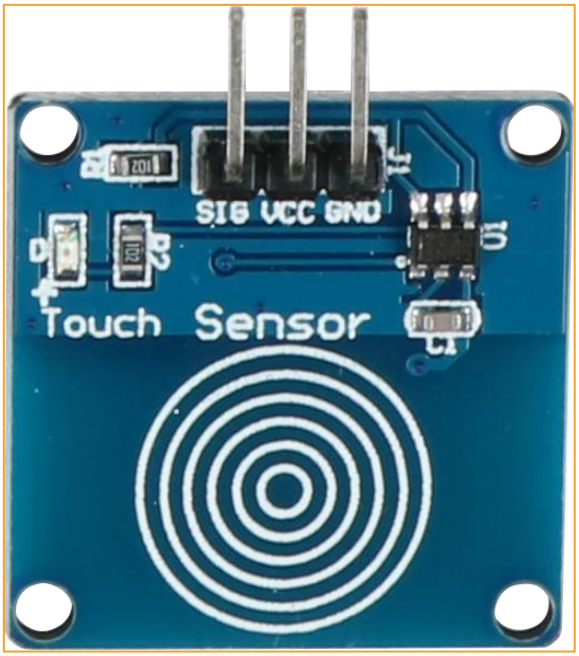
Touch switch module Experiment

Introduction of Touch switch module

Touch switch module is a capacitive touch switch module based on touch detection IC (TTP223B). Normally, the module outputs low level and the mode is low power consumption mode. When you touch the corresponding position with your finger, the module will output high level, and the mode will be changed to fast mode. When there is no touch for 12 seconds, the mode switches back to low power mode. You can install the module on the surface of non-metallic materials such as plastic and glass, and cover the surface of the module with a thin piece of paper (non-metallic). As long as the touch position is correct, it can be made into keys hidden in the wall, desktop and other places.



Touch switch module figure

Experimental purpose

- Understand the working principle of touch switch module
- Realize the use of Arduino control touch switch control LED lamp

The component list

- Keywish Arduino Uno R3 motherboard *1
- USB cable *1
- Touch switch module* 1
- Breadboard

