

## Small\_windmill

### 1.Learning goals

In this lesson, we mainly learn how to control 270° block servo by micro:bit and Super:bit expansion board.

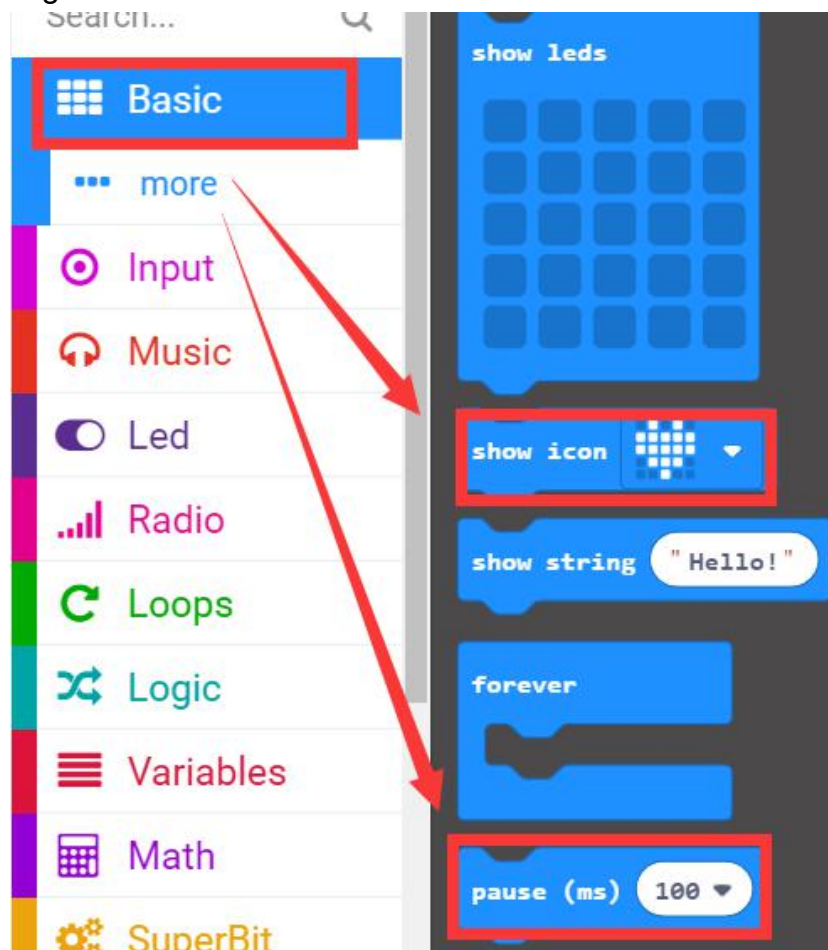
### 2.Programming method

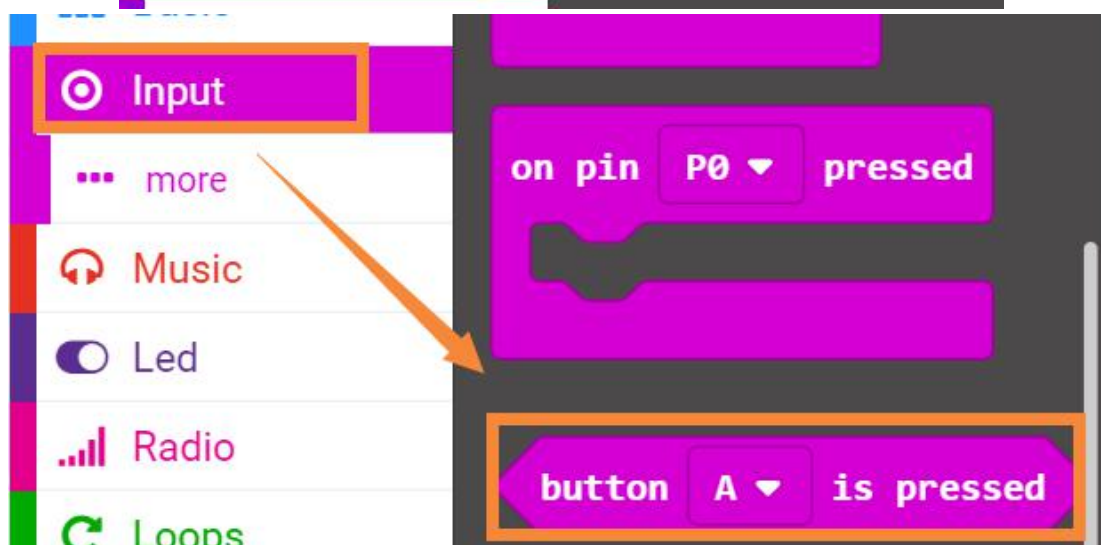
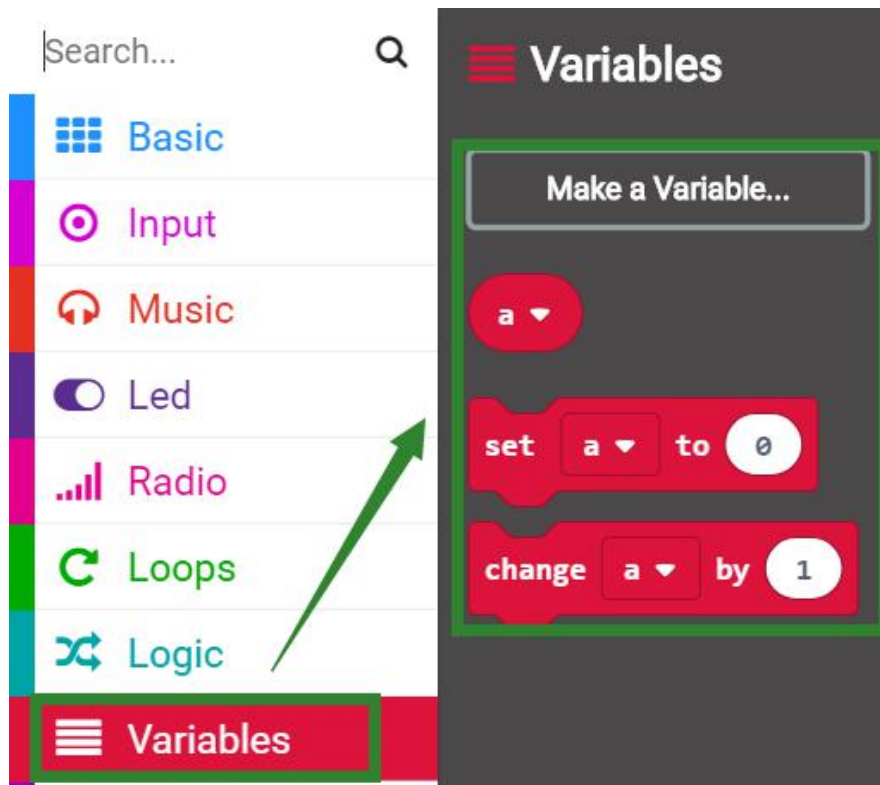
**Mode 1 online programming:** First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: <http://microbit.org/> to enter the programming interface. Add the Yahboom package <https://github.com/lzty634158/SuperBit>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

