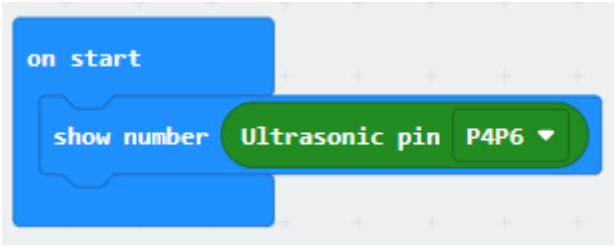
Parameters:
Value: Detected temperature in Celsius (℃), Fahrenheit (℉), humidity (0~100)
Pin: The sensor is connected to the corresponding pin on the expansion board

For example: 

2) 

Function: Distance detected by ultrasonic wave

Parameters:
Pin: The corresponding pin on the expansion board to which the sensor is connected

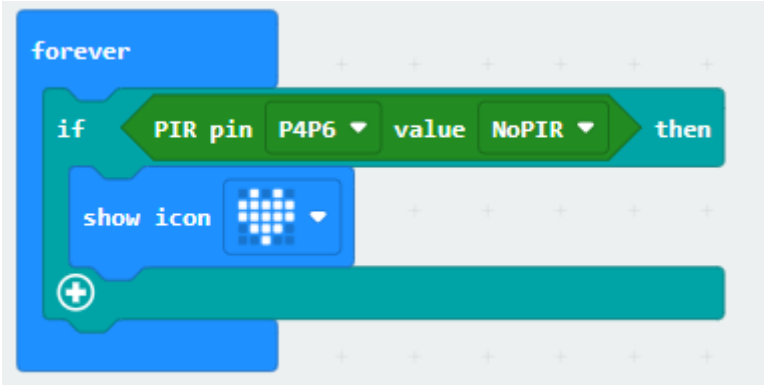
For example: 

3) 

Function: Set a state returned by the human infrared sensor as a judgment condition

Parameters:
Pin: The corresponding pin on the expansion board to which the sensor is connected

State: The state returned by the sensor **Someone is moving** and **No one is moving**

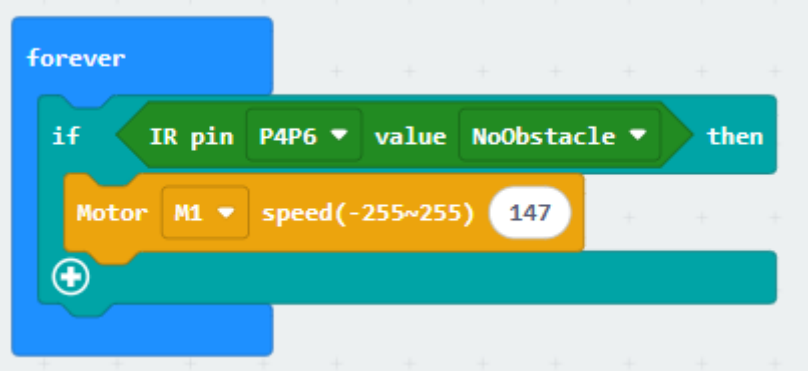
For example: 

4) 

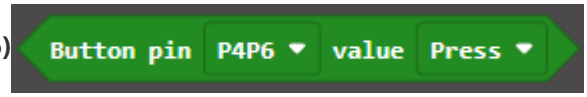
Function: Set a state returned by the infrared sensor as a judgment condition

Parameters:
Pin: The corresponding pin on the expansion board to which the sensor is connected
State: **Obstacle** and **No obstacle** returned by the sensor Two states

For example:



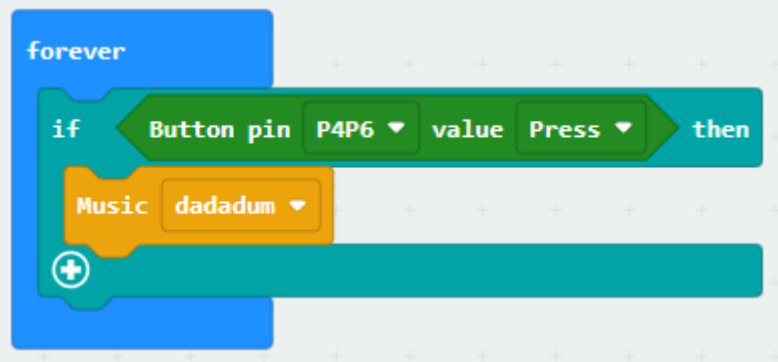
5)



