Министерство образования и науки РФ

ФГБОУ ВПО «Тамбовский государственный технический университет»

Кафедра «»

Лабораторная работа №3

по дисциплине «Объектно-ориентированное программирование»

Компонент «Графический редактор»

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Проверил:.

Тамбов, 20

***Цели и задачи****.*

Создать dll библиотеку, содержимое которой получится из лабораторной работы 2 – графический редактор.

***Решение задачи****.*

Создаем новый проект «Библиотека классов», созданный по умолчанию файл Class1.cs удаляем, в обозревателе добавляем «UserComponent», откроется редактор формы, на него необходимо перекинуть все компоненты из графического редактора – в ручную каждый, либо через коды, однако возможны нестыковки в именах. Необходимо заменить все вызовы формы на имя нового компонента.

Код usrctrlPaint.cs:

using System;

using System.Collections.Generic;

using System.Drawing;

using System.Drawing.Drawing2D;

using System.Windows.Forms;

using Ganza;

//Lab-3 component 'Paint'

namespace LibCompanent

{

[ToolboxBitmap(typeof(usrctrlPaint))]

public partial class usrctrlPaint : UserControl

{

public usrctrlPaint()

{

InitializeComponent();

\_drawableObject = new Karandash();

\_pen = new Pen(\_colorColorSelector);

\_bufferedGraphicsContext = BufferedGraphicsManager.Current;

InitializeGraphics();

}

private int \_key;

private Color \_colorColorSelector = Color.Black;

private Point \_movePoint, \_downPoint;//конечные координаты X-Y//начальные координаты Х-Y

private Pen \_pen;

private void pictureBox1\_MouseMove(object sender, MouseEventArgs e)

{

if (e.Button == MouseButtons.Left)

{

\_movePoint = e.Location;

if (\_drawableObject is Line)

{//отрисовка линии

Line line = (Line)\_drawableObject;

line.Begin = \_downPoint;

line.End = \_movePoint;

line.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

}

else if (\_drawableObject is Rect)

{//отрисовка прямоугольника

Rect rect = (Rect)\_drawableObject;

rect.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

rect.State = \_state;//true на заливку фигуры

int width, height, x, y;

//КООРДИНАТНЫЕ ОБЛАСТИ:

if (\_movePoint.X > \_downPoint.X)

{

width = \_movePoint.X - \_downPoint.X;

x = \_downPoint.X;

}

else

{

width = \_downPoint.X - \_movePoint.X;

x = \_movePoint.X;

}

if (\_movePoint.Y > \_downPoint.Y)

{

height = \_movePoint.Y - \_downPoint.Y;

y = \_downPoint.Y;

}

else

{

height = \_downPoint.Y - \_movePoint.Y;

y = \_movePoint.Y;

}

//отрисовка

rect.Rectangle = new Rectangle(x, y, width, height);

}

else if (\_drawableObject is Karandash)

{//отрисовка карандаш\кисть\ластик

Karandash karandash = (Karandash)\_drawableObject;

if (\_key != 7) karandash.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

else karandash.\_Pen = new Pen(Color.White, trackBarForPenSize.Value);//ластик

karandash.Begin = \_downPoint;

karandash.End = \_movePoint;

\_drawableObject.Draw(\_bmpGraphics);//Запись в буфер перед обновлением холста

\_downPoint = \_movePoint; //начало=конец

}

else if (\_drawableObject is Elipsise)

{//отрисовка элипсиса

Elipsise elipsise = (Elipsise)\_drawableObject;

elipsise.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

elipsise.State = \_state;

elipsise.Begin = \_movePoint;

elipsise.End = \_downPoint;

}

else if (\_drawableObject is RoundRectangle)

{//отрисовка прямоугольника со скруглеными углами

RoundRectangle rect = (RoundRectangle)\_drawableObject;

rect.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

rect.State = \_state;

int width, height, x, y;

//КООРДИНАТНЫЕ ОБЛАСТИ:

if (\_movePoint.X > \_downPoint.X)

{

width = \_movePoint.X - \_downPoint.X;

x = \_downPoint.X;

}

else

{

width = \_downPoint.X - \_movePoint.X;

x = \_movePoint.X;

}

if (\_movePoint.Y > \_downPoint.Y)

