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Assignment 2

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Assignment2

{

// Rational class

class Rational

{

public int Denominator { get; private set; } // property

public int Numerator { get; private set; } // property

// constructor with default values

public Rational( int numerator=0, int denominator = 1)

{

this.Denominator = denominator;

this.Numerator = numerator;

}

// toString override function

public override string ToString()

{

double temp = (double)this.Numerator / this.Denominator;

return $"{this.Numerator} / {this.Denominator} or ({(double)temp})";

}

// increaseby method

public void IncreaseBy(Rational other)

{

this.Denominator = this.Denominator \* other.Denominator;

this.Numerator = (this.Numerator \* other.Denominator) + (other.Numerator \* this.Denominator);

}

// decrease by method

public void DecreaseBy(Rational other)

{

var tempD = this.Denominator \* other.Denominator;

var one = this.Numerator \* other.Denominator;

var two = other.Numerator \* this.Denominator;

this.Numerator = one - two;

this.Denominator = tempD;

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Assignment2

{

class Program

{

// main mathod

static void Main(string[] args)

{

// create 4 Objects with 0,1 or 2 arguments

Rational object1 = new Rational();

Rational object2 = new Rational(4);

Rational object3 = new Rational(3,9);

Rational object4 = new Rational(7,25);

Console.WriteLine($"Object1 = Object1 : {object1.ToString()} + Object2: {object2.ToString()}");

object1.IncreaseBy(object2); // call increaseby function

Console.WriteLine("After calling IncreaseBy mathod");

Console.WriteLine($"Object1 : {object1.ToString()}\nObject2: {object2.ToString()}");

Console.WriteLine($"Object3 = Object3 : {object3.ToString()} + Object4: {object4.ToString()}");

object3.DecreaseBy(object4); // call decreaseBy function

Console.WriteLine("After calling DecreaseBy mathod");

Console.WriteLine($"Object3 : {object3.ToString()} \n Object4: {object4.ToString()}");

}

}

}