Carousel Micro:bit handle control

! Note: Due to the building block structure, the carousel only supports clockwise rotation. That is, the speed needs to be set to -255 during programming, and cannot be set to a positive number.

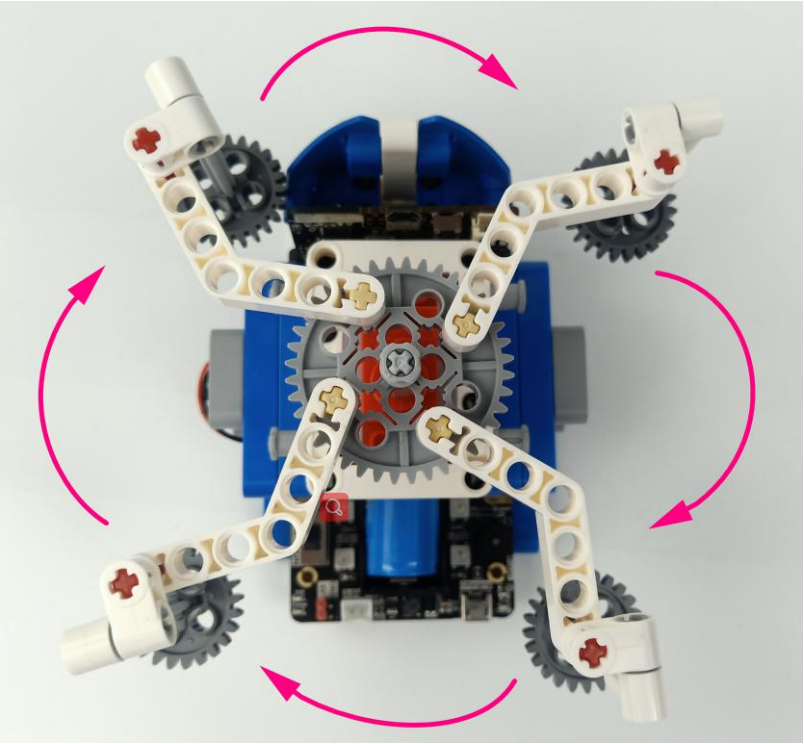
1.Learning goals

In this course, we mainly learn how to use handle control Carousel.

2.Building block assembly steps

For the building block construction steps, please refer to the installation manual or building block installation picture of [Assembly course]-[Carousel].

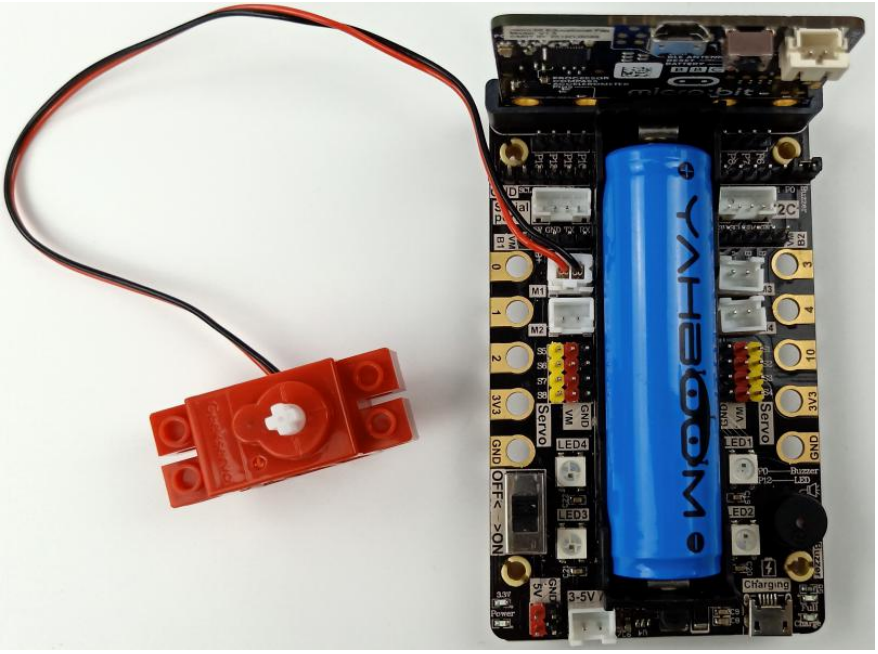
Please make sure that the direction of the L-shaped hole, as shown below.



