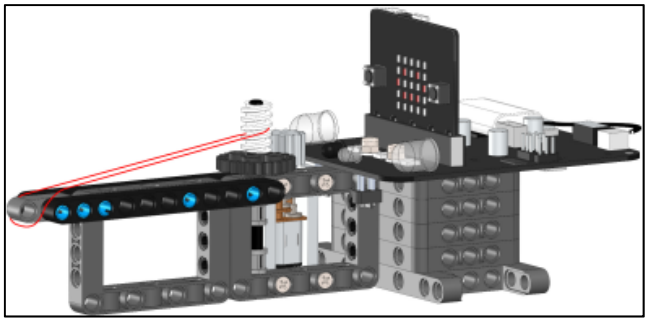
Python course Sniper---“button control”



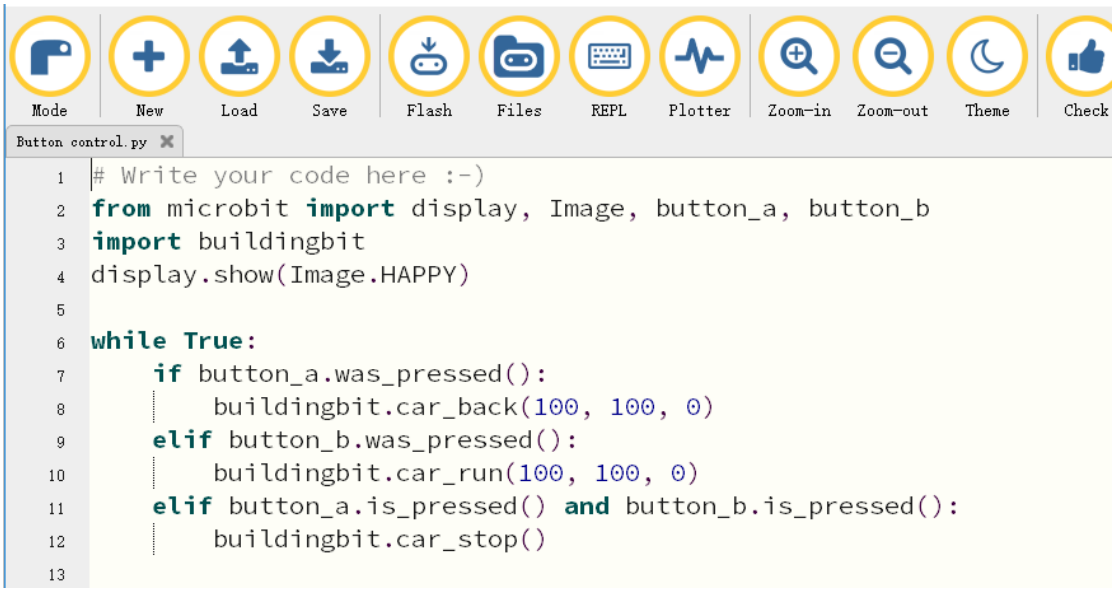
1. Learning goals

After downloading the program, open the sniper's power switch, install the rubber band on the helical gear. When you press the A key on the micro:bit main board, the motor starts until the rubber band is ejected. When you press the B key on the micro:bit main board, the motor rotates in the opposite direction. When you press A and B button, the motors will stop.

2. Preparation before class

We needs to be ready:
Building Block Sniper *1
USB data cable *1

3. Programming




```
# Write your code here :-)
from microbit import display, Image, button_a, button_b
import buildingbit
display.show(Image.HAPPY)

while True:
    if button_a.was_pressed():
        buildingbit.car_back(100, 100, 0)
    elif button_b.was_pressed():
        buildingbit.car_run(100, 100, 0)
    elif button_a.is_pressed() and button_b.is_pressed():
        buildingbit.car_stop()

```

1) Import buildingbit library：**import buildingbit** and display,Image,button_a,button_b library.

2) **display.show(Image.HAPPY)** Display smile.

3) **button_a.was_pressed()**：Check whether the button A on the micro:bit board is pressed. If it is pressed, it returns True; if it is not pressed, it returns False.

4) **buildingbit.car_back(100, 100, 0)** Control the motor to make the sniper

emission.

5) **button_b.was_pressed()**：Check whether the button B on the micro:bit board is pressed. If it is pressed, it returns True; if it is not pressed, it returns False.

6) **buildingbit.car_run(100, 100, 0)** Control the motor to make the sniper no emission.

7) press the A and B button,the motor is stopped.

