

LAMPIRAN A
LISTING PROGRAM

1. Listing Program Utama

```
Private Declare Function
SendMessage Lib "user32"
Alias "SendMessageA"
(ByVal hWnd As Long,
ByVal wParam As Long, ByVal
lParam As Long, ByVal
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 Declare Sub Sleep
Lib "kernel32" (ByVal
dwMilliseconds 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 i As Integer, j As
Integer, awal As Integer
Dim a As Long
Dim b As Long
Dim zz As Integer
Dim v As Double, tinggi
As Double, lebar As
Double
Dim inten As Integer
Dim Tppx As Single, Tppy
As Single
Dim i1 As Integer, i2 As
Integer, i3 As Integer,
i4 As Integer
Dim j1 As Integer, j2 As
Integer, j3 As Integer,
j4 As Integer
Dim Ra As Integer, Ga As
Integer, Ba As Integer,
Cba As Integer, Cra As
Integer
Dim Rb As Integer, Gb As
Integer, Bb As Integer,

Cbb As Integer, Crb As
Integer
Dim c As Long
Dim D1 As Integer, D2 As
Integer, D3 As Integer,
D4 As Integer, E As
Integer, F As Integer
Dim X As Long, Y As Long
Dim x1 As Double, y1 As
Double
Dim x2 As Long, y2 As
Long
Dim wkta
Option Explicit

Private Declare Function
SetCursorPos Lib "user32"
(ByVal m As Long, ByVal n
As Long) As Long

Private m_Mouse As
CMouseEvent

Private Declare Function
SetWindowPos Lib "user32"
(ByVal hWnd As Long,
ByVal hWndInsertAfter As
Long, ByVal X As Long,
ByVal Y As Long, ByVal cx
As Long, ByVal cy As
```

```

Long, ByVal wFlags As
Long) As Long

Private Const
HWND_TOPMOST = -1 'bring
to top and stay there
Private Const
HWND_NOTOPMOST = -2 'put
the window into a normal
position

Private Const SWP_NOMOVE
= &H2 'don't move window
Private Const SWP_NOSIZE
= &H1 'don't size window

Private Declare Function
GetForegroundWindow Lib
"user32" () As Long

Private Sub Form_Load()

'satuan dalam gambar
adalah twips
Picture1.Width = 320 *
Screen.TwipsPerPixelX

Picture1.Height = 240 *
Screen.TwipsPerPixelY

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'intensitas scanning
layar
inten = 5

Tppx =
Screen.TwipsPerPixelX
Tppy =
Screen.TwipsPerPixelY
Text9.BackColor =
&HFFFFFF
awal = 1
Cba = 0
Cra = 0
Cbb = 0
Crb = 0
i1 = 0
i2 = 0
i3 = 0
i4 = 0
j1 = 0
j2 = 0
j3 = 0
j4 = 0
v = 1
Set m_Mouse = New
CMouseEvent

STARTCAM
End Sub

```

```

Private Sub
Form_MouseUp(Button As
Integer, Shift As
Integer, X As Single, Y
As Single)
If Button = 2 Then
PopupMenu test
End Sub

Private Sub
Picture1_Click()

End Sub

Private Sub
Text10_Change()

End Sub

Private Sub
Timer1_Timer()
SendMessage mCapHwnd,
GET_FRAME, 0, 0
SendMessage mCapHwnd,
COPY, 0, 0
Picture1.Picture =
Clipboard.GetData
Clipboard.Clear
awal = 1
i1 = 0

```

```

i2 = 0
j1 = 0
j2 = 0

For j = 1 To 240 / (inten
- 1)
    For i = 1 To 320
/ (inten - 1)
        a =
Picture1.Point(i * inten
* Tppx, j * inten * Tppy)
        Ra = a Mod 256
        Ga = (a \ 256)
Mod 256
        Ba = (a \ 256 \
256) Mod 256
        If Ra > 255 Then
Ra = 255
        If Ga > 255 Then
Ga = 255
        If Ba > 255 Then
Ba = 255
        Cba = 128 -
(0.168736 * Ra) -
(0.331264 * Ga) + (0.5 *
Ba)
        Cra = 128 + (0.5
* Ra) - (0.418688 * Ga) -
(0.081312 * Ba)

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        b =
Picture1.Point((i + 1) *
inten * Tppx, j * inten *
Tppy)
        Rb = b Mod 256
        Gb = (b \ 256)
Mod 256
        Bb = (b \ 256 \
256) Mod 256
        If Rb > 255 Then
Rb = 255
        If Gb > 255 Then
Gb = 255
        If Bb > 255 Then
Bb = 255
        Cbb = 128 -
(0.168736 * Rb) -
(0.331264 * Gb) + (0.5 *
Bb)
        Crb = 128 + (0.5
* Rb) - (0.418688 * Gb) -
(0.081312 * Bb)
        D1 = 0
        D2 = 5
        D3 = 0
        D4 = 5
        'mengupdate nilai
il sebagai titik awal x