3.Wiring of motor

The motor wiring is inserted into the M1 interface of the Super:bit expansion board, and the black wire is close to the battery side;

As shown below.



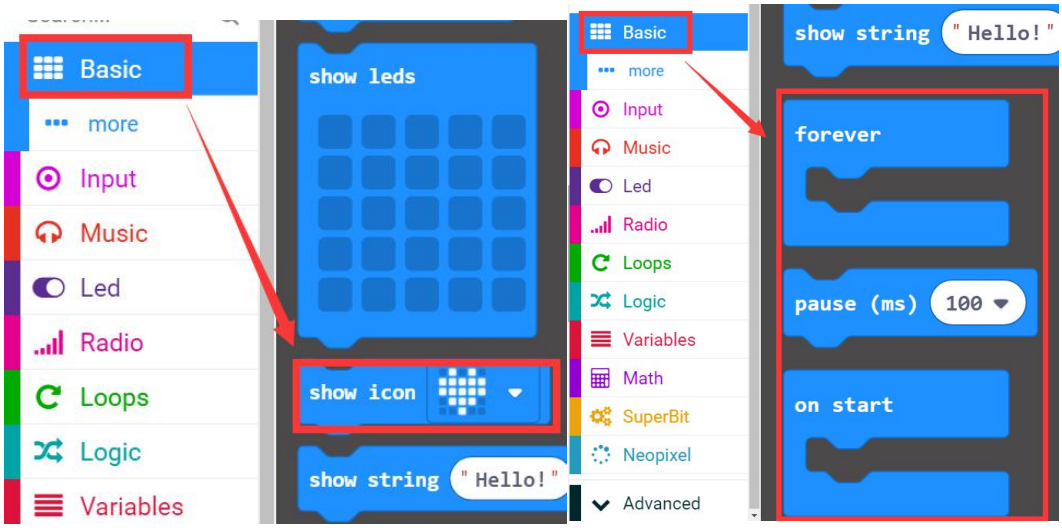
4.Programming method

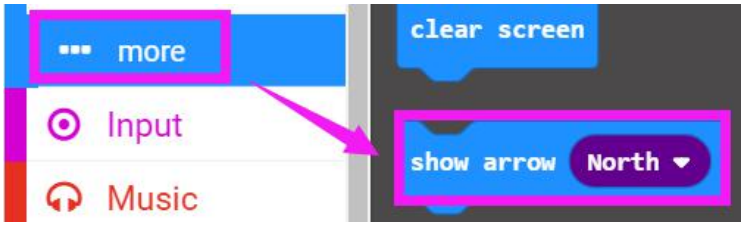
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: http://microbit.org/ to enter the programming interface. Add the Yahboom package **https://github.com/lzty634158/SuperBit**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

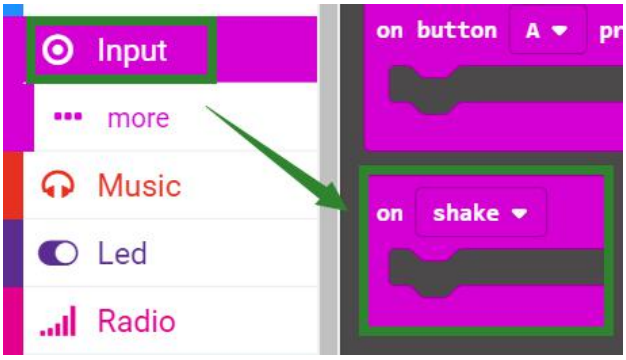
Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click【New Project】, add Yahboom package: **https://github.com/lzty634158/SuperBit** and **https://github.com/lzty634158/GHBit** , you can program.

