Control Magic wheel car motor

Goal

In this lesson, we will learn to control the motor of Magic wheel car to realize the moving forward 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 motor .

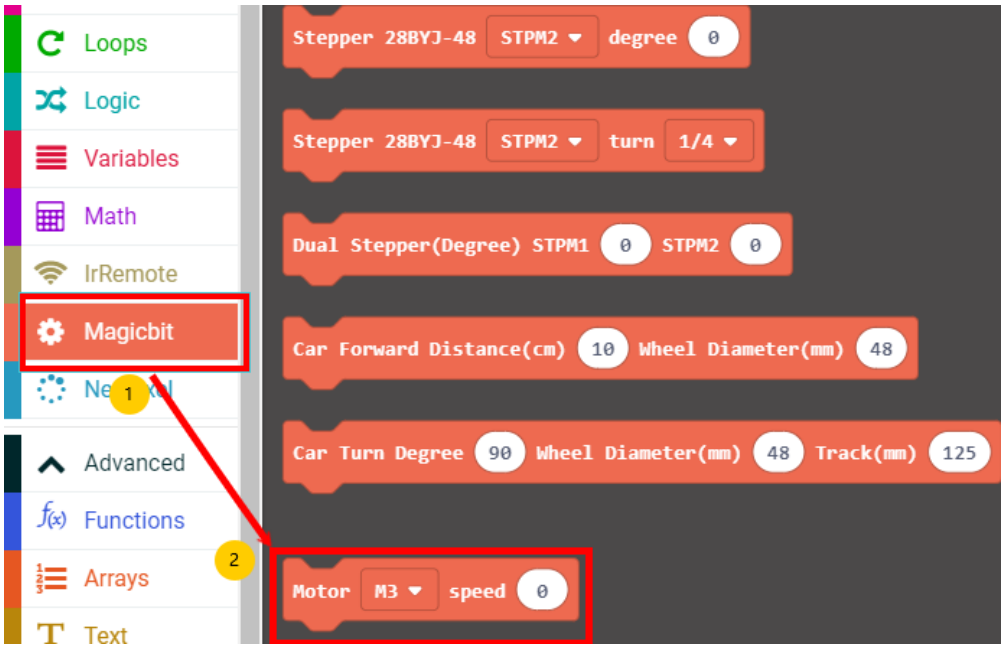
(2) offline programming: open the offline programming software, enter the programming interface, create a new project, click advanced, click expand, enter the address https://github.com/emakefun/pxt-magicbit.git of the extension package, press enter or search, add the Microbit extension package, and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

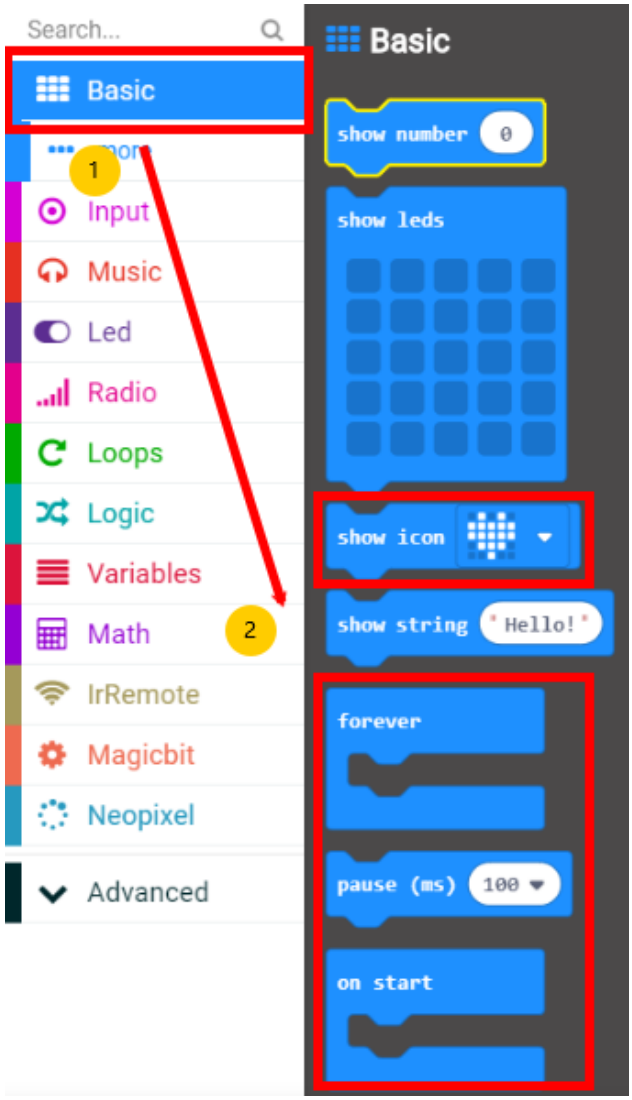
The control principle

Just as a waterwheel in a stream can convert the energy of water into mechanical energy, a motor can turn electrical flow into motion. What happens to the waterwheel if you change the direction of the current? It will change the direction of rotation. The same goes for dc motors. Each motor has two connections, one to the negative terminal of the dc power supply and the other to the positive terminal of the dc power supply. If the positive and negative connection direction of the motor joint is changed, the rotation direction of the motor will also change with the direction of the current.

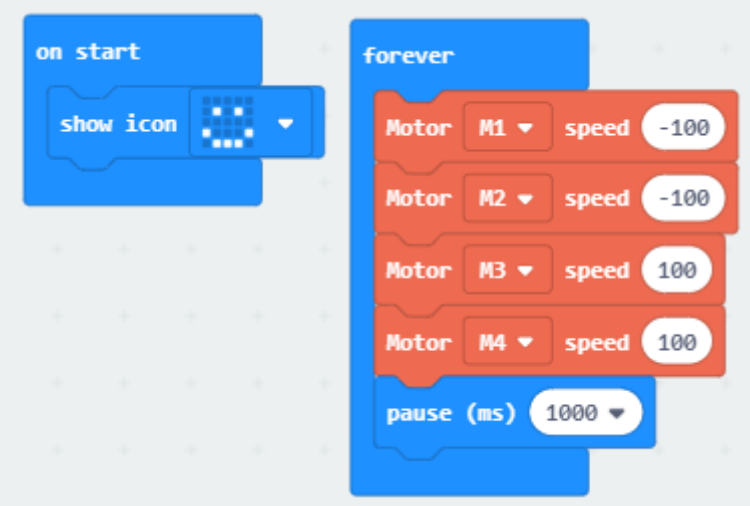
Block programming

1 Location of building blocks required





1、 Final program building block combination



Wiring

The motor of the front wheel on the right side of the car is connected to the extension plate M2 interface

The motor of the rear wheel on the right side of the car is connected to the expansion board M1 interface

The motor of the front wheel on the left side of the car is connected to the M3 interface of the expansion board

The motor of the rear wheel on the left side of the car is connected to the expanded M4 interface

The experimental results

After downloading the program to the microbit motherboard of the Magic wheel car, open the main switch of the expansion board, the microbit will display a smiley face, and the Magic wheel car will advance.