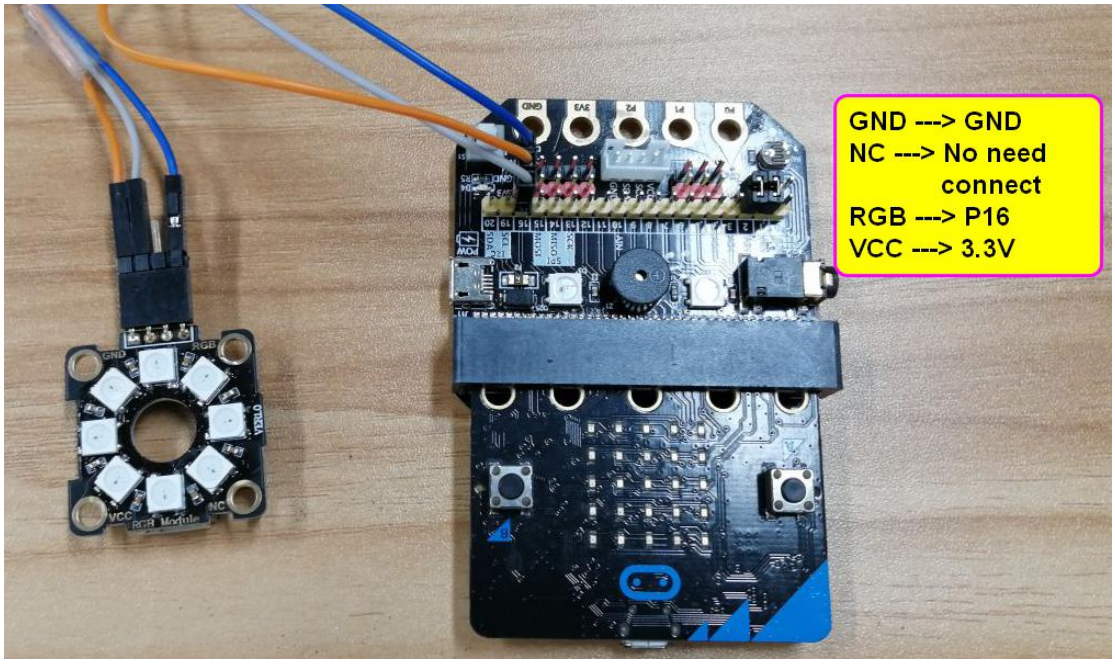
Marquee

1. Learning target

In this course, we will learn how to use Micro:bit and RGB light module to achieve light up a RGB.

2. Preparation

Connect the module to Micro:bit board by expansion board, as shown below.



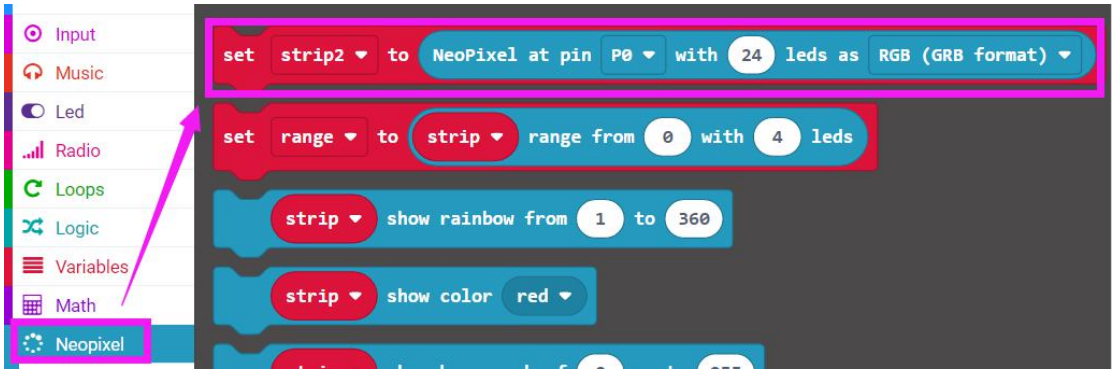
3.Programming method

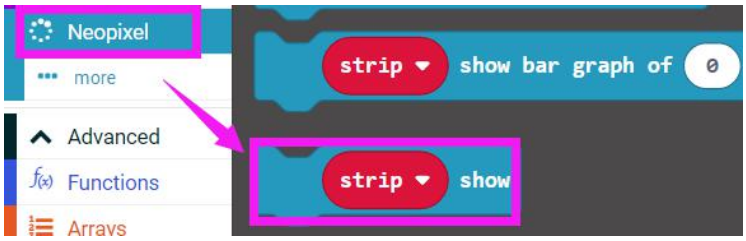
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: http://microbit.org/ to enter the programming interface.

Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click【New Project】, you can start programming.

