Практическая работа 8

Использование событий мыши

Используя знания, полученные в практической работе 7, реализовать простой графический редактор по типы Paint. Предусмотреть функцию выбора толщины линии, выбор цвета. Реализовать механизм очищения поля рисования. Предусмотреть механизм сохранения рисунка в файл.

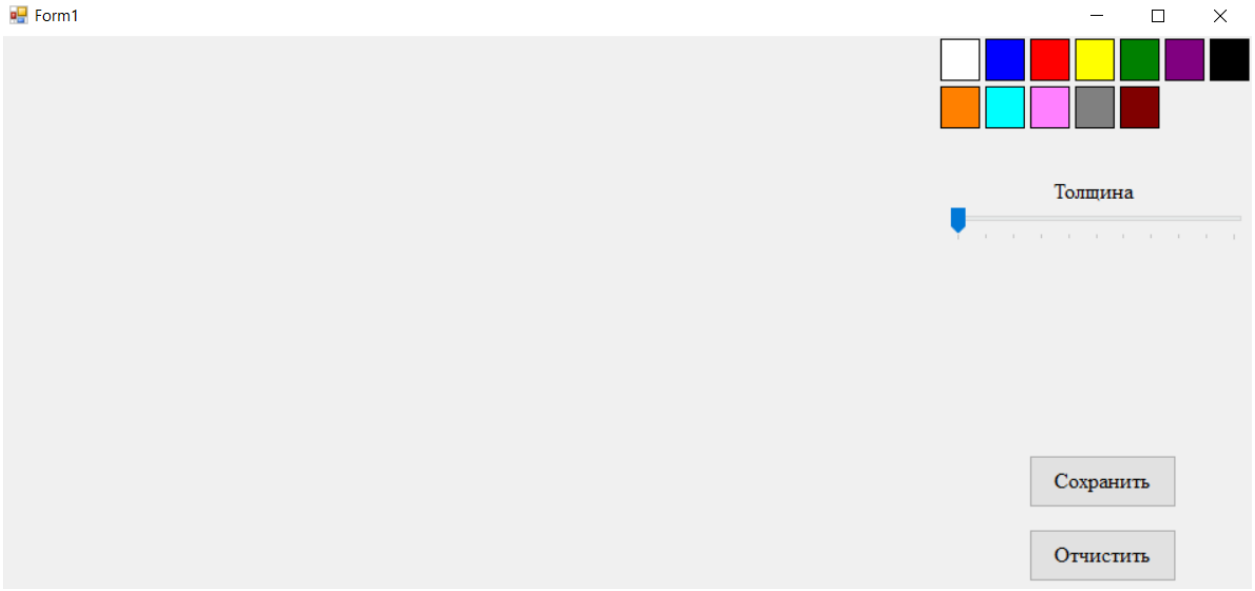

Рисунок -1 Интерфейс программы

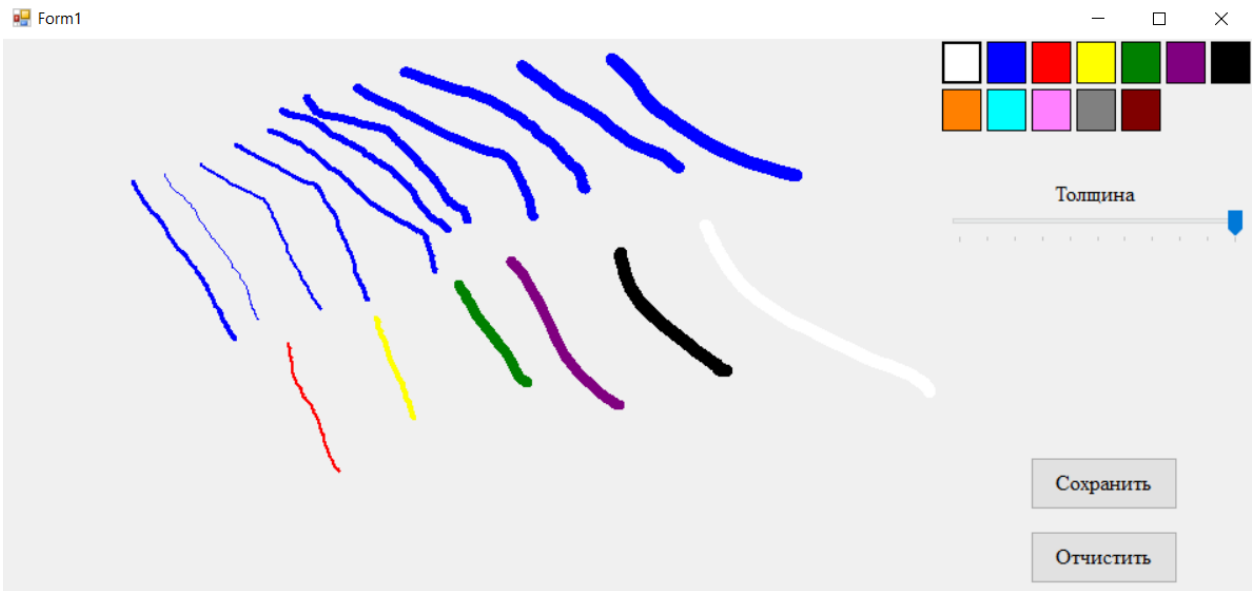

Рисунок -2 Механизм рисования, выбора цвета, выбора толщины

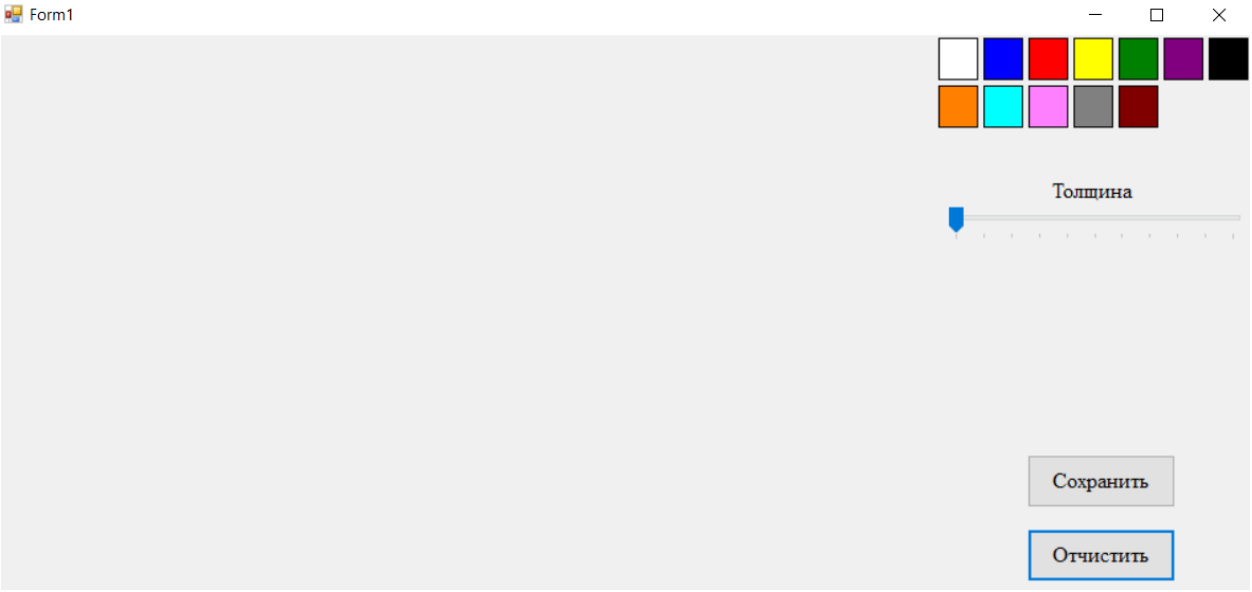

Рисунок -3 Механизм удаления поля рисования

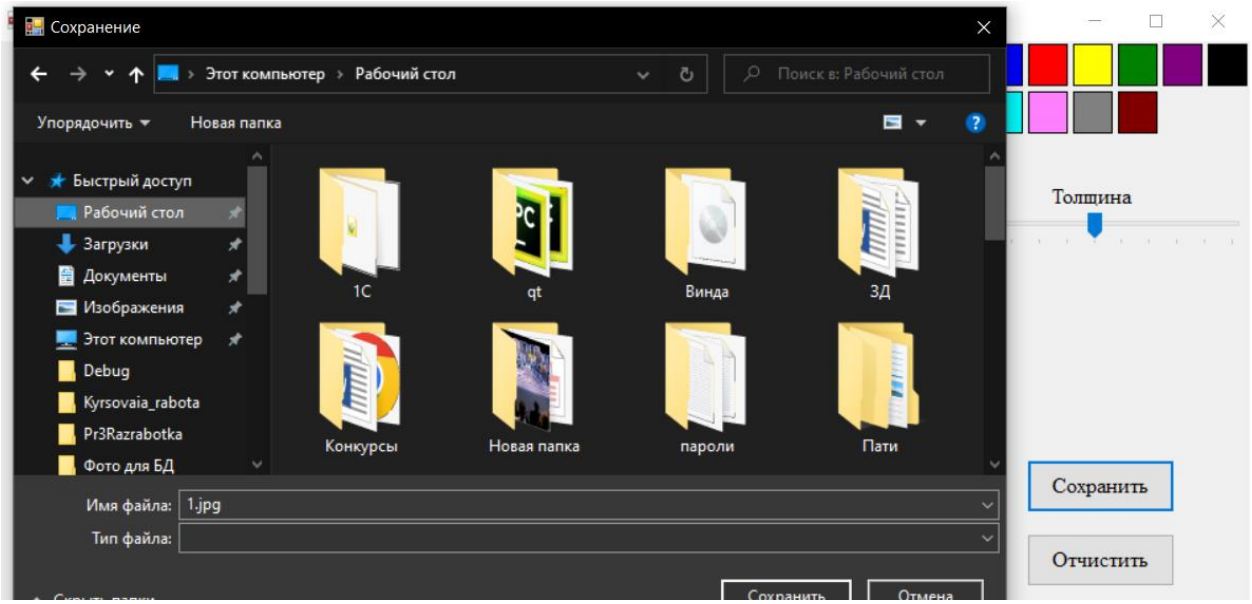

Рисунок -4 Сохранение рисунка

Рисунок -5 Результат сохранения рисунка

Листинг 1

```
public Form1()
{
    InitializeComponent();
    SetSize();
}
private class ArrayPoints
{
    private int index = 0;
    private Point[] points;

    public ArrayPoints(int size)
    {
        if (size <= 0)
        {
            size = 2;
        }
        points = new Point[size];
    }
    public void SetPoint(int x, int y)
    {
        if (index >= points.Length)
        {
            index = 0;
        }
        points[index] = new Point(x, y);
        index++;
    }
    public void ResetPoints()
    {
        index = 0;
    }
    public int GetCountPoints()
