

## Beckon-robot

### 1.Learning goals

In this lesson, we mainly learn how to use the input building block to make the micro:bit read whether the P2 pin is touched and control the servo.

When the P2 and GND of the micro:bit basic expansion board are touched at the same time, the fixed "small hand" of the servo will swing and wave.

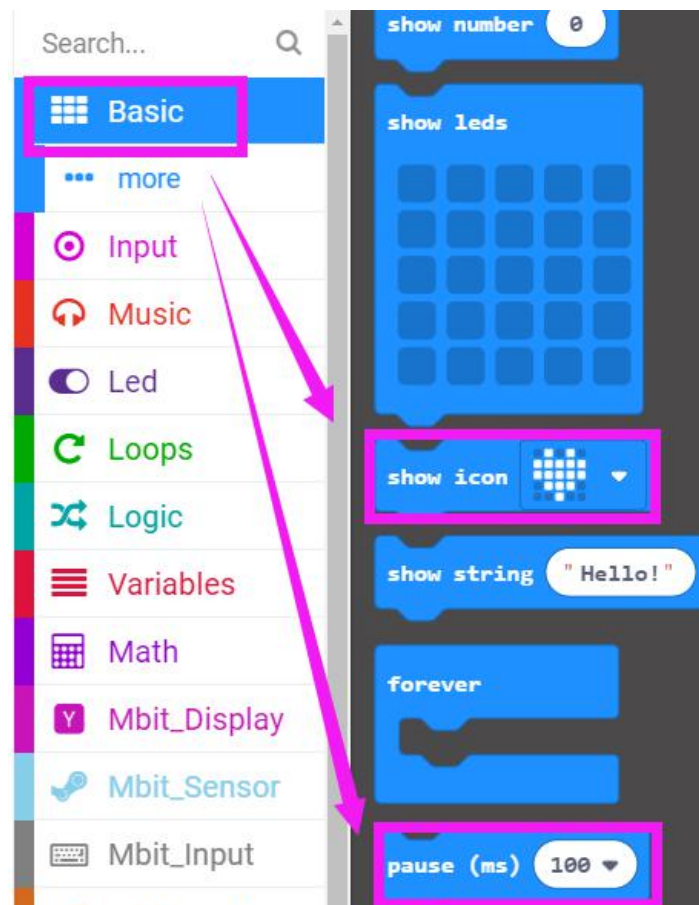
### 2.Programming method:

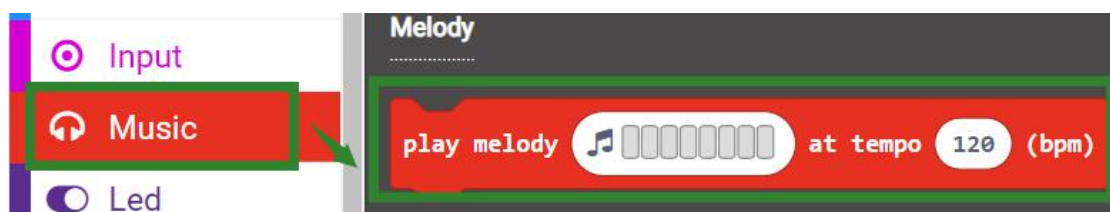
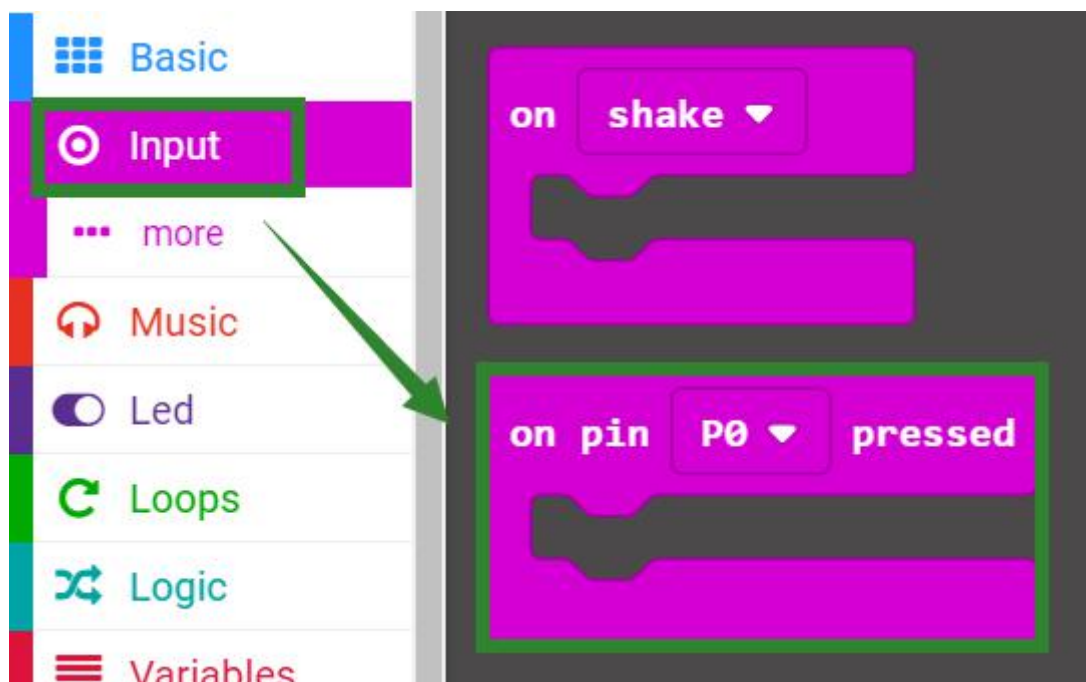
**Mode 1 online programming:** First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: <http://microbit.org/> to enter the programming interface. Add the Yahboom package [https://github.com/lzty634158/yahboom\\_mbit\\_en](https://github.com/lzty634158/yahboom_mbit_en) 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/yahboom\\_mbit\\_en](https://github.com/lzty634158/yahboom_mbit_en) , you can program.

