

Course 4-Display custom animation

Learning goals:

This lesson learns to display custom animation on a micro:bit dot matrix by Python programming. For example: from smile to sadness and then to anger.

Code:

```
from microbit import *
while True:
    face1 = Image("00000:09090:00000:90009:09990")
    face2 = Image("00000:09090:00000:99999:00000")
    face3 = Image("00000:09090:00000:09990:90009")
    face4 = Image("90009:99099:00000:09990:90009")
    face5 = Image("00000:00000:00000:00000:00000")
    all_faces = [face1, face2, face3, face4, face5, ]
    display.show(all_faces, delay=200)
```

Programming and downloading:

1. You should open the Mu software, and enter the code in the edit window, , as shown in Figure 4-1.

Note! All English and symbols should be entered in English, and the last line must be a space.

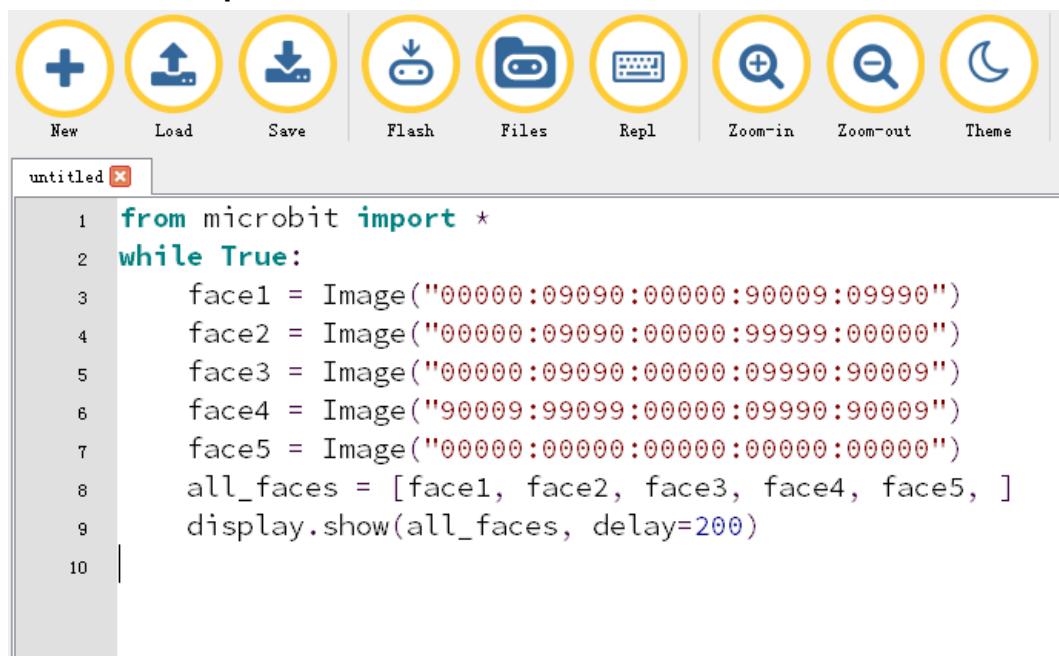


Figure 4-1

2. As shown in Figure 4-2, you need to click the Check button to check if our code has an error. If a line appears with a cursor or an underscore, the program indicating this line is wrong.

```

4. Display custom animation.py
1 from microbit import *
2 while True:
3     face1 = Image("00000:09090:00000:90009:09990")
4     face2 = Image("00000:09090:00000:99999:00000")
5     face3 = Image("00000:09090:00000:09990:90009")
6     face4 = Image("90009:99099:00000:09990:90009")
7     face5 = Image("00000:00000:00000:00000:00000")
8     all_faces = [face1, face2, face3, face4, face5, ]
9     display.show(all_faces, delay=200)
10

```

Figure 4-2

3. You need to connect the micro data cable to micro:bit and the computer, then click the Flash button to download the program to micro:bit as shown in Figure 4-3.

```

4. Display custom animation.py
1 from microbit import *
2 while True:
3     face1 = Image("00000:09090:00000:90009:09990")
4     face2 = Image("00000:09090:00000:99999:00000")
5     face3 = Image("00000:09090:00000:09990:90009")
6     face4 = Image("90009:99099:00000:09990:90009")
7     face5 = Image("00000:00000:00000:00000:00000")
8     all_faces = [face1, face2, face3, face4, face5, ]
9     display.show(all_faces, delay=200)
10

```

Figure 4-3

4. After the download is successful, you can observe the animation of the expression change on the micro:bit dot matrix, as shown in Figure 4-4 to Figure 4-7.

