

## 1.5 日历系统阶段 4\_物联网 / 嵌入式工程师 - 慕课网

“ 慕课网慕课教程 1.5 日历系统阶段 4 涵盖海量编程基础技术教程，以图文图表的形式，把晦涩难懂的编程专业用语，以通俗易懂的方式呈现给用户。

设计一个 display\_month() 函数显示从键盘输入日期，并且显示该年当月的日历。

```
#include <stdio.h>

#define LE_YEAR 1

int Isleap(int y)
{
    if(((y % 4 == 0) && (y % 100 != 0)) || (y % 400 == 0))
    {
        return 1;
    }else{
        return 0;
    }
}

int max_day(int y,int m)
{
    int month[12] = {31,28,31,30,31,30,31,31,30,31,30,31};
    int ret = 0;

    ret = Isleap(y);

    if(ret == LE_YEAR)
    {
        month[1] = 29;
    }

    return month[m - 1];
}

int Total_day(int y,int m,int d)
{
    int sum = 0;
    int i = 0;
    int ret = 0;

    #if 0

    ret = max_day(y,1);

    printf("ret : %d\n",ret);

    #endif

    for(i = 1;i < m;i++)
    {
        sum = sum + max_day(y,i);
    }

    sum = sum + d;
    return sum;
}

int weekday(int y,int m,int d)
{
    int count = 0;

    if(m == 1 || m == 2)
```

```

    {
        m = m + 12;
        y = y - 1;
    }

    count = (d + 2 * m + 3 * (m + 1) / 5 + y + y / 4 - y / 100 + y / 400 + 1) % 7;

    return count;
}

void display_week(int y,int m,int d)
{
    int count = 0;

    count = weekday(y,m,d);

    switch(count)
    {
    case 0:
        printf("%d-%d-%d is Sunday\n",y,m,d);
        break;
    case 1:
        printf("%d-%d-%d is Monday\n",y,m,d);
        break;
    case 2:
        printf("%d-%d-%d is Tuesday\n",y,m,d);
        break;
    case 3:
        printf("%d-%d-%d is Wednesday\n",y,m,d);
        break;
    case 4:
        printf("%d-%d-%d is Thursday\n",y,m,d);
        break;
    case 5:
        printf("%d-%d-%d is Friday\n",y,m,d);
        break;
    case 6:
        printf("%d-%d-%d is Saturday\n",y,m,d);
        break;
    }
    return 0;
}

void display_month(int y,int m,int d)
{
    int count = 0;
    int i = 0,j = 0;
    int max;

    count = weekday(y,m,1);

    printf("\n\t\t%d year %d month\n",y,m);
    printf("SUN\tMON\tTUE\tWED\tTHU\tFRI\tSAT\n");

    for(i = 0;i < count;i++)
    {
        printf("\t");
    }

    max = max_day(y,m);

    for(j = 1;j <= max;j++)
    {
        printf("%d\t",j);

        if((count + j) % 7 == 0)
        {
            putchar('\n');
        }
    }
    putchar('\n');

    return 0;
}

int main()
{

```

```
int year = 0, month = 0, day = 0;
int ret = 0;
printf("please input [year month day] : ");
scanf("%d%d%d", &year, &month, &day);

if(month < 1 || month > 12 || day < 1 || day > 31)
{
    printf("Input date is error!\n");
    return -1;
}
ret = Isleap(year);

if(ret == LE_YEAR)
{
    printf("%d-%d-%d is leap yar\n", year, month, day);
}else{
    printf("%d-%d-%d is not leap yar\n", year, month, day);
}
ret = Total_day(year, month, day);
printf("%d-%d-%d is %d day of the year\n", year, month, day, ret);

display_week(year, month, day);
display_month(year, month, day);

return 0;
}
```

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全文完

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本文由 简悦 SimpRead 优化，用以提升阅读体验

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