{

height = \_movePoint.Y - \_downPoint.Y;

y = \_downPoint.Y;

}

else

{

height = \_downPoint.Y - \_movePoint.Y;

y = \_movePoint.Y;

}

//отрисовка

rect.Rectangle = new Rectangle(x, y, width, height);

}

if (\_drawableObject is PolyGon)

{//Многоугольник

PolyGon polyGon = (PolyGon)\_drawableObject;

polyGon.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

polyGon.Begin = \_pointMouseUp;

/\*ПКМ - бросаем начальную точку

ЛКМ - конечная точка линии\*/

polyGon.End = \_movePoint;

}

if (\_drawableObject is Triangle)

{//Триугольник

Triangle triangle = (Triangle)\_drawableObject;

triangle.Triangles.Clear();

GraphicsPath gp = new GraphicsPath();

gp.AddPolygon(Vertexes);

triangle.\_Pen = new Pen(\_colorColorSelector, trackBarForPenSize.Value);

triangle.State = \_state;

Vertexes[0] = \_downPoint;//Запоминаем первую точку

Vertexes[1] = e.Location;//Запоминаем вторую вершину

Vertexes[2] = GetThirdVertex(\_downPoint, e.Location);//Считаем третью вершину

triangle.Triangles.Add(gp);

}

DrawToBuffer();//На обновление холста

}

}//END VOID

DrawMode \_drawMode;

private Point \_pointMouseUp;

private void pictureBox1\_MouseUp(object sender, MouseEventArgs e)

{

\_pointMouseUp = e.Location;//для полигона

switch (\_drawMode)

{//запись изменений в буфер холста

case DrawMode.Normal:

if (\_drawableObject != null)

\_drawableObject.Draw(\_bmpGraphics);

break;

}

}

private void pictureBox1\_MouseDown(object sender, MouseEventArgs e)

{//начальные координаты

//Включаем режим рисования

\_downPoint = e.Location;

}

private void colorSelect\_ForegroundColorChanged(object sender, EventArgs e)

{//Верхний цвет выбран

\_colorColorSelector = colorSelect.ForegroundColor;

}

private void colorSelect\_BackgroundColorChanged(object sender, EventArgs e)

{//Нижний цвет выбран

\_colorColorSelector = colorSelect.BackgroundColor;

}

private void btnPen\_Click(object sender, EventArgs e)

{//Выбран один из элементов рисования

\_key = 0;

int k = Convert.ToInt32((sender as Button).TabIndex);

switch (k)

{

case 0://btnPen

\_drawableObject = new Karandash();

break;

case 1://btnBrush

\_drawableObject = new Karandash();

break;

case 2://btnRectangle

\_drawableObject = new Rect();

break;

case 3://btnLine

\_drawableObject = new Line();

break;

case 4://btnElipsise

\_drawableObject = new Elipsise();

break;

case 5://btnRoundRectangle

\_drawableObject = new RoundRectangle();

break;

case 6://btnPolyGon

\_key = 1;

\_drawableObject = new PolyGon();

break;

case 7://btnSterka

\_key = 7;

\_drawableObject = new Karandash();

break;

case 8://btnTriangle

\_key = 8;

\_drawableObject = new Triangle();

break;

}

}

private void pictureBoxHolst\_Paint(object sender, PaintEventArgs e)

{

DrawToBuffer();

}

private BufferedGraphics \_bufferedGraphics;

private Shape \_drawableObject;

Bitmap \_bitmap;

private void DrawToBuffer()

{

\_bufferedGraphics.Graphics.Clear(Color.White);//фон

if (\_drawableObject != null)

\_drawableObject.Draw(\_bufferedGraphics.Graphics);

\_bufferedGraphics.Graphics.DrawImageUnscaled(\_bitmap, 0, 0);//\_canvasRect.X, \_canvasRect.Y, \_canvasRect.Width, \_canvasRect.Height);

\_bufferedGraphics.Render();//Обновление холста

}

private Rectangle \_canvasRect;//Область для рисования

private Graphics \_gr, \_bmpGraphics;

private readonly BufferedGraphicsContext \_bufferedGraphicsContext;

private void InitializeGraphics()

{

\_canvasRect = new Rectangle(0, 0, pictureBoxHolst.Width, pictureBoxHolst.Height);//холст размер квадрата

