#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",3

};

int inputyear(void)

{

int year ;

printf("please enter a year (example:1997) :");

scanf("%d",&year);

return year;

}

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;

}

}

int deteminedaycode(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 ;

}

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 ");

for (day =1 ;day <= 1 + daycode \* 5 ;day++ )

{

printf(" ");

}

for( day =1;day<= days\_in\_month[month]; day++ )

{

printf("%2d ",day);

if((day + daycode) % 7 >0)

printf(" ");

else

printf("\n ");

}

daycode = (daycode + days\_in\_month[month] ) %7 ; }

}

int main (void)

{

int year ,daycode,leapyear;

year =inputyear();

determineleapyear(year);

daycode=deteminedaycode(year);

calendar(year,daycode);

printf("\n");

}