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INSTITUTE OF SCIENCE & TECHNOLOGY

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CALENDAR PROGRAM USING C

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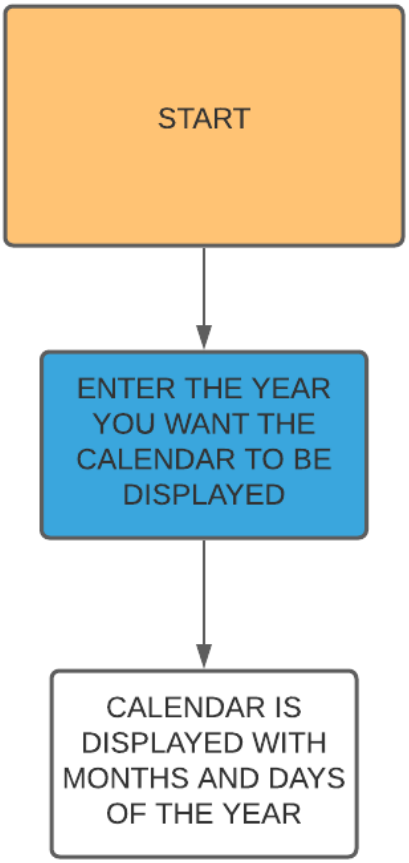
ABSTRACT :-

This mini project on Calendar in C programming language is a console application without graphics. It can help the user to find the dates and days of the months of a particular year. The function of this calendar application is quite simple, making this application a user friendly one. Once the code has been executed, the application asks you to enter the particular year that you want the calendar to be displayed. Then, the calendar displays the calendar of that year.

FLOWCHART :-



ALGORITHM :-

STEP 1 :- Declaring an array containing the days of the months.

STEP 2 :- The char *months[] declaration tells the compiler that 12 strings are being created. Each string is then specified on its own line. The compiler calculates the string's lengths.

STEP 3 :- The determinedaycode function determines the day code and assigns the values to specific days of the week. It will be sun=0, mon=1, tue=2, wed=3, thu=4, fri=5 and sat=6.

STEP 4 :- The determineleapyear function determines whether the inputted year is leap year or not.

STEP 5 :- The calendar function takes the year and day codes as parameters and prints the calendar accordingly.

STEP 6 :- The main function is to call all the above mentioned functions to display the final result, i.e the calendar.

PROGRAM :-

```
//C PROGRAM FOR CALENDAR
#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[]=
{
        " ",
```

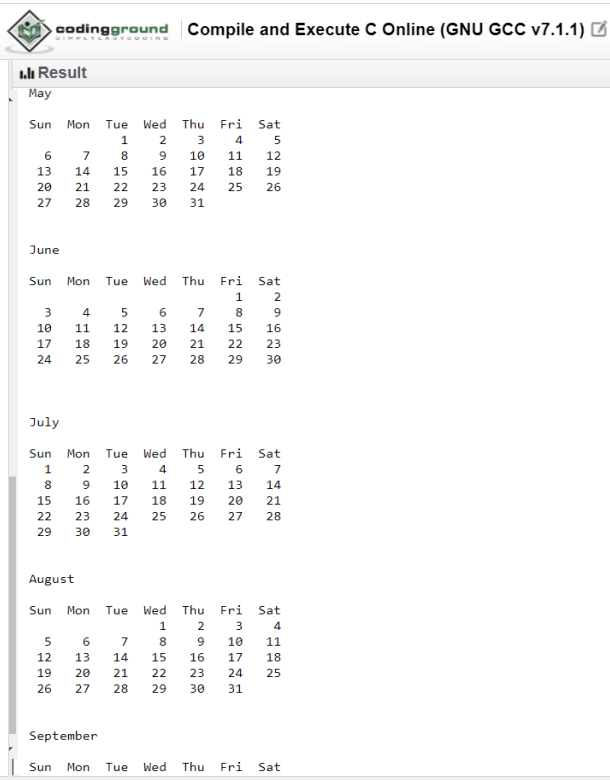
```
        "\n\n\nJanuary",
        "\n\n\nFebruary",
        "\n\n\nMarch",
        "\n\n\nApril",
        "\n\n\nMay",
        "\n\n\nJune",
        "\n\n\nJuly",
        "\n\n\nAugust",
        "\n\n\nSeptember",
        "\n\n\nOctober",
        "\n\n\nNovember",
        "\n\n\nDecember"
};


int inputyear(void)
{
        int year;

        printf("Please enter a year (example: 1999) : ");
        scanf("%d", &year);
        return year;
}

int determinedaycode(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;
}


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;
        }
}

void calendar(int year, int daycode)
{
        int month, day;
```

