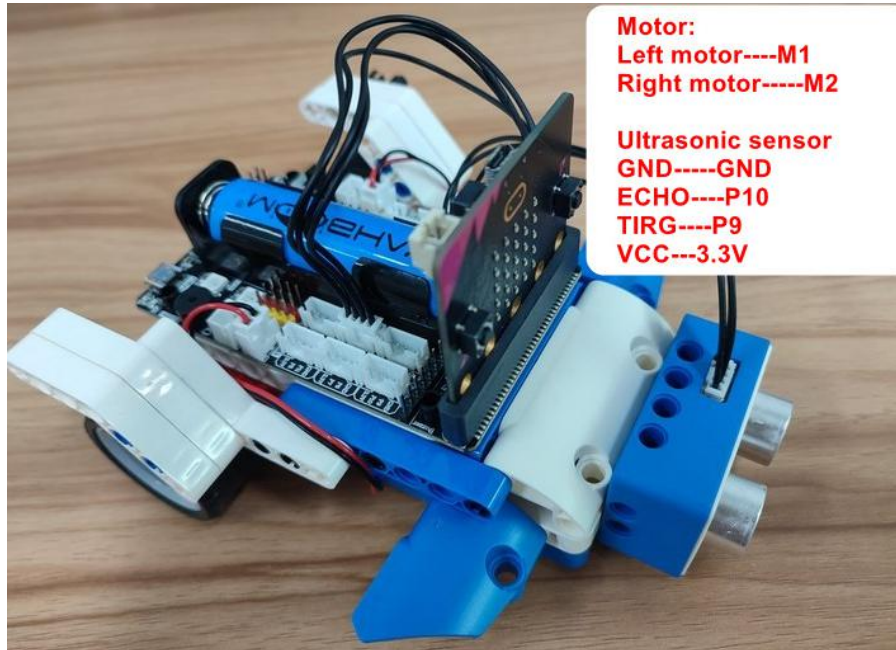**Avoiding car**

1.Learning target

In this course, we will learn how to use Micro:bit and ultrasonic module to make a avoiding car.