5.Looking for blocks

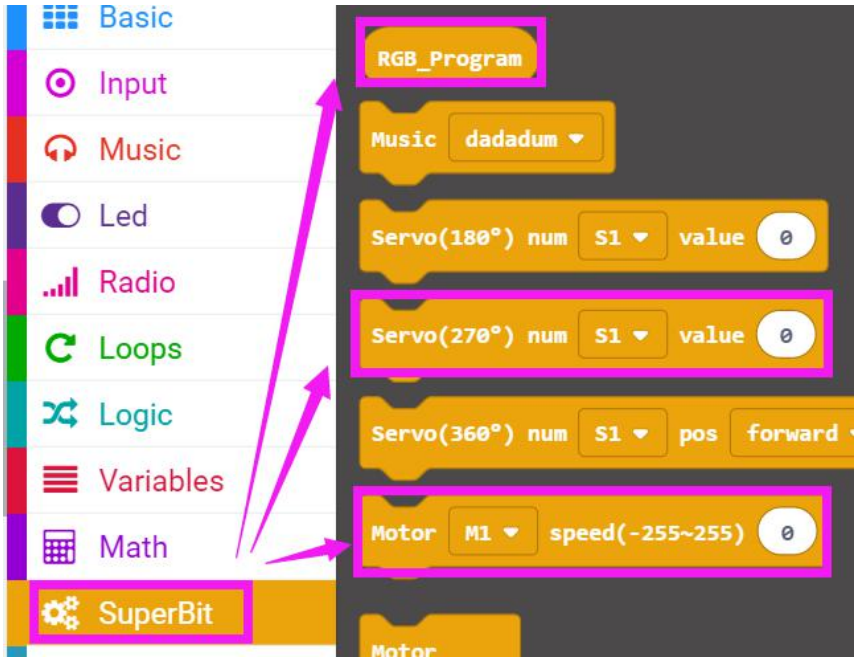
The following is the location of the building blocks required for this programming.

