Assignment 3 if for while conditions structure

Released Date: Oct 15th

Version 1.0

Format: Name the document in the combination of name、ID and No. of Assignment.

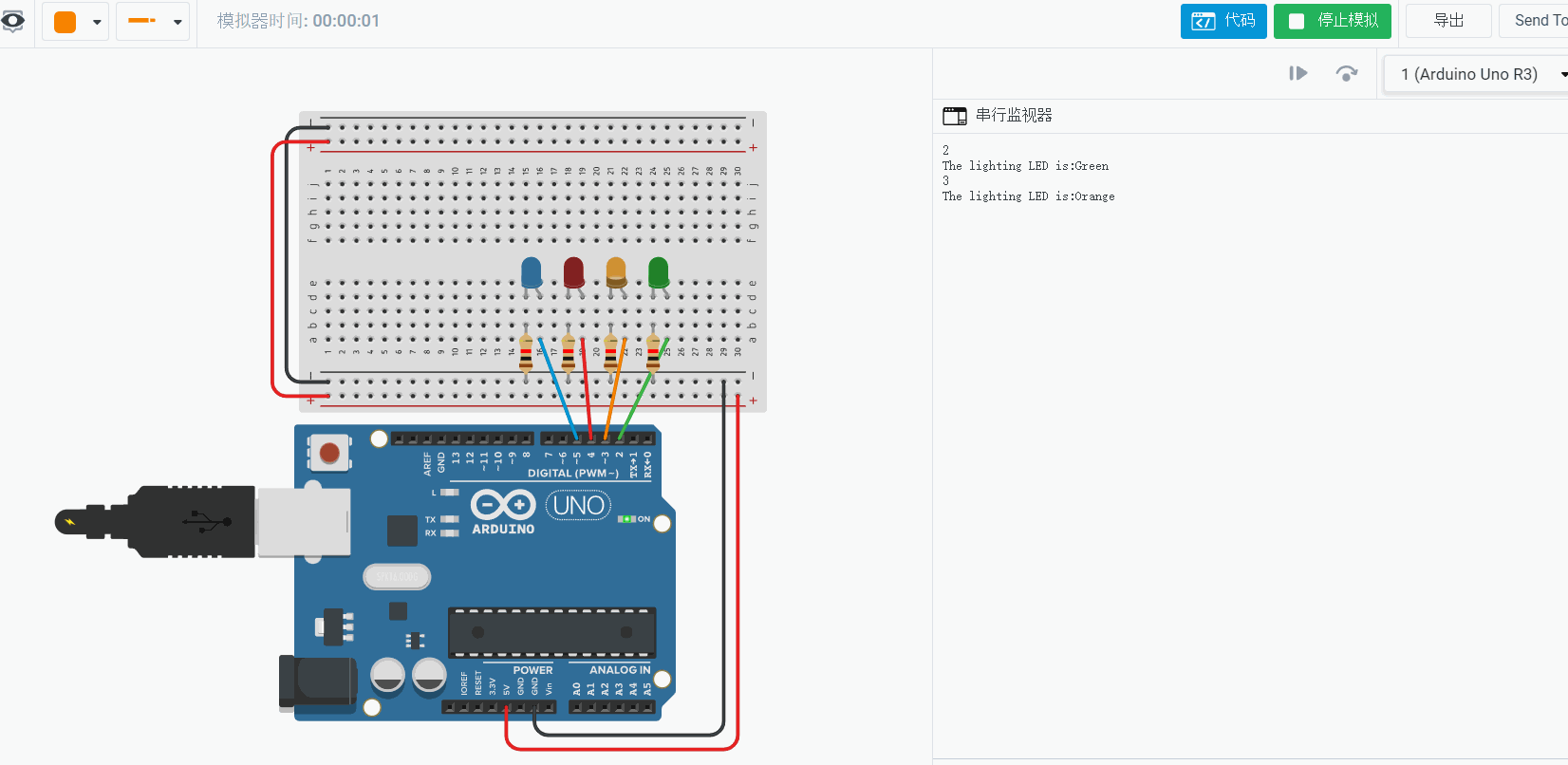
**Example: Ping Yi\_23\_Assignment1.doc**

**Email the document to “pingy@wxit.edu.cn” before Oct 18th.**

**Task 1** 4 LEDs are connected to Arduino Uno, try to use for cycle structure to make a 1s shift effect.

任务1 使用4个LED连接至Arduino Uno，尝试使用for循环结构，实现1s位移点亮的效果。

**You could use Tinker CAD or Proteus for the verifying.可使用在线工具Tinker CAD或Proteus进行仿真。**



**Fig 1 LED Shift Light**

Answer:

int i;

int Timer = 1000;

void setup() {

// put your setup code here, to run once:

for (int i= 2;i<=5;i++) {

   pinMode(i, OUTPUT);

}

}

void loop() {

// put your main code here, to run repeatedly:

for (int i=2; i <= 5; i++) {

digitalWrite(i,HIGH);

delay(1000);

digitalWrite(i, LOW);

delay(1000）；

}

**}**

**Task 2** One LED and a POT are connected to Arduino, define a function named getVoltage to calculate the real time voltage of the POT, if the value is larger than 2.5V, then turn on the LED.

