Control Magic wheel-wheel car RGB lights

Goal

In this lesson, we will learn to control the RGB color lights of the Magic wheel car, and realize the full and partial control of the RGB color lights of the car.

Programming method

(1) online programming: connect micro:bi with the computer through the USB cable, open my computer, find the MICROBIT memory disk and open it, double-click ICROBIT.HTM, and open the browser programming page. After creating a new project, click advanced, click expand, enter the extension package address https://github.com/emakefun/pxt-magicbit.git and press enter or search, add the Microbit extension package, you can start programming control car RGB light .

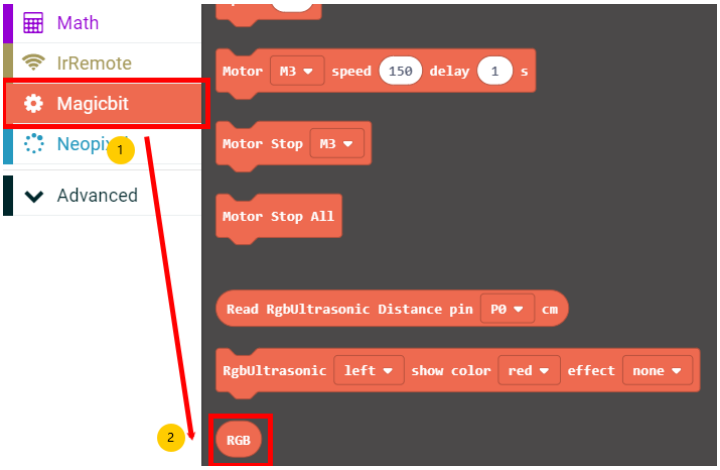
(2) offline programming: open the offline programming software, enter the programming interface, create a new project, click advanced, click expand, enter the address https://github.com/emakefun/pxt-magicbit.git of the extension package, press enter or search, add the Microbit extension package, and then you can start programming control the car RGB light .