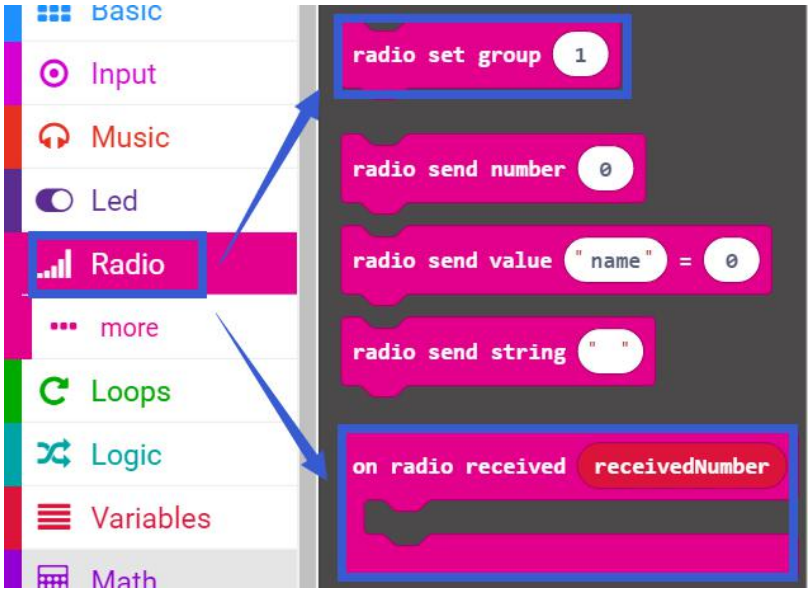


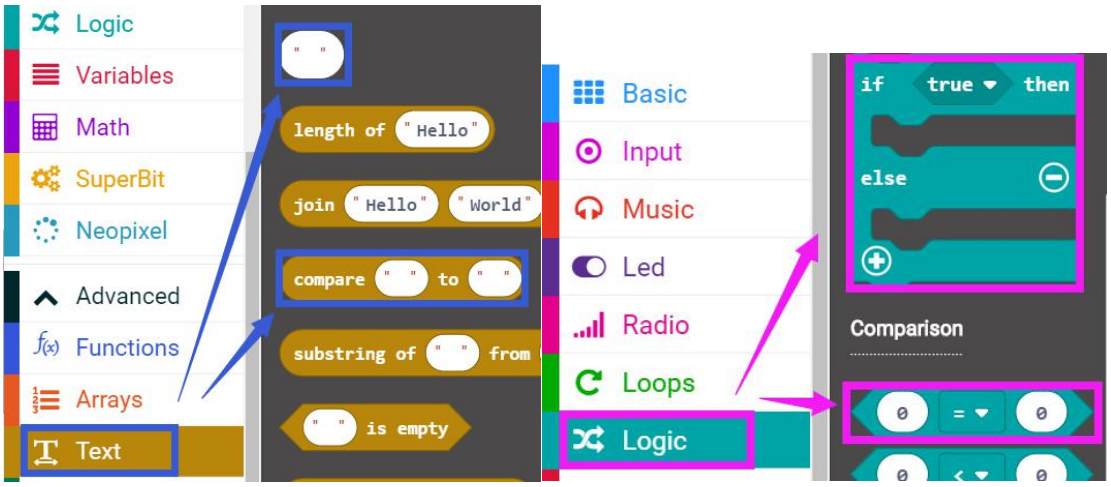

more
Input
Music
clear screen
show arrow
North

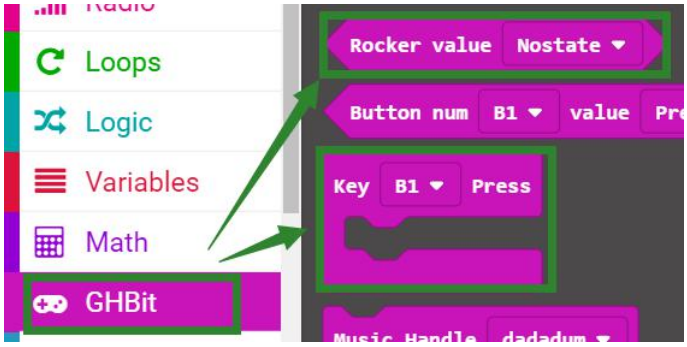

Input
more
Music
Led
Radio
on button
A
on
shake


Radio
Loops
Logic
Variables
set
item
to
0
change
item
by
1


Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
SuperBit
RGB_Program
Music
dadadum
Servo(180°) num
S1
value
0
Servo(270°) num
S1
value
0
Servo(360°) num
S1
pos
forward
Motor
M1
speed(-255~255)
0







