LAMPIRAN A
Listing Program

Program pada Microsoft Visual Basic 6.0
LISTING PROGRAM PADA VISUAL BASIC 6.0

Dim q, ph As String
Dim z As Boolean
Private Declare Function GetPixel Lib "GDI32" (ByVal hdc As Long, ByVal x As Long, ByVal y As Long) As Long
Private Declare Function SetPixel Lib "GDI32" (ByVal hdc As Long, ByVal x As Long, ByVal y As Long, ByVal crColor As Long) As Long

Option Explicit

Private Sub Command2_Click()
Dim i As Integer, j As Integer
    Dim R As Integer, G As Integer, B As Integer
    Dim R2 As Integer, G2 As Integer, B2 As Integer
    Dim c As Long, c2 As Long
    Dim t As Integer

    t = 55
    Picture2.Cls
    Picture2.DrawWidth = 1

    For i = 0 To Picture1.ScaleWidth
        For j = 0 To Picture1.ScaleHeight
            c = GetPixel(Picture1.hdc, i, j)
            R = c Mod 256
            G = (c \\ 256) Mod 256
            B = (c \\ 256 \\ 256) Mod 256
            c2 = Picture4.BackColor
        Next j
    Next i

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R2 = c2 Mod 256  
G2 = (c2 \ 256) Mod 256  
B2 = (c2 \ 256 \ 256) Mod 256

If Abs(R - R2) < t And Abs(G - G2) < t And Abs(B - B2) < t Then

    SetPixel Picture2.hdc, i, j, vbWhite

Else

    SetPixel Picture2.hdc, i, j, vbBlack

End If

Next j
Next i
End Sub

Private Sub command5_click()
Dim R As Integer
    Dim G As Integer
    Dim B As Integer
    Dim warna As String
    Dim warna2 As String
    Dim R2 As Integer
    Dim G2 As Integer
    Dim B2 As Integer
    Dim mse As Long
    mse = 0
    Dim i, j As Integer
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For i = 0 To Picture3.ScaleWidth
    For j = 0 To Picture3.ScaleHeight
        warna = GetPixel(Picture3.hdc, i, j)
        R = warna Mod 256
        G = (warna \ 256) Mod 256
        B = (warna \ 256 \ 256) Mod 256
        warna = (R + G + B) / 3
        warna2 = GetPixel(Picture5.hdc, i, j)
        R2 = warna2 Mod 256
        G2 = (warna2 \ 256) Mod 256
        B2 = (warna2 \ 256 \ 256) Mod 256
        warna2 = (R2 + G2 + B2) / 3
        mse = mse + (warna - warna2) ^ 2
    Next j
    Next i
    MsgBox mse
    mse = mse / (Picture3.ScaleWidth * Picture3.ScaleHeight)
    Text3.Text = mse
End Sub

Private Sub Command7_Click()
    CommonDialog3.ShowSave
    ph = CommonDialog3.FileName
    If Len(ph) > 0 Then
        SavePicture Picture3.Image, ph
    End If
End Sub

Private Sub Picture1_MouseDown(Button As Integer, Shift As Integer, x As Single, y As Single)
    z = True
    If z Then
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Picture4.BackColor = Picture1.Point(x, y)
End If
End Sub

Private Sub Picture1_MouseUp(Button As Integer, Shift As Integer, x As Single, y As Single)
  z = False
End Sub

Private Sub Command1_Click()
  LoadPic Picture1
  q = CommonDialog1.FileName
  Arrange
End Sub
Sub LoadPic(BackgroundPic As Control)

  On Error GoTo err:
  With CommonDialog1
    .DialogTitle = "Select a picture"
    .Filter = "*.::*|*.::*"
    .ShowOpen
  End With

  BackgroundPic.Picture = LoadPicture(CommonDialog1.FileName)

  Exit Sub
err:
  MsgBox "an error occured while loading " & CommonDialog1.FileName
End Sub
Private Sub Command3_Click()
  If Option1 = True Then
Call with_database
End If
If Option2 = True Then
Call without_database
End If
End Sub

Private Sub with_database()
Dim i As Integer, j As Integer
Dim c As Long, c2 As Long
Dim R As Long, G As Long, B As Long
Dim R2 As Integer, G2 As Integer, B2 As Integer
Dim color As Long
Picture3.AutoRedraw = True
Picture3.Cls
Picture3.DrawWidth = 1

For i = 0 To Picture1.ScaleWidth
    For j = 0 To Picture1.ScaleHeight
        'c = GetPixel(Picture1.hdc, i, j)
        'R = c Mod 256
        'G = (c \ 256) Mod 256
        'B = (c \ 256 \ 256) Mod 256
        If GetPixel(Picture2.hdc, i, j) = vbWhite Then
            'If (i - 1 > 0) Then
            'If (j - 1 > 0) Then
            R = 0
        R = R + (GetPixel(Picture5.hdc, i - 1, j - 1) Mod 256)
        R = R + (GetPixel(Picture5.hdc, i, j - 1) Mod 256)
        R = R + (GetPixel(Picture5.hdc, i + 1, j - 1) Mod 256)
        R = R + (GetPixel(Picture5.hdc, i - 1, j) Mod 256)
        R = R + (GetPixel(Picture1.hdc, i, j) Mod 256)
    Next j
Next i
\[ R = R + (\text{GetPixel(Picture5.hdc}, \ i + 1, \ j) \ \text{Mod} \ 256) \]
\[ R = R + (\text{GetPixel(Picture5.hdc}, \ i - 1, \ j + 1) \ \text{Mod} \ 256) \]
\[ R = R + (\text{GetPixel(Picture5.hdc}, \ i, \ j + 1) \ \text{Mod} \ 256) \]
\[ R = R + (\text{GetPixel(Picture5.hdc}, \ i + 1, \ j + 1) \ \text{Mod} \ 256) \]
\[ R = \text{Abs}(R / 9) \]

