Hunters

1.Learning goal

In this course, we learn how to make a hunters game.

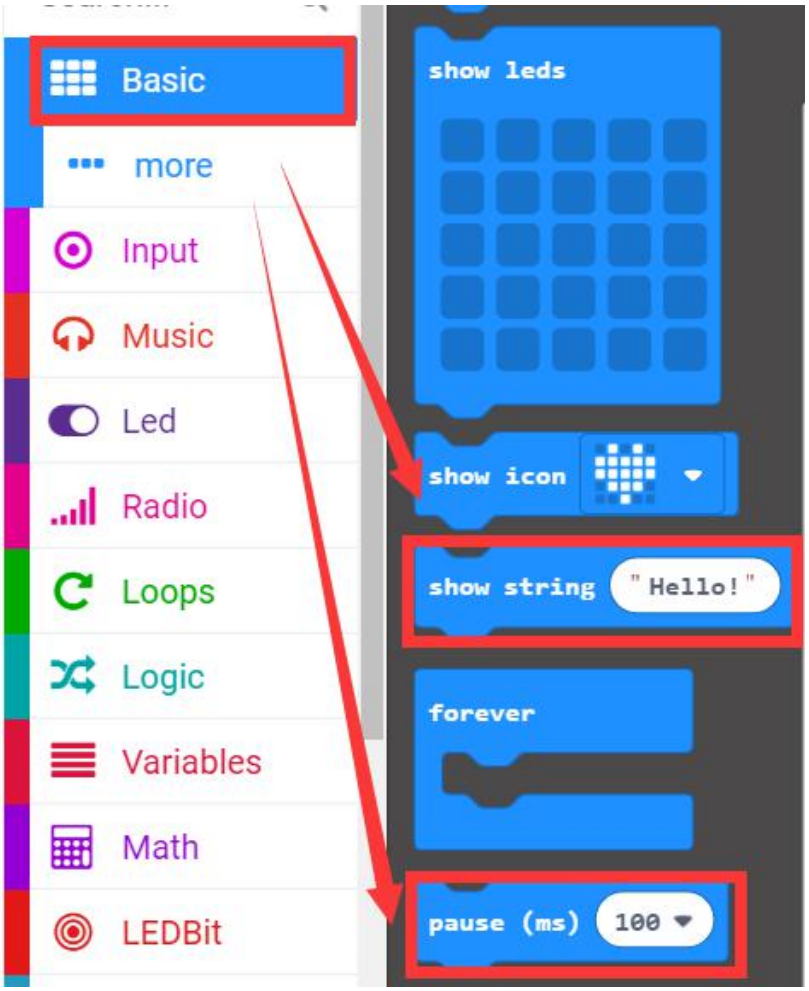
2.Programming method

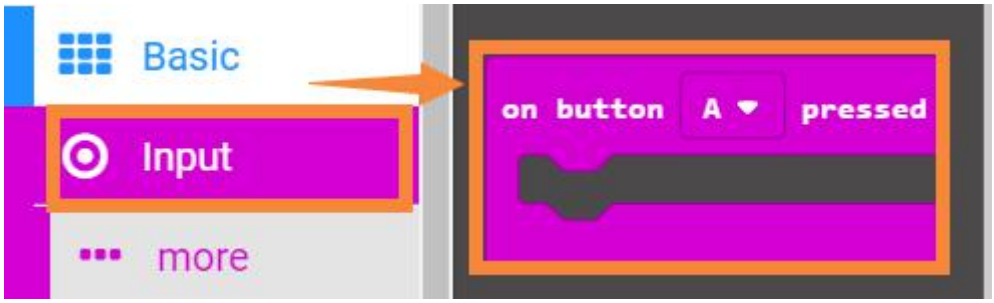
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: **http://microbit.org/** to enter the programming interface. Add the Yahboom package **https://github.com/lzty634158/LED-Bit** to program.