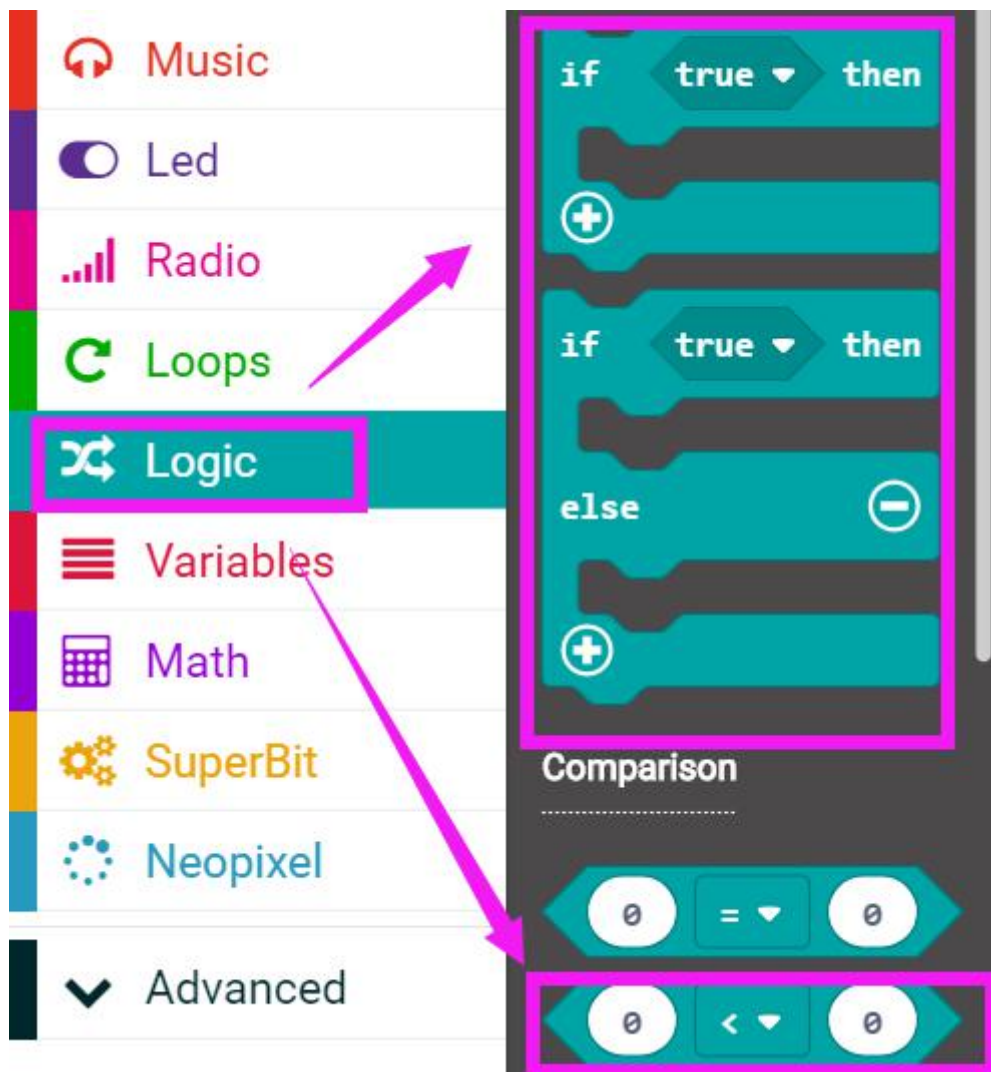
**Mode 2 offline programming:** We need to open the offline programming software. After the installation is complete, enter the programming interface, click **【New Project】**, add Yahboom package: <https://github.com/lzty634158/SuperBit>, you can program.

