30 JUNE 2022

GIVEN A YEAR N, THE TASK IS TO PRINT THE CALENDAR FOR EVERY MONTH OF THE GIVEN YEAR.

CALENDAR

January
20XX

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	26	28	29	30
31						

ANUSHKA KUSHWAHA
RA2111003011883
ISHA ANSHIKA
RA2111030010284

ABSTRACT

Creating a **calendar** in a system of organizing days. This is done by giving names to periods of time, typically days, weeks, months and years. A date is the designation of a single, specific day within such a system. A calendar is also a physical record (often paper) of such a system. A calendar can also mean a list of planned events, such as a court calendar or a partly or fully chronological list of documents, such as a calendar of wills.

Periods in a calendar (such as years and months) are usually, though not necessarily, synchronized with the cycle of the sun or the moon.

The term *calendar* is taken from *kalendae*, the term for the first day of the month in the Roman calendar, related to the verb *calare* 'to call out', referring to the "calling" of the new moon when it was first seen.

OBJECTIVE

Given a year **N**, the task is to print the calendar for every month of the given year.

In this mini project, you can find out the day corresponding to a given date and view the days and dates corresponding to a particular month+year.

CODE

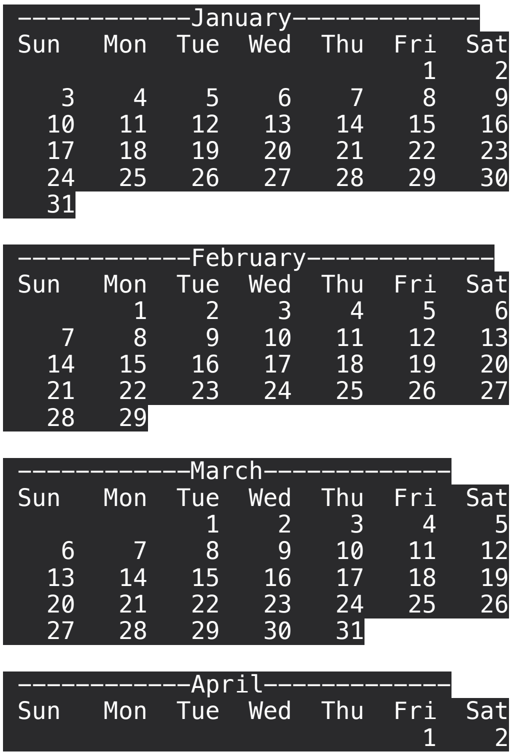
```
// C program to print the month by month
// calendar for the given year
#include <stdio.h>
// Function that returns the index of the
// day for date DD/MM/YYYY
int dayNumber(int day, int month, int year)
{
        static int t[] = { 0, 3, 2, 5, 0, 3,
                                        5, 1, 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;  }
```

OUTPUT

Calendar



```
------------January-------------
Sun   Mon  Tue  Wed  Thu  Fri  Sat
                            1    2
   3    4    5    6    7    8    9
  10   11   12   13   14   15   16
  17   18   19   20   21   22   23
  24   25   26   27   28   29   30
  31

------------February-------------
Sun   Mon  Tue  Wed  Thu  Fri  Sat
        1    2    3    4    5    6
   7    8    9   10   11   12   13
  14   15   16   17   18   19   20
  21   22   23   24   25   26   27
  28   29

------------March-------------
Sun   Mon  Tue  Wed  Thu  Fri  Sat
             1    2    3    4    5
   6    7    8    9   10   11   12
  13   14   15   16   17   18   19
  20   21   22   23   24   25   26
  27   28   29   30   31

------------April-------------
Sun   Mon  Tue  Wed  Thu  Fri  Sat
                            1    2
```

```
    3    4    5    6    7    8    9
   10   11   12   13   14   15   16
   17   18   19   20   21   22   23
   24   25   26   27   28   29   30

 ------------May-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
    1    2    3    4    5    6    7
    8    9   10   11   12   13   14
   15   16   17   18   19   20   21
   22   23   24   25   26   27   28
   29   30   31

 ------------June-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
                    1    2    3    4
    5    6    7    8    9   10   11
   12   13   14   15   16   17   18
   19   20   21   22   23   24   25
   26   27   28   29   30

 ------------July-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
                              1    2
    3    4    5    6    7    8    9
   10   11   12   13   14   15   16
   17   18   19   20   21   22   23
   24   25   26   27   28   29   30
   31

 ------------August-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
         1    2    3    4    5    6
    7    8    9   10   11   12   13
   14   15   16   17   18   19   20
   21   22   23   24   25   26   27
   28   29   30   31

 ------------September-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
                         1    2    3
    4    5    6    7    8    9   10
   11   12   13   14   15   16   17
   18   19   20   21   22   23   24
   25   26   27   28   29   30

 ------------October-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
                                   1
    2    3    4    5    6    7    8
    9   10   11   12   13   14   15
   16   17   18   19   20   21   22
   23   24   25   26   27   28   29
   30   31

 ------------November-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
              1    2    3    4    5
    6    7    8    9   10   11   12
   13   14   15   16   17   18   19
   20   21   22   23   24   25   26
   27   28   29   30

 ------------December-------------
 Sun   Mon  Tue  Wed  Thu  Fri  Sat
                         1    2    3
    4    5    6    7    8    9   10
   11   12   13   14   15   16   17
```

```
 18   19   20   21   22   23   24
 25   26   27   28   29   30   31
```

CONCLUSION

- The primary practical use of a this program to display a calendar to identify days: to be informed about or to agree on a future event and to record an event that has happened.
- Days may be significant for agricultural, civil, religious, or social reasons. For example, a calendar provides a way to determine when to start planting or harvesting, which days are religious or civil holidays, which days mark the beginning and end of business accounting periods, and which days have legal significance, such as the day taxes are due or a contract expires.
- Also, this program calendar may, by identifying a day, provide other useful information about the day such as its season.
- Calendars are also used to help people manage their personal schedules, time, and activities, particularly when individuals have numerous work, school, and family commitments.
- People frequently use multiple systems and may keep both a business and family calendar to help prevent them from overcommitting their time.
- Calendars are also used as part of a complete timekeeping system: date and time of day together specify a moment in time