

作業2：判斷並記錄三角形

班級:資工一乙

姓名:翁于翔

學號:4B1G0128

指導老師: 陳定宏



**.CS**

using System.Collections.Generic;  
using System.Windows;  
using System.Windows.Controls;  
using System.Windows.Media;

namespace \_20220921  
{  
///

/// Interaction logic for MainWindow.xaml  
///  
public partial class MainWindow : Window  
{

1. public class Triangle
2. {
3. public double SideA { get; private set; }
4. public double SideB { get; private set; }
5. public double SideC { get; private set; }
6. public bool IsTriangle { get; private set; }
7. public Triangle(double sideA, double sideB, double sideC)
8. {
9. SideA = sideA;
10. SideB = sideB;
11. SideC = sideC;
12. IsTriangle = CheckIfTriangle(sideA, sideB, sideC);
13. }
14. private bool CheckIfTriangle(double a, double b, double c)
15. {
16. return a + b > c && b + c > a && a + c > b;
17. }
18. }
19. private List<Triangle> triangles = new List<Triangle>();
20. public MainWindow()
21. {
22. InitializeComponent();
23. }
24. private void button\_Click(object sender, RoutedEventArgs e)
25. {
26. textBlock.Text = "請輸入有效數值";
27. double A, B, C;
28. List<double> Triangle = new List<double>();
29. bool number = double.TryParse(textBox.Text, out A);
30. bool number1 = double.TryParse(textBox1.Text, out B);
31. bool number2 = double.TryParse(textBox2.Text, out C);
32. if (!number || A < 0 || !number1 || B < 0 || !number2 || C < 0)
33. {
34. MessageBox.Show("請輸入正數!", "Error!");
35. return;
36. }
37. Triangle triangle = new Triangle(A, B, C);
38. triangles.Add(triangle);
39. if (triangle.IsTriangle)
40. {
41. label.Background = new SolidColorBrush(Colors.Green);
42. label.Content = $"邊長 {A}, {B}, {C} 可構成三角形";
43. }
44. else
45. {
46. label.Background = new SolidColorBrush(Colors.Red);
47. label.Content = $"邊長 {A}, {B}, {C} 不可構成三角形";
48. }
49. UpdateTextBlock();
50. }
51. private void UpdateTextBlock()
52. {
53. textBlock.Text = "測試結果：\n";
54. foreach (Triangle triangle in triangles)
55. {
56. string result = triangle.IsTriangle ? "可構成" : "不可構成";
57. textBlock.Text += $"邊長 {triangle.SideA}, {triangle.SideB}, {triangle.SideC} {result}三角形\n";
58. }
59. }
60. private void textBox\_TextChanged(object sender, TextChangedEventArgs e)
61. {
62. }
63. private void textBox1\_TextChanged(object sender, TextChangedEventArgs e)
64. {
65. }
66. private void textBox2\_TextChanged(object sender, TextChangedEventArgs e)
67. {
68. }
69. }

}

**.xmal**

<Window x:Class="\_20220921.MainWindow"

xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"

xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"

xmlns:d="http://schemas.microsoft.com/expression/blend/2008"

xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"

xmlns:local="clr-namespace:\_20220921"

mc:Ignorable="d"

Title="MainWindow" Height="450" Width="800">

<Grid>

<Button x:Name="button" Content="運算" HorizontalAlignment="Left" Margin="270,144,0,0" VerticalAlignment="Top" Click="button\_Click" Height="43" Width="98"/>

<TextBlock x:Name="textBlock" HorizontalAlignment="Center" Margin="447,0,0,0" TextWrapping="Wrap" VerticalAlignment="Center" Height="415" Width="343" TextAlignment="Center"/>

<TextBox x:Name="textBox" HorizontalAlignment="Left" Margin="248,78,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="120" TextChanged="textBox\_TextChanged"/>

<TextBox x:Name="textBox1" HorizontalAlignment="Left" Margin="248,100,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="120" TextChanged="textBox1\_TextChanged"/>

<TextBox x:Name="textBox2" HorizontalAlignment="Left" Margin="248,122,0,0" TextWrapping="Wrap" VerticalAlignment="Top" Width="120" TextChanged="textBox2\_TextChanged"/>

<Label x:Name="label" Content="" HorizontalAlignment="Left" Margin="10,10,0,0" VerticalAlignment="Top" Height="83" Width="152" HorizontalContentAlignment="Center" VerticalContentAlignment="Center"/>

</Grid>

</Window>

一張含有 文字, 螢幕擷取畫面, 軟體, 陳列 的圖片

自動產生的描述一張含有 文字, 螢幕擷取畫面, 電腦, 軟體 的圖片

自動產生的描述