

Calculator.cs

```
namespace practic_2
{
    public partial class Calculator : Form
    {
        public Calculator()
        {
            InitializeComponent();

            this.ClientSize = new Size(400, 300);
            this.Text = "Калькулятор";

            Label label1 = new Label() { Text = "Результат:", Location = new Point(20, 150), AutoSize
= true };
            TextBox textBox1 = new TextBox() { Location = new Point(20, 20), Width = 100 };
            TextBox textBox2 = new TextBox() { Location = new Point(20, 50), Width = 100 };
            Button addButton = new Button() { Text = "+", Location = new Point(20, 80), Width = 60
};
            Button subtractButton = new Button() { Text = "-", Location = new Point(100, 80), Width
= 60 };
            Button multiplyButton = new Button() { Text = "*", Location = new Point(180, 80), Width
= 60 };
            Button divideButton = new Button() { Text = "/", Location = new Point(260, 80), Width =
60 };

            Button powerButton = new Button() { Text = "^", Location = new Point(20, 110), Width =
60 };
            Button modButton = new Button() { Text = "%", Location = new Point(100, 110), Width =
60 };
            Button maxButton = new Button() { Text = "Max", Location = new Point(180, 110), Width
= 60 };
            Button minButton = new Button() { Text = "Min", Location = new Point(260, 110), Width
= 60 };

            Button openConvButton = new Button() { Text = "Открыть конвертер", Location = new
Point(20, 200), Width = 150 };
            Button openGeneratorButton = new Button() { Text = "Открыть генератор", Location =
new Point(200, 200), Width = 150 };

            this.Controls.Add(label1);
            this.Controls.Add(textBox1);
            this.Controls.Add(textBox2);
            this.Controls.Add(addButton);
            this.Controls.Add(subtractButton);
            this.Controls.Add(multiplyButton);
            this.Controls.Add(divideButton);
            this.Controls.Add(powerButton);
            this.Controls.Add(modButton);
```

```

this.Controls.Add(maxButton);
this.Controls.Add(minButton);
this.Controls.Add(openConvButton);
this.Controls.Add(openGeneratorButton);

addButton.Click += (sender, e) => PerformOperation((a, b) => a + b, textBox1, textBox2,
label1);
subtractButton.Click += (sender, e) => PerformOperation((a, b) => a - b, textBox1,
textBox2, label1);
multiplyButton.Click += (sender, e) => PerformOperation((a, b) => a * b, textBox1,
textBox2, label1);
divideButton.Click += (sender, e) => PerformOperation((a, b) =>
{
    if (b == 0)
    {
        MessageBox.Show("На ноль делить нельзя.");
        return 0;
    }
    return a / b;
}, textBox1, textBox2, label1);

powerButton.Click += (sender, e) => PerformOperation((a, b) => Math.Pow(a, b),
textBox1, textBox2, label1);
modButton.Click += (sender, e) => PerformOperation((a, b) => a % b, textBox1, textBox2,
label1);
maxButton.Click += (sender, e) => PerformOperation((a, b) => Math.Max(a, b), textBox1,
textBox2, label1);
minButton.Click += (sender, e) => PerformOperation((a, b) => Math.Min(a, b), textBox1,
textBox2, label1);

openConvButton.Click += OpenConvButton_Click;
openGeneratorButton.Click += OpenGeneratorButton_Click;
}

private void PerformOperation(Func<double, double, double> operation, TextBox
textBox1, TextBox textBox2, Label label)
{
    if (double.TryParse(textBox1.Text, out double num1) && double.TryParse(textBox2.Text,
out double num2))
    {
        double result = operation(num1, num2);
        label.Text = $"Результат: {result}";
    }
    else
    {
        MessageBox.Show("Пожалуйста, введите корректные числа.");
    }
}

```

```

private void OpenConvButton_Click(object sender, EventArgs e)
{
    this.Hide();
    Conv convForm = new Conv();
    convForm.ShowDialog();
    this.Show();
}

private void OpenGeneratorButton_Click(object sender, EventArgs e)
{
    this.Hide();
    Generator generatorForm = new Generator();
    generatorForm.ShowDialog();
    this.Show();
}
}
}

```

Conv.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_2
{
    public partial class Conv : Form
    {
        public Conv()
        {
            InitializeComponent();

            TextBox textBox1 = new TextBox() { Location = new Point(20, 20), Width = 100 };
            ComboBox comboBox1 = new ComboBox() { Location = new Point(140, 20), Width = 150
};
            Button button1 = new Button() { Text = "Конвертировать", Location = new Point(20, 60)
};
            Label label1 = new Label() { Text = "Результат:", Location = new Point(20, 100), AutoSize
= true };

            comboBox1.Items.Add("Цельсий в Фаренгейт");

```

```

comboBox1.Items.Add("Фаренгейт в Цельсий");
comboBox1.SelectedIndex = 0;

this.Controls.Add(textBox1);
this.Controls.Add(comboBox1);
this.Controls.Add(button1);
this.Controls.Add(label1);

button1.Click += (sender, e) =>
{
    if (double.TryParse(textBox1.Text, out double temperature))
    {
        if (comboBox1.SelectedIndex == 0)
        {
            double fahrenheit = CelsiusToFahrenheit(temperature);
            label1.Text = $"{fahrenheit:F2} °F";
        }
        else
        {
            double celsius = FahrenheitToCelsius(temperature);
            label1.Text = $"{celsius:F2} °C";
        }
    }
    else
    {
        MessageBox.Show("Пожалуйста, введите корректное значение температуры.");
    }
};
}

private double CelsiusToFahrenheit(double celsius)
{
    return (celsius * 9 / 5) + 32;
}

private double FahrenheitToCelsius(double fahrenheit)
{
    return (fahrenheit - 32) * 5 / 9;
}
}

```

Generator.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_2
{
    public partial class Generator : Form
    {
        public Generator()
        {
            InitializeComponent();

            Label label1 = new Label() { Text = "Результат:", Location = new Point(20, 100), AutoSize
= true };
            TextBox minTextBox = new TextBox() { Location = new Point(20, 20), Width = 100,
PlaceholderText = "Мин" };
            TextBox maxTextBox = new TextBox() { Location = new Point(140, 20), Width = 100,
PlaceholderText = "Макс" };
            Button generateButton = new Button() { Text = "Сгенерировать", Location = new
Point(20, 60) };

            this.Controls.Add(label1);
            this.Controls.Add(minTextBox);
            this.Controls.Add(maxTextBox);
            this.Controls.Add(generateButton);

            generateButton.Click += (sender, e) =>
            {
                if (int.TryParse(minTextBox.Text, out int min) && int.TryParse(maxTextBox.Text, out
int max))
                {
                    Random rand = new Random();
                    int randomNumber = rand.Next(min, max + 1);
                    label1.Text = $"Результат: {randomNumber}";
                }
                else
                {
                    MessageBox.Show("Пожалуйста, введите корректные числа.");
                }
            };
        }
    }
}

```





