#include <iostream>

#include "Date.h"

Date::Date( int m, int d, int y )

{

setDate( m, d, y );

}

void Date::setDate( int mm, int dd, int yy )

{

month = ( mm >= 1 && mm <= 12 ) ? mm : 1;

year = ( yy >= 1900 && yy <= 2100 ) ? yy : 1900;

if ( month == 2 && leapYear( year ) )

day = ( dd >= 1 && dd <= 29 ) ? dd : 1;

else

day = ( dd >= 1 && dd <= days[ month ] ) ? dd : 1;

}

Date &Date::operator++()

{

helpIncrement();

return \*this;

}

Date Date::operator++( int )

{

Date temp = \*this;

helpIncrement();

return temp;

}

const Date &Date::operator+=( int additionalDays )

{

for ( int i = 0; i < additionalDays; i++ )

helpIncrement();

return \*this;

}

bool Date::leapYear( int testYear ) const

{

if ( testYear % 400 == 0 ||

( testYear % 100 != 0 && testYear % 4 == 0 ) )

return true;

else

return false;

}

int Date::getMonth() const

{

return month;

}

bool Date::endOfMonth( int testDay ) const

{

if ( month == 2 && leapYear( year ) )

return testDay == 29; // last day of Feb. in leap year

else

return testDay == days[ month ];

}

void Date::helpIncrement()

{

if ( !endOfMonth( day ) )

day++; // increment day

else

if ( month < 12 )

{

month++;

day = 1;

}

else

{

year++;

month = 1;

day = 1;

}

}

ostream &operator<<( ostream &output, const Date &d )

{

static char \*monthName[ 13 ] = { "", "January", "February",

"March", "April", "May", "June", "July", "August",

"September", "October", "November", "December" };

output << monthName[ d.month ] << ' ' << d.day << ", " << d.year;

return output;

}