### 3.Looking for blocks

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

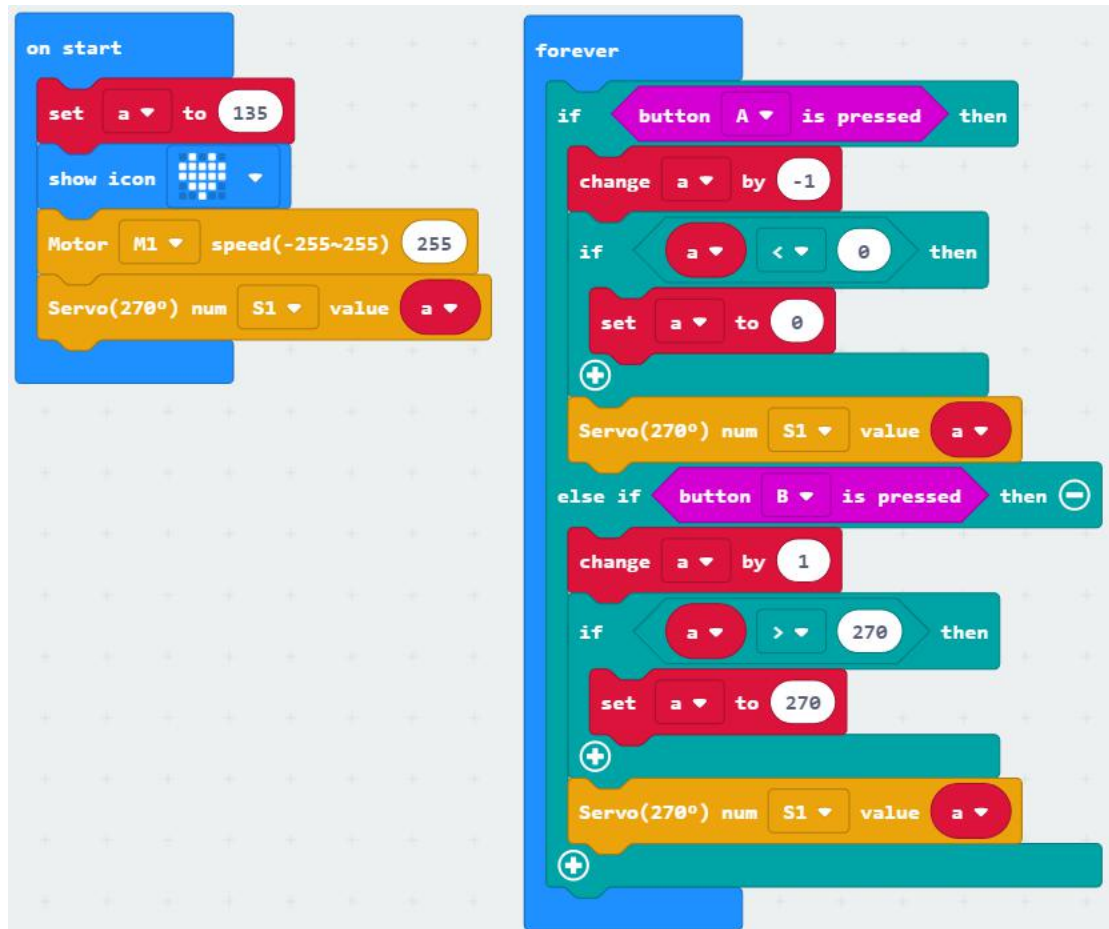




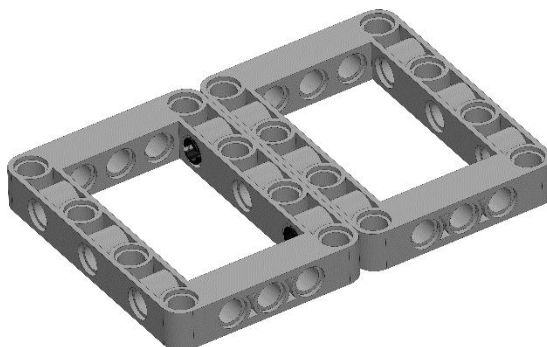
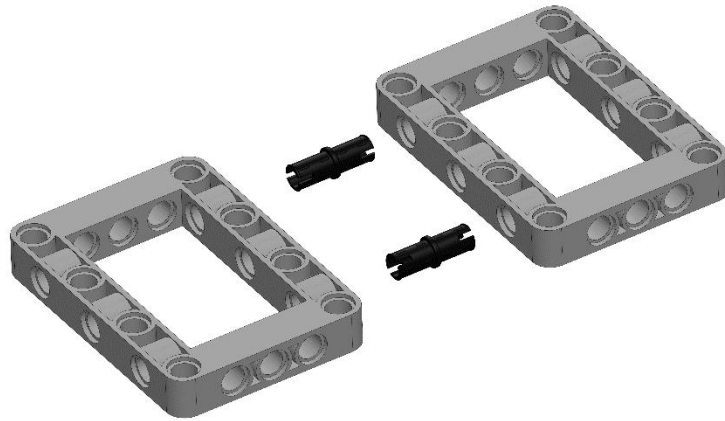


