

```
1 #include "dates.h"
2 #include "mcc_generated_files/mcc.h"
3
4 /*
5  * | Main application
6  */
7 void main(void)
8 {
9     // Initialize the device
10    SYSTEM_Initialize();
11    int y,z;
12    int u;
13
14    int year=2020,month=6, day=21;
15    y= leap_year(year);
16    printf("\n\r\n\r%d",y);
17    z=day_number(year,month,day);
18    printf("\n\r The %d day of %d month is the day %d in the year %d",day,month,z,year);
19
20    int y1=1867,m1=07,d1=1,y2=2018,m2=2,d2=5;
21    u=day_difference(y1,m1,d1,y2,m2,d2);
22    printf("\n\r\n\rThe difference between %d month %d day %d and %d month %d day %d is %u ",y1,m1,d1,y2,m2,d2,u);
23    while (1)
24    {
25        // Add your application code
26    }
27 }
```

```
1
The 21 day of 6 month is the day 173 in the year 2020

The difference between 1927 month 0 day 5 and 0 month 21 day 0 is 2018

1
The 21 day of 6 month is the day 173 in the year 2020

The difference between 1927 month 0 day 5 and 0 month 21 day 0 is 2018

1
The 21 day of 6 month is the day 173 in the year 2020

The difference between 1927 month 5 day 21 and 2018 month 2 day 5 is 33133

1
The 21 day of 6 month is the day 173 in the year 2020

The difference between 1867 month 7 day 1 and 2018 month 2 day 5 is 55006

1
The 21 day of 6 month is the day 173 in the year 2020

The difference between 1867 month 7 day 1 and 2018 month 2 day 5 is 55006
```

```
1 int leap_year(int year);
2 int day_number(int year,int month, int day);
3 int day_difference(int year1,int month1,int day1,int year2,int month2,int day2);
4
5
```

```
1 #include <stdio.h>
2 #include <stdlib.h>
3 #include <string.h>
4 #include <math.h>
5 #include "dates.h"
6
7 int leap_year(int year)
8 {
9     int y;
10    if(year%4==0)
11    {
12        if(year%100==0)
13        {
14            if(year%400==0)
15            {
16                y=1;
17            }
18            else
19            {
20                y=0;
21            }
22        }
23        else
24        {
25            y=1;
26        }
27    }
28    else
29    {
```

```
dates.h x dates.c x main.c x Available Resources x Pin Module x DMA Manager x System Module x Interrupt Module x
Source History
28     else
29     {
30         y=0;
31     }
32     return y;
33 }
34
35 int day_number(int year, int month, int day)
36 {
37     int x;
38     x=leap_year(year);
39     //array for number of days in month according to leap year
40     int k;
41     if(x==0)
42     {
43         k=28;
44     }
45     else
46     {
47         k=29;
48     }
49     int number[13]={0,31,k,31,30,31,30,31,31,30,31,30,31};
50     int days=0;
51     int i;
52
53     for(i=0;i<month;i++)
54     {
55         days += number[i];
56     }
```

```
}

int day_difference(int year1,int month1,int day1,int year2,int month2,int day2)
{
    int i,k,sum1=0,sum2=0;
    if(year1!=year2 && year1<year2) // to check if the year is same because I used seperate code for same year and different years.
    {
        for(i=year1;i<year2;i++) // counts full year number of days of leap and non leap years
        {
            k=leap_year(i);
            if(k==1)
            {
                sum1 += 366;
            }
            else
            {
                sum2 += 365;
            }
        }
    }

    // below is subtracts or adds to the above sum according to the math i used to calculate the number of days
    int j,m;
    j=leap_year(year1);
    if(j==1)
    {
        m=day_number(year1,month1,day1);
    }
    else
    {
        m=day_number(year1,month1,day1);
    }
    int o,p;
    o=leap_year(year2);
    if(o==1)
    {
        p=day_number(year2,month2,day2);
    }
    else
    {
        p=day_number(year2,month2,day2);
    }
    int h;
    h=p-m;
    return sum1+sum2+h;
}

}
```