

```
class NumText:TextBox
{
    public NumText()
    {
        start(); // InitializeComponent()
    }

    void start() // InitializeComponent()
    {
        this.BackColor = Color.Blue;
        this.ForeColor = Color.Yellow;
        this.KeyPress += new KeyPressEventHandler(keyp);
    }

    private void keyp(object sender, KeyPressEventArgs e)
    {
        if (!(((e.KeyChar >= 48) && (e.KeyChar <= 57)) || (e.KeyChar == 8)))
        {
            e.KeyChar = Convert.ToChar(0); // e.Handled = true;
        }
    }
}
```

هذا الصف تعديل للصف [Panel] ويحتوي على زر الغرض منه توضيح تغيير الأبعاد وكذلك إدارة الأحداث والخصائص

```
class PanButton : Panel
{
    private Button button1;
    public String TText
    {
        get
        { return button1.Text; }
        set
        { button1.Text = value; }
    }
    // =====
    public PanButton()
    {
        Start(); // InitializeComponent();
        this.Resize += delegate(object sender, EventArgs e)
        {
            button1.Left = 0;
            button1.Top = 0;
            button1.Width = this.Width;
            button1.Height = this.Height;
        };
        button1.Click += delegate(object sender, EventArgs e)
        { this.OnClick(e); };
        button1.Left = 0;
        button1.Top = 0;
        button1.Width = this.Width;
        button1.Height = this.Height;
        button1.Text = "Ok";
    }
}
```

```
//
private void Start() //InitializeComponent()
{
    this.button1 = new System.Windows.Forms.Button();
    // button1
    this.button1.Location = new System.Drawing.Point(0, 0);
    this.button1.Name = "button1";
    this.button1.Size = new System.Drawing.Size(200, 60);
    this.button1.TabIndex = 0;
    this.button1.Text = "Ok";
    this.button1.UseVisualStyleBackColor = true;
    // PanButton
    this.Controls.Add(this.button1);
    this.Size = new System.Drawing.Size(200, 60);
}
}
```

هذا الصف تعديل للصف [Panel] ويحتوي على أزرار ومربعات نص لحساب عملية الجمع

```
class SumClass : Panel
{
    private Label label1;
    private Label label2;
    private Label label3;
    private TextBox textBox1;
    private TextBox textBox2;
    private TextBox textBox3;
    private Button button1;
    private Button button2;

    public SumClass()
    {
        InitializeComponent();
    }

    private void InitializeComponent()
    {
        this.label1 = new Label();
        this.label2 = new Label();
        this.label3 = new Label();
        this.textBox1 = new TextBox();
        this.textBox2 = new TextBox();
        this.textBox3 = new TextBox();
        this.button1 = new Button();
        this.button2 = new Button();
        this.SuspendLayout();
        //
        // label1
        //
        this.label1.Location = new Point(312, 32);
        this.label1.Name = "label1";
        this.label1.RightToLeft = RightToLeft.Yes;
        this.label1.Size = new Size(62, 13);
        this.label1.TabIndex = 13;
    }
}
```



```

this.label1.Text = "العدد الأول:";
//
// label2
//
this.label2.AutoSize = true;
this.label2.Location = new Point(306, 64);
this.label2.Name = "label2";
this.label2.RightToLeft = RightToLeft.Yes;
this.label2.Size = new Size(67, 13);
this.label2.TabIndex = 14;
this.label2.Text = "العدد الثاني:";
//
// label3
//
this.label3.AutoSize = true;
this.label3.Location = new Point(328, 101);
this.label3.Name = "label3";
this.label3.RightToLeft = RightToLeft.Yes;
this.label3.Size = new Size(47, 13);
this.label3.TabIndex = 15;
this.label3.Text = "النتيجة:";
//
// textBox1
//
this.textBox1.Location = new Point(201, 29);
this.textBox1.Name = "textBox1";
this.textBox1.Size = new Size(86, 20);
this.textBox1.TabIndex = 10;
//
// textBox2
//
this.textBox2.Location = new Point(201, 62);
this.textBox2.Name = "textBox2";
this.textBox2.Size = new Size(86, 20);
this.textBox2.TabIndex = 11;
//
// textBox3
//
this.textBox3.Location = new Point(201, 101);
this.textBox3.Name = "textBox3";
this.textBox3.Size = new Size(86, 20);
this.textBox3.TabIndex = 12;
//
// button1
//
this.button1.Location = new Point(309, 144);
this.button1.Name = "button1";
this.button1.Size = new Size(74, 28);
this.button1.TabIndex = 8;
this.button1.Text = "جمع";
this.button1.UseVisualStyleBackColor = true;
this.button1.Click += new System.EventHandler(this.SumClick);
//
// button2

