Computer Laboratory - Lab Sheet 1

TASK1 - Copy programs given below in a separate file. Save , compile and run it.
First program named `hello.cpp` prints Hello world! to the screen.
Second program named `hesap.cpp` that reads two integers and outputs their sum.

```
a)
// First C++ program
#include <iostream>
using namespace std;
int main()
{
cout << "   Hello World!   " << endl;
cout << "\n" ;
system("Pause");
return 0;
}
```

```
b)
#include <iostream>
using namespace std;
int main()
{
int a,b,c;
cout<<"Enter first integer: ";
cin>>a;
cout<<"Enter second integer: ";
cin>>b;
c=a+b;
cout<<endl;
cout<<"Their sum is : " << c << endl <<
endl;
system("Pause");
return 0;
}
```

TASK2 - Modify the second program from above such that it reads 3 integers and outputs addition of first two integers multiplies by third integer.

TASK3

Write a program that, when given a (positive) number of days n, prints out the year, month, and day representation of n. Assume one year is 12 months and one month is 30 days.

Examples; 759 days ➔ 2 year(s), 1 month(s), 9 day(s)

Output should look exactly like this:

>Please enter a number of days:
>358
>0 year(s), 11 month(s), 28 day(s)

TASK4

The Pythagorean theorem states that the sum of the squares of the sides of a right triangle is equal to the the square of the hypotenuse. For example, if two sides of a right triangle have lenghts of 3 and 4, then the hypotenuse must have a lenght of 5. Together the integers 3, 4 and 5 form a *Pythagorean triple*. There are infinete number of such triples. Given two positive integers, *m* and *n*, where *m>n*, a Pythagorean triple can be generated by the following formulas:

$$side1 = m^2 - n^2$$
$$side2 = 2mn$$
$$hypotenuse = m^2 + n^2$$

The triple (*side1=3, side2=4, hypotenuse=5*) is generated by this formula when *m=2* and *n=1*. Write a program that takes values for *m* and *n* as input and displays the values of the Pythagorean triple generated by the formulas above.