\_gr = pictureBoxHolst.CreateGraphics();

\_bufferedGraphics = \_bufferedGraphicsContext.Allocate(\_gr, \_canvasRect);

Bitmap prevBmp = null;

if (\_bitmap != null)

prevBmp = \_bitmap;

\_bitmap = new Bitmap(ClientSize.Width, ClientSize.Height);

\_bmpGraphics = Graphics.FromImage(\_bitmap);

if (prevBmp != null)

\_bmpGraphics.DrawImage(prevBmp, 0, 0, prevBmp.Width, prevBmp.Height);

}

private void FormGanza\_Resize(object sender, EventArgs e)

{

//InitializeGraphics();

Invalidate();

}

#region -----Triangle-------Vertex---------

PointF[] Vertexes = new PointF[3];//Координаты вершин треугольника

private PointF GetThirdVertex(PointF FirstVertex, PointF SecondVertex)

{

//Угол наклона прямой, образованной известными вершинами

double alpha = Math.Atan((FirstVertex.Y - SecondVertex.Y) / (FirstVertex.X - SecondVertex.X));

/\* k13 - коэффициент наклона прямой, проходящей через первую и третью вершину;

\* k23 - коэффициент наклона прямой, проходящей через вторую и третью вершину;\*/

double k13 = 0, k23 = 0;

float x, y;

//Вычисление угловых коэффициентов в зависимости от угла наклона первой стороны

if (FirstVertex.Y > SecondVertex.Y)

{

k13 = Math.Tan(alpha - 2 \* Math.PI / 3);

k23 = Math.Tan(alpha - Math.PI / 3);

}

else if (FirstVertex.Y <= SecondVertex.Y)

{

k13 = Math.Tan(alpha + Math.PI / 3);

k23 = Math.Tan(alpha + 2 \* Math.PI / 3);

}

//Координата X третьей вершины

x = (float)((k13 \* FirstVertex.X - k23 \* SecondVertex.X + SecondVertex.Y - FirstVertex.Y) / (k13 - k23));

//Координата Y третьей вершины

y = (float)(k13 \* (x - FirstVertex.X) + FirstVertex.Y);

return new PointF(x, y);

}

#endregion

private void trackBarForPenSize\_MouseUp(object sender, MouseEventArgs e)

{//Изменение размера кисти выводим на btnSterka

btnSterka.Text = trackBarForPenSize.Value.ToString();

}

private bool \_state;

private void checkBoxForFill\_CheckStateChanged(object sender, EventArgs e)

{//на заливку фигуры

\_state = checkBoxForFill.Checked;

}

}

}

Основные изменения кода произошли в модуле usrctrlPaint.Designer.cs:

#region Код, автоматически созданный конструктором компонентов

/// <summary>

/// Обязательный метод для поддержки конструктора - не изменяйте

/// содержимое данного метода при помощи редактора кода.

/// </summary>

private void InitializeComponent()

{

this.components = new System.ComponentModel.Container();

this.tabLayoutPnlInstrument = new System.Windows.Forms.TableLayoutPanel();

this.flowLayoutPanelForButtons = new System.Windows.Forms.FlowLayoutPanel();

this.btnPen = new System.Windows.Forms.Button();

this.btnBrush = new System.Windows.Forms.Button();

this.btnRectangle = new System.Windows.Forms.Button();

this.btnLine = new System.Windows.Forms.Button();

this.btnElipsise = new System.Windows.Forms.Button();

this.btnRoundRectangle = new System.Windows.Forms.Button();

this.btnPolyGon = new System.Windows.Forms.Button();

this.btnTriangle = new System.Windows.Forms.Button();

this.flowLayoutPanelForSterka = new System.Windows.Forms.FlowLayoutPanel();

this.btnSterka = new System.Windows.Forms.Button();

this.pictureBoxHolst = new System.Windows.Forms.PictureBox();

this.flowLayoutPanelForRight = new System.Windows.Forms.FlowLayoutPanel();

this.trackBarForPenSize = new System.Windows.Forms.TrackBar();

this.colorSelect = new heaparessential.Controls.ColorSelector();

this.checkBoxForFill = new System.Windows.Forms.CheckBox();

this.toolTipForBtn = new System.Windows.Forms.ToolTip(this.components);

this.tabLayoutPnlInstrument.SuspendLayout();

this.flowLayoutPanelForButtons.SuspendLayout();

this.flowLayoutPanelForSterka.SuspendLayout();

