LAMPIRAN A
LISTING PROGRAM

```
'ambil gambar untuk pengolahan citra dari samping
   Dim StrNmFile As String
   Dim StrTipe As String
   Dim pic As Picture
   StrTipe = "Bitmap (*.bmp)|*.bmp"
   StrTipe = StrTipe & "|GIF (*.gif)|*.gif"
   StrTipe = StrTipe & "|JPEG (*.jpg)|*.jpg"
      CommonDialog1.Filter = StrTipe
   CommonDialog1.FileName = "*.jpg"
   CommonDialog1.ShowOpen
      On Error GoTo ErrorHandler
         StrNmFile = CommonDialog1.FileName
   Set pic = LoadPicture(StrNmFile)
   Picture1.Picture = pic
      Exit Sub
   ErrorHandler:
   MsgBox "gambar belum dipilih"
n = 170
For i = 1 To Picture1.Width Step 15
   For j = 1 To Picture1.Height Step 15
      warna = Picture1.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
      x = (r + g + b) / 3
      If x >= n Then x = 255 Else x = 0
      Picture2.PSet (i, j), RGB(x, x, x)
      Next j
   Next i
```

```
For i = 1 To Picture2.Width Step 15
For j = 1 To Picture2.Height Step 15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3
If j >= 825 Then Picture2.PSet (i, j), RGB(255, 255, 255) Else Picture2.PSet (i, j),
RGB(x, x, x)
Next j
Next i

For i = 1 To Picture2.ScaleWidth Step 15
For j = 1 To Picture2.ScaleHeight Step 15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3

'cari titik tojolan dahi
If x = 0 Then
List1.AddItem (i)
List2.AddItem (j)

GoTo wet

End If

Next j
Next i

wet:

n = 170
For i = 1 To Picture1.Width Step 15
   For j = 1 To Picture1.Height Step 15
      warna = Picture1.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
      x = (r + g + b) / 3
      If x >= n Then x = 255 Else x = 0
```

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      Picture2.PSet (i, j), RGB(x, x, x)
      Next j
   Next i



k = ((List1.List(0)) + 75)
k1 = ((List2.List(0)) + 450)

For i = k To 1 Step -15
For j = (List2.List(0)) To k1 Step 15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3


'mencari titik lekukan hidung
If x = 255 Then
List1.AddItem (i)
List2.AddItem (j)

GoTo wet1

End If

Next j
Next i

wet1:


n = 170
For i = 1 To Picture1.Width Step 15
   For j = 1 To Picture1.Height Step 15
      warna = Picture1.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
      x = (r + g + b) / 3
      If x >= n Then x = 255 Else x = 0
      Picture2.PSet (i, j), RGB(x, x, x)
      Next j
```

```
   Next i


   For i = 1 To Picture2.ScaleWidth Step 15
For j = 1 To Picture2.ScaleHeight Step 15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3
If j >= 1620 Then Picture2.PSet (i, j), RGB(255, 255, 255) Else Picture2.PSet (i, j),
RGB(x, x, x)
Next j
Next i


For i = 1 To Picture2.ScaleWidth Step 15
For j = 1 To Picture2.ScaleHeight Step 15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3

'cari titik ujung hidung
If x = 0 Then
List1.AddItem (i)
List2.AddItem (j)

GoTo wet2

End If

Next j
Next i

wet2:
n = 170
For i = 1 To Picture1.Width Step 15
   For j = 1 To Picture1.Height Step 15
      warna = Picture1.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
```

```
        x = (r + g + b) / 3
        If x >= n Then x = 255 Else x = 0
        Picture2.PSet (i, j), RGB(x, x, x)
        Next j
    Next i

       For i = 1 To Picture2.Width Step 15
For j = 1 To Picture2.Height Step 15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3
If j <= 2340 Then Picture2.PSet (i, j), RGB(255, 255, 255) Else Picture2.PSet (i, j),
RGB(x, x, x)
Next j
Next i

For i = 1 To Picture2.ScaleWidth Step 15
For j = Picture2.ScaleHeight To 1 Step -15
warna = Picture2.Point(i, j)
r = warna And RGB(255, 0, 0)
g = Int((warna And RGB(0, 255, 0)) / 256)
b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
x = (r + g + b) / 3

'cari titik tonjolan dagu
If x = 0 Then
List1.AddItem (i)
List2.AddItem (j)
GoTo wet3
End If

Next j
Next i
wet3:
n = 170
For i = 1 To Picture1.Width Step 15
    For j = 1 To Picture1.Height Step 15
        warna = Picture1.Point(i, j)
        r = warna And RGB(255, 0, 0)
        g = Int((warna And RGB(0, 255, 0)) / 256)
        b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
        x = (r + g + b) / 3
```

