Link : https://github.com/agasusantooo/Pemrograman_Desktop

Latihan Pengamatan 11

1. Flip Horizontal tanpa fungsi bawaan :

```
Private Sub FlipHorizontalToolStripMenuItem_Click(sender As Object, e As
EventArgs) Handles FlipHorizontalToolStripMenuItem.Click
        If PictureBox1.Image Is Nothing Then
            MessageBox.Show("Silakan buka gambar terlebih dahulu.",
"Peringatan", MessageBoxButtons.OK, MessageBoxIcon.Warning)
            Exit Sub
        End If

        Dim bmp As New Bitmap(PictureBox1.Image)
        Dim width As Integer = bmp.Width
        Dim height As Integer = bmp.Height
        Dim flippedBmp As New Bitmap(width, height)

        For y As Integer = 0 To height - 1
            For x As Integer = 0 To width - 1
                ' Salin piksel dari sisi kiri ke sisi kanan (horizontal
flip)
                flippedBmp.SetPixel(width - 1 - x, y, bmp.GetPixel(x, y))
            Next
        Next
```

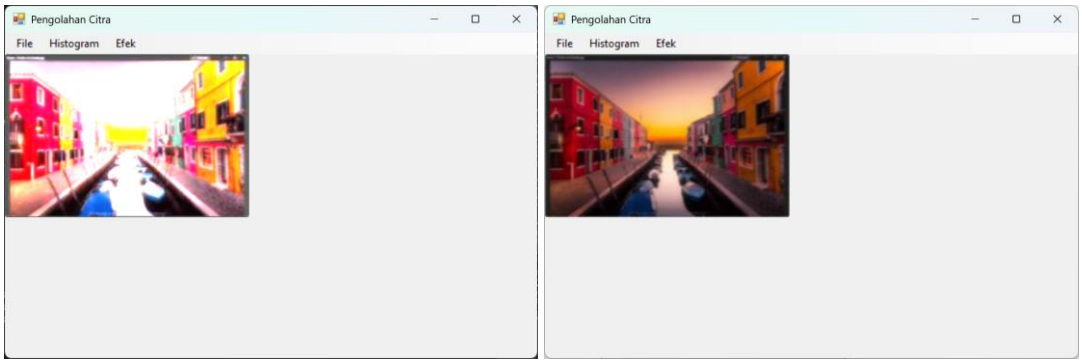
2. Error handling pada grayscale :

```
Private Sub GreyscaleToolStripMenuItem_Click(sender As Object, e As
EventArgs) Handles GreyscaleToolStripMenuItem.Click
    Dim r, g, b, gray As Integer

    If PictureBox1.Image Is Nothing Then
        MessageBox.Show("Silakan buka gambar terlebih dahulu.",
"Peringatan", MessageBoxButtons.OK, MessageBoxIcon.Warning)
        Exit Sub
    End If

    Dim bmp = New Bitmap(PictureBox1.Image)


    For bar As Integer = 0 To PictureBox1.Image.Height - 1
        For kol As Integer = 0 To PictureBox1.Image.Width - 1
            r = bmp.GetPixel(kol, bar).R
            g = bmp.GetPixel(kol, bar).G
            b = bmp.GetPixel(kol, bar).B
            gray = Math.Round(0.2126 * r + 0.7152 * g + 0.0722 * b)
            bmp.SetPixel(kol, bar, Color.FromArgb(gray, gray, gray))
        Next
    Next
    'Dim img As Image
    'img = CType(bmp, Image)
    'PictureBox1.Image = img
    PictureBox1.Image = bmp
End Sub
```

```
        PictureBox1.Image = flippedBmp
```

