// Example program

#include <iostream>

#include <string>

using namespace std;

class Date

{

private:

int month, day, year;

public:

static const string monthName[];

static const int monthDays[];

Date(int userMonth, int userDay, int userYear)

{

month = userMonth;

day = userDay;

year = userYear;

}

Date()

{

}

void setMonth(int userMonth)

{

month = userMonth;

}

void setDay(int userDay)

{

day = userDay;

}

void setYear(int userYear)

{

year = userYear;

}

int getMonth()

{

return month;

}

int getDay()

{

return day;

}

int getYear()

{

return year;

}

void operator++()

{

if(day <= 30)

{

day = day + 1;

}

//Add years

else

{

if(month >= 12)

{

year++;

month = 0;

}

else

{

month++;

}

day = 0;

}

}

void operator--()

{

if(day > 0)

{

day = this->day - 1;

}

//Subtract years

else

{

if(month <= 1)

{

year--;

month = 0;

}

else

{

month--;

}

day = 30;

}

}

bool operator>(const Date& c)

{

if(c.year < this->year)

{

return true;

}

else if(c.year == this->year)

{

if(c.month < this-> month)

{

return true;

}

else if (c.month == this-> month)

{

if(c.day < this-> day)

{

return true;

}

else

{

return false;

}

}

else

{

return false;

}

}

else

{

return false;

}

}

int operator-(const Date& d)

{

Date temp;

temp.month = this->month - d.month;

/\*

if(temp.month < 0)

{

temp.month = -1 \* temp.month;

}

\*/

temp.day = this->day - d.day;

/\*

if(temp.day < 0)

{

temp.day = -1 \* temp.day;

}

\*/

temp.year = this->year - d.year;

/\*

if(temp.day <= 0)

{

cout << "year is negative or zero and thus is invalid";

}

\*/

return temp.month\*30 + temp.day + temp.year\*12\*30 ;

}

void print()

{

cout << monthName[month] << " " << day << " " << year;

}

};

const string Date::monthName[ ] = {"January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", "December" };

const int Date::monthDays[ ] = {31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31 };

int main()

{

Date test = Date();

Date test2 = Date();

int temp;

do

{

cout << "Month: " << endl;

cin >> temp;

test.setMonth(temp);

cout << "Day: " << endl;

cin >> temp;

test.setDay(temp);

cout << "Year: " << endl;

cin >> temp;

test.setYear(temp);

if(test.getMonth() < 0 || test.getMonth() > 12 || test.getDay() < 0 || test.getDay() > 30 || test.getYear()< 0)

{

cout << "Invalid Date" << endl;

}

} while(test.getMonth() < 0 || test.getMonth() > 12 || test.getDay() < 0 || test.getDay() > 30 || test.getYear()< 0);

do

{

cout << "Month: " << endl;

cin >> temp;

test2.setMonth(temp);

cout << "Day: " << endl;

cin >> temp;

test2.setDay(temp);

cout << "Year: " << endl;

cin >> temp;

test2.setYear(temp);

if(test2.getMonth() < 0 || test2.getMonth() > 12 || test2.getDay() < 0 || test2.getDay() > 30 || test2.getYear() < 0)

{

cout << "Invalid Date" << endl;

}

} while(test2.getMonth() < 0 || test2.getMonth() > 12 || test2.getDay() < 0 || test2.getDay() > 30 || test2.getYear() < 0);

test.operator++();

cout << "++ operator: ";

test.print();

cout << endl;

cout << "-- operator: ";

test.operator--();

test.print();

cout << endl;

cout << "> operator: ";

if(test > test2)

{

cout << "true" << endl;

}

else

{

cout << "false"<< endl;

}

cout << "Difference " << test - test2 << " day";

}