```
        If x >= n Then x = 255 Else x = 0
        Picture2.PSet (i, j), RGB(x, x, x)
        Next j
    Next i

'hitung

X1 = List1.List(2) - List1.List(0)
Y1 = List2.List(2) - List2.List(0)
X2 = List1.List(2) - List1.List(1)
Y2 = List2.List(2) - List2.List(1)
x3 = List1.List(2) - List1.List(3)
y3 = List2.List(2) - List2.List(3)

j1 = Sqr(X1 ^ 2 + Y1 ^ 2)
j2 = Sqr(x3 ^ 2 + y3 ^ 2)
q = Round(j1, 3)
c = Round(j2, 3)

m1 = Y1 / X1
m2 = Y2 / X2
sudut = Atn((m1 * m2) / (1 + (m1 * m2)))
v = Round(sudut, 3)
List5.AddItem (q)
List5.AddItem (c)
List5.AddItem (v)

'ambil gambar untuk pengolahan citra dari depan

    Dim StrNmFile As String
    Dim StrTipe As String
    Dim pic As Picture

    StrTipe = "Bitmap (*.bmp)|*.bmp"
    StrTipe = StrTipe & "|GIF (*.gif)|*.gif"
    StrTipe = StrTipe & "|JPEG (*.jpg)|*.jpg"

    CommonDialog1.Filter = StrTipe
    CommonDialog1.FileName = "*.jpg"
    CommonDialog1.ShowOpen

    On Error GoTo ErrorHandler

    StrNmFile = CommonDialog1.FileName
```

```
    Set pic = LoadPicture(StrNmFile)
    Picture3.Picture = pic

    Exit Sub

ErrorHandler:
    MsgBox "gambar belum dipilih"


'deteksi tepi

Dim h1(3, 3), h2(3, 3) As Single
Dim x(500, 500) As Integer

h1(1, 1) = -1: h1(1, 2) = 1: h1(1, 3) = 1
h1(2, 1) = -1: h1(2, 2) = -2: h1(2, 3) = 1
h1(3, 1) = -1: h1(3, 2) = 1: h1(3, 3) = 1

For i = 1 To 3
 For j = 1 To 3
   h2(i, j) = h1(j, i)
 Next j
Next i

n1 = 0
For i = 1 To Picture3.ScaleWidth Step 15
    n1 = n1 + 1
    n2 = 0
For j = 1 To Picture3.ScaleHeight Step 15
    warna = Picture3.Point(i, j)
    r = warna And RGB(255, 0, 0)
    g = Int((warna And RGB(0, 255, 0)) / 256)
    b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)

    n2 = n2 + 1
    x(n1, n2) = Int((r + g + b) / 3)

    Picture4.PSet (i, j), RGB(x(n1, n2), x(n1, n2), x(n1, n2))
  Next j
Next i

For i = 1 To n1
    For j = 1 To n2
        z1 = 0
```

```
        z2 = 0
        For u1 = -1 To 1
           For u2 = -1 To 1
              z1 = z1 + h1(u1 + 2, u2 + 2) * x(i + u1, j + u2)
              z2 = z2 + h2(u1 + 2, u2 + 2) * x(i + u1, j + u2)
           Next u2
        Next u1

        z = Int(Abs(z1 + z2))
        If z > 255 Then z = 255
        Picture4.PSet ((i - 1) * 15 + 1, (j - 1) * 15 + 1), RGB(z, z, z)

        Next j
     Next i


n = 90
For i = 1 To Picture4.Width Step 15
   For j = 1 To Picture4.Height Step 15
      warna = Picture4.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
      s = (r + g + b) / 3
      If s >= n Then s = 255 Else s = 0
      Picture4.PSet (i, j), RGB(s, s, s)
      Next j
   Next i

'krop hidung

For i = 1 To Picture4.Width Step 15
   For j = 1 To Picture4.Height Step 15
      warna = Picture4.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 0, 255)) / 256) / 256)
      s = (r + g + b) / 3
      If j <= 870 Or j >= 1275 Or i <= 705 Or i >= 1470 Then Picture4.PSet (i, j),
RGB(0, 0, 0) Else Picture4.PSet (i, j), RGB(s, s, s)
Next j
   Next i
'hitung biner putih
```

```
For i = 1 To Picture4.Width Step 15
   For j = 1 To Picture4.Height Step 15
      warna = Picture4.Point(i, j)
      r = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(Int((warna And RGB(0, 255, 0)) / 256) / 256)
Picture5.BackColor = warna And RGB(r, g, b)
   If Picture5.BackColor = HFFFFFF Then
z = z + 1
Text2.Text = z


