

Welcome device

1. Purpose

In this lesson, we will learn how to use micro:bit to drive the speech synthesis module and human body infrared module to realize the English broadcast function.

2. 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/Speech> to start programming.

Mode 2 offline programming:

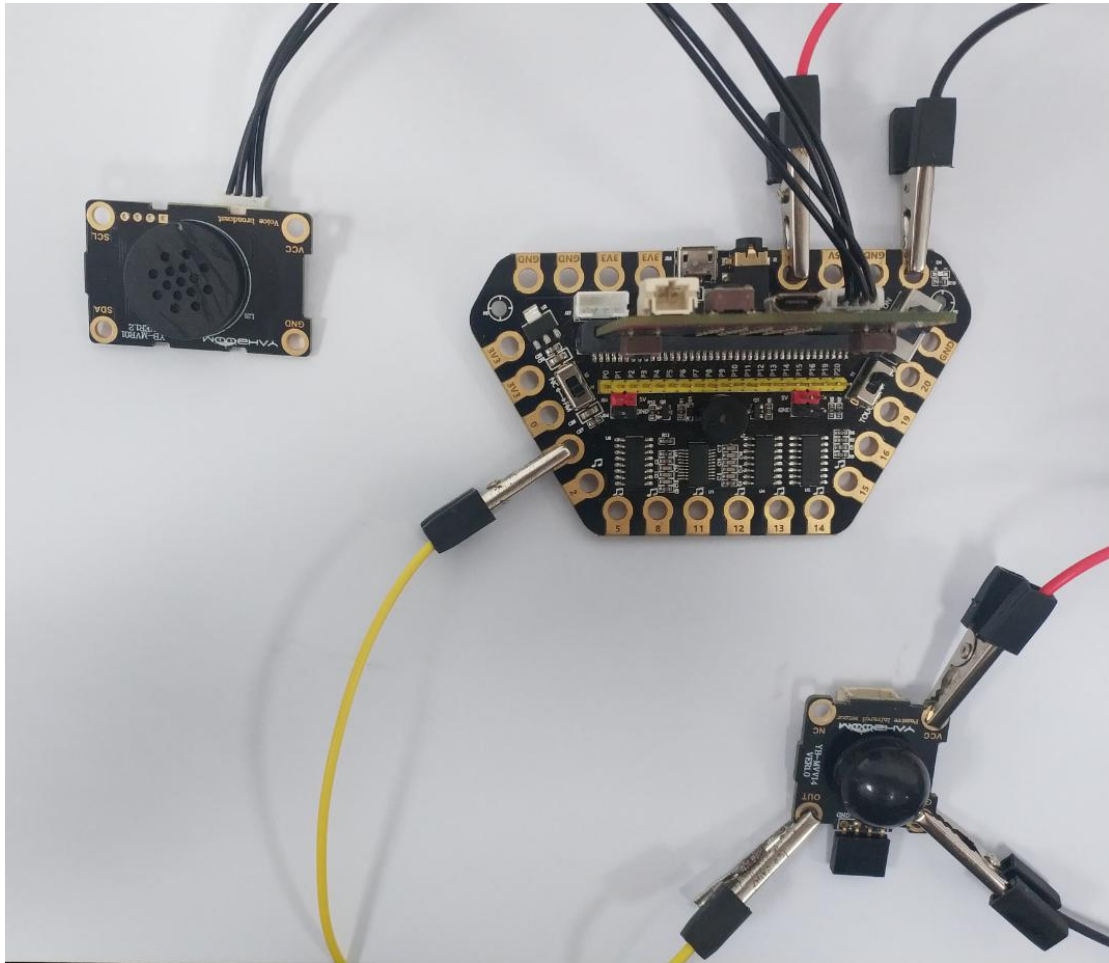
We need to open the offline programming software. After the installation is complete, enter the programming interface, click[New Project]. Add Yahboom package: <https://github.com/YahboomTechnology/Speech>, you can start programming.

