

## 2.Display smile

**Learning goals:** The RGB matrix displays multiple lights and modifies colors.

**Experimental phenomena:** Display a green smile on the RGB matrix.

### 1.Create python file

#### nano smile.py

We need to input content as shown below:

```
#!/usr/bin/python
from sense_hat import SenseHat
sense = SenseHat()
#Display color value
X = (0, 255, 0)
O = (0, 0, 0)
#Data of smile
smile = [
    O, O, O, O, O, O, O, O, O,
    O, O, O, O, O, O, O, O, O,
    O, O, X, O, O, X, O, O, O,
    O, O, O, O, O, O, O, O, O,
    O, X, O, O, O, O, X, O, O,
    O, O, X, X, X, X, O, O, O,
    O, O, O, O, O, O, O, O, O,
    O, O, O, O, O, O, O, O, O
]
#Display smile
sense.set_pixels(smile)
```

Please press **Ctrl+O** to save, press **Ctrl+X** to quit.

The code of the experiment, please refer to **smile.py** in the Python sample

program folder.

## 2.Commonly function

①Modify the RGB matrix to bright green, where X is the color of the expression and O is the background color.

```
#Display color value
X = (0, 255, 0)
O = (0, 0, 0)
```

②Create RGB matrix list

```
#Data of smile
smile = [
    O, O, O, O, O, O, O, O,
    O, O, O, O, O, O, O, O,
    O, O, X, O, O, X, O, O,
    O, O, O, O, O, O, O, O,
    O, X, O, O, O, O, X, O,
    O, O, X, X, X, X, O, O,
    O, O, O, O, O, O, O, O,
    O, O, O, O, O, O, O, O
]
```

③Display smile

```
#Display smile
sense.set_pixels(smile)
```

## 3.Running program

Input the following command to running:

**python smile.py**

```
pi@raspberrypi:~/sense_hat $ nano smile.py
pi@raspberrypi:~/sense_hat $ python smile.py
pi@raspberrypi:~/sense_hat $
```

After running the program, you will see the green smile be display on the RGB matrix.

