

Animation and double buffer



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

public class Form1 : Form
{
    private bool isShrinking = false;
    private int extraSize = 0;

    private System.Windows.Forms.Timer tmrRefresh;
    private System.Windows.Forms.CheckBox chkDoubleBuffer;
    public Form1() {
        InitializeComponent();
        tmrRefresh.Start();
    }

    private void tmrRefresh_Tick(object sender, EventArgs
e)
    {
        if (isShrinking)
            extraSize--;
        else
            extraSize++;

        if (extraSize > 500)
            isShrinking = true;
        else if (extraSize < 1) isShrinking = false;
        this.Invalidate(); } private void DoubleBuffering_Paint(object
sender, System.Windows.Forms.PaintEventArgs e) {
    this.DoubleBuffered = chkDoubleBuffer.Checked; Graphics g =
```

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e.Graphics;                g.SmoothingMode                =
System.Drawing.Drawing2D.SmoothingMode.HighQuality;      Pen
drawingPen                =                new                Pen(Color.Black,                10);
g.FillRectangle(Brushes.White, new Rectangle(new Point(0, 0),
this.ClientSize)); g.DrawRectangle(drawingPen, 50, 50, 50 +
extraSize, 50 + extraSize); } private void
InitializeComponent() { this.tmrRefresh = new
System.Windows.Forms.Timer(new
System.ComponentModel.Container()); this.chkDoubleBuffer = new
System.Windows.Forms.CheckBox(); this.SuspendLayout(); // //
tmrRefresh // this.tmrRefresh.Interval = 1;
this.tmrRefresh.Tick += new
System.EventHandler(this.tmrRefresh_Tick); // //
chkDoubleBuffer // this.chkDoubleBuffer.BackColor =
System.Drawing.Color.White; this.chkDoubleBuffer.Location =
new System.Drawing.Point(12, 12); this.chkDoubleBuffer.Name =
"chkDoubleBuffer"; this.chkDoubleBuffer.Size = new
System.Drawing.Size(336, 16); this.chkDoubleBuffer.TabIndex =
2; this.chkDoubleBuffer.Text = "Use Double Buffering";
this.chkDoubleBuffer.UseVisualStyleBackColor = false; // //
DoubleBuffering // this.AutoScaleDimensions = new
System.Drawing.SizeF(6F, 13F); this.AutoScaleMode =
System.Windows.Forms.AutoScaleMode.Font; this.ClientSize = new
System.Drawing.Size(422, 373);
this.Controls.Add(this.chkDoubleBuffer); this.Name =
"DoubleBuffering"; this.Text = "Form1"; this.Paint += new
System.Windows.Forms.PaintEventHandler(this.DoubleBuffering_Pa
int); this.ResumeLayout(false); } [STAThread] static void
Main() { Application.EnableVisualStyles(); Application.Run(new
Form1()); } } [/csharp]

```