\[ G = 0 \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i - 1, \ j - 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i, \ j - 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i + 1, \ j - 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i - 1, \ j) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i + 1, \ j) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i - 1, \ j + 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = G + ((\text{GetPixel(Picture5.hdc}, \ i + 1, \ j + 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ G = \text{Abs}(G / 9) \]

\[ B = 0 \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i - 1, \ j - 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i, \ j - 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i + 1, \ j - 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i - 1, \ j) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i + 1, \ j) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i - 1, \ j + 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = B + ((\text{GetPixel(Picture5.hdc}, \ i + 1, \ j + 1) \ \text{Mod} \ 256) \ \text{Mod} \ 256) \]
\[ B = \text{Abs}(B / 9) \]

SetPixel Picture3.hdc, i, j, RGB(R, G, B)
SetPixel Picture2.hdc, i, j, vbBlack
Private Sub without_database()
    Dim i, j, k, l, sb, tb, sr, tr, sg, tg As Integer
    Dim c, c2 As Long
    Dim R2 As Integer, G2 As Integer, B2 As Integer
    Dim R As Long, G As Long, B As Long
    Dim color As Long
    List1.Clear
    Picture3.AutoRedraw = True
    Picture3.Cls
    Picture3.DrawWidth = 1

    For i = 0 To Picture2.ScaleWidth
        For j = 0 To Picture2.ScaleHeight
            If GetPixel(Picture2.hdc, i, j) = vbWhite Then
                R = 0
                tr = 0
                G = 0
                tg = 0
                B = 0
                tb = 0
                For k = i - 10 To i
                    SetPixel Picture3.hdc, i, j, GetPixel(Picture1.hdc, i, j)
                Next j
                Next i
            End If
        Next j
    Next i
End Sub
For \( l = j - 10 \) To \( j \)

\[ sr = (\text{GetPixel(Picture1.hdc, } k, l) \mod 256) \]

If \( sr > 55 \) Then

\[ R = R + sr \]
\[ tr = tr + 1 \]

End If

\[ sg = ((\text{GetPixel(Picture1.hdc, } k, l) \mod 256) \div 256) \mod 256 \]

If \( sg > 55 \) Then

\[ G = G + sg \]
\[ tg = tg + 1 \]

End If

\[ sb = ((\text{GetPixel(Picture1.hdc, } k, l) \div 256 \div 256) \mod 256) \]

If \( sb > 55 \) Then

\[ B = B + sb \]
\[ tb = tb + 1 \]

End If

Next \( l \)

Next \( k \)

If \( tr > 0 \) Then \( R = \text{Int}(R / tr) \)

'If \( R < 40 \) Then \( R = R + 55 \)

If \( tg > 0 \) Then \( G = \text{Int}(G / tg) \)

'If \( G < 40 \) Then \( G = G + 55 \)

If \( tb > 0 \) Then \( B = \text{Int}(B / tb) \)

'If \( B < 40 \) Then \( B = B + 55 \)

'SetPixel Picture3.hdc, \( i - 1, j - 1, \) RGB(R, G, B) ' GetPixel(Picture2.hdc, \( i, j \))

'SetPixel Picture3.hdc, \( i, j - 1, \) RGB(R, G, B)

'SetPixel Picture3.hdc, \( i + 1, j - 1, \) RGB(R, G, B)

'SetPixel Picture3.hdc, \( i - 1, j, \) RGB(R, G, B)
Private Sub Command4_Click()
LoadPic2 Picture5
q = CommonDialog1.FileName
Arrange
End Sub

Sub LoadPic2(BackgroundPic As Control)

On Error GoTo err:
With CommonDialog2
.DialogTitle = "Select a picture as database"
.Filter = ".*|*.*
.ShowOpen
End With

BackgroundPic.Picture = LoadPicture(CommonDialog2.FileName)

Exit Sub
err:
MsgBox "an error occured while loading " & CommonDialog2.FileName
End Sub

Sub Arrange()
Picutre1.Move Picture5.Left + Picture5.Width + 20, Picture5.Top,
Picutre5.Width, Picture5.Height
Picture2.Move Picture1.Left + Picture1.Width + 20, Picture1.Top,
Picutre1.Width, Picture1.Height
Picture3.Move Picture2.Left + Picture2.Width + 20, Picture2.Top,
Picutre1.Width, Picture1.Height
End Sub

Private Sub Command6_Click()
End
End Sub