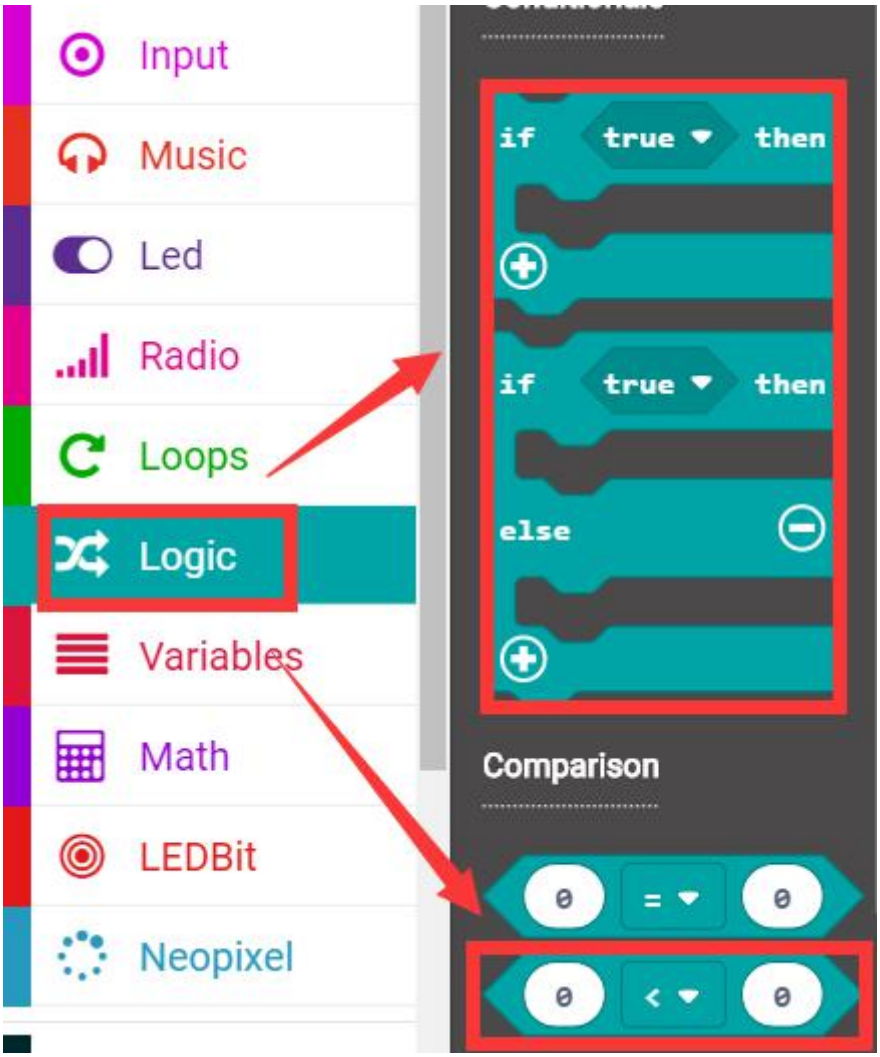
Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click【New Project】, add Yahboom package: **https://github.com/lzty634158/LED-Bit ,** you can program.