Function: Set a certain state of the button as a judgment condition

Parameters:
Pin: The button is connected to the corresponding pin on the expansion board
State: The button is **pressed** and **released** Two states

For example:

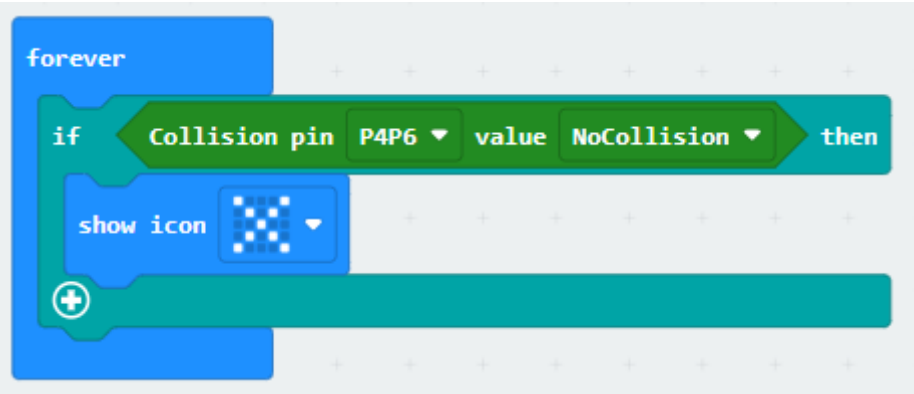


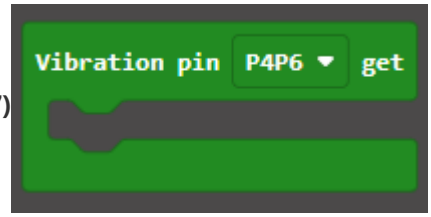
6)

Function: Set a state of the collision detection sensor as a judgment condition

Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board
State: **No collision** and **Collision** returned by the sensor Two states

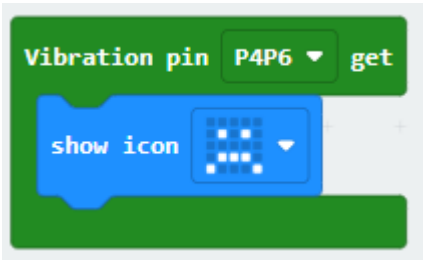
For example:



7) 

Function: Set the vibration sensor to a certain state

Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board

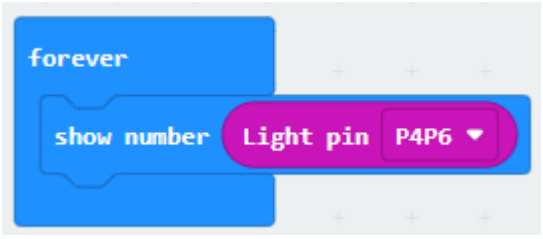
For example: 

C. SuperBit V2 Perception category

1) 

Function: The value detected by the light sensor. The lower the brightness, the larger the value returned

Parameters:
Pin: The corresponding pin on the expansion board to which the sensor is connected

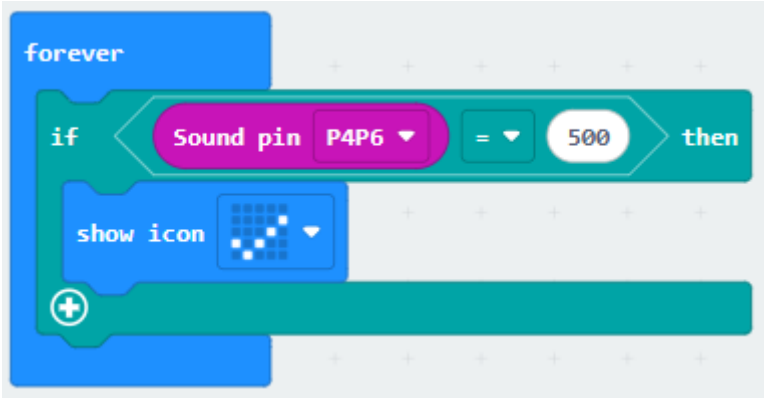
For example: 

