LAMPIRAN A

LIST PROGRAM PADA VISUAL BASIC

PROGRAM UTAMA

```
Dim sm(255), sg(255), sb(255) As Single

Dim pm(255), pg(255), pb(255) As Single

Dim nm(255), ng(255), nb(255) As Single

Dim nnm(255), nng(255), nnb(255) As Single

Dim rm(255), rg(255), rb(255) As Single

Dim rbm(255), rbg(255), rbb(255) As Long

Dim nmMax, nbMax, ngMax As Integer

Dim Totalm, Totalb, Totalg As Long

Dim radian As Double

Dim sudut As Double

Dim klmmax, klmmin, brsmax, brsmin, klm, brs, nbrs As Integer

Dim yar(200, 200) As Integer

Dim xt As Integer 'samping

Dim yt As Integer 'depan

Dim value, portaddress As Integer


Private Declare Function SendMessage Lib "USER32" Alias "SendMessageA" (ByVal hwnd As Long, ByVal wMsg As Long, ByVal wParam As Long, lParam As Any) As Long

Private Declare Function capCreateCaptureWindow Lib "avicap32.dll" Alias "capCreateCaptureWindowA" (ByVal lpszWindowName As String, ByVal dwStyle As Long, ByVal x As Long, ByVal y As Long, ByVal nWidth As Long, ByVal nHeight As Long, ByVal hwndParent As Long, ByVal nID As Long) As Long
```

```
Private mCapHwnd As Long


Private Const CONNECT As Long = 1034
Private Const DISCONNECT As Long = 1035
Private Const GET_FRAME As Long = 1084
Private Const COPY As Long = 1054
Dim Counter As Integer
Dim continue As Boolean
```

```
Sub STOPCAM()
DoEvents
SendMessage mCapHwnd, DISCONNECT, 0, 0
End Sub
```

```
Sub START()
mCapHwnd = capCreateCaptureWindow("WebcamCapture", 0, 0, 0, 160, 120,
Me.hwnd, 0)
DoEvents
SendMessage mCapHwnd, CONNECT, 0, 0
End Sub
```

```
Private Sub cmdCAPTURE_Click()
picture1.Width = picGerak.Width / 4
```

```
picture1.Height = picGerak.Height / 4
'SavePicture picGerak.Image, App.Path + "\picturegerak.jpg"
    it = 0
    For i = 1 To picGerak.Width Step 4
    it = it + 1
    jt = 0
    For j = 1 To picGerak.Height Step 4
    jt = jt + 1
        warna1 = picGerak.Point(i, j)
        warna2 = picGerak.Point(i, j + 1)
        warna3 = picGerak.Point(i + 1, j + 1)
        warna4 = picGerak.Point(i + 1, j)
        warna5 = picGerak.Point(i + 2, j)
        warna6 = picGerak.Point(i + 2, j + 1)
        warna7 = picGerak.Point(i + 3, j)
        warna8 = picGerak.Point(i + 3, j + 1)
        warna9 = picGerak.Point(i, j + 2)
        warna10 = picGerak.Point(i, j + 3)
        warna11 = picGerak.Point(i + 1, j + 2)
        warna12 = picGerak.Point(i + 1, j + 3)
        warna13 = picGerak.Point(i + 2, j + 2)
        warna14 = picGerak.Point(i + 2, j + 3)
        warna15 = picGerak.Point(i + 3, j + 2)
```

```
warna16 = picGerak.Point(i + 3, j + 3)
m1 = warna1 And RGB(255, 0, 0)
g1 = Int((warna1 And RGB(0, 255, 0)) / 256)
b1 = Int(Int((warna1 And RGB(0, 0, 255)) / 256) / 256)
m2 = warna2 And RGB(255, 0, 0)
g2 = Int((warna2 And RGB(0, 255, 0)) / 256)
b2 = Int(Int((warna2 And RGB(0, 0, 255)) / 256) / 256)
m3 = warna3 And RGB(255, 0, 0)
g3 = Int((warna3 And RGB(0, 255, 0)) / 256)
b3 = Int(Int((warna3 And RGB(0, 0, 255)) / 256) / 256)
m4 = warna4 And RGB(255, 0, 0)
g4 = Int((warna4 And RGB(0, 255, 0)) / 256)
b4 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m5 = warna4 And RGB(255, 0, 0)
g5 = Int((warna4 And RGB(0, 255, 0)) / 256)
b5 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m6 = warna4 And RGB(255, 0, 0)
g6 = Int((warna4 And RGB(0, 255, 0)) / 256)
b6 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m7 = warna4 And RGB(255, 0, 0)
g7 = Int((warna4 And RGB(0, 255, 0)) / 256)
b7 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m8 = warna4 And RGB(255, 0, 0)
```

```
g8 = Int((warna4 And RGB(0, 255, 0)) / 256)
b8 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m9 = warna4 And RGB(255, 0, 0)
g9 = Int((warna4 And RGB(0, 255, 0)) / 256)
b9 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m10 = warna4 And RGB(255, 0, 0)
g10 = Int((warna4 And RGB(0, 255, 0)) / 256)
b10 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m11 = warna4 And RGB(255, 0, 0)
g11 = Int((warna4 And RGB(0, 255, 0)) / 256)
b11 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m12 = warna4 And RGB(255, 0, 0)
g12 = Int((warna4 And RGB(0, 255, 0)) / 256)
b12 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m13 = warna4 And RGB(255, 0, 0)
g13 = Int((warna4 And RGB(0, 255, 0)) / 256)
b13 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m14 = warna4 And RGB(255, 0, 0)
g14 = Int((warna4 And RGB(0, 255, 0)) / 256)
b14 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
m15 = warna4 And RGB(255, 0, 0)
g15 = Int((warna4 And RGB(0, 255, 0)) / 256)
b15 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
```

```
        m16 = warna4 And RGB(255, 0, 0)
        g16 = Int((warna4 And RGB(0, 255, 0)) / 256)
        b16 = Int(Int((warna4 And RGB(0, 0, 255)) / 256) / 256)
        m = (m1 + m2 + m3 + m4 + m5 + m6 + m7 + m8 + m9 + m10 + m11 + m12 +
m13 + m14 + m15 + m16) / 16
        g = (g1 + g2 + g3 + g4 + g5 + g6 + g7 + g8 + g9 + g10 + g11 + g12 + g13 + g14
+ g15 + g16) / 16
        b = (b1 + b2 + b3 + b4 + b5 + b6 + b7 + b8 + b9 + b10 + b11 + b12 + b13 + b14
+ b15 + b16) / 16
        picture1.PSet (it, jt), RGB(m, g, b)
    Next j
Next i
Image1.Picture = picture1.Image
End Sub
```

```
Private Sub cmdGabung_Click()
'=================GABUNG GAMBAR=====================
For brs = 1 To picGabung.ScaleHeight
    For klm = 1 To picGabung.ScaleWidth
        warna = picm.Point(klm, brs)
        m = warna And RGB(255, 0, 0)
        xbm = rbm(m) 'xbm adalah nilai intensitas warna merah baru setelah ekualisasi

        warna = picg.Point(klm, brs)
```

```
        g = Int((warna And RGB(0, 255, 0)) / 256)
        xbg = rbg(g) 'xb adalah nilai intensitas warna hijau baru setelah ekualisasi
        warna = picb.Point(klm, brs)
        b = Int(((warna And RGB(0, 0, 255)) / 256) / 256)
        xbb = rbb(b) 'xb adalah nilai intensitas warna biru baru setelah ekualisasi

        picGabung.PSet (klm, brs), RGB(m, g, b)
        Image2.Picture = picGabung.Image
    Next klm
Next brs
CommonDialog1.Filter = "pictures(*.jpeg)|*.jpeg"
CommonDialog1.ShowSave
filesimpan = CommonDialog1.FileName
If Len(filesimpan) > 0 Then
‘SavePicture picGabung.Image, filesimpan
‘MsgBox ("gambar tersimpan")
End If
End Sub
```

```
Private Sub cmdPraktis_Click()
Call cmdCAPTURE_Click
Call Command1_Click
Call Command5_Click
```

```
Call Command6_Click
End Sub
```

```
Private Sub Command1_Click()
'Open "E:\TA\hasil.CSV" For Output As #1
picture1.AutoRedraw = True
x = picture1.ScaleWidth
y = picture1.ScaleHeight
klmmax = 0
brsmax = 0
klmmin = x
brsmin = y

For brs = 1 To y
  For klm = 1 To x
  wrn = picture1.Point(klm, brs)
  m = (wrn And RGB(255, 0, 0))
  g = ((wrn And RGB(0, 255, 0)) \ 256)
  b = (((wrn And RGB(0, 0, 255)) \ 256) \ 256)
  X1 = (-3.2572 * m + 3.2572 * g + 0.5426 * b)
  X2 = -0.217 * m + 1.5337 * g - 0.7741 * b
  X3 = (3.2572 * m - 3.2572 * g + 0.5424 * b)
 'Write #1, Int(X1), Int(X2), Int(X3)
```

```
 If (X2 >= -25 And X2 <= 50) And (X3 >= 90 And X3 <= 200) Then
   m = 255
   g = 255
   b = 255
 End If
 Picture3.PSet (klm, brs), RGB(m, g, b)
 Next klm
Next brs
'Close #1
Image3.Picture = Picture3.Image
End Sub
```

```
Private Sub Command2_Click()
picHistm.Cls
picHistg.Cls
picHistb.Cls

'memberi nilai awal array'
For i = 0 To 255
   nm(i) = 0 'populasi merah
   ng(i) = 0 'populasi ijo
   nb(i) = 0 'populasi biru
Next i
```

```
For j = 1 To picture1.Height
   For i = 1 To picture1.Width
      warna = picture1.Point(i, j)
      m = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(((warna And RGB(0, 0, 255)) / 256) / 256)
      picm.PSet (i, j), RGB(m, 0, 0)
      picg.PSet (i, j), RGB(0, g, 0)
      picb.PSet (i, j), RGB(0, 0, b)
      For k = 0 To 255
         If m = k Then nm(k) = nm(k) + 1
         If g = k Then ng(k) = ng(k) + 1
         If b = k Then nb(k) = nb(k) + 1
      Next k
   Next i
Next j

nmMax = 0
ngMax = 0
nbMax = 0
For i = 0 To 255
   If nm(i) > nmMax Then nmMax = nm(i)
   If ng(i) > ngMax Then ngMax = ng(i)
```

```
    If nb(i) > nbMax Then nbMax = nb(i)
Next i
Totalm = 0
For i = 0 To 255
    Totalm = Totalm + nm(i)
Next i

Totalg = 0
For i = 0 To 255
    Totalg = Totalg + ng(i)
Next i

Totalb = 0
For i = 0 To 255
    Totalb = Totalb + nb(i)
Next i
'gambar histogram warna merah
listHistm.Clear
listHistm.AddItem ("i   nm[i]")
tHeight = picHistm.ScaleHeight - 2
For i = 0 To 255
    pm(i) = nm(i) / Totalm
    listHistm.AddItem (Str(i) + "   " + Str(nm(i)))
```

```
    y = tHeight - (nm(i) / nmMax) * tHeight