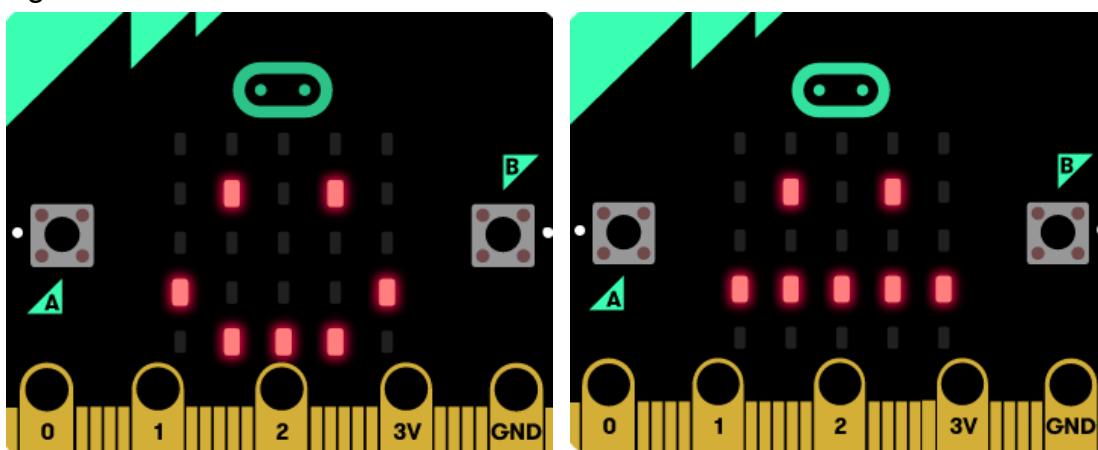


Figure 4-4

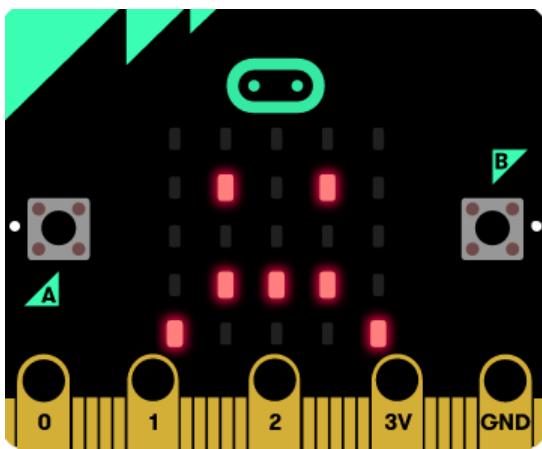


Figure 4-6

Figure 4-5

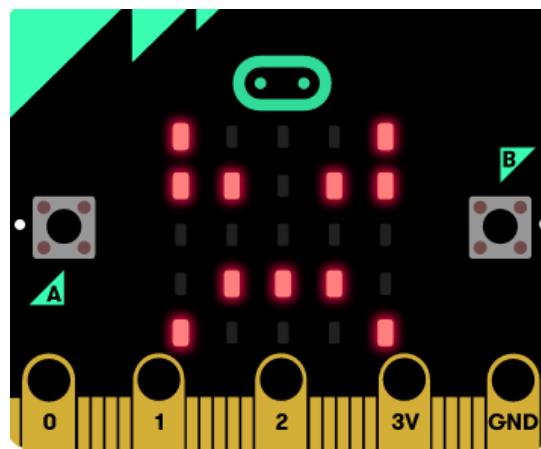


Figure 4-7