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using System;
using System.Drawing;
using System.Collections;
using System.ComponentModel;
using System.Windows.Forms;
using System.Data;

namespace Wrox.ProCSharp.VbToCSharp.SquareRootSample
{
    /// <summary>
    /// The Form that forms the main window for the app.
    /// </summary>

    public class SquareRootForm : System.Windows.Forms.Form
    {
        private System.Windows.Forms.TextBox txtNumber;
        private System.Windows.Forms.TextBox txtSign;
        private System.Windows.Forms.TextBox txtResult;
        private System.Windows.Forms.Button cmdShowResults;
        private System.Windows.Forms.Label label1;
        private System.Windows.Forms.Label label2;
        private System.Windows.Forms.Label label3;
        private System.Windows.Forms.Label label4;

        /// <summary>
        /// Required designer variable.
        /// </summary>
        private System.ComponentModel.Container components=null;
        public SquareRootForm()
        {
            InitializeComponent();
        }
        protected override void Dispose( bool disposing )
        {
            if( disposing )
            {
                if (components != null)
                {
                    components.Dispose();
                }
            }
            base.Dispose( disposing );
        }
        #region Windows Form Designer generated code

        /// <summary>
        /// Required method for Designer support - do not modify
        /// the contents of this method with the code editor.
        /// </summary>

        private void InitializeComponent()
        {
            this.txtNumber = new System.Windows.Forms.TextBox();
            this.txtSign = new System.Windows.Forms.TextBox();
            this.cmdShowResults = new System.Windows.Forms.Button();
            this.label3 = new System.Windows.Forms.Label();
            this.label4 = new System.Windows.Forms.Label();
            this.label1 = new System.Windows.Forms.Label();
            this.label2 = new System.Windows.Forms.Label();
            this.txtResult = new System.Windows.Forms.TextBox();
            this.SuspendLayout();

            //
            // txtNumber
            //

            this.txtNumber.Location = new System.Drawing.Point(160, 24);
            this.txtNumber.Name = "txtNumber";

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this.txtNumber.TabIndex = 0;
this.txtNumber.Text = "";

//
// txtSign
//

this.txtSign.Enabled = false;
this.txtSign.Location = new System.Drawing.Point(160, 136);
this.txtSign.Name = "txtSign";
this.txtSign.TabIndex = 1;
this.txtSign.Text = "";

//
// cmdShowResults
//

this.cmdShowResults.Location = new System.Drawing.Point(24, 96);
this.cmdShowResults.Name = "cmdShowResults";
this.cmdShowResults.Size = new System.Drawing.Size(88, 23);
this.cmdShowResults.TabIndex = 3;
this.cmdShowResults.Text = "Show Results";
this.cmdShowResults.Click += new
    System.EventHandler(this.OnClickShowResults);

//
// label3
//

this.label3.Location = new System.Drawing.Point(72, 24);
this.label3.Name = "label3";
this.label3.Size = new System.Drawing.Size(80, 23);
this.label3.TabIndex = 6;
this.label3.Text = "Input a number";

//
// label4
//

this.label4.Location = new System.Drawing.Point(80, 184);
this.label4.Name = "label4";
this.label4.Size = new System.Drawing.Size(80, 16);
this.label4.TabIndex = 7;
this.label4.Text = "Square root is";

//
// label11
//

this.label11.Location = new System.Drawing.Point(112, 136);
this.label11.Name = "label11";
this.label11.Size = new System.Drawing.Size(40, 23);
this.label11.TabIndex = 4;
this.label11.Text = "Sign is";

//
// label12
//

this.label12.Location = new System.Drawing.Point(48, 184);
this.label12.Name = "label12";
this.label12.Size = new System.Drawing.Size(8, 8);
this.label12.TabIndex = 5;

//
// txtResult
//

this.txtResult.Enabled = false;

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        this.txtResult.Location = new System.Drawing.Point(160, 184);
        this.txtResult.Name = "txtResult";
        this.txtResult.TabIndex = 2;
        this.txtResult.Text = "";

        //
        // Form1
        //

        this.AutoScaleBaseSize = new System.Drawing.Size(5, 13);
        this.ClientSize = new System.Drawing.Size(292, 269);
        this.Controls.AddRange(new System.Windows.Forms.Control[]
            {this.label4,
            this.label3,
            this.label2,
            this.label1,
            this.cmdShowResults,
            this.txtResult,
            this.txtSign,
            this.txtNumber});

        this.Name = "Form1";
        this.Text = "Square Root C# Sample";
        this.ResumeLayout(false);
    }

#endregion

/// <summary>
/// Event handler for user clicking Show Results button.
/// Displays square root and sign of number
/// </summary>
/// <param name="sender"></param>
/// <param name="e"></param>

private void OnClickShowResults(object sender, System.EventArgs e)
{
    float NumberInput = float.Parse(this.txtNumber.Text);
    if (NumberInput < 0)
    {
        this.txtSign.Text = "Negative";
        this.txtResult.Text = Math.Sqrt(-NumberInput) + " I";
    }
    else if (NumberInput == 0)
    {
        txtSign.Text = "Zero";
        txtResult.Text = "0";
    }
    else
    {
        this.txtSign.Text = "Positive";
        this.txtResult.Text = Math.Sqrt(NumberInput).ToString();
    }
}

}

class MainEntryClass
{
    /// <summary>
    /// The main entry point for the application.
    /// </summary>

    [STAThread]
    static void Main()
    {
        SquareRootForm TheMainForm = new SquareRootForm();
        Application.Run(TheMainForm);
    }
}
}

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