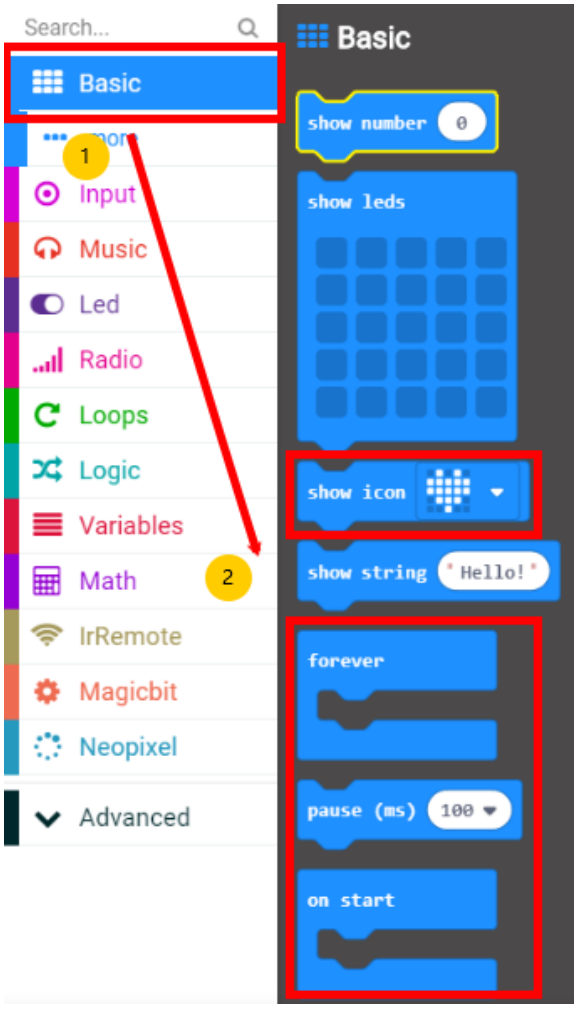
RGB light principle

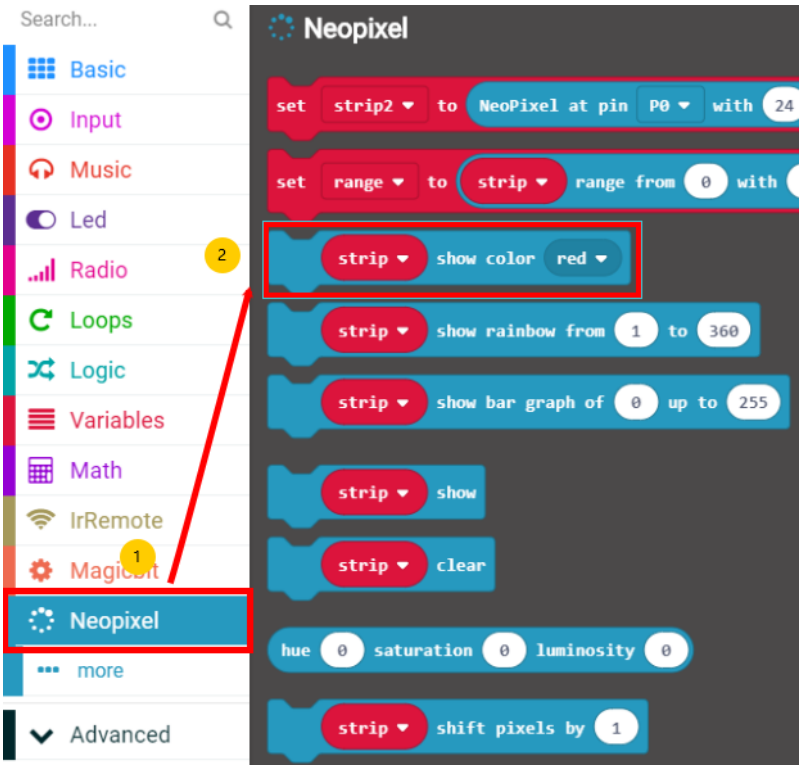
RGB is designed from the principle of color luminescence, the popular point says its color mixture way is like having red, green, blue 3 lamps, when their light superposition each other, color is mixed, and brightness is equal to the sum of brightness, the more mixed brightness is higher. The red, green, and blue color channels have 255 levels of brightness for each color, and the "light" is turned off at 0.