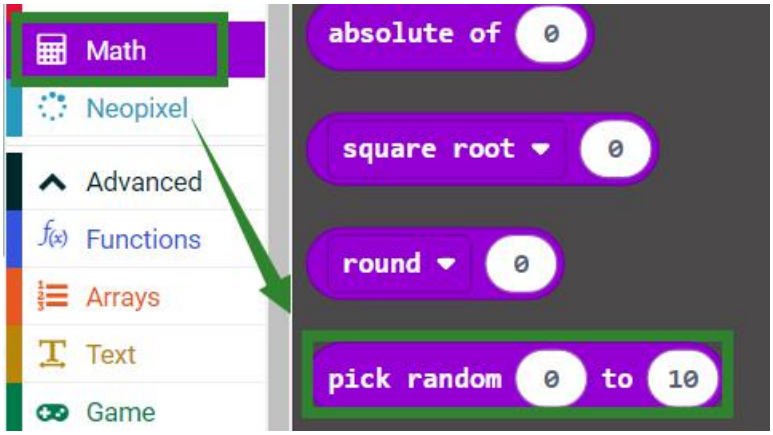
4.Looking for blocks

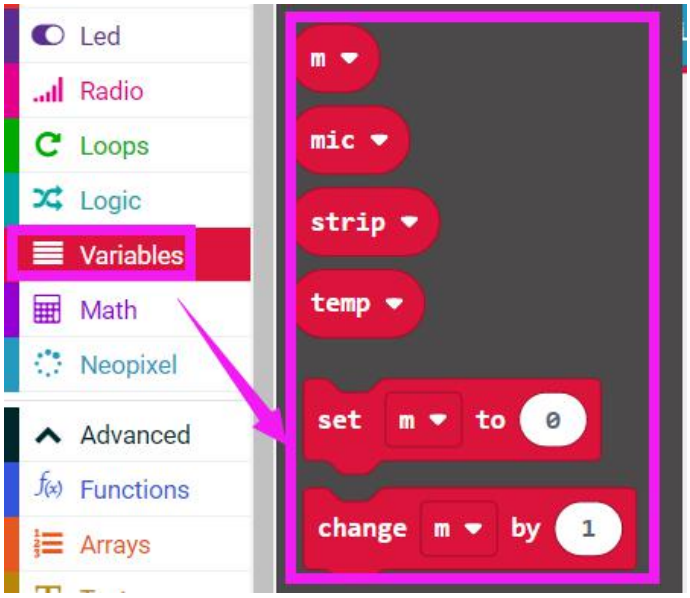
The following is the location of the building blocks required for this programming.


Input
Music
Led
Radio
Loops
Logic
Variables
Math
Neopixel
set strip2 to NeoPixel at pin P0 with 24 leds as RGB (GRB format)
set range to strip range from 0 with 4 leds
strip show rainbow from 1 to 360
strip show color red


Neopixel
more
Advanced
Functions
Arrays
strip show bar graph of 0
strip show

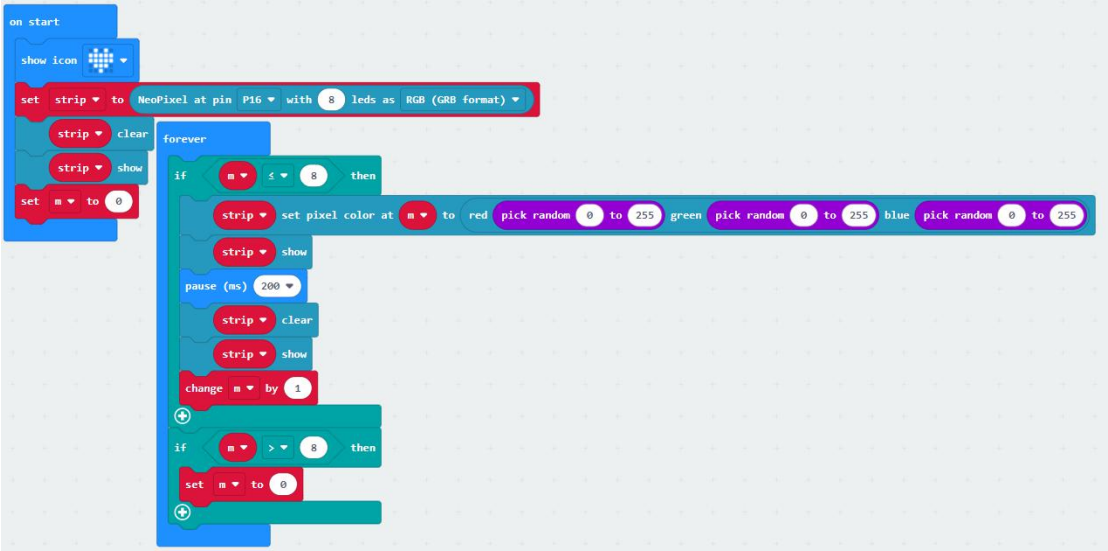

Led
Radio
Loops
Logic
Variables
Math
Neopixel
more
strip set pixel color at 0 to red
strip length
strip set brightness 255
strip ease brightness


Math
Neopixel
Advanced
Functions
Arrays
Text
Game
absolute of 0
square root 0
round 0
pick random 0 to 10



5.Combine block

The summary program is shown below.



The value of m represents the number of the RGB light that is lit each time. After m=8, the value of m is set to 0, and the RGB light is restarted.

6.Experimental phenomena

After the program is downloaded successfully, Micro:bit dot matrix will display heart, all the RGB lights on the module are randomly lit in color to achieve the effect of a marquee.