```

```

jari dan nilai j1 sebagai
titik awal y jari
        'jika nilai di
titik a dan titik b
memenuhi syarat warna
kulit manusia
        If Cba > (75) And
Cba < (121 + D1) And Cra
> (129) And Cra < (201 +
D2) And Cbb > (75) And
Cbb < (121 + D3) And Crb
> (129) And Crb < (201 +
D4) Then
        'fungsi penentu
agar nilai i1 dan j1
diisi
        If (i1 < i And
i1 = 0 Or i1 > i) Then i1
= i
        If (j1 < j And
j1 = 0) Then j1 = j
        Else
        'penentu lebar
jari
        '(Ba < 130 And
Ga < 115 And Ba > 30 And
Ga > 30) And
        If Cba > 75 And
Cba < 121 + D1 And Cra >

```

```

129 And Cra < 201 + D2
And Not (Cbb > 75 And Cbb
< 121 + D3 And Crb > 129
And Crb < 201 + D4) Then
    If i2
= 0 And i - i1 > 2 And i
- i1 < 10 Then i2 = i
        If i2
> 0 And i - i1 > 10 And
j2 = 0 Then j2 = j - 1
            End If
        End If

    'nilai disimpan
ke i3,i4 ,j3,dan j4
    If i1 > 0 Then
i3 = i1
        If i2 > 0 Then
i4 = i2
            If j1 > 0 Then
j3 = j1
                If j2 > 0 Then
j4 = j2
                    If i4 > i3 Then
lebar = Abs(i4 - i3)

                        tinggi = Abs(j4
- j3) + 1
                            If tinggi = 0
Then tinggi = v

```

```

'x1 dan y1
dalam satuan pixel
    x1 = (i3 *
(inten) + ((lebar / 2) *
(inten)))
    y1 = j3 *
(inten)

'untuk set
piksel yang terdeteksi
berwarna merah
    Picture1.PSet
(x1 * Tppx, y1 * Tppy),
RGB(255, 0, 0)

Text1.Text = x1
Text2.Text = y1
Text3.Text = i3
Text4.Text = i4
Text5.Text = j3
Text6.Text = j4
Text7.Text = lebar
Text8.Text = tinggi

    If awal = 1
Then m_Mouse.MoveTo 1024
- (x1 * 3.2), (y1 * 3.2)
        awal = 0
    Else

```

```

    If Abs(x2 -
x1) >= 60 Or Abs(y2 - y1)
>= 60 Then
        If (x2
- x1) <> 0 Then c = (x2 -
x1) Else c = 1
            If c =
0 Then c = 1
                If x2 >
x1 Then
                    For X
= x1 To x2
                        Y =
((X - x1) * (y2 - y1) /
c) + y1

m_Mouse.MoveTo 1024 - (X
* 3.2), Y * 3.2
                    Next
X
                Else
                    For X
= x2 To x1
                        Y =
((X - x1) * (y2 - y1) /
c) + y1

m_Mouse.MoveTo 1024 - (X
* 3.2), Y * 3.2

```

```

                Next
X
                End If
            End If
        End If
        x2 = x1
        y2 = y1

        Text10.Text = " v : "
+ Str(v) + " wkta : " +
Format(wkta, "long time")
+ " Time : " +
Format(Time - wkta, "ss")

        If tinggi / v < 0.6
And tinggi / v > 0.33
Then
            m_Mouse.Click

Text9.BackColor =
&HFF0000

            wkta = Time
            Text9.Refresh
            zz =
Format(Time - wkta, "ss")
            While Val(zz)
< 1

                zz =
Format(Time - wkta, "ss")
            Wend

```

```

Text9.BackColor =
&HFFFFFF
            Text9.Refresh
        End If

            If tinggi / v <
0.33 And v > 0 Then

m_Mouse.RightClick

Text9.BackColor = &H80FF&
            wkta = Time
            Text9.Refresh
            zz =
Format(Time - wkta, "ss")
            While Val(zz)
< 1

                zz =
Format(Time - wkta, "ss")
            Wend

Text9.BackColor =
&HFFFFFF
            Text9.Refresh
        End If

            If tinggi <= 0 Then v
= 1 Else v = tinggi

```

```

                Next i
Next j

End Sub

Sub STARTCAM()
mCapHwnd =
capCreateCaptureWindow("W
ebcamCapture", 0, 0, 0,
320, 240, Me.hWnd, 0)
DoEvents
SendMessage mCapHwnd,
CONNECT, 0, 0
Timer1.Enabled = True
End Sub

Private Sub
Timer2_Timer()
'If the window on top is
not this window...
If Me.hWnd <>
GetForegroundWindow Then
'Make this form be on top
Call
SetWindowPos(GetForegroun
dWindow, HWND_NOTOPMOST,
0, 0, 0, 0, SWP_NOMOVE Or
SWP_NOSIZE)

```

```

'Make the window on top
below this form
Call SetWindowPos(hWnd,
HWND_TOPMOST, 0, 0, 0, 0,
SWP_NOMOVE Or SWP_NOSIZE)
End If
End Sub