### 3.Looking for blocks

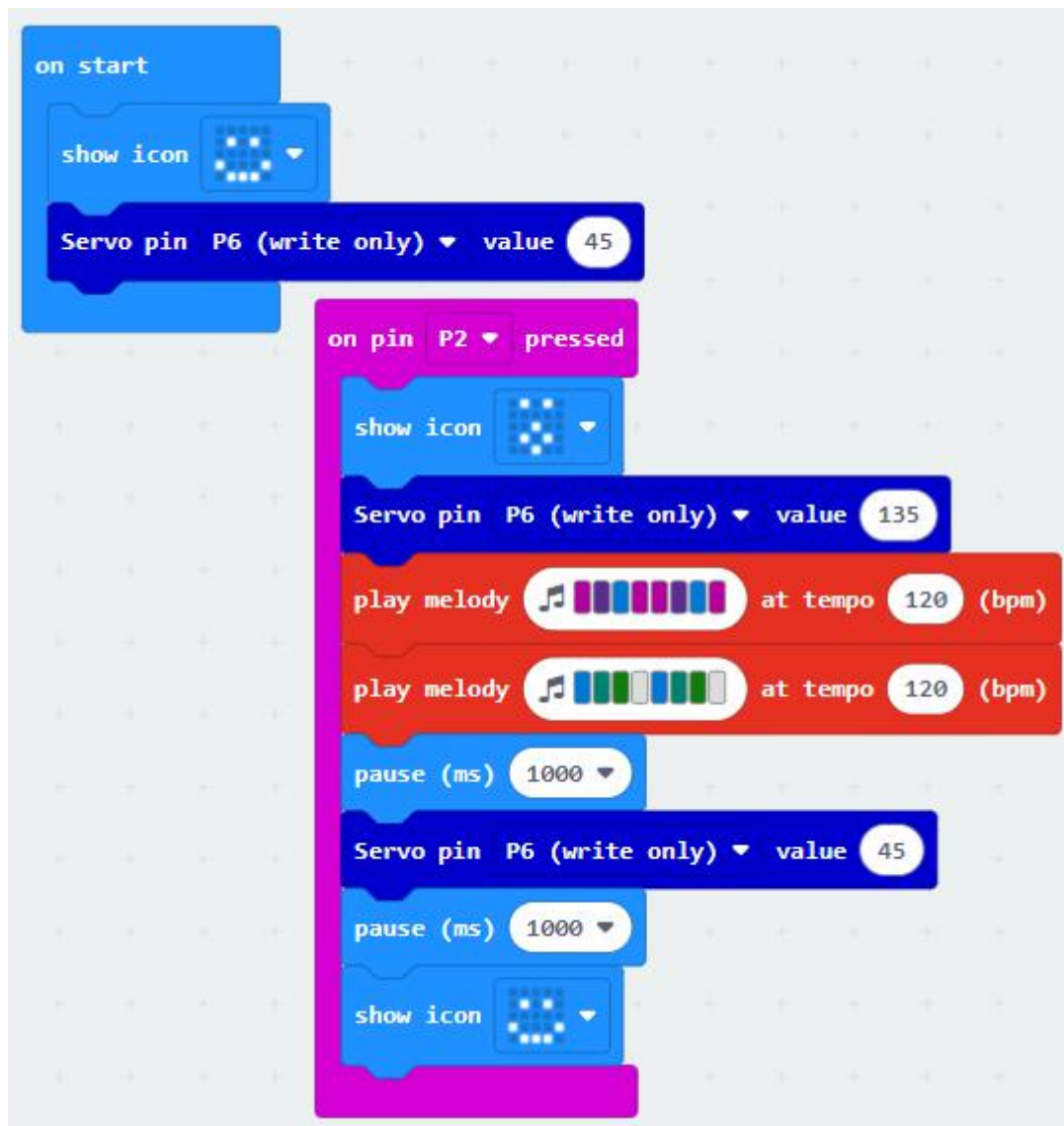
The following is the location of the building blocks required for this programming.



