

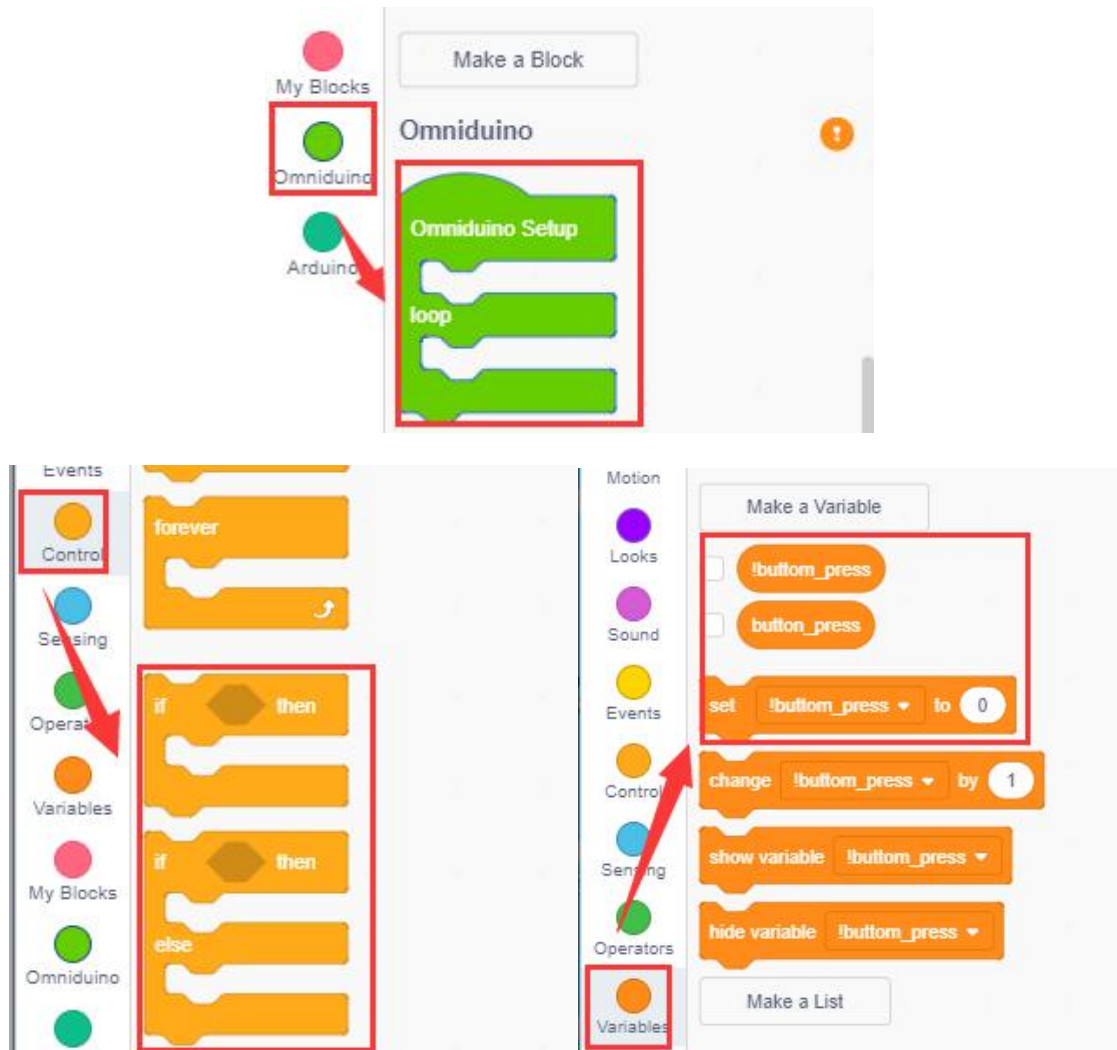
Button control LED

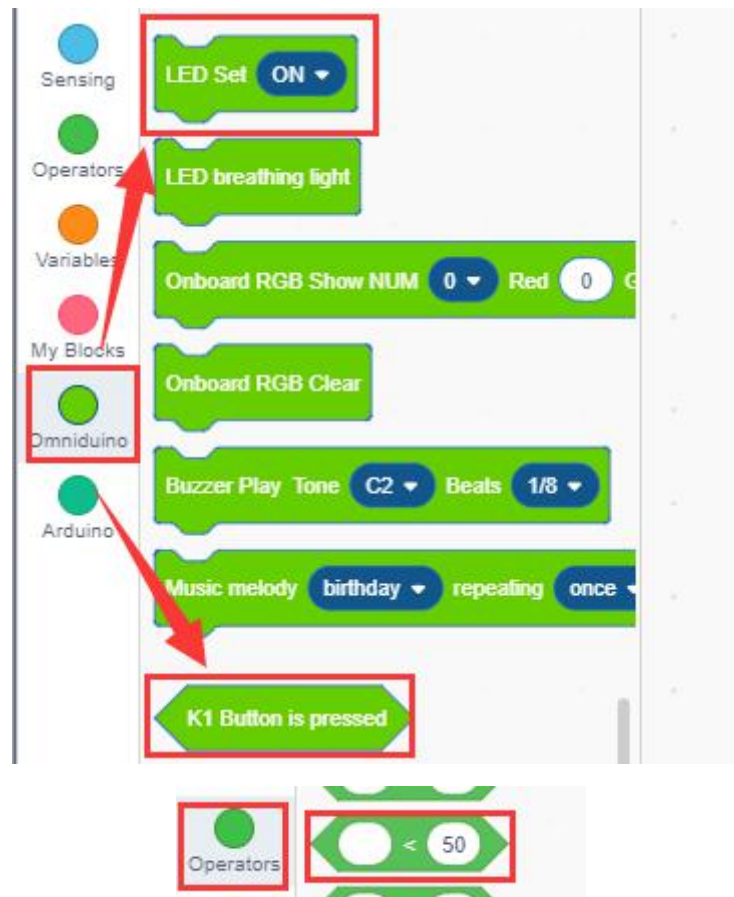
1. Learning goal

In this lesson, we will learn how to use button control LED light by graphical programming.

2. Looking for building blocks

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



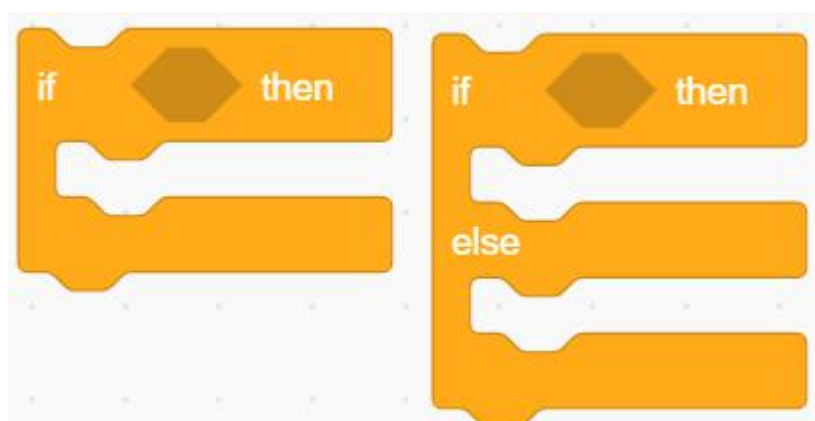


1) The content in the Omniduino setup block will only run once when the Omniduino is turned on or the reset button is pressed.

We can write into the initialization and other content in this block.

The content in the loop is the main loop function of the Omniduino car, most of the data processing and logic processing are completed in this function.

2) If...then...; if..then..else, building block is used to determine the condition of the button.



3) New create variable.



