

TUGAS PENGAMATAN

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1. Flip Horizontal tanpa built in function.

Code :

```
Dim original As Bitmap = New Bitmap(PictureBox1.Image)
```

```
Dim mirrorImage As Bitmap = New Bitmap(original.Width, original.Height)
```

```
For y As Integer = 0 To original.Height - 1
```

```
    Dim ix As Integer = 0, rx As Integer = original.Width - 1
```

```
    While ix < original.Width
```

```
        Dim color As Color = original.GetPixel(ix, y)
```

```
        mirrorImage.SetPixel(rx, y, color)
```

```
        ix += 1
```

```
        rx -= 1
```

```
    End While
```

```
Next
```

```
PictureBox1.Image = mirrorImage
```

```
0 references
Private Sub FlipHorizontalManualToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles FlipHorizontalManualToolStripMenuItem.Click
    Dim original As Bitmap = New Bitmap(PictureBox1.Image)
    Dim mirrorImage As Bitmap = New Bitmap(original.Width, original.Height)
    For y As Integer = 0 To original.Height - 1
        Dim ix As Integer = 0, rx As Integer = original.Width - 1
        While ix < original.Width
            Dim color As Color = original.GetPixel(ix, y)
            mirrorImage.SetPixel(rx, y, color)
            ix += 1
            rx -= 1
        End While
    Next
    PictureBox1.Image = mirrorImage
End Sub
```

Sebelum Flip :



Sesudah Flip



2. Error handling pada menu properti. Ketika belum ada file gambar yang dibuka maka tidak ada properti yang dapat ditunjukkan, oleh karena itu terdapat error handling dengan pesan bahwa user harus membuka file foto/gambar terlebih dahulu.

Code :

```
Private Sub PropertiToolStripMenuItem_Click(sender As Object, e As EventArgs)
Handles PropertiToolStripMenuItem.Click
    If PictureBox1.Image Is Nothing Then
        MsgBox("Buka file foto terlebih dahulu..")
    Else
        MessageBox.Show("Nama File: " + namaFile + vbCrLf + "Lebar: " +
PictureBox1.Image.Width.ToString + vbCrLf + "Tinggi: " +
PictureBox1.Image.Height.ToString)
    End If
End Sub
```

```
0 references
Private Sub PropertiToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles PropertiToolStripMenuItem.Click
    If PictureBox1.Image Is Nothing Then
        MsgBox("Buka file foto terlebih dahulu..")
    Else
        MessageBox.Show("Nama File: " + namaFile + vbCrLf + "Lebar: " + PictureBox1.Image.Width.ToString + vbCrLf + "Tinggi: " + PictureBox1.Image.Height.ToString)
    End If
End Sub
0 references
Private Sub KeluarToolStripMenuItem_Click(sender As Object, e As EventArgs) Handles KeluarToolStripMenuItem.Click
    Application.Exit()
End Sub
```

3. Matriks kernel edge detection, menghasilkan garis tepi dari objek gambar yang dirender.

Gambar awal :

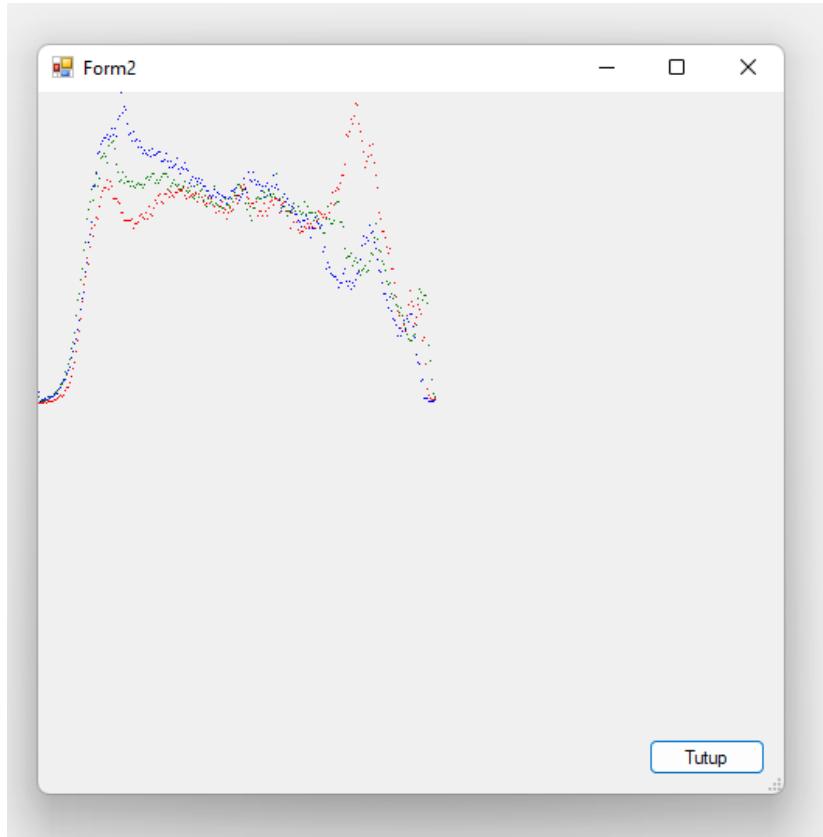


Setelah dilakukan 2 kali edge detection :



4. Pengurangan kontras sebanyak 8 kali pada citra membuat frekuensi pixel dari RGB yang tadinya terlihat jelas menjadi pudar. Bahkan ada beberapa pixel yang sudah tidak terbaca.

Awal :



Setelah 8 kali pengurangan kontras :