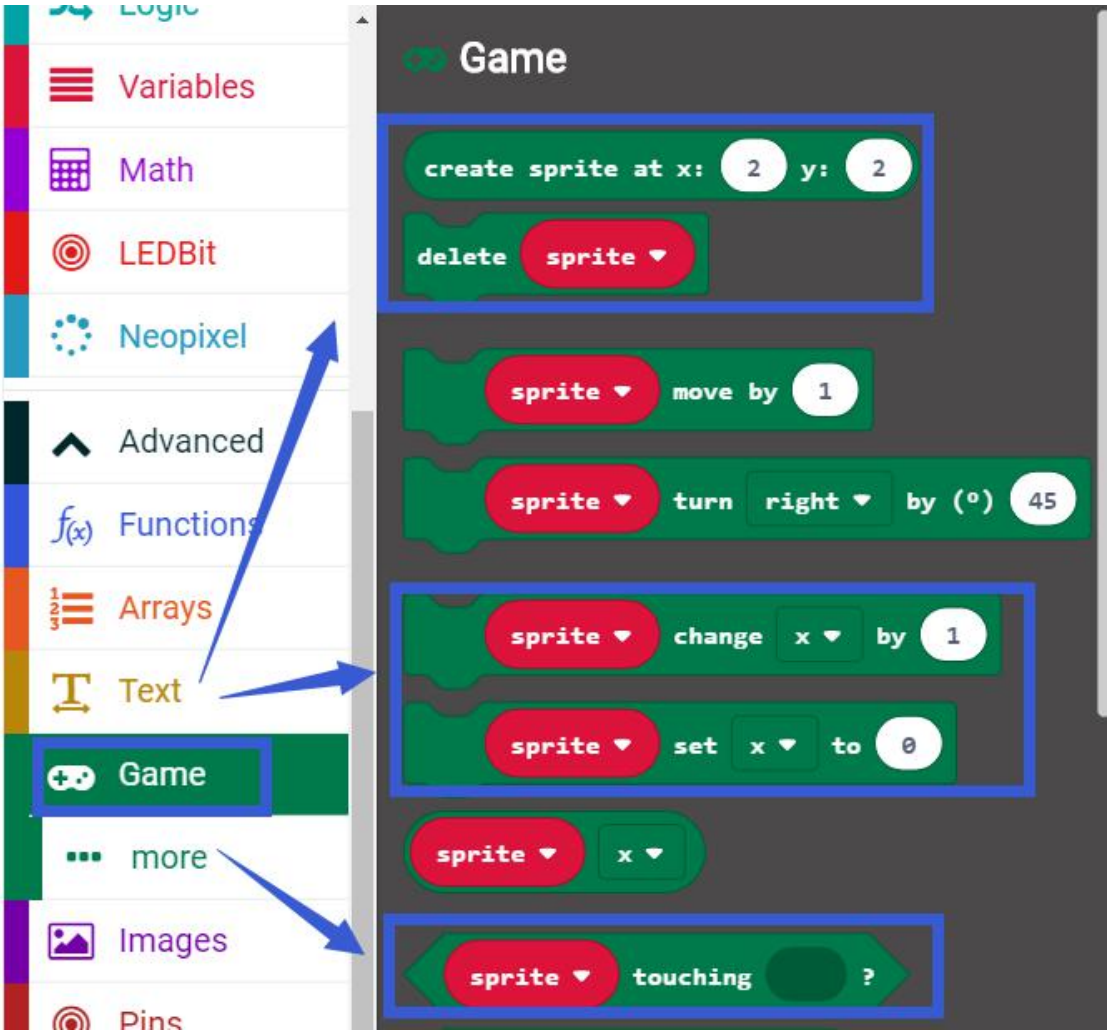
3.Looking for blocks

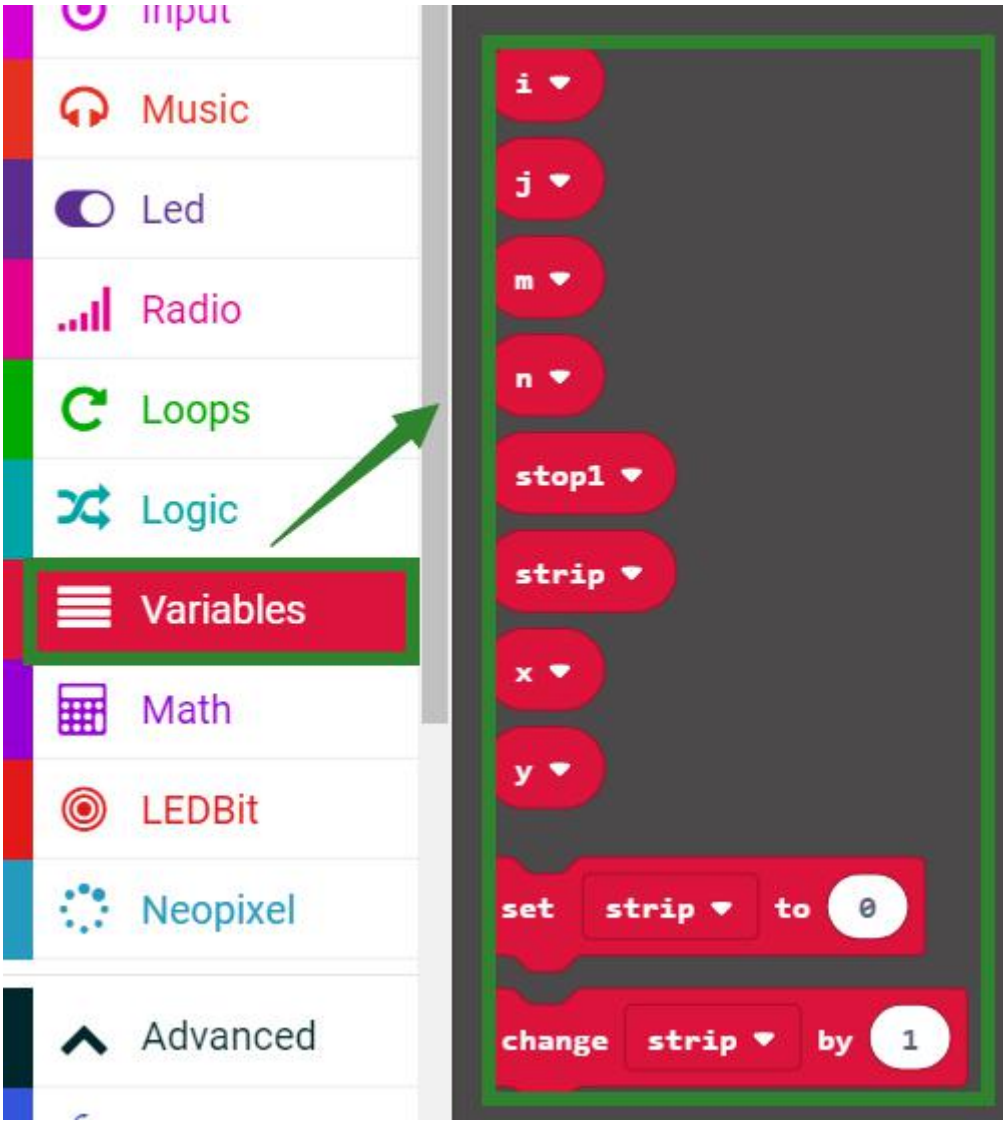
The following is the location of the building blocks required for this programming.

