1. 显示数字

//全局变量,记录数字引脚

int LED[] = { D1, D2, D3, D4, D5, D6, D7 };

void setup() {

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

for (int i = 0; i <= 6; i++)

{

//设置引脚模式

pinMode(LED[i], OUTPUT);

//给引脚写入高电平

digitalWrite(LED[i], HIGH);

}

}

void loop() {

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

//给引脚写入低电平

digitalWrite(LED[0], LOW);

digitalWrite(LED[1], LOW);

digitalWrite(LED[2], LOW);

}

1. 秒表显示

//共阳极码段

const unsigned char dofly\_DuanMa[10] = { 0xc0, 0xf9, 0xa4, 0xb0, 0x99, 0x92, 0x82, 0xf8, 0x80, 0x90 };//const关键字是防止定义的变量的值被以外修改

//全局变量,记录数字引脚

int LEDPins[] = { D1, D2, D3, D4, D5, D6, D7,D8 }; // 对应的 LED 引脚

void setup() {

//循环设置，把对应的 LED 都设置成输出

for (int LED = 0; LED < 8; LED++)

{

pinMode(LEDPins[LED], OUTPUT);

}

}

// 数据处理，把需要处理的 byte 数据写到对应的引脚端口。

void deal(unsigned char value)

{

for (int i = 0; i<8; i++)

{

digitalWrite(LEDPins[i], bitRead(value, i));//使用了 bitRead 函数，非常简单

}

}

//主循环

void loop() {

//循环显示 0-9 数字

for (int i = 0; i<10; i++)

{

deal(dofly\_DuanMa[i]);//读取对应的段码值

delay(1000); //调节延时，2个数字之间的停留间隔

}

}

1. 红绿灯显示

//针脚的数组

int Pins[] = { D5, D6, D7 };

//标识

int flag = 1;

void setup() {

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

for (int i = 0; i < 3; i++)

{

//设置针脚的模式为输出

pinMode(Pins[i], OUTPUT);

}

}

//循环处理

void loop() {

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

if (flag == 1)

{

//红灯亮

digitalWrite(Pins[0], HIGH);

//绿灯灭

digitalWrite(Pins[2], LOW);

delay(5000);

//切换标识

flag = 0;

}

else

{

//红等灭

digitalWrite(Pins[0], LOW);

//绿灯亮

digitalWrite(Pins[2], HIGH);

delay(5000);

//切换标识

flag = 1;

}

//红灯灭

digitalWrite(Pins[0], LOW);

//绿灯灭

digitalWrite(Pins[2], LOW);

//黄灯亮

digitalWrite(Pins[1], HIGH);

delay(3000);

//黄灯灭

digitalWrite(Pins[1], LOW);

}

1. 4位数码管实验计数器

#define d\_a D1

#define d\_b D2

#define d\_c D3

#define d\_d D4

#define d\_e D5

#define d\_f D6

#define d\_g D7

#define d\_h D8

#define COM1 3

#define COM2 1

#define COM3 9

#define COM4 10

//数码管0-F码值

unsigned char num[17][8] =

{

//a b c d e f g h

{ 1, 1, 1, 1, 1, 1, 0, 0 }, //0

{ 0, 1, 1, 0, 0, 0, 0, 0 }, //1

{ 1, 1, 0, 1, 1, 0, 1, 0 }, //2

{ 1, 1, 1, 1, 0, 0, 1, 0 }, //3

{ 0, 1, 1, 0, 0, 1, 1, 0 }, //4

{ 1, 0, 1, 1, 0, 1, 1, 0 }, //5

{ 1, 0, 1, 1, 1, 1, 1, 0 }, //6

{ 1, 1, 1, 0, 0, 0, 0, 0 }, //7

{ 1, 1, 1, 1, 1, 1, 1, 0 }, //8

{ 1, 1, 1, 1, 0, 1, 1, 0 }, //9

{ 1, 1, 1, 0, 1, 1, 1, 1 }, //A

{ 1, 1, 1, 1, 1, 1, 1, 1 }, //B

{ 1, 0, 0, 1, 1, 1, 0, 1 }, //C

{ 1, 1, 1, 1, 1, 1, 0, 1 }, //D

{ 1, 0, 0, 1, 1, 1, 1, 1 }, //E

{ 1, 0, 0, 0, 1, 1, 1, 1 }, //F

{ 0, 0, 0, 0, 0, 0, 0, 1 }, //.