((System.ComponentModel.ISupportInitialize)(this.pictureBoxHolst)).BeginInit();

this.flowLayoutPanelForRight.SuspendLayout();

((System.ComponentModel.ISupportInitialize)(this.trackBarForPenSize)).BeginInit();

this.SuspendLayout();

//

// tabLayoutPnlInstrument

//

this.tabLayoutPnlInstrument.BackColor = System.Drawing.SystemColors.Control;

this.tabLayoutPnlInstrument.ColumnCount = 2;

this.tabLayoutPnlInstrument.ColumnStyles.Add(new System.Windows.Forms.ColumnStyle(System.Windows.Forms.SizeType.Percent, 11.49194F));

this.tabLayoutPnlInstrument.ColumnStyles.Add(new System.Windows.Forms.ColumnStyle(System.Windows.Forms.SizeType.Percent, 88.50806F));

this.tabLayoutPnlInstrument.Controls.Add(this.flowLayoutPanelForButtons, 1, 0);

this.tabLayoutPnlInstrument.Controls.Add(this.flowLayoutPanelForSterka, 0, 0);

this.tabLayoutPnlInstrument.Controls.Add(this.pictureBoxHolst, 1, 1);

this.tabLayoutPnlInstrument.Controls.Add(this.flowLayoutPanelForRight, 0, 1);

this.tabLayoutPnlInstrument.Dock = System.Windows.Forms.DockStyle.Fill;

this.tabLayoutPnlInstrument.Location = new System.Drawing.Point(0, 0);

this.tabLayoutPnlInstrument.Name = "tabLayoutPnlInstrument";

this.tabLayoutPnlInstrument.RowCount = 2;

this.tabLayoutPnlInstrument.RowStyles.Add(new System.Windows.Forms.RowStyle(System.Windows.Forms.SizeType.Percent, 8.864266F));

this.tabLayoutPnlInstrument.RowStyles.Add(new System.Windows.Forms.RowStyle(System.Windows.Forms.SizeType.Percent, 91.13573F));

this.tabLayoutPnlInstrument.RowStyles.Add(new System.Windows.Forms.RowStyle(System.Windows.Forms.SizeType.Absolute, 20F));

this.tabLayoutPnlInstrument.Size = new System.Drawing.Size(496, 361);

this.tabLayoutPnlInstrument.TabIndex = 1;

//

// flowLayoutPanelForButtons

//

this.flowLayoutPanelForButtons.Controls.Add(this.btnPen);

this.flowLayoutPanelForButtons.Controls.Add(this.btnBrush);

this.flowLayoutPanelForButtons.Controls.Add(this.btnRectangle);

this.flowLayoutPanelForButtons.Controls.Add(this.btnLine);

this.flowLayoutPanelForButtons.Controls.Add(this.btnElipsise);

this.flowLayoutPanelForButtons.Controls.Add(this.btnRoundRectangle);

this.flowLayoutPanelForButtons.Controls.Add(this.btnPolyGon);

this.flowLayoutPanelForButtons.Controls.Add(this.btnTriangle);

this.flowLayoutPanelForButtons.Dock = System.Windows.Forms.DockStyle.Bottom;

this.flowLayoutPanelForButtons.Location = new System.Drawing.Point(60, 3);

this.flowLayoutPanelForButtons.Name = "flowLayoutPanelForButtons";

this.flowLayoutPanelForButtons.Size = new System.Drawing.Size(433, 26);

this.flowLayoutPanelForButtons.TabIndex = 2;