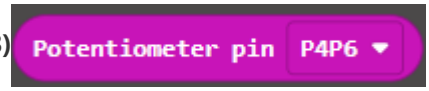
2) 

Function: The analog value output by the sound sensor, the range is 0~1023, the louder the sound, the greater the output analog value

Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board

For example:

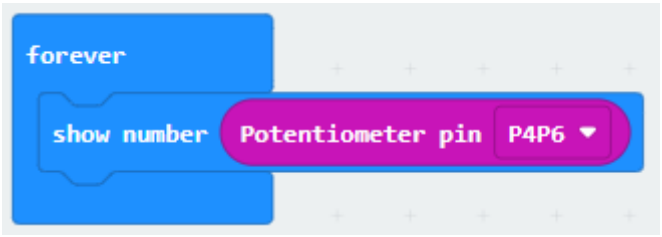


3) 

Function: The current resistance value of the potentiometer

Parameters:
Pin： The sensor is connected to the corresponding pin on the expansion board

For example:

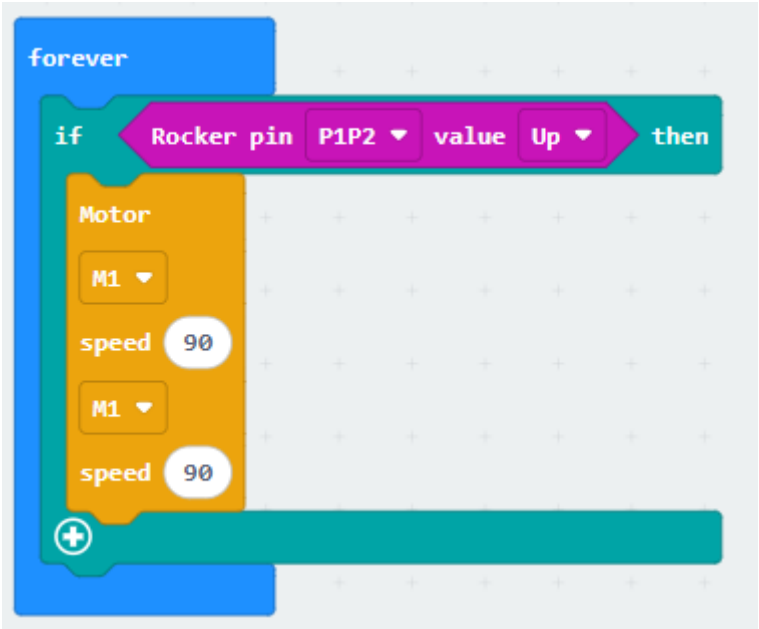


4) 

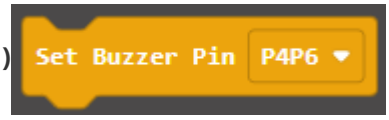
Function: Set a state of the joystick as a judgment condition

Parameter:
Pin: The joystick is connected to the corresponding pin on the expansion board
State: The joystick has 5 states: **None**, **Up**, **Down**, **Left**, **Right**

For example:



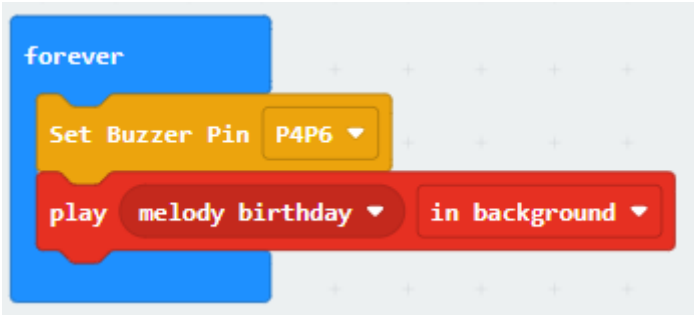
D. SuperBit V2 PWM class

1) 

Function: Set the buzzer to be connected to a certain pin

Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board

For example:

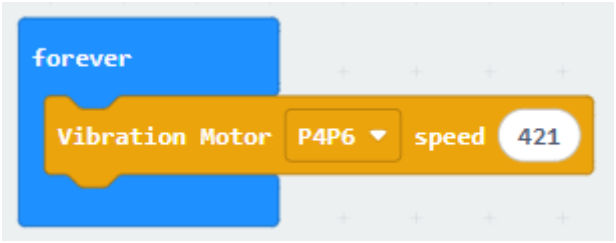


2) 

Function: Set the vibration motor to vibrate at a certain speed

Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board
Speed: Vibration speed, range 0-1023

For example:



3) 

Function: Set the R, G, and B values of the RGB light to change the color

Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board
Red, green, blue: RGB value of the light, range 0-255

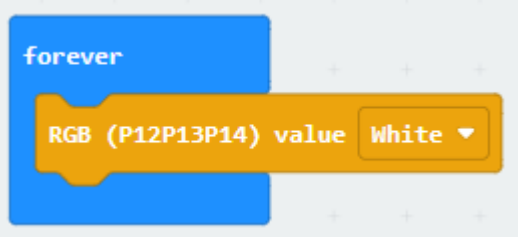
For example:

4) 

Function: Set the color of the RGB light

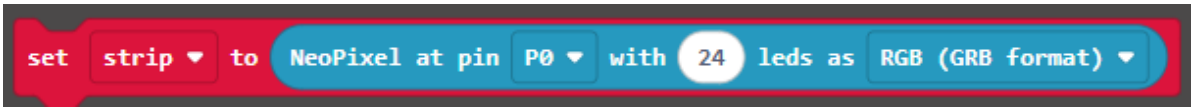
Parameters:
Pin: The sensor is connected to the corresponding pin on the expansion board
Color display: Off and several fixed colors

For example:



E. Neopixel

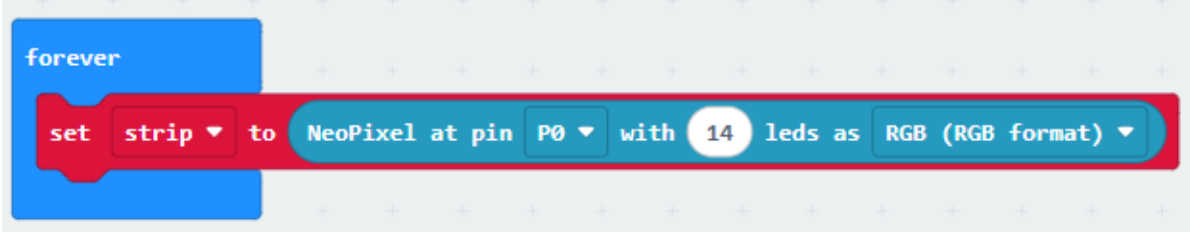
1)



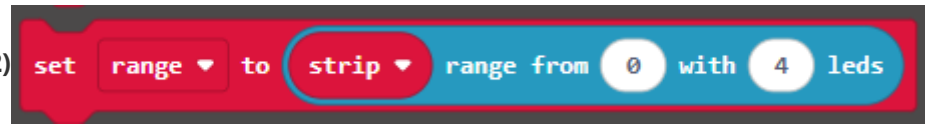
Function: Create and initialize a light strip

Parameters:
Pin: The pin connected to the light strip
Number of beads: The number of beads waiting to be connected
Mode: The mode used by the light beads, including RGB (GRB order), RGB + W, RGB (RGB order)

For example:

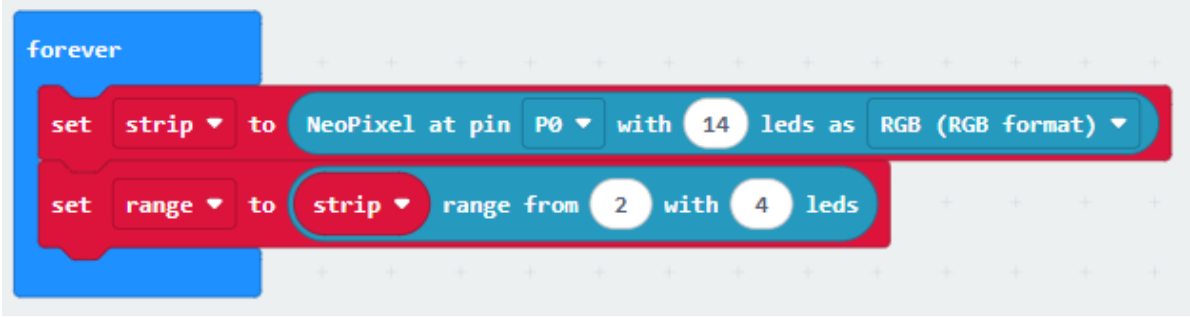


2)

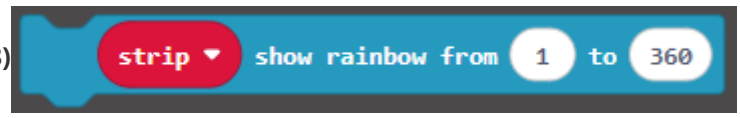


Function: Select a range from the color light strip, starting from a certain light, and select a certain number of lights.

Parameters:
Pixels: starting position of the light
Length: the number of selected lights
For example:



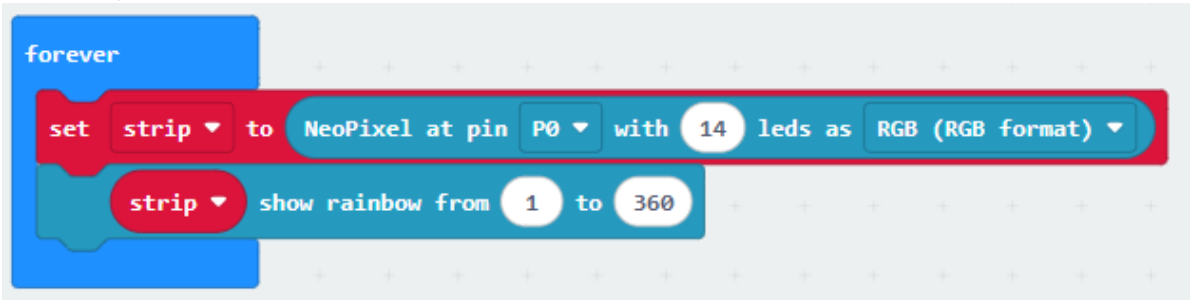
3)



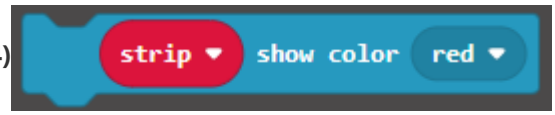
Function: let the light strip present a gradient color effect in a certain hue range

Parameters:
Hue: range 0-360 (complete color circle)

For example:



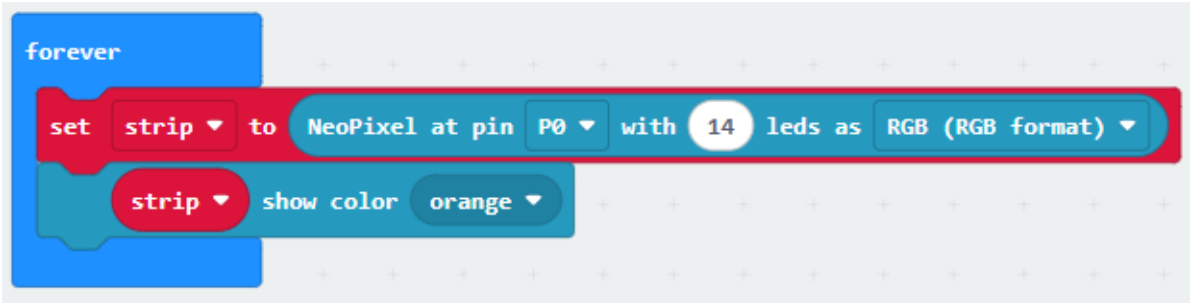
4)



Function: Let the light strip present a certain color

Parameter:
Color: Several fixed colors, such as red, orange, yellow, violet, etc.