任务2 一个LED和一个电位器与Arduino Uno相连，定义一个函数名为getVoltage，用于计算POT段子的实时电压，若电压大于2.5V，则点亮LED。

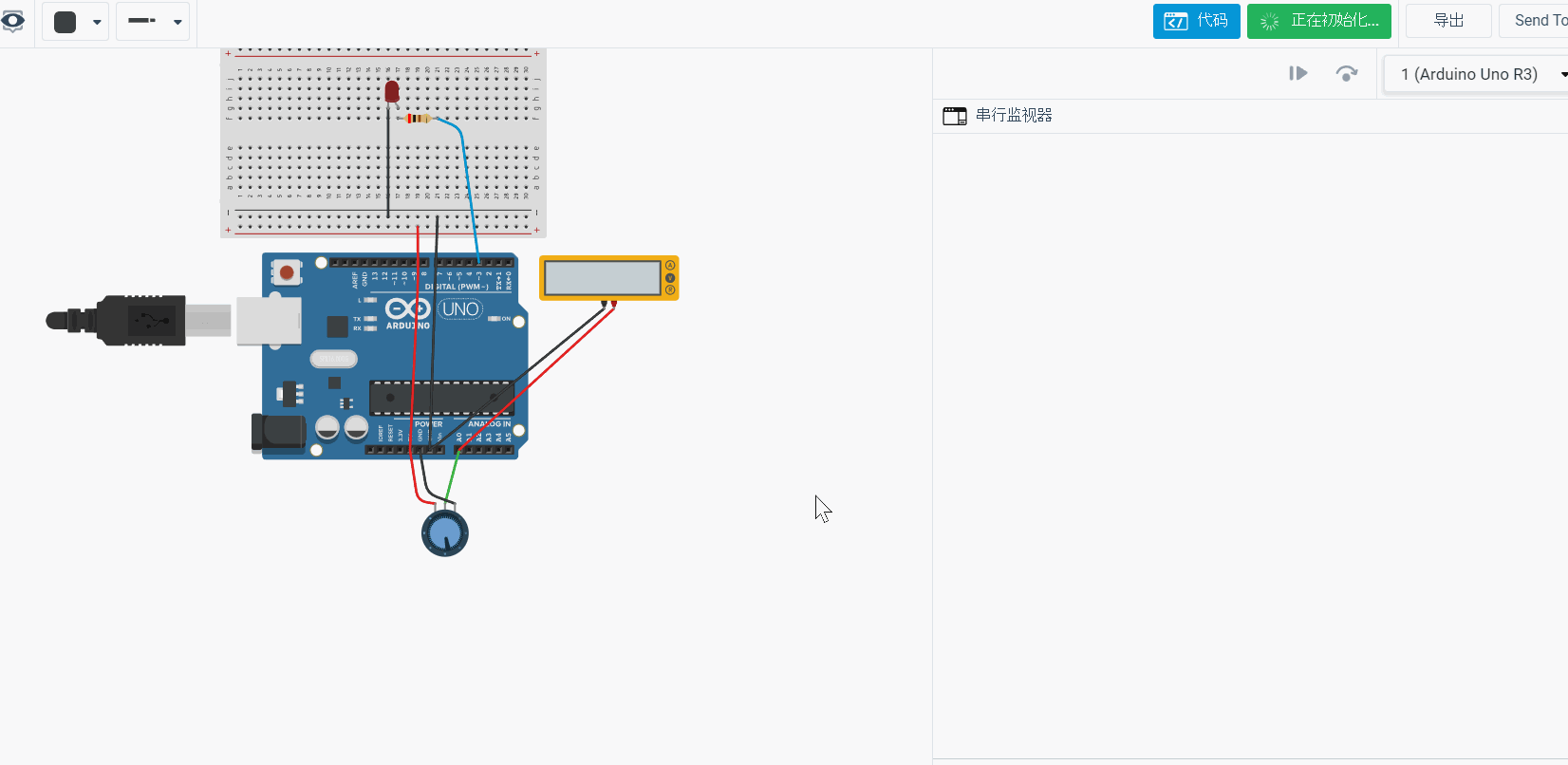


Fig 2 LED Indicator

Answer:

int val;

void setup() {

// put your setup code here, to run once:

pinMode(3,OUTPUT);

   Serial.begin(9600);

}

void loop() {

// put your main code here, to run repeatedly:

val=analogRead(A0);

    val=map(val,0,1023,0,255);

if (val<2.5)

{

    digitalWrite(3,LOW);

    }

    else

    {

    analogWrite(3,val);

}

}