//

// btnPen

//

this.btnPen.AccessibleName = "";

this.btnPen.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnPen.BackgroundImage = global::LibCompanent.Properties.Resources.btnPen;

this.btnPen.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnPen.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnPen.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnPen.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnPen.ForeColor = System.Drawing.Color.Red;

this.btnPen.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnPen.Location = new System.Drawing.Point(3, 3);

this.btnPen.Name = "btnPen";

this.btnPen.Size = new System.Drawing.Size(33, 21);

this.toolTipForBtn.SetToolTip(btnPen, "Карандаш");

this.btnPen.TabIndex = 0;

this.btnPen.Tag = "";

this.btnPen.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnPen.UseVisualStyleBackColor = true;

this.btnPen.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnBrush

//

this.btnBrush.AccessibleName = "";

this.btnBrush.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnBrush.BackgroundImage = global::LibCompanent.Properties.Resources.btnBrush;

this.btnBrush.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnBrush.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnBrush.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnBrush.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnBrush.ForeColor = System.Drawing.Color.Red;

this.btnBrush.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnBrush.Location = new System.Drawing.Point(42, 3);

this.btnBrush.Name = "btnBrush";

this.toolTipForBtn.SetToolTip(btnBrush, "Кисть");

this.btnBrush.Size = new System.Drawing.Size(33, 21);

this.btnBrush.TabIndex = 1;

this.btnBrush.Tag = "";

this.btnBrush.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnBrush.UseVisualStyleBackColor = true;

this.btnBrush.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnRectangle

//

this.btnRectangle.AccessibleName = "";

this.btnRectangle.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnRectangle.BackgroundImage = global::LibCompanent.Properties.Resources.btnRectangle;

this.btnRectangle.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnRectangle.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnRectangle.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnRectangle.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnRectangle.ForeColor = System.Drawing.Color.Red;

this.btnRectangle.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnRectangle.Location = new System.Drawing.Point(81, 3);

this.btnRectangle.Name = "btnRectangle";

this.toolTipForBtn.SetToolTip(btnRectangle, "Прямоугольник");

this.btnRectangle.Size = new System.Drawing.Size(33, 21);

this.btnRectangle.TabIndex = 2;

this.btnRectangle.Tag = "";

this.btnRectangle.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnRectangle.UseVisualStyleBackColor = true;

this.btnRectangle.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnLine

//

this.btnLine.AccessibleName = "";

this.btnLine.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnLine.BackgroundImage = global::LibCompanent.Properties.Resources.btnLine;

this.btnLine.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnLine.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnLine.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnLine.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnLine.ForeColor = System.Drawing.Color.Red;

this.btnLine.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnLine.Location = new System.Drawing.Point(120, 3);

this.btnLine.Name = "btnLine";

this.toolTipForBtn.SetToolTip(btnLine, "Линия");

this.btnLine.Size = new System.Drawing.Size(33, 21);

this.btnLine.TabIndex = 3;

this.btnLine.Tag = "";

this.btnLine.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnLine.UseVisualStyleBackColor = true;

this.btnLine.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnElipsise

//

this.btnElipsise.AccessibleName = "";

this.btnElipsise.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnElipsise.BackgroundImage = global::LibCompanent.Properties.Resources.btnElipsise;

this.btnElipsise.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnElipsise.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnElipsise.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnElipsise.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnElipsise.ForeColor = System.Drawing.Color.Red;

this.btnElipsise.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnElipsise.Location = new System.Drawing.Point(159, 3);

this.btnElipsise.Name = "btnElipsise";

this.toolTipForBtn.SetToolTip(btnElipsise, "Эллипсис");

this.btnElipsise.Size = new System.Drawing.Size(33, 21);

this.btnElipsise.TabIndex = 4;

this.btnElipsise.Tag = "";

this.btnElipsise.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnElipsise.UseVisualStyleBackColor = true;

this.btnElipsise.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnRoundRectangle

//

this.btnRoundRectangle.AccessibleName = "";

this.btnRoundRectangle.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnRoundRectangle.BackgroundImage = global::LibCompanent.Properties.Resources.btnRoundRectangle;

this.btnRoundRectangle.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnRoundRectangle.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnRoundRectangle.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnRoundRectangle.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnRoundRectangle.ForeColor = System.Drawing.Color.Red;

this.btnRoundRectangle.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnRoundRectangle.Location = new System.Drawing.Point(198, 3);

this.btnRoundRectangle.Name = "btnRoundRectangle";

this.toolTipForBtn.SetToolTip(btnRoundRectangle, "Скругленный прямоугольник");

this.btnRoundRectangle.Size = new System.Drawing.Size(33, 21);

this.btnRoundRectangle.TabIndex = 5;

this.btnRoundRectangle.Tag = "";

this.btnRoundRectangle.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnRoundRectangle.UseVisualStyleBackColor = true;

this.btnRoundRectangle.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnPolyGon

//

this.btnPolyGon.AccessibleName = "";

this.btnPolyGon.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnPolyGon.BackgroundImage = global::LibCompanent.Properties.Resources.btnPolyGon;

this.btnPolyGon.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnPolyGon.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnPolyGon.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnPolyGon.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnPolyGon.ForeColor = System.Drawing.Color.Red;

this.btnPolyGon.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnPolyGon.Location = new System.Drawing.Point(237, 3);

this.btnPolyGon.Name = "btnPolyGon";

this.toolTipForBtn.SetToolTip(btnPolyGon, "Многоугольник");

this.btnPolyGon.Size = new System.Drawing.Size(33, 21);

this.btnPolyGon.TabIndex = 6;

this.btnPolyGon.Tag = "";

this.btnPolyGon.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnPolyGon.UseVisualStyleBackColor = true;

this.btnPolyGon.Click += new System.EventHandler(this.btnPen\_Click);

//

// btnTriangle

//

this.btnTriangle.AccessibleName = "";

this.btnTriangle.Anchor = ((System.Windows.Forms.AnchorStyles)((System.Windows.Forms.AnchorStyles.Bottom | System.Windows.Forms.AnchorStyles.Left)));

this.btnTriangle.BackgroundImage = global::LibCompanent.Properties.Resources.btnTriangle;

this.btnTriangle.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnTriangle.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnTriangle.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnTriangle.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnTriangle.ForeColor = System.Drawing.Color.Red;

this.btnTriangle.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnTriangle.Location = new System.Drawing.Point(276, 3);

this.btnTriangle.Name = "btnTriangle";

this.toolTipForBtn.SetToolTip(btnTriangle, "Триугольник");

this.btnTriangle.Size = new System.Drawing.Size(33, 21);

this.btnTriangle.TabIndex = 8;

this.btnTriangle.Tag = "";

this.btnTriangle.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnTriangle.UseVisualStyleBackColor = true;

this.btnTriangle.Click += new System.EventHandler(this.btnPen\_Click);

//

// flowLayoutPanelForSterka

//

this.flowLayoutPanelForSterka.Controls.Add(this.btnSterka);

this.flowLayoutPanelForSterka.Dock = System.Windows.Forms.DockStyle.Fill;

this.flowLayoutPanelForSterka.Location = new System.Drawing.Point(3, 3);

this.flowLayoutPanelForSterka.Name = "flowLayoutPanelForSterka";

this.flowLayoutPanelForSterka.Size = new System.Drawing.Size(51, 26);

this.flowLayoutPanelForSterka.TabIndex = 3;

//

// btnSterka

//

this.btnSterka.AccessibleName = "";

this.btnSterka.BackgroundImage = global::LibCompanent.Properties.Resources.btnSterka;

this.btnSterka.BackgroundImageLayout = System.Windows.Forms.ImageLayout.Center;

this.btnSterka.Cursor = System.Windows.Forms.Cursors.Hand;

this.btnSterka.FlatAppearance.MouseOverBackColor = System.Drawing.Color.FromArgb(((int)(((byte)(224)))), ((int)(((byte)(224)))), ((int)(((byte)(224)))));

this.btnSterka.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.btnSterka.ForeColor = System.Drawing.Color.Red;

this.btnSterka.ImageAlign = System.Drawing.ContentAlignment.MiddleLeft;

this.btnSterka.Location = new System.Drawing.Point(3, 3);

this.btnSterka.Name = "btnSterka";

this.toolTipForBtn.SetToolTip(btnSterka, "Ластик");

this.btnSterka.Size = new System.Drawing.Size(41, 21);

this.btnSterka.TabIndex = 7;

this.btnSterka.Tag = "";

this.btnSterka.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.btnSterka.UseVisualStyleBackColor = true;

this.btnSterka.Click += new System.EventHandler(this.btnPen\_Click);

