

Answer on Question#38080- Programming - C++

1. I want a program that compute and display the next of the specific date in Gregorian calendar. The date should be entered day/month/year. An invalid date should be handled properly.

Solution.

```
#include <iostream>
#include <time.h>

using namespace std;

struct struct_date
{
    char day;
    char month;
    short year;
};

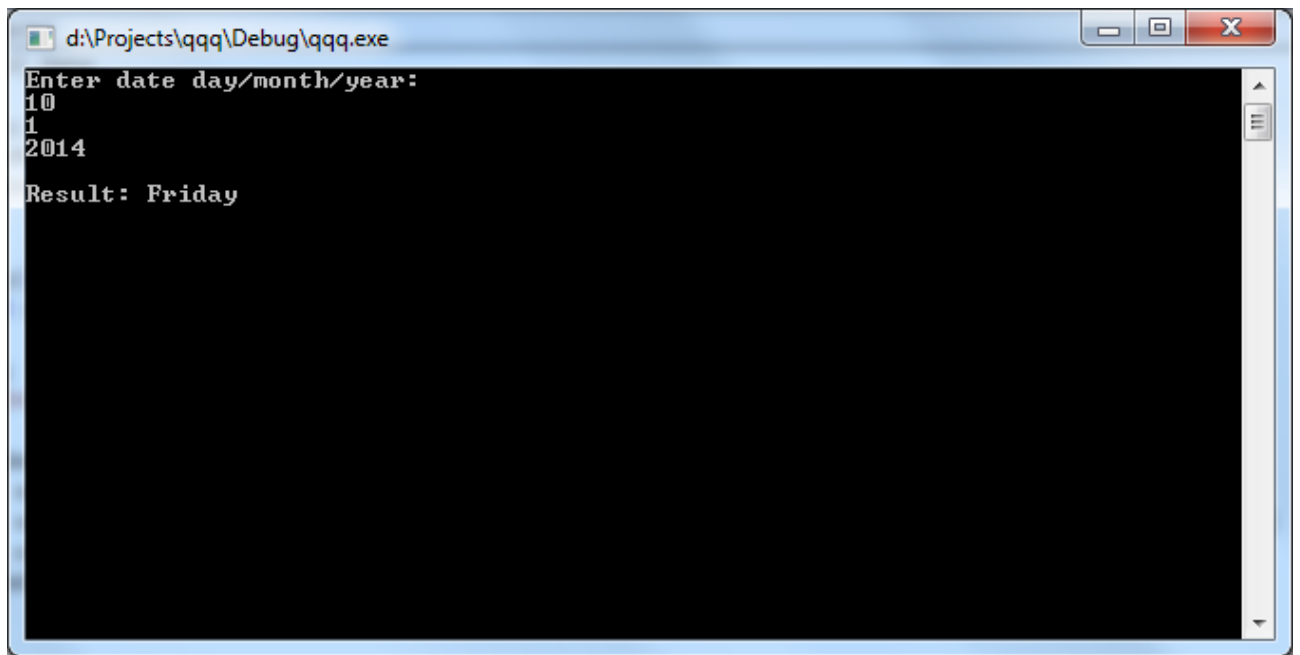
int what_day(const struct struct_date * const date);
int main(int argc, char* argv[])
{
    int a=0;
    cout<<"Enter date day/month/year: "<<endl;

    struct_date *sdate=new struct_date;
    cin>>a; sdate->day=a; if(a>31){cout<<"You entered the wrong date!"<<endl;
system("pause"); return 0;}
    cin>>a; sdate->month=a; if(a>12){cout<<"You entered the wrong date!"<<endl;
system("pause"); return 0;}
    cin>>a; sdate->year=a;
    cout<<endl<<"Result: ";

    switch(what_day(sdate))
    {
        case 0: cout<<"Sunday"; break;
        case 1: cout<<"Monday"; break;
        case 2: cout<<"Tuesday"; break;
        case 3: cout<<"Wednesday"; break;
        case 4: cout<<"Thursday"; break;
        case 5: cout<<"Friday"; break;
        case 6: cout<<"Saturday"; break;
    }

    cout<<endl;
    system("pause");
    return 0;
}

int what_day(const struct struct_date * const date)
{
    int a = (14 - date->month) / 12;
    int y = date->year - a;
    int m = date->month + 12 * a - 2;
    return (7000 + (date->day + y + y / 4 - y / 100 + y / 400 + (31 * m) / 12)) % 7;
}
```



The image shows a Windows command prompt window with the title bar "d:\Projects\qqq\Debug\qqq.exe". The window contains the following text:

```
Enter date day/month/year:  
10  
1  
2014  
Result: Friday
```

The window has a standard Windows interface with a title bar, minimize, maximize, and close buttons, and a scroll bar on the right side.