LAMPIRAN A
LISTING PROGRAM
1. Listing Program Utama

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 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
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 X As Long, Y 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) As Long
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

    "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

    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
    End Sub
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

        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

        Cba = 128 - (0.168736 * Ra) - (0.331264 * Ga) + (0.5 * Ba)
        Cra = 128 + (0.5 * Ra) - (0.418688 * Ga) - (0.081312 * Ba)
        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

        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
                If (Ba < 130 And Ga < 115 And Ba > 30 And Ga > 30) And 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
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), 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
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
         m_Mouse.MoveTo 1024 - (X * 3.2), Y * 3.2
      Next X
   Else
      For X = x2 To x1
         m_Mouse.MoveTo 1024 - (X * 3.2), Y * 3.2
      Next X
   End If
End If

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
Next i
Next j

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.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
Next i
Next j

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(GetForegrou
    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" (By Val 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_MOVEDOWN = &H6
Private Const MOUSEEVENTF_MOOVE = &H1
Private Const MOUSEEVENTF_RIGHTDOWN = &H8
Private Const MOUSEEVENTF_RIGHTUP = &H10
Private Const MOUSEEVENTF_WHEEL = &H800

Private Sub Class_Initialize()
' Store screen dimensions in pixels
m_ScreenWidth = GetSystemMetrics(SM_CXSCREEN)
m_ScreenHeight = GetSystemMetrics(SM_CYSCREEN)
'm_Default duration for mouse down
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_LEFTDOWN, 0, 0, 0, 0)
Case vbMiddleButton
Call mouse_event(MOUSEEVENTF_MIDDLEDOWN, 0, 0, 0, 0)
Case vbRightButton
Call mouse_event(MOUSEEVENTF_RIGHTDOWN, 0, 0, 0, 0)
End Select
End Sub

EVENTF_MIDDLEDOWN, 0, 0, 0, 0)
    Case vbRightButton
        Call mouse_event(MOUSEEVENTF_RIGHTDOWN, 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_LEFTUP, 0, 0, 0, 0)
        Case vbMiddleButton
            Call mouse_event(MOUSEEVENTF_MIDDLEUP, 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_LEFTDOWN, 0, 0, 0, 0)
    If m_ClickDelay Then
        ' DoEvents ' allow down position to paint
        Call Sleep(m_ClickDelay)
    End If
    Call mouse_event(MOUSEEVENTF_LEFTUP, 0, 0, 0, 0)
End Sub

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

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_ABSOLUTE 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