

实时时钟

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混合1902

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```

unsigned char data hour = 23;
unsigned char data minute = 59;
unsigned char data second = 0;
unsigned char data ms_50 = 0;

// days of month table
unsigned char xdata Date[2][12] = {
    {31,28,31,30,31,30,31,31,30,31,30,31},
    {31,29,31,30,31,30,31,31,30,31,30,31}
};

void Set(void)
{
    EA = 1;
    ET0 = 1;
    TMOD = 0x01;
    TH0 = 0x3C;
    TL0 = 0xB0;
    TR0 = 1;
    TF0 = 0;
}

// Determine whether it is a leap year,
// if it is true, return 1, otherwise return 0
bit JudgeDays(void)
{
    unsigned int Year = 2000 + year;
    bit flag = 0;
    if( (Year % 400) == 0 || (Year % 4 == 0 && Year % 100 != 0) )
        flag = 1;
    return flag;
}

// interrupt program
void timer0(void) interrupt 1
{
    // reset
    TH0 = 0x3C;
    TL0 = 0xB0;
    TF0 = 0;

    // Trigger interrupt, indicating overflow, it is 50ms
    ms_50++;
    if( ms_50 == 20 )
    {
        ms_50 = 0;
        second++;
    }

    // minute++;
    if( second == 60 )
    {
        second = 0;
        minute++;
    }

    // hour++;

```

```

if( minute == 60 )
{
    minute = 0;
    hour++;
}

// day++;
if( hour == 24 )
{
    hour = 0;
    day++;
}

// month++;
if( day == Date[JudgeDays()][month-1]+1 )
{
    day = 1;
    month++;
}

// year++;
if( month == 13 )
{
    month = 1;
    year++;
}
}

// Display time as decimal
unsigned char Decimal(unsigned char hex)
{
    return 16*(hex/10)+hex%10;
}

void main(void)
{
    // Show time at 0x50
    code unsigned char* show_place = 0x50;
    // Show the year as 2000+
    show_place[0] = Decimal(20);

    Set();

    while(1){
        show_place[1] = Decimal(year);
        show_place[2] = Decimal(month);
        show_place[3] = Decimal(day);
        show_place[4] = Decimal(hour);
        show_place[5] = Decimal(minute);
        show_place[6] = Decimal(second);
    };
}

```