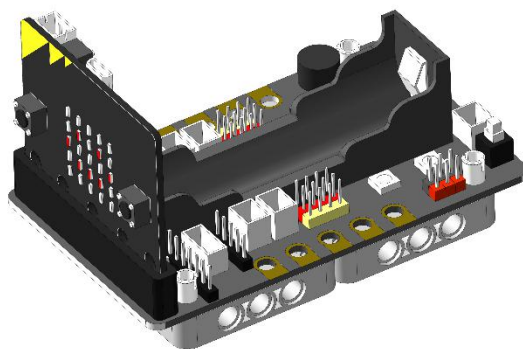
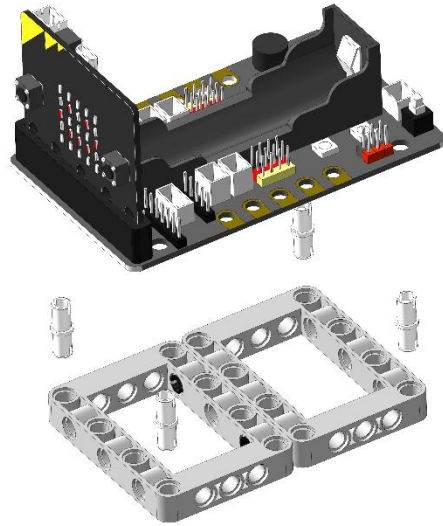
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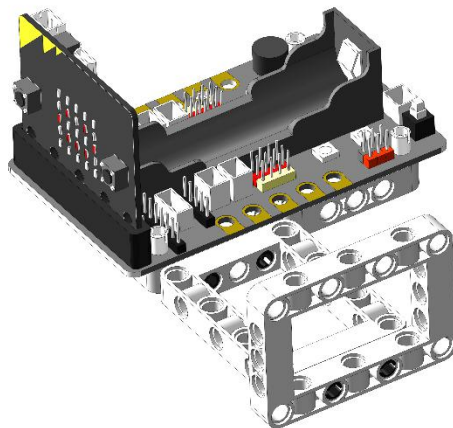
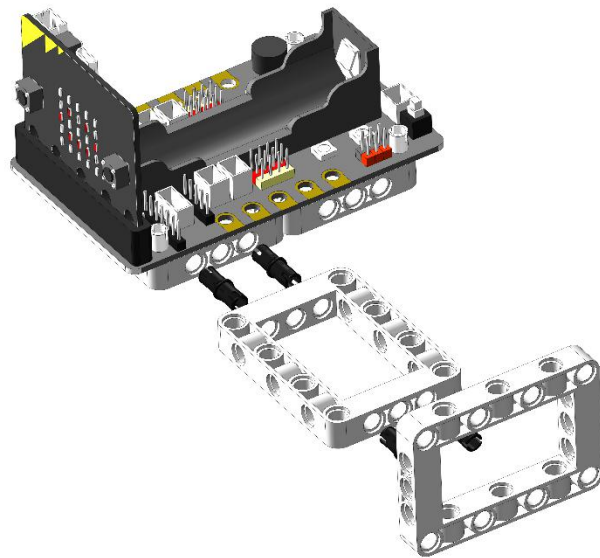
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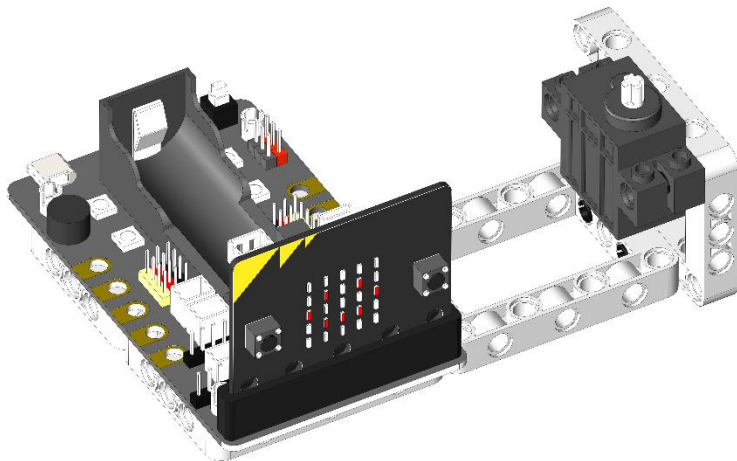
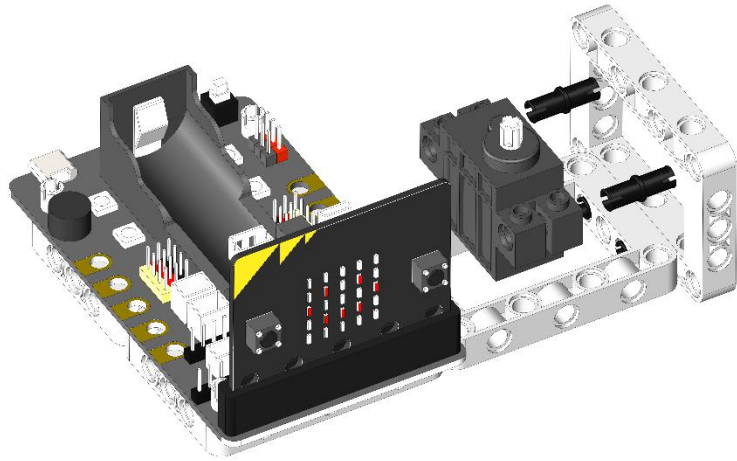
#### 4. Building block assembly steps



