

## SOURCE CODE

```
#include<stdio.h>

#define TRUE  1
#define FALSE 0

int days_in_month[]={0,31,28,31,30,31,30,31,31,30,31,30,31};
char *months[]=
{
    " ",
    "\n\nJanuary",
    "\n\nFebruary",
    "\n\nMarch",
    "\n\nApril",
    "\n\nMay",
    "\n\nJune",
    "\n\nJuly",
    "\n\nAugust",
    "\n\nSeptember",
    "\n\nOctober",
    "\n\nNovember",
    "\n\nDecember"
};

int inputyear(void)
{
    int year;

    printf("Please enter a year (example: 1999) : ");
    scanf("%d", &year);
    return year;
}
```

```
}
```

```
int determinedaycode(int year)
```

```
{
```

```
    int daycode;
```

```
    int d1, d2, d3;
```

```
    d1 = (year - 1.) / 4.0;
```

```
    d2 = (year - 1.) / 100.;
```

```
    d3 = (year - 1.) / 400.;
```

```
    daycode = (year + d1 - d2 + d3) % 7;
```

```
    return daycode;
```

```
}
```

```
int determineleapyear(int year)
```

```
{
```

```
    if(year % 4 == FALSE && year % 100 != FALSE || year % 400 == FALSE)
```

```
    {
```

```
        days_in_month[2] = 29;
```

```
        return TRUE;
```

```
    }
```

```
    else
```

```
    {
```

```
        days_in_month[2] = 28;
```

```
        return FALSE;
```

```
    }
```

```
}
```

```
void calendar(int year, int daycode)
```

```
{
```

```
    int month, day;
```

```
    for ( month = 1; month <= 12; month++ )
```

```
    {
```

```

printf("%s", months[month]);
printf("\n\nSun Mon Tue Wed Thu Fri Sat\n");

// Correct the position for the first date
for ( day = 1; day <= 1 + daycode * 5; day++ )
{
    printf(" ");
}

// Print all the dates for one month
for ( day = 1; day <= days_in_month[month]; day++ )
{
    printf("%2d", day );

    // Is day before Sat? Else start next line Sun.
    if ( ( day + daycode ) % 7 > 0 )
        printf(" ");
    else
        printf("\n ");
}

// Set position for next month
daycode = ( daycode + days_in_month[month] ) % 7;
}
}

int main(void)
{
    int year, daycode, leapyear;

    year = inputyear();
    daycode = determinedaycode(year);
    determineleapyear(year);
    calendar(year, daycode);
    printf("\n");
}

```