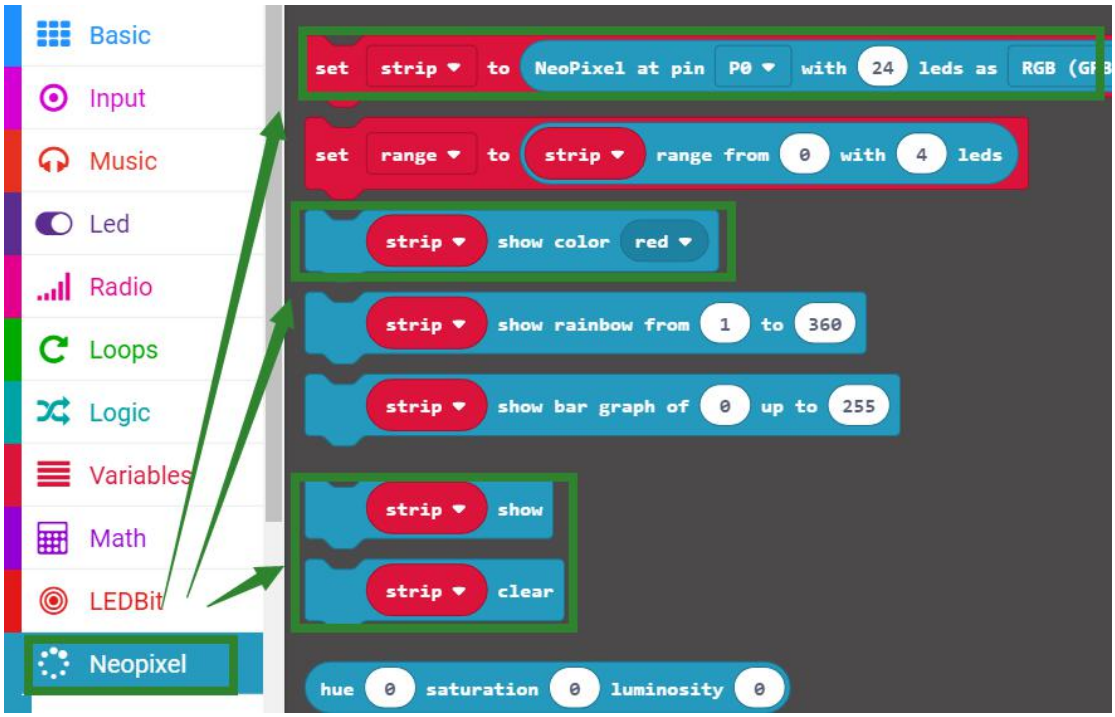


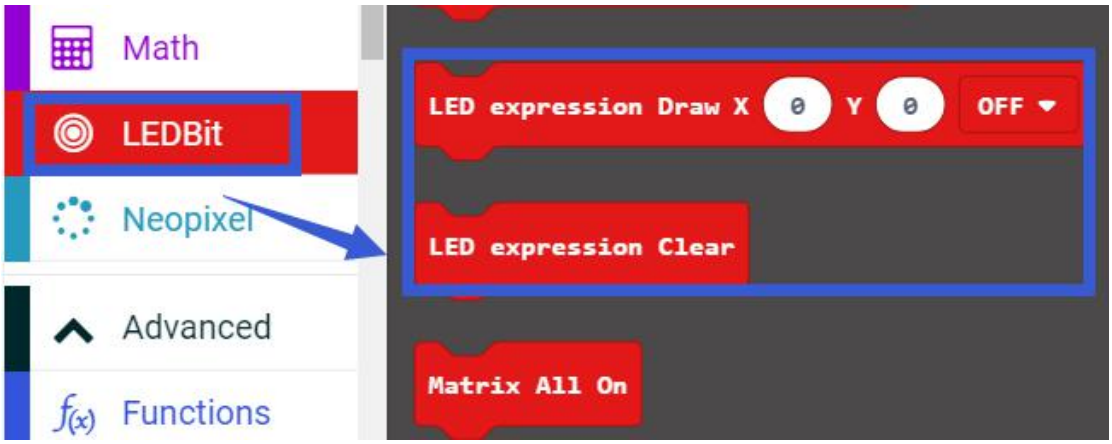

Basic
Input
more
on button A pressed

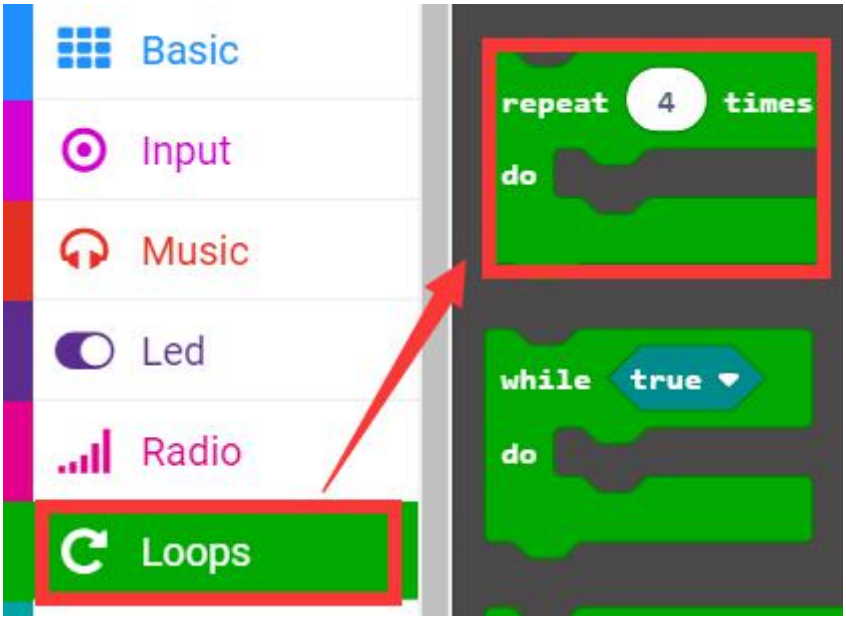

Input
Music
Led
Radio
Loops
Logic
Variables
Math
LEDBit
Neopixel
if true then
if true then
else
Comparison
0 = 0
0 < 0

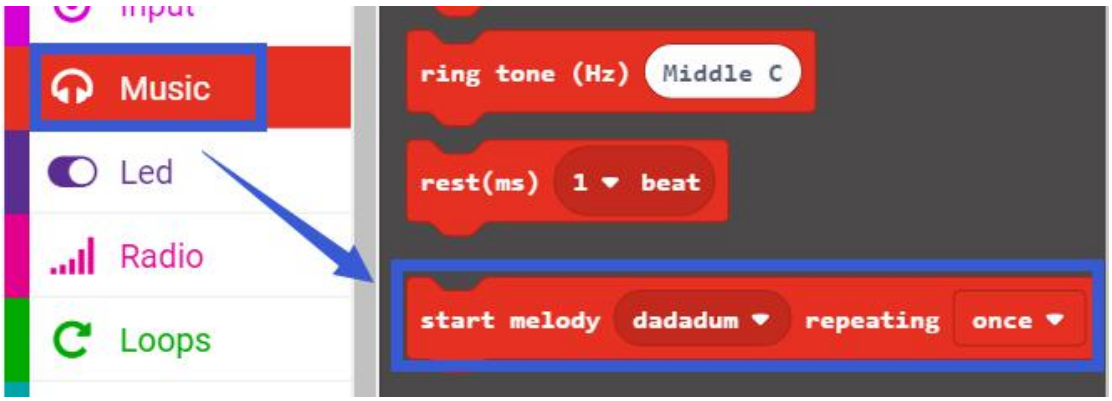

Variables
Math
LEDBit
Neopixel
Advanced
Functions
Arrays
Text
Game
more
Images
Pins
Game
create sprite at x: 2 y: 2
delete sprite
sprite move by 1
sprite turn right by (°) 45
sprite change x by 1
sprite set x to 0
sprite x
sprite touching ?


Music
Led
Radio
Loops
Logic
Variables
Math
LEDBit
Neopixel
Advanced
i
j
m
n
stop1
strip
x
y
set strip to 0
change strip by 1


Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
LEDBit
Neopixel
set strip to NeoPixel at pin P0 with 24 leds as RGB (GR
set range to strip range from 0 with 4 leds
strip show color red
strip show rainbow from 1 to 360
strip show bar graph of 0 up to 255
strip show
strip clear
hue 0 saturation 0 luminosity 0