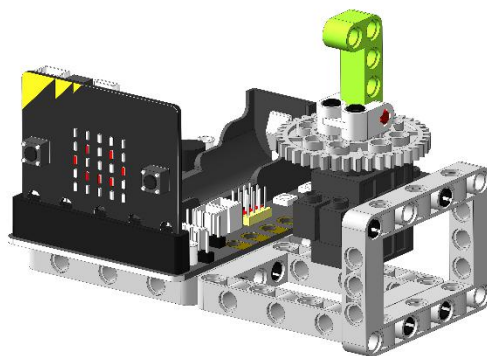
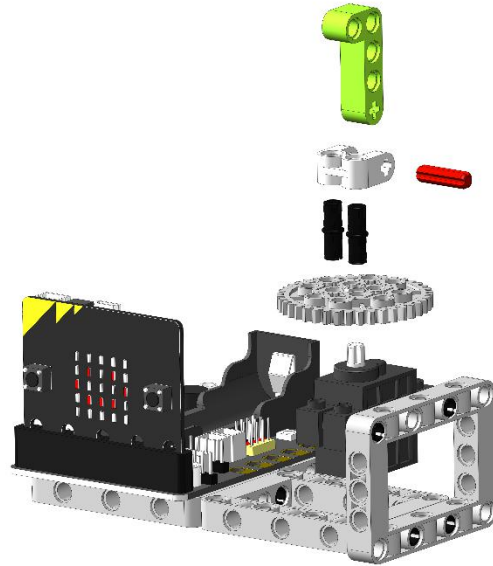


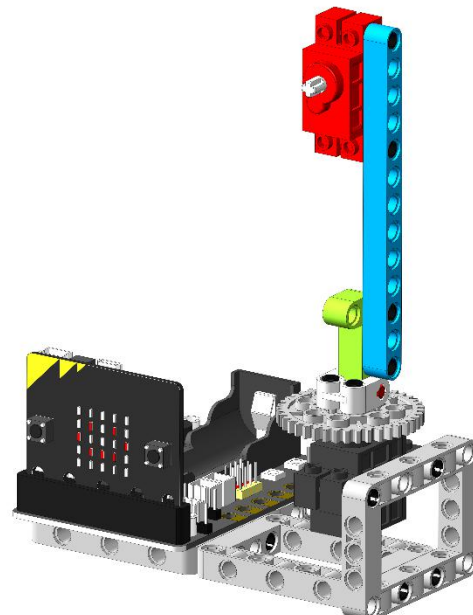
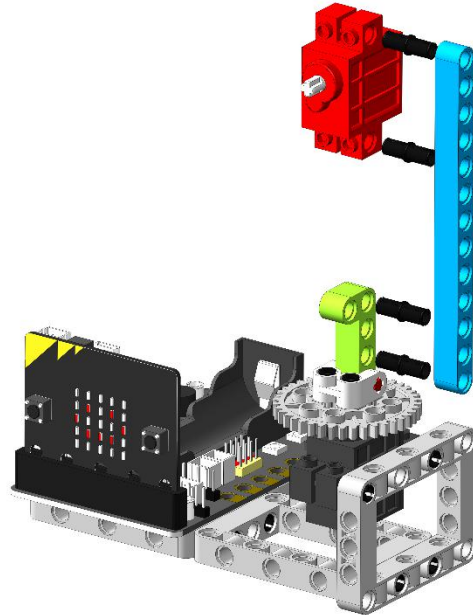


