

BỘ GIÁO DỤC VÀ ĐÀO TẠO

ĐẠI HỌC DUY TÂN

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BÀI THỰC HÀNH

PHẦN 2 LỚP – ĐỐI TƯỢNG

Lập Trình Winforms: VB.NET / C#.NET

GIẢNG VIÊN: PHẠM VĂN DƯỢC

ĐÀ NẴNG 08/2014

Bài 3:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
namespace phan_so{
    class Program{
        public class Fraction {
            private int numerator;
            private int denominator;
            //-----
            public void Input() {
                try {
                    Console.Out.Write("To input numerator:");
                    this.numerator = int.Parse(Console.ReadLine());
                }
                catch (Exception e) { Console.Out.Write(e); }
                try{
                    do{
                        Console.Out.Write("To input denominator:");
                        this.denominator = int.Parse(Console.ReadLine());
                    } while (this.denominator == 0);
                }
                catch (Exception e) { Console.Out.Write(e); }
            }
            //-----
            public void Output() {
                Console.Out.WriteLine("{0} / {1}", this.numerator, this.denominator);
            }
            //-----
            public int Get_numerator(){
                return this.numerator;
            }
            //-----
        }
    }
}
```

```

public int Get_denominator(){
    return this.denominator;
}

public void Set_numerator(int numerator)
{
    this.numerator = numerator;
}

//-----
public void Set_denominator(int denominator){
    this.denominator = denominator;
}

}

//-----
static int UCLN(int a, int b){
    a = Math.Abs(a);
    b = Math.Abs(b);
    if (a == 0) return b;
    if(b == 0) return a;
    while(a != b)
        if (a > b) a = a - b;
        else b = b - a;
    return a;
}

//-----
static Fraction Multi(Fraction A, Fraction B){
    Fraction C = new Fraction();
    int numerator, denominator, UC;
    numerator = A.Get_numerator() * B.Get_numerator();
    denominator = A.Get_denominator() * B.Get_denominator();
    UC = UCLN(numerator, denominator);
    numerator = numerator / UC;
    denominator = denominator / UC;
    C.Set_numerator(numerator);
    C.Set_denominator(denominator);
    return C;
}

```

```

}
//-----
static Fraction Division(Fraction A, Fraction B){
    Fraction C = new Fraction();
    int numerator, denominator, UC;
    numerator = A.Get_numerator() * B.Get_denominator();
    denominator = A.Get_denominator() * B.Get_numerator();
    UC = UCLN(numerator, denominator);
    numerator = numerator / UC;
    denominator = denominator / UC;
    C.Set_numerator(numerator);
    C.Set_denominator(denominator);
    return C;
}
//-----
static Fraction Subtraction(Fraction A, Fraction B){
    Fraction C = new Fraction();
    int numerator, denominator, UC;
    numerator = A.Get_numerator() * B.Get_denominator()
                - A.Get_denominator() * B.Get_numerator();
    denominator = A.Get_denominator() * B.Get_denominator();
    UC = UCLN(numerator, denominator);
    numerator = numerator / UC;
    denominator = denominator / UC;
    C.Set_numerator(numerator);
    C.Set_denominator(denominator);
    return C;
}

static Fraction Sum(Fraction A, Fraction B){
    Fraction C = new Fraction();
    int numerator, denominator, UC;
    numerator = A.Get_numerator() * B.Get_denominator()
                + A.Get_denominator() * B.Get_numerator();
    denominator = A.Get_denominator() * B.Get_denominator();

```

```

UC = UCLN(numerator, denominator);
numerator = numerator / UC;
denominator = denominator / UC;
C.Set_numerator(numerator);
C.Set_denominator(denominator);
return C;
}
public static Fraction A = new Fraction();
public static Fraction B = new Fraction();
public static Fraction C = new Fraction();
public static Fraction D = new Fraction();
public static Fraction E = new Fraction();
public static Fraction F = new Fraction();
//-----
static void Main(string[] args){
    A.Input(); A.Output(); B.Input(); B.Output();
    C = Multi(A, B);
    Console.Out.Write("Tich A,B:");C.Output();
    D = Division(A, B);
    Console.Out.Write("Thuong A,B:"); D.Output();
    E = Subtraction(A, B);
    Console.Out.Write("Hieu A,B:"); E.Output();
    F = Sum(A, B);
    Console.Out.Write("Tong A,B:"); F.Output();
    System.Console.ReadLine();
}
}
}

```