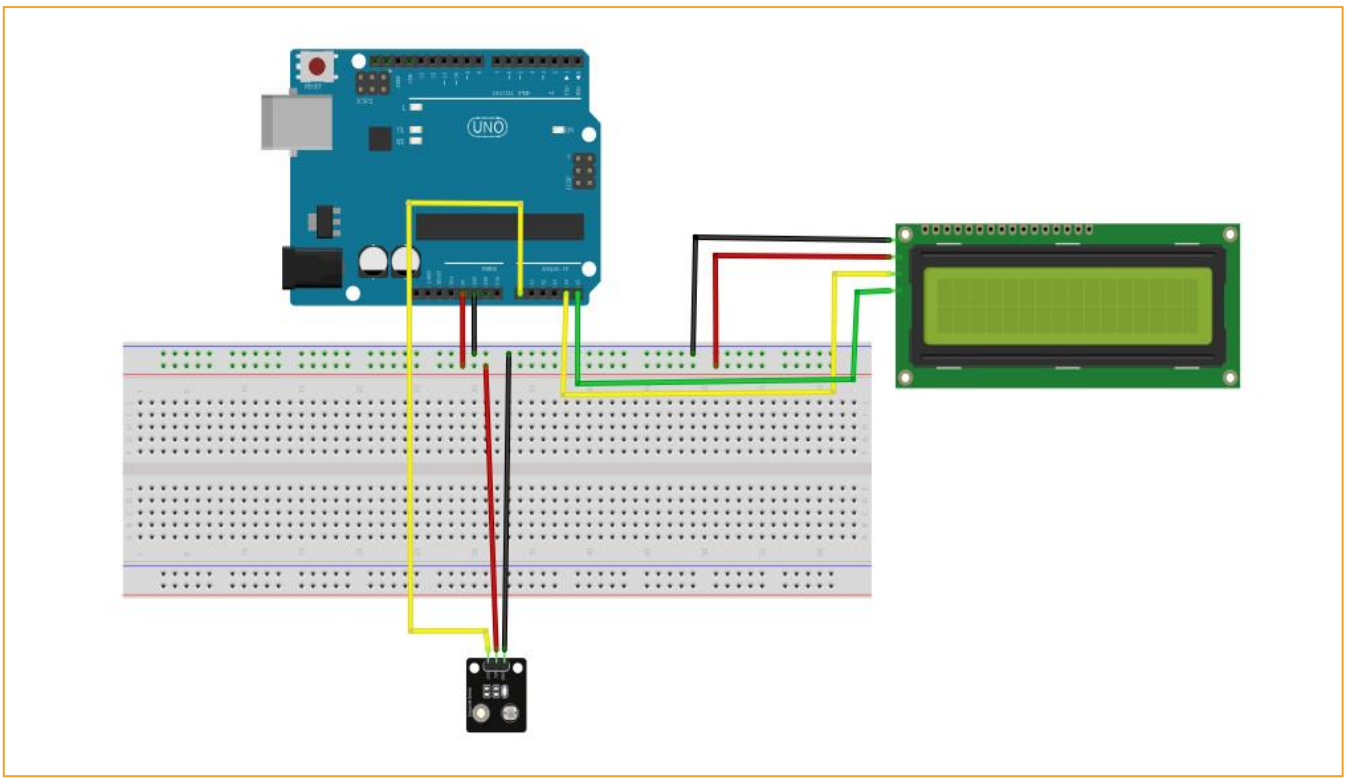
- LED*1
- Jumper wires

The experimental principle

Use the Arduino control touch switch to control the LED light to turn on and off. Touch the switch module with your finger. When the Arduino UNO board detects the high level output of the touch switch module, control the LED light to turn on, otherwise the LED light will go off.

Wiring

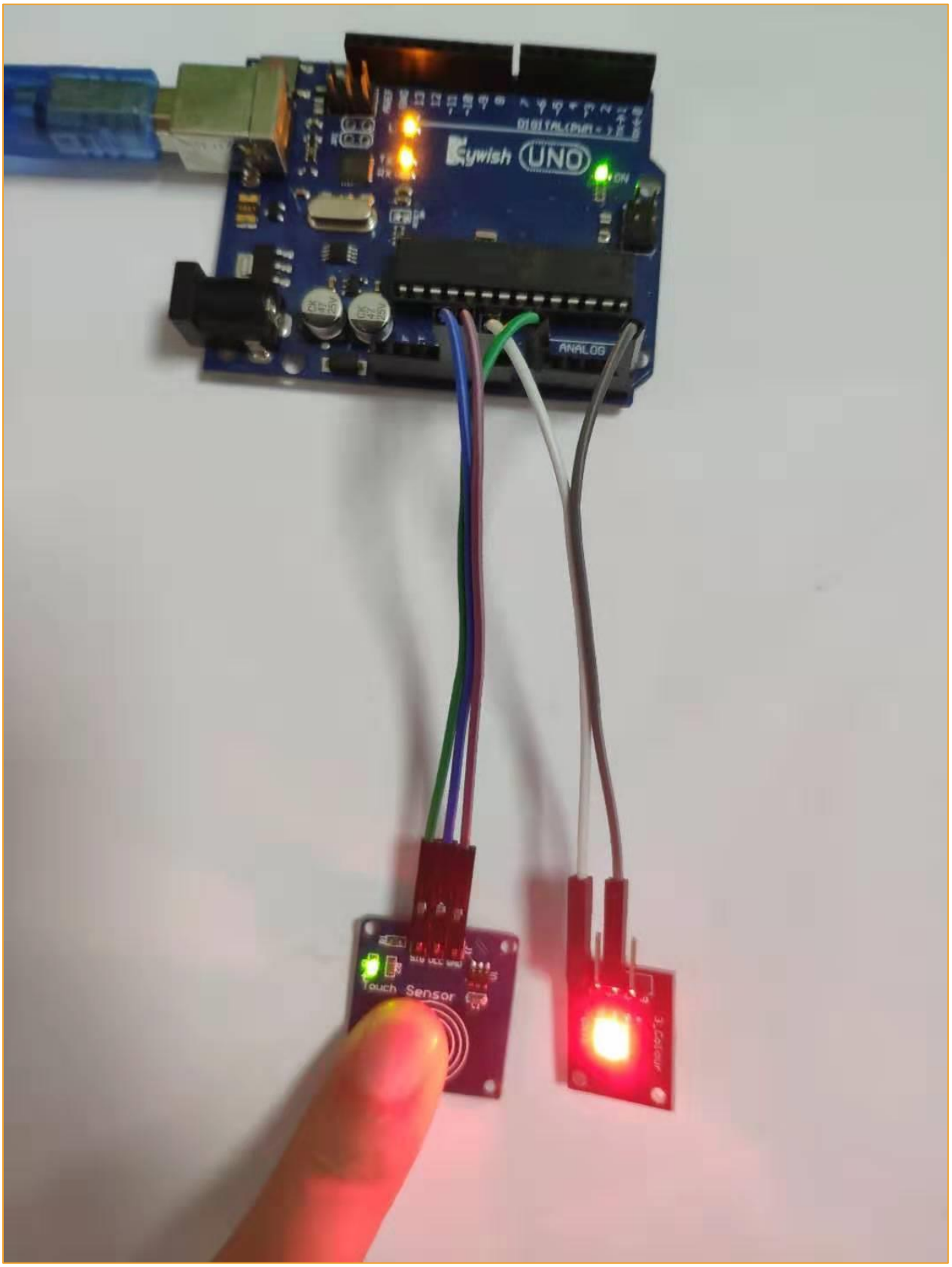
Arduino UNO	Touch switch module
A0	SIG】
5V	VCC(+)
GND	GND(-)
Arduino UNO	LED
A5	+
GND	GND(-)