End If

Next j
   Next i

   List5.AddItem (z)



'simpan

For p = 0 To 4 Step 1
List3.AddItem List5.List(p)
Next p
Picture1.Cls
Picture2.Cls
Picture3.Cls
Picture4.Cls
List5.Clear
List1.Clear
List2.Clear
Text2.Text = 0

'reset

List1.Clear
List2.Clear
List5.Clear
List3.Clear
Picture1.Cls
Picture2.Cls
Picture3.Cls
```

```
Picture4.Cls
Text2.Text = 0

'mencek koordinat

Counter = 0

Xp = x / Screen.TwipsPerPixelX
Yp = y / Screen.TwipsPerPixelY
'Show data on label
Label2.Caption = "X: " & Xp & " -- Y: " & Yp

Counter = Counter + 1

  'menampilkan koordinat

Label2.Caption = "X: 0 -- Y: 0"

'membandingkan

If Option1.Value = False And Option2.Value = False And Option3.Value = False
And Option4.Value = False And Option5.Value = False And Option6.Value = False
And Option7.Value = False And Option8.Value = False And Option9.Value = False
And Option10.Value = False And Option11.Value = False Then
MsgBox "pilih dahulu parameter yang akan dibandingkan"
End If
If Option1.Value = True Then
If Abs(List3.List(0) - List5.List(0)) <= 14.45 Then MsgBox "cocok" Else MsgBox
"tidak cocok"
End If
If Option2.Value = True Then
If Abs(List3.List(1) - List5.List(1)) <= 8.694 Then MsgBox "cocok" Else MsgBox
"tidak cocok"
End If
If Option3.Value = True Then
If Abs(List3.List(2) - List5.List(2)) <= 0.003 Then MsgBox "cocok" Else MsgBox
"tidak cocok"
End If
If Option4.Value = True Then
If Abs(List3.List(3) - List5.List(3)) <= 24.334 Then MsgBox "cocok" Else MsgBox
"tidak cocok"
End If
If Option5.Value = True Then
```

```
If Abs(List3.List(0) - List5.List(0)) <= 14.45 And Abs(List3.List(1) - List5.List(1)) <= 8.694 Then MsgBox "cocok" Else MsgBox "tidak cocok"
End If
If Option6.Value = True Then
If Abs(List3.List(0) - List5.List(0)) <= 14.45 And Abs(List3.List(2) - List5.List(2)) <= 0.003 Then MsgBox "cocok" Else MsgBox "tidak cocok"
End If
If Option7.Value = True Then
If Abs(List3.List(0) - List5.List(0)) <= 14.45 And Abs(List3.List(3) - List5.List(3)) <= 24.334 Then MsgBox "cocok" Else MsgBox "tidak cocok"
End If
If Option8.Value = True Then
If Abs(List3.List(1) - List5.List(1)) <= 8.694 And Abs(List3.List(2) - List5.List(2)) <= 0.003 Then MsgBox "cocok" Else MsgBox "tidak cocok"
End If
If Option9.Value = True Then
If Abs(List3.List(1) - List5.List(1)) <= 8.694 And Abs(List3.List(3) - List5.List(3)) <= 24.334 Then MsgBox "cocok" Else MsgBox "tidak cocok"
End If
If Option10.Value = True Then
If Abs(List3.List(0) - List5.List(0)) <= 14.45 And Abs(List3.List(1) - List5.List(1)) <= 8.694 And Abs(List3.List(2) - List5.List(2)) <= 0.003 And Abs(List3.List(3) - List5.List(3)) <= 24.334 Then MsgBox "cocok" Else MsgBox "tidak cocok"
End If
If Option11.Value = True Then If Abs(List3.List(0) - List5.List(0)) <= 14.45 And Abs(List3.List(1) - List5.List(1)) <= 8.694 And Abs(List3.List(2) - List5.List(2)) <= 0.003 Then MsgBox "cocok" Else MsgBox "tidak cocok"


'keluar dari program utama

Unload Me
```

LAMPIRAN B

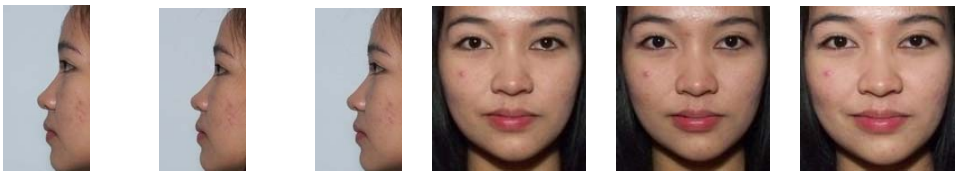
FOTO-FOTO

Ardi

Paskal

Inggar

Irma



Rizki