3. About wiring

Speech synthesis module	Micro:bit board
SCL	19
SDA	20
VCC	5V/3.3V
GND	GND

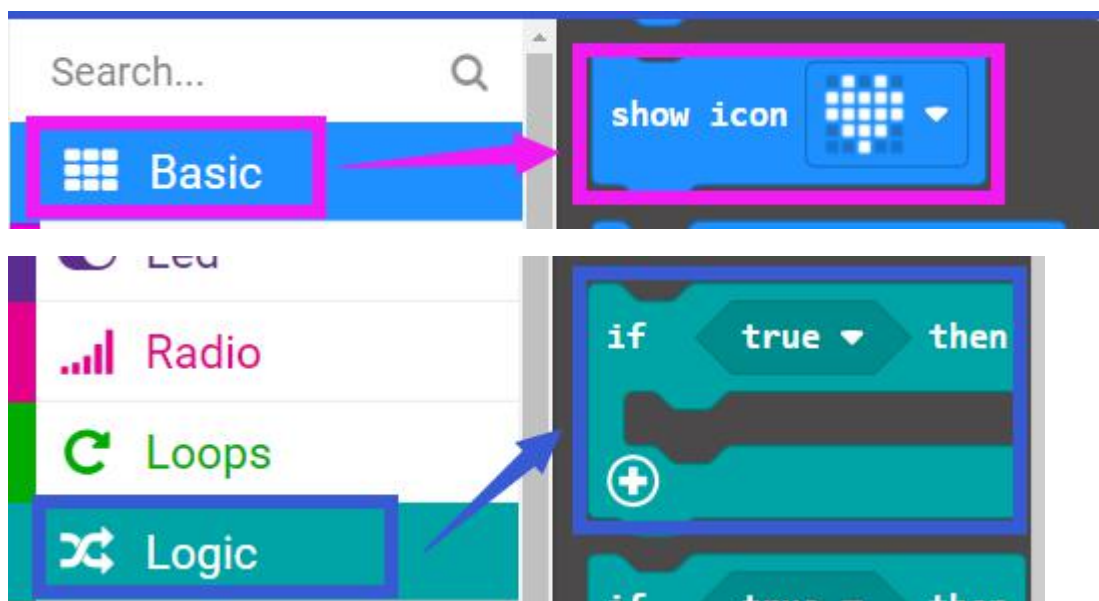
Human body infrared module	Micro:bit board
OUT	P1
VCC	5V/3.3V
GND	GND

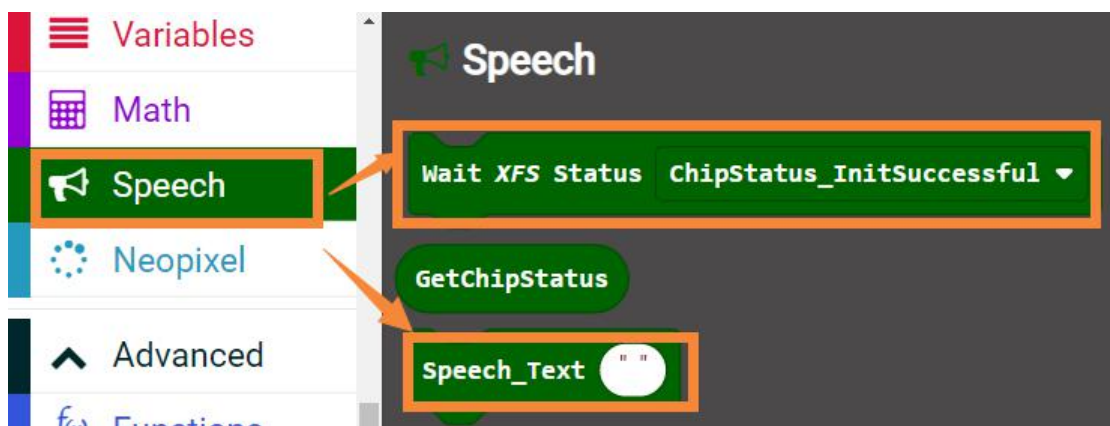
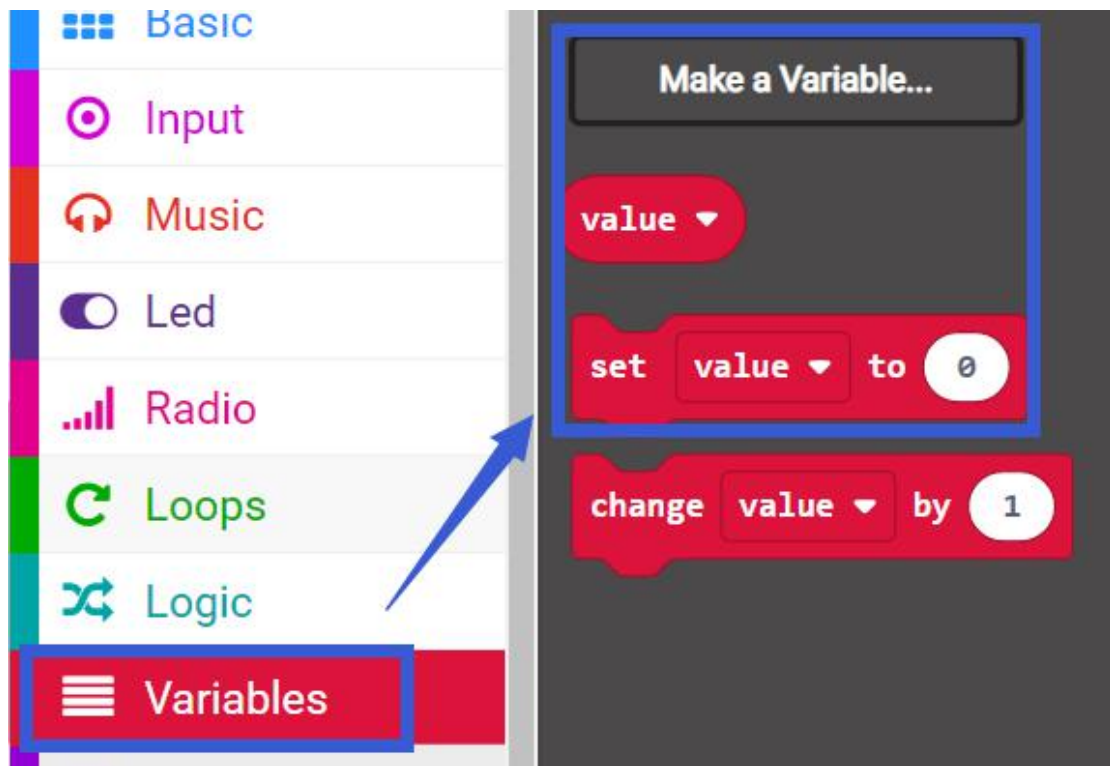
Note: As shown in the figure below, we use the micro:bit alligator clip expansion board.