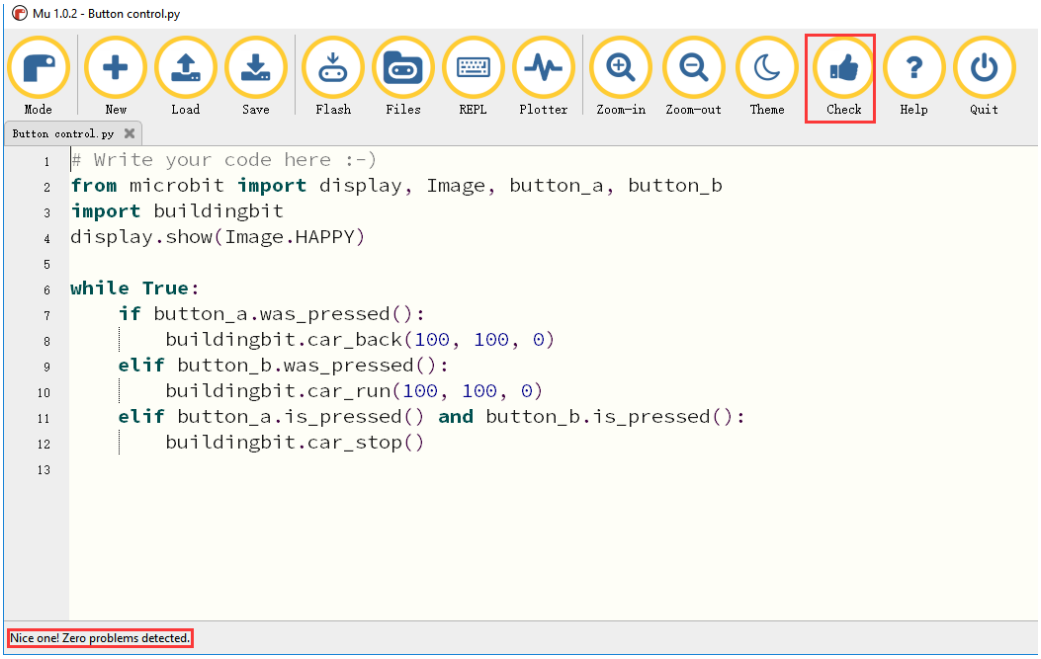
Code as shown below:

```
# Write your code here :-)
from microbit import display, Image, button_a, button_b
import buildingbit
display.show(Image.HAPPY)

while True:
    if button_a.was_pressed():
        buildingbit.car_back(100, 100, 0)
    elif button_b.was_pressed():
        buildingbit.car_run(100, 100, 0)
    elif button_a.is_pressed() and button_b.is_pressed():
        buildingbit.car_stop()

```

4. Download program

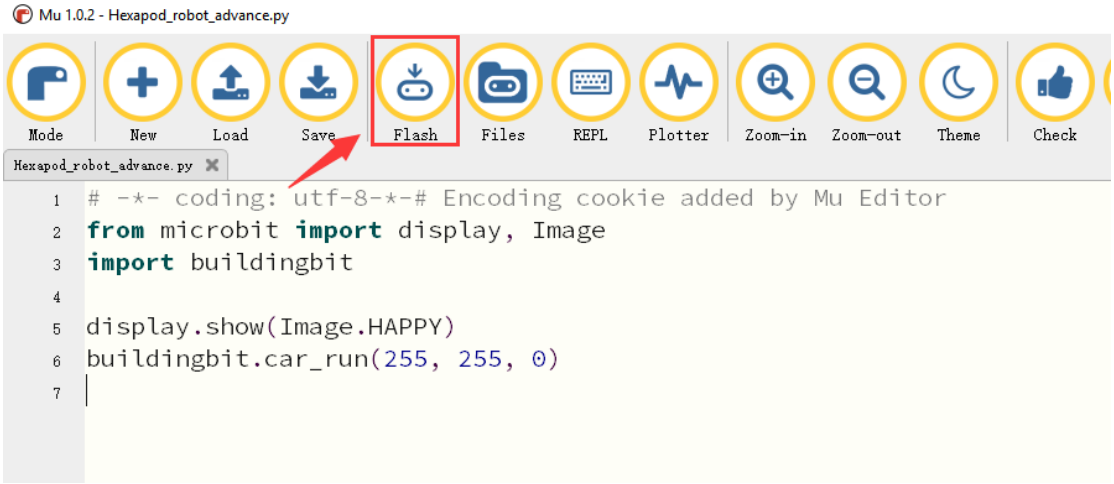
4.1 After programming is complete, please connect the computer and the micro:bit board with a Micro USB data cable.

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. If there is no cursor or underline, it means that the code is correct, and the bottom left will prompt that the check is OK.



4.3 Click the 【Flash】 button to download the program to the micro: bit board

of the building block sniper.



If the program is wrong or the experimental phenomenon is wrong after downloading, please confirm whether you have downloaded the Buildingbit library hex file we provided to the micro: bit board.

For the specific method of adding library files, please refer to 【1.Preparation before class】---【Python programming】