项目名称:四位数码管计时

小组成员：2213611604欧阳俊、2215012469向胤兴、2214214880黄金阳 2214214822陈珂

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项目介绍：让四位数码管实现自动从1到9999

代码：

#define d\_a 2 //定义数码管a 接引脚 2

#define d\_b 3

#define d\_c 4

#define d\_d 5

#define d\_e 6

#define d\_f 7

#define d\_g 8

#define d\_h 9

#define COM1 10 //定义 第一组数码管 com1 接引脚2

#define COM2 11

#define COM3 12

#define COM4 13

//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);

}

}

}

}

}

}

void Display(unsigned char com,unsigned char n) //显示函数，com可选数值范围1-4，num可选数值范围0-9

{

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);

switch(com) //选通位选

{

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]);

}

结果图片：

结论：没什么大结论，主要是在for语句中套用for语句，同时构造了一个函数。这里使用的是共阴极数码管。通过代码学会了数组的使用，HIGH可以用1代替，LOW可以用0代替。

}