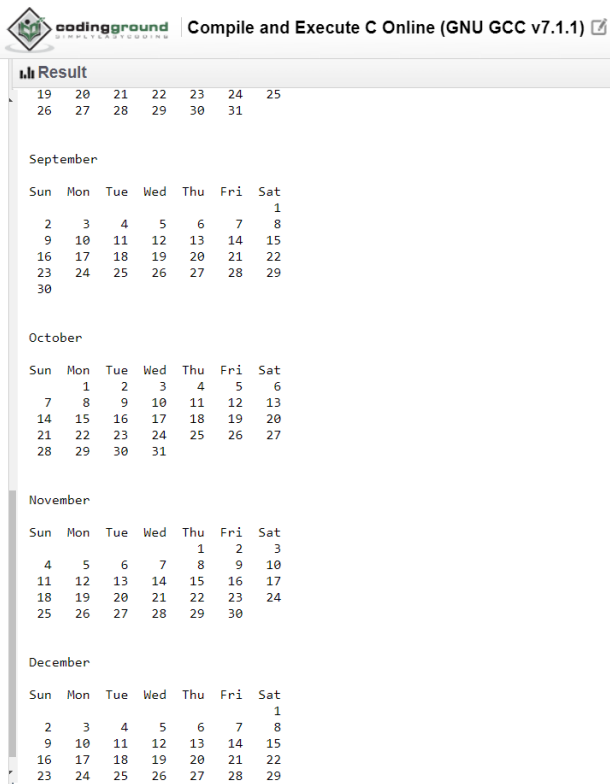
```
    for ( month = 1; month <= 12; month++ )
    {
        printf("%s", months[month]);
        printf("\n\nSun  Mon  Tue  Wed  Thu  Fri  Sat\n" );

        // Correct the position for the first date
        for ( day = 1; day <= 1 + daycode * 5; day++ )
        {
            printf(" ");
        }

        // Print all the dates for one month
        for ( day = 1; day <= days_in_month[month]; day++ )
        {
            printf("%2d", day );

            // Is day before Sat? Else start next line Sun.
            if ( ( day + daycode ) % 7 > 0 )
                printf("   " );
            else
                printf("\n " );
        }
            // Set position for next month
            daycode = ( daycode + days_in_month[month] ) % 7;
    }
}
```

```
int main(void)
{
	int year, daycode, leapyear;

	year = inputyear();
	daycode = determinedaycode(year);
	determineleapyear(year);
	calendar(year, daycode);
	printf("\n");
}
```

SCREENSHOTS :-




```
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
```




```
 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
```

DECLARATION :-

I hereby declare that the project entitled “CALENDAR USING C“ which is being submitted as a mini Project for 1ST semester in Mechanical Engineering to SRM INSTITUTE OF SCIENCE AND TECHNOLOGY is an authentic work done under the complete guidance of Prof DR VIJAY A, SCHOOL OF COMPUTING, SRMIST, I would also like to thank the professors’ friends and family members who have supported me during this time. Last but not the least, I would like to thank GOD ALMIGHTY.

Date: 18/01/2022

REFERENCES :-

C PROGRAMMING TUTORIALS BY CODINGUNIT.COM

https://web.archive.org/web/20211003223330/https://www.codingunit.com/how-to-make-a-calendar-in-c