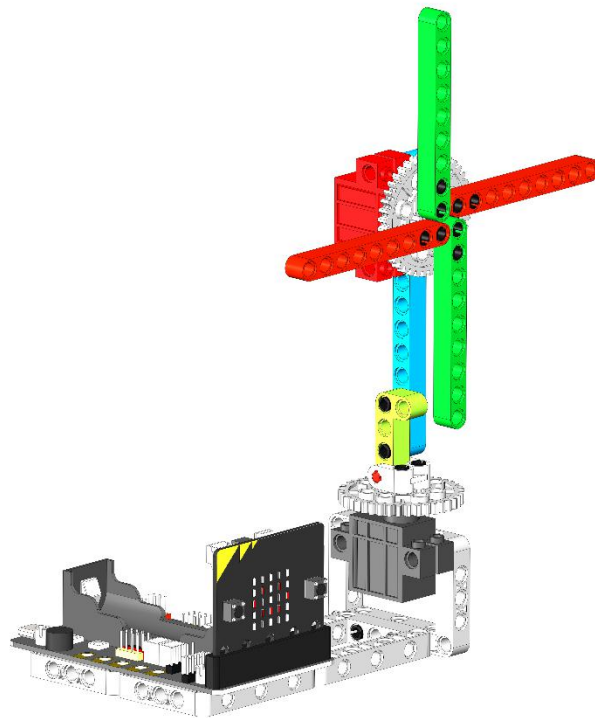
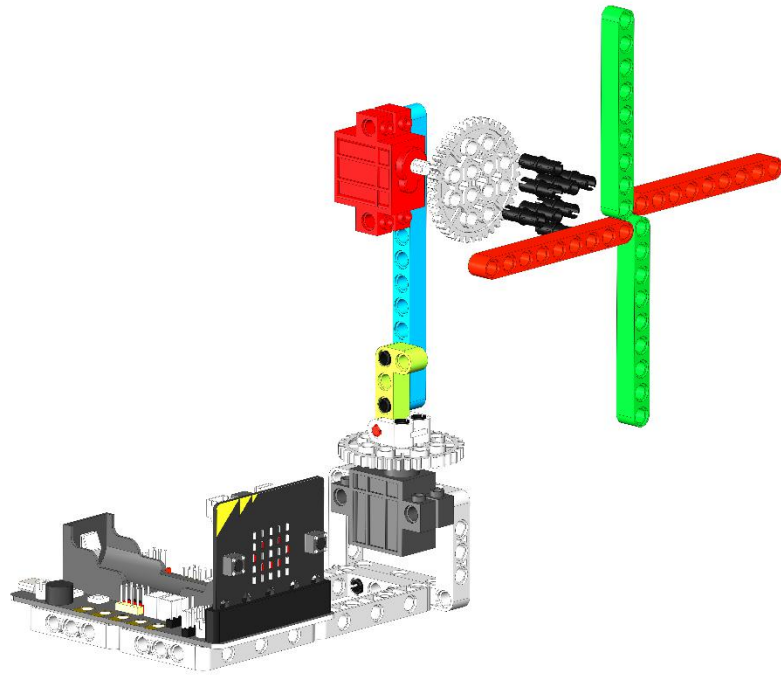












### Hardware connection

The 270° block servo connect to the S1 interface of the Super:bit

expansion board. The orange wire of the 270° block servo is connected to the yellow pin of S1, the red wire of the 270° block servo is connected to the red pin of S1, and the brown wire of the 270° block servo is connected to the black pin of S1.

## 5. Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix will display the heart pattern.

The building block motor rotates forward, the speed of 255, 270° building block servo is turned to 135°; press the A button to turn the windmill to the left, press the B button to turn windmill to the right.

If you need to start over, press the reset button on the back of the micro:bit board.