

### 3.3 RGB light exchange lighting

RGB light exchange lighting.hex

[http://www.yahboom.net/xiazai/Tiny\\_bit/3.Light%20of%20Tiny%20bit/RGB%20light%20exchange%20lighting.hex](http://www.yahboom.net/xiazai/Tiny_bit/3.Light%20of%20Tiny%20bit/RGB%20light%20exchange%20lighting.hex)

#### 1.Preparation

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

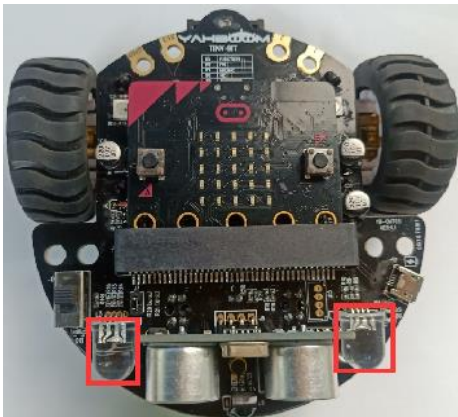
1-2.Learn about the principle of LED

#### 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: <http://microbit.org/> to enter the programming interface. Add the Yahboom package: <https://github.com/lzty634158/Tiny-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/Tiny-bit>, you can program.

In the picture shown below, the two lights with the red wire frame are the RGB Searching 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.

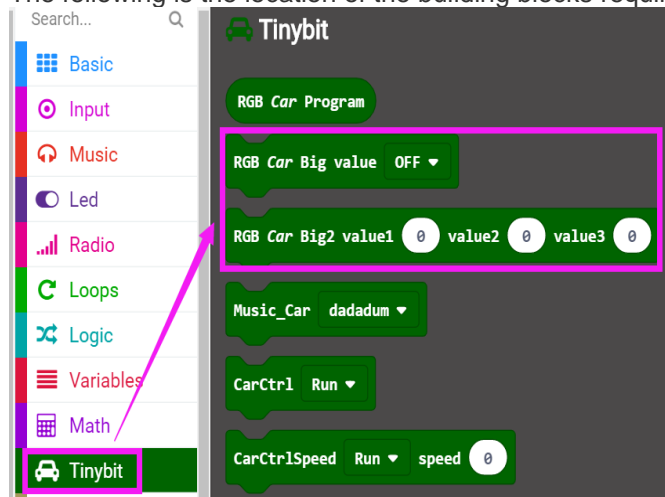
#### 2.Learning goal

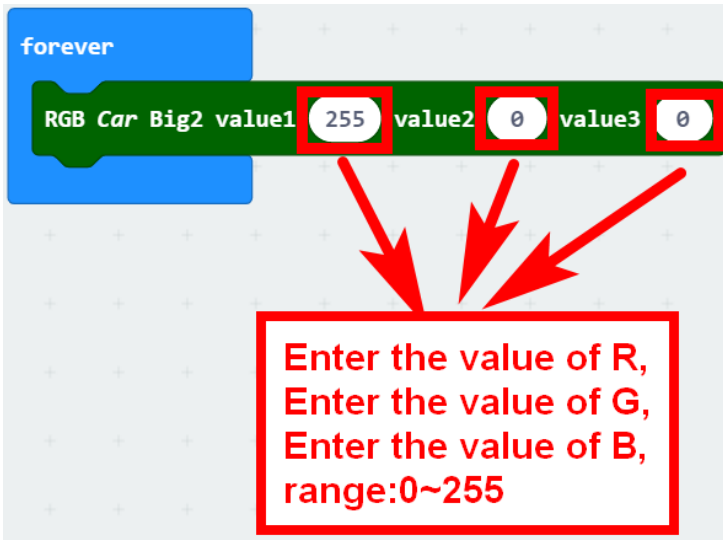
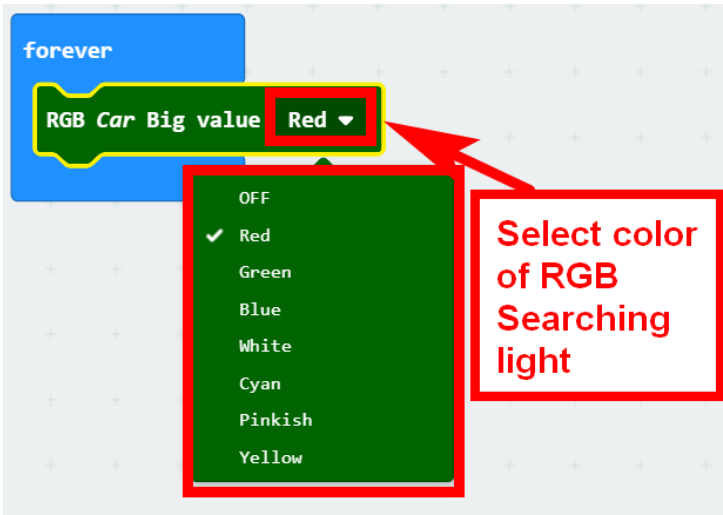
2-1.Learn how to use RGB Searching lights graphically program building blocks

2-2.In this lesson, we will learn to light up red RGB Searching lights on the Tiny-bit robot.

#### 3.Search for block

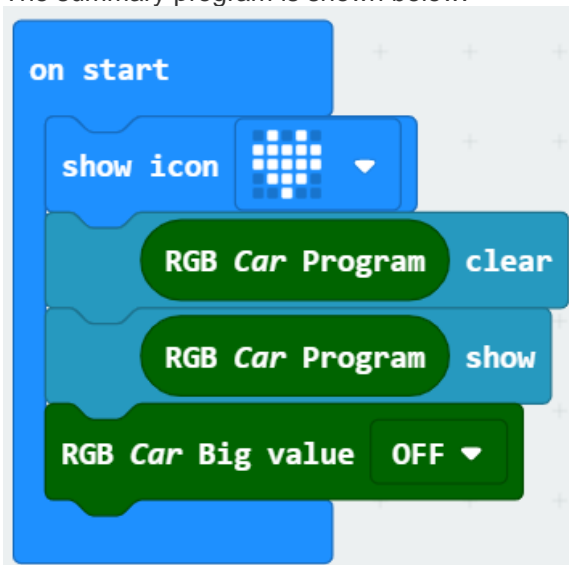
The following is the location of the building blocks required for this programming





#### 4. Combine block

The summary program is shown below:



```
forever
  RGB Car Big value Red
  pause (ms) 1000
  RGB Car Big value Green
  pause (ms) 1000
  RGB Car Big value Blue
  pause (ms) 1000
  RGB Car Big value White
  pause (ms) 1000
  RGB Car Big value Cyan
  pause (ms) 1000
```

```
RGB Car Big value Pinkish
pause (ms) 1000
RGB Car Big value Yellow
pause (ms) 1000
RGB Car Big value OFF
pause (ms) 1000
```

### 5. Experimental phenomena

After the program is downloaded, we can see that micro:bit board will display a heart pattern on the dot matrix. And the color of all RGB Searching lights is changed Red -> Green -> Blue -> White -> Cyan -> Pinkish -> Yellow every 1 seconds.