//

// pictureBoxHolst

//

this.pictureBoxHolst.BackColor = System.Drawing.Color.White;

this.pictureBoxHolst.Dock = System.Windows.Forms.DockStyle.Fill;

this.pictureBoxHolst.Location = new System.Drawing.Point(60, 35);

this.pictureBoxHolst.Name = "pictureBoxHolst";

this.pictureBoxHolst.Size = new System.Drawing.Size(433, 323);

this.pictureBoxHolst.TabIndex = 0;

this.pictureBoxHolst.TabStop = false;

this.pictureBoxHolst.Paint += new System.Windows.Forms.PaintEventHandler(this.pictureBoxHolst\_Paint);

this.pictureBoxHolst.MouseDown += new System.Windows.Forms.MouseEventHandler(this.pictureBox1\_MouseDown);

this.pictureBoxHolst.MouseMove += new System.Windows.Forms.MouseEventHandler(this.pictureBox1\_MouseMove);

this.pictureBoxHolst.MouseUp += new System.Windows.Forms.MouseEventHandler(this.pictureBox1\_MouseUp);

//

// flowLayoutPanelForRight

//

this.flowLayoutPanelForRight.Controls.Add(this.trackBarForPenSize);

this.flowLayoutPanelForRight.Controls.Add(this.checkBoxForFill);

this.flowLayoutPanelForRight.Controls.Add(this.colorSelect);

this.flowLayoutPanelForRight.Dock = System.Windows.Forms.DockStyle.Fill;

this.flowLayoutPanelForRight.Location = new System.Drawing.Point(3, 35);

this.flowLayoutPanelForRight.Name = "flowLayoutPanelForRight";

this.flowLayoutPanelForRight.Size = new System.Drawing.Size(51, 323);

this.flowLayoutPanelForRight.TabIndex = 4;

//

// trackBarForPenSize

//

this.trackBarForPenSize.Location = new System.Drawing.Point(3, 3);

this.trackBarForPenSize.Name = "trackBarForPenSize";

this.trackBarForPenSize.Orientation = System.Windows.Forms.Orientation.Vertical;

this.trackBarForPenSize.Size = new System.Drawing.Size(45, 80);

this.trackBarForPenSize.TabIndex = 2;

this.trackBarForPenSize.MouseUp += new System.Windows.Forms.MouseEventHandler(this.trackBarForPenSize\_MouseUp);

//

// colorSelect

//

this.colorSelect.BackgroundColor = System.Drawing.Color.White;

this.colorSelect.ForegroundColor = System.Drawing.Color.Black;

this.colorSelect.Location = new System.Drawing.Point(3, 111);

this.colorSelect.Name = "colorSelect";

this.colorSelect.Size = new System.Drawing.Size(50, 145);

this.colorSelect.TabIndex = 1;

this.colorSelect.ForegroundColorChanged += new System.EventHandler(this.colorSelect\_ForegroundColorChanged);

this.colorSelect.BackgroundColorChanged += new System.EventHandler(this.colorSelect\_BackgroundColorChanged);

//

// checkBoxForFill

//

this.checkBoxForFill.BackgroundImage = global::LibCompanent.Properties.Resources.checkBoxForFill;

this.checkBoxForFill.BackgroundImageLayout = System.Windows.Forms.ImageLayout.None;

this.checkBoxForFill.CheckAlign = System.Drawing.ContentAlignment.MiddleRight;

this.checkBoxForFill.FlatStyle = System.Windows.Forms.FlatStyle.Popup;

this.checkBoxForFill.ImageAlign = System.Drawing.ContentAlignment.MiddleRight;

this.checkBoxForFill.Location = new System.Drawing.Point(3, 89);

this.checkBoxForFill.Name = "checkBoxForFill";

this.checkBoxForFill.Size = new System.Drawing.Size(41, 16);

this.checkBoxForFill.TabIndex = 9;

this.checkBoxForFill.Text = "F";

this.checkBoxForFill.TextAlign = System.Drawing.ContentAlignment.MiddleRight;

this.toolTipForBtn.SetToolTip(this.checkBoxForFill, "Заливка");

this.checkBoxForFill.UseVisualStyleBackColor = true;

this.checkBoxForFill.CheckStateChanged += new System.EventHandler(this.checkBoxForFill\_CheckStateChanged);

