```c
#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\n\nJanuary",
        "\n\n\nFebruary",
        "\n\n\nMarch",
        "\n\n\nApril",
        "\n\n\nMay",
        "\n\n\nJune",
        "\n\n\nJuly",
        "\n\n\nAugust",
        "\n\n\nSeptember",
        "\n\n\nOctober",
        "\n\n\nNovember",
        "\n\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)
{
```

```c
        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");
}
```