2. Preparation

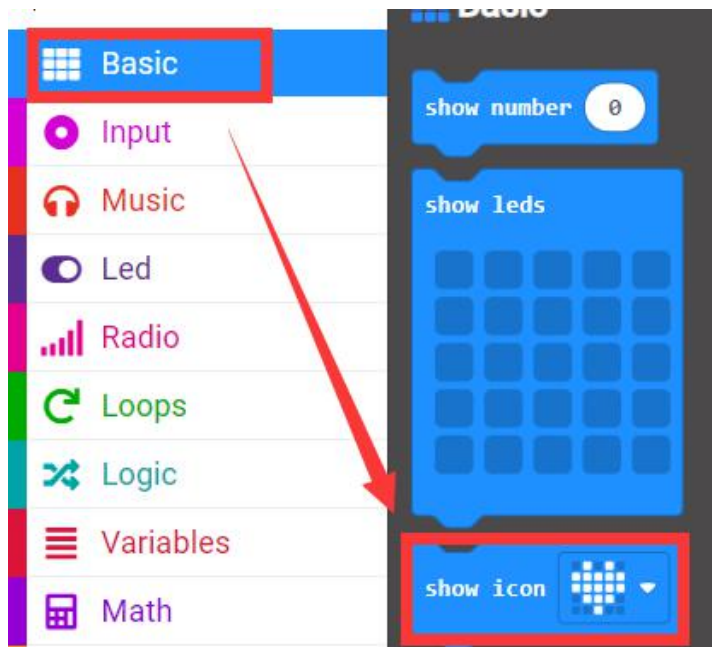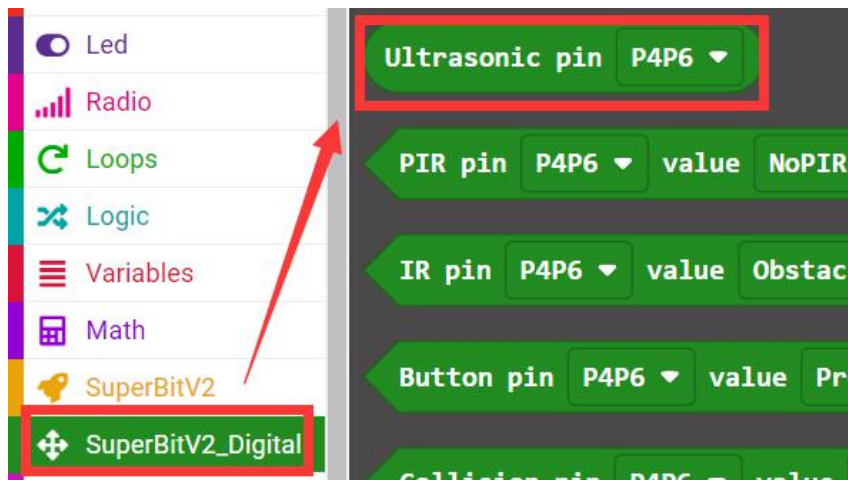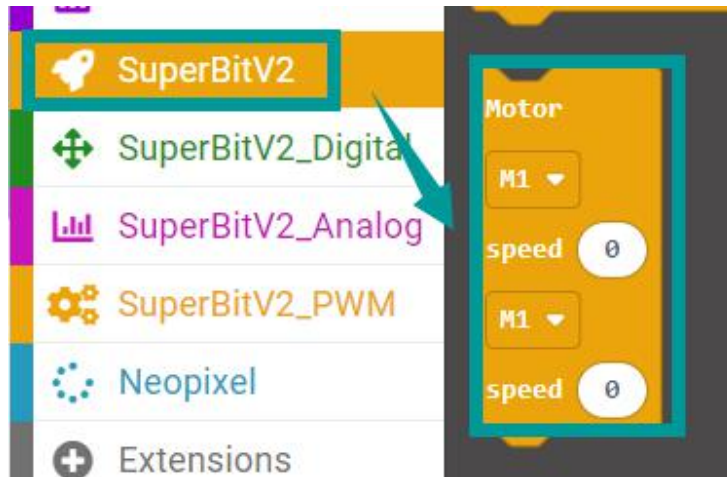Connect the module to Micro:bit board by expansion board, as shown below.
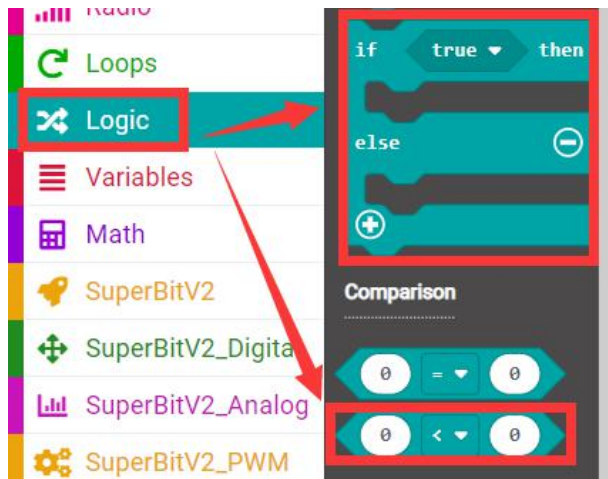

3.Programming method

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/YahboomTechnology/SuperBitLibV2 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/YahboomTechnology/SuperBitLibV2 , you can start programming.

4.Looking for blocks

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

SuperBitV2

SuperBitV2_Digital

SuperBitV2_Analog

SuperBitV2_PWM

Neopixel

Extensions

Motor

M1 ▼

speed 0

M1 ▼

speed 0

Led

Radio

Loops

Logic

Variables

Math

SuperBitV2

SuperBitV2_Digital

Ultrasonic pin P4P6 ▼

PIR pin P4P6 ▼ value NoPIR

IR pin P4P6 ▼ value Obstacl

Button pin P4P6 ▼ value Pre

Collision pin P4P6 ▼ value

Basic

Input

Music

Led

Radio

Loops

Logic

Variables

Math

show number 0

show leds

show icon ▦ ▼

5.Combine block

The summary program is shown below.

5. Phenomenon

After the program is downloaded successfully. Micro:bit dot matrix will display a smiling face. When the ultrasonic detects that the distance between obstacles is less than 10cm, the car will turn right to avoid obstacles. If there are no obstacles within 10cm, the car will go straight.