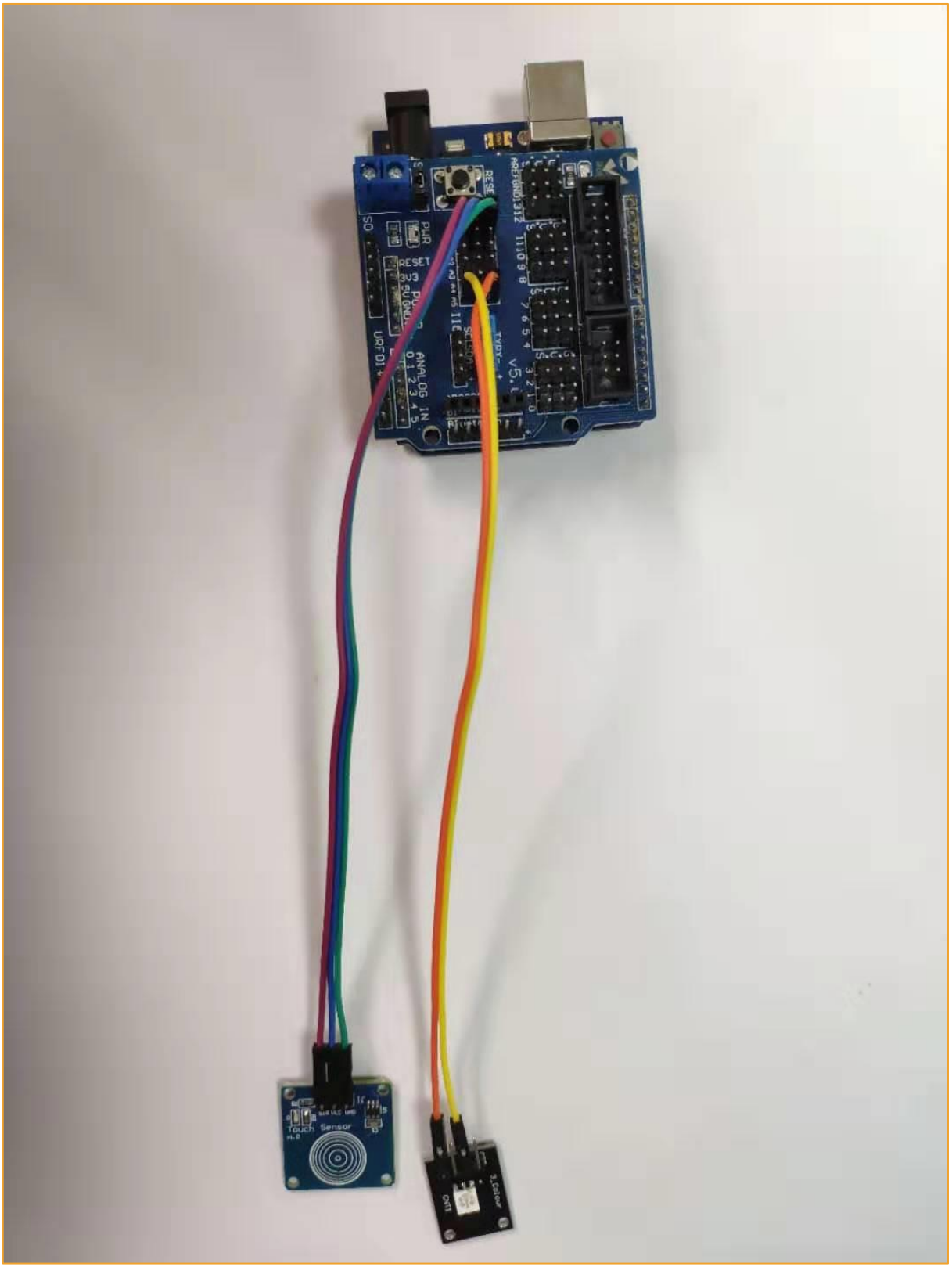
ArduinoIDE Code

```
int Led=A5;
int SensorPin=A0;
int val=0;
void setup()
{
  pinMode(Led,OUTPUT);
  pinMode(SensorPin,INPUT);
  Serial.begin(9600);
}
void loop()
{
  val=digitalRead(SensorPin);
  Serial.println(val);
  if(val==1)
     {
       digitalWrite(Led,HIGH);
     }
  else
     {
       digitalWrite(Led,LOW);
     }
}
```

