**Задание:**

Изм.

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Подпись

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Разраб.

Провер.

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Листов

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| --- | --- | --- | --- |
| 8 | (5, 5, 180,260 ) | (5, 5, 180,260 ) |  |

|  |  |  |
| --- | --- | --- |
| *toolStripMenuItem1* | *toolStripMenuItem6* | *toolStripMenuItem10* |
| **Файл** | **Фигура** | **Заливки** |
| *toolStripMenuItem2* | *toolStripMenuItem7* | *toolStripMenuItem11* |
| **Система координат** | **Эллипс** | **Сплошная** |
| *toolStripMenuItem3* | *toolStripMenuItem8* | *toolStripMenuItem12* |
| **Открыть** | **Прямоугольник** | **Узорная** |
| *toolStripMenuItem4* | *toolStripMenuItem9* | *toolStripMenuItem13* |
| **Сохранить** | **Многоугольник** | **Текстурная** |
| *toolStripMenuItem5* |  | *toolStripMenuItem14* |
| **Выход** |  | **Мозаика** |

**Код программы:**

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;

using System.Drawing.Drawing2D;

namespace Program8

{

public partial class Form1 : Form

{

Graphics Graph1;

Bitmap image1 = new Bitmap(500, 800);

Bitmap image2 = new Bitmap("D:/Алёша/Учёба/ОПиБД/C#/Program8/textura.jpg");

Pen Pen1 = new Pen(Color.Black, 1);

Pen Pen2 = new Pen(Color.Brown, 2);

Pen Pen3 = new Pen(Color.Cyan, 4);

Font drawFont = new Font("Arial", 12);

SolidBrush Brush1 = new SolidBrush(Color.Blue);

SolidBrush Brush2 = new SolidBrush(Color.LightGoldenrodYellow);

HatchBrush hatchbrush1 = new HatchBrush(HatchStyle.SolidDiamond, Color.Gray, Color.DarkGreen);

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int i = 0;

Point point1 = new Point(-100, -100);

Point point2 = new Point(-50, 50);

Point point3 = new Point(50, -100);

Point point4 = new Point(-50, -50);

public Form1()

{

InitializeComponent();

}

private void ToolStripMenuItem2\_Click(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.Clear(Color.White);

for (i = -250; i <= 250; i += 50)

{

Graph1.DrawString(Convert.ToString(i), drawFont, Brush1, i + 250, 410);

}

for (i = -400; i <= 400; i += 50)

{

Graph1.DrawString(Convert.ToString(i), drawFont, Brush1, 260, 400 - i);

}

Graph1.ScaleTransform(1, -1);

Graph1.TranslateTransform(250, -400);

Graph1.DrawLine(Pen1, -250, 0, 250, 0);

Graph1.DrawLine(Pen1, 0, -400, 0, 400);

for (int i = -250; i <= 250; i += 50)

{

Graph1.DrawRectangle(Pen3, i, 0, 1, 1);

}

for (int i = -400; i <= 400; i += 50)

{

Graph1.DrawRectangle(Pen3, 0, i, 1, 1);

}

}

private void ToolStripMenuItem7\_Click(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.DrawEllipse(Pen1, 5, 5, 180, 260);

Graph1.Dispose();

}

private void ToolStripMenuItem8\_Click(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.ScaleTransform(1, -1);

Graph1.TranslateTransform(250, -400);

Graph1.DrawRectangle(Pen2, 5, 5, 180, 260);

Graph1.Dispose();

}

private void ToolStripMenuItem9\_Click\_1(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.ScaleTransform(1, -1);

Graph1.TranslateTransform(250, -400);

Point[] lomannays = { point1, point2, point3, point4, point1 };

Graph1.DrawPolygon(Pen3, lomannays);

Graph1.Dispose();

}

private void ToolStripMenuItem4\_Click(object sender, EventArgs e)

{

saveFileDialog1.Filter = "BMP(\*.bmp) | \*.bmp";

saveFileDialog1.ShowDialog();

image1.Save(saveFileDialog1.FileName, System.Drawing.Imaging.ImageFormat.Bmp);

}

private void ToolStripMenuItem11\_Click\_1(object sender, EventArgs e)

{

colorDialog1.ShowDialog();

Brush1.Color = colorDialog1.Color;

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.FillEllipse(Brush1, 5, 5, 180, 260);

}

private void ToolStripMenuItem12\_Click\_1(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.ScaleTransform(1, -1);

Graph1.TranslateTransform(250, -400);

Graph1.FillRectangle(hatchbrush1, 5, 5, 180, 260);

}

private void ToolStripMenuItem13\_Click\_1(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.ScaleTransform(1, -1);

Graph1.TranslateTransform(250, -400);

Point[] lomannaya = { point1, point2, point3, point4, point1 };

TextureBrush TextureBrushl = new TextureBrush(image2);

Graph1.FillPolygon(TextureBrushl, lomannaya);

}

private void ToolStripMenuItem14\_Click\_1(object sender, EventArgs e)

{

Graph1 = Graphics.FromImage(image1);

pictureBox1.Image = image1;

Graph1.ScaleTransform(1, -1);

Graph1.TranslateTransform(250, -400);

Point[] lomannaya = { point1, point2, point3, point4, point1 };

TextureBrush TextureBrushl = new TextureBrush(image2);

TextureBrushl.Transform = new Matrix(75.0f / 640.0f, 0.0f, 0.0f, 75.0f / 480.0f, 0.0f, 0.0f);

Graph1.FillPolygon(TextureBrushl, lomannaya);

Graph1.Dispose();

}

private void ToolStripMenuItem3\_Click(object sender, EventArgs e)

{

openFileDialog1.ShowDialog();

pictureBox1.Image = Image.FromFile(openFileDialog1.FileName);

}

private void ToolStripMenuItem5\_Click\_1(object sender, EventArgs e)

{

Close();

}

}

}

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**Выполнение программы:**

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| Система координат | Контуры | Сплошная заливка |
|  |  |  |
| Узорная заливка | Текстурная заливка | Текстурная заливка мозаикой |
|  |  |  |

**Вывод: Оно работает 😊**