Keyestudio

Project 1: Heart Beat

1. Description

The sensor modules and LED dot matrix of the Microbit basic project comes with the micro: bit mainboard.

Prepare a Micro:bit board and a USB cable. Next we will conduct a basic experiment that a heartbeat pattern flashes on the micro:bit board.

2. Components Needed

Micro:bit * 1	USB Cable * 1	

3. Test Code

You can upload the code directly from the tutorial (read the "Development Environment Configuration" file if in doubt).

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```
from microbit import *

while True:
    display.show(Image.HEART)
    sleep(500)
    display.show(Image.HEART_SMALL)
    sleep(500)
```

4. Code Explanation

| from microbit import *	Import the library file of micro：bit
while True:	This is a permanent loop that make the micro: bit execute the code in the loop forever.
display.show(Image.HEART)	LED dot matrix displays " "
sleep(500)	Delay in 500ms

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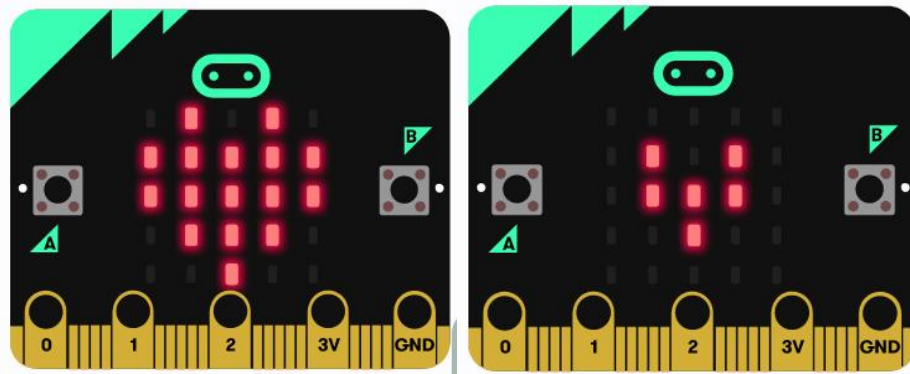
display.show(Image.HEART_SMALL)	LED dot matrix displays " "

5. Test Result

Upload the code to the micro:bit and plug in it via a USB cable, then the LED dot matrix displays and .

If download unsuccessfully, disconnect the micro:bit and reboot it

6. Expanded Knowledge

You can see that "Image.HEART" is equal to ; "Image.HEART_SMALL" is equal to . This is actually written in microbit, you can directly use it.

The following is a list of built-in images. If you are interested, you can replace "Image.HEART" in the function show () with one of the following images.

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- Image.HEART

- Image.HEART_SMALL

- Image.HAPPY

- Image.SMILE

- Image.SAD

- Image.CONFUSED

- Image.ANGRY

- Image.ASLEEP

- Image.SURPRISED

- Image.SILLY

- Image.FABULOUS

- Image.MEH

- Image.YES

- Image.NO

- Image.CLOCK12, Image.CLOCK11, Image.CLOCK10, Image.CLOCK9, Image.CLOCK8, Image.CLOCK7, Image.CLOCK6, Image.CLOCK5, Image.CLOCK4, Image.CLOCK3, Image.CLOCK2,Image.CLOCK1

- Image.ARROW_N, Image.ARROW_NE, Image.ARROW_E, Image.ARROW_SE, Image.ARROW_S, Image.ARROW_SW, Image.ARROW_W, Image.ARROW_NW

- Image.TRIANGLE

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- Image.TRIANGLE_LEFT

- Image.CHESSBOARD

- Image.DIAMOND

- Image.DIAMOND_SMALL

- Image.SQUARE

- Image.SQUARE_SMALL

- Image.RABBIT

- Image.COW

- Image.MUSIC_CROTCHET

- Image.MUSIC_QUAVER

- Image.MUSIC_QUAVERS

- Image.PITCHFORK

- Image.PACMAN

- Image.TARGET

- Image.TSHIRT

- Image.ROLLERSKATE

- Image.DUCK

- Image.HOUSE

- Image.TORTOISE

- Image.BUTTERFLY

- Image.STICKFIGURE

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- Image.GHOST

- Image.SWORD

- Image.GIRAFFE

- Image.SKULL

- Image.UMBRELLA

- Image.SNAKE，Image.ALL_CLOCKS，Image.ALL_ARROWS