    picHistm.Line (i, tHeight)-(i, y), RGB(255, 0, 0)
Next i
'gambar histogram warna ijo
listHistg.Clear
listHistg.AddItem ("i   ng[i]")
tHeight = picHistg.ScaleHeight - 2
For i = 0 To 255
   pg(i) = ng(i) / Totalg
    listHistg.AddItem (Str(i) + "   " + Str(ng(i)))
    y = tHeight - (ng(i) / ngMax) * tHeight
    picHistg.Line (i, tHeight)-(i, y), RGB(0, 255, 0)
Next i
'gambar histogram warna biru
listHistb.Clear
listHistb.AddItem ("i   nb[i]")
tHeight = picHistb.ScaleHeight - 2
For i = 0 To 255
    pb(i) = nb(i) / Totalb
    listHistb.AddItem (Str(i) + "   " + Str(nb(i)))
    y = tHeight - (nb(i) / nbMax) * tHeight
    picHistb.Line (i, tHeight)-(i, y), RGB(0, 0, 255)
Next i
```

```
Image1.Picture = picture1.Picture
End Sub
```

```
Sub Command3_Click()
listHistm.Clear
listHistg.Clear
listHistb.Clear
picm.Cls
picb.Cls
picg.Cls
picHistm.Cls
picHistg.Cls
picHistb.Cls

'====================EQUALISASI MERAH=====================
sm(0) = pm(0)
rm(0) = 0
listHistm.AddItem ("i    rm(i)     sm(i)")
listHistm.AddItem ("0" + "    " + Str(sm(0)) + "     " + Str(rm(0)))

For i = 1 To 255
    sm(i) = Round((sm(i - 1) + pm(i)), 4)
    rm(i) = Round((i / 255), 4)
```

```
    listHistm.AddItem (Str(i) + "    " + Str(sm(i)) + "      " + Str(rm(i)))
Next i
For i = 255 To 0 Step -1
    For j = 255 To 0 Step -1
        If sm(i) < rm(j) Then
            rbm(i) = j 'ini artinya r-baru-merah
        End If
    Next j
Next i

'membuat histogram yang baru
For i = 0 To 255
    nnm(i) = 0 'ini artinya n-new-merah
Next i

For j = 1 To picture1.Height 'Step 15
    For i = 1 To picture1.Width 'Step 15
        warna = picture1.Point(i, j)
        m = warna And RGB(255, 0, 0)
        g = Int((warna And RGB(0, 255, 0)) / 256)
        b = Int(((warna And RGB(0, 0, 255)) / 256) / 256)
        xbm = rbm(m) 'xb adalah nilai intnsitas baru setelah ekualisasi
        picm.PSet (i, j), RGB(xbm, 0, 0)
```

```
        For k = 0 To 255
            If xbm = k Then
            nnm(k) = nnm(k) + 1
            End If
        Next k
    Next i
Next j

nnmMax = 0
For i = 0 To 255
    If nnm(i) > nnmMax Then nnmMax = nnm(i)
Next i

listHistm.Clear
picHistm.Cls
listHistm.AddItem ("i   nnm[i]")
tHeight = picHistm.ScaleHeight - 2
For i = 0 To 255
    listHistm.AddItem (Str(i) + "   " + Str(nnm(i)))
    y = tHeight - (nnm(i) / nnmMax) * tHeight
    picHistm.Line (i, tHeight)-(i, y), RGB(255, 0, 0)
Next i
```

```
'====================EQUALISASI IJO====================
sg(0) = pg(0)
rg(0) = 0
listHistg.AddItem ("i    rg(i)     sg(i)")
listHistg.AddItem ("0" + "    " + Str(sm(0)) + "     " + Str(rm(0)))

For i = 1 To 255
    sg(i) = Round((sg(i - 1) + pg(i)), 4)
    rg(i) = Round((i / 255), 4)
    listHistm.AddItem (Str(i) + "    " + Str(sg(i)) + "     " + Str(rg(i)))
Next i

For i = 255 To 0 Step -1
    For j = 255 To 0 Step -1
        If sg(i) < rg(j) Then
            rbg(i) = j 'ini artinya r-baru-ijo
        End If
    Next j
Next i

'membuat histogram yang baru
For i = 0 To 255
    nng(i) = 0 'ini artinya n-new-ijo
```

```
Next i


For j = 1 To picture1.Height
   For i = 1 To picture1.Width
      warna = picture1.Point(i, j)
      m = warna And RGB(255, 0, 0)
      g = Int((warna And RGB(0, 255, 0)) / 256)
      b = Int(((warna And RGB(0, 0, 255)) / 256) / 256)
      xbg = rbg(g) 'xb adalah nilai intensitas baru setelah ekualisasi
      picg.PSet (i, j), RGB(0, xbg, 0)
      For k = 0 To 255
         If xbg = k Then
         nng(k) = nng(k) + 1
         End If
      Next k
   Next i
Next j


nngMax = 0
For i = 0 To 255
   If nng(i) > nngMax Then nngMax = nng(i)
Next i
```

```
listHistg.Clear
picHistg.Cls
listHistg.AddItem ("i    nng[i]")
tHeight = picHistg.ScaleHeight - 2
For i = 0 To 255
    listHistg.AddItem (Str(i) + "    " + Str(nng(i)))
    y = tHeight - (nng(i) / nngMax) * tHeight
    picHistg.Line (i, tHeight)-(i, y), RGB(0, 255, 0)
Next i
'====================EQUALISASI BIRU====================
sb(0) = pb(0)
rb(0) = 0
listHistb.AddItem ("i    rb(i)     sb(i)")
listHistb.AddItem ("0" + "    " + Str(sb(0)) + "     " + Str(rb(0)))

For i = 1 To 255
    sb(i) = Round((sb(i - 1) + pb(i)), 4)
    rb(i) = Round((i / 255), 4)
    listHistb.AddItem (Str(i) + "    " + Str(sb(i)) + "     " + Str(rb(i)))
Next i
For i = 255 To 0 Step -1
    For j = 255 To 0 Step -1
        If sb(i) < rb(j) Then
```

```
            rbb(i) = j 'ini artinya r-baru-biru
        End If
    Next j
Next i

'membuat histogram yang baru
For i = 0 To 255
    nnb(i) = 0 'ini artinya n-new-biru
Next i
For j = 1 To picture1.Height
    For i = 1 To picture1.Width
        warna = picture1.Point(i, j)
        m = warna And RGB(255, 0, 0)
        g = Int((warna And RGB(0, 255, 0)) / 256)
        b = Int(((warna And RGB(0, 0, 255)) / 256) / 256)
        xbb = rbb(b) 'xb adalah nilai intensitas baru setelah ekualisasi
        picb.PSet (i, j), RGB(0, 0, xbb)
        For k = 0 To 255
            If xbb = k Then
            nnb(k) = nnb(k) + 1
            End If
        Next k
    Next i
```

```
Next j

nnbMax = 0
For i = 0 To 255
   If nnb(i) > nnbMax Then nnbMax = nnb(i)
Next i

listHistb.Clear
picHistb.Cls
listHistb.AddItem ("i   nnb[i]")
tHeight = picHistb.ScaleHeight - 2
For i = 0 To 255
   listHistb.AddItem (Str(i) + "   " + Str(nnb(i)))
   y = tHeight - (nnb(i) / nnbMax) * tHeight
   picHistb.Line (i, tHeight)-(i, y), RGB(0, 0, 255)
Next i
End Sub
```

```
Private Sub Command4_Click()
picGabung.AutoRedraw = True
x = picGabung.ScaleWidth
y = picGabung.ScaleHeight
klmmax = 0
```

```
brsmax = 0
klmmin = x
brsmin = y

For brs = 1 To y
  For klm = 1 To x
  wrn = picGabung.Point(klm, brs)
  m = (wrn And RGB(255, 0, 0))
  g = ((wrn And RGB(0, 255, 0)) \ 256)
  b = (((wrn And RGB(0, 0, 255)) \ 256) \ 256)
  X1 = (-3.2572 * m + 3.2572 * g + 0.5426 * b)
  X2 = -0.217 * m + 1.5337 * g - 0.7741 * b
  X3 = (3.2572 * m - 3.2572 * g + 0.5424 * b)
  If (X2 >= -15 And X2 <= 25) And (X3 >= 72 And X3 <= 180) Then
    m = 255
    g = 255
    b = 255
    If klmmax < klm Then klmmax = klm
    If brsmax < brs Then brsmax = brs
    If klmmin > klm Then klmmin = klm
    If brsmin > brs Then brsmin = brs
  End If
  Picture3.PSet (klm, brs), RGB(m, g, b)
```

```
 Next klm
Next brs
'Debug.Print klmMax, brsMax, klmMin, brsMin
Image3.Picture = Picture3.Image
MsgBox ("Selesai")
End Sub
```

```
Private Sub Command5_Click()
PicCrop.Cls
klmmax = 0
brsmax = 0
klmmin = 160
brsmin = 30
For klm = 1 To 200
For brs = 1 To 200
yar(klm, brs) = 0
Next brs
Next klm
PicCrop.PaintPicture Picture3.Image, 0, 0, PicCrop.ScaleWidth, PicCrop.Height, 0, 90, , 30
ImCrop.Picture = PicCrop.Image
listHistm.Clear
For klm = 1 To PicCrop.Width
```

```
For brs = 1 To PicCrop.Height
   warna = PicCrop.Point(klm, brs)
   If warna = RGB(255, 255, 255) Then
      yar(klm, brs) = klm
      listHistm.AddItem (Str(klm) + " , " + Str(brs) + " = " + Str(yar(klm, brs)))
      If klmmax < klm Then klmmax = klm
      If brsmax < brs Then brsmax = brs
      If klmmin > klm Then klmmin = klm
      If brsmin > brs Then brsmin = brs
   End If
   Next brs
   Next klm
Debug.Print klmmax, brsmax, klmmin, brsmin
End Sub
```

```
Private Sub Command6_Click()
Text2.Text = ""
radian = 0
sudut = 0
xt = 0
yt = 0
dx = 0
dy = 0
```

```
simetri = 1
xt = (klmmax + klmmin) \ 2
yt = (brsmax + brsmin) \ 2
nbrs = yar(xt, yt)
tb = yt
ts = yt
a = 1
While (simetri = 1) And (tb >= brsmin) And (ts <= brsmax)
tb = yt - a
ts = yt + a
Debug.Print tb, ts, yar(xt, tb), yar(xt, ts), nbrs
If yar(xt, tb) = nbrs And yar(xt, ts) = nbrs Then
   simetri = 1
   a = a + 1
Else
   simetri = 0
End If
Wend
dy = 2 * (a - 1)
dx = xt - klmmin
radian = Atn(dy / dx)
sudut = radian * 180 / 3.14
If sudut > 20 Then Text2.Text = "senyum": Out portaddress, 254
```

```
    If sudut <= 20 And sudut > 10 Then Text2.Text = "biasa": Out portaddress, 253
    If sudut <= 10 Then Text2.Text = "cemberut": Out portaddress, 251
Debug.Print xt, yt, a, dx, dy, radian, sudut
End Sub
```

```
Private Sub Dir1_Change()
File1.Path = Dir1.Path
End Sub
```

```
Private Sub Drive1_Change()
Dir1.Path = Drive1.Drive
End Sub
```

```
Private Sub File1_Click()
Text1.Text = Dir1.Path + "\" + File1.FileName
Image1.Picture = LoadPicture(Text1.Text)
picture1.Picture = Image1.Picture
picm.Width = picture1.Width
picm.Height = picture1.Height
picg.Width = picture1.Width
picg.Height = picture1.Height
picb.Width = picture1.Width
picb.Height = picture1.Height
```