```

```
//
this.button2.Location = new Point(12, 144);
//this.button2.Margin = new System.Windows.Forms.Padding(3, 2, 3, 2);
this.button2.Name = "button2";
this.button2.Size = new Size(66, 28);
this.button2.TabIndex = 9;
this.button2.Text = "خروج";
this.button2.UseVisualStyleBackColor = true;
//
// SumClass
//
this.ClientSize = new Size(397, 184);
this.Controls.Add(this.label3);
this.Controls.Add(this.label2);
this.Controls.Add(this.label1);
this.Controls.Add(this.textBox3);
this.Controls.Add(this.textBox2);
this.Controls.Add(this.textBox1);
this.Controls.Add(this.button2);
this.Controls.Add(this.button1);
this.Name = "SumClass";
this.ResumeLayout(false);
this.PerformLayout();

}

private void SumClick(object sender, EventArgs e)
{
    int x = Convert.ToInt32(textBox1.Text);
    int y = Convert.ToInt32(textBox2.Text);
    int z = x + y;
    textBox3.Text = z.ToString();
}
}
```

مثال رقم ١ لتوضيح رسم زر بالإعتماد على خطوط مستقيمة

```
class mButon00 : UserControl
{
    public mButon00()
    { InitializeComponent(); // Start(); }
    private void InitializeComponent() //Start()
    {
        this.Size = new Size(117, 35);
        this.Paint += new System.Windows.Forms.PaintEventHandler(this.mb_Paint);
    }
    private void mb_Paint(object sender, PaintEventArgs e)
    {
        Pen p1 = new Pen(Color.White, 2);
        Pen p2 = new Pen(Color.Black, 2);
        e.Graphics.DrawLine(p1, 0, 0, this.Width, 0);
        e.Graphics.DrawLine(p1, 0, 0, 0, this.Height);
        e.Graphics.DrawLine(p2, 0, this.Height, this.Width, this.Height);
        e.Graphics.DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
}
```



```

class mButon01 : UserControl
{
    public mButon01()
    {
        InitializeComponent(); // Start();
    }
    private void InitializeComponent() // Start()
    {
        this.Size = new Size(117, 35);
        this.Paint += new PaintEventHandler(this.mb_Paint);
        this.MouseDown += new MouseEventHandler(this.mb_MouseDown);
        this.MouseUp += new MouseEventHandler(this.mb_MouseUp);
    }
    private void mb_Paint(object sender, PaintEventArgs e)
    {
        Pen p1 = new Pen(Color.White, 2);
        Pen p2 = new Pen(Color.Black, 2);
        e.Graphics.DrawLine(p1, 0, 0, this.Width, 0);
        e.Graphics.DrawLine(p1, 0, 0, 0, this.Height);
        e.Graphics.DrawLine(p2, 0, this.Height, this.Width, this.Height);
        e.Graphics.DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
    private void mb_MouseDown(object sender, MouseEventArgs e)
    {
        Pen p1 = new Pen(Color.Black, 2);
        Pen p2 = new Pen(Color.White, 2);
        this.CreateGraphics().DrawLine(p1, 0, 0, this.Width, 0);
        this.CreateGraphics().DrawLine(p1, 0, 0, 0, this.Height);
        this.CreateGraphics().DrawLine(p2, 0, this.Height, this.Width, this.Height);
        this.CreateGraphics().DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
    private void mb_MouseUp(object sender, MouseEventArgs e)
    {
        Pen p1 = new Pen(Color.White, 2);
        Pen p2 = new Pen(Color.Black, 2);
        this.CreateGraphics().DrawLine(p1, 0, 0, this.Width, 0);
        this.CreateGraphics().DrawLine(p1, 0, 0, 0, this.Height);
        this.CreateGraphics().DrawLine(p2, 0, this.Height, this.Width, this.Height);
        this.CreateGraphics().DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
}
}
}

```

```

class mButon02 : UserControl
{
    private Label label1;
    public String text
    {
        get
        { return label1.Text; }
        set
        { label1.Text = value; }
    }
}
// =====

