

LAMPIRAN A

Program template matching

Dim h1(3, 3), h2(3, 3), n1, n2, pro(10) As Single

Dim x(94, 94), y(94, 94), tem1(94, 94, 7) As Integer

Sub proim(gam As Single)

n1 = 0: th = 16

For i = 1 To Picture1(gam).ScaleWidth

 'n1= lbr n2 = pjg

 n1 = n1 + 1

 n2 = 0

 For j = 1 To Picture1(gam).ScaleHeight

 warna = Picture1(gam).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)

 'Jadi grayscale

 n2 = n2 + 1

 x(n1, n2) = 0.299 * r + 0.587 * g + 0.144 * b

 Picture1(gam).PSet (i, j), RGB(x(n1, n2), x(n1, n2), x(n1, n2))

 Next j

Next i

'deteksi tepi dengan filter sobel

For i = 1 To n1

 For j = 1 To n2

 z1 = 0

 z2 = 0

 For u1 = -1 To 1

 For u2 = -1 To 1

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        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) + Abs(z2))
If z > 255 Then z = 255
y(i, j) = z
'binerin supaya keliatan jelas bentuknya
If y(i, j) <= 128 Then y(i, j) = 0 Else y(i, j) = 255
Picture1(gam).PSet (i - 1, j - 1), RGB(y(i, j), y(i, j), y(i, j))
Next j
Next i
End Sub

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Private Sub Command1_Click()
Dim s As Integer

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For jengam = 0 To 7
    If pro(jengam) = 0 Then
        proim (jengam)
        For i = 1 To 94
            For j = 1 To 94
                tem1(i, j, jengam) = y(i, j)
            Next j
        Next i
        pro(jengam) = 1
    End If
Next jengam

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' template matching
lab = 0: s = 0: tem = 0

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For gbr = 4 To 7
    For template = 0 To 3
        For i = 1 To n1 - 1
            For j = 1 To n2 - 1
                tem = tem + Abs(tem1(i, j, gbr) - tem1(i, j, template))
            Next j
        Next i
        s = (1 - (tem / (255 * n1 * n2))) * 100
        Label1(lab).Caption = s
        lab = lab + 1: tem = 0
    Next template
Next gbr
End Sub

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Private Sub Command2_Click()
    Dim buka
    CommonDialog1.Filter = "*.*)"
    CommonDialog1.ShowOpen
    buka = CommonDialog1.FileName
    If Option1.Value Then
        Picture1(4).Picture = LoadPicture(buka)
        pro(4) = 0
    ElseIf Option2.Value Then
        Picture1(5).Picture = LoadPicture(buka)
        pro(5) = 0
    ElseIf Option3.Value Then
        pro(6) = 0
        Picture1(6).Picture = LoadPicture(buka)
    ElseIf Option4.Value Then
        Picture1(7).Picture = LoadPicture(buka)
        pro(7) = 0
    End If

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End Sub

Private Sub Command3_Click()

Unload Me

End Sub

Private Sub Form_Load()

For i = 0 To 7

 Picture1(i).ScaleMode = 3

 Picture1(i).ScaleHeight = 93

 Picture1(i).ScaleWidth = 93

Next i

Option1.Value = True

h1(1, 1) = -1: h1(1, 2) = 0: h1(1, 3) = 1

h1(2, 1) = -2: h1(2, 2) = 0: h1(2, 3) = 2

h1(3, 1) = -1: h1(3, 2) = 0: h1(3, 3) = 1

For i = 1 To 3

 For j = 1 To 3

 h2(i, j) = h1(j, i)

 Next j

Next i

For i = 1 To 10

 pro(i) = 0

Next i

End Sub