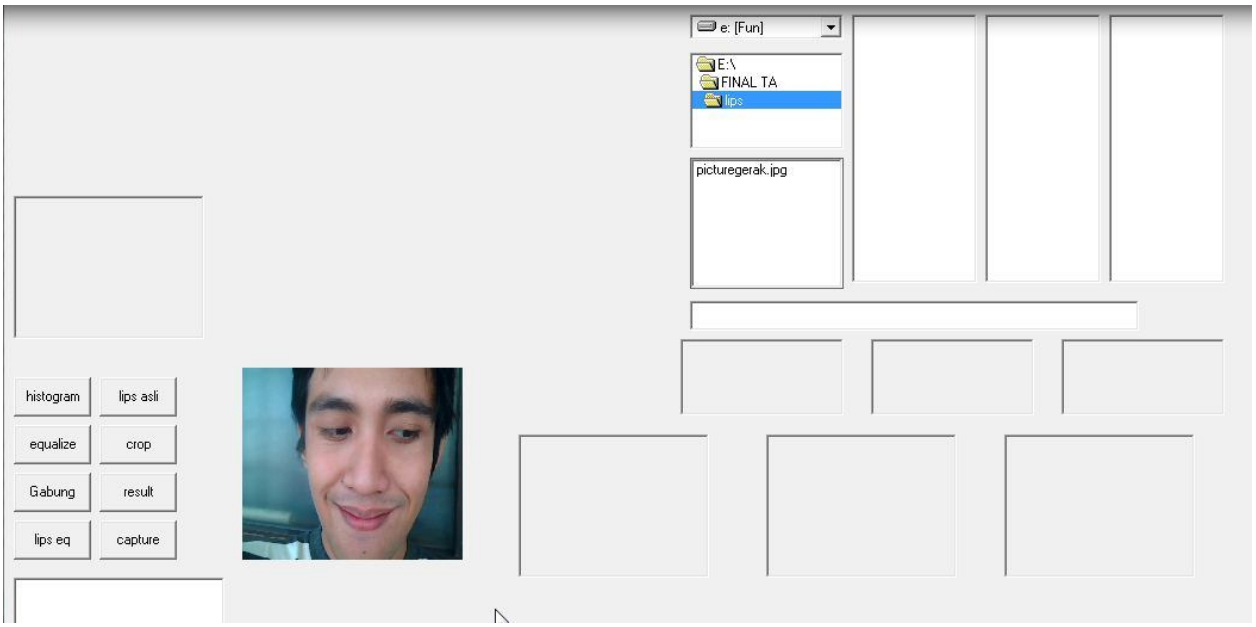
```
picGabung.Width = picture1.Width
picGabung.Height = picture1.Height
Picture3.Width = picture1.Width
Picture3.Height = picture1.Height
End Sub
```

```
Private Sub Form_Activate()
START
continue = True
Do While continue
    SendMessage mCapHwnd, GET_FRAME, 0, 0
    SendMessage mCapHwnd, COPY, 0, 0
    picGerak.Picture = Clipboard.GetData
    ImGerak.Picture = picGerak.Picture
    DoEvents
Loop
End Sub
```

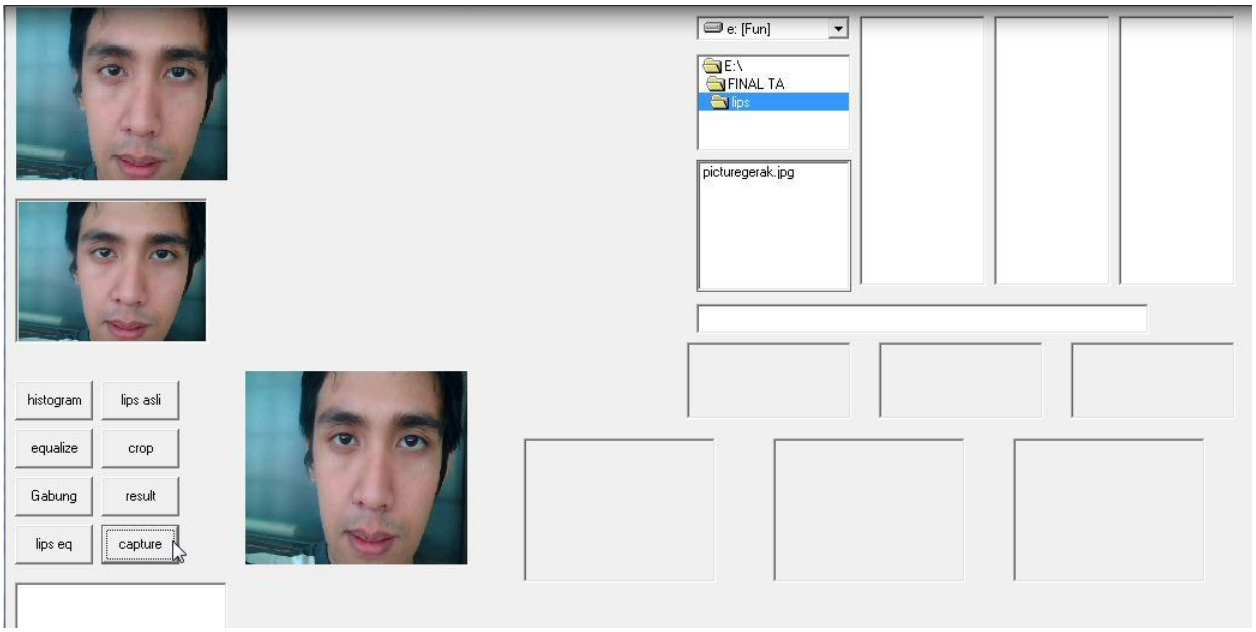
```
Private Sub Form_Load()
value = 0
portaddress = &H378
End Sub
```

LAMPIRAN B

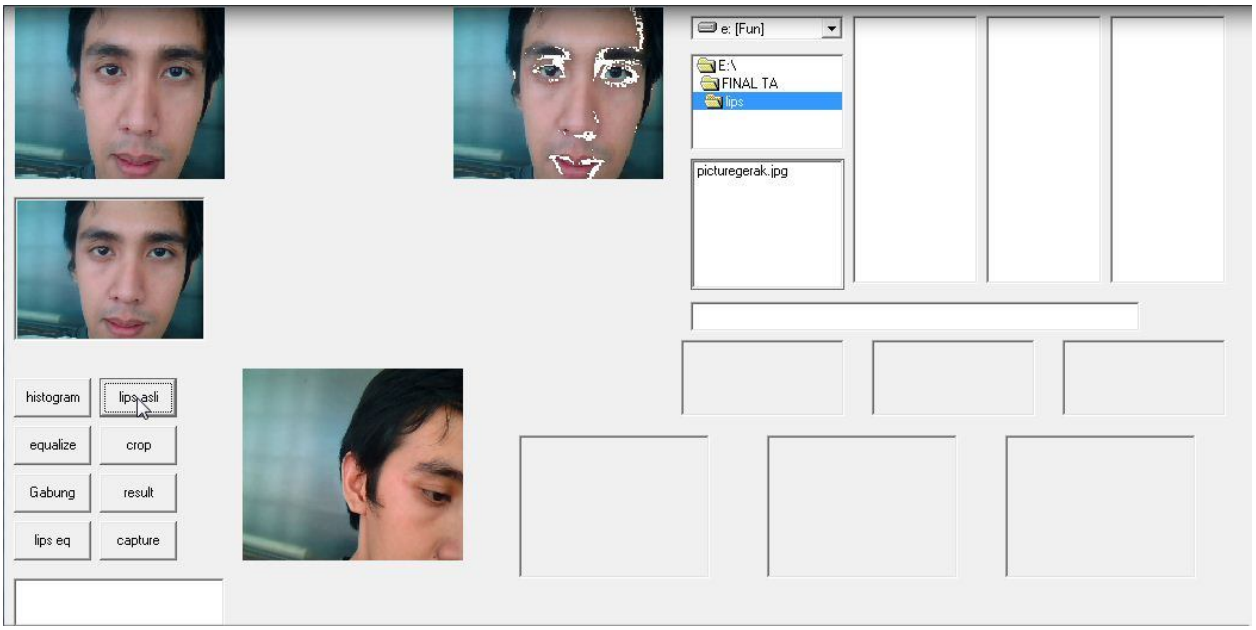
TAMPILAN PADA VISUAL BASIC



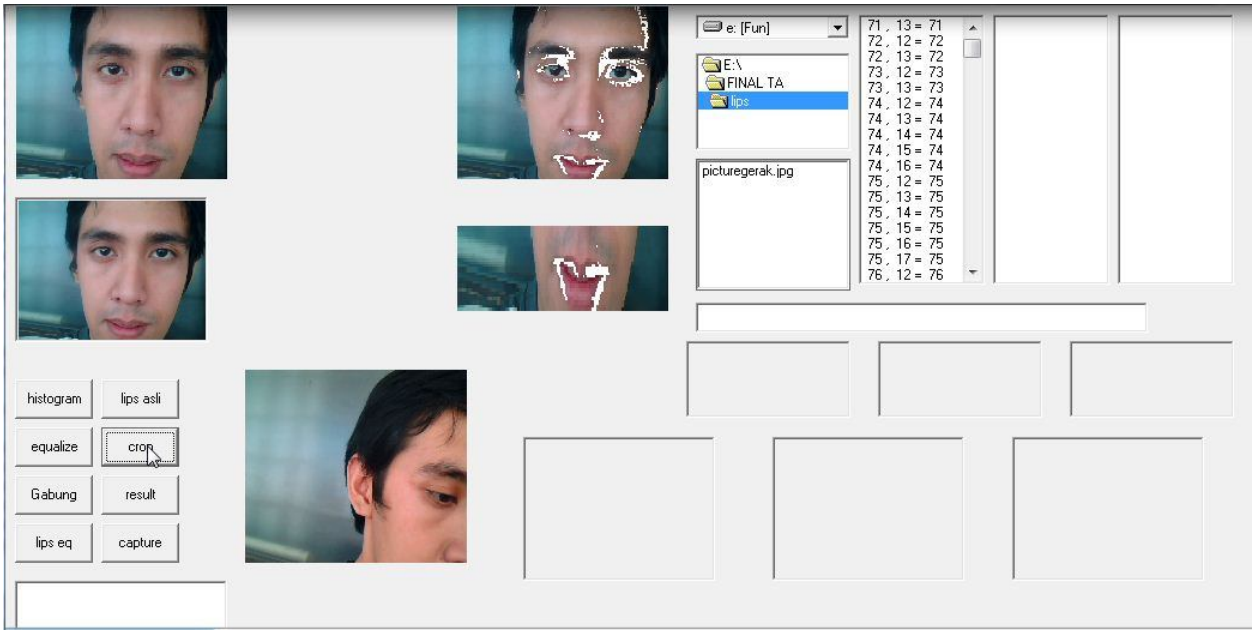
Gambar A-1. Tampilan awal program



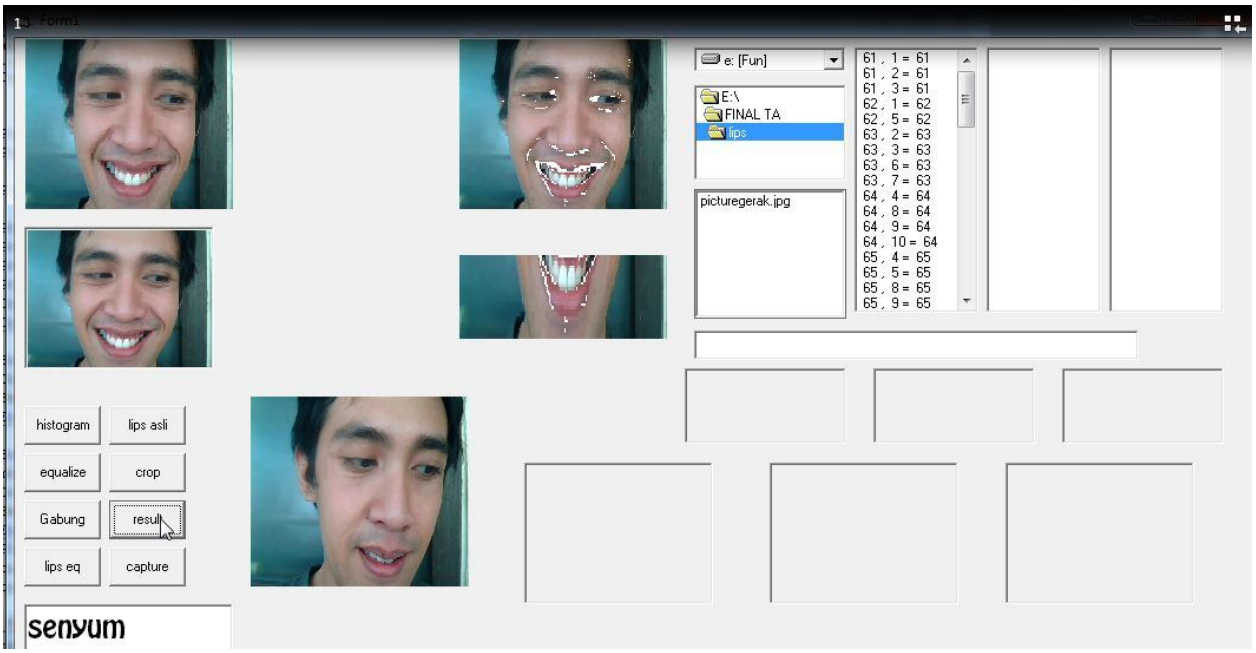
Gambar A-2. Tampilan setelah capture



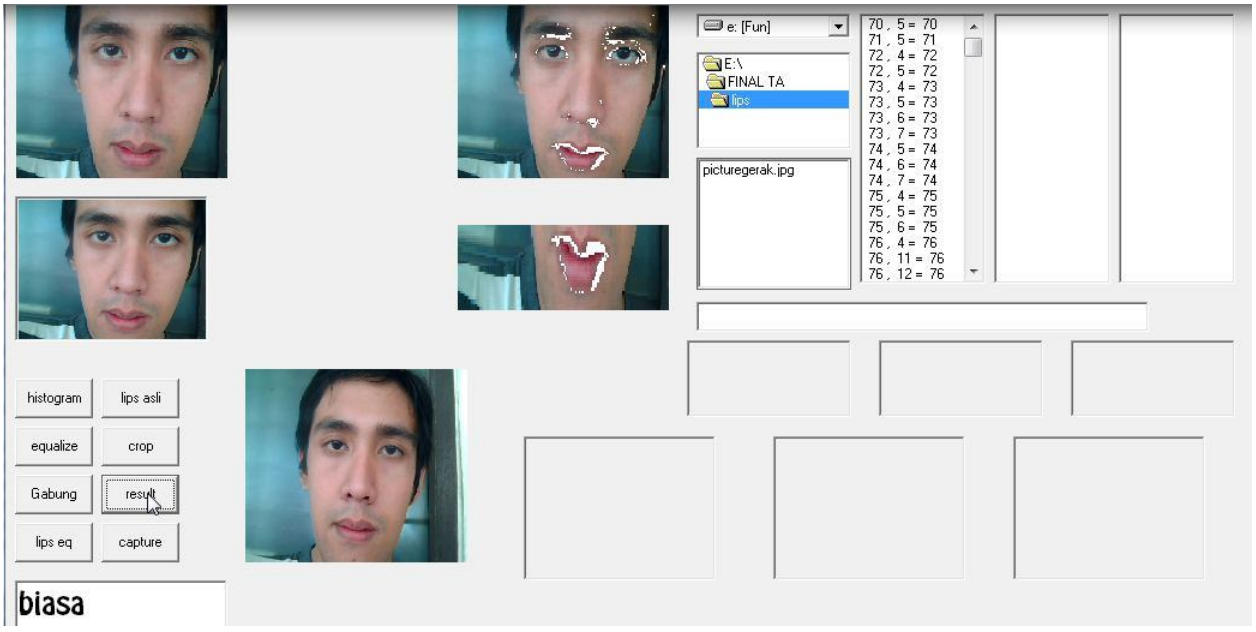
Gambar A-3. Tampilan deteksi bibir



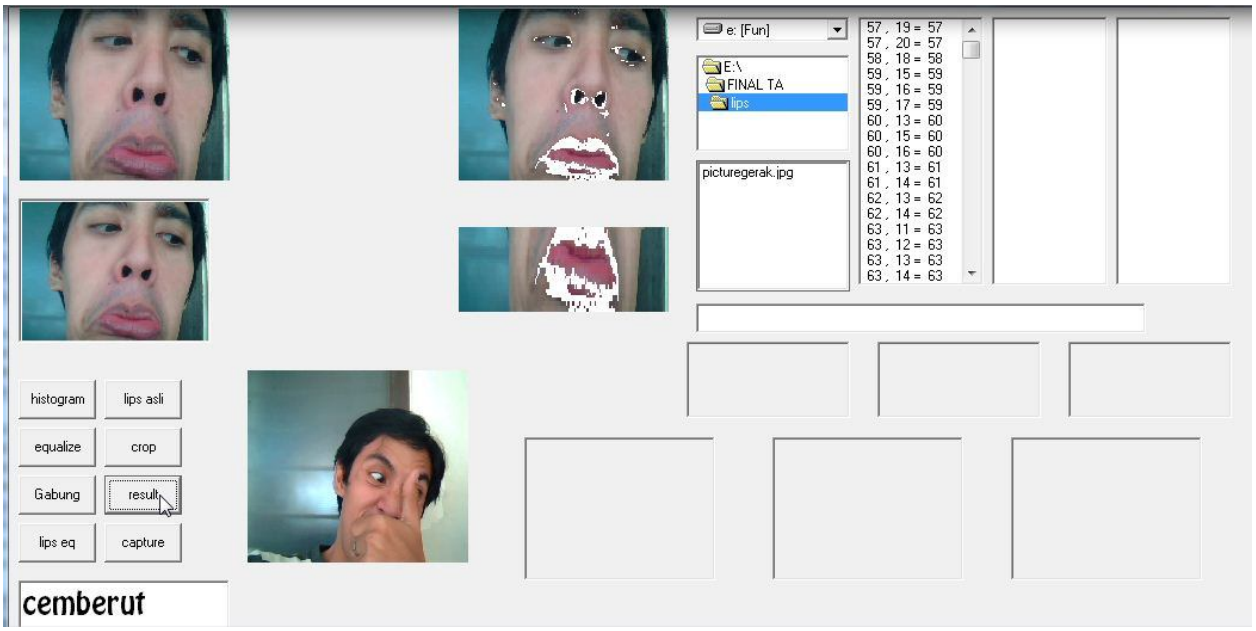
Gambar A-4. Tampilan setelah picture dicrop



Gambar A-5. Tampilan hasil deteksi senyum (“senyum”)



Gambar A-6. Tampilan hasil deteksi senyum (“biasa”)



Gambar A-7. Tampilan hasil deteksi senyum (“cemberut”)

LAMPIRAN C

HASIL DATA PENGAMATAN

LIPS DETECTION

data 1

x2	x3
24	147
28	151
28	151
28	151
33	156
35	158
32	155
35	130
36	131
39	134
40	135
138	138
14	164
19	169
20	170
20	170
24	174
26	176
25	175
26	149
28	151
31	154
33	156
18	194
3	187
5	190
6	191
8	193
12	197
15	199
15	199
16	178
20	181
22	183
24	185
13	213
4	204
3	202
3	203
7	207
11	211
13	213

x2	x3
11	219
14	222
16	224
17	225
18	226
25	210
29	214
33	217
33	217
138	138
24	234
24	235
24	234
24	235
22	233
21	232
24	234
32	219
37	224
40	227
39	226
46	188
31	242
35	245
34	245
31	242
27	237
24	235
28	238
37	224
41	229
44	231
43	230
45	186
36	221
36	221
35	220
35	220
32	217
29	214
30	215
38	210

data 2

x2	x3
24	211
27	200
29	202
34	196
34	196
33	195
36	183
28	201
28	201
27	200
27	200
138	138
12	185
17	190
26	197
34	196
38	198
39	187
39	187
35	197
34	196
32	194
30	193
33	164
17	187
20	191
29	188
34	193
39	180
38	178
36	177
33	181
32	180
30	178
28	176
29	166
23	183
23	182
29	181
32	173
32	172
33	164

x2	x3
25	164
27	166
30	159
32	160
34	162
29	156
28	155
27	154
26	154
138	138
17	168
21	160
25	164
28	156
25	154
27	153
31	149
28	148
28	148
27	147
26	146
-10	118
17	156
19	159
24	161
24	153
20	145
19	137
21	138
22	135
20	134
19	132
18	131
-10	117
2	130
2	130
2	129
3	131
7	134
9	136
9	136
14	121

data 3

x2	x3
8	65
8	52
13	46
15	47
16	54
16	65
18	65
24	59
17	65
8	74
2	80
138	138
8	66
8	56
7	53
9	54
9	51
9	56
10	64
12	65
8	67
0	78
-4	79
138	138
0	67
1	60
2	61
2	63
1	55
-3	54
-5	54
-4	64
-3	67
-6	77
-8	84
-7	73
-3	68
-4	70
-4	64
-5	62
-7	61
-3	56

x2	x3
14	106
13	96
6	95
7	86
15	87
24	94
27	110
29	112
30	113
28	111
138	138
42	123
40	131
34	136
32	125
30	120
38	107
45	110
44	126
44	127
43	124
40	120
138	138
53	136
47	141
41	147
39	141
38	132
40	117
43	111
41	124
46	126
49	127
51	121
21	116
46	130
40	135
36	139
35	138
34	130
31	126
31	123

data 4

x2	x3
4	108
4	108
8	112
14	117
16	120
16	119
14	118
10	103
10	103
12	104
15	107
138	138
-8	105
-8	104
-6	106
-2	110
2	115
5	118
7	119
0	103
0	102
0	102
1	103
138	138
-13	113
-18	109
-20	106
-20	106
-17	109
-13	113
-10	116
-8	105
-8	105
-7	106
-7	107
-7	121
0	139
-3	136
-6	133
-9	130
-10	129
-10	129

x2	x3
18	169
17	167
14	164
12	162
10	161
10	161
10	150
13	154
16	157
18	158
138	138
25	186
25	185
23	183
22	182
22	182
22	183
24	184
23	173
26	175
28	177
27	176
138	138
22	186
22	186
21	186
21	186
21	186
22	186
22	187
22	181
23	182
23	182
21	180
22	161
26	164
27	165
26	165
25	164
26	165
26	168
28	170

data 5

x2	x3	x2	x3
41	171	47	174
41	168	47	174
42	169	47	173
46	161	46	173
47	162	138	138
46	161	54	193
47	154	53	184
40	163	51	182
38	162	50	174
38	162	51	175
39	163	54	178
138	138	58	173
35	173	54	183
36	166	55	184
37	166	55	184
40	157	54	183
40	157	138	138
40	157	56	195
39	154	57	188
5	159	55	186
34	157	55	179
33	157	56	180
34	157	58	182
138	138	61	177
38	176	58	187
39	168	60	189
38	168	60	189
40	158	60	189
41	159	138	138
41	159	53	199
42	156	54	193
37	164	54	192
37	163	55	181
36	163	55	182
36	162	57	183
138	138	60	179
46	185	60	189
46	176	62	191
44	175	63	192
44	168	62	191
44	168	138	138
46	170	56	202

data 6

x2	x3	x2	x3
-11	109	17	217
-12	119	15	214
-10	121	11	211
-12	129	10	210
-12	128	138	138
-13	128	13	190
-17	131	9	195
-19	141	6	194
-20	140	5	202
-21	138	11	208
-21	138	20	218
138	138	25	234
-17	104	20	226
-17	108	15	220
-17	104	9	214
-17	107	6	212
-20	116	138	138
-25	135	14	200
-23	140	12	209
-27	146	12	209
-26	148	9	218
-26	147	9	218
-28	146	10	220
138	138	8	229
-14	138	14	211
-18	134	11	208
-25	135	7	204
-25	138	4	200
-22	148	138	138
-13	165	3	199
-5	172	6	202
-5	183	3	213
-4	185	0	210
-5	184	-8	212
-6	182	-12	208
138	138	-14	206
2	165	-4	197
-3	160	-1	200
-11	167	-2	199
-9	168	-6	195
-4	185	138	138
10	198	-4	174

data 7

x2	x3	x2	x3
32	169	16	155
37	153	16	155
37	153	21	160
37	157	27	166
34	163	138	138
30	183	36	164
28	190	39	153
28	182	41	147
27	181	39	154
27	180	36	160
27	180	29	179
138	138	26	179
24	161	27	166
30	145	29	168
31	144	35	174
32	149	41	180
30	156	138	138
23	176	30	159
20	179	34	140
14	168	35	138
13	166	34	142
13	166	28	151
14	168	22	171
138	138	21	174
13	144	33	162
19	135	35	164
22	135	38	168
23	140	42	171
22	149	138	138
16	167	35	163
11	170	39	145
-1	153	41	144
-3	150	41	148
-1	152	38	155
2	156	32	181
138	138	35	185
24	155	38	168
31	144	38	168
34	140	38	167
34	149	37	166
33	157	138	138
25	176	43	144

data 8

x2	x3	x2	x3
-3	124	-12	71
-2	124	-9	73
-1	125	-4	79
-2	124	0	83
-2	124	138	138
5	131	7	75
13	140	4	72
15	141	3	70
12	138	3	71
11	137	6	73
13	139	10	77
138	138	12	80
-12	81	17	88
-12	81	21	92
-12	81	26	97
-12	81	31	102
-12	81	138	138
-7	86	36	116
0	93	33	113
-2	106	31	111
-5	103	31	111
-6	101	32	112
-5	102	35	115
138	138	37	117
-10	37	38	109
-11	41	39	110
-13	48	41	112
-12	45	42	113
-10	37	138	138
-12	45	41	134
-12	54	42	135
-16	67	41	134
-15	59	40	132
-15	59	38	130
-16	67	35	128
138	138	34	126
-13	44	37	117
-13	43	38	118
-13	44	39	119
-13	44	40	120
-13	44	138	138
-12	45	41	133

data 9

x2	x3
5	68
6	77
9	81
11	91
9	97
8	103
7	102
-2	111
-4	110
-6	108
-8	106
138	138
-6	62
-6	66
-9	71
-9	79
-10	80
-12	90
-13	90
-14	100
-11	102
-8	106
-5	109
138	138
-17	78
-19	84
-18	80
-20	85
-20	94
-18	109
-15	112
-17	121
-12	126
-5	133
0	138
138	138
-29	99
-31	108
-30	109
-32	118
-24	126
-15	147

x2	x3
2	154
6	157
11	162
14	165
138	138
0	142
-5	148
-9	144
-15	149
-11	153
-4	172
3	180
9	179
11	181
13	183
16	186
138	138
22	161
20	161
15	162
14	165
13	172
17	182
21	186
27	177
28	178
29	180
31	181
138	138
42	160
37	163
35	164
35	172
34	174
33	185
32	184
38	167
37	166
35	164
33	162
138	138
43	160

data 10

x2	x3
-2	113
0	108
4	118
2	129
-10	141
-20	151
-28	154
-22	121
-24	115
-20	94
-20	87
138	138
-11	109
-10	108
-9	116
-9	127
-16	136
-27	146
-31	142
-23	112
-21	101
-22	95
-22	93
138	138
-15	116
-20	112
-19	106
-24	122
-28	137
-25	150
-18	156
-11	148
-11	140
-11	124
-11	117
138	138
2	143
-9	134
-17	137
-16	146
-11	163
-1	181

x2	x3
26	185
23	174
18	154
14	142
138	138
26	179
12	173
3	176
8	188
19	202
31	213
46	221
49	223
45	207
39	189
34	172
138	138
42	204
33	200
20	205
26	212
36	224
40	225
49	224
47	223
45	214
43	196
40	181
138	138
48	212
42	219
29	215
27	220
35	230
36	220
39	213
34	210
35	204
37	190
36	177
138	138
40	220

data 11

x2	x3	x2	x3
-2	113	12	109
1	108	10	107
2	108	8	105
4	102	6	103
4	102	138	138
6	104	30	156
7	98	33	151
11	95	31	148
10	94	26	141
10	94	26	140
12	96	30	144
138	138	37	139
-16	99	38	143
-14	98	37	142
-10	103	34	139
-4	100	31	137
-3	101	138	138
-4	100	42	171
-4	89	47	172
-6	85	46	171
-8	84	43	160
-9	83	41	157
-9	83	43	160
138	138	48	153
-20	96	44	152
-18	94	43	151
-14	99	39	147
-5	99	35	143
-2	102	138	138
-4	100	40	169
-5	87	42	167
-18	76	42	167
-20	74	42	158
-22	72	41	157
-23	71	41	157
138	138	44	149
0	123	41	149
0	115	39	147
0	115	35	143
4	111	30	138
7	113	138	138
9	116	33	147

data 12

x2	x3	x2	x3
-8	146	61	166
-3	150	62	166
3	153	62	167
8	157	62	167
13	154	138	138
14	155	71	188
14	156	73	187
14	141	75	188
14	141	75	188
14	141	76	178
14	140	75	177
138	138	74	176
-6	148	73	175
-1	148	72	174
3	153	70	172
9	150	69	171
12	153	138	138
15	145	71	178
16	145	71	179
18	144	73	173
19	145	74	174
21	147	76	168
23	149	76	168
138	138	76	168
27	169	78	170
29	168	77	169
32	171	74	167
36	163	72	164
37	164	138	138
36	163	62	169
38	157	62	162
40	158	62	163
41	160	65	157
44	162	67	159
45	163	68	160
138	138	71	155
59	191	71	163
62	186	70	162
63	188	67	159
65	181	65	157
64	180	138	138
62	179	65	157

data 13

x2	x3
3	280
5	282
7	283
7	284
7	284
8	285
9	286
15	265
16	258
20	242
19	238
138	138
3	280
6	283
8	285
9	286
9	286
8	285
8	284
14	264
15	258
20	242
20	239
138	138
11	286
14	288
16	290
16	290
15	289
14	288
12	287
16	267
18	261
23	246
25	244
138	138
22	296
23	297
24	298
24	298
22	296
20	294

x2	x3
21	272
24	267
30	252
31	250
138	138
33	301
33	301
33	301
31	299
29	297
27	295
27	295
28	278
31	274
37	259
39	258
138	138
35	303
35	303
34	302
32	300
29	297
29	297
29	297
33	283
36	278
42	265
44	263
138	138
35	303
35	303
33	301
30	298
28	296
29	297
30	299
35	286
39	281
45	267
46	265
138	138
42	275

data 14

x2	x3
-17	102
-18	100
-16	103
-14	105
-13	105
-13	106
-12	106
-31	134
-31	135
-29	136
-28	137
138	138
-16	103
-20	99
-20	94
-19	90
-19	90
-20	94
-21	98
-38	110
-42	125
-42	135
-40	137
138	138
-8	118
-12	114
-14	112
-15	111
-15	111
-15	111
-13	113
-37	156
-35	157
-33	160
-31	162
138	138
14	140
13	140
14	141
15	142
16	142
17	143

x2	x3
-5	191
-5	191
-4	191
-4	191
138	138
34	161
36	164
40	168
42	169
41	169
41	168
41	168
20	215
19	214
16	212
15	211
138	138
42	169
46	174
51	179
52	179
48	176
45	173
44	172
18	211
16	208
14	206
11	204
138	138
40	168
46	173
51	179
52	180
48	175
44	172
42	169
16	208
14	206
11	204
10	202
138	138
34	163

data 15

x2	x3	x2	x3
17	86	18	169
11	94	23	166
17	100	30	158
26	120	36	151
30	131	138	138
21	136	34	223
11	125	37	220
5	123	38	213
8	113	35	210
13	103	35	205
18	100	39	204
138	138	42	207
-2	105	35	194
-3	104	37	188
-3	112	39	175
2	119	40	168
4	124	138	138
0	128	41	243
-3	124	42	239
-11	126	40	224
-5	112	37	220
-1	113	38	213
6	100	37	207
138	138	36	201
-12	117	39	198
-12	125	36	187
-12	128	29	165
-12	128	24	151
-12	128	138	138
-5	135	36	244
-1	142	39	241
-4	146	36	225
0	141	32	216
5	131	31	206
9	123	32	195
138	138	28	191
-3	163	33	186
0	166	28	178
-3	158	22	152
-9	150	14	141
-12	150	138	138
-6	148	46	163

data 16

x2	x3	x2	x3
33	101	18	87
33	101	15	84
36	96	15	84
34	88	18	87
36	84	138	138
38	78	5	85
39	78	5	85
36	96	9	78
33	93	11	80
29	90	17	76
27	87	21	80
138	138	24	83
31	103	25	105
31	99	24	104
33	93	25	105
32	85	27	107
32	80	138	138
31	79	11	91
33	72	11	91
29	89	14	91
24	84	17	86
21	81	21	88
20	80	27	86
138	138	30	90
27	99	33	113
27	99	32	112
30	91	33	113
29	90	33	113
30	77	138	138
27	75	17	109
26	73	21	101
20	88	24	101
15	84	26	94
13	81	27	95
15	83	30	97
138	138	34	93
14	93	33	113
15	87	33	113
17	86	32	112
19	80	31	111
20	79	138	138
21	80	32	103

data 17

x2	x3	x2	x3
21	46	20	42
21	46	20	42
21	47	20	42
21	47	20	42
21	47	138	138
21	47	21	63
21	47	19	61
17	39	17	60
17	40	17	60
17	40	19	61
18	40	20	62
138	138	21	64
18	45	23	46
18	45	23	46
18	45	24	46
18	45	24	46
17	44	138	138
17	43	22	78
17	43	20	77
14	36	19	76
14	36	19	76
15	37	20	77
15	37	20	77
138	138	21	78
17	44	27	49
16	43	27	49
16	42	27	49
15	42	27	49
15	42	138	138
15	42	23	80
16	42	23	79
16	38	22	79
16	38	22	78
16	39	22	78
16	39	21	78
138	138	21	78
15	58	29	52
14	56	29	52
12	54	30	52
12	54	30	52
13	55	138	138
14	56	28	62

data 18

x2	x3	x2	x3
24	26	31	20
23	26	30	30
22	21	29	45
21	22	28	52
20	21	138	138
21	21	28	50
20	22	26	48
24	26	27	49
22	35	30	46
19	43	30	52
16	53	30	54
138	138	32	45
23	20	34	45
22	18	33	55
23	13	32	66
20	18	30	75
21	10	138	138
20	15	30	72
20	15	28	73
25	11	30	69
23	24	30	75
22	35	33	69
20	45	33	69
138	138	30	73
24	21	38	63
24	14	36	69
21	18	32	86
24	10	32	92
24	12	138	138
22	17	32	89
25	11	30	86
25	14	30	89
24	24	32	86
23	39	32	88
22	46	31	90
138	138	30	85
27	30	37	71
26	24	35	80
25	26	32	93
25	26	30	99
27	29	138	138
27	24	40	60

data 19

x2	x3	x2	x3
-20	131	6	166
-29	118	4	163
-34	104	4	164
-34	92	8	168
-30	85	138	138
-29	87	13	163
-26	78	14	164
-29	100	12	162
-30	99	12	163
-30	99	14	165
-29	100	15	178
138	138	19	181
-16	157	17	164
-20	139	13	161
-26	132	11	158
-26	122	11	158
-27	121	138	138
-24	116	22	146
-23	116	22	146
-22	116	22	148
-23	114	19	157
-23	115	21	160
-21	117	22	169
138	138	23	170
-1	174	22	161
-3	173	19	158
-4	169	15	154
-7	166	12	151
-6	153	138	138
-8	150	26	129
-9	150	27	131
-7	153	24	140
-9	151	25	141
-7	153	23	151
-3	157	22	158
138	138	26	155
10	174	24	148
9	173	22	145
6	179	17	141
2	175	14	138
4	169	138	138
4	169	25	115

data 20

x2	x3	x2	x3
2	47	-10	72
3	48	-10	72
4	49	-9	73
7	52	-6	76
10	55	138	138
11	56	-20	73
12	57	-19	75
13	58	-19	75
10	55	-16	78
6	52	-7	87
5	51	2	96
138	138	6	99
-6	52	8	102
-4	53	6	100
-2	56	5	98
2	60	5	98
4	62	138	138
4	62	3	107
3	61	2	106
1	58	0	104
-3	55	3	106
-6	51	10	113
-8	50	15	119
138	138	16	120
-9	58	14	118
-8	60	10	114
-7	60	7	111
-8	59	5	109
-9	58	138	138
-13	55	24	130
-15	52	17	123
-15	52	10	117
-16	51	11	118
-16	52	17	124
-14	53	19	126
138	138	18	124
-20	62	15	121
-19	63	12	118
-22	61	9	116
-21	57	9	115
-19	63	138	138
-17	66	28	118

data 21

x2	x3	x2	x3
-6	121	30	159
-11	131	32	161
-17	134	34	163
-19	122	34	163
-10	94	138	138
-1	80	20	204
5	64	14	210
-2	82	7	203
-1	83	9	194
-2	82	18	179
-4	80	28	154
138	138	29	141
-23	127	29	146
-28	134	31	148
-31	130	32	149
-25	106	31	148
-20	87	138	138
-18	83	30	206
-9	63	24	211
-12	95	17	217
-6	101	14	201
0	108	17	179
3	111	25	152
138	138	28	144
-16	148	30	146
-20	153	29	145
-25	149	26	142
-24	140	22	138
-16	123	138	138
-9	106	19	201
-3	90	13	212
3	118	13	212
8	124	12	197
15	130	11	170
18	134	17	149
138	138	24	138
17	190	29	130
12	199	27	128
7	194	22	123
10	183	18	119
21	174	138	138
30	158	8	150

data 22

x2	x3	x2	x3
43	141	47	161
43	141	52	166
41	145	56	170
44	136	57	172
43	138	138	138
43	135	26	176
43	134	26	176
46	125	27	177
47	127	32	173
49	129	37	178
49	129	40	180
138	138	43	183
40	147	51	176
39	145	57	183
36	149	61	187
38	142	61	187
37	144	138	138
39	134	40	193
40	135	39	193
40	131	37	198
39	131	42	194
40	132	43	199
42	134	45	194
138	138	46	194
29	157	45	186
31	147	48	188
31	147	50	190
30	145	49	189
32	147	138	138
33	151	46	208
35	149	45	207
38	141	44	205
40	143	45	206
43	145	46	201
45	147	45	200
138	138	43	199
23	159	43	183
22	158	42	182
23	154	40	180
26	156	40	180
30	156	138	138
35	161	43	212

data 23

x2	x3	x2	x3
24	183	66	202
26	178	69	205
27	180	66	202
25	185	64	200
27	175	138	138
25	173	52	215
21	172	49	212
33	139	44	206
38	144	45	207
38	144	52	205
38	144	59	212
138	138	61	214
44	216	66	217
41	213	70	220
39	199	66	216
36	199	64	214
37	196	138	138
35	198	44	192
33	195	43	186
43	158	43	186
48	162	45	187
46	161	51	193
46	160	57	199
138	138	60	203
57	233	63	213
55	231	66	217
48	223	63	213
48	223	62	212
50	221	138	138
53	223	41	180
52	223	41	180
59	186	44	182
62	189	46	176
59	187	48	178
58	185	51	179
138	138	53	181
56	239	53	207
55	230	57	211
50	225	54	208
48	218	53	206
53	224	138	138
57	222	51	143

data 24

x2	x3	x2	x3
10	183	13	252
3	176	11	250
-2	171	13	252
1	175	19	258
10	185	138	138
9	191	34	286
4	186	32	284
2	164	32	284
3	165	34	289
-3	159	37	292
-12	150	35	292
138	138	32	289
-3	195	35	277
-4	194	39	281
-6	192	40	282
-8	197	37	280
-4	201	138	138
-5	203	51	297
-7	201	50	296
-9	187	51	297
-10	187	51	304
-11	185	53	307
-14	182	48	304
138	138	43	299
11	231	51	293
14	235	60	301
11	239	62	303
9	237	55	296
6	237	138	138
7	237	46	285
7	237	46	288
8	231	42	284
4	227	38	283
6	230	38	282
12	236	34	279
138	138	31	275
17	260	38	282
16	262	49	293
15	261	53	296
12	264	48	291
11	263	138	138
12	264	48	248

data 25

x2	x3	x2	x3
30	123	30	145
25	130	30	145
22	137	29	145
23	139	29	144
26	140	138	138
28	140	37	154
28	140	31	159
28	143	25	163
26	142	24	165
25	141	27	166
25	141	31	167
138	138	34	164
24	131	35	151
22	138	35	150
19	145	34	150
20	147	33	149
21	149	138	138
23	149	43	160
27	145	36	166
26	142	33	171
26	142	32	173
25	141	33	174
25	141	37	173
138	138	38	174
24	131	41	156
19	138	40	156
16	144	39	155
17	147	38	154
21	148	138	138
24	150	41	165
28	147	38	168
26	142	36	174
26	142	35	176
26	142	37	178
26	142	40	178
138	138	42	177
27	144	44	160
22	149	43	159
18	154	42	158
18	157	41	157
21	159	138	138
25	161	43	144

data 26

x2	x3	x2	x3
-4	184	14	295
-8	180	19	300
-10	185	25	306
-2	195	30	311
0	199	138	138
-6	200	22	300
-5	202	15	296
-7	214	10	298
-4	217	10	301
0	221	12	302
3	224	12	304
138	138	13	305
-6	216	10	308
-11	210	15	313
-15	213	22	320
-10	220	26	324
-8	225	138	138
-9	231	26	291
-4	236	24	289
0	233	21	287
3	236	17	290
7	240	17	293
11	244	19	297
138	138	21	300
5	259	18	320
0	257	21	323
-2	257	25	327
0	267	28	330
4	272	138	138
6	275	24	282
10	281	25	282
7	272	20	285
9	275	17	283
14	280	14	287
16	282	16	293
138	138	20	296
13	287	12	314
9	282	14	317
6	282	18	321
8	287	21	324
9	294	138	138
8	296	25	235

data 27

x2	x3	x2	x3
-4	145	17	166
-3	146	20	169
1	150	18	167
8	157	19	168
16	166	138	138
24	173	1	150
29	178	7	156
34	183	6	155
37	186	3	152
35	184	3	153
35	184	10	159
138	138	17	166
-2	147	22	171
1	150	25	174
6	155	24	173
13	162	25	174
21	170	138	138
28	177	9	158
32	181	12	161
33	182	11	160
35	185	10	159
33	182	14	163
32	181	23	172
138	138	31	180
-1	148	36	185
5	154	39	188
9	158	37	186
13	162	37	186
18	167	138	138
24	173	16	166
28	177	16	165
25	174	15	164
27	176	15	164
25	174	22	171
25	174	32	181
138	138	40	189
-1	148	45	194
5	154	47	196
6	155	45	194
5	154	45	194
5	154	138	138
10	160	25	171

data 28

x2	x3	x2	x3
12	171	4	181
12	172	7	177
14	177	12	166
18	181	12	159
19	193	138	138
18	193	51	215
16	191	41	205
17	180	31	204
19	178	27	200
25	164	23	207
28	159	19	203
138	138	14	199
11	170	13	201
12	172	17	201
15	178	22	186
18	181	21	182
18	193	138	138
20	194	61	226
20	194	57	221
18	193	53	226
24	183	59	232
29	180	65	249
35	166	65	249
138	138	59	244
1	162	47	235
1	162	52	236
1	171	57	221
5	175	56	217
8	185	138	138
12	189	44	208
15	192	41	206
21	198	42	214
25	195	54	227
33	186	68	252
35	182	71	255
138	138	65	250
26	187	68	256
17	179	71	255
8	178	74	238
3	173	71	232
0	177	138	138
-2	175	42	156

data 29

x2	x3	x2	x3
-1	129	9	157
-4	138	12	160
-4	146	16	163
-2	157	18	166
4	169	138	138
7	173	23	140
5	179	24	141
5	167	23	148
3	165	21	158
2	163	20	160
2	163	19	168
138	138	21	169
-3	125	25	164
-5	134	29	169
-5	135	35	174
-2	146	38	177
3	154	138	138
4	167	36	141
5	168	36	153
5	164	35	160
3	162	32	169
2	160	30	170
1	160	32	172
138	138	33	181
1	120	40	179
-1	127	44	183
-3	137	48	187
-2	146	49	189
2	153	138	138
3	166	44	149
4	167	43	160
5	155	42	167
4	155	39	175
5	155	37	174
5	156	39	179
138	138	43	183
9	128	46	183
8	135	49	186
7	146	52	189
8	147	52	189
7	155	138	138
8	160	46	151

data 30

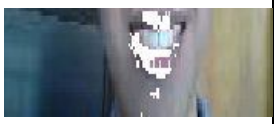
x2	x3	x2	x3
33	103	3	131
29	99	2	131
20	99	2	131
17	89	2	131
11	95	138	138
10	92	26	164
8	90	20	159
5	89	15	155
3	87	13	153
1	85	14	155
0	84	13	153
138	138	10	150
21	102	9	149
16	109	9	149
15	100	8	149
9	103	8	148
8	100	138	138
4	105	32	181
3	103	27	178
0	92	22	172
-1	91	19	179
-2	90	18	178
-3	90	16	175
138	138	13	174
15	116	10	169
11	115	9	169
8	110	8	168
4	117	7	167
3	117	138	138
4	112	35	188
3	110	31	182
0	107	24	187
0	107	24	184
-1	106	23	186
-1	106	19	182
138	138	14	178
17	136	12	175
12	137	11	174
7	131	10	173
5	129	8	172
6	135	138	138
5	134	35	151

Rangkuman hasil lips detection

data ke-n	x2 min	x2max	x3min	x3max
1	3	48	130	245
2	-10	39	106	211
3	-5	53	46	147
4	-20	30	102	187
5	33	63	154	208
6	-28	25	104	234
7	-3	43	135	190
8	-13	46	37	140
9	-31	42	62	186
10	-31	49	87	230
11	-23	48	72	172
12	-8	78	134	191
13	3	54	238	303
14	-42	51	90	215
15	-11	47	86	244
16	5	39	68	113
17	12	31	36	78
18	16	40	11	99
19	-34	26	78	181
20	-22	28	47	130
21	-31	32	63	217
22	22	61	125	212
23	21	70	139	239
24	-11	62	150	307
25	16	47	123	178
26	-15	30	180	330
27	-4	50	145	196
28	-2	74	153	256
29	-5	52	120	189
30	-2	35	85	188
rata2	-7.33333	46.43333	103.5333	200.5333
batas akhir	-25	50	90	200

SMILE DETECTION

Beberapa data yang telah dimbil :

Foto asli	Lips detection	Pic crop	Hasil	Ket
			biasa	✓
			senyum	✓
			cemberut	✓
			biasa	✓

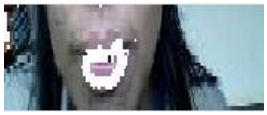
			senyum	✓
			cemberut	✓
			senyum	✓
			biasa	✓

			cemberut	✓
			biasa	✓
			senyum	✓
			cemberut	✓

			biasa	✓
			senyum	✓
			cemberut	✓
			biasa	✓

			senyum	✓
			cemberut	✓
			biasa	✓
			senyum	✓

			cemberut	✓
			senyum	✖
			senyum	✓
			cemberut	✓

			senyum	✘
			senyum	✓
			cemberut	✓
			biasa	✓

			biasa	✖
			cemberut	✓