```

```
public mButon02()
```

```
{  
    InitializeComponent( );  
    label1.Left = 5;  
    label1.Top = 5;  
    label1.Width = this.Width - 10;  
    label1.Height = this.Height - 10;  
    // =====  
    this.Resize += delegate(object sender, EventArgs e)  
    {  
        label1.Left = 5;  
        label1.Top = 5;  
        label1.Width = this.Width-10;  
        label1.Height = this.Height-10;  
    };  
    label1.Click += delegate(object sender, EventArgs e)  
    {  
        this.OnClick(e);  
    };  
}
```

```
// =====
```

```
private void InitializeComponent()
```

```
{  
    this.label1 = new Label();  
    this.SuspendLayout();  
    //  
    // label1  
    //  
    this.label1.Location = new Point(3, 9);  
    this.label1.Name = "label1";  
    this.label1.Size = new Size(42, 17);  
    this.label1.TabIndex = 0;  
    this.label1.Text = "label1";  
    this.label1.TextAlign = ContentAlignment.MiddleCenter;  
    this.label1.MouseDown += new MouseEventHandler(this.label1_MouseDown);  
    this.label1.MouseUp += new MouseEventHandler(this.label1_MouseUp);  
    //  
    // mButon02  
    //  
    this.Controls.Add(this.label1);  
    this.Name = "mButon02";  
    this.Size = new Size(117, 35);  
    this.Paint += new PaintEventHandler(this.mb_Paint);  
    this.MouseDown += new MouseEventHandler(this.mb_MouseDown);  
    this.MouseUp += new MouseEventHandler(this.mb_MouseUp);  
    this.ResumeLayout(false);  
}
```

```
// =====
```

```
private void mb_Paint(object sender, PaintEventArgs e)
```

```
{  
    Pen p1 = new Pen(Color.White, 2);  
    Pen p2 = new Pen(Color.Black, 2);  
    e.Graphics.DrawLine(p1, 0, 0, this.Width, 0);  
    e.Graphics.DrawLine(p1, 0, 0, 0, this.Height);  
}
```

```

        e.Graphics.DrawLine(p2, 0, this.Height, this.Width, this.Height);
        e.Graphics.DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
    // =====
    private void mb_MouseDown(object sender, MouseEventArgs e)
    {
        Pen p1 = new Pen(Color.Black, 2);
        Pen p2 = new Pen(Color.White, 2);
        this.CreateGraphics().DrawLine(p1, 0, 0, this.Width, 0);
        this.CreateGraphics().DrawLine(p1, 0, 0, 0, this.Height);
        this.CreateGraphics().DrawLine(p2, 0, this.Height, this.Width, this.Height);
        this.CreateGraphics().DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
    // =====
    private void mb_MouseUp(object sender, MouseEventArgs e)
    {
        Pen p1 = new Pen(Color.White, 2);
        Pen p2 = new Pen(Color.Black, 2);
        this.CreateGraphics().DrawLine(p1, 0, 0, this.Width, 0);
        this.CreateGraphics().DrawLine(p1, 0, 0, 0, this.Height);
        this.CreateGraphics().DrawLine(p2, 0, this.Height, this.Width, this.Height);
        this.CreateGraphics().DrawLine(p2, this.Width, 0, this.Width, this.Height);
    }
    // =====
    private void label1_MouseDown(object sender, MouseEventArgs e)
    {
        this.OnMouseDown(e);
    }
    // =====

    // =====
    private void label1_MouseUp(object sender, MouseEventArgs e)
    {
        this.OnMouseUp(e);
    }
    // =====
}

```

لبناء أداة رسم المربع والدائرة

```

public class Shape : Control // UserControl
{
    public Shape()
    {
        this.Paint +=
            new PaintEventHandler(Shape_Paint );
    }

    public enum ShapeType
    {
        Circular = 0,
        Rectangular = 1,
    }
}

```



```

private ShapeType _shape = ShapeType.Rectangular;

[Description("Determines the type of the shape : rectangle or circle"),
Category("Appearance"),
DefaultValue(typeof(ShapeType), "Rectangular"),
Browsable(true)]
public ShapeType shape
{
    get { return _shape; }
    set
    {
        if (_shape == value)
            return;
        _shape = value;
        Invalidate();
    }
}

private void Shape_Paint(object sender, PaintEventArgs e)
{
    Graphics gfx = e.Graphics;
    Rectangle rec = this.ClientRectangle;
    rec.Width -= 1;
    rec.Height -= 1;
    switch (_shape)
    {
        case ShapeType.Rectangular:
            gfx.DrawRectangle(new Pen(Color.Black, 1), rec);
            break;
        case ShapeType.Circular:
            gfx.DrawEllipse(new Pen(Color.Black, 1), rec);
            break;
    }
}
}

```

مثال لتوضيح التعامل مع الملفات

```

class FileClass
{
    static public void WriteToFile1()
    {
        StreamWriter sw = new StreamWriter("data.txt");
        sw.WriteLine("Welcome ...");
        sw.WriteLine("This is my first file program");
        sw.WriteLine("Good bye...");
        sw.Close();
    }
    static public void ReadFromFile1()
    {
        StreamReader sr = new StreamReader("data.txt");
        string tmp;
        tmp = sr.ReadLine();
    }
}

```



```

        Console.WriteLine(tmp);
        tmp = sr.ReadLine();
        Console.WriteLine(tmp);
        tmp = sr.ReadLine();
        Console.WriteLine(tmp);
        sr.Close();
    }

    static public void WriteToFile2()
    {
        StreamWriter sw = new StreamWriter("data.txt",true);
        string tmp;
        while ((tmp = Console.ReadLine().Trim()) != "")
            sw.WriteLine(tmp);
        sw.Close();
    }

    static public void ReadFromFile2()
    {
        StreamReader sr = new StreamReader("data.txt");
        string tmp;
        while((tmp = sr.ReadLine())!=null)
            Console.WriteLine(tmp);
        sr.Close();
    }
}

```