# 3.4 LED light exchange lighting

## LED light exchange lighting.hex

http://www.yahboom.net/xiazai/Tiny\_bit/3.Light%20of%20Tiny%20bit/LED%20light%20exchange%20lighting.hex **1.Preparation** 

1-1. The position of the LED lights in the robot car

1-2.Learn about the principle of LED

# 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: <a href="http://microbit.org/">http://microbit.org/</a> to enter the programming interface. Add the Yahboom package: <a href="https://github.com/lzty634158/Tiny-bit">http://microbit.org/</a> to enter the programming interface. Add the Yahboom package: <a href="https://github.com/lzty634158/Tiny-bit">https://github.com/lzty634158/Tiny-bit</a> 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/Tiny-bit, you can program. In the picture shown below, the two white squares circled by the red wire frame are the colorful lights on the Tiny-bit.



**Principle**: LED light (red, green, blue) are packaged in the LED module. We can mix different colors(256\*256\*256) by controlling the brightness of the three LEDs.

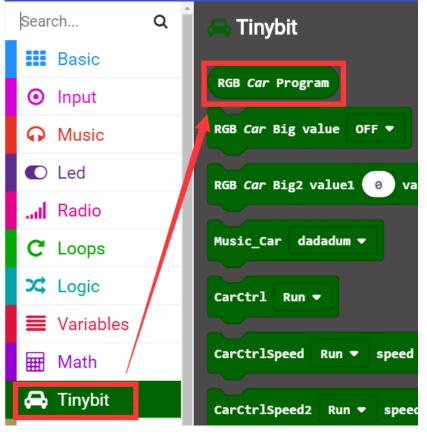
## 2.Learning goal

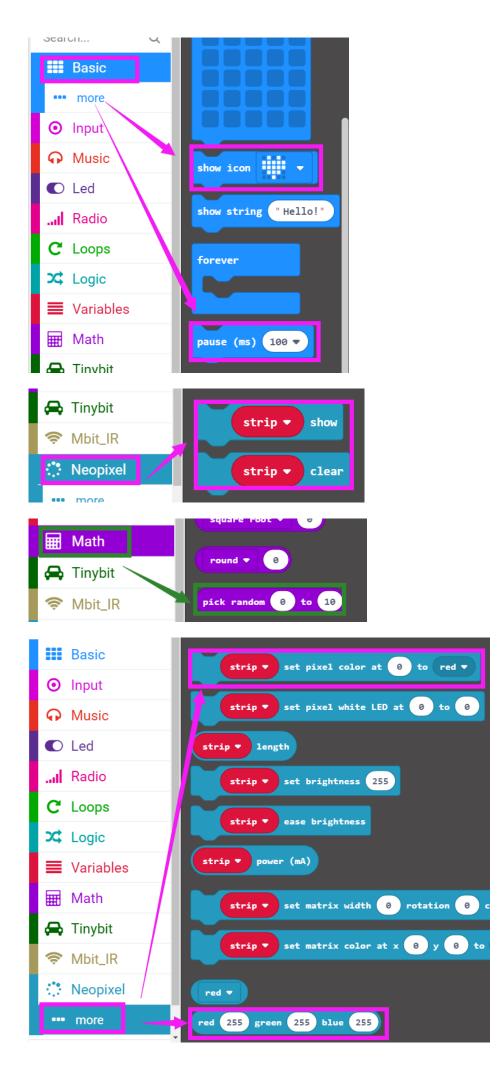
2-1.Learn how to use LED lights graphically program building blocks

2-2.We will make two LED lights of Tiny-bit light up white by programming.

## 3.Search for block

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

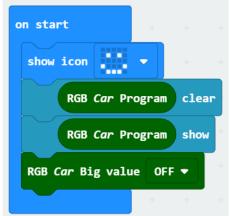






#### 4.Combine block

The summary program is shown below:





#### 5. Experimental phenomena

After the program is downloaded, we can see that a smile pattern is displayed on the dot matrix of micro:bit board. The two LED lights alternately light up different colors, as shown below.