4. Combine building blocks

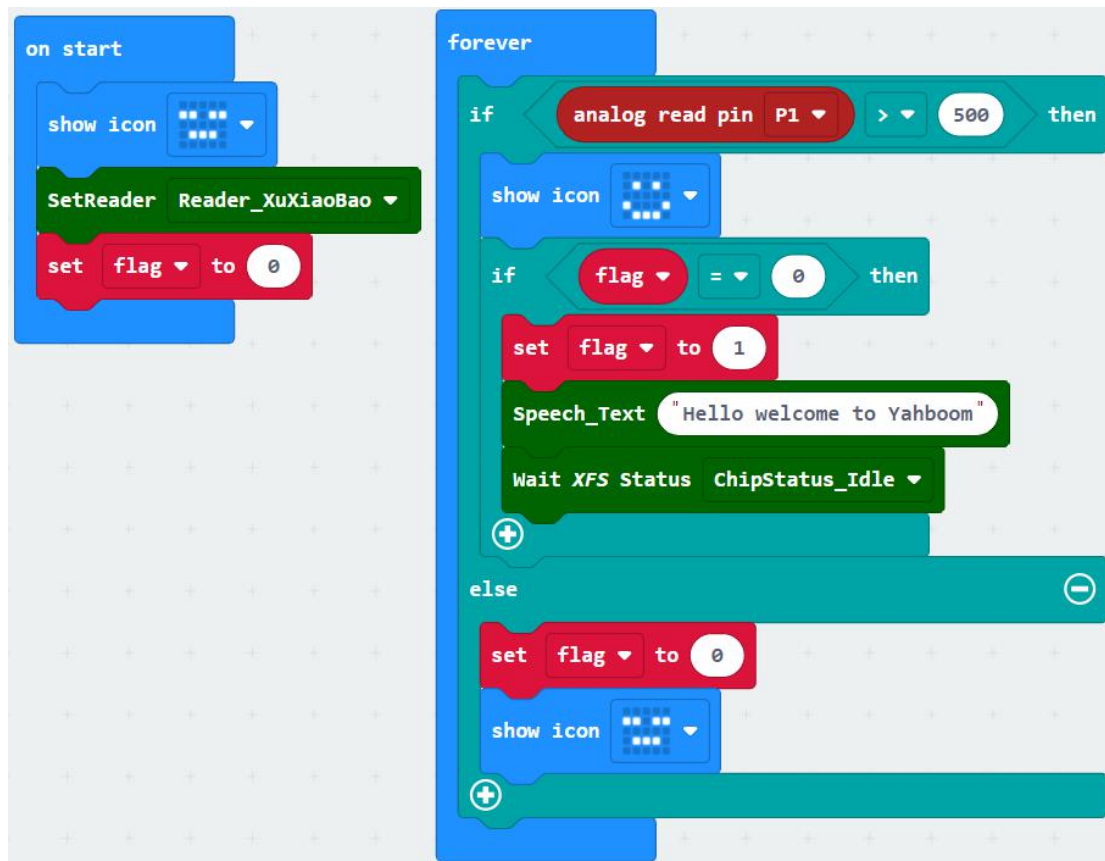
We need to use the following programming building blocks.





We judge whether the human body is detected by reading the analog value of P1 pin. When the analog value of the P1 pin is greater than 500, it is determined that a human body has been detected.

The summary program is shown below.



5. Experimental phenomenon

After the program is downloaded successfully, the dot matrix shows a face expression.

When a person approaches the human body infrared module, speech synthesis module will play "Hello welcome to Yahboom".