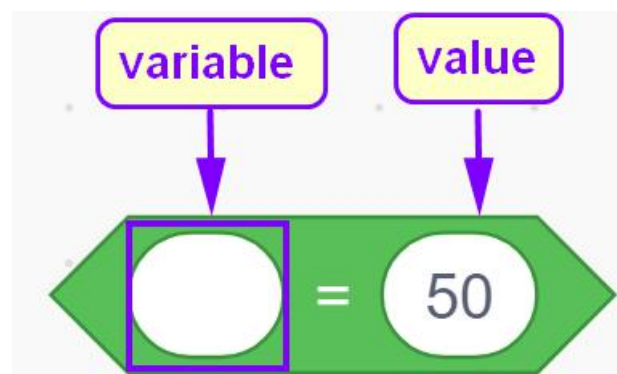
4) Button



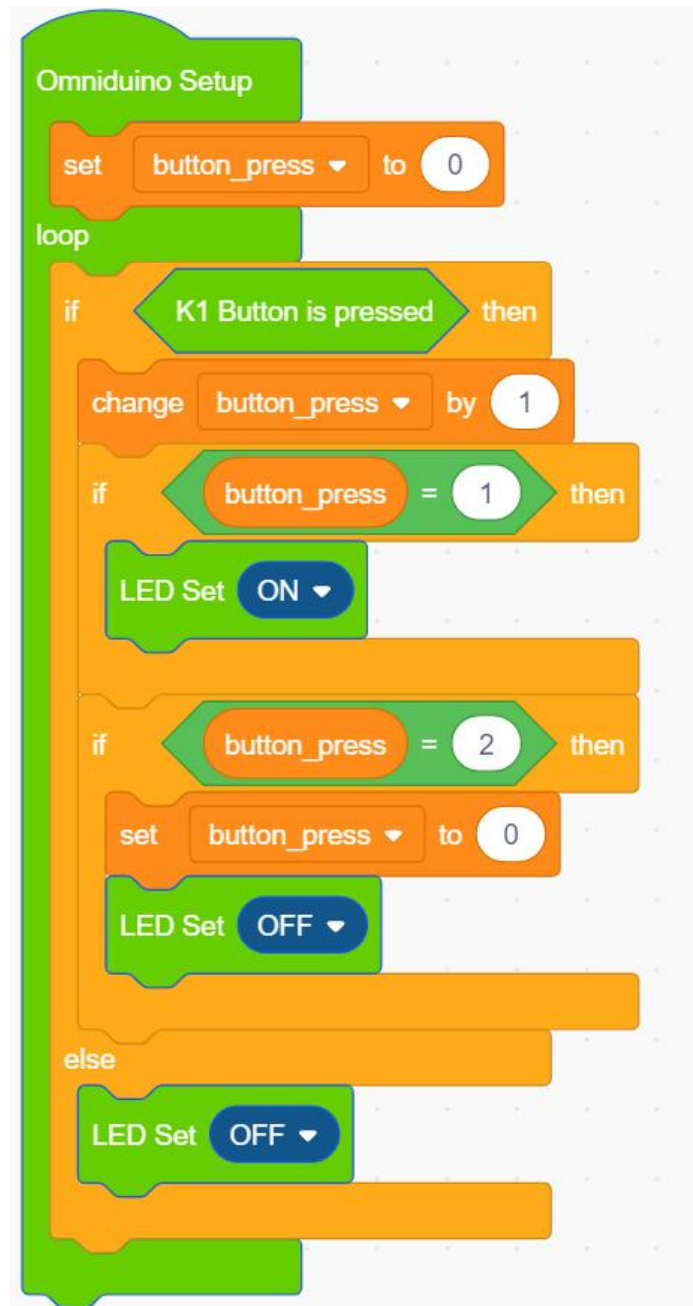
5) LED status, you can choose on and off



6) Operator =



Combine blocks



3. Compiling and uploading the program

3.1 After building the blocks, click the **[code mode]** in the upper right corner of the Helloblock programming interface. We can see the corresponding Arduino code.



Omniduino Setup

```

set button_press to 0
loop
  if K1 Button is pressed then
    change button_press by 1
    if button_press = 1 then
      LED Set ON
    if button_press = 2 then
      set button_press to 0
      LED Set OFF
    else
      LED Set OFF
  