};

void setup()

{

pinMode(d\_a, OUTPUT); //设置为输出引脚

pinMode(d\_b, OUTPUT);

pinMode(d\_c, OUTPUT);

pinMode(d\_d, OUTPUT);

pinMode(d\_e, OUTPUT);

pinMode(d\_f, OUTPUT);

pinMode(d\_g, OUTPUT);

pinMode(d\_h, OUTPUT);

pinMode(COM1, OUTPUT);

pinMode(COM2, OUTPUT);

pinMode(COM3, OUTPUT);

pinMode(COM4, OUTPUT);

}

void loop()

{

//累加循环当去到9999自动从0开机计数

for (int l = 0; l < 10; l++)

{

for (int k = 0; k < 10; k++)

{

for (int j = 0; j < 10; j++)

{

for (int i = 0; i < 10; i++)

{

//一秒钟快闪125次，就等于一秒，

//1000/8=125

for (int q = 0; q<125; q++)

{

Display(1, l);//第一位数码管显示l的值

delay(2);

Display(2, k);

delay(2);

Display(3, j);

delay(2);

Display(4, i);

delay(2);

}

}

}

}

}

}

//显示函数，com可选数值范围1-4，num可选数值范围0-9

void Display(unsigned char com, unsigned char n)

{

digitalWrite(d\_a, LOW); //去除余晖

digitalWrite(d\_b, LOW);

digitalWrite(d\_c, LOW);

digitalWrite(d\_d, LOW);

digitalWrite(d\_e, LOW);

digitalWrite(d\_f, LOW);

digitalWrite(d\_g, LOW);

digitalWrite(d\_h, LOW);

//选通位选

switch (com)

{

case 1:

digitalWrite(COM1, LOW); //选择位1

digitalWrite(COM2, HIGH);

digitalWrite(COM3, HIGH);

digitalWrite(COM4, HIGH);

break;

case 2:

digitalWrite(COM1, HIGH);

digitalWrite(COM2, LOW); //选择位2

digitalWrite(COM3, HIGH);

digitalWrite(COM4, HIGH);

break;

case 3:

digitalWrite(COM1, HIGH);

digitalWrite(COM2, HIGH);

digitalWrite(COM3, LOW); //选择位3

digitalWrite(COM4, HIGH);

break;

case 4:

digitalWrite(COM1, HIGH);

digitalWrite(COM2, HIGH);

digitalWrite(COM3, HIGH);

digitalWrite(COM4, LOW); //选择位4

break;

default:break;

}

digitalWrite(d\_a, num[n][0]); //a查询码值表

digitalWrite(d\_b, num[n][1]);

digitalWrite(d\_c, num[n][2]);

digitalWrite(d\_d, num[n][3]);

digitalWrite(d\_e, num[n][4]);

digitalWrite(d\_f, num[n][5]);

digitalWrite(d\_g, num[n][6]);

digitalWrite(d\_h, num[n][7]);

}

1. Lcd屏的显示实验

英文显示

LiquidCrystal lcd(D7, D6, D5, D4, D3, D2);

//初始化

void setup() {

//设置行列值

//指定显示屏的尺寸（宽度和高度）,16列，2行

lcd.begin(16, 2);

//打印字符，将文本显示在LCD上.

lcd.print("hello, DOFLY!");

}

//循环执行

void loop() {

//设置光标到第2行第7列

//(注意：1 表示第2行，从0开始计数):

lcd.setCursor(6, 1);

//打印复位后的运行秒值

lcd.print(millis() / 1000);

lcd.print(" Second");

}

循环显示

#include <LiquidCrystal.h>

LiquidCrystal lcd(D7, D6, D5, D4, D3, D2);

//显示的内容

char strtitle[] = "hello, DOFLY!";

//内容的长度

int nSize = strlen(strtitle);

//初始化

void setup() {

lcd.begin(16, 2);

}

//循环执行

void loop() {

lcd.setCursor(0, 0);

lcd.print("hello, DOFLY!");

//将光标设置到第1行的最右边

lcd.setCursor(16, 0);

//设置自动滚屏

lcd.autoscroll();

//依次输出单个字符

for (int i = 0; i<nSize; i++)

{

lcd.print(strtitle[i]);

delay(300);

}

//关闭自动滚屏

lcd.noAutoscroll();

}

左右移动

#include <LiquidCrystal.h>

LiquidCrystal lcd(D7, D6, D5, D4, D3, D2);

//显示的内容

char strtitle[] = "hello, DOFLY!";

//内容的长度

int nSize = strlen(strtitle);

//初始化

void setup() {

lcd.begin(16, 2);

lcd.print("hello, DOFLY!");

}

//循环执行

void loop() {

//lcd.scrollDisplayLeft();

lcd.scrollDisplayRight();

delay(300);

}