//

// usrctrlPaint

//

this.AutoScaleDimensions = new System.Drawing.SizeF(6F, 13F);

this.AutoScaleMode = System.Windows.Forms.AutoScaleMode.Font;

this.Controls.Add(this.tabLayoutPnlInstrument);

this.Name = "usrctrlPaint";

this.Size = new System.Drawing.Size(496, 361);

this.Resize += new System.EventHandler(this.FormGanza\_Resize);

this.tabLayoutPnlInstrument.ResumeLayout(false);

this.flowLayoutPanelForButtons.ResumeLayout(false);

this.flowLayoutPanelForSterka.ResumeLayout(false);

((System.ComponentModel.ISupportInitialize)(this.pictureBoxHolst)).EndInit();

this.flowLayoutPanelForRight.ResumeLayout(false);

this.flowLayoutPanelForRight.PerformLayout();

((System.ComponentModel.ISupportInitialize)(this.trackBarForPenSize)).EndInit();

this.ResumeLayout(false);

}

#endregion

private System.Windows.Forms.TableLayoutPanel tabLayoutPnlInstrument;

private System.Windows.Forms.FlowLayoutPanel flowLayoutPanelForButtons;

private System.Windows.Forms.Button btnPen;

private System.Windows.Forms.Button btnBrush;

private System.Windows.Forms.Button btnRectangle;

private System.Windows.Forms.Button btnLine;

private System.Windows.Forms.Button btnElipsise;

private System.Windows.Forms.Button btnRoundRectangle;

private System.Windows.Forms.Button btnPolyGon;

private System.Windows.Forms.Button btnTriangle;

private System.Windows.Forms.FlowLayoutPanel flowLayoutPanelForSterka;

private System.Windows.Forms.Button btnSterka;

private System.Windows.Forms.PictureBox pictureBoxHolst;

private System.Windows.Forms.FlowLayoutPanel flowLayoutPanelForRight;

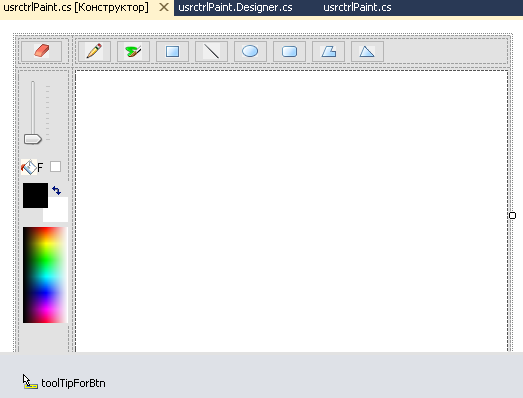
private System.Windows.Forms.TrackBar trackBarForPenSize;

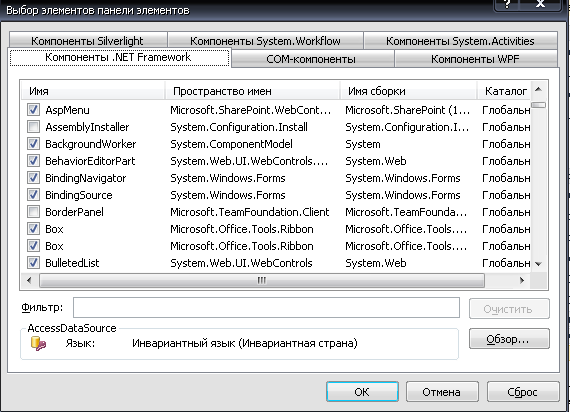
private heaparessential.Controls.ColorSelector colorSelect;

private System.Windows.Forms.ToolTip toolTipForBtn;

private System.Windows.Forms.CheckBox checkBoxForFill;

Визуально вся сборка выглядит так:

Отчетливо видно, что все контроллы расположены на «панели» вместо прежней формы. После сборки проекта получим dll библиотеку. Для подключения её в новых проектах можно рассмотреть два возможных направления: певрвый – самый простой, во вкладке “ToolBox”, раздел «Общие» правый клик мыши, выбираем пункт «Выбрать элемент», откроется окно выбора компонентов Net, жмем «Обзор», указываем созданную библиотеку и добавляем. Теперь компонент можно бросать на форму или еще куда так же, как и обычную кнопку и т.п.



Второй вариант добавления – длинней первого, необходимо все явно прописать в коде:

LibCompanent.usrctrlPaint cPaint = new usrctrlPaint();

this.Controls.Add(cPaint);

а также положение на форме, размеры и т.п.

Результат в обоих случаях тот же:

