

**Project 6: Calendar Application**

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

**Basically, three operations can be done in this calendar application. To find out the day corresponding to a given date, the date, month and year are asked. You can list the days and dates of any month of any year. For example, entering 04 2014 (April 2014) will give you an output as shown in the screenshot in this post.**

**You can navigate the months using arrow** **keys, or press n and p keys to view the next and previous months respectively. The third feature of this project on Calendar application utilizes file handling. With this feature, you can add important notes with corresponding dates.**

SOURCE CODE:

#include <stdio.h>

// Function to get the day of the week for a given date

int getDayOfWeek(int year, int month, int day) {

if (month < 3) {

month += 12;

year--;

}

int h = (day + 2 \* month + 3 \* (month + 1) / 5 + year + year / 4 - year / 100 + year / 400) % 7;

return h;

}

// Function to print a monthly calendar

void printCalendar(int year, int month) {

printf(" Mon Tue Wed Thu Fri Sat Sun\n");

int dayOfWeek = getDayOfWeek(year, month, 1);

for (int i = 0; i < dayOfWeek; i++) {

printf(" ");

}

int daysInMonth;

if (month == 4 || month == 6 || month == 9 || month == 11) {

daysInMonth = 30;

} else if (month == 2) {

// Check for leap year

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

daysInMonth = 29;

} else {

daysInMonth = 28;

}

} else {

daysInMonth = 31;

}

for (int day = 1; day <= daysInMonth; day++) {

printf("%5d", day);

if (++dayOfWeek > 6) {

dayOfWeek = 0;

printf("\n");

}

}

printf("\n");

}

int main() {

int year, month;

printf("Enter year: ");

scanf("%d", &year);

printf("Enter month (1-12): ");

scanf("%d", &month);

if (month < 1 || month > 12) {

printf("Invalid month.\n");

return 1;

}

printf("\n");

printCalendar(year, month);

return 0;

}

OUTPUT:

Enter year:2005

Enter month (1-12): 9

Mon Tue Wed Thu Fri Sat Sun

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