```

2. Listing Program Class Module

```
Option Explicit
```

```

Private Declare Function
    GetSystemMetrics Lib
    "user32" (ByVal nIndex As
    Long) As Long
Private Declare Sub mouse_event
    Lib "user32" (ByVal
    dwFlags As Long, ByVal dx
    As Long, ByVal dy As
    Long, ByVal dwData As
    Long, ByVal dwExtraInfo
    As Long)
Private Declare Sub Sleep Lib
    "kernel32" (ByVal
    dwMilliseconds As Long)

' Flags used with mouse_event
Private Const
    MOUSEEVENTF_ABSOLUTE = &H8000&

```

```

Private Const
    MOUSEEVENTF_LEFTDOWN = &H2
Private Const
    MOUSEEVENTF_LEFTUP = &H4
Private Const
    MOUSEEVENTF_MIDDLEDOWN = &H20
Private Const
    MOUSEEVENTF_MIDDLEUP = &H40
Private Const MOUSEEVENTF_MOVE
    = &H1
Private Const
    MOUSEEVENTF_RIGHTDOWN = &H8
Private Const
    MOUSEEVENTF_RIGHTUP = &H10
Private Const MOUSEEVENTF_WHEEL
    = &H800

' GetSystemMetrics() codes
Private Const SM_CXSCREEN = 0
Private Const SM_CYSCREEN = 1

' A few module level
variables...
Private m_ScreenWidth As Long
Private m_ScreenHeight As Long
Private m_ClickDelay As Long

' Virtual scaling applied to
screen...
Private Const m_Scale As Long =
    &HFFFF&

Private Sub Class_Initialize()
    ' Store screen dimensions in
    pixels

```

```

    m_ScreenWidth =
    GetSystemMetrics(SM_CXSCREEN)
    m_ScreenHeight =
    GetSystemMetrics(SM_CYSCREEN)
    ' Default duration for
    mousedown
    m_ClickDelay = 200
    'milliseconds
End Sub

```

```

Public Property Let
    ClickDelay(ByVal NewVal As
    Long)
    If NewVal >= 0 Then
    m_ClickDelay = NewVal
    End Property

```

```

Public Property Get
    ClickDelay() As Long
    ClickDelay = m_ClickDelay
End Property

```

```

Public Sub ButtonPress(ByVal
    Button As MouseButtonConstants)
    ' Depress mouse button at
    current screen location.
    Select Case Button
        Case vbLeftButton,
        vbMiddleButton, vbRightButton
            Call
            mouse_event(MOUSEEVENTF_LEFTDOW
            N, 0, 0, 0, 0)
        Case vbMiddleButton
            Call
            mouse_event(MOUSE

```

```

                EVENTF_MIDDLEDOWN
                , 0, 0, 0, 0)
        Case vbRightButton
            Call
mouse_event(MOUSEEVENTF_RIGHTDO
WN, 0, 0, 0, 0)
        End Select
    End Sub

Public Sub ButtonRelease(ByVal
    Button As
    MouseButtonConstants)
    ' Release mouse button at
    current screen location.
    Select Case Button
        Case vbLeftButton,
vbMiddleButton, vbRightButton
            Call
mouse_event(MOUSEEVENTF_LEFTTUP,
0, 0, 0, 0)
            Case vbMiddleButton
                Call
mouse_event(MOUSEEVENTF_MIDDLEU
P, 0, 0, 0, 0)
            Case vbRightButton
                Call
mouse_event(MOUSEEVENTF_RIGHTUP
, 0, 0, 0, 0)
            End Select
    End Sub

Public Sub Click()
    ' Click the mouse, with
    delay to simulate human timing.

```

```

    Call
mouse_event(MOUSEEVENTF_LEFTDOW
N, 0, 0, 0, 0)
    If m_ClickDelay Then
        ' DoEvents ' allow down
        position to paint
        Call Sleep(m_ClickDelay)
    End If
    Call
mouse_event(MOUSEEVENTF_LEFTTUP,
0, 0, 0, 0)
End Sub

Public Sub RightClick()
    ' Click the mouse, with
    delay to simulate human timing.
    Call
mouse_event(MOUSEEVENTF_RIGHTDO
WN, 0, 0, 0, 0)
    If m_ClickDelay Then
        ' DoEvents ' allow down
        position to paint
        Call Sleep(m_ClickDelay)
    End If
    Call
mouse_event(MOUSEEVENTF_RIGHTUP
, 0, 0, 0, 0)
End Sub

' X/Y need to be passed as
pixels!
Public Sub MoveTo(ByVal X As
    Long, ByVal Y As Long,
    Optional ByVal Absolute
    As Boolean = True)

```

```

    Dim meFlags As Long

    If Absolute Then
        ' Map into same
        coordinate space used by
        mouse_event.
        X = (X / m_ScreenWidth) *
m_Scale
        Y = (Y / m_ScreenHeight)
* m_Scale
        ' Set flags
        meFlags =
            MOUSEEVENTF_ABSOLUT
            E Or
            MOUSEEVENTF_MOVE
    Else
        ' Set flags for relative
        movement
        meFlags =
MOUSEEVENTF_MOVE
    End If

    ' Move the cursor to
    destination.
    Call mouse_event(meFlags, X,
Y, 0, 0)
End Sub

```