```

```

#include "Arduino.h"
#include "YahBoom_Omniduino.h"

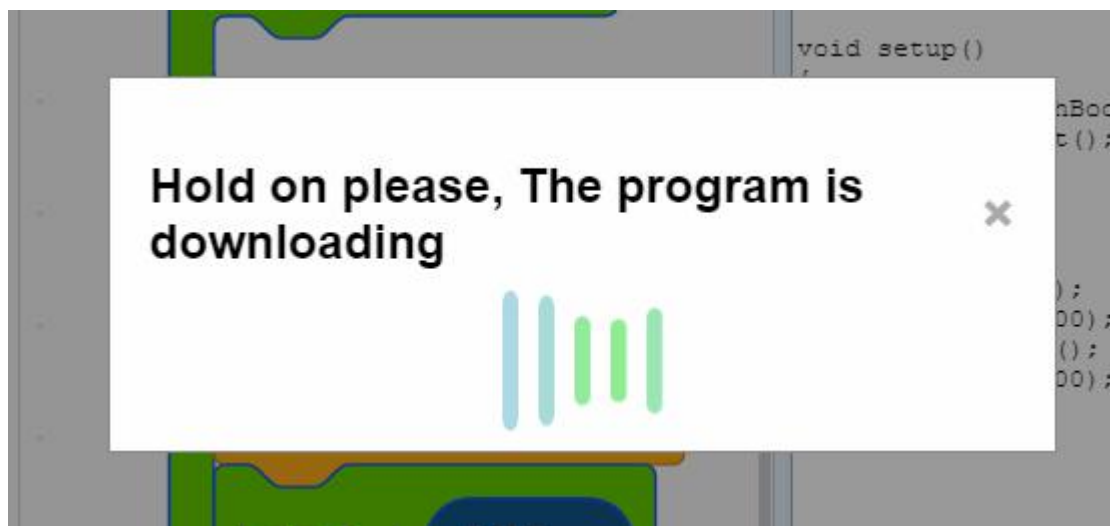
YahBoom_Omniduino Omniduino;
double Button_press;
YahBoom_Omniduino_Button cButton(8);
YahBoom_Omniduino_LED cLED(5);

void setup()
{
  Omniduino.YahBoom_Omniduino_Init();
  cButton.YahBoom_Omniduino_Button_Init();
  cLED.LED_Init(); button_press=0;
}

void loop()
{
  if(cButton.Get_Button_State())
  {
    button_press += 1;
    if(button_press == 1)
    {
      cLED.LED_ON();
    }
    if(button_press == 2)
    {
      button_press=0;
      cLED.LED_OFF();
    }
  }
}
  
```

DEBUG StatusLogger Shut down RollingFileManager
 C:\Users\Administrator\AppData\Local\Arduino15\logs/application.log, all resources released: true
 >TRACE StatusLogger XmlConfiguration stopped 2 remaining Appenders.
 TRACE StatusLogger XmlConfiguration cleaning Appenders from 2 LoggerConfigs.
 >DEBUG StatusLogger Stopped
 XmlConfiguration[location=jar:file:/C:/Program%20Files%20(x86)/Helloblock/resources/Arduino/lib/pde.jar!/log4j2.xml] OK
 >DEBUG StatusLogger Stopped
 LoggerContext[name=1e6f5c3, org.apache.logging.log4j.core.LoggerContext@11c005e] with status true
 >arduino program error! >####:"C:\Program Files (x86)\Helloblock\resources\Arduino\arduino.exe"
 "C:\Program Files (x86)\Helloblock\resources\Arduino\project\project.ino">####:Write success!>
 COM1:

3.2 Then, you need to connect Omniduino car to your computer. Select the CH340 port number identified in the previous step in the upper right corner. Then, click the up arrow to start compiling and uploading the program.



3.3 When the words "**Done compiling Done uploading**" appear in the lower right corner of the programming interface, which means the program has been uploaded.


```
C:\Users\Administrator\AppData\Local\Arduino15\logs
/application.log
DEBUG StatusLogger All asynchronous threads have
terminated
DEBUG StatusLogger RollingFileManager shutdown
completed with status true
>DEBUG StatusLogger Shut down RollingFileManager
C:\Users\Administrator\AppData\Local\Arduino15\logs
/application.log, all resources released: true
>TRACE StatusLogger XmlConfiguration stopped 2
remaining Appenders.
TRACE StatusLogger XmlConfiguration cleaning
Appenders from 2 LoggerConfigs.
>DEBUG StatusLogger Stopped
XmlConfiguration[location=jar:file:/C:/Program%20Fi
les%20(x86)/Helloblock/resources/Arduino/lib/pde.ja
r!/log4j2.xml] OK
>DEBUG StatusLogger Stopped
LoggerContext[name=1e6f5c3,
org.apache.logging.log4j.core.LoggerContext@16bc455
] with status true
>Done compiling. Done uploading!
```

4. Experimental phenomenon

After the program is downloaded. When we press button every time, the status of the LED lights will be changed.