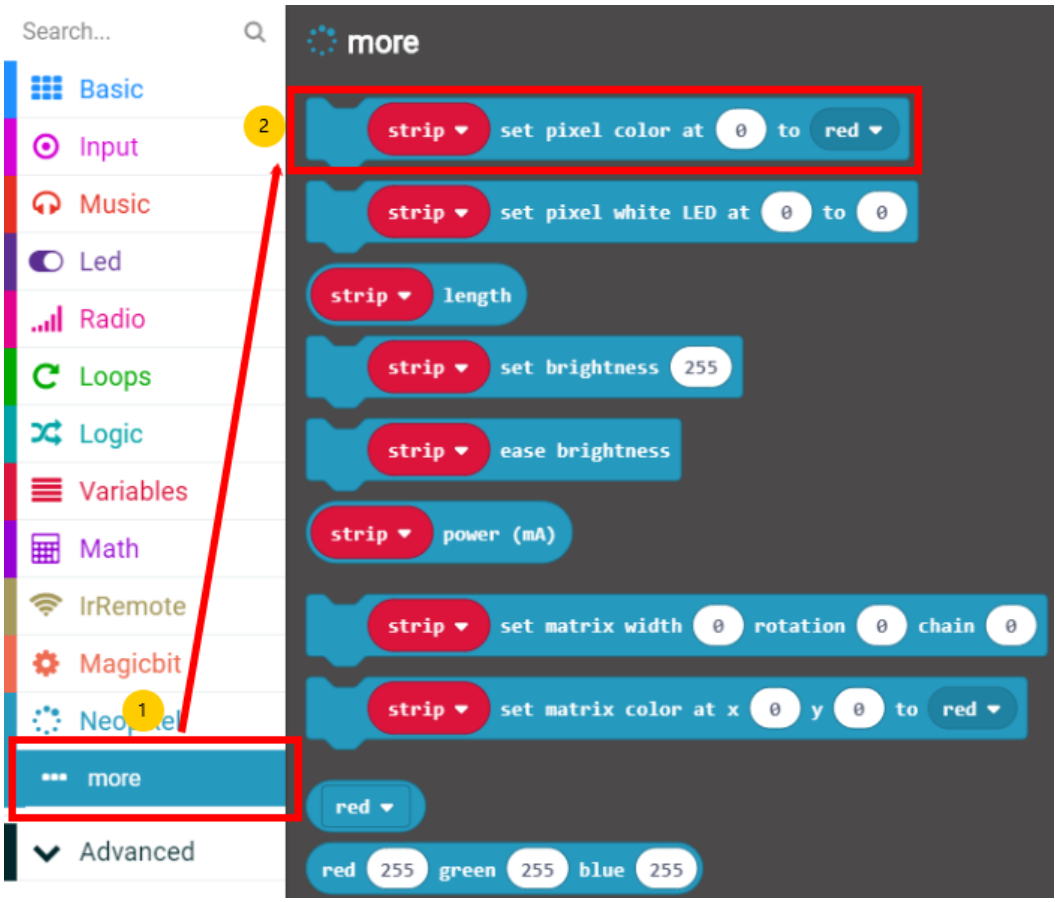
Block programming

1 Location of building blocks required

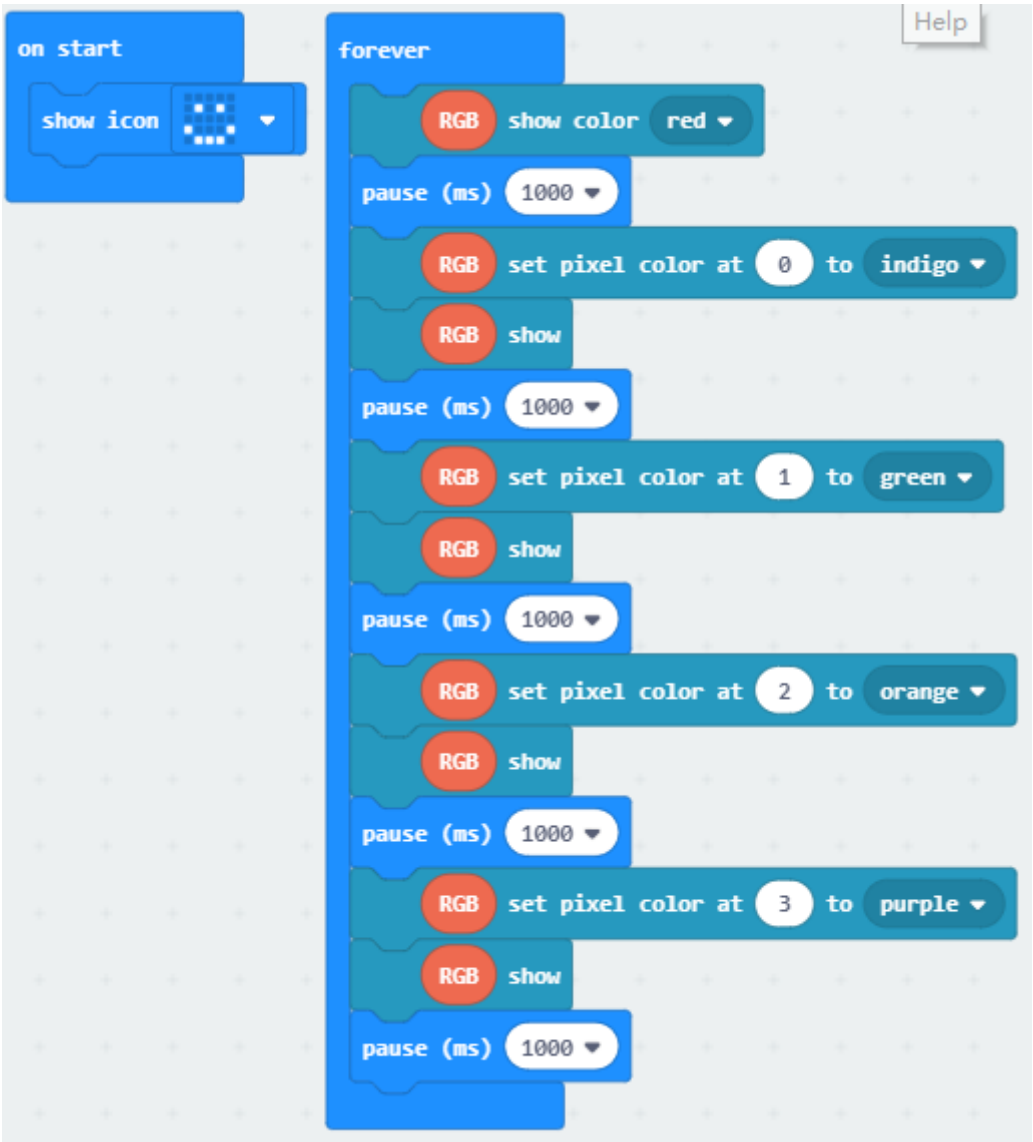

Math
IrRemote
Magicbit
Neopi
Advanced
1
2
Motor M3 speed 150 delay 1 s
Motor Stop M3
Motor Stop All
Read RgbUltrasonic Distance pin P0 cm
RgbUltrasonic left show color red effect none
RGB


Search...
Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
IrRemote
Magicbit
Neopixel
Advanced
1
2
Basic
show number 0
show leds
show icon
show string "Hello!"
forever
pause (ms) 100
on start





1、Final program building block combination



The experimental results

After downloading the program to the microbit motherboard of the Magic wheel car, turn on the main switch of the expansion board, and the microbit will display a smiling face. The RGB light of the Magic wheel car will be all red, then the first light will turn indigo, the second light will turn green, the third light will turn orange, and the fourth light will turn purple, and so on.