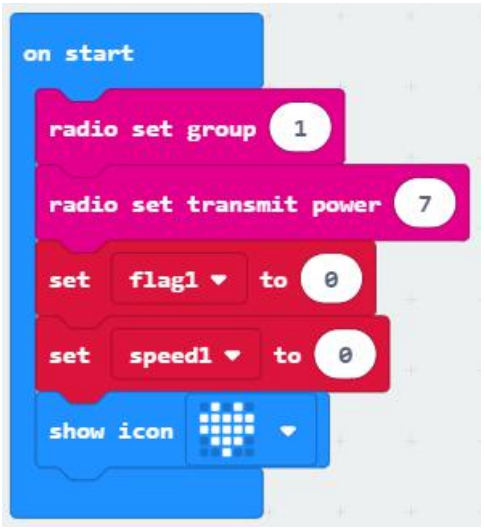
How to create a new variable

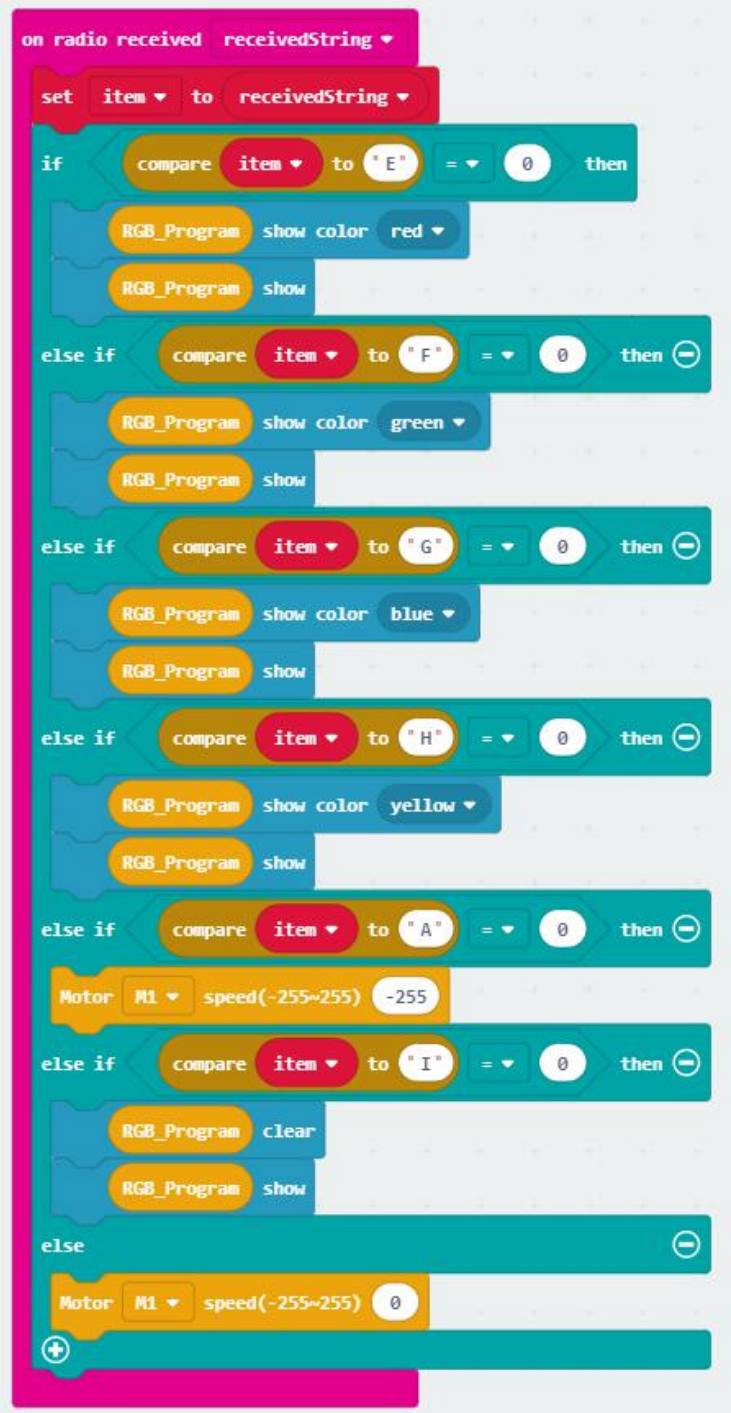
①Find the [Variable] option in the building block column-[Make a Variable]

②Enter the name of variable to complete the new variable.

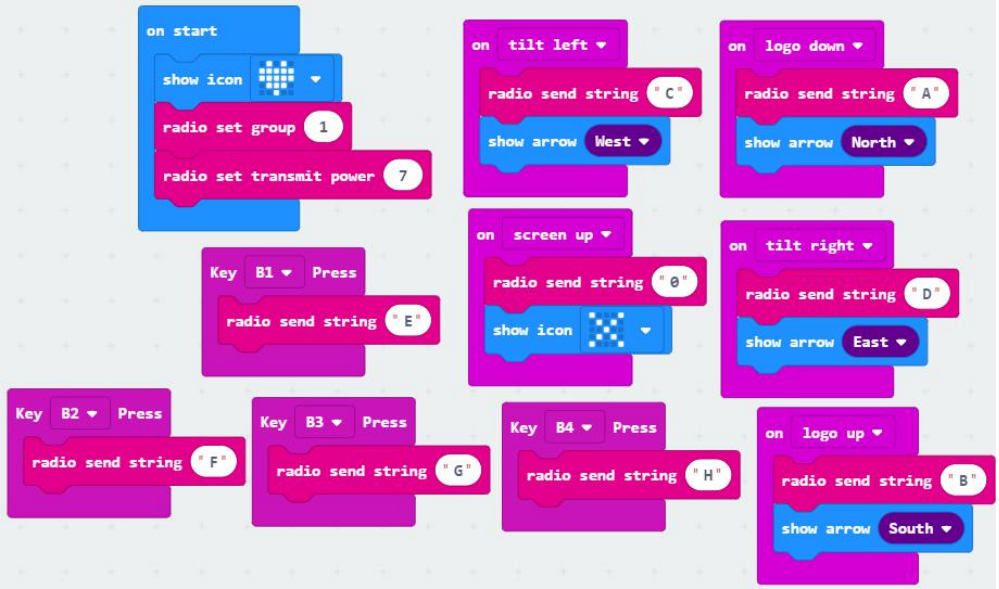
6.Combine block

The Carousel program is shown below.