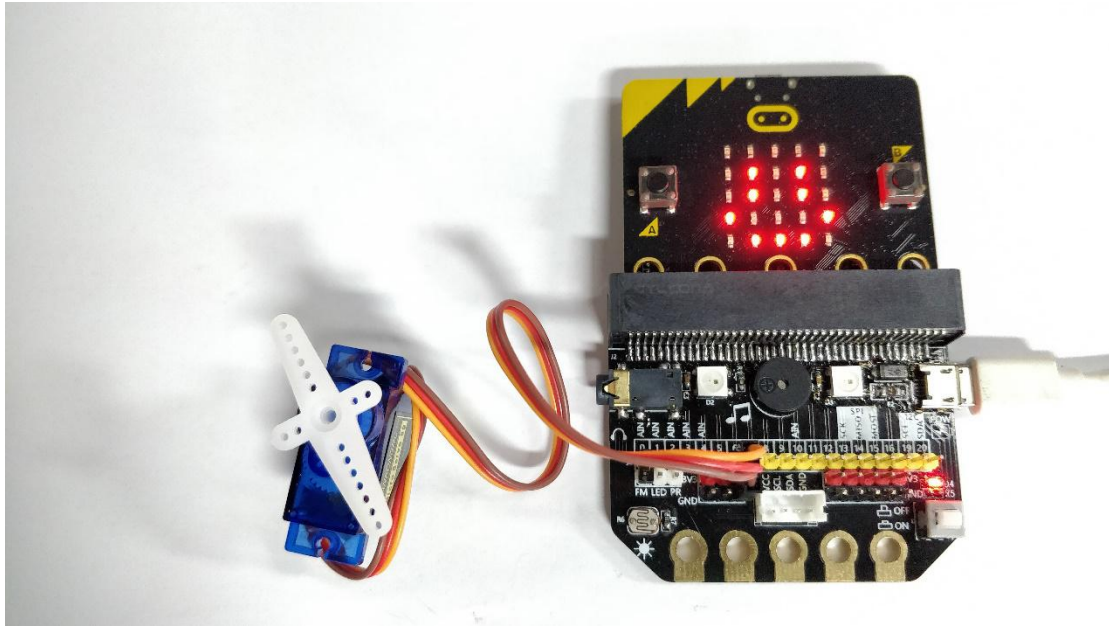


#### 4.Combine building block

The summary program is shown below:



**Note:** The jumper cap needs to be installed on the P0 and FM, P2 and PR pins on the basic expansion board. As shown below.



## 5. Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix display a smile, and the servo is turned to 45°; when P2 and GND are touched at the same time, the micro:bit dot matrix will display a surprise expression, while playing the music “power up” and servo to 145°.

After 1 second, the servo turn to 45°, and the micro:bit dot matrix display smile.