//This program reads three positive integers
//and determines whether or not they form the
//sides of a triangle.

#include <iostream>
using namespace std;

int main()
{
    int a, b, c; //sides of the triangle
    char ans, ch;
    do{
        cout << "Enter three integers: ";
        cin >> a >> b >> c;
        if(a>=b+c)
        {
            cout << "Invalid because " << a << " >= " << b << " + " << c << endl;
        } else
        {
            if(b>=a+c)
            {
                cout << "Invalid because " << b << " >= " << a << " + " << c << endl;
            } else
            {
                if(c>=a+b)
                {
                    cout << "Invalid because " << c << " >= " << a << " + " << b << endl;
                } else
                {
                    cout << "Valid Triangle" << endl;
                }
            }
        }
        cout << "Enter y or Y to do another set " << "N or n to quit: ";
        cin >> ans;
        //After reading answer peek at next character in
        //input stream and remove if it is not rt or lf
        ch = cin.peek();
        while(ch!=static_cast<char>(10) &&
        ch!=static_cast<char>(13)){
            cin.ignore();
            ch = cin.peek();
        }
        //Check that ans was one of n, N, y or Y, and repeat
        //reading until it is.
        while(ans != 'n' && ans != 'N' &&
        ans != 'Y' && ans != 'y'){
            cout << "Enter y or Y to do another set " << "N or n to quit: ";
            cin >> ans;
            ch = cin.peek();
            while(ch!=static_cast<char>(10) &&
            ch!=static_cast<char>(13)){
                cin.ignore();
                ch = cin.peek();
            }
        }
    } while(ans=='Y' || ans == 'y');

    return(0);
}