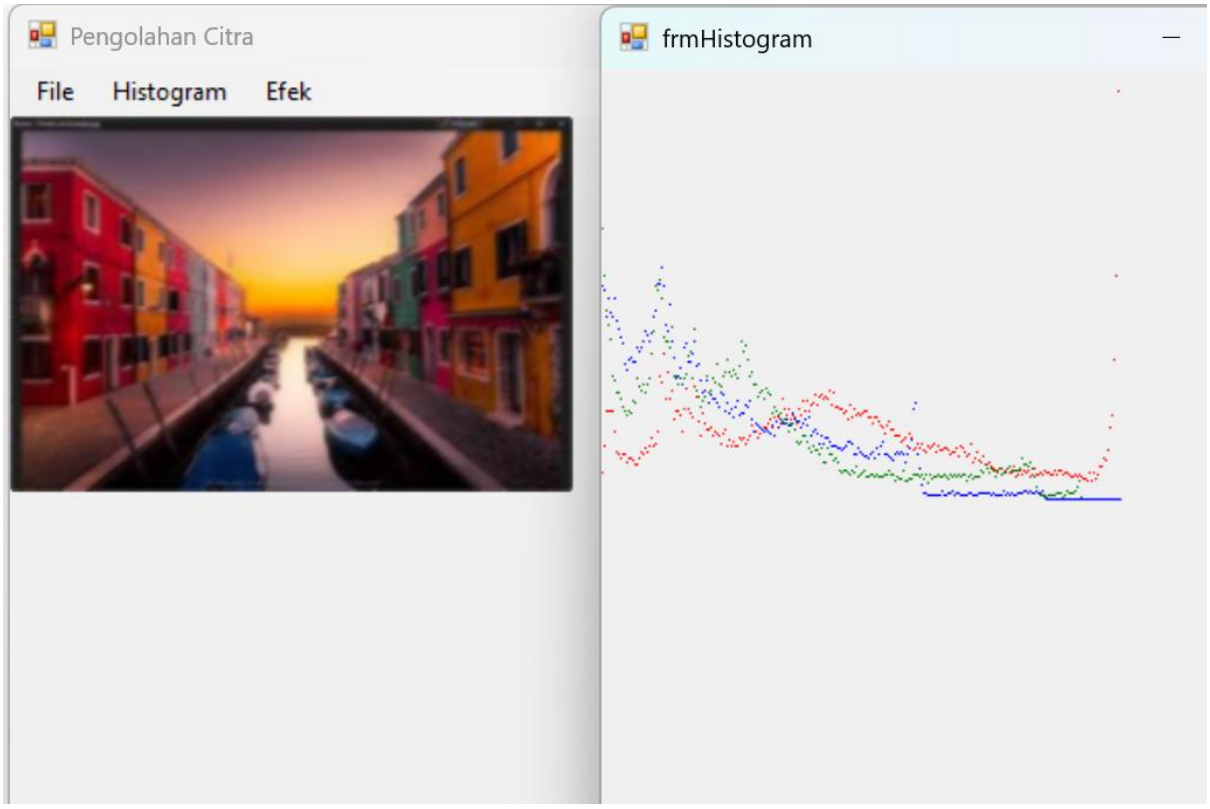
```
End Sub
```

3. Saya menambahkan gaussian blur

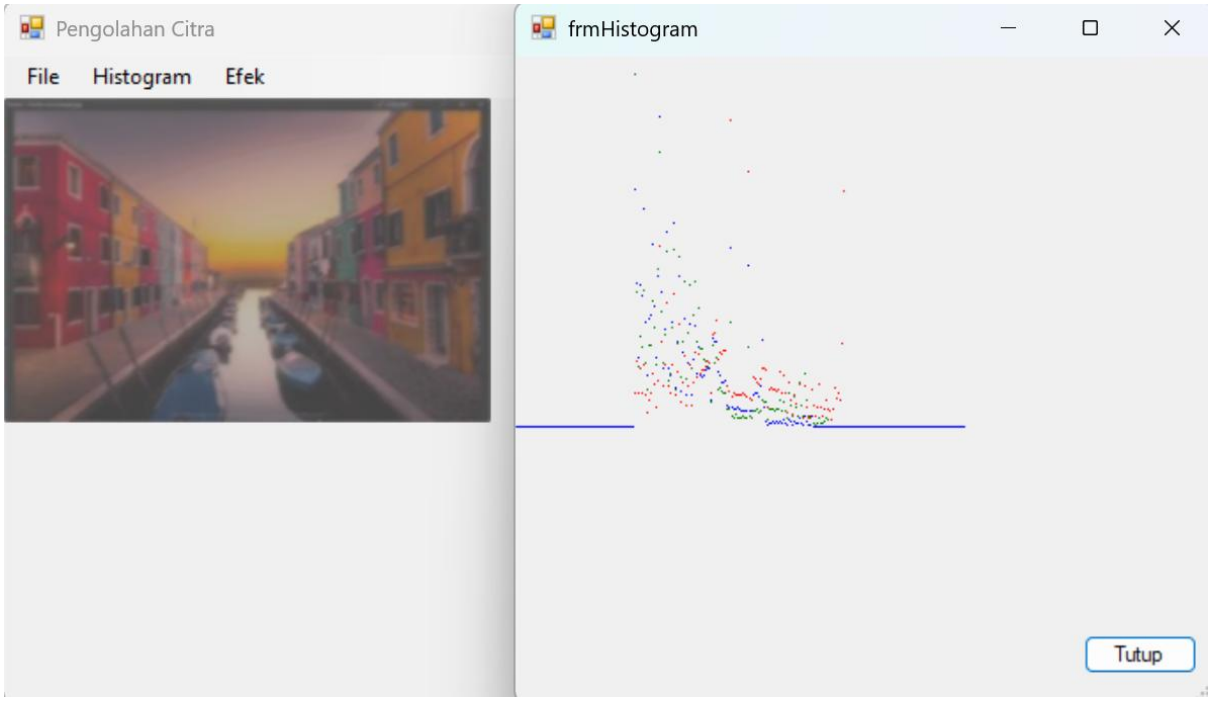


Gaussian blur yang kiri dan blur biasa sebelah kanan. Terdapat perbedaan di intensitas cahayanya. Gaussian blur lebih terang daripada blur biasa

4. Histogram awal



Histogram 8 kali pengurangan kontras



Perbedaannya bahwa intensitas warnanya berkurang drastis ditunjukkan oleh histogram yang jauh lebih sedikit menampilkan spectrum warnanya karena banyak yang berada di tepi bawah