For example:

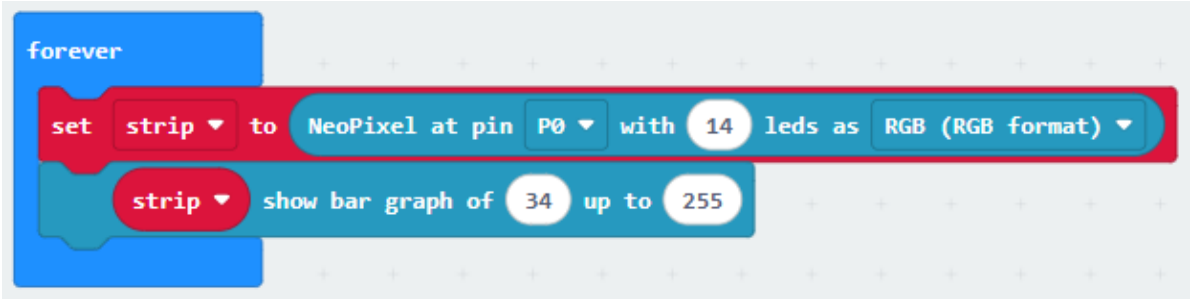


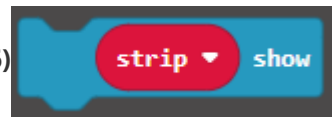
5)

Function: Display the value on the LED light strip in the form of a bar graph.

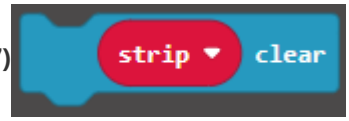
Parameters:
Value: the currently displayed value
Maximum value: the maximum value that can be set. When set to this maximum value, all the lamp beads will light up

For example:



6) 

Function: Refresh the display of the light strip

7) 

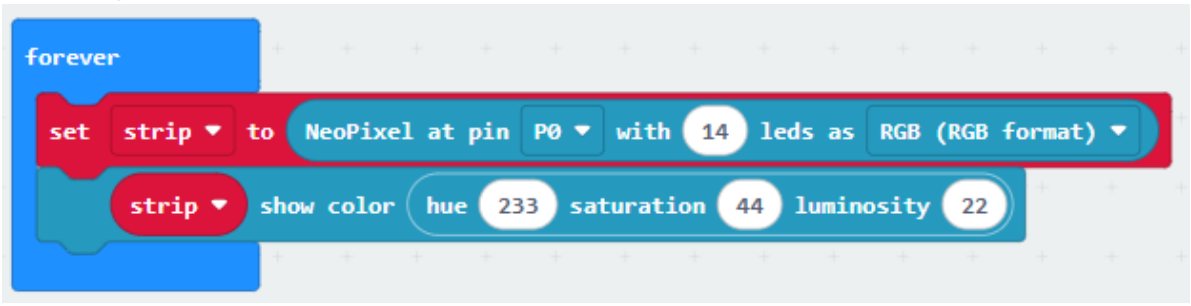
Function: Clear the display of the light strip, that is, turn off the light

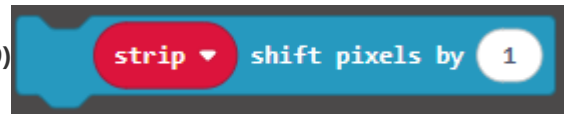
8) 

Function: Convert hue, saturation, and brightness values to RGB colors

Parameters:
Hue: Range 0-360
Saturation: Range 0-99
Brightness: Range 0-99

For example:



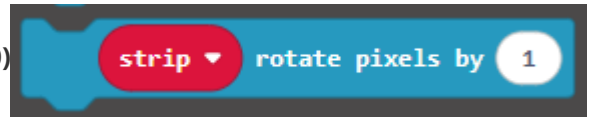
9) 

Function: Control the light strip to move at a certain pixel. Move the pixels of the light strip **forward** by a specified number of pixels, and use "0" (i.e. closed pixels) to clear the position left at the end

Prerequisite: After use, you need to call **Refresh Display** to display the changes

Parameters:
Offset: The pixels moved by the light strip

For example:

10) 

Function: Control the light strip to **circulate** with a certain pixel, that is, move the front pixel to the back

Prerequisite: After use, you need to call **Refresh Display** To display the changes

Parameters:
Offset: The pixel that the light strip moves

For example:

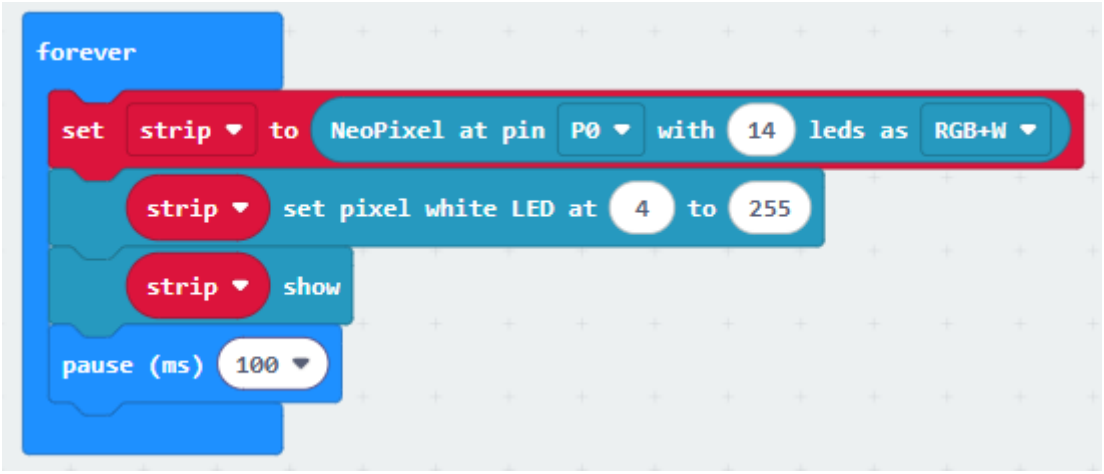
11) 

Function: Set the brightness of the white light at a certain pixel position

Prerequisite: Only applicable to **RGBW** lamp beads (not ordinary RGB lamp beads). After use, you also need to call **Refresh Display** to display the changes

Parameters:
Pixel: The number of lamp beads to be set (from 0 Start counting)
Brightness: Range 0-255

For example:



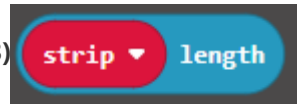
12) 

Function: Set the lamp bead at a certain pixel position on the light strip to display a certain color

Prerequisite: After use, you also need to call **Refresh Display** to display the changes

Parameters:
Pixel: The number of lamp beads to be set (from 0 Start counting)
Color: The color to be displayed on the light strip

For example:

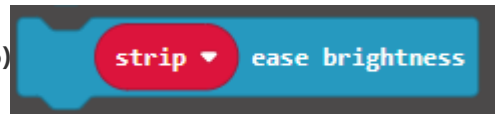
13) 

Function: Get the number of lamp beads on the light strip

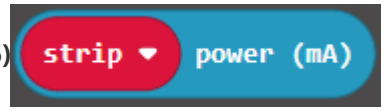
14) 

Function: Set the brightness of the light strip

Parameters:
Brightness: Range 0-255, the larger the value, the brighter it is

15) 

Function: Reduce the brightness of the light strip

16) 

Function: Estimate the current consumed by the current lighting configuration

17) 

Function: Set the number of lamp beads per row of the light strip, the direction of the entire matrix, and the arrangement method

Prerequisite: It is a matrix-shaped light strip or light board

Parameters:

width: The number of lamp beads per row
rotation: Rotation method 0-`NeoRotation.Rotate0` (no rotation), 1-`NeoRotation.Rotate90` (90 degrees clockwise), 2-`NeoRotation.Rotate180` (upside down), 3-`NeoRotation.Rotate270` (270 degrees clockwise)

chain: arrangement 0-`NeoMatrixChain.None` (normal arrangement), 1-`NeoMatrixChain.ZZ` (Z-shaped arrangement)

18) 

Function: Set the color of the lamp beads at the specific coordinate position on the matrix-shaped light strip

Prerequisite: It is a matrix-shaped light strip or light board

Parameters:
x, y: horizontal and vertical coordinates
Color: The color displayed by the lamp beads