#include <stdio.h>

// Function that returns the index of the

// day for date DD/MM/YYYY

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

{

Static int t[] = { 0, 3, 2, 5, 0, 3,

5, 1, 4, 6, 2, 4 };

Year -= month < 3;

Return (year + year / 4

* Year / 100

+ year / 400

+ t[month – 1] + day)

% 7;

}

// Function that returns the name of the

// month for the given month Number

// January – 0, February – 1 and so on

Char\* getMonthName(int monthNumber)

{

Char\* month;

Switch (monthNumber) {

Case 0:

Month = “January”;

Break;

Case 1:

Month = “February”;

Break;

Case 2:

Month = “March”;

Break;

Case 3:

Month = “April”;

Break;

Case 4:

Month = “May”;

Break;

Case 5:

Month = “June”;

Break;

Case 6:

Month = “July”;

Break;

Case 7:

Month = “August”;

Break;

Case 8:

Month = “September”;

Break;

Case 9:

Month = “October”;

Break;

Case 10:

Month = “November”;

Break;

Case 11:

Month = “December”;

Break;

}

Return month;

}

// Function to return the number of days

// in a month

Int numberOfDays(int monthNumber, int year)

{

// January

If (monthNumber == 0)

Return (31);

// February

If (monthNumber == 1) {

// If the year is leap then Feb

// has 29 days

If (year % 400 == 0

|| (year % 4 == 0

&& year % 100 != 0))

Return (29);

Else

Return (28);

}

// March

If (monthNumber == 2)

Return (31);

// April

If (monthNumber == 3)

Return (30);

// May

If (monthNumber == 4)

Return (31);

// June

If (monthNumber == 5)

Return (30);

// July

If (monthNumber == 6)

Return (31);

// August

If (monthNumber == 7)

Return (31);

// September

If (monthNumber == 8)

Return (30);

// October

If (monthNumber == 9)

Return (31);

// November

If (monthNumber == 10)

Return (30);

// December

If (monthNumber == 11)

Return (31);

}

// Function to print the calendar of

// the given year

Void printCalendar(int year)

{

Printf(“ Calendar - %d\n\n”, year);

Int days;

// Index of the day from 0 to 6

Int current = dayNumber(1, 1, year);

// I for Iterate through months

// j for Iterate through days

// of the month – i

For (int I = 0; I < 12; i++) {

Days = numberOfDays(I, year);

// Print the current month name

Printf(“\n ------------%s-------------\n”,

getMonthName(i));

// Print the columns

Printf(“ Sun Mon Tue Wed Thu Fri Sat\n”);

// Print appropriate spaces

Int k;

For (k = 0; k < current; k++)

Printf(“ “);

For (int j = 1; j <= days; j++) {

Printf(“%5d”, j);

If (++k > 6) {

K = 0;

Printf(“\n”);

}

}

If (k)

Printf(“\n”);

Current = k;

}

Return;

}

// Driver Code

Int main()

{

Int year = 2016;

// Function Call

printCalendar(year);

return 0;

}