    {
        return index;
    }
    public Point[] GetPoints()
    {
```

```
        return points;
    }
}


private bool isMouse = false;

private ArrayPoints arrayPoints = new ArrayPoints(2);

Bitmap map = new Bitmap(100, 100);
Graphics graphics;

Pen pen = new Pen(Color.Black, 3f);

private void SetSize()
{
    Rectangle rectangle = Screen.PrimaryScreen.Bounds;
    map = new Bitmap(rectangle.Width, rectangle.Height);
    graphics = Graphics.FromImage(map);

    pen.StartCap = System.Drawing.Drawing2D.LineCap.Round;
    pen.EndCap = System.Drawing.Drawing2D.LineCap.Round;
}

private void pictureBox1_MouseDown(object sender, MouseEventArgs e)
{
    isMouse = true;

}

private void pictureBox1_MouseUp(object sender, MouseEventArgs e)
{
    isMouse = false;
    arrayPoints.ResetPoints();
}

private void pictureBox1_MouseLeave(object sender, EventArgs e)
{

}

private void pictureBox1_MouseMove(object sender, MouseEventArgs e)
{
    if (!isMouse)
    {
        return;
    }

    arrayPoints.SetPoint(e.X, e.Y);
    if (arrayPoints.GetCountPoints() >= 2)
    {
        graphics.DrawLines(pen,arrayPoints.GetPoints());
        pictureBox1.Image = map;
        arrayPoints.SetPoint(e.X, e.Y);
    }
}

private void button3_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button4_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
```

```
}

private void button5_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button6_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button7_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button8_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button9_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button10_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button11_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button12_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button13_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button14_Click(object sender, EventArgs e)
{
    pen.Color = ((Button)sender).BackColor;
}

private void button2_Click(object sender, EventArgs e)
{
    graphics.Clear(pictureBox1.BackColor);
    pictureBox1.Image = map;
}

private void trackBar1_ValueChanged(object sender, EventArgs e)
{
    pen.Width = trackBar1.Value;
}

private void button1_Click(object sender, EventArgs e)
{
```

```
            if (saveFileDialog1.ShowDialog() == DialogResult.OK)
            {
                pictureBox1.Image.Save(saveFileDialog1.FileName);
            }
        }
```

Ссылка на гитхаб:

https://github.com/Alexandrov911/Pr8Sistem.git