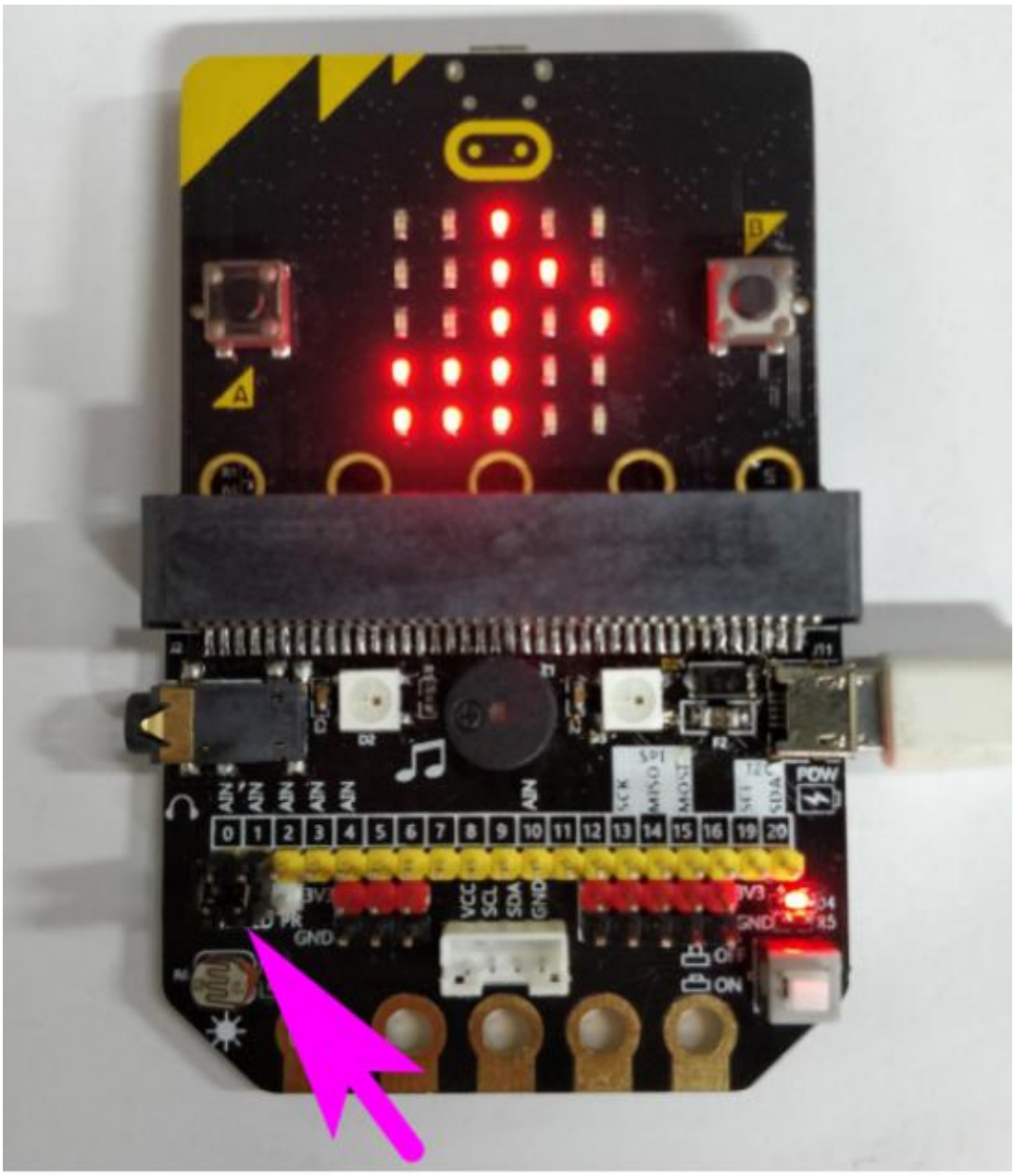




4.Combine building block

Please refer to the hex file for the procedure of this experiment.

Note: The jumper cap needs to be connected to the P1 and LED pins, P1 and LED pins. As shown below.



5. Game rules

After the program is successfully downloaded,

LED: bit coordinates(0, 0) will be illuminated, indicating that there is a "prey" in the warehouse.

At the same time, the middle position (coordinates 2, 2) of the micro:bit dot matrix will be illuminated. This is the "hunter".

And the micro:bit dot matrix will randomly illuminate a different point, indicating "new prey."

We can capture the "prey" by pressing the A, B button to control the direction of the "hunter", and when the two points come together, the hunter has captured the prey. At this point, the buzzer will play a piece of music, and the LED:bit dot matrix will light up a new point, indicating that there will be a new "prey" in the warehouse.

!!!Note: There is no time limit for this game until the LED:bit dot matrix is lit full screen and the game will end.

If you need to restart the game, press the micro:bit reset button.