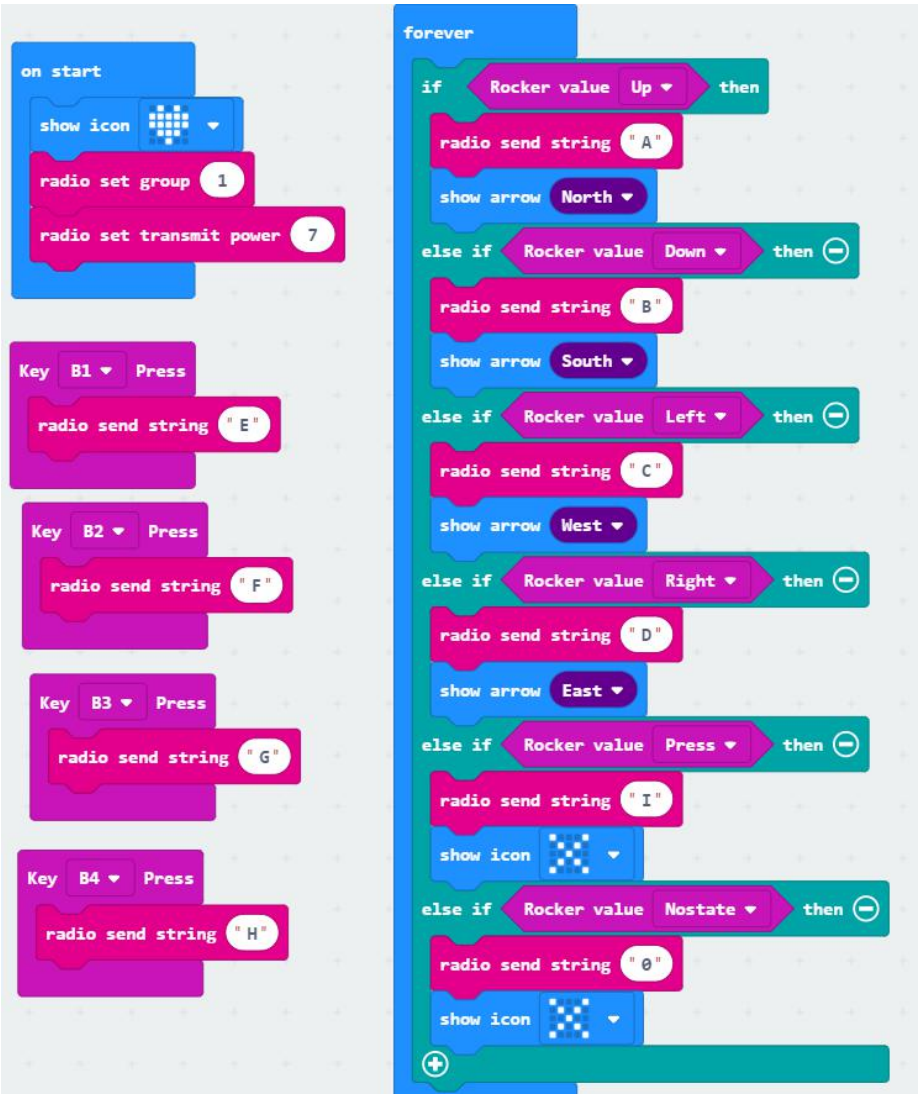




Handle gravity control code, as shown below.



Handle rocker control code, as shown below.



7.Experimental phenomena

We need to download the Carousel code into the micro:bit board of the Carousel .

Open the power switch of the Carousel , we can see a heart pattern displayed on the micro:bit dot matrix;

We need to download the Handle code into the micro:bit board of the handle.

Open the power switch of the handle, we can see that the micro: bit dot matrix will initially display a heart pattern, and then display an "X" pattern, indicating that the handle is in the default(no data is sent).

They will automatically pairing, then, we can start remote control the Carousel by handle.

The handle functions are shown below.

! Note:

In case of handle rocker control, press the rocker to control the RGB light closed. In case of handle gravity control, this function is not available.