

Form1.cs

```
using System.Drawing.Drawing2D;

namespace practic_1
{
    public partial class Form1 : Form
    {
        private bool dragging = false;
        private Point dragCursorPoint;
        private Point dragFormPoint;
        public Form1()
        {
            InitializeComponent();
            this.ClientSize = new Size(400, 400);
            this.Text = "Фиолетовая звезда";
            SetFormToStar();
            this.Paint += new PaintEventHandler(MainForm_Paint);

            Button button = new Button();
            button.Text = "Открыть форму 2";
            button.Location = new Point(150, 150);
            button.Click += (sender, e) =>
            {
                Form2 form2 = new Form2();
                form2.Show();
            };
            this.Controls.Add(button);

            this.MouseDown += new MouseEventHandler(Form1_MouseDown);
            this.MouseMove += new MouseEventHandler(Form1_MouseMove);
            this.MouseUp += new MouseEventHandler(Form1_MouseUp);
        }

        private void SetFormToStar()
        {
            GraphicsPath path = new GraphicsPath();
            Point[] points = GetStarPoints(5, 200, 100);
            path.AddPolygon(points);
            this.Region = new Region(path);
        }

        private Point[] GetStarPoints(int num_points, float outer_radius, float inner_radius)
        {
            double angle = Math.PI / num_points;
            List<Point> points = new List<Point>();

            for (int i = 0; i < 2 * num_points; i++)
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    {
        float radius = (i % 2 == 0) ? outer_radius : inner_radius;
        float x = (float)(200 + radius * Math.Cos(i * angle - Math.PI / 2));
        float y = (float)(200 + radius * Math.Sin(i * angle - Math.PI / 2));
        points.Add(new Point((int)x, (int)y));
    }

    return points.ToArray();
}

private void MainForm_Paint(object sender, PaintEventArgs e)
{
    Graphics g = e.Graphics;
    Brush brush = Brushes.Violet;
    g.FillRegion(brush, this.Region);
}

private void Form1_MouseDown(object sender, MouseEventArgs e)
{
    if (e.Button == MouseButtons.Left)
    {
        dragging = true;
        dragCursorPoint = Cursor.Position;
        dragFormPoint = this.Location;
    }
}

private void Form1_MouseMove(object sender, MouseEventArgs e)
{
    if (dragging)
    {
        Point dif = Point.Subtract(Cursor.Position, new Size(dragCursorPoint));
        this.Location = Point.Add(dragFormPoint, new Size(dif));
    }
}

private void Form1_MouseUp(object sender, MouseEventArgs e)
{
    if (e.Button == MouseButtons.Left)
    {
        dragging = false;
    }
}

private void Form1_Load(object sender, EventArgs e)
{
}
}

```

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}
```

Form2.cs

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

namespace practic_1
{
    public partial class Form2 : Form
    {
        public Form2()
        {
            InitializeComponent();

            Button openButton = new Button();
            openButton.Text = "Открыть форму 1";
            openButton.Location = new Point(100, 150);
            openButton.Click += OpenButton_Click;

            this.Controls.Add(openButton);
        }

        private void OpenButton_Click(object sender, EventArgs e)
        {
            Form1 form1 = new Form1();
            form1.Show();
            this.Close();
        }
    }
}
```