#include<iostream>

using namespace **std**;

int **dayNumber**(int day, int month, int year)

{

   static int A[] = { 0, 3, 2, 5, 0, 3, 5, 1, 4, 6, 2, 4 };

   year -= month < 3;

   return ( year + year/4 - year/100 + year/400 + A[month-1] + day) % 7;

}

**string** **getMonthName**(int monthNumber) *// to display every month in calender*

{

   string M[] = {"January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", "December"};

   return (M[monthNumber]);

}

int **numberOfDays** (int monthNumber, int year)

{

   switch(monthNumber)

   {

      case 0 :

      case 2 :

      case 4 :

      case 6 :

      case 7 :

      case 9 :

      case 11: return(31); *// for months of 31 days*

      break;

      case 1 :

         if (year % 400 == 0 || (year % 4 == 0 && year %100 != 0))

            return (29);

         else

            return (28);

      break;

      case 3 :

      case 5 :

      case 8 :

      case 10 : return(30); *// for months of 30 days*

      break;

   }

}

void **printCalendar**(int year) *// definition of printCalender function*

{

   cout<<"\t\t\t Calendar - Year "<<year;

   int days;

   int current = **dayNumber** (1, 1, year);

   for (int i = 0; i < 12; i++)

   {

      days = **numberOfDays** (i, year);

      cout<<endl<<"\t\t ----X----"<<**getMonthName** (i).**c\_str**()<<"----X---- \t\t"<<endl;

      cout<<" Sun  Mon  Tue   Wed    Thu    Fri    Sat \n";

      int k;

      for (k = 0; k < current; k++)

         cout<<"\t";

      for (int j = 1; j <= days; j++)

      {

**printf**("%5d", j);

         if (++k > 6)

         {

            k = 0;

            cout<<endl;

         }

      }

      if (k)

         cout<<endl;

         current = k;

   }

   return;

}

int **main**()

{

   int year;

   cout<<"Enter the year\n";

   cin>>year; *// taking year value from user as input*

**printCalendar**(year); *// calling printCalender function*

   return (0);

}