Experiment Result



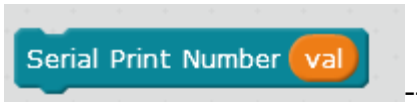
If you have a Sensor V5.0 expansion pad in your kit, wire it as shown below.



Mlock graphical programming program

The main blocks used in mBlock programming are::

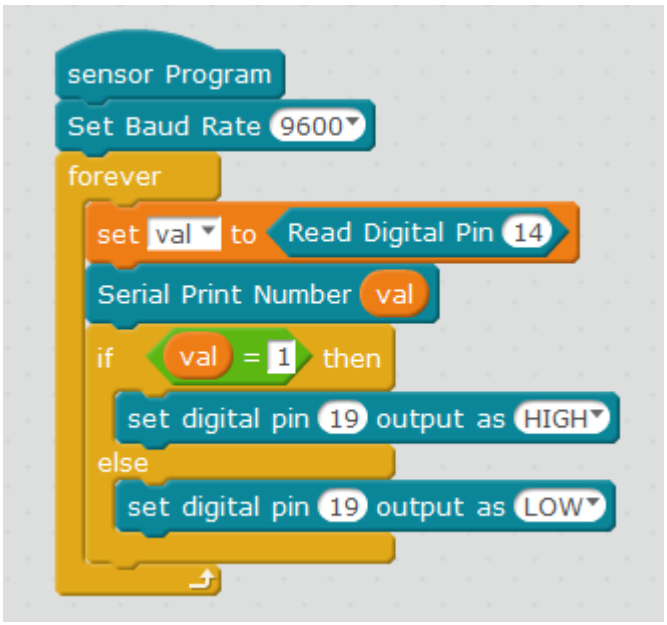
- 

--Set variable read values
- 

--Serial print variables
- 

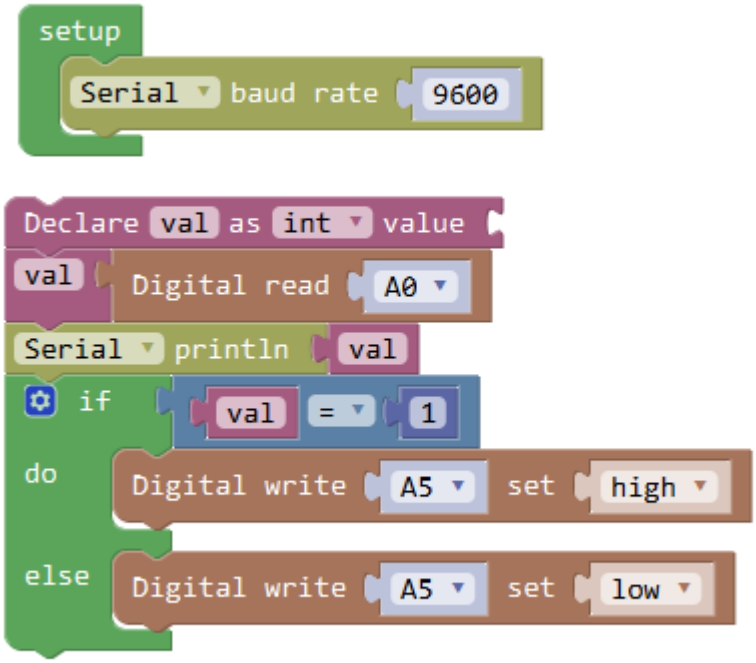
--Sets the state of the digital pin output

MBlock writes the touch switch program as shown in the figure below:



Mixly graphical programming program

You can also use Mixly to open a written program file directly. It is a.mix file. Here are the steps to open it:


setup
Serial baud rate 9600
Declare val as int value
val Digital read A0
Serial println val
if val = 1
do
Digital write A5 set high
else
Digital write A5 set low

MagicBlock graphical programming program